



Long-Term Demand Side Management Potential in the Entergy New Orleans Service Area

Final Report

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Executive Summary

This report summarizes the results of a demand side management (DSM) potential analysis (Potential Study) conducted by ICF International for Entergy Services, Inc. (ESI) and Entergy New Orleans (ENO). The objectives of the analysis were: (1) To develop high-level, long-run **achievable electric DSM program potential estimates** appropriate for inclusion in ESI's Integrated Resource Planning (IRP) analysis of the ENO service area, and; (2) To develop **achievable gas DSM program potential estimates** consistent with New Orleans City Council requirements, and for consideration by ENO in long-term DSM program strategy.

Consistent with IRP requirements, this Potential Study includes forecasts covering a **20-year planning horizon (2015-2034)**. ESI's System Planning and Operations group's (SPO) primary requirements from the Potential Study were hourly **electric loadshapes and program cost projections** representing **three levels—low, reference, and high—of achievable DSM program savings** from 2015 through 2034. These load shapes and costs are the demand side inputs into their IRP analysis. The outputs of the gas study include **gas savings forecasts, program costs, and cost-effectiveness estimates**.

The long-run planning nature of the Potential Study means that **the estimates should not be applied directly to short-term DSM planning activities**, including, but not limited to program implementation plans or utility goal setting. Long-run program assumptions do not necessarily translate well for actual implementation in the short-term and may not reflect regulatory or other constraints. Program plans require a different level of attention to program design, costs, delivery mechanisms, measure mix, participation, regulatory guidelines, rate impacts, and other factors.

Note also that the characterization of ICF's achievable potential forecast in this report does not represent how SPO utilized the data for the purposes of the IRP, nor are the loadshapes produced for SPO included in this report.

Approach Summary

ICF used a bottom-up approach to estimate DSM potential. "Bottom-up," in the context of achievable potential studies, refers to an analytical approach that begins with characterizing the market size, or eligible stock of efficiency measures, screening measures for cost-effectiveness, forecasting savings for those measures first at the measure-level, then summing savings to the program, and service area levels.

It was assumed that programs with gas measures would be operated jointly with electric programs. That is, we assumed there would be no stand alone gas programs. This is because there were not any cost-effective gas measures that required the creation of new programs, and because gas savings potential is too small in scale to operate gas programs independently of electric programs.

Types of Potential Estimated

For ESI's and ENO's purposes it was necessary only to estimate **achievable potential**, which is **the level of cost-effective net DSM savings estimated to be reasonably achievable through utility-administered programs in the course of the planning horizon**. Achievable program potential estimates are a function of baseline energy use, energy costs, current levels of efficiency measure market saturation, program incentive levels, program market barriers, and other factors.

Technical and economic potential were not estimated. Technical potential is the estimated level of efficiency savings that could technically be achieved without consideration of economics, customer behavior, and other barriers. Technical potential assumes that customers adopt all of the most energy efficient measures regardless of cost or other market barriers. Economic potential is the cost-effective subset of technical potential. Economic potential assumes that all customers will purchase the most cost-effective measures available regardless of market barriers. Technical and economic potential estimates are theoretical and therefore not suitable for use in this study since they do not reflect the level of DSM that could actually be achieved through utility programs.

Scenarios

Achievable energy efficiency potential was forecasted under three scenarios, which are defined below. ICF first developed the reference case estimates by measure for each program. Then, the high and low case scenarios were developed around the reference case.

- **Reference case potential.** The realistic level of cost-effective savings that could be achieved by utility programs given the best information available at the time of the Potential Study. Incentive levels are generally between 25% and 75% of incremental cost, with the exception of hard-to-reach markets, e.g., small business, where incentives need to be different.
- **High case potential.** The level of cost-effective savings that could be achieved by utility programs at maximum incentive levels. Incentive levels were set to 100% of incremental costs where possible.
- **Low case potential.** The level of cost-effective savings that could be achieved at lower incentive levels. In most cases incentives were capped at 25%.

Uncertainty

DSM potential studies are forecasts, and all forecasts have forecast error, or uncertainty. This Study includes thousands of assumptions, including baseline data, measure parameters, avoided costs, program assumptions, and other inputs. While it is impossible to eliminate uncertainty, it can be mitigated through certain analytical strategies. The most basic strategy is to use the best information available at the time of the analysis. Where possible, this Study used data specific to the ENO service area. Where service area-specific data was unavailable, ICF used the most accurate proxy data available, such as Louisiana-specific data or data specific to the Southern region.

Another basic strategy is to use a bottom-up approach such as the one employed in this Study. Using a bottom-up approach ensures that the market size for efficiency measures is accounted for in developing the forecast. In addition, ICF program managers developed participation estimates at the measure level; these were then aggregated to the program and service area levels. By not using a single, formulaic approach to forecasting all measures, we ensured that baselines changes and market barriers applicable to specific measures were not washed-out in the analysis. Finally, benchmarking data on program performance in other jurisdictions was used, where possible, to help gauge the reasonableness of the estimates.

Energy Efficiency Potential

Figure 1, below, provides an overall summary of this Study's electric forecast including GWh and MW savings, savings impacts, costs, benefits, and cost-effectiveness.

Figure 2 provides similar outputs for gas programs. To review the electric forecast:

- ICF estimates that, in the reference case, **ENO can achieve cost-effective cumulative electric savings equal to 6.1% of load over the 2015 to 2034 time horizon**. Total program **costs** over this 20-year period are estimated to **equal \$111 Million**.¹ Total **net benefits** are estimated to equal **\$100 Million**.
- In the high case, we estimate that ENO could achieve an additional 223 GWh in savings for an additional \$28 Million in program spending beyond the reference case. That is, in the high case, savings would increase 59% over reference case levels while spending would increase 25%.
- In the low case, ICF estimates that ENO would achieve 35% less savings than in the reference case, while costs would decrease 17% compared to the reference case.

To review the gas forecast:

- ICF estimates that, in the reference case, **ENO can achieve cost-effective cumulative gas savings equal to 0.5% of sales over the 2015 to 2034 time horizon**. Total program **costs** over this 20-year period are estimated to equal **\$9 Million**.² Total **net benefits** are estimated to equal **\$24 Million**.
- In the high case, we estimate that ENO could achieve an additional 705,876 therms in savings for an additional \$8 Million in program spending beyond the reference case. That is, in the high case, savings would increase 211% over reference case levels while spending would increase 189%.
- In the low case, ICF estimates that ENO would achieve 27% less savings than in the reference case, while costs would decrease 56% compared to the reference case.

¹ Including program incentive and non-incentive costs.

² Including program incentive and non-incentive costs.

Combined benefits and costs of all electric and gas programs are shown Figure 3.³

A key take-away from the gas analysis is that there is insufficient cost-effective gas potential for ENO to run "gas only" programs - the market size is simply too small. This does not mean cost-effective gas measures should not be considered by ENO, but that they should be included in programs that would be combined electric and gas offerings.

One of the most important things to take in account when reviewing the estimates in this report is that program costs and savings of historical programs, particularly from jurisdictions dissimilar to ENO, cannot be compared on an apples-to-apples basis to the long-run costs and savings forecasted for ENO. This is mainly because minimum efficiency standards for equipment and buildings have improved, significantly in some cases. For example, minimum efficiency standards for the most common light bulbs will require such bulbs to be 60% to 70% more efficient in 2020 than they were in 2012. This and other adopted minimum efficiency standards for lighting, appliances, and new buildings mean that future programs will achieve lower savings levels, and at higher costs, than comparable programs in the past, all else equal.

Figure 1. Total Electric Savings, Savings Impacts, Benefits, Costs and Costs-Effectiveness

Scenario	Cumulative GWh Savings (2015-2034)	Cumulative GWh Savings as % of Sales	Cumulative MW Savings (2015-2034)	Cumulative MW Savings as % of Peak ⁴	Total TRC Benefits, 2015-2034 (\$Mil.)	Total TRC Costs, 2015-2034 (\$Mil.) ⁵	Net TRC Benefits, 2015-2034 (\$Mil.) ⁶	TRC B/C Ratio	Total Program Costs, 2015-2034 (\$Mil.) ⁷	Levelized Cost per kWh ⁸
Low	246	3.9%	69	5.9%	\$182	\$124	\$58	1.5	\$92	\$0.05
Reference	378	6.1%	112	9.6%	\$293	\$193	\$100	1.5	\$111	\$0.06
High	601	10.0%	168	14.5%	\$790	\$463	\$320	1.7	\$139	\$0.09

³ Includes benefits and costs of all programs, not just the ten programs noted in Section 5 that include electric and gas measures, but also the benefits and costs of the eight additional programs that include only electric measures.

⁴ Forecasted non-coincident peak demand.

⁵ TRC (Total Resource Cost) test costs include total measure incremental costs and program non-incentive costs over the time horizon of the forecast (2015-2034).

⁶ TRC (Total Resource Cost) test benefits include total electric generation (kWh), capacity (kW), and gas (therm) costs avoided over the time horizon of the forecast (2015-2034).

⁷ Program costs include incentive costs and non-incentive costs (e.g., administration, marketing, etc.).

⁸ Id.

Figure 2. Total Gas Savings, Savings Impacts, Benefits, Costs and Costs-Effectiveness

Scenario	Cumulative Therm Savings (2015-2034)	Cumulative Therm Savings as % of Sales	Total TRC Benefits, 2015-2034 (\$Mil.)	Total TRC Costs, 2015-2034 (\$Mil.) ⁹	Net TRC Benefits, 2015-2034 (\$Mil.) ¹⁰	TRC B/C Ratio	Total Program Costs, 2015-2034 (\$Mil.) ¹¹	Level-ized Cost per Therm
Low	462,039	0.4%	\$19	\$5	\$14	3.7	\$4	\$0.71
Reference	634,173	0.5%	\$31	\$6	\$24	4.9	\$9	\$1.16
High	1,340,048	1.1%	\$51	\$17	\$35	3.1	\$17	\$1.08

Figure 3. Combined Electric and Gas Benefits and Costs for All Programs

Scenario	Total TRC Benefits, 2015-2034 (\$Mil.)	Total TRC Costs, 2015-2034 (\$Mil.)	Net TRC Benefits, 2015-2034 (\$Mil.)	TRC B/C Ratio	Total Program Costs, 2015-2034 (\$Mil.)
Low	\$201	\$129	\$72	1.6	\$96
Reference	\$324	\$199	\$124	1.6	\$120
High	\$841	\$480	\$355	1.8	\$156

Organization of the Remainder of the Report

Section 1 of this report describes ICF's approach to estimating achievable potential. Section 2 covers baseline energy use in the ENO service area, and Sections 3 and 4 cover the achievable potential forecasts for electricity and gas, respectively. Individual appendices are listed in Section 5, and the actual appendices are provided separately from this report.

⁹ TRC (Total Resource Cost) test costs include total measure incremental costs and program non-incentive costs over the time horizon of the forecast (2015-2034).

¹⁰ TRC (Total Resource Cost) test benefits include gas (therm) costs avoided over the time horizon of the forecast (2015-2034).

¹¹ Program costs include incentive costs and non-incentive costs (e.g., administration, marketing, etc.).

List of Acronyms

Acronym	Full Description
ACEEE	American Council for an Energy-Efficient Economy
AHRI	Air Conditioning Heating and Refrigeration Institute
CB ECS	U.S. Department of Energy Commercial Buildings Energy Consumption Survey
CBI	Commercial Building Inventory
CHP	Combined heat and power
DOE	U.S. Department of Energy
DSM	Demand side management
EIA	U.S. Department of Energy, Energy Information Administration
ENO	Entergy New Orleans
EE	Energy efficiency
ESI	Entergy Services, Inc.
LBNL	Lawrence Berkeley National Laboratory
MECS	U.S. Department of Energy Manufacturing Energy Consumption Survey Consumption Survey
MISO	Midcontinent Independent System Operator
RASS	Residential Appliance Saturation Survey
RECS	U.S. Department of Energy Residential Energy Consumption Survey
SEER	Seasonal Energy Efficiency Ratio
SPO	System Planning and Operations
TRC	Total Resource Cost
TRM	Technical Resource Manual

Table of Contents

Executive Summary	i
Approach Summary.....	i
Types of Potential Estimated	ii
Scenarios	ii
Uncertainty.....	ii
Energy Efficiency Potential.....	iii
Organization of the Remainder of the Report	v
List of Acronyms	vi
List of Figures	vii
1 Analysis Approach	1
1.1 Overview of Approach.....	1
1.2 Data Collection.....	3
1.3 Eligible Stock.....	6
1.4 Measure Analysis	7
1.4.1 Measures Evaluated.....	8
1.4.2 Measure Benefit Cost-Screening.....	9
1.4.3 Treatment of Codes and Standards.....	10
1.5 Achievable Potential Approach	11
1.5.1 Programs Modeled.....	11
1.5.2 Gas Programs Modeled.....	14
1.5.3 Program Assumptions.....	14
1.5.4 Scenario Development.....	21
2 Energy Use in the ENO Service Area	23
2.1 Electricity.....	23
2.2 Natural Gas	26
3 Achievable Electric Energy Efficiency Potential	29
3.1 Cumulative Potential	29
3.2 Costs in Context	32
3.3 Incremental Savings Potential	33
3.4 Savings in context	34
4 Achievable Natural Gas Efficiency Potential	37
4.1 Cumulative Potential	37
4.2 Incremental Potential	40
4.3 Gas Program Benchmarking	40
5 Combined Electric & Gas Benefits & Costs	41
6 Appendices	43

List of Figures

Figure 1. Total Electric Savings, Savings Impacts, Benefits, Costs and Costs-Effectiveness.....	iv
Figure 2. Total Gas Savings, Savings Impacts, Benefits, Costs and Costs-Effectiveness	v

Figure 3. Combined Electric and Gas Benefits and Costs for All Programs.....	v
Figure 4. Potential Study Approach.....	2
Figure 5. Data Used in Analysis.....	3
Figure 6. Example Eligible Stock Calculation	7
Figure 7. Illustrative Measure Characteristics (Wall Insulation).....	8
Figure 8. Number of Measures Evaluated and Included.....	9
Figure 9. Illustrative Measure Incentive Calculation	17
Figure 10. Illustrative Payback Acceptance Curve	18
Figure 11. Illustrative Market Diffusion Assumptions.....	19
Figure 12. Market Diffusion Curve.....	20
Figure 13. Distribution of Total Base Year Electric Electricity Use, by Sector, for ENO and U.S. Total (ENO Total 2013 Sales= 5,105 GWh).....	23
Figure 14. Distribution of Base Year ENO Residential Electricity Use by End Use (Total 2013 Residential Sales=1,867 GWh)	24
Figure 15. Base Year ENO Commercial Electricity Use by End Use (Total 2013 Commercial Sales=2,767 GWh)	24
Figure 16. Base Year Industrial Electricity Use by Sector by End Use (ENO)	25
Figure 17. Distribution of Total Base Year Natural Gas Use, by Sector, for ENO and U.S. Total (ENO Total 2013 Sales= 92,223,913 Therms)	26
Figure 18. Distribution of Base Year ENO Residential Natural Gas Use by End Use (Total 2013 Residential Sales= 39,130,304 Therms).....	27
Figure 19. Base Year ENO Commercial Natural Gas Use by End Use (Total 2013 Commercial Sales=51,156,855 Therms).....	27
Figure 20. Base Year Industrial Natural Gas Use by Sector by End Use	28
Figure 21. ENO Cumulative MWh Savings Forecast, by Scenario	30
Figure 22. Total Electric Savings, Savings Impacts, Benefits, Costs and Costs-Effectiveness, by Scenario	30
Figure 23. ENO Electric DSM Supply Curve, Reference Case.....	31
Figure 24. Average Levelized Costs of Energy Efficiency in 20 States (2009-2012) and as Forecasted for ENO for this Potential Study (2015-2034).....	33
Figure 25. Incremental MWh Savings, by Scenario.....	34
Figure 26. Incremental Savings in Context	35
Figure 27. U.S. Retail Electric Rates, 2013.....	36
Figure 28. Cumulative Achievable Natural Gas Energy Efficiency Potential, by Scenario.....	38
Figure 29. Total Gas Savings, Savings Impacts, Benefits, Costs and Costs-Effectiveness, by Scenario	38
Figure 30. ENO Gas Efficiency Supply Curve, Reference Case	39
Figure 31. Incremental Achievable Natural Gas Energy Efficiency Potential, by Scenario.....	40
Figure 32. Combined Electric and Gas Benefits and Costs for All Programs.....	42

1 Analysis Approach

1.1 Overview of Approach

ICF used a bottom-up approach to estimate energy efficiency potential. The approach is illustrated in Figure 4. "Bottom-up," in the context of achievable potential studies, refers to an analytical approach that begins with characterizing the market size, or eligible stock of efficiency measures, screening measures for cost-effectiveness, forecasting savings for those measures first at the measure-level, then summing savings to the program, and service territory levels.

This analysis started with collecting data on all relevant inputs, including baseline data, measure data, and program data. Data types collected are itemized in Figure 5.

Estimating the eligible stock of efficiency options was the next step of the analysis. The eligible stock is the size of the market for efficiency measures, in measure units, such as bulbs, tons of cooling, or homes. ICF estimated the eligible stock for each measure within each end use and sector. This required data on the number on customer types in each service territory, the number and types of buildings, what types of energy using equipment are in each building type, and the current saturation of efficient equipment.

A comprehensive measure database was also developed in the first stages of the analysis. This database includes 228 measure types and 1,056 measures in total. Commercially available electric and gas measures covering each relevant savings opportunity within each end use and sector were included. The database includes prescriptive or "deemed" type measures, whole building and custom options, and behavioral measures. The database is comprised primarily of retrofit measures but also includes replace-on-burnout and new construction measures.

Measures were then screened for cost-effectiveness using the measure Total Resource Cost (TRC) test. With few exceptions, only measures with a TRC test result of 1.0 or better were passed on to the next stage of the analysis.

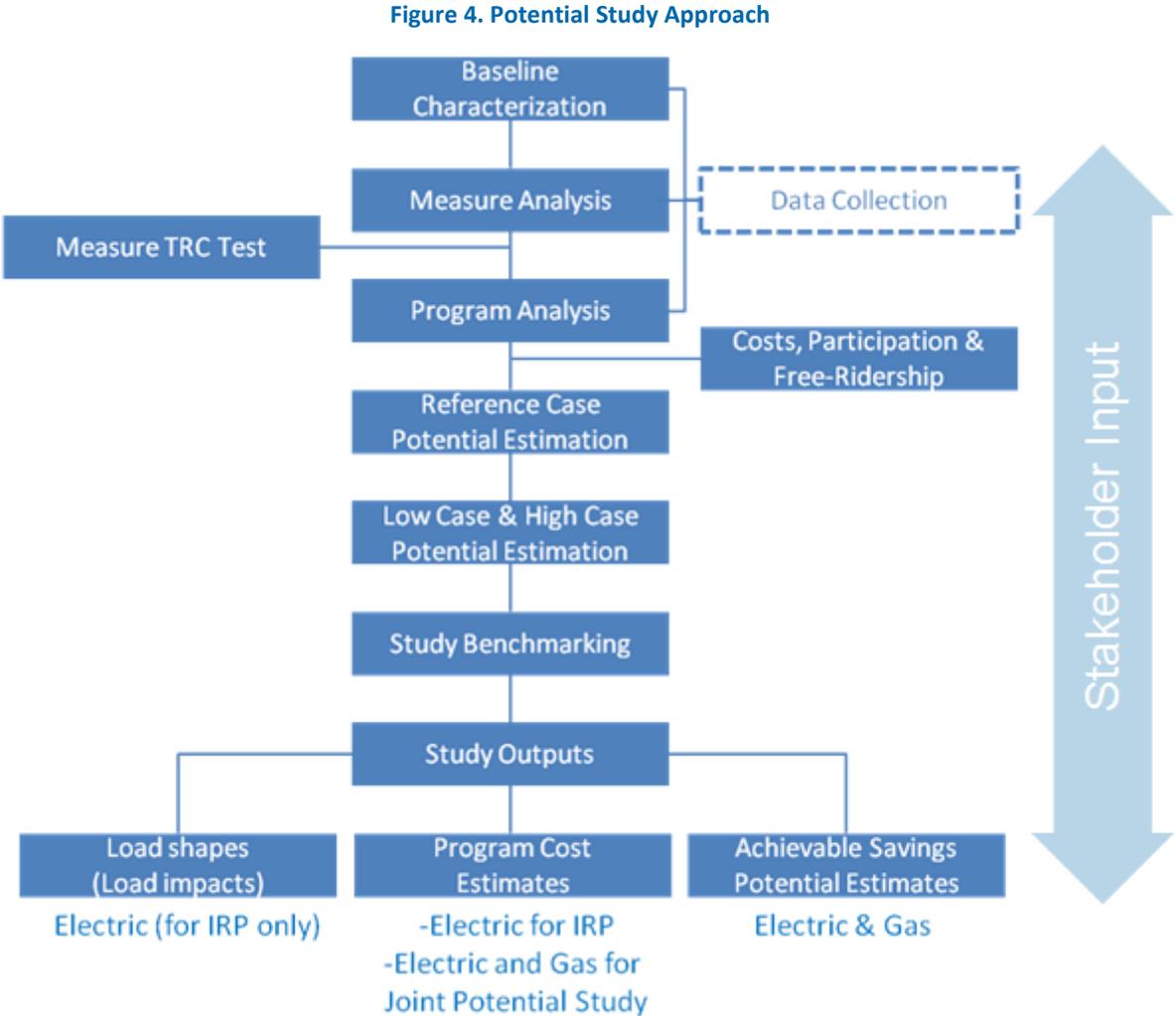
With the eligible stock and measures defined, ICF then performed the achievable potential analysis, which involved developing savings forecasts for measures included in 17 program types across three sectors over the 2015 to 2034 time period under three scenarios:

- **Reference case potential.** The realistic level of cost-effective savings that could be achieved by utility programs given the best information available at the time of the Potential Study. Incentive levels are generally between 25% and 75% of incremental cost, with the exception of hard-to-reach markets, e.g., small business, where incentives need to be different.¹²

¹² Incentives for programs targeting hard-to-reach customers tend to be higher than for other programs, since to these customers energy efficiency is less affordable. For example, incentives for the Low Income Weatherization program modeled in this Study are 100% of incremental costs.

- **High case potential.** The level of cost-effective savings that could be achieved by utility programs at maximum incentive levels. Incentive levels were to 100% of incremental costs where possible.
- **Low case potential.** The level of cost-effective savings that could be achieved at lower incentive levels. In most cases incentives were capped at 25%.

Finally, ICF provided Entergy SPO with the DSM inputs required for the IRP. These included loadshapes for each program, which reflect savings forecasted for every hour of every year of the analysis, and annual program costs. Gas savings potential and program costs were also developed, though these were not inputs to the electric IRP. In the sub-sections below, ICF discusses each step in the analysis in further detail.



1.2 Data Collection

The sources of data used in the analysis are shown in Figure 5. Every effort was made to use data that was as current as possible, and to use assumptions specific to the ENO service area; primary data was used where possible.

Figure 5. Data Used in Analysis

Data/Information Type	Source (Year)	Type of Data	Primary Purpose in this Study
Utility Information			
Avoided costs	Entergy (2014)	Forecast	Cost-effectiveness testing
Customer counts	Entergy (2014)	Actual	Calculating the eligible stock
Load forecast	Energy (2014)	Forecast	Calculating load impacts of EE potential
Retail rates	Entergy (2014)	Actual	Achievable potential analysis
Baseline Data			
Residential building characteristics and efficiency saturation	Entergy Residential Appliance Saturation Survey (2006)	Primary	Calculating the eligible stock
	Post-Katrina Study by GCR (2008)	Primary	
	U.S. DOE Residential Energy Consumption Survey (RECS, 2009)	Secondary	
	U.S. Census Data (2009)	Secondary	
	Other Secondary Sources (See Appendix)	Secondary	
	ICF expert judgment	Secondary	
Commercial building characteristics and efficiency saturation	Commercial Building Inventory (CBI) data for Louisiana (2014)	Secondary	
	Air Conditioning Heating and Refrigeration Institute (AHRI, 2014)	Secondary	
	U.S. DOE Commercial Buildings Energy Consumption Survey (CBECS, 2003)	Secondary	
Commercial building characteristics and efficiency saturation	Other Secondary Sources (See Appendix)	Secondary	
	ICF expert judgment	Secondary	

Long-Term Demand Side Management Potential in the Entergy New Orleans Service Area

Final Report

Analysis Approach

Data/Information Type	Source (Year)	Type of Data	Primary Purpose in this Study
Industrial sub-sector characteristics and efficiency saturation	U.S. DOE Manufacturing Energy Consumption Survey (MECS, 2010)	Secondary	

Long-Term Demand Side Management Potential in the Entergy New Orleans Service Area

Final Report

Analysis Approach

Data/Information Type	Source (Year)	Type of Data	Primary Purpose in this Study
Measure Assumptions			
Residential measure data	AR Technical Resource Manual (TRM) v. 3.0 (2014)	Measure parameters	Measure database development
	OK TRM (2014) ¹³		
	CA DEER (2014)		
	Mid-Atlantic TRM (2014)		
	NREL (2014)		
	IL TRM (2014) ¹⁴		
	ICF measure databases (2014)		
Commercial measure data	AR Technical Resource Manual v. 3.0 (2014)	Measure parameters	Measure database development
	OK TRM (2014) ¹⁵		
	IL TRM (2014) ¹⁶		
	Mid-Atlantic TRM (2014)		
	ICF measure databases (2014)		
Industrial measure data	U.S. DOE studies; U.S. EPA studies; LBNL studies; other published studies (see Appendix)	Measure parameters	Measure database development
	ICF estimates (2014)		
Program Information			
ICF program data and expert judgment	ICF	Secondary	Estimating achievable potential
Historical program savings data	U.S. EIA (2010-2012)	Secondary	Program savings benchmarking
Program cost data	ACEEE (2014)	Secondary	Program cost benchmarking
Customer survey data	ICF	Primary	Payback acceptance calculations

¹³ Adjustments to cooling and heating degree days made for weather sensitive measures.

¹⁴ Id.

¹⁵ Id.

¹⁶ Id.

1.3 Eligible Stock

After data collection, estimating the eligible stock of efficiency options was the next step of the analysis. The eligible stock is the size of the market for efficiency measures, in measure units, such as bulbs, tons of cooling, or homes. ICF estimated the eligible stock for each measure within each end use and sector. Key data from the baseline sources noted above includes items such as:

- The percent of homes with a particular type of equipment (e.g., light bulbs, central air conditioner, refrigerator),
- Equipment counts (e.g., number of bulbs per home, tons of cooling per home, refrigerators per home),
- Equipment efficiency level (e.g., bulb type, SEER rating, ENERGY STAR Rating), and
- Equipment age.

A simple example of an eligible stock calculation for residential specialty bulbs is shown below. This example shows there are 1.8 million incandescent specialty screw-in bulbs installed in homes in ENO's service area (row g). This equals 100% of all specialty light bulbs installed (row f). That is, based on the best available information, 100% percent of the existing stock of residential specialty screw-in bulbs could be replaced with more efficient units (e.g., a reflector LED).

Since this is a "replace-on-burnout" measure, the eligible stock must account for stock turnover (row h). Stock turnover is the rate at which existing equipment expires and requires replacement. It is the inverse of equipment age, or one divided by the equipment's effective useful life (EUL).¹⁷ After the application of the stock turnover rate, the total number of specialty bulbs eligible to be replaced in 2014 equals 3.2 million (row i).¹⁸

¹⁷ For retrofit measures, annual replacement eligibility equals 100%.

¹⁸ ICF's potential model updates the eligible stock in every year of the analysis to account for measures installed in previous years.

Figure 6. Example Eligible Stock Calculation

	Variable	Value	Source/Calculation
	Efficient unit	12 Watt LED Specialty Lamp	AR TRM v. 3.0
	Baseline unit	60W Incandescent Specialty Lamp	AR TRM v. 3.0
a	Baseline unit effective useful life	2	AR TRM v. 3.0
b	# ENO Residential Customers	162,863	Entergy SPO
c	# Bulbs per Home	33.9	U.S. DOE RECS (2009)
d	% Applicability (% of bulbs that are specialty applications)	32%	Entergy RASS
e	Efficient unit saturation	0%	U.S. DOE RECS (2009)
f	Not yet adopted rate	100%	1-e
g	Total eligible stock in 2014	1,766,734	b*c*d*f
h	Annual replacement eligibility (stock turnover rate)	50%	1/a
i	Total # bulbs eligible to be replaced in 2013	883,367	b*c*d*f*h

For many measures, this information is broken down further in ICF's energy efficiency potential model. For example, the eligible stock for residential central air conditioners is further broken down by:

- Efficiency rating (SEER level),
- Home heating type (electric or gas), and
- Decision type (replace-on-burnout, retrofit, new construction).

1.4 Measure Analysis

ICF developed a comprehensive measure database for this Study. The database includes most measures in the Arkansas Technical Reference Manual ("TRM") version 3.0¹⁹ plus additional measures included based on a gap analysis. The final database includes commercially available measures covering each relevant savings opportunity within each end use and sector. The database includes prescriptive or "deemed" type measures, whole building options (such as commercial custom and new construction projects), and behavioral measures (such as residential Home Energy Use Benchmarking and

¹⁹ The AR TRM v.3.0 was the most current, regulator-approved TRM applicable to Entergy services territories at the time of this analysis.

Retrocommissioning measures). Data for each of the characteristics shown in Column A in Figure 7 was developed for each measure.

Figure 7. Illustrative Measure Characteristics (Wall Insulation)

(A) Measure Characteristic	(B) Value
1. Applicable sector	Residential
2. Applicable subsector	Single Family
3. Building type	AC with Gas Heat
4. End-use	Shell
5. Measure name	Wall insulation
6. Measure definition	R-13
7. Baseline definition	No insulation
8. Measure unit	Home
9. Measure delivery type	Retrofit
10. Incremental cost	\$1,310 (materials and labor)
11. Baseline unit effective useful life	N/A (baseline=no insulation)
12. Efficient unit effective useful life	20 years
13. Incremental (annual) kWh savings	1,073 kWh
14. Incremental kW savings	0.796 kW
15. Annual Gas savings (Therms)	132.36

1.4.1 Measures Evaluated

In total, ICF analyzed 228 measure types for this Study; 148 electric-only measure types, 66 gas-only measure types, and 14 measures that result in both electric and gas savings. An example of a measure type is a residential central air conditioner (CAC). These measure types represent all end uses and savings opportunities. Many measures required permutations for different applications, such as different building types, lamp wattages, efficiency levels and decision types. For example, there are permutations of CACs by SEER level, subsector, and building type. As shown in Figure 8, ICF developed a total of 1,056 measure permutations for this Study. Sixty-seven percent of these measures are retrofit in nature, 31% are replace-on-burnout type measures, and 2% are new construction type measures.

Descriptions of each measure type and permutation are in the Appendix, as well as measure cost-effectiveness results.

Figure 8. Number of Measures Evaluated and Included

Sector	# Measure Types Evaluated	Total # Measures Evaluated (All Measure Permutations)	# Measures Cost-Effective (TRC>=1)	# Measures Included in Analysis
Electric Only Measures				
Residential	40	94	70	66
Commercial	44	476	363	336
Industrial	64	197	187	187
Total Electric Only	148	767	620	589
Gas Only Measures				
Residential	10	30	2	3
Commercial	12	37	10	2
Industrial	44	183	152	149
Total Gas Only	66	250	164	154
Electric and Gas Measures				
Residential	13	14	10	10
Commercial	1	25	20	20
Industrial	0	0	0	0
Total Electric and Gas	14	39	30	30
GRAND TOTAL	228	1,056	814	773

1.4.2 Measure Benefit Cost-Screening

All measures were analyzed for cost effectiveness using the measure Total Resource Cost (TRC) test.²⁰ Electric measure TRC results were calculated in three test years: 2014, 2020, and 2022. Most studies only test measure cost-effectiveness in the base year. However, we decided to test electric measure cost-effectiveness in 2020 and 2022, in addition to doing so in 2014, because short-term avoided electric costs are very low, due in large part to a short-term capacity surplus in MISO. The capacity cost forecast increases every year and stabilizes in 2022. Thus, ICF believes 2022 is a more representative year for testing measure cost-effectiveness for the purposes of this long-run Study, than is 2014.^{21 22}

²⁰ Measure TRC benefits include avoided energy and avoided capacity costs due to the measure over the measure lifetime. Measure TRC costs are measure incremental costs; these include the difference in equipment and labor costs between the efficient and baseline units.

²¹ All else equal, an electric measure tested for cost-effectiveness in 2022 had a higher measure TRC ratio than the same measure tested in 2014.

²² 2014 was used as the test year for gas only measures.

Therefore, for nearly all electric measures, measure cost-effectiveness was assessed using 2022 as the test year. The only exceptions were for measures that phase-out prior to 2022. Lighting measures impacted by EISA 2007 Tier 2 were tested using 2020 as the test year. Air conditioning and heat pump measures impacted by DOE rules were tested in 2014 (see Section 1.4.3 for a description of how codes and standards were treated in this Study).

In most cases, only measures with a TRC of 1.0 or higher (in their representative test years) were passed on to the next stage of the analysis. A measure TRC result of 1.0 indicates that the measure is cost-effective on a standalone basis (before consideration of program costs or net-to-gross ratios). Exceptions to this rule were made for some low-income measures (the assumption being that low income programs are required by policy), and for non-economic measure permutations where a majority of the permutations of that measure type were cost-effective. For example, if a measure type was cost-effective for a majority of but not all applicable building types, ICF included the measure type for all building types in the achievable potential analysis. This is because it can be impractical in implementation to exclude participation by customers in specific building types.

Some cost-effective measures were also not included in the analysis. If a measure was cost-effective for a minority of building types, ICF excluded all permutations of the measure in the achievable potential analysis since it can be impractical in implementation to limit participation to certain building types. There were also some cost-effective measures with little to no known technical applicability²³ in New Orleans; certain types of commercial gas boiler measures, for example.²⁴ In such cases, the measure was also excluded from the analysis.

1.4.3 Treatment of Codes and Standards

The treatment of equipment and building energy baselines in this Study is summarized below.

- The Energy Independence and Security Act of 2007 (EISA) set energy efficiency standards for light bulbs manufactured from 2012 forward. From 2012 through 2014, Tier 1 of EISA took effect, phasing-out the manufacture and import of traditional filament incandescent 100W bulbs in 2012 and 75W bulbs in 2013. In 2014, the EISA legislation impacted 60 watt and 40 watt incandescent light bulbs, which are the most common light bulbs in use. The next EISA milestone, Tier 2, takes effect in 2020. This phase will require that all light bulbs manufactured are 60-70% more efficient

²³ Technical applicability is the fraction of the relevant building stock where the measure can actually be installed, or used.

²⁴ For example, ICF examined commercial boiler cut-out controls as a possible gas measure. However, there was insufficient data on the number and age of commercial boilers in New Orleans to be able to estimate potential for this measure. ICF program experience in the South also suggests that, due to the very low number of heating degree days (HDD) in the region, commercial boiler use for space heating in New Orleans is minimal, and that such boilers are used largely for water heating. Cut-out controls are not applicable in such situations, as their use would result in turning off the hot water supply to the building.

than before EISA took effect. Lighting industry experts and program planners expect residential lighting program savings to be viable up until 2020. However, the current assumption of many experts and planners is that programs may not be able to claim savings for most CFLs and LEDs after 2020 due to the baseline changes, and to significant price decreases of LEDs.²⁵ The exceptions are specialty CFLs and reflector LEDs, which are exempt from EISA 2007.

- U.S. DOE rules pertaining to commercial lamps and ballasts are reflected in baselines for linear florescent lighting.²⁶ These rules result in a 20% improvement in baseline efficiency for linear florescent lamps.²⁷ This is important because efficient linear florescent lighting accounts for the largest portion of historical commercial lighting savings in many jurisdictions.
- U.S. DOE energy conservation standards for residential heat pumps (HPs) and single package central air conditioners (CACs) go into effect in 2015 and 2016, respectively. The improvement from a SEER 13 to a SEER 14 baseline for these units has a negative impact on the savings and cost-effectiveness of CAC and HP measures.
- Louisiana's current commercial building energy code is compliant with ASHRAE 90.1-2007. However, ICF assumed commercial new construction baselines consistent with the next (and more efficient) version of the code, which is ASHRAE 90.1-2010 for the 2015 to 2018 period; for the remainder of the Study period (2019-2034) we assumed the adopted code would be ASHRAE 90.1-2013. These are reasonable assumptions given the long-run nature of the Study.
- Similarly, Louisiana's current residential building energy code is compliant with IECC 2009. However, ICF assumed residential new construction baselines consistent with the next (and more efficient) version of the code, which is IECC 2012. Again, this is a reasonable assumption given the long-run nature of the Study.

1.5 Achievable Potential Approach

This section describes ICF's approach to modeling achievable potential, starting with the program types modeled, followed by subsections on the development of program assumptions, and on the scenario analysis.

1.5.1 Programs Modeled

Eighteen program types were modeled for this Study. These are briefly described below, by sector.

²⁵ ENERGY STAR-compliant A-line LEDs were available at Home Depot stores in Louisiana for \$10 at the time this Study was completed, and prices continue to decline toward the cost of CFLs.

²⁶ Consistent with the U.S. Energy Policy Act of 2005.

²⁷ The rules specify a switch from magnetic ballast baseline to an electronic ballast baseline.

Residential Programs

- **Home Energy Use Benchmarking.** Program designed around directly influencing household habits and decision-making on energy consumption through quantitative or graphical feedback on consumption, accompanied by tips on saving energy.
- **Lighting and Appliances.** Midstream incentive program that brings down the cost of efficient lighting, appliances and consumer electronics.
- **Multifamily.** Commercial building characteristics and efficiency saturation. Program designed to encourage the installation of measures in common areas and units for residential structures of more than four units. Aimed at building owners, managers, and tenants. Due to the very small size of the multifamily housing sector in the ENO service area, it was assumed that this program would merge with the Home Energy Audit and Retrofit program in the long run.
- **Efficient New Homes.** Program that provides incentives to builders for new homes built or manufactured to energy performance standards higher than applicable code.
- **ENERGY STAR Air Conditioning.** Program designed to encourage the distribution, sale, purchase, and installation of residential air conditioners and heat pumps that are more efficient than current standards.
- **Home Energy Audit and Retrofit.** Residential audit program that provides a comprehensive assessment of a home's energy consumption and identification of opportunities to save energy. Incentives are paid for the installation of identified measures such as insulation and duct sealing. Program includes a direct install element where low cost measures are installed with participant permission.
- **Pool Pump.** Program that incentivizes the installation of higher efficiency pumps or variable speed pumps for swimming pools.
- **Water Heating.** Program designed to encourage the distribution, sale, purchase, and installation of water heating systems that are more efficient than current standards.
- **Solar Hot Water.** Program required by City Council of New Orleans to encourage the distribution, sale, purchase, and installation of solar water heating systems.
- **Low Income Weatherization.** Program for qualifying low-income customers that provides home weatherization (e.g., air sealing, insulation) free of charge.
- **Direct Load Control.** A demand response program by which the utility remotely shuts down or cycles a customer's air conditioner.
- **Dynamic Pricing.** Tariff in which residential customers are charged more during times when electricity is more expensive, and less when it is less expensive.

Commercial Programs

- **Commercial Prescriptive and Custom.** Program that provides both financial incentives and technical assistance to all eligible commercial customers seeking to improve the efficiency of existing facilities; provides resources for new higher efficiency equipment purchases, facility modernization, and other efficiency improvements.
- **Data Centers.** Custom program around large-scale server floors or data centers. Projects tend to be site specific and involve some combination of measures for servers, networking devices, HVAC, and energy management systems and software.
- **New Construction.:** Program that provides technical support in the building design phase, and incentives to owners, builders, architects and similar parties for buildings that exceed current energy efficiency codes by prescribed levels.
- **Retrocommissioning (RCx).** Provides in-depth engineering studies on commercial buildings that focus on operational adjustments designed to optimize building system performance. Incentives are paid for implementing measures identified in studies.
- **Small Business.** Program that provides basic energy audits and direct install measures to small business customers, and deep discounts/incentives for additional measures identified through audits.
- **Dynamic Pricing.** Tariff in which commercial customers are charged more during times when electricity is more expensive, and less when it is less expensive.

Industrial Programs

- **Industrial Prescriptive and Custom.** Program that provides both financial incentives and technical assistance to all eligible industrial customers seeking to improve the efficiency of existing plants; provides resources for new higher efficiency equipment purchases, facility modernization, and other efficiency improvements. Industrial Prescriptive and Custom sub-programs modeled for this Study include:
 - Machine Drive
 - Process Heating
 - Boilers
 - Process Cooling and Refrigeration
 - Facility HVAC
 - Facility Lighting
 - Other Process/Non-Process Use

1.5.2 Gas Programs Modeled

It was assumed that programs with gas measures would be operated jointly with their analogous electric programs. That is, we assumed there would be no stand alone gas programs. This is because there were not any cost-effective gas measures that required the creation of new programs, and because gas savings potential is too small in scale to operate gas programs independently of electric programs.

Ten of the programs described above would include both electric and gas measures:

- A. Residential Programs
 - 1. Efficient New Homes
 - 2. Home Audit and Retrofit
 - 3. Home Energy Use Benchmarking
 - 4. Low Income Weatherization
- B. Commercial and Industrial Programs
 - 5. Commercial Prescriptive and Custom
 - 6. Industrial Boilers
 - 7. Industrial HVAC
 - 8. Industrial Process Heating
 - 9. Industrial All End Uses
 - 10. Small Business Solutions

1.5.3 Program Assumptions

This section describes how key assumptions were developed for programs. Key assumptions include costs, participation rates, and net-to-gross ratios.

Program Costs

Program costs were estimated to reflect average annual costs over the long run. Notwithstanding the baseline improvements discussed above, ICF expects program costs in the long run to be lower than program costs today. This is because Louisiana is an immature market for DSM. As programs grow and the market matures, program delivery costs are expected to decrease as a percentage of overall program costs.²⁸

Incentive and non-incentive program cost estimates were developed. Incentives are program payments to customers, contractors, retailers, or manufacturers that lower the cost of efficient products and services. Non-incentive costs include administration, marketing, education and training, and evaluation costs. Individual non-incentive cost categories were not estimated for this Potential Study. ICF program experience and program costs in other territories were considered in developing program costs for this

²⁸ For example, fixed costs associated with program start-up increase program costs in the short-run, not in the long-run.

Potential Study. Cost estimates by program are shown in aggregate in Sections 3 and 4 and by program in the Appendix.

Participation

A participation rate is the percent of the eligible stock or applicable customer population predicted to install an efficiency measure in a given year. The approach to developing participation rates in this potential Study was similar to the approach used in most potential studies. It involves:

1. Developing a maximum market acceptance rate or (S_{max}), which is the maximum annual participation rate for a given measure.
2. Estimating a participation rate in year 1 of the program.
3. Developing a ramp-up schedule from year 1 to the year in which S_{max} is predicted to occur
4. Forecasting participation for the years after the year in which the S_{max} is expected to be achieved.

The shape of participation curves can take a variety of forms depending on the nature of the measure, the program in which it is being delivered, the relevant market barriers, baseline changes and the size and nature of the eligible stock. ICF assessed achievable participation on a measure-by-measure basis. Because such a wide variety of measures are included in this Study, ICF could not apply just one formulaic approach to estimating program participation for all measures. This is illustrated generally by the participation approach types described below, and by the participation estimates for individual measures shown in Appendix A. Each measure was put in a group²⁹ with similar measures for the purpose of assigning participation approaches and payback curves; these assignments are shown in Appendix C.

Participation Approach A

This approach to estimating participation combines research on customer financial decision making with research on the diffusion of innovative technologies in the marketplace.

²⁹ Most programs have multiple measure groupings, or bundles. Some, such as Home Energy Use Benchmarking, only have one group.

One way that programs motivate customers to participate is by improving the financial attractiveness of the efficient option over the standard, or baseline option. Financial attractiveness in Approach A is a function of how much the incentive lowers the customer simple payback. Customer payback is the amount of time it takes for a customer to recover the costs of investing in the efficient unit instead of the standard unit. Customer payback equals the difference in cost between the efficient and standard units (commonly known as the incremental cost), divided by the utility bill savings due to the efficient unit.³⁰ Payback before the incentive is applied is calculated as:

$$\text{Pre-incentive Customer payback (Years)} = \text{Incremental cost} \div \text{Utility bill savings}$$

And payback after the incentive is applied is calculated as:

$$\text{Post-incentive Customer payback (Years)} = (\text{Incremental cost} - \text{Incentive cost}) \div \text{Utility bill savings}$$

In the reference case, measure incentives were calculated to bring down the customer payback to two years, with a cap of 75% of incremental cost, and a minimum incentive of 25% of incremental cost.³¹ An incentive calculation for an illustrative measure is shown in Figure 9.³²

For this illustrative measure the pre-incentive payback is 6.3 years (row 10) and the post-incentive payback is two years (row 17). Not all incentives bring down the payback to two years. This happens when the maximum incentive is reached, when the pre-incentive payback is already less than two years, or when the incentive would need to be greater than the incremental cost to bring the payback down to two years.

³⁰ Incremental costs include the difference in the cost of equipment, labor and operations, and maintenance.

³¹ Incentive levels for other scenarios are shown in Section 1.5.4.

³² Values shown in Figure 9 are generic and shown only to demonstrate approach. The values should not be construed as actual assumptions used in this Study. Actual assumptions are noted as such in the body of this report and in the Appendix.

Figure 9. Illustrative Measure Incentive Calculation

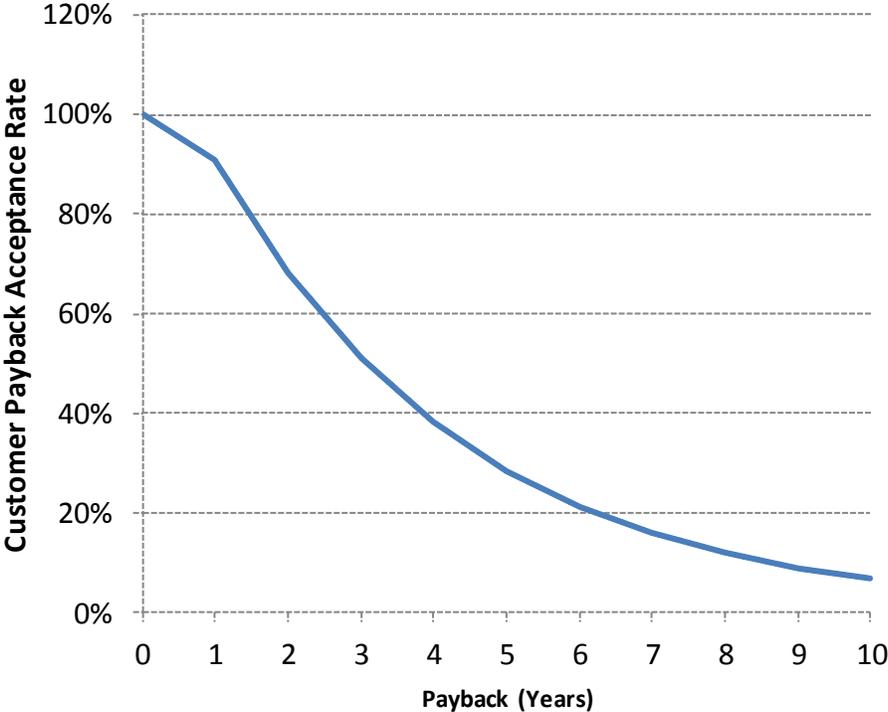
	Incentive Calculations	Value	Source/Calculation
1	Retail Electricity Rate—kWh	\$ 0.09	Utility
2	Retail Capacity Charge—kW	\$ 0.00	Utility
3	Retail Gas Rate—therm	\$ 0.95	Utility
4	Base Measure Life	15	Deemed Savings
5	Total Incremental Cost ¹	\$ 238.00	Deemed Savings
6	Annual kWh Savings	417.33	Deemed Savings
7	Annual kWh Summer-Peak Savings	0.12	Deemed Savings
8	Annual Gas Savings	0.00	Deemed Savings
9	Annual Bill Savings	\$ 37.91	Annual Energy Savings by Participant
10	Pre-incentive Payback (Years)	6.3	Total Incremental Cost/Annual Bill Savings
11	Incentive Assumptions		
12	Minimum Incentive Level	25%	Reference Case Assumption
13	Maximum Incentive Level	75%	Reference Case Assumption
14	Post-incentive Payback Target (Years)	2	Reference Case Assumption
15	Incentive as % of Incremental Cost	68%	MAX [MIN (Minimum Incentive Level, 1-Post-rebate Payback Target/Pre-rebate Payback)]
16	Incentive	\$ 162.18	Incentive as % of Incremental Cost x Total Incremental Cost
17	Post-incentive Payback	2	(Total Incremental Cost-Incentive) / Annual Bill Savings

Incentives are used to calculate program costs and to forecast participation. ICF uses the post-incentive payback to estimate the fraction of customers that may choose the efficient unit over the standard unit. This is done using payback acceptance curves, an example of which is shown in Figure 10. Different payback curves were utilized for each sector. All payback curves utilized in this Study are shown in Appendix C.

The curve in Figure 10 plots results from a residential survey on payback acceptance.³³ The curve shows that 68% of eligible residential customers stated they are willing to accept a two-year measure payback. However, people tend to overstate their payback acceptance in surveys. This is sometimes called survey response bias; when customers are making actual decisions about installing equipment, they are usually willing to accept much shorter payback levels than they stated they would in a survey.

³³ Surveys were conducted prior to this Study outside of Entergy service areas.

Figure 10. Illustrative Payback Acceptance Curve



Survey response bias as well as market barriers need to be accounted for in developing program participation estimates. Market barriers to participation include financial barriers, such as lack of access to capital; information barriers, such as lack of customer understanding about the benefits of efficient equipment; and, delivery barriers, such as contractor recruitment and participation. Response bias and market barriers are considered by ICF when developing participation curves.

In participation Approach A, three variables determine the shape of the participation curve for a measure:

1. A *maximum market acceptance rate*, or " S_{max} " (row 2 in Figure 11) is used to estimate the maximum annual participation rate;³⁴ next the ramp-up schedule is determined using
2. A *ramp-up rate* (row 3 in Figure 11) to estimate first year participation; and
3. A *ramp-up shape* (row 4 in Figure 11) is applied to reflect how quickly a program could reach the maximum annual participation rate.

The maximum annual market acceptance (S_{max})³⁵ is the product of the customer stated payback acceptance and the program market acceptance rate (row 8 in Figure 11):

$$\text{Maximum annual market acceptance rate } (S_{max}) = \text{Customer stated payback acceptance} \times \text{Program Market Acceptance rate}$$

Moreover, the first year participation rate is maximum annual market rate, divided by the ramp-up rate (row 9 in Figure 11). To summarize:

$$\text{First year participation rate} = \text{Maximum annual market acceptance rate} \div \text{Program ramp up rate}$$

Figure 11. Illustrative Market Diffusion Assumptions

	Program Assumptions	Value	Source/Calculation
1	Customer Stated Payback Acceptance	68%	Payback Acceptance Calculation
2	Program Market Acceptance Rate	30%	ICF Program Assumption
3	Ramp-up Rate	5	ICF Program Assumption
4	Ramp-up Shape	100%	ICF Program Assumption
5	Program Start Year	2015	
6	Study Period (years)	20	
7	First Year Participation Estimates		
8	Maximum Annual Market Acceptance (S_{max})	20.4%	Program Market Rate Acceptance x Customer Stated Payback Acceptance
9	First Year Share of Installations (S_0)	4.1%	Maximum Annual Market Acceptance (S_{max}) / Ramp-Up Rate

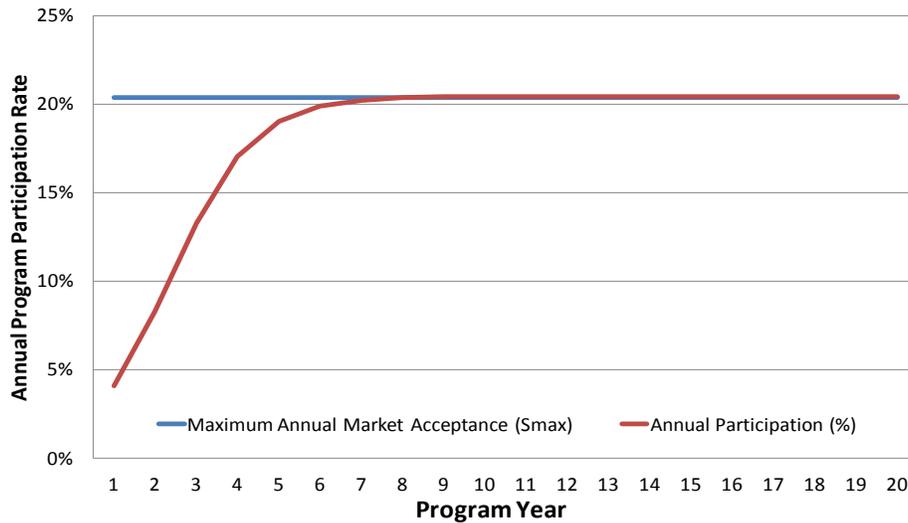
Figure 12 illustrates the outcome of Approach A. Program participation in the first year is 4%. The participation rate in each year grows until it reaches the maximum estimated level of 20%. Increasing

³⁴ The program participation rate in the year the program reaches maturity.

³⁵ The highest estimated level of program market penetration in a given year.

the ramp-up shape steepens the curve, and decreasing it makes the curve more gradual. This figure is an example of a "market diffusion" or "s-curve."

Figure 12. Market Diffusion Curve



This approach to modeling DSM program participation is only applicable to measure and program types where payback acceptance is relevant to customer financial decision-making.

Participation Approach B

Participation Approach A is not applicable to DSM measure and program types where payback acceptance is a less relevant proxy for customer financial decision making. This is the case for residential new homes programs, for example, where qualified homebuilders are the target market, not homebuyers. Nor does the payback acceptance survey data apply to customer decisions about participating in demand response programs. For measures where Approach B was used, participation rates were individually inputted for each year based on program experience.

Demand Response Program Participation

Two types of demand response (DR) programs were modeled for this Study: Dynamic Pricing (for Residential and for C&I) and Residential Direct Load Control.

Direct load control participation requires the utility to install a controlling device on the customer's AC or to install a "smart thermostat" inside the customer's home. Participation estimates were split evenly between these two options.

DR participation forecasts in this Study were based on the Expanded Business as Usual (EBAU) case for Louisiana developed for FERC by The Brattle Group.³⁶ DR programs were assumed to be voluntary, or "opt-in" in nature. This is generally consistent with current regulation of DR options in most service areas.

Net-to-Gross Ratios

Program evaluators independently verify reported savings and conduct empirical studies and other activities to estimate actual energy savings during the period of performance. The ratio of evaluated savings to reported savings is called the program net-to-gross (NTG) ratio. Applying the NTG ratio to gross savings results in net savings. Net savings estimates are reflected in the load shapes provided to SPO for this Potential Study.

Reference case NTG ratios were estimated based on program impact evaluation results from California, Illinois and from the Northeast, and are shown the in Appendix. As noted above, NTG ratios were generally increased in the high scenario, as evaluation research has shown that higher incentive levels are correlated with lower free-ridership. This principal was also applied in the low case; NTG ratios were lowered in most cases from reference case levels since incentives in the low case are lower than in the reference case.

1.5.4 Scenario Development

Achievable energy efficiency potential was forecasted for the above programs under three scenarios, which are defined below. ICF first developed the reference case estimates by measure for each program using the approaches describe d above. Then, the high and low case scenarios were developed around the reference case.

- **Reference case potential.** The realistic level of cost-effective savings that could be achieved by utility programs given the best information available at the time of the Potential Study. Incentive levels are generally between 25% and 75% of incremental cost, with the exception of hard-to-reach markets, e.g., small business, where incentives need to be different.
- **High case potential.** The level of cost-effective savings that could be achieved by utility programs at maximum incentive levels. Incentive levels were set to 100% of incremental costs where possible.
- **Low case potential.** The level of cost-effective savings that could be achieved at lower incentive levels. In most cases incentives were capped at 25%.

Besides incentive levels, program designs were assumed to be identical across scenarios. Assumptions about customer preferences and decision making criteria, utility assumptions such as avoided costs and discount rates, as well as exogenous economic factors such as growth and inflation were all held

³⁶ Federal Energy Regulatory Commission. A National Assessment of Demand Response Potential. Prepared by The Brattle Group et al. June 2009.

constant across scenarios.³⁷ As such, the ICF's scenario analysis focused on the impact of varying incentive levels.

Below we provide additional information on how the high and low cases were developed subsequent to the completion of the reference case. Since readers tend to focus more on the high than the low case, more description is provided regarding the development of the high case.

- **Comparative incentive analysis.** Incentive levels in the reference case are generally between 25% and 75% of measure incremental cost. All incentives in the high case are 100% of incremental cost, except as noted below. In the high case, for measures or programs where incentives are less important, the additional incentive has little to no impact. This is true for the Commercial New Construction program. In other cases, the 100% incentive has a large impact, as with the Commercial Prescriptive and Custom program.
- **Cost-effectiveness constraints.** In the high scenario, incentives could not be increased to 100% for every program due to cost-effectiveness constraints. This is because changing incentive levels can change the mix of measures installed. For example, increasing the incentive to 100% increases participation of high efficiency air conditioners (e.g., SEER 16+), which save more energy than efficient SEER 14-15 units, but also cost considerably more; as a result, they are less cost-effective than the SEER 14-15 options. Increasing uptake of such measures reduced overall cost-effectiveness compared to reference case levels for some programs. In such cases, incentives were increased up to the point where, when non-incentive program costs were added, the program was still cost-effective.
- **Non-incentive program costs.** Changing incentive levels also requires adjusting program non-incentive costs for most programs. If increasing incentives increases participation, then more incentive processing is required, more inspections and other quality assurance must occur, more trainings must be held, etc. And the converse is true when incentives are decreased. Therefore, non-incentive costs were adjusted from reference case levels in the low and high cases commensurate with changes in gross savings estimates. This was done on a program-by-program basis, and required expert input from ICF DSM program managers.
- **Net-to-gross ratios.** Finally, for most programs, incentive levels are negatively correlated with free-ridership; higher incentives generally correspond to lower free-ridership, and vice versa. Therefore, NTG ratios for most programs were decreased in the low scenario, and increased in the high scenario. NTG assumptions for each scenario are shown in the Appendix.

³⁷ One reason these factors are held constant in ICF's model is that ICF's DSM forecasts are used as inputs to SPO's IRP model, which is a dynamic model that varies utility, macroeconomic, and other assumptions.

2 Energy Use in the ENO Service Area

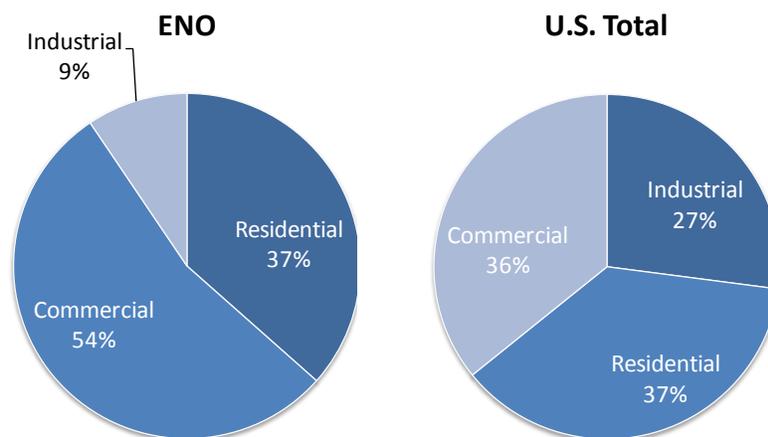
This section of the report begins by briefly describing baseline electricity use in the ENO service area. Next, the baseline natural gas use is described.

2.1 Electricity

Below we describe base year (2013) electricity use in the ENO service territory, in aggregate and by sector by end use. Figure 13 shows the distribution of electricity use in 2013 for ENO and for the U.S. in total. Note the ENO industrial share is one-third the U.S. industrial share, and that the ENO commercial share is 50% higher than the U.S. commercial share. Figure 14 and Figure 15 show the distributions of residential and commercial electricity use by end use. Figure 16 disaggregates industrial use by sector by end use.

As discussed in the Approach section, measures were developed for each applicable end use, and an eligible stock, or market size, was estimated for each measure. Data on the eligible stock is included in the measures section of the Appendix.

Figure 13. Distribution of Total Base Year Electric Electricity Use, by Sector, for ENO and U.S. Total (ENO Total 2013 Sales= 5,105 GWh)³⁸



³⁸ Commercial for ENO also includes government and lighting sales; industrial sales % also includes industrial CHP, which is not included in the industrial subsector totals in Figure 16.

Figure 14. Distribution of Base Year ENO Residential Electricity Use by End Use (Total 2013 Residential Sales=1,867 GWh)³⁹

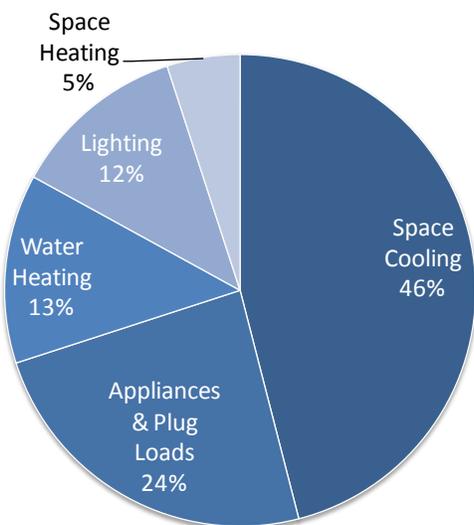
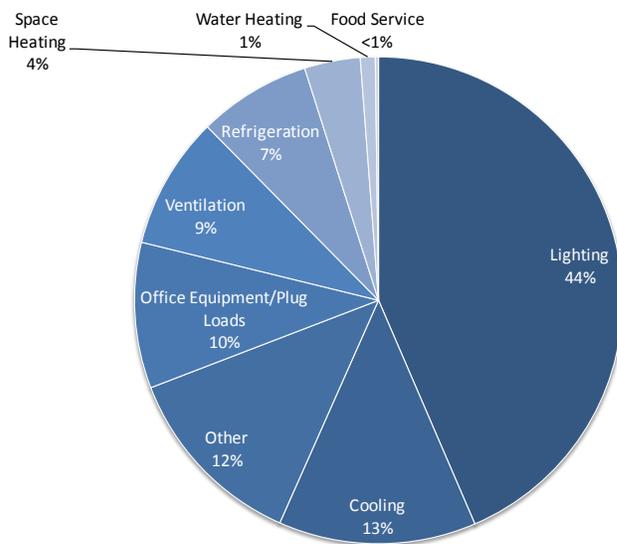


Figure 15. Base Year ENO Commercial Electricity Use by End Use (Total 2013 Commercial Sales=2,767 GWh)⁴⁰



³⁹ Sources: ICF estimates based on U.S. DOE (CBECS 2003) and CBI commercial building data for Louisiana.

⁴⁰ Includes Government and Lighting sales. Sources: Entergy (2014), U.S. DOE (CBECS 2003), Commercial Building Institute (2014)

Long-Term Demand Side Management Potential in the Entergy New Orleans Service Area

Final Report

Energy Use in the ENO Service Area

Figure 16. Base Year Industrial Electricity Use by Sector by End Use (ENO)⁴¹

	Large Industrial			Small Industrial	All Sectors
	Food Products	Industrial Gases	All Other - Large Industrial		
Total Industrial Base Year (2013) Sales, GWh	65	226	40	150	481
% Total Industrial Base Year (2013) Sales	13%	47%	8%	31%	100%
End Use	% Base Year (2013) MWh Use by Sector by End Use				
Machine Drive	47%	52%	52%	52%	52%
-Pumps	11%	14%	14%	14%	14%
-Fans	5%	8%	8%	8%	7%
-Compressors	5%	9%	9%	9%	8%
-Materials handling	4%	7%	7%	7%	6%
-Materials processing	17%	13%	13%	13%	13%
-Motor - Other Applications	4%	2%	2%	2%	2%
Process Heating	5%	11%	11%	11%	11%
Process Cooling and Refrigeration	28%	7%	7%	7%	10%
Other Process Uses	0%	2%	2%	2%	2%
Electro-Chemical	0%	9%	9%	9%	8%
Facility HVAC	8%	8%	8%	8%	8%
Facility Lighting	8%	6%	6%	6%	7%
Other non-process use	3%	2%	2%	2%	2%
Other process/Other non-process use	0%	0%	0%	0%	0%

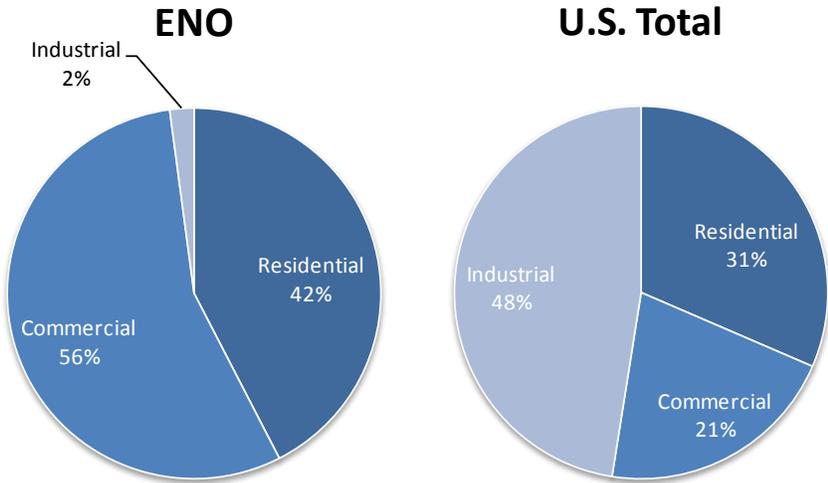
⁴¹ Sources: Entergy (2014), U.S. DOE (MECS 2010). Note industrial total sales shown in the table do not include combined heat and power (CHP). Note also that the industrial sales forecast provided by SPO and used by ICF to determine the industrial baseline for this Potential Study has been updated since this analysis was performed. SPO's updated industrial sector forecast shows higher growth in industrial electricity use than the previous forecast. All else equal, this may mean that industrial savings potential could be slightly underestimated in this Potential Study, but it is too difficult to draw any specific conclusions about the impacts of the updated industrial forecast without further analysis.

2.2 Natural Gas

Below we describe base year (2013) natural gas use in the ENO service territory, in aggregate and by sector by end use. Figure 17 shows the distribution of natural gas use in 2013 for ENO and for the U.S. in total. Note the ENO industrial share 4% of the U.S. industrial share, and the ENO commercial share is 267% of the U.S. commercial share. Figure 18 and Figure 19 show the distributions of residential and commercial electricity use by end use. Figure 20 disaggregates industrial use by sector by end use.

As discussed in the Approach section, measures were developed for each applicable end use, and an eligible stock, or market size, was estimated for each measure. Data on the eligible stock is included in the measures section of the Appendix.

Figure 17. Distribution of Total Base Year Natural Gas Use, by Sector, for ENO and U.S. Total (ENO Total 2013 Sales= 92,223,913 Therms)^{42 43}



⁴² Commercial for ENO includes government. ENO industrial share excludes sales to non-jurisdictional ("NJ") large industrial customers served by ENO under negotiated rates, terms and conditions specific to each of those customers.

⁴³ Sources: ENO; U.S. EIA, 2014.

Figure 18. Distribution of Base Year ENO Residential Natural Gas Use by End Use (Total 2013 Residential Sales= 39,130,304 Therms)⁴⁴

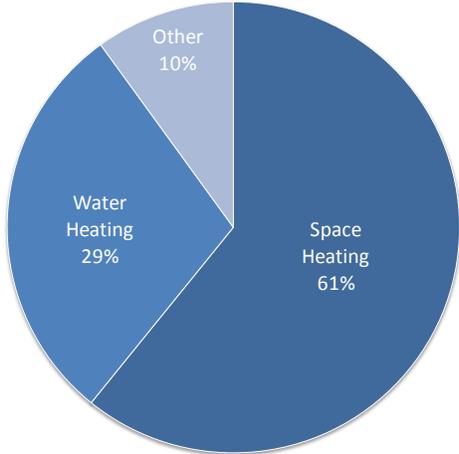
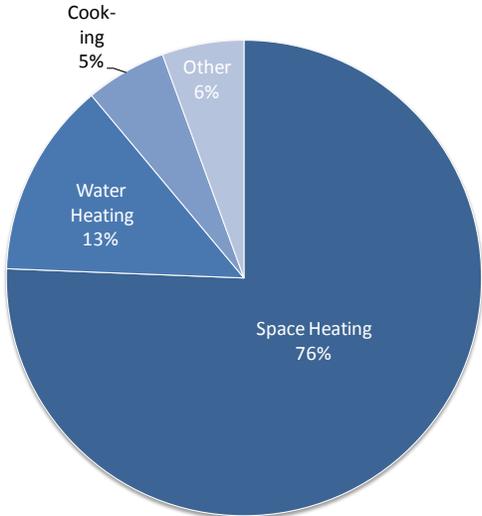


Figure 19. Base Year ENO Commercial Natural Gas Use by End Use (Total 2013 Commercial Sales=51,156,855 Therms)⁴⁵



⁴⁴ Sources: Entergy Services, U.S. DOE RECS 2009

⁴⁵ Includes Government. Sources: Entergy (2014), U.S. DOE (CBECS 2003), Commercial Building Institute (2014)

Figure 20. Base Year Industrial Natural Gas Use by Sector by End Use ⁴⁶

	Large		Small Industrial	All Sectors
	Industrial Gases	All Other - Large Industrial		
Total Industrial Base Year (2013) Sales, Therms	1,051,744	186,724	698,286	1,936,754
% Total Industrial Base Year (2013) Sales	54%	10%	36%	100%
End Use				
Boilers	18%	13%	13%	16%
CHP/Cogeneration	42%	37%	37%	40%
Other Electricity Generation	<1%	<1%	<1%	<1%
Process Heating	32%	42%	42%	36%
Process Cooling and Refrigeration	<1%	<1%	<1%	<1%
Other Process Uses	2%	2%	2%	2%
Machine Drive	3%	2%	2%	3%
HVAC	1%	3%	3%	2%
Onsite Transportation	<1%	1%	1%	1%
Other Nonprocess	<1%	<1%	<1%	<1%

⁴⁶ Sources: Entergy (2014), U.S. DOE (MECS 2010). Note industrial total sales shown in the table do not include combined heat and power (CHP). Note also that the industrial sales forecast provided by SPO and used by ICF to determine the industrial baseline for this Potential Study has been updated since this analysis was performed. SPO's updated industrial sector forecast shows higher growth in industrial electricity use than the previous forecast. All else equal, this may mean that industrial savings potential could be slightly underestimated in this Potential Study, but it is too difficult to draw any specific conclusions about the impacts of the updated industrial forecast without further analysis.

3 Achievable Electric Energy Efficiency Potential

This section includes the presentation and analysis of ICF's forecast of total achievable electric DSM potential for the ENO service area for 2015 through 2034. Total achievable potential is the sum of residential, commercial, and industrial potential. Electric savings and program cost estimates are shown, as well as benefit-cost estimates. The forecast is put in context through benchmarking analysis.

3.1 Cumulative Potential

Total achievable potential is the sum of achievable potential estimated for each measure in the analysis. Total cumulative achievable potential estimates are shown in Figure 21, along with cumulative savings⁴⁷ impacts. Figure 22 provides an overall summary of this Study's forecast including electricity and demand savings, savings impacts, costs, benefits, and cost-effectiveness. To review the forecast:

- ICF estimates that, in the reference case, ENO can achieve cost-effective cumulative electric savings equal to 6.1% of load over the 2015 to 2034 time horizon. Total program costs over this 20-year period are estimated to equal \$111 Million.⁴⁸ Total net benefits are estimated to equal \$100 Million.
- In the high case, we estimate that ENO could achieve an additional 223 GWh in savings for an additional \$28 Million in program spending beyond the reference case. That is, in the high case, savings would increase 59% over reference case levels while spending would increase 25%.
- In the low case, ICF estimates that ENO would achieve 35% less savings than in the reference case, while costs would decrease 17% compared to the reference case.

⁴⁷ The summation of savings from multiple projects or programs over 2015-2034, taking into account the time of measure installation in the first year, annual energy savings for subsequent years, and the life of the installed measures.

⁴⁸ Including program incentive and non-incentive costs.

Figure 21. ENO Cumulative MWh Savings Forecast, by Scenario

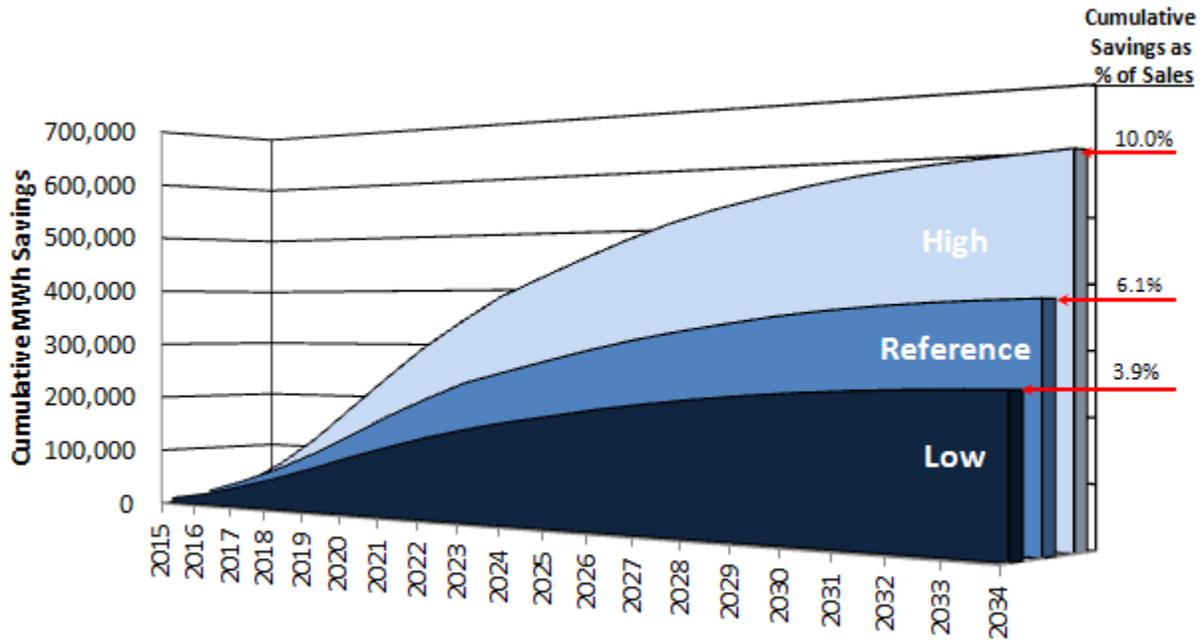


Figure 22. Total Electric Savings, Savings Impacts, Benefits, Costs and Costs-Effectiveness, by Scenario

Scenario	Cumulative GWh Savings (2015-2034)	Cumulative GWh Savings as % of Sales	Cumulative MW Savings (2015-2034)	Cumulative MW Savings as % of Peak ⁴⁹	Total TRC Benefits, 2015-2034 (\$Mil.)	Total TRC Costs, 2015-2034 (\$Mil.) ⁵⁰	Net TRC Benefits, 2015-2034 (\$Mil.) ⁵¹	TRC B/C Ratio	Total Program Costs, 2015-2034 (\$Mil.) ⁵²	Levelized Cost per kWh ⁵³
Low	246	3.9%	69	5.9%	\$182	\$124	\$58	1.5	\$92	\$0.05
Reference	378	6.1%	112	9.6%	\$293	\$193	\$100	1.5	\$111	\$0.06
High	601	10.0%	168	14.5%	\$790	\$463	\$320	1.7	\$139	\$0.09

⁴⁹ Forecasted non-coincident peak demand.

⁵⁰ TRC (Total Resource Cost) test costs include total measure incremental costs and program non-incentive costs over the time horizon of the forecast (2015-2034).

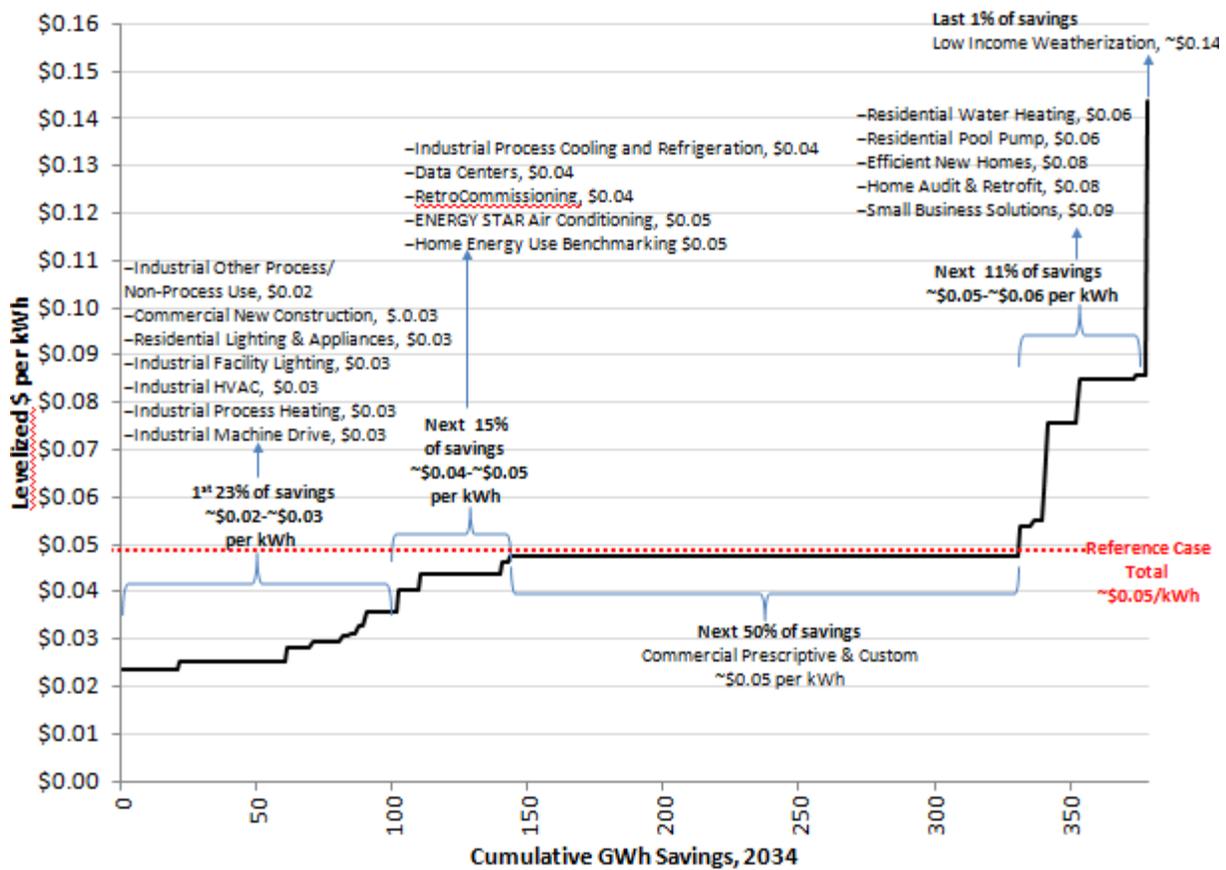
⁵¹ TRC (Total Resource Cost) test benefits include total electric generation (kWh), capacity (kW), and gas (therm) costs avoided over the time horizon of the forecast (2015-2034).

⁵² Program costs include incentive costs and non-incentive costs (e.g., administration, marketing, etc.).

⁵³ Id.

Figure 23 shows the reference case DSM supply curve, which plots cumulative electric savings on the x-axis and levelized program costs on the y-axis.⁵⁴ The graph shows that 23% of savings could be achieved through programs that cost \$0.02-\$0.03 per kWh. Moving from left to right, each additional group of programs shown in the graph is more costly on a per kWh basis. The programs listed in each group on the supply curve are sorted from lowest to highest levelized cost per kWh; Industrial Other Process/Non-Process Use and Commercial New Construction are the least costly; Low Income Weatherization is the most costly. The program with the largest savings impact is Commercial Prescriptive and Custom.

Figure 23. ENO Electric DSM Supply Curve, Reference Case⁵⁵



⁵⁴ Levelized costs are the result of a computational approach used to compare the cost of different projects or technologies. The stream of each project's net costs is discounted to a single year using a discount rate (creating a net present value) and divided by the project's expected lifetime output (kWh in this case).

⁵⁵ Reference case total levelized cost shown (\$0.05/kWh) does not include DR programs. If DR is included, the Reference case total levelized cost is \$0.06/kWh.

3.2 Costs in Context

A recent ACEEE report⁵⁶ summarized levelized program costs over the 2009 to 2012 period across 20 states. Data reported in this study was used to develop Figure 24.⁵⁷ Although historical program costs in other states are not necessarily comparable to future program costs in Louisiana due to differences in baselines, customer mixes, avoided costs, and other factors, it is helpful to put the costs projected in this Potential Study into context.

The total levelized cost per kWh in the reference case in this Potential Study is about \$0.05 per kWh. This is at the upper end of the costs shown for other states in Figure 24 and are similar to the costs researched by ACEEE for Vermont, California, Rhode Island, Connecticut and Massachusetts; this makes sense for at least two reasons.

First, the portfolio of programs modeled for this Study is comprehensive in scope. It includes a wide variety of measures and programs covering all customer sectors, including hard-to-reach markets. Such is the nature of the portfolios run by administrators in the states listed above. If cost-effectiveness was the only goal for energy efficiency, DSM program administrators would likely spend program funding on elements at the lower end of the supply curve.

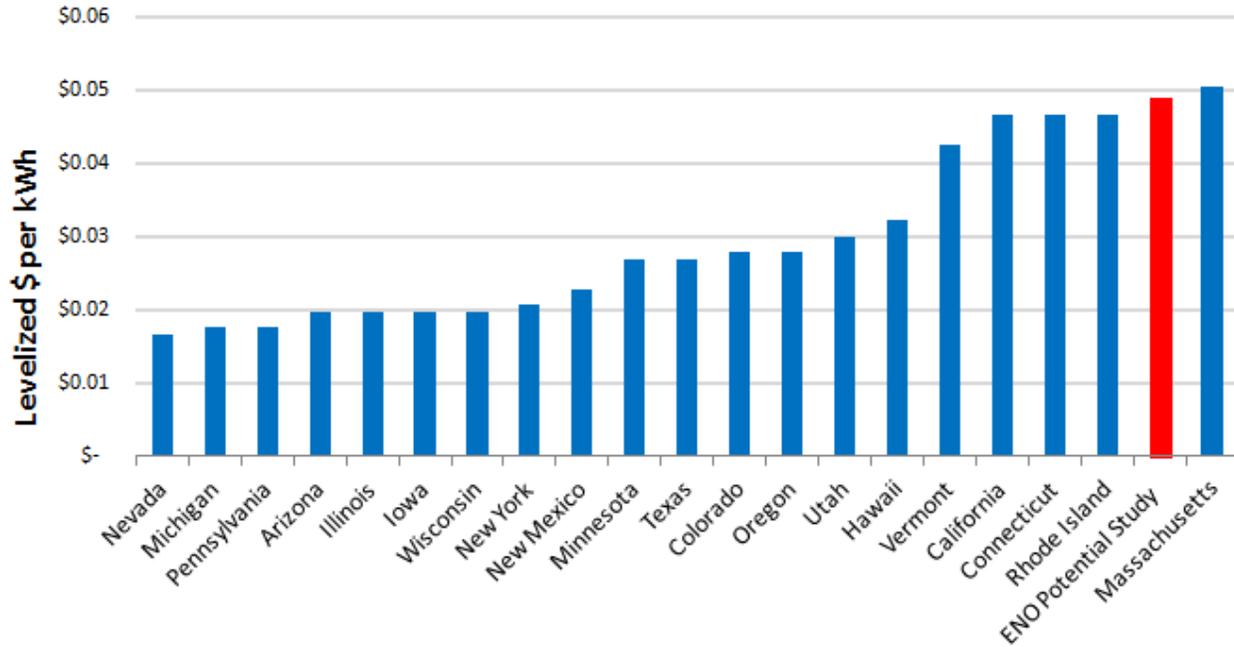
Second, costs in the ACEEE report reflect historical baselines, and heavy program reliance on very cost-effective, popular measures such as CFLs that will either not be available to programs in the future, or will have significantly diminished savings due to baseline changes. For example, according to Efficiency Vermont's 2010 Annual Report, 74% of cumulative residential program savings in 2010 were due to lighting measures.⁵⁸ By comparison, only 39% of cumulative residential program savings for ENO is forecasted to be due to lighting measures -- this is largely due to the impacts of EISA 2007. Given what ICF knows today, such improvements to technology and new construction minimum efficiency standards mean that, all else equal, future programs are likely to be less cost-effective than historical programs.

⁵⁶ Maggie Molina. The Best Value for America's Energy Dollar: A National Review of the Cost of Utility Energy Efficiency Programs. ACEEE Report U1402. March 2014.

⁵⁷ Note that that the levelized costs reported in the ACEEE report reflect savings at the meter, whereas costs in this Study are reported at generator. Also, ACEEE's assumed discount rate was 5%, whereas ENO's discount rate is closer to 7%. ACEEE estimates that accounting for line losses and bringing the savings to the generator level would reduce levelized costs about 7%, and that increasing the discount rate from 5% to 7% would increase levelized costs 10%. These adjustments were made to the levelized cost values reported by ACEEE, and are reflected in Figure 24.

⁵⁸ Efficiency Vermont. Annual Report 2010. February 2012.

Figure 24. Average Levelized Costs of Energy Efficiency in 20 States (2009-2012) and as Forecasted for ENO for this Potential Study (2015-2034)



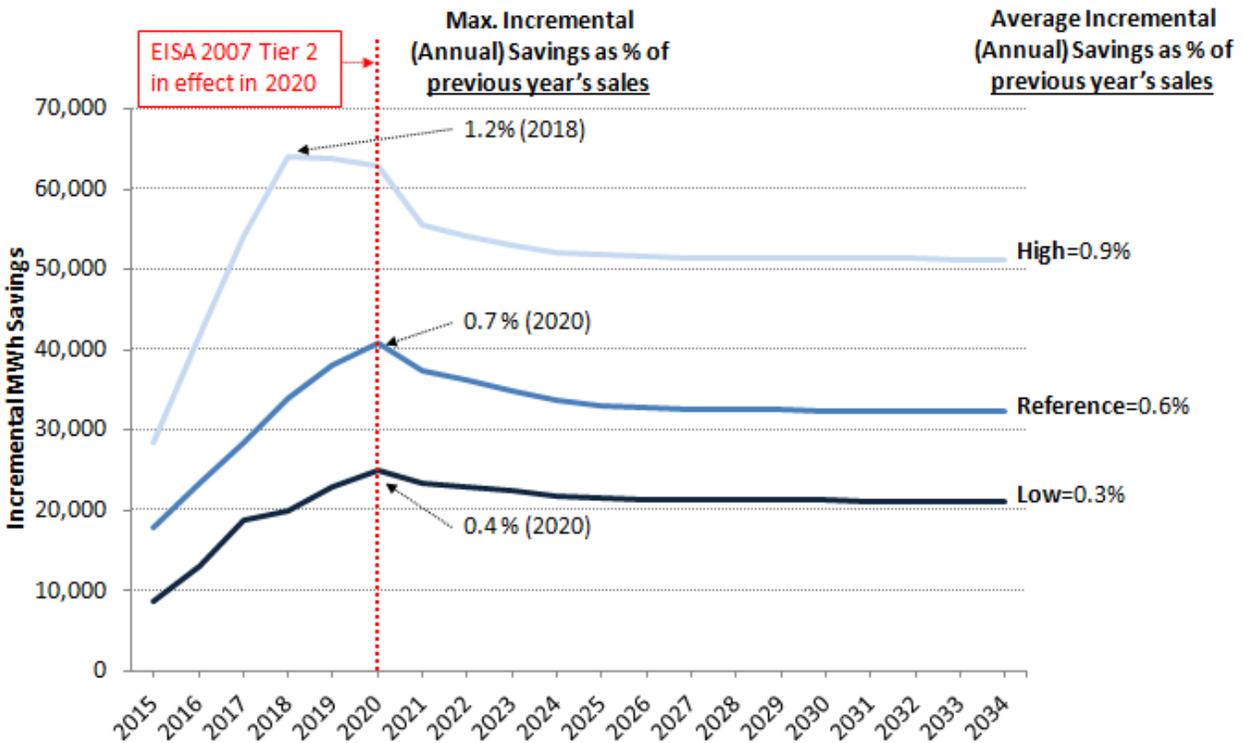
3.3 Incremental Savings Potential

Figure 25 shows the total incremental MWh savings⁵⁹ forecast by scenario. The graph shows that programs are assumed to have different ramp-up schedules in each scenario, with the schedules being the most aggressive in the high case due to the very high incentive levels.

Figure 25 also shows the impacts of EISA 2007 Tier 2, where savings drop significantly post-2020. Prior to 2020, ICF assumed ENO would pursue very aggressive (but achievable) CFL and LED lighting savings for bulb-types that will be phased-out.

⁵⁹ The difference between the amount of energy savings acquired or planned to be acquired as a result of energy efficiency activities in one year, and the amount of energy savings acquired or planned to be acquired as a result of the energy efficiency activities in the prior year.

Figure 25. Incremental MWh Savings, by Scenario



3.4 Savings in context

Figure 26 compares forecasted incremental savings impacts for this Study to savings impacts in Southern states achieved during 2010 through 2012. Column A describes the relevant statistic. Column B provides the statistical values in savings as % of load (i.e., savings as % of sales) for Southern states, and Column C provides a description of the forecast in this Study compared to Column B. To develop the statistics in this table, program performance data was aggregated across 27 EE portfolios and 10 states in the South⁶⁰ over 2010 to 2012.⁶¹ In total there were 76 administrator-program year pairings used for benchmarking. This data is shown in the Appendix.

Average reference case savings impacts forecasted for this Study are equal to the 86th percentile of the benchmarking sample, or 0.6% of sales. In simple terms, this means ICF forecasts that ENO's DSM portfolio could achieve higher savings impacts than did 86% of Southern DSM portfolios during the 2010 to 2012 period. ICF forecasts that, at a minimum, ENO could achieve median-level savings. The maximum level of savings in an average year is equal to the 98th percentile of Southern DSM portfolios during the 2010 to 2012 time period.

⁶⁰ Based on climate zone designations. States in Southern climate zones include: Alabama, Arkansas, Florida, Georgia, Louisiana, Mississippi, North Carolina, Oklahoma, South Carolina, Texas and Virginia.

⁶¹ Using U.S. EIA Form 861 data.

Figure 26. Incremental Savings in Context

(A) Statistic	(B) Savings as % of Load of Southern Portfolios over 2010-12	(C) Relation of (B) to ENO Forecast Scenario (Savings as % of Load)
Minimum	<0.1%	
25th Percentile	0.2%	
50th Percentile (Median)	0.3%	Low case average
73rd Percentile	0.4%	Low case maximum (2020)
86th Percentile	0.6%	Reference case average
92nd Percentile	0.7%	Reference case maximum (2020)
98th Percentile	0.9%	High case average
99th Percentile	1.2%	High case maximum (2018)
Maximum	1.3%	
Average	0.3%	

It is appropriate to compare ENO program performance to that of other programs in the Southern region, and not to a broader, national database of programs for at least two reasons:

- **Comparable Retail Rates.** As shown in Figure 27, Louisiana has some of the lowest retail electric rates in the country. Although there are other barriers to EE besides cost, cost is important, and higher retail rates mean that measures pay for themselves faster, and are therefore more attractive to customers.

Figure 27. U.S. Retail Electric Rates, 2013⁶²

Census Division	2013 YTD Avg Retail Rate (\$/kWh)
West South Central	\$0.085
-Louisiana	\$0.080
East South Central	\$0.087
West North Central	\$0.090
Mountain	\$0.092
East North Central	\$0.093
South Atlantic	\$0.097
Pacific Contiguous	\$0.121
Middle Atlantic	\$0.129
New England	\$0.145
Pacific Noncontiguous	\$0.266
U.S. Total	\$0.101

- **Comparable Weather.** Louisiana is in the Southern U.S. Climate region. This is relevant to EE because many measures, such as air conditioners and insulation, are weather sensitive. These measures have similar savings levels across states with similar climates. For example, air conditioners have a much higher number of operating hours in the South than in the North, and conversely, insulation results in more winter savings in the North than in the South. This is one reason why is it difficult to compare the performance of Southern and Northern programs.

It is true there are administrators with retail rates and weather that are comparable to ENO and that have achieved savings levels higher than that forecasted in this Study. However, those are exceptions and would need to be benchmarked against ENO on a case-by-case basis.

⁶² Source: U.S. EIA Electric Power Monthly, February 2014.

4 Achievable Natural Gas Efficiency Potential

This section includes the presentation and analysis of ICF's forecast of total achievable natural gas energy efficiency potential for the ENO service area for 2015 through 2034. Total achievable potential is the sum of residential, commercial, and industrial potential. Gas savings and program cost estimates are shown, as well as benefit-cost estimates..

4.1 Cumulative Potential

Total achievable potential is the sum of achievable potential estimated for each measure in the analysis. Total cumulative achievable potential estimates are shown in Figure 21, along with cumulative savings⁶³ impacts. Figure 29 provides an overall summary of this Study's gas forecast including savings, savings impacts, costs, benefits, and cost-effectiveness. To review the forecast:

- ICF estimates that, in the reference case, ENO can achieve cost-effective cumulative gas savings equal to 0.5% of sales over the 2015 to 2034 time horizon. Total program costs over this 20-year period are estimated to equal \$9 Million.⁶⁴ Total net benefits are estimated to equal \$24 Million.
- In the high case, we estimate that ENO could achieve an additional 705,876 therms in savings for an additional \$8 Million in program spending beyond the reference case. That is, in the high case, savings would increase 211% over reference case levels while spending would increase 189%.
- In the low case, ICF estimates that ENO would achieve 27% less savings than in the reference case, while costs would decrease 56% compared to the reference case.

⁶³ The summation of savings from multiple projects or programs over 2015-2034, taking into account the time of measure installation in the first year, annual energy savings for subsequent years, and the life of the installed measures.

⁶⁴ Including program incentive and non-incentive costs.

Figure 28. Cumulative Achievable Natural Gas Energy Efficiency Potential, by Scenario

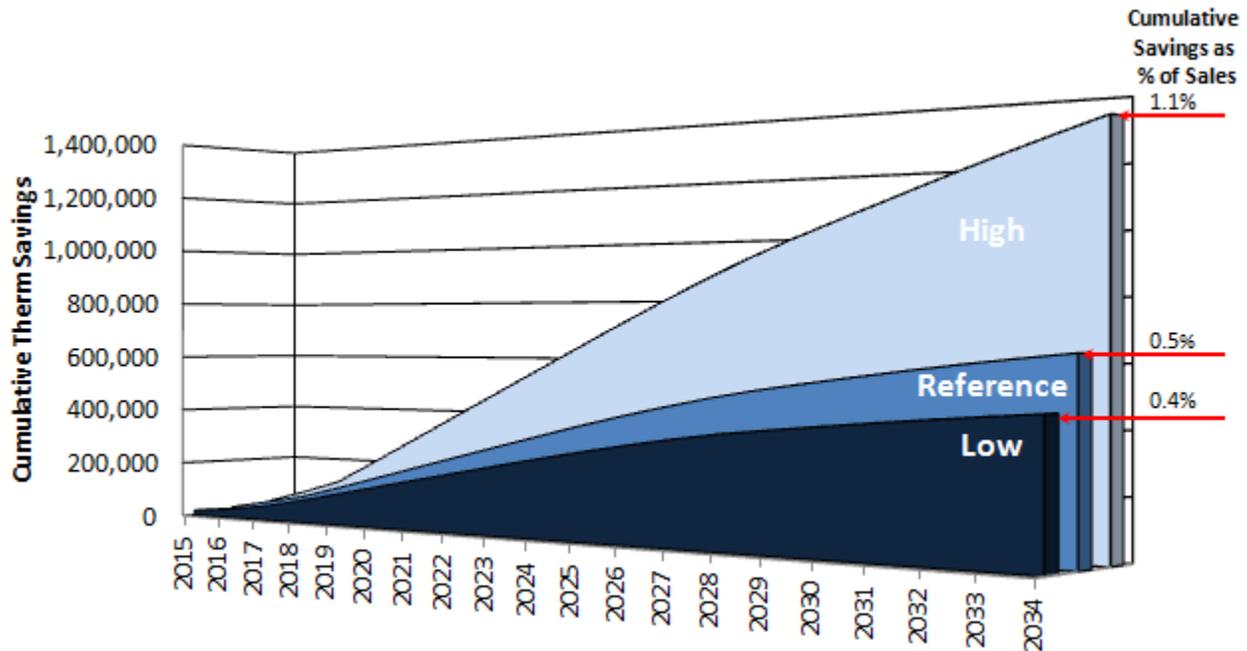


Figure 29. Total Gas Savings, Savings Impacts, Benefits, Costs and Costs-Effectiveness, by Scenario

Scenario	Cumulative Therm Savings (2015-2034)	Cumulative Therm Savings as % of Sales	Total TRC Benefits, 2015-2034 (\$Mil.)	Total TRC Costs, 2015-2034 (\$Mil.) ⁶⁵	Net TRC Benefits, 2015-2034 (\$Mil.) ⁶⁶	TRC B/C Ratio	Total Program Costs, 2015-2034 (\$Mil.) ⁶⁷	Level-ized Cost per Therm
Low	462,039	0.4%	\$19	\$5	\$14	3.7	\$4	\$0.71
Reference	634,173	0.5%	\$31	\$6	\$24	4.9	\$9	\$1.16
High	1,340,048	1.1%	\$51	\$17	\$35	3.1	\$17	\$1.08

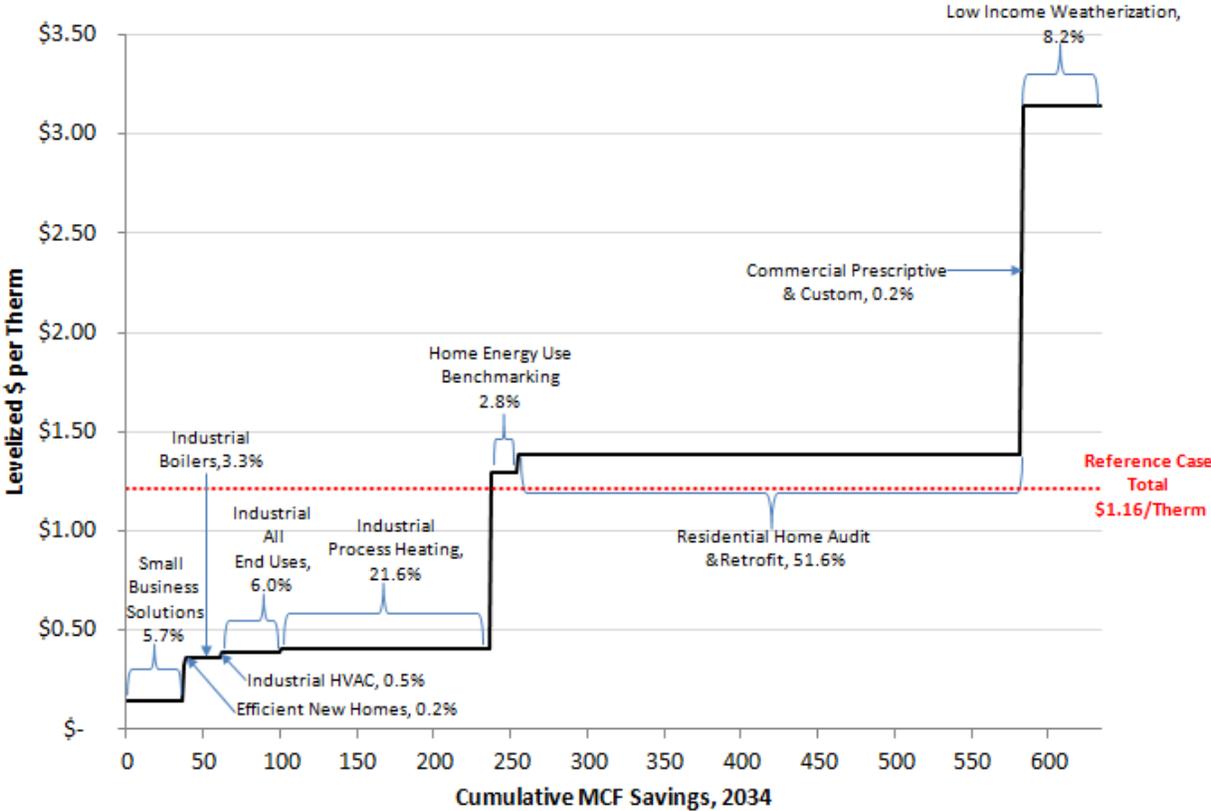
⁶⁵ TRC (Total Resource Cost) test costs include total measure incremental costs and program non-incentive costs over the time horizon of the forecast (2015-2034).

⁶⁶ TRC (Total Resource Cost) test benefits include gas (therm) costs avoided over the time horizon of the forecast (2015-2034).

⁶⁷ Program costs include incentive costs and non-incentive costs (e.g., administration, marketing, etc.).

Figure 30 shows the reference case gas efficiency supply curve, which plots cumulative gas savings on the x-axis and levelized program costs on the y-axis.⁶⁸ The first horizontal segment on the bottom left of the plot shows that 5.7% of savings could be achieved through the Small Business program at a cost of \$0.14 per therm. Moving from left to right, each additional program shown in the graph is more costly on a per therm basis. Residential Home Audit and Retrofit is the program with the largest gas savings potential, while Efficient New Homes and Commercial Prescriptive and Custom have the smallest levels of gas savings potential.

Figure 30. ENO Gas Efficiency Supply Curve, Reference Case

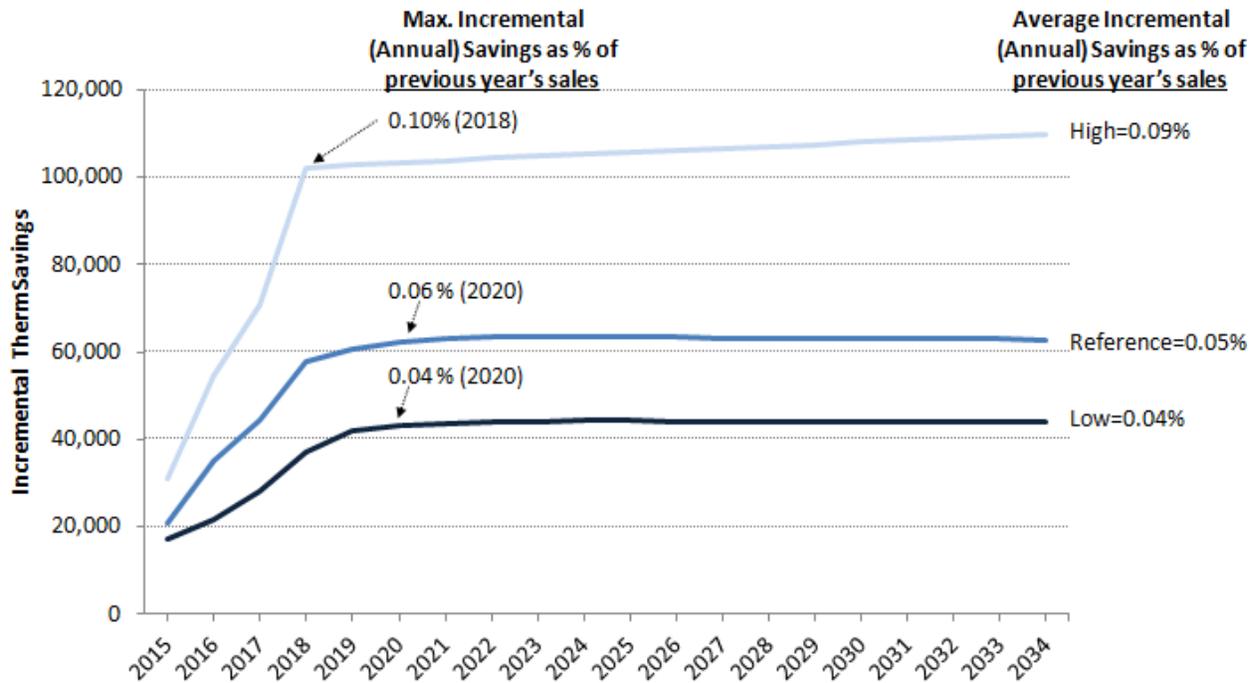


⁶⁸ Levelized costs are the result of a computational approach used to compare the cost of different projects or technologies. The stream of each project’s net costs is discounted to a single year using a discount rate (creating a net present value) and divided by the project’s expected lifetime output (Therms in this case).

4.2 Incremental Potential

Figure 31 shows the total incremental therm savings⁶⁹ forecast by scenario. The graph shows that programs are assumed to have different ramp-up schedules in each scenario, with the schedules being the most aggressive in the high case due to the very high incentive levels.

Figure 31. Incremental Achievable Natural Gas Energy Efficiency Potential, by Scenario



4.3 Gas Program Benchmarking

Research indicates there are an insufficient number of existing gas efficiency programs in the Southern region against which to benchmark the ENO gas potential forecasts. Finding appropriate peer administrators for ENO gas programs is further complicated by the unique composition of ENO's gas customer base, as shown in Figure 17.

Readers may note that gas savings potential is small compared to electric savings potential. There are at least three reasons for this:

⁶⁹ The difference between the amount of energy savings acquired or planned to be acquired as a result of energy efficiency activities in one year, and the amount of energy savings acquired or planned to be acquired as a result of the energy efficiency activities in the prior year.

1. The cost of natural gas is low, and forecasts at the time of the analysis indicate it will continue to be low for the foreseeable future. This limited the number of gas measures that passed the measure TRC cost-effectiveness screen.
2. For residential and commercial gas measures that are cost-effective, there is limited gas savings since these measures are weather sensitive. New Orleans is in the Southern U.S. Climate Region where there is a low number of annual heating degree days.
3. While most industrial gas measures are not weather sensitive, the market size for this sector is small—industrial constitutes only 2% of gas sales.

A key take-away from the gas analysis is that there is insufficient cost-effective gas potential for ENO to run "gas only" programs - the market size is simply too small. This does not mean cost-effective gas measures should not be considered by ENO, but that they should be included in programs that would be combined electric and gas offerings.

5 Combined Electric & Gas Benefits & Costs

Combined electric and gas program benefits and costs are shown in Figure 32.⁷⁰ As stated above in the Approach section, it was assumed that programs with gas measures would be operated jointly with their analogous electric programs. That is, we assumed there would be no stand alone gas programs. This is because there were not any cost-effective gas measures that required the creation of new programs, and because gas savings potential is too small in scale to operate gas programs independently of electric programs.

Ten of the programs described in Section 1.5.1, Programs Modeled, would include both electric and gas measures:

- A. Residential Programs
 1. Efficient New Homes
 2. Home Audit and Retrofit
 3. Home Energy Use Benchmarking
 4. Low Income Weatherization
- B. Commercial and Industrial Programs
 5. Commercial Prescriptive and Custom
 6. Industrial Boilers
 7. Industrial HVAC
 8. Industrial Process Heating
 9. Industrial All End Uses

⁷⁰ Figure 32 includes benefits and costs for all electric and gas programs, i.e., not just for the ten programs listed where there are electric and gas measures included.

10. Small Business Solutions

Figure 32. Combined Electric and Gas Benefits and Costs for All Programs

Scenario	Total TRC Benefits, 2015-2034 (\$Mil.)	Total TRC Costs, 2015-2034 (\$Mil.)	Net TRC Benefits, 2015-2034 (\$Mil.)	TRC B/C Ratio	Total Program Costs, 2015-2034 (\$Mil.)
Low	\$201	\$129	\$72	1.6	\$96
Reference	\$324	\$199	\$124	1.6	\$120
High	\$841	\$480	\$355	1.8	\$156

6 Appendices

- A. Measure characteristics and assumptions
- B. Net-to-gross assumptions
- C. Payback acceptance curves and participation approaches utilized
- D. Program level savings, costs and cost-effectiveness
- E. Benchmarking data
- F. Avoided costs

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page

Long-Term Demand Side Management Potential in the Entergy New Orleans Service Area, Final Report,
 June 2015

Appendix A: Measure Characteristics and Assumptions

This Appendix includes measure characteristics, assumptions, and sources.

Below, definitions are provided for variables whose names may require further description for the reader.

Variable	Definition
<i>Participation</i>	
First Year of Participation (So Year)	First year of the analysis in which participation is forecasted to occur for a measure. In some cases, participation does not occur in the first year of the analysis (2015) because the baseline is not relevant until after 2015; in some cases we forecasted it would take a year or more before a program could realize savings for a measure due to program processes or historically slow adoption rates.
First Year Annual Participation Rate (So)	Annual (incremental) participation rate in first year in which participation is forecasted to occur.
Year of Maximum Annual Participation (Smax Year)	Year of the analysis in which the maximum participation rate is forecasted to occur for this measure.
Maximum Annual Participation Rate (Smax)	Annual (incremental) participation rate in the year in which the maximum participation rate is forecasted to occur.
Final Year of Participation (Fo Year)	Final year in the analysis in which participation is forecasted to occur for this measure. If not 2034, this is due to a baseline change.
Final Year Annual Participation Rate (Fo)	Annual (incremental) participation rate in the final year in which participation is forecasted to occur for this measure.
<i>Applicability Factors</i>	
Total Sub-Sector Units	# of applicable buildings for commercial and residential, or # of applicable kWh for industrial process
Measure Units per Sub-Sector Unit	# of measure units applicable per sub-sector unit
Applicability	% of subsector measure is applicable to
Technical Feasibility	% of cases where measure can technically be installed
Distribution of Measure Permutation by Measure Size	If multiple measure permutations by size, the % applicability of the measure permutation's size across the relevant size options. Based on baseline data on relevant buildings/subsectors.
Distribution of Measure Permutation by Efficiency Level	If multiple measure permutations by efficiency level, the % applicability of the measure permutation's efficiency level across relevant efficiency levels. Based upon relative payback acceptance, and/or professional judgment as needed.
Not Yet Adopted Rate	One minus the current measure saturation rate
Annual Replacement Eligibility	1/measure life for replace on burnout; 100% for retrofit and new construction.
Total Applicable Measure Units	Product of all other applicability factors. Total market size for measure in 2014.

Residential Measures

							MEASURE DESCRIPTION	
Measure ID	Weather Sensitive	Sector	Sub-Sector	Building Type	End Use	Measure Name	Efficient Measure Definition	Base Measure Definition
1	NWS	Residential	All	All	Lighting	Residential Lighting Efficiency	15 W CFL - General Purpose Lighting	43W EISA compliant lamp
2	NWS	Residential	All	All	Lighting	Residential Lighting Efficiency	15 W CFL - Generic Specialty Lamp	60W EISA-exempt incandescent generic specialty lamp
3	NWS	Residential	All	All	Lighting	Residential Lighting Efficiency	12 W LED - A-type Omni-directional General Purpose Lighting	43W EISA compliant lamp
4	NWS	Residential	All	All	Lighting	Residential Lighting Efficiency	12 W LED - Generic Specialty Lamp	60W EISA-exempt incandescent generic specialty lamp
5	NWS	Residential	All	All	Consumer Electronics	Consumer Electronics	ENERGY STAR TV	Standard TV
6	NWS	Residential	All	Gas WH	Appliances	ENERGYSTAR Clothes Washer and Dryer	MEF>2.0 and WF<6.0	MEF>1.26 and WF<9.5
7	NWS	Residential	All	Electric WH	Appliances	ENERGYSTAR Clothes Washer and Dryer	MEF>2.0 and WF<6.0	MEF>1.26 and WF<9.5
8	NWS	Residential	All	Electric WH	Appliances	ENERGYSTAR Clothes Washer and Dryer	MEF>2.0 and WF<6.0	MEF>1.26 and WF<9.5
9	NWS	Residential	All	Gas WH	Appliances	ENERGYSTAR Clothes Washer and Dryer	MEF>2.0 and WF<6.0	MEF>1.26 and WF<9.5
10	NWS	Residential	All	Electric WH	Appliances	ENERGYSTAR Dishwasher	<=307 KWh/yr Standard, <=222 KWh/yr Compact	<=355 KWh/yr Standard, <=260 KWh/yr Compact
11	NWS	Residential	All	Gas WH	Appliances	ENERGYSTAR Dishwasher	<=307 KWh/yr Standard, <=222 KWh/yr Compact	<=355 KWh/yr Standard, <=260 KWh/yr Compact
12	NWS	Residential	All	All	Appliances	HE Refrigerator	2014 CEE Tier 3 Refrigerator	2011 DOE Standards = 2014 CEE Tier2
13	WS	Residential	All	Gas Heat (No AC)	HVAC	Room Air Conditioner	CEE Tier1 Window Unit 8000 btu; 11.3 EER	DOE 2014 Standard 8000 btu window unit; EER10.9
14	WS	Residential	All	Gas Heat (No AC)	HVAC	Room Air Conditioner	CEE Tier1 Wall Unit 20000 btu; 9.8 EER	DOE 2014 Standard Wall Unit 20000 btu; 9.4 EER
15	NWS	Residential	All	All	Appliances	Advanced Power Strips	advanced power strip	standard surge protector or wall outlet
16	NWS	Residential	All	All	Appliances	ENERGY STAR Dehumidifier	ENERGY STAR Dehumidifier, 1.85 LkWh	Federal Standard Dehumidifier, 1.5 LkWh
17	NWS	Residential	All	Electric WH	Hot Water	Water Heater Replacement	50 Gallon Heat Pump Water Heater - EF 2	50 Gallon Electric Storage Water Heater EF .94
18	NWS	Residential	All	Electric WH	Hot Water	Water Heater Replacement	50 Gallon Heat Pump Water Heater - EF 2.35	50 Gallon Electric Storage Water Heater EF .94
19	NWS	Residential	All	Electric WH	Hot Water	Water Heater Replacement	80 Gallon Heat Pump Water Heater - EF 2.35	80 Gallon Electric Storage Water Heater - EF 2
20	NWS	Residential	All	Electric WH	Hot Water	Water Heater Replacements	0.99 EF - Tankless Water Heater	50 Gallon Electric Storage Water Heater EF .93
22	NWS	Residential	SingleFamily&Duplex	All	Other	Home Energy Audit	Duct and Envelope Test-in/Test-out	Duct and Envelope Test-in/Test-out
23	NWS	Residential	SingleFamily&Duplex	All	Lighting	Residential Lighting Efficiency	15 W CFL - General Purpose Lighting Direct Install	43W EISA compliant lamp
24	NWS	Residential	SingleFamily&Duplex	Electric WH	Hot Water	Faucet Aerators	1.5 GPM	2.2 GPM
25	NWS	Residential	SingleFamily&Duplex	Electric WH	Hot Water	Low Flow Showerheads	1.5 GPM	2.5 GPM
26	WS	Residential	SingleFamily&Duplex	AC/Gas Heat	Shell	Air Infiltration	14.3 ACH50 ~ 1.9 CFM50/sq ft	10.5 ACH50 ~ 1.4 CFM50/sq ft
27	WS	Residential	SingleFamily&Duplex	Gas Heat (No AC)	Shell	Air Infiltration	14.3 ACH50 ~ 1.9 CFM50/sq ft	10.5 ACH50 ~ 1.4 CFM50/sq ft
28	WS	Residential	SingleFamily&Duplex	AC/Electric Resistance Heat	Shell	Air Infiltration	14.3 ACH50 ~ 1.9 CFM50/sq ft	10.5 ACH50 ~ 1.4 CFM50/sq ft
29	WS	Residential	SingleFamily&Duplex	Heat Pump	Shell	Air Infiltration	14.3 ACH50 ~ 1.9 CFM50/sq ft	10.5 ACH50 ~ 1.4 CFM50/sq ft
30	WS	Residential	SingleFamily&Duplex	AC/Gas Heat	Shell	Attic Knee Wall Insulation	R-30	No Insulation
31	WS	Residential	SingleFamily&Duplex	Gas Heat (No AC)	Shell	Attic Knee Wall Insulation	R-30	No Insulation
32	WS	Residential	SingleFamily&Duplex	AC/Electric Resistance Heat	Shell	Attic Knee Wall Insulation	R-30	No Insulation
33	WS	Residential	SingleFamily&Duplex	Heat Pump	Shell	Attic Knee Wall Insulation	R-30	No Insulation
34	WS	Residential	SingleFamily&Duplex	AC/Gas Heat	Shell	Ceiling Insulation	10"-12" of Insulation	0"-2" of Insulation
35	WS	Residential	SingleFamily&Duplex	AC/Gas Heat	Shell	Ceiling Insulation	10"-12" of Insulation	2"-4" of Insulation
36	WS	Residential	SingleFamily&Duplex	AC/Gas Heat	Shell	Ceiling Insulation	10"-12" of Insulation	4"-6" of Insulation
37	WS	Residential	SingleFamily&Duplex	AC/Gas Heat	Shell	Ceiling Insulation	10"-12" of Insulation	6"-8" of Insulation
38	WS	Residential	SingleFamily&Duplex	Gas Heat (No AC)	Shell	Ceiling Insulation	10"-12" of Insulation	0"-2" of Insulation
39	WS	Residential	SingleFamily&Duplex	Gas Heat (No AC)	Shell	Ceiling Insulation	10"-12" of Insulation	2"-4" of Insulation
40	WS	Residential	SingleFamily&Duplex	Gas Heat (No AC)	Shell	Ceiling Insulation	10"-12" of Insulation	4"-6" of Insulation
41	WS	Residential	SingleFamily&Duplex	Gas Heat (No AC)	Shell	Ceiling Insulation	10"-12" of Insulation	6"-8" of Insulation
42	WS	Residential	SingleFamily&Duplex	AC/Electric Resistance Heat	Shell	Ceiling Insulation	10"-12" of Insulation	0"-2" of Insulation
43	WS	Residential	SingleFamily&Duplex	AC/Electric Resistance Heat	Shell	Ceiling Insulation	10"-12" of Insulation	2"-4" of Insulation
44	WS	Residential	SingleFamily&Duplex	AC/Electric Resistance Heat	Shell	Ceiling Insulation	10"-12" of Insulation	4"-6" of Insulation
45	WS	Residential	SingleFamily&Duplex	AC/Electric Resistance Heat	Shell	Ceiling Insulation	10"-12" of Insulation	6"-8" of Insulation
46	WS	Residential	SingleFamily&Duplex	Heat Pump	Shell	Ceiling Insulation	10"-12" of Insulation	0"-2" of Insulation
47	WS	Residential	SingleFamily&Duplex	Heat Pump	Shell	Ceiling Insulation	10"-12" of Insulation	2"-4" of Insulation
48	WS	Residential	SingleFamily&Duplex	Heat Pump	Shell	Ceiling Insulation	10"-12" of Insulation	4"-6" of Insulation
49	WS	Residential	SingleFamily&Duplex	Heat Pump	Shell	Ceiling Insulation	10"-12" of Insulation	6"-8" of Insulation
50	WS	Residential	SingleFamily&Duplex	AC/Electric Resistance Heat	HVAC	Duct Sealing	6.8 CFM25 per 100sqft of Conditioned Space	23 CFM25 per 100sqft of Conditioned Space
51	WS	Residential	SingleFamily&Duplex	Heat Pump	HVAC	Duct Sealing	6.8 CFM25 per 100sqft of Conditioned Space	23 CFM25 per 100sqft of Conditioned Space
52	WS	Residential	SingleFamily&Duplex	AC/Gas Heat	HVAC	Duct Sealing	6.8 CFM25 per 100sqft of Conditioned Space	23 CFM25 per 100sqft of Conditioned Space
53	WS	Residential	SingleFamily&Duplex	AC/Gas Heat	Shell	Energy Star Windows	U-0.35 and SHGC 0.3	single pane
54	WS	Residential	SingleFamily&Duplex	Gas Heat (No AC)	Shell	Energy Star Windows	U-0.35 and SHGC 0.3	single pane
55	WS	Residential	SingleFamily&Duplex	AC/Electric Resistance Heat	Shell	Energy Star Windows	U-0.35 and SHGC 0.3	single pane
56	WS	Residential	SingleFamily&Duplex	Heat Pump	Shell	Energy Star Windows	U-0.35 and SHGC 0.3	single pane
57	WS	Residential	SingleFamily&Duplex	AC/Gas Heat	Shell	Energy Star Windows	U-0.35 and SHGC 0.3	double pane
58	WS	Residential	SingleFamily&Duplex	Gas Heat (No AC)	Shell	Energy Star Windows	U-0.35 and SHGC 0.3	double pane
59	WS	Residential	SingleFamily&Duplex	AC/Electric Resistance Heat	Shell	Energy Star Windows	U-0.35 and SHGC 0.3	double pane
60	WS	Residential	SingleFamily&Duplex	Heat Pump	Shell	Energy Star Windows	U-0.35 and SHGC 0.3	double pane

Residential Measures

Measure ID	Weather Sensitive	Sector	Sub-Sector	Building Type	End Use	Measure Name	MEASURE DESCRIPTION	
							Efficient Measure Definition	Base Measure Definition
61	WS	Residential	SingleFamily&Duplex	AC/Gas Heat	Shell	Floor Insulation	R-19	No Insulation
62	WS	Residential	SingleFamily&Duplex	Gas Heat (No AC)	Shell	Floor Insulation	R-19	No Insulation
63	WS	Residential	SingleFamily&Duplex	AC/Electric Resistance Heat	Shell	Floor Insulation	R-19	No Insulation
64	WS	Residential	SingleFamily&Duplex	Heat Pump	Shell	Floor Insulation	R-19	No Insulation
65	WS	Residential	SingleFamily&Duplex	AC/Gas Heat	Shell	Radiant Barriers	Ceiling insulation > R-19w/radiant barrier	Ceiling insulation > R-19w/o radiant barrier
66	WS	Residential	SingleFamily&Duplex	Gas Heat (No AC)	Shell	Radiant Barriers	Ceiling insulation > R-19w/radiant barrier	Ceiling insulation > R-19w/o radiant barrier
67	WS	Residential	SingleFamily&Duplex	AC/Electric Resistance Heat	Shell	Radiant Barriers	Ceiling insulation > R-19w/radiant barrier	Ceiling insulation > R-19w/o radiant barrier
68	WS	Residential	SingleFamily&Duplex	Heat Pump	Shell	Radiant Barriers	Ceiling insulation > R-19w/radiant barrier	Ceiling insulation > R-19w/o radiant barrier
69	WS	Residential	SingleFamily&Duplex	AC/Gas Heat	Shell	Wall Insulation	R-13	No Insulation
70	WS	Residential	SingleFamily&Duplex	Gas Heat (No AC)	Shell	Wall Insulation	R-13	No Insulation
71	WS	Residential	SingleFamily&Duplex	AC/Electric Resistance Heat	Shell	Wall Insulation	R-13	No Insulation
72	WS	Residential	SingleFamily&Duplex	Heat Pump	Shell	Wall Insulation	R-13	No Insulation
73	WS	Residential	SingleFamily&Duplex	Electric WH	Hot Water	Water Heater Jackets	3" WHJ	No Insulation
74	WS	Residential	SingleFamily&Duplex	Electric WH	Hot Water	Water Heater Pipe Insulation	3/4" Insulation	No Insulation
75	WS	Residential	SingleFamily&Duplex	AC/Gas Heat	Shell	Window Film	Film SHGC < 0.5	double pane
76	WS	Residential	SingleFamily&Duplex	Gas Heat (No AC)	Shell	Film SHGC < 0.5	Film SHGC < 0.5	double pane
77	WS	Residential	SingleFamily&Duplex	AC/Electric Resistance Heat	Shell	Window Film	Film SHGC < 0.5	double pane
78	WS	Residential	SingleFamily&Duplex	Heat Pump	Shell	Window Film	Film SHGC < 0.5	double pane
79	NWS	Residential	SingleFamily&Duplex	All	Other	ENERGY STAR Variable Speed Drive Pool Pump	VSD Pump ≥1.0 HP and ≤2.0 HP - Summer-Only Operation (5.5 months)	Single Speed Pump - ≥1.0 HP and ≤2.0 HP - Summer-Only Operation (5.5 months)
80	NWS	Residential	SingleFamily&Duplex	All	HVAC	High Efficiency Bathroom Exhaust Fan	Exhaust fan, 8.3 CFM/W, <2.0 sones (quiet), operating in accordance with ASHRAE 62.2	Exhaust fan, 3.1 CFM/W, <2.0 sones (quiet), operating in accordance with ASHRAE 62.2
82	WS	Residential	All	AC/Electric Resistance Heat	HVAC	Central AC Replacement	SEER 15 CAC	SEER 14 CAC
83	WS	Residential	All	AC/Electric Resistance Heat	HVAC	Central AC Replacement	SEER 16 CAC	SEER 14 CAC
84	WS	Residential	All	AC/Electric Resistance Heat	HVAC	Central AC Replacement	SEER 18 CAC	SEER 14 CAC
85	WS	Residential	All	AC/Electric Resistance Heat	HVAC	Central AC Replacement	SEER 15 CAC	SEER 13 CAC
86	WS	Residential	All	AC/Electric Resistance Heat	HVAC	Central AC Replacement	SEER 16 CAC	SEER 13 CAC
87	WS	Residential	All	AC/Electric Resistance Heat	HVAC	Central AC Replacement	SEER 18 CAC	SEER 13 CAC
88	WS	Residential	All	AC/Gas Heat	HVAC	Central AC Replacement	SEER 15 CAC with ECM Furnace Motor	SEER 14 CAC with PSC Furnace Motor
89	WS	Residential	All	AC/Gas Heat	HVAC	Central AC Replacement	SEER 16 CAC with ECM Furnace Motor	SEER 14 CAC with PSC Furnace Motor
90	WS	Residential	All	AC/Gas Heat	HVAC	Central AC Replacement	SEER 18 CAC with ECM Furnace Motor	SEER 14 CAC with PSC Furnace Motor
91	WS	Residential	All	AC/Gas Heat	HVAC	Central AC Replacement	SEER 15 CAC with ECM Furnace Motor	SEER 13 CAC with PSC Furnace Motor
92	WS	Residential	All	AC/Gas Heat	HVAC	Central AC Replacement	SEER 16 CAC with ECM Furnace Motor	SEER 13 CAC with PSC Furnace Motor
93	WS	Residential	All	AC/Gas Heat	HVAC	Central AC Replacement	SEER 18 CAC with ECM Furnace Motor	SEER 13 CAC with PSC Furnace Motor
94	WS	Residential	All	Heat Pump	HVAC	Heat Pump Replacement	SEER 15 HP	SEER 14 HP
95	WS	Residential	All	Heat Pump	HVAC	Heat Pump Replacement	SEER 16 HP	SEER 14 HP
96	WS	Residential	All	Heat Pump	HVAC	Heat Pump Replacement	SEER 18 HP	SEER 14 HP
97	WS	Residential	All	Heat Pump	HVAC	Heat Pump Replacement	SEER 15 HP	SEER 13 HP
98	WS	Residential	All	Heat Pump	HVAC	Heat Pump Replacement	SEER 16 HP	SEER 13 HP
99	WS	Residential	All	Heat Pump	HVAC	Heat Pump Replacement	SEER 18 HP	SEER 13 HP
100	WS	Residential	All	AC	HVAC	Mini-Split AC	SEER 15 Mini-Split AC	SEER 14 CAC
101	WS	Residential	All	AC	HVAC	Mini-Split AC	SEER 22 Mini-Split AC	SEER 14 CAC
102	WS	Residential	All	Heat Pump	HVAC	Mini-Split Heat Pump	SEER 15 Mini-Split Heat Pump	SEER 14 Central Heat Pump
103	WS	Residential	All	Heat Pump	HVAC	Mini-Split Heat Pump	SEER 22 Mini-Split Heat Pump	SEER 14 Central Heat Pump
104	WS	Residential	All	AC	HVAC	Mini-Split AC	SEER 15 Mini-Split AC	SEER 13 CAC
105	WS	Residential	All	AC	HVAC	Mini-Split AC	SEER 22 Mini-Split AC	SEER 13 CAC
106	WS	Residential	All	Heat Pump	HVAC	Mini-Split Heat Pump	SEER 15 Mini-Split Heat Pump	SEER 13 Central Heat Pump
107	WS	Residential	All	Heat Pump	HVAC	Mini-Split Heat Pump	SEER 22 Mini-Split Heat Pump	SEER 13 Central Heat Pump
108	WS	Residential	SingleFamily&Duplex	Heat Pump	HVAC	Ground Source Heatpump	ENERGY STAR Open Loop Water-to-Air System with Desuperheater	SEER 13 Air Source Heat Pump
109	WS	Residential	SingleFamily&Duplex	Heat Pump	HVAC	Ground Source Heatpump	ENERGY STAR Open Loop Water-to-Air System with Desuperheater	SEER 14 Air Source Heat Pump
111	WS	Residential	All	AC	HVAC	Central AC Tune-up	5% improvement in efficiency of existing equipment (11.2 EER)	Existing equipment (10.6 EER)
112	WS	Residential	All	Heat Pump	HVAC	Heat Pump Tune-up	5% improvement in efficiency of existing equipment (11.2 EER)	Existing equipment (10.6 EER)
114	NWS	Residential	All	All	Appliances	Refrigerator/Freezer Recycling	Recycling Secondary Refrigerator/Freezer	Functioning Secondary Refrigerator/Freezer
115	NWS	Residential	All	Gas Heat (No AC)	HVAC	Room Air Conditioner Recycling	Recycling of non-efficient window AC unit	Inefficient window AC unit
117	NWS	Residential	Multifamily	All	Other	Home Energy Audit	Direct Install	Direct Install
118	NWS	Residential	Multifamily	All	Lighting	Residential Lighting Efficiency	15 W CFL - General Purpose Lighting Direct Install	43W EISA compliant lamp
119	NWS	Residential	Multifamily	Electric WH	Hot Water	Faucet Aerators	1.5 GPM	2.2 GPM
120	NWS	Residential	Multifamily	Electric WH	Hot Water	Low Flow Showerheads	1.5 GPM	2.5 GPM

Residential Measures

Measure ID	Weather Sensitive	Sector	Sub-Sector	Building Type	End Use	Measure Name	MEASURE DESCRIPTION	
							Efficient Measure Definition	Base Measure Definition
121	NWS	Residential	Multifamily	Common Area	Lighting	Hallway Lighting Efficiency	High Performance T8/T5 with Low-BF Ballast	2-Lamp 32W HPT8/T5 with Low-BF Ballast
122	NWS	Residential	Multifamily	Common Area	Lighting	Exterior Lighting Efficiency	75 W Outdoor LED lamp	250W Metal Halide
124	WS	Residential	SingleFamily&Duplex	All	Lighting	New home - lighting	High Performance Homes - Lighting Package	
125	WS	Residential	SingleFamily&Duplex	All	Other	New home - nonlighting	High Performance Homes - HVAC and Shell Improvements	Code level home with SEER 13 cooling equipment
126	WS	Residential	SingleFamily&Duplex	All	Other	New home - nonlighting	High Performance Homes - HVAC and Shell Improvements	Code level home with SEER 14 cooling equipment
127	WS	Residential	SingleFamily&Duplex	All	Other	New home - furnace	High Performance Homes - Furnace Improvements	Code level home with standard furnace
129	WS	Residential	All	All	Other	Benchmarking	2% Energy savings on average	
130	WS	Residential	All	AC	Other	Direct Load Control Switch	0.85 kW Savings	
131	WS	Residential	All	Heat Pump	Other	Direct Load Control Switch	0.85 kW Savings	
132	WS	Residential	All	AC	Other	Direct Load Control Thermostat	0.85 kW Savings	
133	WS	Residential	All	Heat Pump	Other	Direct Load Control Thermostat	0.85 kW Savings	
134	WS	Residential	All	AC	Other	Enabled Dynamic Pricing (Res)	27.5% Peak Demand Savings	
135	WS	Residential	All	AC	Other	Non-Enabled Dynamic Pricing (Res)	11% Peak Demand Savings	
136	WS	Residential	All	All	Other	Low-Income Weatherization Package		
137	WS	Residential	All	Electric WH	Hot Water	Solar Hot Water	Solar DHW 3.0 EF meeting SRCC OG-300 Standard; 80 gallon tank (LA State Tax Credit version, valid through 2017)	
138	WS	Residential	All	Electric WH	Hot Water	Solar Hot Water	Solar DHW 3.0 EF meeting SRCC OG-300 Standard; 80 gallon tank	
140	WS	Residential	SingleFamily&Duplex	AC/Gas Heat	HVAC	Duct Insulation	R-8	Un-insulated metal supply and return ductwork
141	WS	Residential	SingleFamily&Duplex	Gas Heat (No AC)	HVAC	Duct Insulation	R-8	Un-insulated metal supply and return ductwork
142	WS	Residential	SingleFamily&Duplex	AC/Electric Resistance Heat	HVAC	Duct Insulation	R-8	Un-insulated metal supply and return ductwork
143	WS	Residential	SingleFamily&Duplex	Heat Pump	HVAC	Duct Insulation	R-8	Un-insulated metal supply and return ductwork
144	WS	Residential	SingleFamily&Duplex	AC/Gas Heat	HVAC	Gas Furnace Replacement	ENERGY STAR 90% AFUE	80% AFUE
145	WS	Residential	SingleFamily&Duplex	Gas Heat (No AC)	HVAC	Gas Furnace Replacement	ENERGY STAR 90% AFUE	80% AFUE
146	WS	Residential	Multifamily	AC/Gas Heat	HVAC	Gas Furnace Replacement	ENERGY STAR 90% AFUE	80% AFUE
147	WS	Residential	Multifamily	Gas Heat (No AC)	HVAC	Gas Furnace Replacement	ENERGY STAR 90% AFUE	80% AFUE
148	WS	Residential	All	AC/Gas Heat	HVAC	Gas Furnace Tune-Up	Tune-up of an existing residential gas furnace	Existing residential furnace
149	WS	Residential	All	Gas Heat (No AC)	HVAC	Gas Furnace Tune-Up	Tune-up of an existing residential gas furnace	Existing residential furnace
150	WS	Residential	All	Gas WH	Hot Water	Efficient Gas water heaters	.62 EF storage water heater	.59 EF storage water heater
151	WS	Residential	All	Gas WH	Hot Water	Tankless Gas water heater	.82 EF tankless water heater	.59 EF storage water heater
152	WS	Residential	All	Gas WH	Hot Water	Gas WH jacket	R-6.7 insulation (40, gallons, 3" insulation)	uninsulated post 1991 storage-type water heater (40 gallons)
153	WS	Residential	All	Gas WH	Hot Water	Gas WH pipe insulation	1/2" insulation on hot water pipes	uninsulated hot water pipes
154	NWS	Residential	All	Gas WH	Hot Water	Faucet aerators – Gas WH	1.5 GPM	2.2 GPM
155	NWS	Residential	All	Gas WH	Hot Water	Low Flow Showerheads	1.5 GPM	2.5 GPM

Residential Measures

Measure ID	Weather Sensitive	Sector	Sub-Sector	Building Type	End Use	Measure Name	Measure Unit Name	EPM Logic (RET/ROB/N/EW)	Baseline Unit Lifetime (Years)	Efficient Unit Lifetime (Years)	MEASURE INCREMENTAL SAVING PER UNIT					
											Total Incremental Cost	Annual kWh Savings	Annual kW Coincident Peak Savings	Annual Gas Savings (Therms)	Annual kWh Increases	Annual kW Coincident Peak Increases
1	NWS	Residential	All	All	Lighting	Residential Lighting Efficiency	per lamp	ROB	2	8	\$1.50	15	0.00300	0	0	0
2	NWS	Residential	All	All	Lighting	Residential Lighting Efficiency	per lamp	ROB	2	8	\$5.00	25	0.00530	0	0	0
3	NWS	Residential	All	All	Lighting	Residential Lighting Efficiency	per lamp	ROB	2	20	\$10.00	19	0.00410	0	0	0
4	NWS	Residential	All	All	Lighting	Residential Lighting Efficiency	per lamp	ROB	2	20	\$10.00	29	0.00630	0	0	0
5	NWS	Residential	All	All	Consumer Electronics	Consumer Electronics	per appliance	ROB	8	8	\$40.00	140	0.00160	0	0	0
6	NWS	Residential	All	Gas WH	Appliances	ENERGYSTAR Clothes Washer and Dryer	per appliance	ROB	11	11	\$175.76	24	0.00300	9	0	0
7	NWS	Residential	All	Electric WH	Appliances	ENERGYSTAR Clothes Washer and Dryer	per appliance	ROB	11	11	\$175.76	224	0.03100	0	0	0
8	NWS	Residential	All	Electric WH	Appliances	ENERGYSTAR Clothes Washer and Dryer	per appliance	ROB	11	11	\$175.76	141	0.01900	3	0	0
9	NWS	Residential	All	Gas WH	Appliances	ENERGYSTAR Clothes Washer and Dryer	per appliance	ROB	11	11	\$175.76	97	0.01300	6	0	0
10	NWS	Residential	All	Electric WH	Appliances	ENERGYSTAR Dishwasher	per appliance	ROB	11	11	\$259.00	74	0.01000	0	0	0
11	NWS	Residential	All	Gas WH	Appliances	ENERGYSTAR Dishwasher	per appliance	ROB	11	11	\$259.00	33	0.00400	2	0	0
12	NWS	Residential	All	All	Appliances	HE Refrigerator	per appliance	ROB	16	16	\$84.00	26	0.00397	0	0	0
13	WS	Residential	All	Gas Heat (No AC)	HVAC	Room Air Conditioner	per appliance	ROB	10	10	\$40.00	20	0.02260	0	0	0
14	WS	Residential	All	Gas Heat (No AC)	HVAC	Room Air Conditioner	per appliance	ROB	10	10	\$40.00	27	0.03020	0	0	0
15	NWS	Residential	All	All	Appliances	Advanced Power Strips	per home	RET	10	10	\$15.50	112	0.01400	0	0	0
16	NWS	Residential	All	All	Appliances	ENERGY STAR Dehumidifier	per home	ROB	12	12	\$60.00	163	0.03693	0	0	0
17	NWS	Residential	All	Electric WH	Hot Water	Water Heater Replacement	Installed Units	ROB	13	13	\$1,000.00	2,403	0.21070	0	0	0
18	NWS	Residential	All	Electric WH	Hot Water	Water Heater Replacement	Installed Units	ROB	13	13	\$1,128.00	2,723	0.23880	0	0	0
19	NWS	Residential	All	Electric WH	Hot Water	Water Heater Replacement	Installed Units	ROB	13	13	\$128.00	357	0.03130	0	0	0
20	NWS	Residential	All	Electric WH	Hot Water	Water Heater Replacements	Installed Units	ROB	20	20	\$800.00	207	0.01820	0	0	0
22	NWS	Residential	SingleFamily&Duplex	All	Other	Home Energy Audit	per home	RET	1	1	\$250.00	0	0.00000	0	0	0
23	NWS	Residential	SingleFamily&Duplex	All	Lighting	Residential Lighting Efficiency	per lamp	RET	2	8	\$4.65	17	0.00400	0	0	0
24	NWS	Residential	SingleFamily&Duplex	Electric WH	Hot Water	Faucet Aerators	per faucet	RET	10	10	\$3.00	33	0.00350	0	0	0
25	NWS	Residential	SingleFamily&Duplex	Electric WH	Hot Water	Low Flow Showerheads	per showerhead	RET	10	10	\$9.75	295	0.03070	0	0	0
26	WS	Residential	SingleFamily&Duplex	AC/Gas Heat	Shell	Air Infiltration	per home	RET	11	11	\$537.00	488	0.47268	20	0	0
27	WS	Residential	SingleFamily&Duplex	Gas Heat (No AC)	Shell	Air Infiltration	per home	RET	11	11	\$537.00	19	0.00000	20	0	0
28	WS	Residential	SingleFamily&Duplex	AC/Electric Resistance Heat	Shell	Air Infiltration	per home	RET	11	11	\$537.00	948	0.47268	0	0	0
29	WS	Residential	SingleFamily&Duplex	Heat Pump	Shell	Air Infiltration	per home	RET	11	11	\$537.00	577	0.47268	0	0	0
30	WS	Residential	SingleFamily&Duplex	AC/Gas Heat	Shell	Attic Knee Wall Insulation	per home	RET	20	20	\$1,028.00	304	0.25896	7	0	0
31	WS	Residential	SingleFamily&Duplex	Gas Heat (No AC)	Shell	Attic Knee Wall Insulation	per home	RET	20	20	\$1,028.00	12	0.00375	7	0	0
32	WS	Residential	SingleFamily&Duplex	AC/Electric Resistance Heat	Shell	Attic Knee Wall Insulation	per home	RET	20	20	\$1,028.00	472	0.26030	0	0	0
33	WS	Residential	SingleFamily&Duplex	Heat Pump	Shell	Attic Knee Wall Insulation	per home	RET	20	20	\$1,028.00	343	0.25799	0	0	0
34	WS	Residential	SingleFamily&Duplex	AC/Gas Heat	Shell	Ceiling Insulation	per home	RET	20	20	\$1,803.06	2,790	0.97921	105	0	0
35	WS	Residential	SingleFamily&Duplex	AC/Gas Heat	Shell	Ceiling Insulation	per home	RET	20	20	\$1,252.66	1,461	0.47822	55	0	0
36	WS	Residential	SingleFamily&Duplex	AC/Gas Heat	Shell	Ceiling Insulation	per home	RET	20	20	\$1,252.66	797	0.24670	31	0	0
37	WS	Residential	SingleFamily&Duplex	AC/Gas Heat	Shell	Ceiling Insulation	per home	RET	20	20	\$797.14	380	0.11955	16	0	0
38	WS	Residential	SingleFamily&Duplex	Gas Heat (No AC)	Shell	Ceiling Insulation	per home	RET	20	20	\$1,803.06	114	0.03893	105	0	0
39	WS	Residential	SingleFamily&Duplex	Gas Heat (No AC)	Shell	Ceiling Insulation	per home	RET	20	20	\$1,252.66	69	0.02282	55	0	0
40	WS	Residential	SingleFamily&Duplex	Gas Heat (No AC)	Shell	Ceiling Insulation	per home	RET	20	20	\$1,252.66	45	0.01464	31	0	0
41	WS	Residential	SingleFamily&Duplex	Gas Heat (No AC)	Shell	Ceiling Insulation	per home	RET	20	20	\$797.14	29	0.00932	16	0	0
42	WS	Residential	SingleFamily&Duplex	AC/Electric Resistance Heat	Shell	Ceiling Insulation	per home	RET	20	20	\$1,803.06	5,200	0.97921	0	0	0
43	WS	Residential	SingleFamily&Duplex	AC/Electric Resistance Heat	Shell	Ceiling Insulation	per home	RET	20	20	\$1,252.66	2,714	0.47822	0	0	0
44	WS	Residential	SingleFamily&Duplex	AC/Electric Resistance Heat	Shell	Ceiling Insulation	per home	RET	20	20	\$1,252.66	1,499	0.24670	0	0	0
45	WS	Residential	SingleFamily&Duplex	AC/Electric Resistance Heat	Shell	Ceiling Insulation	per home	RET	20	20	\$797.14	740	0.11955	0	0	0
46	WS	Residential	SingleFamily&Duplex	Heat Pump	Shell	Ceiling Insulation	per home	RET	20	20	\$1,803.06	3,852	1.00198	0	0	0
47	WS	Residential	SingleFamily&Duplex	Heat Pump	Shell	Ceiling Insulation	per home	RET	20	20	\$1,252.66	2,012	0.47822	0	0	0
48	WS	Residential	SingleFamily&Duplex	Heat Pump	Shell	Ceiling Insulation	per home	RET	20	20	\$1,252.66	1,101	0.24670	0	0	0
49	WS	Residential	SingleFamily&Duplex	Heat Pump	Shell	Ceiling Insulation	per home	RET	20	20	\$797.14	531	0.11955	0	0	0
50	WS	Residential	SingleFamily&Duplex	AC/Electric Resistance Heat	HVAC	Duct Sealing	per home	RET	18	18	\$1,165.00	4,933	0.66656	0	0	0
51	WS	Residential	SingleFamily&Duplex	Heat Pump	HVAC	Duct Sealing	per home	RET	18	18	\$1,165.00	3,280	0.66656	0	0	0
52	WS	Residential	SingleFamily&Duplex	AC/Gas Heat	HVAC	Duct Sealing	per home	RET	18	18	\$1,165.00	1,830	0.66656	132	0	0
53	WS	Residential	SingleFamily&Duplex	AC/Gas Heat	Shell	Energy Star Windows	per home	RET	20	20	\$6,482.60	1,457	0.91364	105	0	0
54	WS	Residential	SingleFamily&Duplex	Gas Heat (No AC)	Shell	Energy Star Windows	per home	RET	20	20	\$6,482.60	92	0.03659	105	0	0
55	WS	Residential	SingleFamily&Duplex	AC/Electric Resistance Heat	Shell	Energy Star Windows	per home	RET	20	20	\$6,482.60	3,854	0.98128	0	0	0
56	WS	Residential	SingleFamily&Duplex	Heat Pump	Shell	Energy Star Windows	per home	RET	20	20	\$6,482.60	2,618	0.99520	0	0	0
57	WS	Residential	SingleFamily&Duplex	AC/Gas Heat	Shell	Energy Star Windows	per home	ROB	20	20	\$1,365.23	937	0.57984	28	0	0
58	WS	Residential	SingleFamily&Duplex	Gas Heat (No AC)	Shell	Energy Star Windows	per home	ROB	20	20	\$1,365.23	41	0.01616	28	0	0
59	WS	Residential	SingleFamily&Duplex	AC/Electric Resistance Heat	Shell	Energy Star Windows	per home	ROB	20	20	\$1,365.23	1,577	0.57984	0	0	0
60	WS	Residential	SingleFamily&Duplex	Heat Pump	Shell	Energy Star Windows	per home	ROB	20	20	\$1,365.23	1,261	0.57984	0	0	0

Measure ID	Weather Sensitive	Sector	Sub-Sector	MEASURE DESCRIPTION				MEASURE INCREMENTAL SAVING PER UNIT								
				Building Type	End Use	Measure Name	Measure Unit Name	EPM Logic (RET/ROB/N EW)	Baseline Unit Lifetime (Years)	Efficient Unit Lifetime (Years)	Total Incremental Cost	Annual kWh Savings	Annual kW Coincident Peak Savings	Annual Gas Savings (Therms)	Annual kWh Increases	Annual kW Coincident Peak Increases
61	WS	Residential	SingleFamily&Duplex	AC/Gas Heat	Shell	Floor Insulation	per home	RET	20	20	\$1,973.60	228	0.34918	120	0	0
62	WS	Residential	SingleFamily&Duplex	Gas Heat (No AC)	Shell	Floor Insulation	per home	RET	20	20	\$1,973.60	214	0.00000	120	0	0
63	WS	Residential	SingleFamily&Duplex	AC/Electric Resistance Heat	Shell	Floor Insulation	per home	RET	20	20	\$1,973.60	2,960	0.34918	0	0	0
64	WS	Residential	SingleFamily&Duplex	Heat Pump	Shell	Floor Insulation	per home	RET	20	20	\$1,973.60	1,499	0.34918	0	0	0
65	WS	Residential	SingleFamily&Duplex	AC/Gas Heat	Shell	Radiant Barriers	per home	RET	25	25	\$1,423.27	303	0.34139	18	0	0
66	WS	Residential	SingleFamily&Duplex	Gas Heat (No AC)	Shell	Radiant Barriers	per home	RET	25	25	\$1,423.27	2	0.00051	18	0	0
67	WS	Residential	SingleFamily&Duplex	AC/Electric Resistance Heat	Shell	Radiant Barriers	per home	RET	25	25	\$1,423.27	711	0.34382	0	0	0
68	WS	Residential	SingleFamily&Duplex	Heat Pump	Shell	Radiant Barriers	per home	RET	25	25	\$1,423.27	561	0.34495	0	0	0
69	WS	Residential	SingleFamily&Duplex	AC/Gas Heat	Shell	Wall Insulation	per home	RET	20	20	\$1,310.36	1,073	0.79597	132	0	0
70	WS	Residential	SingleFamily&Duplex	Gas Heat (No AC)	Shell	Wall Insulation	per home	RET	20	20	\$1,310.36	280	0.10982	132	0	0
71	WS	Residential	SingleFamily&Duplex	AC/Electric Resistance Heat	Shell	Wall Insulation	per home	RET	20	20	\$1,310.36	4,098	0.79597	0	0	0
72	WS	Residential	SingleFamily&Duplex	Heat Pump	Shell	Wall Insulation	per home	RET	20	20	\$1,310.36	2,467	0.79597	0	0	0
73	WS	Residential	SingleFamily&Duplex	Electric WH	Hot Water	Water Heater Jackets	Installed Units	RET	13	13	\$53.50	104	0.00800	0	0	0
74	WS	Residential	SingleFamily&Duplex	Electric WH	Hot Water	Water Heater Pipe Insulation	Installed Units	RET	13	13	\$38.42	44	0.01400	0	0	0
75	WS	Residential	SingleFamily&Duplex	AC/Gas Heat	Shell	Window Film	sqft of windows	RET	10	10	\$2.66	2	0.00067	0	0	0
76	WS	Residential	SingleFamily&Duplex	Gas Heat (No AC)	Shell	Window Film	sqft of windows	RET	10	10	\$2.66	0	0.00000	0	0	0
77	WS	Residential	SingleFamily&Duplex	AC/Electric Resistance Heat	Shell	Window Film	sqft of windows	RET	10	10	\$2.66	2	0.00067	0	0	0
78	WS	Residential	SingleFamily&Duplex	Heat Pump	Shell	Window Film	sqft of windows	RET	10	10	\$2.66	2	0.00067	0	0	0
79	NWS	Residential	SingleFamily&Duplex	All	Other	ENERGY STAR Variable Speed Drive Pool Pump	per unit	RET	10	10	\$848.00	2,182	0.47900	0	0	0
80	NWS	Residential	SingleFamily&Duplex	All	HVAC	High Efficiency Bathroom Exhaust Fan	per unit	RET	19	19	\$43.50	89	0.01010	0	0	0
82	WS	Residential	All	AC/Electric Resistance Heat	HVAC	Central AC Replacement	Home	ROB	15	15	\$357.00	409	0.11692	0	0	0
83	WS	Residential	All	AC/Electric Resistance Heat	HVAC	Central AC Replacement	Home	ROB	15	15	\$714.00	768	0.21639	0	0	0
84	WS	Residential	All	AC/Electric Resistance Heat	HVAC	Central AC Replacement	Home	ROB	15	15	\$1,431.00	1,365	0.37379	0	0	0
85	WS	Residential	All	AC/Electric Resistance Heat	HVAC	Central AC Replacement	Home	ROB	15	15	\$714.00	882	0.25509	0	0	0
86	WS	Residential	All	AC/Electric Resistance Heat	HVAC	Central AC Replacement	Home	ROB	15	15	\$1,071.00	1,240	0.35456	0	0	0
87	WS	Residential	All	AC/Electric Resistance Heat	HVAC	Central AC Replacement	Home	ROB	15	15	\$1,788.00	1,837	0.51196	0	0	0
88	WS	Residential	All	AC/Gas Heat	HVAC	Central AC Replacement	Home	ROB	15	15	\$357.00	610	0.11692	0	0	0
89	WS	Residential	All	AC/Gas Heat	HVAC	Central AC Replacement	Home	ROB	15	15	\$714.00	968	0.21639	0	0	0
90	WS	Residential	All	AC/Gas Heat	HVAC	Central AC Replacement	Home	ROB	15	15	\$1,431.00	1,565	0.37379	0	0	0
91	WS	Residential	All	AC/Gas Heat	HVAC	Central AC Replacement	Home	ROB	15	15	\$714.00	1,082	0.25509	0	0	0
92	WS	Residential	All	AC/Gas Heat	HVAC	Central AC Replacement	Home	ROB	15	15	\$1,071.00	1,441	0.35456	0	0	0
93	WS	Residential	All	AC/Gas Heat	HVAC	Central AC Replacement	Home	ROB	15	15	\$1,788.00	2,038	0.51196	0	0	0
94	WS	Residential	All	Heat Pump	HVAC	Heat Pump Replacement	Home	ROB	15	15	\$411.00	555	0.11692	0	0	0
95	WS	Residential	All	Heat Pump	HVAC	Heat Pump Replacement	Home	ROB	15	15	\$822.00	1,055	0.21639	0	0	0
96	WS	Residential	All	Heat Pump	HVAC	Heat Pump Replacement	Home	ROB	15	15	\$1,698.00	1,912	0.37379	0	0	0
97	WS	Residential	All	Heat Pump	HVAC	Heat Pump Replacement	Home	ROB	15	15	\$822.00	1,346	0.25509	0	0	0
98	WS	Residential	All	Heat Pump	HVAC	Heat Pump Replacement	Home	ROB	15	15	\$1,233.00	1,846	0.35456	0	0	0
99	WS	Residential	All	Heat Pump	HVAC	Heat Pump Replacement	Home	ROB	15	15	\$2,055.00	2,703	0.51196	0	0	0
100	WS	Residential	All	AC	HVAC	Mini-Split AC	Home	ROB	15	13	\$1,394.69	4,064	1.44836	0	0	0
101	WS	Residential	All	AC	HVAC	Mini-Split AC	Home	ROB	15	13	\$3,510.08	5,887	1.90112	0	0	0
102	WS	Residential	All	Heat Pump	HVAC	Mini-Split Heat Pump	Home	ROB	15	13	\$1,394.69	6,141	1.44836	0	0	0
103	WS	Residential	All	Heat Pump	HVAC	Mini-Split Heat Pump	Home	ROB	15	13	\$3,510.08	8,806	1.90112	0	0	0
104	WS	Residential	All	AC	HVAC	Mini-Split AC	Home	ROB	15	13	\$1,751.69	3,884	1.34877	0	0	0
105	WS	Residential	All	AC	HVAC	Mini-Split AC	Home	ROB	15	13	\$3,867.08	5,707	1.80153	0	0	0
106	WS	Residential	All	Heat Pump	HVAC	Mini-Split Heat Pump	Home	ROB	15	13	\$1,751.69	6,126	1.34877	0	0	0
107	WS	Residential	All	Heat Pump	HVAC	Mini-Split Heat Pump	Home	ROB	15	13	\$3,867.08	8,792	1.80153	0	0	0
108	WS	Residential	SingleFamily&Duplex	Heat Pump	HVAC	Ground Source Heatpump	per home	ROB	15	15	\$9,000.00	13,424	1.31207	0	0	0
109	WS	Residential	SingleFamily&Duplex	Heat Pump	HVAC	Ground Source Heatpump	per home	ROB	15	15	\$8,500.00	11,996	1.17891	0	0	0
111	WS	Residential	All	AC	HVAC	Central AC Tune-up	Home	ROB	10	10	\$175.00	384	0.14010	0	0	0
112	WS	Residential	All	Heat Pump	HVAC	Heat Pump Tune-up	Home	ROB	10	10	\$175.00	638	0.14010	0	0	0
114	NWS	Residential	All	All	Appliances	Refrigerator/Freezer Recycling	per appliance	RET	8	8	\$120.00	810	0.12240	0	0	0
115	NWS	Residential	All	Gas Heat (No AC)	HVAC	Room Air Conditioner Recycling	per appliance	RET	4	4	\$120.00	1,430	0.82170	0	0	0
117	NWS	Residential	Multifamily	All	Other	Home Energy Audit	per home	RET	1	1	\$0.00	0	0.00000	0	0	0
118	NWS	Residential	Multifamily	All	Lighting	Residential Lighting Efficiency	per lamp	RET	2	8	\$4.65	17	0.00400	0	0	0
119	NWS	Residential	Multifamily	Electric WH	Hot Water	Faucet Aerators	per faucet	RET	10	10	\$3.00	33	0.00350	0	0	0
120	NWS	Residential	Multifamily	Electric WH	Hot Water	Low Flow Showerheads	per showerhead	RET	10	10	\$9.75	295	0.03070	0	0	0

MEASURE DESCRIPTION											MEASURE INCREMENTAL SAVING PER UNIT					
Measure ID	Weather Sensitive	Sector	Sub-Sector	Building Type	End Use	Measure Name	Measure Unit Name	EEPM Logic (RET/ROB/NEW)	Baseline Unit Lifetime (Years)	Efficient Unit Lifetime (Years)	Total Incremental Cost	Annual kWh Savings	Annual kW Coincident Peak Savings	Annual Gas Savings (Therms)	Annual kWh Increases	Annual kW Coincident Peak Increases
121	NWS	Residential	Multifamily	Common Area	Lighting	Halfway Lighting Efficiency	Per Fixture	RET	11	11	\$55.00	65	0.01000	0	0	0
122	NWS	Residential	Multifamily	Common Area	Lighting	Exterior Lighting Efficiency	Per Fixture	RET	2	11	\$175.00	781	0.00000	0	0	0
124	WS	Residential	SingleFamily&Duplex	All	Lighting	New home - lighting	per home	NEW	2	8	\$38.80	995	0.14120	0	0	0
125	WS	Residential	SingleFamily&Duplex	All	Other	New home - nonlighting	per home	NEW	17	17	\$1,797.87	1,507	0.41603	0	0	0
126	WS	Residential	SingleFamily&Duplex	All	Other	New home - nonlighting	per home	NEW	17	17	\$1,397.87	1,176	0.30825	0	0	0
127	WS	Residential	SingleFamily&Duplex	All	Other	New home - furnace	per home	NEW	20	20	\$1,028.80	0	0.00000	115	0	0
129	WS	Residential	All	All	Other	Benchmarking	per customer	RET	1	1	\$10.50	270	0.06205	2	0	0
130	WS	Residential	All	AC	Other	Direct Load Control Switch	per customer	RET	5	5	\$170.00	0	1.20000	0	0	0
131	WS	Residential	All	Heat Pump	Other	Direct Load Control Switch	per customer	RET	5	5	\$170.00	0	1.20000	0	0	0
132	WS	Residential	All	AC	Other	Direct Load Control Thermostat	per customer	RET	5	5	\$110.00	0	1.20000	0	0	0
133	WS	Residential	All	Heat Pump	Other	Direct Load Control Thermostat	per customer	RET	5	5	\$110.00	0	1.20000	0	0	0
134	WS	Residential	All	AC	Other	Enabled Dynamic Pricing (Res)	per customer	RET	10	10	\$200.00	0	0.69000	0	0	0
135	WS	Residential	All	AC	Other	Non-Enabled Dynamic Pricing (Res)	per customer	RET	10	10	\$1.00	0	0.31000	0	0	0
136	WS	Residential	All	All	Other	Low-Income Weatherization Package	per home	RET	14	14	\$2,740.00	3,891	1.09431	48	0	0
137	WS	Residential	All	Electric WH	Hot Water	Solar Hot Water	per customer	RET	20	20	\$3,149.50	2,628	0.42000	0	0	0
138	WS	Residential	All	Electric WH	Hot Water	Solar Hot Water	per customer	RET	20	20	\$6,299.00	2,628	0.42000	0	0	0
140	WS	Residential	SingleFamily&Duplex	AC/Gas Heat	HVAC	Duct Insulation	Home	RET	20	20	\$730.26	268	0.41752	13	0	0
141	WS	Residential	SingleFamily&Duplex	Gas Heat (No AC)	HVAC	Duct Insulation	Home	RET	20	20	\$730.26	0	0.00000	13	0	0
142	WS	Residential	SingleFamily&Duplex	AC/Electric Resistance Heat	HVAC	Duct Insulation	Home	RET	20	20	\$730.26	1,061	0.41752	0	0	0
143	WS	Residential	SingleFamily&Duplex	Heat Pump	HVAC	Duct Insulation	Home	RET	20	20	\$730.26	941	0.41752	0	0	0
144	WS	Residential	SingleFamily&Duplex	AC/Gas Heat	HVAC	Gas Furnace Replacement	Home	ROB	20	20	\$630.00	0	0.00000	14	0	0
145	WS	Residential	SingleFamily&Duplex	Gas Heat (No AC)	HVAC	Gas Furnace Replacement	Home	ROB	20	20	\$630.00	0	0.00000	14	0	0
146	WS	Residential	Multifamily	AC/Gas Heat	HVAC	Gas Furnace Replacement	Home	ROB	20	20	\$630.00	0	0.00000	8	0	0
147	WS	Residential	Multifamily	Gas Heat (No AC)	HVAC	Gas Furnace Replacement	Home	ROB	20	20	\$630.00	0	0.00000	8	0	0
148	WS	Residential	All	AC/Gas Heat	HVAC	Gas Furnace Tune-Up	Per Unit	RET	3	3	\$175.00	0	0.00000	34	0	0
149	WS	Residential	All	Gas Heat (No AC)	HVAC	Gas Furnace Tune-Up	Per Unit	RET	3	3	\$175.00	0	0.00000	34	0	0
150	WS	Residential	All	Gas WH	Hot Water	Efficient Gas water heaters	Home	ROB	11	11	\$400.00	0	0.00000	10	0	0
151	WS	Residential	All	Gas WH	Hot Water	Tankless Gas water heater	Home	ROB	20	20	\$605.00	0	0.00000	55	0	0
152	WS	Residential	All	Gas WH	Hot Water	Gas WH jacket	Home	RET	13	13	\$53.50	0	0.00000	5	0	0
153	WS	Residential	All	Gas WH	Hot Water	Gas WH pipe insulation	Home	RET	11	11	\$38.42	0	0.00000	2	0	0
154	NWS	Residential	All	Gas WH	Hot Water	Faucet aerators – Gas WH	per faucet	RET	10	10	\$3.00	0	0.00000	1	0	0
155	NWS	Residential	All	Gas WH	Hot Water	Low Flow Showerheads	per showerhead	RET	10	10	\$9.75	0	0.00000	10	0	0

Residential Measures

Measure ID	Weather Sensitive	MEASURE DESCRIPTION				MEASURE SELECTION					APPLICABILITY							PROGRAM		
		Sector	Sub-Sector	Building Type	End Use	Measure Name	Measure TRC calculated for 2014	Measure TRC calculated for 2020	Measure TRC calculated for 2022	Passed Measure Screening? (1=Yes, 0=No)	Total Sub-Sector Units	Measure Units per Sub-Sector Unit	Applicability	Technical Feasibility	Distribution by size/model but not Efficiency Level	Distribution by Efficiency Level	Not Yet Adopted		Annual Replacement Eligibility	Total Applicable Measure Units
1	NWS	Residential	All	All	Lighting	Residential Lighting Efficiency	3.3	4.7	5.1	1	162,863	34	100%	68.0%	0%	50%	100%	50%	938,578	Residential Lighting & Appliances
2	NWS	Residential	All	All	Lighting	Residential Lighting Efficiency	1.6	2.3	2.4	0	0	0	0%	0.0%	0%	0%	0%	0%	0	"N/A"
3	NWS	Residential	All	All	Lighting	Residential Lighting Efficiency	1.7	2.0	2.1	1	162,863	34	100%	68.0%	0%	50%	100%	50%	938,578	Residential Lighting & Appliances
4	NWS	Residential	All	All	Lighting	Residential Lighting Efficiency	2.6	3.1	3.3	1	162,863	34	100%	32.0%	0%	100%	100%	50%	883,367	Residential Lighting & Appliances
5	NWS	Residential	All	All	Consumer Electronics	Consumer Electronics	1.1	1.2	1.3	1	162,863	1	100%	0%	0%	0%	4%	13%	814	Residential Lighting & Appliances
6	NWS	Residential	All	Gas WH	Appliances	ENERGYSTAR Clothes Washer and Dryer	0.3	0.3	0.3	0	0	0	0%	0%	0%	0%	0%	0%	0	"N/A"
7	NWS	Residential	All	Electric WH	Appliances	ENERGYSTAR Clothes Washer and Dryer	0.6	0.8	0.8	0	0	0	0%	0%	0%	0%	0%	0%	0	"N/A"
8	NWS	Residential	All	Electric WH	Appliances	ENERGYSTAR Clothes Washer and Dryer	0.5	0.6	0.6	0	0	0	0%	0%	0%	0%	0%	0%	0	"N/A"
9	NWS	Residential	All	Gas WH	Appliances	ENERGYSTAR Clothes Washer and Dryer	0.4	0.5	0.5	0	0	0	0%	0%	0%	0%	0%	0%	0	"N/A"
10	NWS	Residential	All	Electric WH	Appliances	ENERGYSTAR Dishwasher	0.1	0.2	0.2	0	0	0	0%	0%	0%	0%	0%	0%	0	"N/A"
11	NWS	Residential	All	Gas WH	Appliances	ENERGYSTAR Dishwasher	0.1	0.1	0.1	0	0	0	0%	0%	0%	0%	0%	0%	0	"N/A"
12	NWS	Residential	All	All	Appliances	HE Refrigerator	0.2	0.3	0.3	0	0	0	0%	0%	0%	0%	0%	0%	0	"N/A"
13	WS	Residential	All	Gas Heat (No AC)	HVAC	Room Air Conditioner	0.4	0.8	0.8	0	0	0	0%	0%	0%	0%	0%	0%	0	"N/A"
14	WS	Residential	All	Gas Heat (No AC)	HVAC	Room Air Conditioner	0.6	1.0	1.1	1	162,863	2	39%	0%	50%	0%	100%	10%	6,352	Residential Lighting & Appliances
15	NWS	Residential	All	All	Appliances	Advanced Power Strips	3.2	4.0	4.2	1	162,863	1	100%	0%	0%	0%	100%	100%	232,894	Residential Lighting & Appliances
16	NWS	Residential	All	All	Appliances	ENERGY STAR Dehumidifier	1.6	2.1	2.2	1	162,863	1	100%	32.2%	0%	100%	0%	8%	4,370	Residential Lighting & Appliances
17	NWS	Residential	All	Electric WH	Hot Water	Water Heater Replacement	1.3	1.5	1.6	1	162,863	1	27%	0%	50%	50%	100%	8%	842	Water Heating
18	NWS	Residential	All	Electric WH	Hot Water	Water Heater Replacement	1.3	1.5	1.6	1	162,863	1	27%	0%	50%	50%	100%	8%	842	Water Heating
19	NWS	Residential	All	Electric WH	Hot Water	Water Heater Replacement	1.5	1.8	1.9	1	162,863	1	27%	0%	50%	0%	100%	8%	1,691	Water Heating
20	NWS	Residential	All	Electric WH	Hot Water	Water Heater Replacements	0.2	0.2	0.2	0	0	0	0%	0%	0%	0%	0%	0%	0	"N/A"
22	NWS	Residential	SingleFamily&Duplex	All	Other	Home Energy Audit	0.0	0.0	0.0	1	131,919	1	100%	56.2%	0%	0%	0%	100%	74,086	Residential Home Audit & Retrofit
23	NWS	Residential	SingleFamily&Duplex	All	Lighting	Residential Lighting Efficiency	1.2	1.7	1.9	1	131,919	12	100%	56.2%	0%	0%	66%	100%	586,758	Residential Home Audit & Retrofit
24	NWS	Residential	SingleFamily&Duplex	Electric WH	Hot Water	Faucet Aerators	4.7	5.8	6.1	1	131,919	2	27%	56.2%	0%	0%	0%	100%	40,006	Residential Home Audit & Retrofit
25	NWS	Residential	SingleFamily&Duplex	Electric WH	Hot Water	Low Flow Showerheads	13.0	15.9	16.8	1	131,919	1	27%	56.2%	0%	0%	0%	100%	20,003	Residential Home Audit & Retrofit
26	WS	Residential	SingleFamily&Duplex	AC/Gas Heat	Shell	Air Infiltration	1.0	1.5	1.6	1	131,919	1	36%	56.2%	0%	0%	52%	100%	14,016	Residential Home Audit & Retrofit
27	WS	Residential	SingleFamily&Duplex	Gas Heat (No AC)	Shell	Air Infiltration	0.2	0.2	0.2	0	0	0	0%	0.0%	0%	0%	0%	0%	0	"N/A"
28	WS	Residential	SingleFamily&Duplex	AC/Electric Resistance Heat	Shell	Air Infiltration	1.2	1.7	1.9	1	131,919	1	21%	56.2%	0%	0%	52%	100%	7,943	Residential Home Audit & Retrofit
29	WS	Residential	SingleFamily&Duplex	Heat Pump	Shell	Air Infiltration	0.9	1.4	1.6	1	131,919	1	4%	56.2%	0%	0%	52%	100%	1,541	Residential Home Audit & Retrofit
30	WS	Residential	SingleFamily&Duplex	AC/Gas Heat	Shell	Attic Knee Wall Insulation	0.5	0.7	0.7	0	0	0	0%	0.0%	0%	0%	0%	0%	0	"N/A"
31	WS	Residential	SingleFamily&Duplex	Gas Heat (No AC)	Shell	Attic Knee Wall Insulation	0.1	0.1	0.1	0	0	0	0%	0.0%	0%	0%	0%	0%	0	"N/A"
32	WS	Residential	SingleFamily&Duplex	AC/Electric Resistance Heat	Shell	Attic Knee Wall Insulation	0.6	0.7	0.8	0	0	0	0%	0.0%	0%	0%	0%	0%	0	"N/A"
33	WS	Residential	SingleFamily&Duplex	Heat Pump	Shell	Attic Knee Wall Insulation	0.5	0.7	0.7	0	0	0	0%	0.0%	0%	0%	0%	0%	0	"N/A"
34	WS	Residential	SingleFamily&Duplex	AC/Gas Heat	Shell	Ceiling Insulation	2.0	2.4	2.5	1	131,919	1	36%	56.2%	0%	0%	25%	100%	6,739	Residential Home Audit & Retrofit
35	WS	Residential	SingleFamily&Duplex	AC/Gas Heat	Shell	Ceiling Insulation	1.5	1.8	1.9	1	131,919	1	36%	56.2%	0%	33%	75%	100%	6,671	Residential Home Audit & Retrofit
36	WS	Residential	SingleFamily&Duplex	AC/Gas Heat	Shell	Ceiling Insulation	0.8	1.0	1.0	0	0	0	0%	0.0%	0%	0%	0%	0%	0	"N/A"
37	WS	Residential	SingleFamily&Duplex	AC/Gas Heat	Shell	Ceiling Insulation	0.6	0.7	0.8	0	0	0	0%	0.0%	0%	0%	0%	0%	0	"N/A"
38	WS	Residential	SingleFamily&Duplex	Gas Heat (No AC)	Shell	Ceiling Insulation	0.4	0.5	0.5	0	0	0	0%	0.0%	0%	0%	0%	0%	0	"N/A"
39	WS	Residential	SingleFamily&Duplex	Gas Heat (No AC)	Shell	Ceiling Insulation	0.3	0.4	0.4	0	0	0	0%	0.0%	0%	0%	0%	0%	0	"N/A"
40	WS	Residential	SingleFamily&Duplex	Gas Heat (No AC)	Shell	Ceiling Insulation	0.2	0.2	0.2	0	0	0	0%	0.0%	0%	0%	0%	0%	0	"N/A"
41	WS	Residential	SingleFamily&Duplex	Gas Heat (No AC)	Shell	Ceiling Insulation	0.2	0.2	0.2	0	0	0	0%	0.0%	0%	0%	0%	0%	0	"N/A"
42	WS	Residential	SingleFamily&Duplex	AC/Electric Resistance Heat	Shell	Ceiling Insulation	2.5	3.0	3.1	1	131,919	1	21%	56.2%	0%	0%	25%	100%	3,819	Residential Home Audit & Retrofit
43	WS	Residential	SingleFamily&Duplex	AC/Electric Resistance Heat	Shell	Ceiling Insulation	1.9	2.2	2.3	1	131,919	1	21%	56.2%	0%	33%	75%	100%	3,780	Residential Home Audit & Retrofit
44	WS	Residential	SingleFamily&Duplex	AC/Electric Resistance Heat	Shell	Ceiling Insulation	1.0	1.2	1.2	1	131,919	1	21%	56.2%	0%	33%	75%	100%	3,780	Residential Home Audit & Retrofit
45	WS	Residential	SingleFamily&Duplex	AC/Electric Resistance Heat	Shell	Ceiling Insulation	0.8	0.9	1.0	0	0	0	0%	0.0%	0%	0%	0%	0%	0	"N/A"
46	WS	Residential	SingleFamily&Duplex	Heat Pump	Shell	Ceiling Insulation	2.0	2.5	2.6	1	131,919	1	4%	56.2%	0%	0%	25%	100%	741	Residential Home Audit & Retrofit
47	WS	Residential	SingleFamily&Duplex	Heat Pump	Shell	Ceiling Insulation	1.5	1.8	1.9	1	131,919	1	4%	56.2%	0%	33%	75%	100%	733	Residential Home Audit & Retrofit
48	WS	Residential	SingleFamily&Duplex	Heat Pump	Shell	Ceiling Insulation	0.8	1.0	1.0	0	0	0	0%	0.0%	0%	0%	0%	0%	0	"N/A"
49	WS	Residential	SingleFamily&Duplex	Heat Pump	Shell	Ceiling Insulation	0.6	0.7	0.8	0	0	0	0%	0.0%	0%	0%	0%	0%	0	"N/A"
50	WS	Residential	SingleFamily&Duplex	AC/Electric Resistance Heat	HVAC	Duct Sealing	3.2	3.7	3.9	1	131,919	1	21%	56.2%	0%	0%	52%	100%	7,943	Residential Home Audit & Retrofit
51	WS	Residential	SingleFamily&Duplex	Heat Pump	HVAC	Duct Sealing	2.3	2.8	2.9	1	131,919	1	4%	56.2%	0%	0%	52%	100%	1,541	Residential Home Audit & Retrofit
52	WS	Residential	SingleFamily&Duplex	AC/Gas Heat	HVAC	Duct Sealing	2.2	2.7	2.8	1	131,919	1	36%	56.2%	0%	0%	52%	100%	14,016	Residential Home Audit & Retrofit
53	WS	Residential	SingleFamily&Duplex	AC/Gas Heat	Shell	Energy Star Windows	0.4	0.5	0.5	0	0	0	0%	0.0%	0%	0%	0%	0%	0	"N/A"
54	WS	Residential	SingleFamily&Duplex	Gas Heat (No AC)	Shell	Energy Star Windows	0.1	0.1	0.1	0	0	0	0%	0.0%	0%	0%	0%	0%	0	"N/A"
55	WS	Residential	SingleFamily&Duplex	AC/Electric Resistance Heat	Shell	Energy Star Windows	0.6	0.7	0.7	0	0	0	0%	0.0%	0%	0%	0%	0%	0	"N/A"
56	WS	Residential	SingleFamily&Duplex	Heat Pump	Shell	Energy Star Windows	0.4	0.5	0.6	0	0	0	0%	0.0%	0%	0%	0%	0%	0	"N/A"
57	WS	Residential	SingleFamily&Duplex	AC/Gas Heat	Shell	Energy Star Windows	1.1	1.3	1.4	1	131,919	1	36%	56.2%	0%	0%	0%	5%	1,348	Residential Home Audit & Retrofit
58	WS	Residential	SingleFamily&Duplex	Gas Heat (No AC)	Shell	Energy Star Windows	0.2	0.2	0.2	0	0	0	0%	0.0%	0%	0%	0%	0%	0	"N/A"
59	WS	Residential	SingleFamily&Duplex	AC/Electric Resistance Heat	Shell	Energy Star Windows	1.2	1.5	1.6	1	131,919	1	21%	56.2%	0%	0%	0%	5%	764	Residential Home Audit & Retrofit
60	WS	Residential	SingleFamily&Duplex	Heat Pump	Shell	Energy Star Windows	1.1	1.4	1.4	1	131,919	1	4%	56.2%	0%	0%	0%	5%	148	Residential Home Audit & Retrofit

Residential Measures

Measure ID	Weather Sensitive	MEASURE DESCRIPTION				MEASURE SELECTION						APPLICABILITY							PROGRAM	
		Sector	Sub-Sector	Building Type	End Use	Measure Name	Measure TRC calculated for 2014	Measure TRC calculated for 2020	Measure TRC calculated for 2022	Passed Measure Screening? (1=Yes, 0=No)	Total Sub-Sector Units	Measure Units per Sub-Sector Unit	Applicability	Technical Feasibility	Distribution by size/model but not Efficiency Level	Distribution by Efficiency Level	Not Yet Adopted	Annual Replacement Eligibility		Total Applicable Measure Units
61	WS	Residential	SingleFamily&Duplex	AC/Gas Heat	Shell	Floor Insulation	0.7	0.8	0.8	0	0	0	0%	0%	0%	0%	0%	0	"N/A	
62	WS	Residential	SingleFamily&Duplex	Gas Heat (No AC)	Shell	Floor Insulation	0.5	0.5	0.5	0	0	0	0%	0%	0%	0%	0%	0	"N/A	
63	WS	Residential	SingleFamily&Duplex	AC/Electric Resistance Heat	Shell	Floor Insulation	1.2	1.4	1.4	1	131,919	1	21%	56.2%	0%	0%	35%	100%	5,346	Residential Home Audit & Retrofit
64	WS	Residential	SingleFamily&Duplex	Heat Pump	Shell	Floor Insulation	0.7	0.8	0.9	0	0	0	0%	0.0%	0%	0%	0%	0	"N/A	
65	WS	Residential	SingleFamily&Duplex	AC/Gas Heat	Shell	Radiant Barriers	0.6	0.7	0.8	0	0	0	0%	0.0%	0%	0%	0%	0	"N/A	
66	WS	Residential	SingleFamily&Duplex	Gas Heat (No AC)	Shell	Radiant Barriers	0.1	0.1	0.1	0	0	0	0%	0.0%	0%	0%	0%	0	"N/A	
67	WS	Residential	SingleFamily&Duplex	AC/Electric Resistance Heat	Shell	Radiant Barriers	0.7	0.9	0.9	0	0	0	0%	0.0%	0%	0%	0%	0	"N/A	
68	WS	Residential	SingleFamily&Duplex	Heat Pump	Shell	Radiant Barriers	0.6	0.8	0.8	0	0	0	0%	0.0%	0%	0%	0%	0	"N/A	
69	WS	Residential	SingleFamily&Duplex	AC/Gas Heat	Shell	Wall Insulation	1.9	2.3	2.4	1	131,919	1	36%	56.2%	0%	0%	35%	100%	9,434	Residential Home Audit & Retrofit
70	WS	Residential	SingleFamily&Duplex	Gas Heat (No AC)	Shell	Wall Insulation	0.9	1.0	1.0	1	131,919	1	39%	56.2%	0%	0%	35%	100%	10,113	Residential Home Audit & Retrofit
71	WS	Residential	SingleFamily&Duplex	AC/Electric Resistance Heat	Shell	Wall Insulation	2.8	3.3	3.4	1	131,919	1	21%	56.2%	0%	0%	35%	100%	5,346	Residential Home Audit & Retrofit
72	WS	Residential	SingleFamily&Duplex	Heat Pump	Shell	Wall Insulation	1.9	2.4	2.5	1	131,919	1	4%	56.2%	0%	0%	35%	100%	1,037	Residential Home Audit & Retrofit
73	WS	Residential	SingleFamily&Duplex	Electric WH	Hot Water	Water Heater Jackets	1.0	1.2	1.3	1	131,919	1	27%	56.2%	0%	0%	8%	100%	1,539	Residential Home Audit & Retrofit
74	WS	Residential	SingleFamily&Duplex	Electric WH	Hot Water	Water Heater Pipe Insulation	0.8	1.0	1.1	1	131,919	1	27%	56.2%	0%	0%	8%	100%	1,539	Residential Home Audit & Retrofit
75	WS	Residential	SingleFamily&Duplex	AC/Gas Heat	Shell	Window Film	0.4	0.6	0.6	0	0	0	0%	0.0%	0%	0%	0%	0	"N/A	
76	WS	Residential	SingleFamily&Duplex	Gas Heat (No AC)	Shell	Window Film	0.0	0.0	0.0	0	0	0	0%	0.0%	0%	0%	0%	0	"N/A	
77	WS	Residential	SingleFamily&Duplex	AC/Electric Resistance Heat	Shell	Window Film	0.3	0.5	0.5	0	0	0	0%	0.0%	0%	0%	0%	0	"N/A	
78	WS	Residential	SingleFamily&Duplex	Heat Pump	Shell	Window Film	0.4	0.6	0.6	0	0	0	0%	0.0%	0%	0%	0%	0	"N/A	
79	NWS	Residential	SingleFamily&Duplex	All	Other	ENERGY STAR Variable Speed Drive Pool Pump	1.2	1.6	1.8	1	131,919	1	100%	4.3%	0%	0%	100%	0	Pool Pump	
80	NWS	Residential	SingleFamily&Duplex	All	HVAC	High Efficiency Bathroom Exhaust Fan	1.6	1.8	1.9	1	131,919	2	100%	0%	0%	0%	100%	148,171	Residential Home Audit & Retrofit	
82	WS	Residential	All	AC/Electric Resistance Heat	HVAC	Central AC Replacement	0.9	1.1	1.2	1	162,863	1	21%	0%	98%	34%	100%	7%	748	ENERGY STAR Air Conditioning
83	WS	Residential	All	AC/Electric Resistance Heat	HVAC	Central AC Replacement	0.8	1.0	1.1	1	162,863	1	21%	0%	98%	34%	100%	7%	733	ENERGY STAR Air Conditioning
84	WS	Residential	All	AC/Electric Resistance Heat	HVAC	Central AC Replacement	0.7	0.9	1.0	0	0	0	0%	0%	0%	0%	0%	0	"N/A	
85	WS	Residential	All	AC/Electric Resistance Heat	HVAC	Central AC Replacement	1.0	1.2	1.3	1	162,863	1	21%	0%	98%	34%	100%	7%	746	ENERGY STAR Air Conditioning
86	WS	Residential	All	AC/Electric Resistance Heat	HVAC	Central AC Replacement	0.9	1.1	1.2	1	162,863	1	21%	0%	98%	34%	100%	7%	732	ENERGY STAR Air Conditioning
87	WS	Residential	All	AC/Electric Resistance Heat	HVAC	Central AC Replacement	0.8	1.0	1.0	1	162,863	1	21%	0%	98%	32%	100%	7%	704	ENERGY STAR Air Conditioning
88	WS	Residential	All	AC/Gas Heat	HVAC	Central AC Replacement	1.2	1.5	1.5	1	162,863	1	36%	0%	98%	35%	100%	7%	1,388	ENERGY STAR Air Conditioning
89	WS	Residential	All	AC/Gas Heat	HVAC	Central AC Replacement	1.0	1.2	1.3	1	162,863	1	36%	0%	98%	33%	100%	7%	1,286	ENERGY STAR Air Conditioning
90	WS	Residential	All	AC/Gas Heat	HVAC	Central AC Replacement	0.8	1.0	1.1	1	162,863	1	36%	0%	98%	31%	100%	7%	1,207	ENERGY STAR Air Conditioning
91	WS	Residential	All	AC/Gas Heat	HVAC	Central AC Replacement	1.1	1.4	1.4	1	162,863	1	36%	0%	98%	35%	100%	7%	1,330	ENERGY STAR Air Conditioning
92	WS	Residential	All	AC/Gas Heat	HVAC	Central AC Replacement	1.0	1.2	1.3	1	162,863	1	36%	0%	98%	34%	100%	7%	1,291	ENERGY STAR Air Conditioning
93	WS	Residential	All	AC/Gas Heat	HVAC	Central AC Replacement	0.8	1.1	1.1	0	0	0	0%	0%	0%	0%	0%	0	"N/A	
94	WS	Residential	All	Heat Pump	HVAC	Heat Pump Replacement	1.0	1.2	1.2	1	162,863	1	4%	0%	97%	34%	100%	7%	144	ENERGY STAR Air Conditioning
95	WS	Residential	All	Heat Pump	HVAC	Heat Pump Replacement	0.9	1.1	1.2	1	162,863	1	4%	0%	97%	34%	100%	7%	142	ENERGY STAR Air Conditioning
96	WS	Residential	All	Heat Pump	HVAC	Heat Pump Replacement	0.8	1.0	1.0	0	0	0	0%	0%	0%	0%	0%	0	"N/A	
97	WS	Residential	All	Heat Pump	HVAC	Heat Pump Replacement	1.1	1.4	1.5	1	162,863	1	4%	0%	97%	34%	100%	7%	144	ENERGY STAR Air Conditioning
98	WS	Residential	All	Heat Pump	HVAC	Heat Pump Replacement	1.0	1.3	1.3	1	162,863	1	4%	0%	97%	33%	100%	7%	141	ENERGY STAR Air Conditioning
99	WS	Residential	All	Heat Pump	HVAC	Heat Pump Replacement	0.9	1.1	1.2	0	0	0	0%	0%	0%	0%	0%	0	"N/A	
100	WS	Residential	All	AC	HVAC	Mini-Split AC	2.1	2.8	3.0	1	162,863	1	57%	0%	3%	52%	100%	7%	81	ENERGY STAR Air Conditioning
101	WS	Residential	All	AC	HVAC	Mini-Split AC	1.2	1.5	1.6	1	162,863	1	57%	0%	3%	48%	100%	7%	74	ENERGY STAR Air Conditioning
102	WS	Residential	All	Heat Pump	HVAC	Mini-Split Heat Pump	2.8	3.6	3.8	1	162,863	1	4%	0%	3%	52%	100%	7%	6	ENERGY STAR Air Conditioning
103	WS	Residential	All	Heat Pump	HVAC	Mini-Split Heat Pump	1.6	2.0	2.1	1	162,863	1	4%	0%	3%	48%	100%	7%	5	ENERGY STAR Air Conditioning
104	WS	Residential	All	AC	HVAC	Mini-Split AC	1.6	2.1	2.2	1	162,863	1	57%	0%	3%	52%	100%	7%	80	ENERGY STAR Air Conditioning
105	WS	Residential	All	AC	HVAC	Mini-Split AC	1.0	1.3	1.4	1	162,863	1	57%	0%	3%	48%	100%	7%	74	ENERGY STAR Air Conditioning
106	WS	Residential	All	Heat Pump	HVAC	Mini-Split Heat Pump	2.2	2.8	2.9	1	162,863	1	4%	0%	3%	51%	100%	7%	6	ENERGY STAR Air Conditioning
107	WS	Residential	All	Heat Pump	HVAC	Mini-Split Heat Pump	1.4	1.8	1.9	1	162,863	1	4%	0%	3%	49%	100%	7%	5	ENERGY STAR Air Conditioning
108	WS	Residential	SingleFamily&Duplex	Heat Pump	HVAC	Ground Source Heatpump	0.9	1.1	1.1	0	0	0	0%	0%	0%	0%	0%	0	"N/A	
109	WS	Residential	SingleFamily&Duplex	Heat Pump	HVAC	Ground Source Heatpump	0.9	1.0	1.1	0	0	0	0%	0%	0%	0%	0%	0	"N/A	
111	WS	Residential	All	AC	HVAC	Central AC Tune-up	1.2	1.7	1.8	1	162,863	1	57%	0%	0%	0%	0%	10%	9,283	ENERGY STAR Air Conditioning
112	WS	Residential	All	Heat Pump	HVAC	Heat Pump Tune-up	1.8	2.3	2.5	1	162,863	1	4%	0%	0%	0%	0%	10%	651	ENERGY STAR Air Conditioning
114	NWS	Residential	All	All	Appliances	Refrigerator/Freezer Recycling	2.4	3.2	3.4	0	0	0	0%	0.0%	0%	0%	0%	0	"N/A	
115	NWS	Residential	All	Gas Heat (No AC)	HVAC	Room Air Conditioner Recycling	2.6	4.8	5.7	0	0	0	0%	0.0%	0%	0%	0%	0	"N/A	
117	NWS	Residential	Multifamily	All	Other	Home Energy Audit	#DIV/0!	#DIV/0!	#DIV/0!	0	0	0	0%	0.0%	0%	0%	0%	0	"N/A	
118	NWS	Residential	Multifamily	All	Lighting	Residential Lighting Efficiency	1.2	1.7	1.9	1	29,315	8	100%	30.7%	0%	0%	66%	100%	47,494	Multifamily
119	NWS	Residential	Multifamily	Electric WH	Hot Water	Faucet Aerators	4.7	5.8	6.1	1	29,315	2	27%	30.7%	0%	0%	68%	100%	3,303	Multifamily
120	NWS	Residential	Multifamily	Electric WH	Hot Water	Low Flow Showerheads	13.0	15.9	16.8	1	29,315	1	27%	30.7%	0%	0%	68%	100%	1,652	Multifamily

Residential Measures

Measure ID	Weather Sensitive	MEASURE DESCRIPTION				MEASURE SELECTION					APPLICABILITY					PROGRAM				
		Sector	Sub-Sector	Building Type	End Use	Measure Name	Measure TRC calculated for 2014	Measure TRC calculated for 2020	Measure TRC calculated for 2022	Passed Measure Screening? (1=Yes, 0=No)	Total Sub-Sector Units	Measure Units per Sub-Sector Unit	Applicability	Technical Feasibility	Distribution by size/model but not Efficiency Level		Distribution by Efficiency Level	Not Yet Adopted	Annual Replacement Eligibility	Total Applicable Measure Units
121	NWS	Residential	Multifamily	Common Area	Lighting	Hallway Lighting Efficiency	0.5	0.7	0.7	0	0	0%	0.0%	0%	0%	0%	0%	0	*NA	
122	NWS	Residential	Multifamily	Common Area	Lighting	Exterior Lighting Efficiency	1.9	2.1	2.1	1	29,315	1	100%	11.1%	0%	0%	0%	100%	3,244	Multifamily
124	WS	Residential	SingleFamily&Duplex	All	Lighting	New home - lighting	8.0	10.4	11.2	1	591	1	100%	0%	0%	0%	0%	100%	591	Efficient New Homes
125	WS	Residential	SingleFamily&Duplex	All	Other	New home - nonlighting	0.7	0.9	0.9	1	591	1	100%	0%	0%	0%	0%	100%	591	Efficient New Homes
126	WS	Residential	SingleFamily&Duplex	All	Other	New home - nonlighting	0.7	0.9	0.9	1	591	1	100%	0%	0%	0%	0%	100%	591	Efficient New Homes
127	WS	Residential	SingleFamily&Duplex	All	Other	New home - furnace	0.7	0.8	0.8	1	591	1	100%	0%	0%	0%	0%	100%	591	Efficient New Homes
129	WS	Residential	All	All	Other	Benchmarking	1.3	1.7	2.2	1	162,863	1	100%	0%	0%	0%	0%	100%	162,863	Home Energy Use Benchmarking
130	WS	Residential	All	AC	Other	Direct Load Control Switch	0.9	3.5	4.3	1	162,863	1	57%	0%	0%	0%	0%	100%	92,832	Direct Load Control
131	WS	Residential	All	Heat Pump	Other	Direct Load Control Switch	0.9	3.5	4.3	1	162,863	1	4%	0%	0%	0%	0%	100%	6,515	Direct Load Control
132	WS	Residential	All	AC	Other	Direct Load Control Thermostat	1.4	5.4	6.7	1	162,863	1	57%	0%	0%	0%	0%	100%	92,832	Direct Load Control
133	WS	Residential	All	Heat Pump	Other	Direct Load Control Thermostat	1.4	5.4	6.7	1	162,863	1	4%	0%	0%	0%	0%	100%	6,515	Direct Load Control
134	WS	Residential	All	AC	Other	Enabled Dynamic Pricing (Res)	1.5	3.4	3.8	0	0	0	0%	0%	0%	0%	0%	0	*NA	
135	WS	Residential	All	AC	Other	Non-Enabled Dynamic Pricing (Res)	139.0	303.3	339.0	1	162,863	1	57%	0%	0%	0%	0%	100%	92,832	Dynamic Pricing
136	WS	Residential	All	All	Other	Low-Income Weatherization Package	1.1	1.4	1.5	1	162,863	1	100%	22.0%	0%	0%	0%	100%	35,830	Low-Income Weatherization
137	WS	Residential	All	Electric WH	Hot Water	Solar Hot Water	0.7	0.8	0.9	1	162,863	1	27%	0%	0%	0%	0%	100%	43,973	Solar Hot Water
138	WS	Residential	All	Electric WH	Hot Water	Solar Hot Water	0.4	0.4	0.4	1	162,863	1	27%	0%	0%	0%	0%	100%	43,973	Solar Hot Water
140	WS	Residential	SingleFamily&Duplex	AC/Gas Heat	HVAC	Duct Insulation	1.0	1.3	1.4	1	131,919	1	36%	0%	0%	0%	79%	100%	37,917	Residential Home Audit & Retrofit
141	WS	Residential	SingleFamily&Duplex	Gas Heat (No AC)	HVAC	Duct Insulation	0.1	0.1	0.1	0	0	0	0%	0%	0%	0%	0%	0	*NA	
142	WS	Residential	SingleFamily&Duplex	AC/Electric Resistance Heat	HVAC	Duct Insulation	1.6	2.0	2.1	1	131,919	1	21%	0%	0%	0%	79%	100%	21,486	Residential Home Audit & Retrofit
143	WS	Residential	SingleFamily&Duplex	Heat Pump	HVAC	Duct Insulation	1.5	1.9	2.0	1	131,919	1	4%	0%	0%	0%	79%	100%	4,169	Residential Home Audit & Retrofit
144	WS	Residential	SingleFamily&Duplex	AC/Gas Heat	HVAC	Gas Furnace Replacement	0.1	0.2	0.2	0	0	0	0%	0%	0%	0%	0%	0	*NA	
145	WS	Residential	SingleFamily&Duplex	Gas Heat (No AC)	HVAC	Gas Furnace Replacement	0.1	0.2	0.2	0	0	0	0%	0%	0%	0%	0%	0	*NA	
146	WS	Residential	Multifamily	AC/Gas Heat	HVAC	Gas Furnace Replacement	0.1	0.1	0.1	0	0	0	0%	0%	0%	0%	0%	0	*NA	
147	WS	Residential	Multifamily	Gas Heat (No AC)	HVAC	Gas Furnace Replacement	0.1	0.1	0.1	0	0	0	0%	0%	0%	0%	0%	0	*NA	
148	WS	Residential	All	AC/Gas Heat	HVAC	Gas Furnace Tune-Up	0.2	0.3	0.3	0	0	0	0%	0%	0%	0%	0%	0	*NA	
149	WS	Residential	All	Gas Heat (No AC)	HVAC	Gas Furnace Tune-Up	0.2	0.3	0.3	0	0	0	0%	0%	0%	0%	0%	0	*NA	
150	WS	Residential	All	Gas WH	Hot Water	Efficient Gas water heaters	0.1	0.1	0.1	0	0	0	0%	0%	0%	0%	0%	0	*NA	
151	WS	Residential	All	Gas WH	Hot Water	Tankless Gas water heater	0.6	0.6	0.7	0	0	0	0%	0%	0%	0%	0%	0	*NA	
152	WS	Residential	All	Gas WH	Hot Water	Gas WH jacket	0.5	0.5	0.5	0	0	0	0%	0%	0%	0%	0%	0	*NA	
153	WS	Residential	All	Gas WH	Hot Water	Gas WH pipe insulation	0.2	0.2	0.2	0	0	0	0%	0%	0%	0%	0%	0	*NA	
154	NWS	Residential	All	Gas WH	Hot Water	Faucet aerators - Gas WH	1.4	1.6	1.7	1	162,863	2	65%	0%	0%	0%	68%	100%	143,971	Residential Home Audit & Retrofit
155	NWS	Residential	All	Gas WH	Hot Water	Low Flow Showerheads	3.8	4.3	4.5	1	162,863	1	65%	0%	0%	0%	68%	100%	71,985	Residential Home Audit & Retrofit

Residential Measures

MEASURE DESCRIPTION						MEASURE DOCUMENTATION					
Measure ID	Weather Sensitive	Sector	Sub-Sector	Building Type	End Use	Measure Name	Measure Cost Source	Measure Savings Source	Measure Lifetime Source	Measure Unit per SubSector Unit Source	Applicability
1	NWS	Residential	All	All	Lighting	Residential Lighting Efficiency	IL TRM	AR TRM	AR TRM	DOE	RASS
2	NWS	Residential	All	All	Lighting	Residential Lighting Efficiency	IL TRM	AR TRM	AR TRM	DOE	RASS
3	NWS	Residential	All	All	Lighting	Residential Lighting Efficiency	IL TRM	AR TRM	AR TRM	DOE	RASS
4	NWS	Residential	All	All	Lighting	Residential Lighting Efficiency	IL TRM	AR TRM	AR TRM	DOE	RASS
5	NWS	Residential	All	All	Consumer Electronics	Consumer Electronics	ICF	ICF	ICF	ICF	RASS
6	NWS	Residential	All	Gas WH	Appliances	ENERGYSTAR Clothes Washer and Dryer	ICF	ICF	ICF	ICF	RASS
7	NWS	Residential	All	Electric WH	Appliances	ENERGYSTAR Clothes Washer and Dryer	ICF	ICF	ICF	ICF	RASS
8	NWS	Residential	All	Electric WH	Appliances	ENERGYSTAR Clothes Washer and Dryer	ICF	ICF	ICF	ICF	RASS
9	NWS	Residential	All	Gas WH	Appliances	ENERGYSTAR Clothes Washer and Dryer	ICF	ICF	ICF	ICF	RASS
10	NWS	Residential	All	Electric WH	Appliances	ENERGYSTAR Dishwasher	ICF	ICF	ICF	ICF	RASS
11	NWS	Residential	All	Gas WH	Appliances	ENERGYSTAR Dishwasher	ICF	ICF	ICF	ICF	RASS
12	NWS	Residential	All	All	Appliances	HE Refrigerator	DOE	IL TRM	AR TRM	ICF	RASS
13	WS	Residential	All	Gas Heat (No AC)	HVAC	Room Air Conditioner	IL TRM	ICF/AR TRM	AR TRM	RECS	RASS
14	WS	Residential	All	Gas Heat (No AC)	HVAC	Room Air Conditioner	IL TRM	ICF/AR TRM	AR TRM	RECS	RASS
15	NWS	Residential	All	All	Appliances	Advanced Power Strips	ICF	AR TRM	AR TRM	RASS	RASS
16	NWS	Residential	All	All	Appliances	ENERGY STAR Dehumidifier	IL TRM	IL TRM	IL TRM	ICF	RASS
17	NWS	Residential	All	Electric WH	Hot Water	Water Heater Replacement	IL TRM	ICF/AR TRM	AR TRM	ICF	RASS
18	NWS	Residential	All	Electric WH	Hot Water	Water Heater Replacement	IL TRM	ICF/AR TRM	AR TRM	ICF	RASS
19	NWS	Residential	All	Electric WH	Hot Water	Water Heater Replacement	IL TRM	ICF/AR TRM	AR TRM	ICF	RASS
20	NWS	Residential	All	Electric WH	Hot Water	Water Heater Replacements	ICF	ICF/AR TRM	AR TRM	ICF	RASS
22	NWS	Residential	SingleFamily&Duplex	All	Other	Home Energy Audit	ICF	ICF	ICF	ICF	RASS
23	NWS	Residential	SingleFamily&Duplex	All	Lighting	Residential Lighting Efficiency	ICF	AR TRM	AR TRM	ICF	RASS
24	NWS	Residential	SingleFamily&Duplex	Electric WH	Hot Water	Faucet Aerators	ICF	AR TRM	AR TRM	ICF	RASS
25	NWS	Residential	SingleFamily&Duplex	Electric WH	Hot Water	Low Flow Showerheads	ICF	AR TRM	AR TRM	ICF	RASS
26	WS	Residential	SingleFamily&Duplex	AC/Gas Heat	Shell	Air Infiltration	ICF	ICF/AR TRM	AR TRM	ICF	RASS
27	WS	Residential	SingleFamily&Duplex	Gas Heat (No AC)	Shell	Air Infiltration	ICF	ICF/AR TRM	AR TRM	ICF	RASS
28	WS	Residential	SingleFamily&Duplex	AC/Electric Resistance Heat	Shell	Air Infiltration	ICF	ICF/AR TRM	AR TRM	ICF	RASS
29	WS	Residential	SingleFamily&Duplex	Heat Pump	Shell	Air Infiltration	ICF	ICF/AR TRM	AR TRM	ICF	RASS
30	WS	Residential	SingleFamily&Duplex	AC/Gas Heat	Shell	Attic Knee Wall Insulation	ICF	ICF/AR TRM	AR TRM	ICF	RASS
31	WS	Residential	SingleFamily&Duplex	Gas Heat (No AC)	Shell	Attic Knee Wall Insulation	ICF	ICF/AR TRM	AR TRM	ICF	RASS
32	WS	Residential	SingleFamily&Duplex	AC/Electric Resistance Heat	Shell	Attic Knee Wall Insulation	ICF	ICF/AR TRM	AR TRM	ICF	RASS
33	WS	Residential	SingleFamily&Duplex	Heat Pump	Shell	Attic Knee Wall Insulation	ICF	ICF/AR TRM	AR TRM	ICF	RASS
34	WS	Residential	SingleFamily&Duplex	AC/Gas Heat	Shell	Ceiling Insulation	DEER	ICF/AR TRM	AR TRM	RASS	RASS
35	WS	Residential	SingleFamily&Duplex	AC/Gas Heat	Shell	Ceiling Insulation	DEER	ICF/AR TRM	AR TRM	RASS	RASS
36	WS	Residential	SingleFamily&Duplex	AC/Gas Heat	Shell	Ceiling Insulation	DEER	ICF/AR TRM	AR TRM	RASS	RASS
37	WS	Residential	SingleFamily&Duplex	AC/Gas Heat	Shell	Ceiling Insulation	DEER	ICF/AR TRM	AR TRM	RASS	RASS
38	WS	Residential	SingleFamily&Duplex	Gas Heat (No AC)	Shell	Ceiling Insulation	DEER	ICF/AR TRM	AR TRM	RASS	RASS
39	WS	Residential	SingleFamily&Duplex	Gas Heat (No AC)	Shell	Ceiling Insulation	DEER	ICF/AR TRM	AR TRM	RASS	RASS
40	WS	Residential	SingleFamily&Duplex	Gas Heat (No AC)	Shell	Ceiling Insulation	DEER	ICF/AR TRM	AR TRM	RASS	RASS
41	WS	Residential	SingleFamily&Duplex	Gas Heat (No AC)	Shell	Ceiling Insulation	DEER	ICF/AR TRM	AR TRM	RASS	RASS
42	WS	Residential	SingleFamily&Duplex	AC/Electric Resistance Heat	Shell	Ceiling Insulation	DEER	ICF/AR TRM	AR TRM	RASS	RASS
43	WS	Residential	SingleFamily&Duplex	AC/Electric Resistance Heat	Shell	Ceiling Insulation	DEER	ICF/AR TRM	AR TRM	RASS	RASS
44	WS	Residential	SingleFamily&Duplex	AC/Electric Resistance Heat	Shell	Ceiling Insulation	DEER	ICF/AR TRM	AR TRM	RASS	RASS
45	WS	Residential	SingleFamily&Duplex	AC/Electric Resistance Heat	Shell	Ceiling Insulation	DEER	ICF/AR TRM	AR TRM	RASS	RASS
46	WS	Residential	SingleFamily&Duplex	Heat Pump	Shell	Ceiling Insulation	DEER	ICF/AR TRM	AR TRM	RASS	RASS
47	WS	Residential	SingleFamily&Duplex	Heat Pump	Shell	Ceiling Insulation	DEER	ICF/AR TRM	AR TRM	RASS	RASS
48	WS	Residential	SingleFamily&Duplex	Heat Pump	Shell	Ceiling Insulation	DEER	ICF/AR TRM	AR TRM	RASS	RASS
49	WS	Residential	SingleFamily&Duplex	Heat Pump	Shell	Ceiling Insulation	DEER	ICF/AR TRM	AR TRM	RASS	RASS
50	WS	Residential	SingleFamily&Duplex	AC/Electric Resistance Heat	HVAC	Duct Sealing	ICF	ICF/AR TRM	AR TRM	ICF	RASS
51	WS	Residential	SingleFamily&Duplex	Heat Pump	HVAC	Duct Sealing	ICF	ICF/AR TRM	AR TRM	ICF	RASS
52	WS	Residential	SingleFamily&Duplex	AC/Gas Heat	HVAC	Duct Sealing	ICF	ICF/AR TRM	AR TRM	ICF	RASS
53	WS	Residential	SingleFamily&Duplex	AC/Gas Heat	Shell	Energy Star Windows	DEER	ICF/AR TRM	AR TRM	ICF	RASS
54	WS	Residential	SingleFamily&Duplex	Gas Heat (No AC)	Shell	Energy Star Windows	DEER	ICF/AR TRM	AR TRM	ICF	RASS
55	WS	Residential	SingleFamily&Duplex	AC/Electric Resistance Heat	Shell	Energy Star Windows	DEER	ICF/AR TRM	AR TRM	ICF	RASS
56	WS	Residential	SingleFamily&Duplex	Heat Pump	Shell	Energy Star Windows	DEER	ICF/AR TRM	AR TRM	ICF	RASS
57	WS	Residential	SingleFamily&Duplex	AC/Gas Heat	Shell	Energy Star Windows	DEER	ICF/AR TRM	AR TRM	ICF	RASS
58	WS	Residential	SingleFamily&Duplex	Gas Heat (No AC)	Shell	Energy Star Windows	DEER	ICF/AR TRM	AR TRM	ICF	RASS
59	WS	Residential	SingleFamily&Duplex	AC/Electric Resistance Heat	Shell	Energy Star Windows	DEER	ICF/AR TRM	AR TRM	ICF	RASS
60	WS	Residential	SingleFamily&Duplex	Heat Pump	Shell	Energy Star Windows	DEER	ICF/AR TRM	AR TRM	ICF	RASS

Residential Measures

MEASURE DESCRIPTION						MEASURE DOCUMENTATION						
Measure ID	Weather Sensitive	Sector	Sub-Sector	Building Type	End Use	Measure Name	Measure Cost Source	Measure Savings Source	Measure Lifetime Source	Measure Unit per SubSector Unit Source	Applicability	
61	WS	Residential	SingleFamily&Duplex	AC/Gas Heat	Shell	Floor Insulation	DEER	ICF/AR TRM	AR TRM	RASS	RASS	
62	WS	Residential	SingleFamily&Duplex	Gas Heat (No AC)	Shell	Floor Insulation	DEER	ICF/AR TRM	AR TRM	RASS	RASS	
63	WS	Residential	SingleFamily&Duplex	AC/Electric Resistance Heat	Shell	Floor Insulation	DEER	ICF/AR TRM	AR TRM	RASS	RASS	
64	WS	Residential	SingleFamily&Duplex	Heat Pump	Shell	Floor Insulation	DEER	ICF/AR TRM	AR TRM	RASS	RASS	
65	WS	Residential	SingleFamily&Duplex	AC/Gas Heat	Shell	Radiant Barriers	DEER	ICF/AR TRM	AR TRM	RASS	RASS	
66	WS	Residential	SingleFamily&Duplex	Gas Heat (No AC)	Shell	Radiant Barriers	DEER	ICF/AR TRM	AR TRM	RASS	RASS	
67	WS	Residential	SingleFamily&Duplex	AC/Electric Resistance Heat	Shell	Radiant Barriers	DEER	ICF/AR TRM	AR TRM	RASS	RASS	
68	WS	Residential	SingleFamily&Duplex	Heat Pump	Shell	Radiant Barriers	DEER	ICF/AR TRM	AR TRM	RASS	RASS	
69	WS	Residential	SingleFamily&Duplex	AC/Gas Heat	Shell	Wall Insulation	DEER	ICF/AR TRM	AR TRM	ICF	RASS	
70	WS	Residential	SingleFamily&Duplex	Gas Heat (No AC)	Shell	Wall Insulation	DEER	ICF/AR TRM	AR TRM	ICF	RASS	
71	WS	Residential	SingleFamily&Duplex	AC/Electric Resistance Heat	Shell	Wall Insulation	DEER	ICF/AR TRM	AR TRM	ICF	RASS	
72	WS	Residential	SingleFamily&Duplex	Heat Pump	Shell	Wall Insulation	DEER	ICF/AR TRM	AR TRM	ICF	RASS	
73	WS	Residential	SingleFamily&Duplex	Electric WH	Hot Water	Water Heater Jackets	DEER	ICF/AR TRM	AR TRM	ICF	RASS	
74	WS	Residential	SingleFamily&Duplex	Electric WH	Hot Water	Water Heater Pipe Insulation	DEER	ICF/AR TRM	AR TRM	ICF	RASS	
75	WS	Residential	SingleFamily&Duplex	AC/Gas Heat	Shell	Window Film	DEER	ICF/AR TRM	AR TRM	ICF	RASS	
76	WS	Residential	SingleFamily&Duplex	Gas Heat (No AC)	Shell	Window Film	DEER	ICF/AR TRM	AR TRM	ICF	RASS	
77	WS	Residential	SingleFamily&Duplex	AC/Electric Resistance Heat	Shell	Window Film	DEER	ICF/AR TRM	AR TRM	ICF	RASS	
78	WS	Residential	SingleFamily&Duplex	Heat Pump	Shell	Window Film	DEER	ICF/AR TRM	AR TRM	ICF	RASS	
79	NWS	Residential	SingleFamily&Duplex	All	Other	ENERGY STAR Variable Speed Drive Pool Pump	ICF	OK TRM	OK TRM	ICF	RASS	
80	NWS	Residential	SingleFamily&Duplex	All	HVAC	High Efficiency Bathroom Exhaust Fan	IL TRM	IL TRM	IL TRM	RECS	RASS	
82	WS	Residential	All	AC/Electric Resistance Heat	HVAC	Central AC Replacement	DEER	OK TRM with EFLH from ENERGY STAR ACHP savings calculator for Little Rock	AR TRM	ICF	RASS	
83	WS	Residential	All	AC/Electric Resistance Heat	HVAC	Central AC Replacement	DEER	OK TRM with EFLH from ENERGY STAR ACHP savings calculator for Little Rock	AR TRM	ICF	RASS	
84	WS	Residential	All	AC/Electric Resistance Heat	HVAC	Central AC Replacement	DEER	OK TRM with EFLH from ENERGY STAR ACHP savings calculator for Little Rock	AR TRM	ICF	RASS	
85	WS	Residential	All	AC/Electric Resistance Heat	HVAC	Central AC Replacement	DEER	OK TRM with EFLH from ENERGY STAR ACHP savings calculator for Little Rock	AR TRM	ICF	RASS	
86	WS	Residential	All	AC/Electric Resistance Heat	HVAC	Central AC Replacement	DEER	OK TRM with EFLH from ENERGY STAR ACHP savings calculator for Little Rock	AR TRM	ICF	RASS	
87	WS	Residential	All	AC/Electric Resistance Heat	HVAC	Central AC Replacement	DEER	OK TRM with EFLH from ENERGY STAR ACHP savings calculator for Little Rock	AR TRM	ICF	RASS	
88	WS	Residential	All	AC/Gas Heat	HVAC	Central AC Replacement	ICF	ICF/OK TRM	AR TRM	ICF	RASS	
89	WS	Residential	All	AC/Gas Heat	HVAC	Central AC Replacement	ICF	ICF/OK TRM	AR TRM	ICF	RASS	
90	WS	Residential	All	AC/Gas Heat	HVAC	Central AC Replacement	ICF	ICF/OK TRM	AR TRM	ICF	RASS	
91	WS	Residential	All	AC/Gas Heat	HVAC	Central AC Replacement	ICF	ICF/OK TRM	AR TRM	ICF	RASS	
92	WS	Residential	All	AC/Gas Heat	HVAC	Central AC Replacement	ICF	ICF/OK TRM	AR TRM	ICF	RASS	
93	WS	Residential	All	AC/Gas Heat	HVAC	Central AC Replacement	ICF	ICF/OK TRM	AR TRM	ICF	RASS	
94	WS	Residential	All	Heat Pump	HVAC	Heat Pump Replacement	Mid atlantic TRM	OK TRM with EFLH from ENERGY STAR ACHP savings calculator for Little Rock	AR TRM	ICF	RASS	
95	WS	Residential	All	Heat Pump	HVAC	Heat Pump Replacement	Mid atlantic TRM	OK TRM with EFLH from ENERGY STAR ACHP savings calculator for Little Rock	AR TRM	ICF	RASS	
96	WS	Residential	All	Heat Pump	HVAC	Heat Pump Replacement	Mid atlantic TRM	OK TRM with EFLH from ENERGY STAR ACHP savings calculator for Little Rock	AR TRM	ICF	RASS	
97	WS	Residential	All	Heat Pump	HVAC	Heat Pump Replacement	Mid atlantic TRM	OK TRM with EFLH from ENERGY STAR ACHP savings calculator for Little Rock	AR TRM	ICF	RASS	
98	WS	Residential	All	Heat Pump	HVAC	Heat Pump Replacement	Mid atlantic TRM	OK TRM with EFLH from ENERGY STAR ACHP savings calculator for Little Rock	AR TRM	ICF	RASS	
99	WS	Residential	All	Heat Pump	HVAC	Heat Pump Replacement	Mid atlantic TRM	OK TRM with EFLH from ENERGY STAR ACHP savings calculator for Little Rock	AR TRM	ICF	RASS	
100	WS	Residential	All	AC	HVAC	Mini-Split AC	DEER/ICF research	OK TRM with EFLH from ENERGY STAR ACHP savings calculator for Little Rock/AR TRM	OK TRM	ICF	RASS	
101	WS	Residential	All	AC	HVAC	Mini-Split AC	DEER/ICF research	OK TRM with EFLH from ENERGY STAR ACHP savings calculator for Little Rock/AR TRM	OK TRM	ICF	RASS	
102	WS	Residential	All	Heat Pump	HVAC	Mini-Split Heat Pump	DEER/ICF research	OK TRM with EFLH from ENERGY STAR ACHP savings calculator for Little Rock/AR TRM	OK TRM	ICF	RASS	
103	WS	Residential	All	Heat Pump	HVAC	Mini-Split Heat Pump	DEER/ICF research	OK TRM with EFLH from ENERGY STAR ACHP savings calculator for Little Rock/AR TRM	OK TRM	ICF	RASS	
104	WS	Residential	All	AC	HVAC	Mini-Split AC	DEER/ICF research	OK TRM with EFLH from ENERGY STAR ACHP savings calculator for Little Rock/AR TRM	OK TRM	ICF	RASS	
105	WS	Residential	All	AC	HVAC	Mini-Split AC	DEER/ICF research	OK TRM with EFLH from ENERGY STAR ACHP savings calculator for Little Rock/AR TRM	OK TRM	ICF	RASS	
106	WS	Residential	All	Heat Pump	HVAC	Mini-Split Heat Pump	DEER/ICF research	OK TRM with EFLH from ENERGY STAR ACHP savings calculator for Little Rock/AR TRM	OK TRM	ICF	RASS	
107	WS	Residential	All	Heat Pump	HVAC	Mini-Split Heat Pump	DEER/ICF research	OK TRM with EFLH from ENERGY STAR ACHP savings calculator for Little Rock/AR TRM	OK TRM	ICF	RASS	
108	WS	Residential	SingleFamily&Duplex	Heat Pump	HVAC	Ground Source Heatpump	ICF/DOE	ICF/OK TRM	OK TRM	ICF	RASS	
109	WS	Residential	SingleFamily&Duplex	Heat Pump	HVAC	Ground Source Heatpump	ICF/DOE	ICF/OK TRM	OK TRM	ICF	RASS	
111	WS	Residential	All	AC	HVAC	Central AC Tune-up	IL TRM	AR TRM	AR TRM	ICF	RASS	
112	WS	Residential	All	Heat Pump	HVAC	Heat Pump Tune-up	IL TRM	AR TRM	AR TRM	ICF	RASS	
114	NWS	Residential	All	All	Appliances	Refrigerator/Freezer Recycling	IL TRM	Ameren PYS Evaluation Report	IL TRM	RECS	RASS	
115	NWS	Residential	All	Gas Heat (No AC)	HVAC	Room Air Conditioner Recycling	IL TRM	ICF/AR TRM	IL TRM	RECS	RASS	
117	NWS	Residential	MultiFamily	All	Other	Home Energy Audit	ICF	ICF	ICF	ICF	RASS	
118	NWS	Residential	MultiFamily	All	Lighting	Residential Lighting Efficiency	ICF	AR TRM	AR TRM	ICF	RASS	
119	NWS	Residential	MultiFamily	Electric WH	Hot Water	Faucet Aerators	ICF	AR TRM	AR TRM	ICF	RASS	
120	NWS	Residential	MultiFamily	Electric WH	Hot Water	Low Flow Showerheads	ICF	AR TRM	AR TRM	ICF	RASS	

Residential Measures

MEASURE DESCRIPTION						MEASURE DOCUMENTATION					
Measure ID	Weather Sensitive	Sector	Sub-Sector	Building Type	End Use	Measure Name	Measure Cost Source	Measure Savings Source	Measure Lifetime Source	Measure Unit per SubSector Unit Source	Applicability
121	NWS	Residential	Multifamily	Common Area	Lighting	Hallway Lighting Efficiency	IL TRM	ICF	AR & IL TRM	ICF	RASS
122	NWS	Residential	Multifamily	Common Area	Lighting	Exterior Lighting Efficiency	IL TRM	ICF	AR & IL TRM	ICF	RASS
124	WS	Residential	SingleFamily&Duplex	All	Lighting	New home - lighting	PSO outreach/Mid atlantic TRM	PSO new homes program w/ Monroe weather file and upgrade lighting and seer baseline	AR-TRM	ICF	RASS
125	WS	Residential	SingleFamily&Duplex	All	Other	New home - nonlighting	PSO outreach/Mid atlantic TRM	PSO new homes program w/ Monroe weather file and upgrade lighting baseline	ICF	ICF	RASS
126	WS	Residential	SingleFamily&Duplex	All	Other	New home - nonlighting	PSO outreach/Mid atlantic TRM	PSO new homes program w/ Monroe weather file and upgrade lighting and seer baseline	ICF	ICF	RASS
127	WS	Residential	SingleFamily&Duplex	All	Other	New home - furnace	Mid atlantic TRM	PSO new homes program w/ Monroe weather file and upgrade lighting baseline	AR-TRM	ICF	RASS
129	WS	Residential	All	All	Other	Benchmarking	2011 Model	ComEd PY5 Program Evaluation	2011 Model	ICF	RASS
130	WS	Residential	All	AC	Other	Direct Load Control Switch	2011 Model	Comverge EAI Study	2011 Model	ICF	RASS
131	WS	Residential	All	Heat Pump	Other	Direct Load Control Switch	2011 Model	Comverge EAI Study	2011 Model	ICF	RASS
132	WS	Residential	All	AC	Other	Direct Load Control Thermostat	2011 Model	Comverge EAI Study	2011 Model	ICF	RASS
133	WS	Residential	All	Heat Pump	Other	Direct Load Control Thermostat	2011 Model	Comverge EAI Study	2011 Model	ICF	RASS
134	WS	Residential	All	AC	Other	Enabled Dynamic Pricing (Res)	2011 Model	2011 Model	2011 Model	ICF	RASS
135	WS	Residential	All	AC	Other	Non-Enabled Dynamic Pricing (Res)	2011 Model	2011 Model	2011 Model	ICF	RASS
136	WS	Residential	All	All	Other	Low-Income Weatherization Package	2011 ICF Model	ICF based EAI 2011 data	ICF based EAI 2011 data	ICF	RASS
137	WS	Residential	All	Electric WH	Hot Water	Solar Hot Water	2011 ICF Model	2011 ICF Model	2011 ICF Model	ICF	RASS
138	WS	Residential	All	Electric WH	Hot Water	Solar Hot Water	2011 ICF Model	2011 ICF Model	2011 ICF Model	ICF	RASS
140	WS	Residential	SingleFamily&Duplex	AC/Gas Heat	HVAC	Duct Insulation	NREL data base	EAI TRM	EAI TRM (based on NEAT)	ICF	RASS
141	WS	Residential	SingleFamily&Duplex	Gas Heat (No AC)	HVAC	Duct Insulation	NREL data base	EAI TRM	EAI TRM (based on NEAT)	ICF	RASS
142	WS	Residential	SingleFamily&Duplex	AC/Electric Resistance Heat	HVAC	Duct Insulation	NREL data base	EAI TRM	EAI TRM (based on NEAT)	ICF	ICF
143	WS	Residential	SingleFamily&Duplex	Heat Pump	HVAC	Duct Insulation	NREL data base	EAI TRM	EAI TRM (based on NEAT)	ICF	ICF
144	WS	Residential	SingleFamily&Duplex	AC/Gas Heat	HVAC	Gas Furnace Replacement	IL TRM and Mid Atlantic TRM	EAI TRM	EAI TRM (based on DEER 2008)	ICF	ICF
145	WS	Residential	SingleFamily&Duplex	Gas Heat (No AC)	HVAC	Gas Furnace Replacement	IL TRM and Mid Atlantic TRM	EAI TRM	EAI TRM (based on DEER 2008)	ICF	ICF
146	WS	Residential	Multifamily	AC/Gas Heat	HVAC	Gas Furnace Replacement	IL TRM and Mid Atlantic TRM	EAI TRM	EAI TRM (based on DEER 2008)	ICF	ICF
147	WS	Residential	Multifamily	Gas Heat (No AC)	HVAC	Gas Furnace Replacement	IL TRM and Mid Atlantic TRM	EAI TRM	EAI TRM (based on DEER 2008)	ICF	ICF
148	WS	Residential	All	AC/Gas Heat	HVAC	Gas Furnace Tune-Up	not in il, not in ok, not in ar, not in nrel, not in mid atlantic, not in RS means. Used AC tune up cost	EAI TRM	EAI TRM (based on NEAT)	ICF	ICF
149	WS	Residential	All	Gas Heat (No AC)	HVAC	Gas Furnace Tune-Up	not in il, not in ok, not in ar, not in nrel, not in mid atlantic, not in RS means. Used AC tune up cost	EAI TRM	EAI TRM (based on NEAT)	ICF	ICF
150	WS	Residential	All	Gas WH	Hot Water	Efficient Gas water heaters	IL TRM	EAI TRM	EAI TRM (based on DEER 2008)	ICF	ICF
151	WS	Residential	All	Gas WH	Hot Water	Tankless Gas water heater	IL TRM	EAI TRM	EAI TRM (based on DEER 2008)	ICF	ICF
152	WS	Residential	All	Gas WH	Hot Water	Gas WH jacket	DEER	EAI TRM	EAI TRM (based on NEAT)	ICF	ICF
153	WS	Residential	All	Gas WH	Hot Water	Gas WH pipe insulation	DEER	EAI TRM	EAI TRM (based on NEAT)	ICF	ICF
154	NWS	Residential	All	Gas WH	Hot Water	Faucet aerators - Gas WH	Based on EAI MF direct install program	EAI TRM	EAI TRM (based on DEER 2008)	ICF	RASS
155	NWS	Residential	All	Gas WH	Hot Water	Low Flow Showerheads	Based on EAI MF direct install program	EAI TRM	EAI TRM (based on DEER 2008)	ICF	RASS

Residential Measures

Measure ID	Weather Sensitive	MEASURE DESCRIPTION					PROGRAM	PARTICIPATION LOW CASE					
		Sector	Sub-Sector	Building Type	End Use	Measure Name		Program Name	First Year of Participation (So Year)	First Year Annual Participation Rate (So)	Year of Maximum Annual Participation (Smax)	Maximum Annual Participation Rate (Smax)	Final Year of Participation (Fo Year)
1	NWS	Residential	All	All	Lighting	Residential Lighting Efficiency	Residential Lighting & Appliances	2016	18.803%	2017	39.003600%	2020	6.496152%
2	NWS	Residential	All	All	Lighting	Residential Lighting Efficiency	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
3	NWS	Residential	All	All	Lighting	Residential Lighting Efficiency	Residential Lighting & Appliances	2016	4.037%	2020	8.555985%	2020	8.555985%
4	NWS	Residential	All	All	Lighting	Residential Lighting Efficiency	Residential Lighting & Appliances	2015	2.924%	2020	20.115380%	2034	0.672113%
5	NWS	Residential	All	All	Consumer Electronics	Consumer Electronics	Residential Lighting & Appliances	2015	1.602%	2034	8.008618%	2034	8.008618%
6	NWS	Residential	All	Gas WH	Appliances	ENERGYSTAR Clothes Washer and Dryer	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
7	NWS	Residential	All	Electric WH	Appliances	ENERGYSTAR Clothes Washer and Dryer	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
8	NWS	Residential	All	Electric WH	Appliances	ENERGYSTAR Clothes Washer and Dryer	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
9	NWS	Residential	All	Gas WH	Appliances	ENERGYSTAR Clothes Washer and Dryer	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
10	NWS	Residential	All	Electric WH	Appliances	ENERGYSTAR Dishwasher	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
11	NWS	Residential	All	Gas WH	Appliances	ENERGYSTAR Dishwasher	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
12	NWS	Residential	All	All	Appliances	HE Refrigerator	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
13	WS	Residential	All	Gas Heat (No AC)	HVAC	Room Air Conditioner	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
14	WS	Residential	All	Gas Heat (No AC)	HVAC	Room Air Conditioner	Residential Lighting & Appliances	2015	0.003%	2034	0.015919%	2034	0.015919%
15	NWS	Residential	All	All	Appliances	Advanced Power Strips	Residential Lighting & Appliances	2015	3.147%	2034	15.732867%	2034	15.732867%
16	NWS	Residential	All	All	Appliances	ENERGY STAR Dehumidifier	Residential Lighting & Appliances	2015	0.510%	2034	2.549144%	2034	2.549144%
17	NWS	Residential	All	Electric WH	Hot Water	Water Heater Replacement	Water Heating	2015	0.800%	2034	3.997793%	2034	3.997793%
18	NWS	Residential	All	Electric WH	Hot Water	Water Heater Replacement	Water Heating	2015	0.804%	2034	4.019057%	2034	4.019057%
19	NWS	Residential	All	Electric WH	Hot Water	Water Heater Replacement	Water Heating	2015	0.933%	2034	4.664616%	2034	4.664616%
20	NWS	Residential	All	Electric WH	Hot Water	Water Heater Replacements	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
22	NWS	Residential	SingleFamily&Duplex	All	Other	Home Energy Audit	Residential Home Audit & Retrofit	2015	0.250%	2019	1.500000%	2034	1.500000%
23	NWS	Residential	SingleFamily&Duplex	All	Lighting	Residential Lighting Efficiency	Residential Home Audit & Retrofit	2015	0.188%	2019	1.125000%	2034	1.125000%
24	NWS	Residential	SingleFamily&Duplex	Electric WH	Hot Water	Faucet Aerators	Residential Home Audit & Retrofit	2015	0.188%	2019	1.125000%	2034	1.125000%
25	NWS	Residential	SingleFamily&Duplex	Electric WH	Hot Water	Low Flow Showerheads	Residential Home Audit & Retrofit	2015	0.188%	2019	1.125000%	2034	1.125000%
26	WS	Residential	SingleFamily&Duplex	AC/Gas Heat	Shell	Air Infiltration	Residential Home Audit & Retrofit	2015	0.025%	2019	0.150000%	2034	0.150000%
27	WS	Residential	SingleFamily&Duplex	Gas Heat (No AC)	Shell	Air Infiltration	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
28	WS	Residential	SingleFamily&Duplex	AC/Electric Resistance Heat	Shell	Air Infiltration	Residential Home Audit & Retrofit	2015	0.025%	2019	0.150000%	2034	0.150000%
29	WS	Residential	SingleFamily&Duplex	Heat Pump	Shell	Air Infiltration	Residential Home Audit & Retrofit	2015	0.025%	2019	0.150000%	2034	0.150000%
30	WS	Residential	SingleFamily&Duplex	AC/Gas Heat	Shell	Attic Knee Wall Insulation	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
31	WS	Residential	SingleFamily&Duplex	Gas Heat (No AC)	Shell	Attic Knee Wall Insulation	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
32	WS	Residential	SingleFamily&Duplex	AC/Electric Resistance Heat	Shell	Attic Knee Wall Insulation	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
33	WS	Residential	SingleFamily&Duplex	Heat Pump	Shell	Attic Knee Wall Insulation	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
34	WS	Residential	SingleFamily&Duplex	AC/Gas Heat	Shell	Ceiling Insulation	Residential Home Audit & Retrofit	2015	0.025%	2019	0.150000%	2034	0.150000%
35	WS	Residential	SingleFamily&Duplex	AC/Gas Heat	Shell	Ceiling Insulation	Residential Home Audit & Retrofit	2015	0.025%	2019	0.150000%	2034	0.150000%
36	WS	Residential	SingleFamily&Duplex	AC/Gas Heat	Shell	Ceiling Insulation	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
37	WS	Residential	SingleFamily&Duplex	AC/Gas Heat	Shell	Ceiling Insulation	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
38	WS	Residential	SingleFamily&Duplex	Gas Heat (No AC)	Shell	Ceiling Insulation	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
39	WS	Residential	SingleFamily&Duplex	Gas Heat (No AC)	Shell	Ceiling Insulation	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
40	WS	Residential	SingleFamily&Duplex	Gas Heat (No AC)	Shell	Ceiling Insulation	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
41	WS	Residential	SingleFamily&Duplex	Gas Heat (No AC)	Shell	Ceiling Insulation	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
42	WS	Residential	SingleFamily&Duplex	AC/Electric Resistance Heat	Shell	Ceiling Insulation	Residential Home Audit & Retrofit	2015	0.025%	2019	0.150000%	2034	0.150000%
43	WS	Residential	SingleFamily&Duplex	AC/Electric Resistance Heat	Shell	Ceiling Insulation	Residential Home Audit & Retrofit	2015	0.025%	2019	0.150000%	2034	0.150000%
44	WS	Residential	SingleFamily&Duplex	AC/Electric Resistance Heat	Shell	Ceiling Insulation	Residential Home Audit & Retrofit	2015	0.025%	2019	0.150000%	2034	0.150000%
45	WS	Residential	SingleFamily&Duplex	AC/Electric Resistance Heat	Shell	Ceiling Insulation	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
46	WS	Residential	SingleFamily&Duplex	Heat Pump	Shell	Ceiling Insulation	Residential Home Audit & Retrofit	2015	0.025%	2019	0.150000%	2034	0.150000%
47	WS	Residential	SingleFamily&Duplex	Heat Pump	Shell	Ceiling Insulation	Residential Home Audit & Retrofit	2015	0.025%	2019	0.150000%	2034	0.150000%
48	WS	Residential	SingleFamily&Duplex	Heat Pump	Shell	Ceiling Insulation	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
49	WS	Residential	SingleFamily&Duplex	Heat Pump	Shell	Ceiling Insulation	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
50	WS	Residential	SingleFamily&Duplex	AC/Electric Resistance Heat	HVAC	Duct Sealing	Residential Home Audit & Retrofit	2015	0.025%	2019	0.150000%	2034	0.150000%
51	WS	Residential	SingleFamily&Duplex	Heat Pump	HVAC	Duct Sealing	Residential Home Audit & Retrofit	2015	0.025%	2019	0.150000%	2034	0.150000%
52	WS	Residential	SingleFamily&Duplex	AC/Gas Heat	HVAC	Duct Sealing	Residential Home Audit & Retrofit	2015	0.025%	2019	0.150000%	2034	0.150000%
53	WS	Residential	SingleFamily&Duplex	AC/Gas Heat	Shell	Energy Star Windows	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
54	WS	Residential	SingleFamily&Duplex	Gas Heat (No AC)	Shell	Energy Star Windows	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
55	WS	Residential	SingleFamily&Duplex	AC/Electric Resistance Heat	Shell	Energy Star Windows	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
56	WS	Residential	SingleFamily&Duplex	Heat Pump	Shell	Energy Star Windows	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
57	WS	Residential	SingleFamily&Duplex	AC/Gas Heat	Shell	Energy Star Windows	Residential Home Audit & Retrofit	2015	0.025%	2019	0.150000%	2034	0.150000%
58	WS	Residential	SingleFamily&Duplex	Gas Heat (No AC)	Shell	Energy Star Windows	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
59	WS	Residential	SingleFamily&Duplex	AC/Electric Resistance Heat	Shell	Energy Star Windows	Residential Home Audit & Retrofit	2015	0.025%	2019	0.150000%	2034	0.150000%
60	WS	Residential	SingleFamily&Duplex	Heat Pump	Shell	Energy Star Windows	Residential Home Audit & Retrofit	2015	0.025%	2019	0.150000%	2034	0.150000%

Residential Measures

Measure ID	Weather Sensitive	Sector	Sub-Sector	MEASURE DESCRIPTION			Measure Name	PROGRAM	PARTICIPATION LOW CASE				
				Building Type	End Use				Program Name	First Year of Participation (So Year)	First Year Annual Participation Rate (So)	Year of Maximum Annual Participation (Smax)	Maximum Annual Participation Rate (Smax)
61	WS	Residential	SingleFamily&Duplex	AC/Gas Heat	Shell	Floor Insulation	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
62	WS	Residential	SingleFamily&Duplex	Gas Heat (No AC)	Shell	Floor Insulation	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
63	WS	Residential	SingleFamily&Duplex	AC/Electric Resistance Heat	Shell	Floor Insulation	Residential Home Audit & Retrofit	2015	0.025%	2019	0.150000%	2034	0.150000%
64	WS	Residential	SingleFamily&Duplex	Heat Pump	Shell	Floor Insulation	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
65	WS	Residential	SingleFamily&Duplex	AC/Gas Heat	Shell	Radiant Barriers	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
66	WS	Residential	SingleFamily&Duplex	Gas Heat (No AC)	Shell	Radiant Barriers	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
67	WS	Residential	SingleFamily&Duplex	AC/Electric Resistance Heat	Shell	Radiant Barriers	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
68	WS	Residential	SingleFamily&Duplex	Heat Pump	Shell	Radiant Barriers	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
69	WS	Residential	SingleFamily&Duplex	AC/Gas Heat	Shell	Wall Insulation	Residential Home Audit & Retrofit	2015	0.025%	2019	0.150000%	2034	0.150000%
70	WS	Residential	SingleFamily&Duplex	Gas Heat (No AC)	Shell	Wall Insulation	Residential Home Audit & Retrofit	2015	0.025%	2019	0.150000%	2034	0.150000%
71	WS	Residential	SingleFamily&Duplex	AC/Electric Resistance Heat	Shell	Wall Insulation	Residential Home Audit & Retrofit	2015	0.025%	2019	0.150000%	2034	0.150000%
72	WS	Residential	SingleFamily&Duplex	Heat Pump	Shell	Wall Insulation	Residential Home Audit & Retrofit	2015	0.025%	2019	0.150000%	2034	0.150000%
73	WS	Residential	SingleFamily&Duplex	Electric WH	Hot Water	Water Heater Jackets	Residential Home Audit & Retrofit	2015	0.188%	2019	1.125000%	2034	1.125000%
74	WS	Residential	SingleFamily&Duplex	Electric WH	Hot Water	Water Heater Pipe Insulation	Residential Home Audit & Retrofit	2015	0.188%	2019	1.125000%	2034	1.125000%
75	WS	Residential	SingleFamily&Duplex	AC/Gas Heat	Shell	Window Film	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
76	WS	Residential	SingleFamily&Duplex	Gas Heat (No AC)	Shell	Window Film	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
77	WS	Residential	SingleFamily&Duplex	AC/Electric Resistance Heat	Shell	Window Film	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
78	WS	Residential	SingleFamily&Duplex	Heat Pump	Shell	Window Film	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
79	NWS	Residential	SingleFamily&Duplex	All	Other	ENERGY STAR Variable Speed Drive Pool Pump	Pool Pump	2015	0.430%	2034	2.151567%	2034	2.151567%
80	NWS	Residential	SingleFamily&Duplex	All	HVAC	High Efficiency Bathroom Exhaust Fan	Residential Home Audit & Retrofit	2015	0.025%	2019	0.150000%	2034	0.150000%
82	WS	Residential	All	AC/Electric Resistance Heat	HVAC	Central AC Replacement	ENERGY STAR Air Conditioning	2015	0.000%	2034	25.627131%	2015	0.000000%
83	WS	Residential	All	AC/Electric Resistance Heat	HVAC	Central AC Replacement	ENERGY STAR Air Conditioning	2015	0.000%	2034	25.203805%	2015	0.000000%
84	WS	Residential	All	AC/Electric Resistance Heat	HVAC	Central AC Replacement	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
85	WS	Residential	All	AC/Electric Resistance Heat	HVAC	Central AC Replacement	ENERGY STAR Air Conditioning	2016	5.218%	2015	5.217731%	2015	5.217731%
86	WS	Residential	All	AC/Electric Resistance Heat	HVAC	Central AC Replacement	ENERGY STAR Air Conditioning	2016	5.138%	2015	5.137650%	2015	5.137650%
87	WS	Residential	All	AC/Electric Resistance Heat	HVAC	Central AC Replacement	ENERGY STAR Air Conditioning	2016	4.979%	2015	4.978826%	2015	4.978826%
88	WS	Residential	All	AC/Gas Heat	HVAC	Central AC Replacement	ENERGY STAR Air Conditioning	2015	0.000%	2034	27.822445%	2015	0.000000%
89	WS	Residential	All	AC/Gas Heat	HVAC	Central AC Replacement	ENERGY STAR Air Conditioning	2015	0.000%	2034	26.635176%	2015	0.000000%
90	WS	Residential	All	AC/Gas Heat	HVAC	Central AC Replacement	ENERGY STAR Air Conditioning	2015	0.000%	2034	25.319469%	2015	0.000000%
91	WS	Residential	All	AC/Gas Heat	HVAC	Central AC Replacement	ENERGY STAR Air Conditioning	2016	5.447%	2015	5.447070%	2015	5.447070%
92	WS	Residential	All	AC/Gas Heat	HVAC	Central AC Replacement	ENERGY STAR Air Conditioning	2016	5.318%	2015	5.317856%	2015	5.317856%
93	WS	Residential	All	AC/Gas Heat	HVAC	Central AC Replacement	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
94	WS	Residential	All	Heat Pump	HVAC	Heat Pump Replacement	ENERGY STAR Air Conditioning	2015	0.000%	2034	26.615089%	2015	0.000000%
95	WS	Residential	All	Heat Pump	HVAC	Heat Pump Replacement	ENERGY STAR Air Conditioning	2015	0.000%	2034	26.320437%	2015	0.000000%
96	WS	Residential	All	Heat Pump	HVAC	Heat Pump Replacement	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
97	WS	Residential	All	Heat Pump	HVAC	Heat Pump Replacement	ENERGY STAR Air Conditioning	2016	5.524%	2015	5.524305%	2015	5.524305%
98	WS	Residential	All	Heat Pump	HVAC	Heat Pump Replacement	ENERGY STAR Air Conditioning	2016	5.434%	2015	5.434376%	2015	5.434376%
99	WS	Residential	All	Heat Pump	HVAC	Heat Pump Replacement	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
100	WS	Residential	All	AC	HVAC	Mini-Split AC	ENERGY STAR Air Conditioning	2015	0.000%	2034	29.819926%	2015	0.000000%
101	WS	Residential	All	AC	HVAC	Mini-Split AC	ENERGY STAR Air Conditioning	2015	0.000%	2034	27.734872%	2015	0.000000%
102	WS	Residential	All	Heat Pump	HVAC	Mini-Split Heat Pump	ENERGY STAR Air Conditioning	2015	6.166%	2034	30.828174%	2034	30.828174%
103	WS	Residential	All	Heat Pump	HVAC	Mini-Split Heat Pump	ENERGY STAR Air Conditioning	2015	5.870%	2034	29.350306%	2034	29.350306%
104	WS	Residential	All	AC	HVAC	Mini-Split AC	ENERGY STAR Air Conditioning	2016	5.783%	2015	5.782534%	2015	5.782534%
105	WS	Residential	All	AC	HVAC	Mini-Split AC	ENERGY STAR Air Conditioning	2016	5.419%	2015	5.419152%	2015	5.419152%
106	WS	Residential	All	Heat Pump	HVAC	Mini-Split Heat Pump	ENERGY STAR Air Conditioning	2015	6.063%	2034	30.313155%	2034	30.313155%
107	WS	Residential	All	Heat Pump	HVAC	Mini-Split Heat Pump	ENERGY STAR Air Conditioning	2015	5.801%	2034	29.005445%	2034	29.005445%
108	WS	Residential	SingleFamily&Duplex	Heat Pump	HVAC	Ground Source Heatpump	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
109	WS	Residential	SingleFamily&Duplex	Heat Pump	HVAC	Ground Source Heatpump	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
111	WS	Residential	All	AC	HVAC	Central AC Tune-up	ENERGY STAR Air Conditioning	2015	5.776%	2034	28.878397%	2034	28.878397%
112	WS	Residential	All	Heat Pump	HVAC	Heat Pump Tune-up	ENERGY STAR Air Conditioning	2015	6.083%	2034	30.414928%	2034	30.414928%
114	NWS	Residential	All	All	Appliances	Refrigerator/Freezer Recycling	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
115	NWS	Residential	All	Gas Heat (No AC)	HVAC	Room Air Conditioner Recycling	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
117	NWS	Residential	Multifamily	All	Other	Home Energy Audit	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
118	NWS	Residential	Multifamily	All	Lighting	Residential Lighting Efficiency	Multifamily	2015	13.500%	2017	26.400000%	2034	1.600000%
119	NWS	Residential	Multifamily	Electric WH	Hot Water	Faucet Aerators	Multifamily	2015	13.500%	2017	26.400000%	2034	1.600000%
120	NWS	Residential	Multifamily	Electric WH	Hot Water	Low Flow Showerheads	Multifamily	2015	13.500%	2017	26.400000%	2034	1.600000%

Residential Measures

Measure ID	Weather Sensitive	MEASURE DESCRIPTION				PROGRAM	PARTICIPATION LOW CASE						
		Sector	Sub-Sector	Building Type	End Use		Measure Name	Program Name	First Year of Participation (So Year)	First Year Annual Participation Rate (So)	Year of Maximum Annual Participation (Smax)	Maximum Annual Participation Rate (Smax)	Final Year of Participation (Fo Year)
121	NWS	Residential	Multifamily	Common Area	Lighting	Hallway Lighting Efficiency	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
122	NWS	Residential	Multifamily	Common Area	Lighting	Exterior Lighting Efficiency	Multifamily	2015	13.5000%	2017	26.400000%	2034	1.600000%
124	WS	Residential	SingleFamily&Duplex	All	Lighting	New home - lighting	Efficient New Homes	2016	1.375%	2018	6.600000%	2020	6.600000%
125	WS	Residential	SingleFamily&Duplex	All	Other	New home - nonlighting	Efficient New Homes	2016	1.375%	2015	1.375000%	2015	1.375000%
126	WS	Residential	SingleFamily&Duplex	All	Other	New home - nonlighting	Efficient New Homes	2015	0.000%	2018	6.600000%	2015	0.000000%
127	WS	Residential	SingleFamily&Duplex	All	Other	New home - furnace	Efficient New Homes	2016	1.375%	2015	1.375000%	2015	1.375000%
129	WS	Residential	All	All	Other	Benchmarking	Home Energy Use Benchmarking	2015	2.500%	2015	2.500000%	2034	2.500000%
130	WS	Residential	All	AC	Other	Direct Load Control Switch	Direct Load Control	2015	0.328%	2017	0.982500%	2034	0.982500%
131	WS	Residential	All	Heat Pump	Other	Direct Load Control Switch	Direct Load Control	2015	0.328%	2017	0.982500%	2034	0.982500%
132	WS	Residential	All	AC	Other	Direct Load Control Thermostat	Direct Load Control	2015	0.328%	2017	0.982500%	2034	0.982500%
133	WS	Residential	All	Heat Pump	Other	Direct Load Control Thermostat	Direct Load Control	2015	0.328%	2017	0.982500%	2034	0.982500%
134	WS	Residential	All	AC	Other	Enabled Dynamic Pricing (Res)	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
135	WS	Residential	All	AC	Other	Non-Enabled Dynamic Pricing (Res)	Dynamic Pricing	2015	0.192%	2018	0.769231%	2034	0.769231%
136	WS	Residential	All	All	Other	Low-Income Weatherization Package	Low-Income Weatherization	2015	0.200%	2015	0.200000%	2034	0.200000%
137	WS	Residential	All	Electric WH	Hot Water	Solar Hot Water	Solar Hot Water	2016	0.005%	2015	0.004912%	2017	0.004912%
138	WS	Residential	All	Electric WH	Hot Water	Solar Hot Water	Solar Hot Water	2015	0.000%	2018	0.002456%	2015	0.000000%
140	WS	Residential	SingleFamily&Duplex	AC/Gas Heat	HVAC	Duct Insulation	Residential Home Audit & Retrofit	2015	0.025%	2019	0.150000%	2034	0.150000%
141	WS	Residential	SingleFamily&Duplex	Gas Heat (No AC)	HVAC	Duct Insulation	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
142	WS	Residential	SingleFamily&Duplex	AC/Electric Resistance Heat	HVAC	Duct Insulation	Residential Home Audit & Retrofit	2015	0.025%	2019	0.150000%	2034	0.150000%
143	WS	Residential	SingleFamily&Duplex	Heat Pump	HVAC	Duct Insulation	Residential Home Audit & Retrofit	2015	0.025%	2019	0.150000%	2034	0.150000%
144	WS	Residential	SingleFamily&Duplex	AC/Gas Heat	HVAC	Gas Furnace Replacement	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
145	WS	Residential	SingleFamily&Duplex	Gas Heat (No AC)	HVAC	Gas Furnace Replacement	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
146	WS	Residential	Multifamily	AC/Gas Heat	HVAC	Gas Furnace Replacement	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
147	WS	Residential	Multifamily	Gas Heat (No AC)	HVAC	Gas Furnace Replacement	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
148	WS	Residential	All	AC/Gas Heat	HVAC	Gas Furnace Tune-Up	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
149	WS	Residential	All	Gas Heat (No AC)	HVAC	Gas Furnace Tune-Up	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
150	WS	Residential	All	Gas WH	Hot Water	Efficient Gas water heaters	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
151	WS	Residential	All	Gas WH	Hot Water	Tankless Gas water heater	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
152	WS	Residential	All	Gas WH	Hot Water	Gas WH jacket	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
153	WS	Residential	All	Gas WH	Hot Water	Gas WH pipe insulation	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
154	NWS	Residential	All	Gas WH	Hot Water	Faucet aerators – Gas WH	Residential Home Audit & Retrofit	2015	0.188%	2019	1.125000%	2034	1.125000%
155	NWS	Residential	All	Gas WH	Hot Water	Low Flow Showerheads	Residential Home Audit & Retrofit	2015	0.188%	2019	1.125000%	2034	1.125000%

Residential Measures

Measure ID	Weather Sensitive	MEASURE DESCRIPTION					Measure Name	PROGRAM	PARTICIPATION HIGH CASE					
		Sector	Sub-Sector	Building Type	End Use	Program Name			First Year of Participation (So Year)	First Year Annual Participation Rate (So)	Year of Maximum Annual Participation (Smax)	Maximum Annual Participation Rate (Smax)	Final Year of Participation (Fo Year)	Final Year Participation Rate (Fo)
1	NWS	Residential	All	All	Lighting	Residential Lighting Efficiency	Residential Lighting & Appliances	2016	75.000%	2015	75.000000%	2020	12.605250%	
2	NWS	Residential	All	All	Lighting	Residential Lighting Efficiency	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
3	NWS	Residential	All	All	Lighting	Residential Lighting Efficiency	Residential Lighting & Appliances	2016	18.815%	2020	28.128132%	2020	28.128132%	
4	NWS	Residential	All	All	Lighting	Residential Lighting Efficiency	Residential Lighting & Appliances	2015	8.500%	2018	43.621218%	2034	1.000000%	
5	NWS	Residential	All	All	Consumer Electronics	Consumer Electronics	Residential Lighting & Appliances	2015	5.000%	2034	20.000000%	2034	20.000000%	
6	NWS	Residential	All	Gas WH	Appliances	ENERGYSTAR Clothes Washer and Dryer	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
7	NWS	Residential	All	Electric WH	Appliances	ENERGYSTAR Clothes Washer and Dryer	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
8	NWS	Residential	All	Electric WH	Appliances	ENERGYSTAR Clothes Washer and Dryer	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
9	NWS	Residential	All	Gas WH	Appliances	ENERGYSTAR Clothes Washer and Dryer	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
10	NWS	Residential	All	Electric WH	Appliances	ENERGYSTAR Dishwasher	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
11	NWS	Residential	All	Gas WH	Appliances	ENERGYSTAR Dishwasher	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
12	NWS	Residential	All	All	Appliances	HE Refrigerator	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
13	WS	Residential	All	Gas Heat (No AC)	HVAC	Room Air Conditioner	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
14	WS	Residential	All	Gas Heat (No AC)	HVAC	Room Air Conditioner	Residential Lighting & Appliances	2015	6.250%	2034	25.000000%	2034	25.000000%	
15	NWS	Residential	All	All	Appliances	Advanced Power Strips	Residential Lighting & Appliances	2015	5.000%	2034	20.000000%	2034	20.000000%	
16	NWS	Residential	All	All	Appliances	ENERGY STAR Dehumidifier	Residential Lighting & Appliances	2015	2.500%	2034	10.000000%	2034	10.000000%	
17	NWS	Residential	All	Electric WH	Hot Water	Water Heater Replacement	Water Heating	2015	3.333%	2034	10.000000%	2034	10.000000%	
18	NWS	Residential	All	Electric WH	Hot Water	Water Heater Replacement	Water Heating	2015	3.333%	2034	10.000000%	2034	10.000000%	
19	NWS	Residential	All	Electric WH	Hot Water	Water Heater Replacement	Water Heating	2015	3.333%	2034	10.000000%	2034	10.000000%	
20	NWS	Residential	All	Electric WH	Hot Water	Water Heater Replacements	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
21	NWS	Residential	SingleFamily&Duplex	All	Other	Home Energy Audit	Residential Home Audit & Retrofit	2015	0.250%	2018	2.000000%	2034	2.000000%	
22	NWS	Residential	SingleFamily&Duplex	All	Lighting	Residential Lighting Efficiency	Residential Home Audit & Retrofit	2015	0.188%	2018	1.500000%	2034	1.500000%	
24	NWS	Residential	SingleFamily&Duplex	Electric WH	Hot Water	Faucet Aerators	Residential Home Audit & Retrofit	2015	0.188%	2018	1.500000%	2034	1.500000%	
25	NWS	Residential	SingleFamily&Duplex	Electric WH	Hot Water	Low Flow Showerheads	Residential Home Audit & Retrofit	2015	0.188%	2018	1.500000%	2034	1.500000%	
26	WS	Residential	SingleFamily&Duplex	AC/Gas Heat	Shell	Air Infiltration	Residential Home Audit & Retrofit	2015	0.100%	2018	0.800000%	2034	0.800000%	
27	WS	Residential	SingleFamily&Duplex	Gas Heat (No AC)	Shell	Air Infiltration	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
28	WS	Residential	SingleFamily&Duplex	AC/Electric Resistance Heat	Shell	Air Infiltration	Residential Home Audit & Retrofit	2015	0.100%	2018	0.800000%	2034	0.800000%	
29	WS	Residential	SingleFamily&Duplex	Heat Pump	Shell	Air Infiltration	Residential Home Audit & Retrofit	2015	0.100%	2018	0.800000%	2034	0.800000%	
30	WS	Residential	SingleFamily&Duplex	AC/Gas Heat	Shell	Attic Knee Wall Insulation	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
31	WS	Residential	SingleFamily&Duplex	Gas Heat (No AC)	Shell	Attic Knee Wall Insulation	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
32	WS	Residential	SingleFamily&Duplex	AC/Electric Resistance Heat	Shell	Attic Knee Wall Insulation	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
33	WS	Residential	SingleFamily&Duplex	Heat Pump	Shell	Attic Knee Wall Insulation	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
34	WS	Residential	SingleFamily&Duplex	AC/Gas Heat	Shell	Ceiling Insulation	Residential Home Audit & Retrofit	2015	0.100%	2018	0.800000%	2034	0.800000%	
35	WS	Residential	SingleFamily&Duplex	AC/Gas Heat	Shell	Ceiling Insulation	Residential Home Audit & Retrofit	2015	0.100%	2018	0.800000%	2034	0.800000%	
36	WS	Residential	SingleFamily&Duplex	AC/Gas Heat	Shell	Ceiling Insulation	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
37	WS	Residential	SingleFamily&Duplex	AC/Gas Heat	Shell	Ceiling Insulation	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
38	WS	Residential	SingleFamily&Duplex	Gas Heat (No AC)	Shell	Ceiling Insulation	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
39	WS	Residential	SingleFamily&Duplex	Gas Heat (No AC)	Shell	Ceiling Insulation	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
40	WS	Residential	SingleFamily&Duplex	Gas Heat (No AC)	Shell	Ceiling Insulation	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
41	WS	Residential	SingleFamily&Duplex	Gas Heat (No AC)	Shell	Ceiling Insulation	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
42	WS	Residential	SingleFamily&Duplex	AC/Electric Resistance Heat	Shell	Ceiling Insulation	Residential Home Audit & Retrofit	2015	0.100%	2018	0.800000%	2034	0.800000%	
43	WS	Residential	SingleFamily&Duplex	AC/Electric Resistance Heat	Shell	Ceiling Insulation	Residential Home Audit & Retrofit	2015	0.100%	2018	0.800000%	2034	0.800000%	
44	WS	Residential	SingleFamily&Duplex	AC/Electric Resistance Heat	Shell	Ceiling Insulation	Residential Home Audit & Retrofit	2015	0.100%	2018	0.800000%	2034	0.800000%	
45	WS	Residential	SingleFamily&Duplex	AC/Electric Resistance Heat	Shell	Ceiling Insulation	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
46	WS	Residential	SingleFamily&Duplex	Heat Pump	Shell	Ceiling Insulation	Residential Home Audit & Retrofit	2015	0.100%	2018	0.800000%	2034	0.800000%	
47	WS	Residential	SingleFamily&Duplex	Heat Pump	Shell	Ceiling Insulation	Residential Home Audit & Retrofit	2015	0.100%	2018	0.800000%	2034	0.800000%	
48	WS	Residential	SingleFamily&Duplex	Heat Pump	Shell	Ceiling Insulation	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
49	WS	Residential	SingleFamily&Duplex	Heat Pump	Shell	Ceiling Insulation	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
50	WS	Residential	SingleFamily&Duplex	AC/Electric Resistance Heat	HVAC	Duct Sealing	Residential Home Audit & Retrofit	2015	0.100%	2018	0.800000%	2034	0.800000%	
51	WS	Residential	SingleFamily&Duplex	Heat Pump	HVAC	Duct Sealing	Residential Home Audit & Retrofit	2015	0.100%	2018	0.800000%	2034	0.800000%	
52	WS	Residential	SingleFamily&Duplex	AC/Gas Heat	HVAC	Duct Sealing	Residential Home Audit & Retrofit	2015	0.100%	2018	0.800000%	2034	0.800000%	
53	WS	Residential	SingleFamily&Duplex	AC/Gas Heat	Shell	Energy Star Windows	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
54	WS	Residential	SingleFamily&Duplex	Gas Heat (No AC)	Shell	Energy Star Windows	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
55	WS	Residential	SingleFamily&Duplex	AC/Electric Resistance Heat	Shell	Energy Star Windows	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
56	WS	Residential	SingleFamily&Duplex	Heat Pump	Shell	Energy Star Windows	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
57	WS	Residential	SingleFamily&Duplex	AC/Gas Heat	Shell	Energy Star Windows	Residential Home Audit & Retrofit	2015	0.100%	2018	0.800000%	2034	0.800000%	
58	WS	Residential	SingleFamily&Duplex	Gas Heat (No AC)	Shell	Energy Star Windows	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
59	WS	Residential	SingleFamily&Duplex	AC/Electric Resistance Heat	Shell	Energy Star Windows	Residential Home Audit & Retrofit	2015	0.100%	2018	0.800000%	2034	0.800000%	
60	WS	Residential	SingleFamily&Duplex	Heat Pump	Shell	Energy Star Windows	Residential Home Audit & Retrofit	2015	0.100%	2018	0.800000%	2034	0.800000%	

Residential Measures

Measure ID	Weather Sensitive	Sector	Sub-Sector	MEASURE DESCRIPTION		Measure Name	PROGRAM	PARTICIPATION HIGH CASE					
				Building Type	End Use			Program Name	First Year of Participation (So Year)	First Year Annual Participation Rate (So)	Year of Maximum Annual Participation (Smax)	Maximum Annual Participation Rate (Smax)	Final Year of Participation (Fo Year)
61	WS	Residential	SingleFamily&Duplex	AC/Gas Heat	Shell	Floor Insulation	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
62	WS	Residential	SingleFamily&Duplex	Gas Heat (No AC)	Shell	Floor Insulation	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
63	WS	Residential	SingleFamily&Duplex	AC/Electric Resistance Heat	Shell	Floor Insulation	Residential Home Audit & Retrofit	2015	0.100%	2018	0.800000%	2034	0.800000%
64	WS	Residential	SingleFamily&Duplex	Heat Pump	Shell	Floor Insulation	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
65	WS	Residential	SingleFamily&Duplex	AC/Gas Heat	Shell	Radiant Barriers	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
66	WS	Residential	SingleFamily&Duplex	Gas Heat (No AC)	Shell	Radiant Barriers	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
67	WS	Residential	SingleFamily&Duplex	AC/Electric Resistance Heat	Shell	Radiant Barriers	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
68	WS	Residential	SingleFamily&Duplex	Heat Pump	Shell	Radiant Barriers	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
69	WS	Residential	SingleFamily&Duplex	AC/Gas Heat	Shell	Wall Insulation	Residential Home Audit & Retrofit	2015	0.100%	2018	0.800000%	2034	0.800000%
70	WS	Residential	SingleFamily&Duplex	Gas Heat (No AC)	Shell	Wall Insulation	Residential Home Audit & Retrofit	2015	0.100%	2018	0.800000%	2034	0.800000%
71	WS	Residential	SingleFamily&Duplex	AC/Electric Resistance Heat	Shell	Wall Insulation	Residential Home Audit & Retrofit	2015	0.100%	2018	0.800000%	2034	0.800000%
72	WS	Residential	SingleFamily&Duplex	Heat Pump	Shell	Wall Insulation	Residential Home Audit & Retrofit	2015	0.100%	2018	0.800000%	2034	0.800000%
73	WS	Residential	SingleFamily&Duplex	Electric WH	Hot Water	Electric WH	Residential Home Audit & Retrofit	2015	0.188%	2018	1.500000%	2034	1.500000%
74	WS	Residential	SingleFamily&Duplex	Electric WH	Hot Water	Water Heater Pipe Insulation	Residential Home Audit & Retrofit	2015	0.188%	2018	1.500000%	2034	1.500000%
75	WS	Residential	SingleFamily&Duplex	AC/Gas Heat	Shell	Window Film	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
76	WS	Residential	SingleFamily&Duplex	Gas Heat (No AC)	Shell	Window Film	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
77	WS	Residential	SingleFamily&Duplex	AC/Electric Resistance Heat	Shell	Window Film	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
78	WS	Residential	SingleFamily&Duplex	Heat Pump	Shell	Window Film	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
79	NWS	Residential	SingleFamily&Duplex	All	Other	ENERGY STAR Variable Speed Drive Pool Pump	Pool Pump	2015	1.375%	2034	4.125063%	2034	4.125063%
80	NWS	Residential	SingleFamily&Duplex	All	HVAC	High Efficiency Bathroom Exhaust Fan	Residential Home Audit & Retrofit	2015	0.100%	2018	0.800000%	2034	0.800000%
82	WS	Residential	All	AC/Electric Resistance Heat	HVAC	Central AC Replacement	ENERGY STAR Air Conditioning	2015	0.000%	2034	29.679019%	2015	0.000000%
83	WS	Residential	All	AC/Electric Resistance Heat	HVAC	Central AC Replacement	ENERGY STAR Air Conditioning	2015	0.000%	2034	29.475798%	2015	0.000000%
84	WS	Residential	All	AC/Electric Resistance Heat	HVAC	Central AC Replacement	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
85	WS	Residential	All	AC/Electric Resistance Heat	HVAC	Central AC Replacement	ENERGY STAR Air Conditioning	2016	9.966%	2015	9.966104%	2015	9.966104%
86	WS	Residential	All	AC/Electric Resistance Heat	HVAC	Central AC Replacement	ENERGY STAR Air Conditioning	2016	9.903%	2015	9.902722%	2015	9.902722%
87	WS	Residential	All	AC/Electric Resistance Heat	HVAC	Central AC Replacement	ENERGY STAR Air Conditioning	2016	9.775%	2015	9.775278%	2015	9.775278%
88	WS	Residential	All	AC/Gas Heat	HVAC	Central AC Replacement	ENERGY STAR Air Conditioning	2015	0.000%	2034	30.702509%	2015	0.000000%
89	WS	Residential	All	AC/Gas Heat	HVAC	Central AC Replacement	ENERGY STAR Air Conditioning	2015	0.000%	2034	30.155131%	2015	0.000000%
90	WS	Residential	All	AC/Gas Heat	HVAC	Central AC Replacement	ENERGY STAR Air Conditioning	2015	0.000%	2034	29.531522%	2015	0.000000%
91	WS	Residential	All	AC/Gas Heat	HVAC	Central AC Replacement	ENERGY STAR Air Conditioning	2016	10.145%	2015	10.144518%	2015	10.144518%
92	WS	Residential	All	AC/Gas Heat	HVAC	Central AC Replacement	ENERGY STAR Air Conditioning	2016	10.045%	2015	10.044551%	2015	10.044551%
93	WS	Residential	All	AC/Gas Heat	HVAC	Central AC Replacement	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
94	WS	Residential	All	Heat Pump	HVAC	Heat Pump Replacement	ENERGY STAR Air Conditioning	2015	0.000%	2034	30.145748%	2015	0.000000%
95	WS	Residential	All	Heat Pump	HVAC	Heat Pump Replacement	ENERGY STAR Air Conditioning	2015	0.000%	2034	30.007631%	2015	0.000000%
96	WS	Residential	All	Heat Pump	HVAC	Heat Pump Replacement	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
97	WS	Residential	All	Heat Pump	HVAC	Heat Pump Replacement	ENERGY STAR Air Conditioning	2016	10.204%	2015	10.203608%	2015	10.203608%
98	WS	Residential	All	Heat Pump	HVAC	Heat Pump Replacement	ENERGY STAR Air Conditioning	2016	10.135%	2015	10.134760%	2015	10.134760%
99	WS	Residential	All	Heat Pump	HVAC	Heat Pump Replacement	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
100	WS	Residential	All	AC	HVAC	Mini-Split AC	ENERGY STAR Air Conditioning	2015	0.000%	2034	31.593283%	2015	0.000000%
101	WS	Residential	All	AC	HVAC	Mini-Split AC	ENERGY STAR Air Conditioning	2015	0.000%	2034	30.662609%	2015	0.000000%
102	WS	Residential	All	Heat Pump	HVAC	Mini-Split Heat Pump	ENERGY STAR Air Conditioning	2015	10.677%	2034	32.029619%	2034	32.029619%
103	WS	Residential	All	Heat Pump	HVAC	Mini-Split Heat Pump	ENERGY STAR Air Conditioning	2015	10.462%	2034	31.387087%	2034	31.387087%
104	WS	Residential	All	AC	HVAC	Mini-Split AC	ENERGY STAR Air Conditioning	2016	10.398%	2015	10.397717%	2015	10.397717%
105	WS	Residential	All	AC	HVAC	Mini-Split AC	ENERGY STAR Air Conditioning	2016	10.123%	2015	10.123039%	2015	10.123039%
106	WS	Residential	All	Heat Pump	HVAC	Mini-Split Heat Pump	ENERGY STAR Air Conditioning	2015	10.603%	2034	31.807801%	2034	31.807801%
107	WS	Residential	All	Heat Pump	HVAC	Mini-Split Heat Pump	ENERGY STAR Air Conditioning	2015	10.411%	2034	31.234432%	2034	31.234432%
108	WS	Residential	SingleFamily&Duplex	Heat Pump	HVAC	Ground Source Heatpump	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
109	WS	Residential	SingleFamily&Duplex	Heat Pump	HVAC	Ground Source Heatpump	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
111	WS	Residential	All	AC	HVAC	Central AC Tune-up	ENERGY STAR Air Conditioning	2015	10.393%	2034	31.177925%	2034	31.177925%
112	WS	Residential	All	Heat Pump	HVAC	Heat Pump Tune-up	ENERGY STAR Air Conditioning	2015	10.617%	2034	31.851809%	2034	31.851809%
114	NWS	Residential	All	All	Appliances	Refrigerator/Freezer Recycling	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
115	NWS	Residential	All	Gas Heat (No AC)	HVAC	Room Air Conditioner Recycling	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
117	NWS	Residential	Multifamily	All	Other	Home Energy Audit	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
118	NWS	Residential	Multifamily	All	Lighting	Residential Lighting Efficiency	Multifamily	2015	22.500%	2016	40.000000%	2034	1.600000%
119	NWS	Residential	Multifamily	Electric WH	Hot Water	Faucet Aerators	Multifamily	2015	22.500%	2016	40.000000%	2034	1.600000%
120	NWS	Residential	Multifamily	Electric WH	Hot Water	Low Flow Showerheads	Multifamily	2015	22.500%	2016	40.000000%	2034	1.600000%

Residential Measures

Measure ID	Weather Sensitive	MEASURE DESCRIPTION				End Use	Measure Name	PROGRAM	PARTICIPATION HIGH CASE				
		Sector	Sub-Sector	Building Type	Program Name				First Year of Participation (So Year)	First Year Annual Participation Rate (So)	Year of Maximum Annual Participation (Smax)	Maximum Annual Participation Rate (Smax)	Final Year of Participation (Fo Year)
121	NWS	Residential	Multifamily	Common Area	Lighting	Halfway Lighting Efficiency	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
122	NWS	Residential	Multifamily	Common Area	Lighting	Exterior Lighting Efficiency	Multifamily	2015	22.500%	2016	40.000000%	2034	1.600000%
124	WS	Residential	SingleFamily&Duplex	All	Lighting	New home - lighting	Efficient New Homes	2016	3.025%	2017	14.520000%	2020	14.520000%
125	WS	Residential	SingleFamily&Duplex	All	Other	New home - nonlighting	Efficient New Homes	2016	3.025%	2015	3.025000%	2015	3.025000%
126	WS	Residential	SingleFamily&Duplex	All	Other	New home - nonlighting	Efficient New Homes	2015	0.000%	2017	14.520000%	2015	0.000000%
127	WS	Residential	SingleFamily&Duplex	All	Other	New home - furnace	Efficient New Homes	2016	3.025%	2015	3.025000%	2015	3.025000%
129	WS	Residential	All	All	Other	Benchmarking	Home Energy Use Benchmarking	2015	5.000%	2016	10.000000%	2034	10.000000%
130	WS	Residential	All	AC	Other	Direct Load Control Switch	Direct Load Control	2015	0.655%	2017	1.965000%	2034	1.965000%
131	WS	Residential	All	Heat Pump	Other	Direct Load Control Switch	Direct Load Control	2015	0.655%	2017	1.965000%	2034	1.965000%
132	WS	Residential	All	AC	Other	Direct Load Control Thermostat	Direct Load Control	2015	0.655%	2017	1.965000%	2034	1.965000%
133	WS	Residential	All	Heat Pump	Other	Direct Load Control Thermostat	Direct Load Control	2015	0.655%	2017	1.965000%	2034	1.965000%
134	WS	Residential	All	AC	Other	Enabled Dynamic Pricing (Res)	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
135	WS	Residential	All	AC	Other	Non-Enabled Dynamic Pricing (Res)	Dynamic Pricing	2015	0.385%	2018	1.538462%	2034	1.538462%
136	WS	Residential	All	All	Other	Low-Income Weatherization Package	Low-Income Weatherization	2015	0.200%	2015	0.200000%	2034	0.200000%
137	WS	Residential	All	Electric WH	Hot Water	Solar Hot Water	Solar Hot Water	2016	0.010%	2015	0.009824%	2017	0.009824%
138	WS	Residential	All	Electric WH	Hot Water	Solar Hot Water	Solar Hot Water	2015	0.000%	2018	0.004912%	2015	0.000000%
140	WS	Residential	SingleFamily&Duplex	AC/Gas Heat	HVAC	Duct Insulation	Residential Home Audit & Retrofit	2015	0.100%	2018	0.800000%	2034	0.800000%
141	WS	Residential	SingleFamily&Duplex	Gas Heat (No AC)	HVAC	Duct Insulation	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
142	WS	Residential	SingleFamily&Duplex	AC/Electric Resistance Heat	HVAC	Duct Insulation	Residential Home Audit & Retrofit	2015	0.100%	2018	0.800000%	2034	0.800000%
143	WS	Residential	SingleFamily&Duplex	Heat Pump	HVAC	Duct Insulation	Residential Home Audit & Retrofit	2015	0.100%	2018	0.800000%	2034	0.800000%
144	WS	Residential	SingleFamily&Duplex	AC/Gas Heat	HVAC	Gas Furnace Replacement	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
145	WS	Residential	SingleFamily&Duplex	Gas Heat (No AC)	HVAC	Gas Furnace Replacement	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
146	WS	Residential	Multifamily	AC/Gas Heat	HVAC	Gas Furnace Replacement	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
147	WS	Residential	Multifamily	Gas Heat (No AC)	HVAC	Gas Furnace Replacement	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
148	WS	Residential	All	AC/Gas Heat	HVAC	Gas Furnace Tune-Up	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
149	WS	Residential	All	Gas Heat (No AC)	HVAC	Gas Furnace Tune-Up	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
150	WS	Residential	All	Gas WH	Hot Water	Efficient Gas water heaters	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
151	WS	Residential	All	Gas WH	Hot Water	Tankless Gas water heater	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
152	WS	Residential	All	Gas WH	Hot Water	Gas WH jacket	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
153	WS	Residential	All	Gas WH	Hot Water	Gas WH pipe insulation	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
154	NWS	Residential	All	Gas WH	Hot Water	Faucet aerators – Gas WH	Residential Home Audit & Retrofit	2015	0.188%	2018	1.500000%	2034	1.500000%
155	NWS	Residential	All	Gas WH	Hot Water	Low Flow Showerheads	Residential Home Audit & Retrofit	2015	0.188%	2018	1.500000%	2034	1.500000%

Residential Measures

Measure ID	Weather Sensitive	MEASURE DESCRIPTION					Measure Name	PROGRAM	PARTICIPATION REFERENCE CASE				
		Sector	Sub-Sector	Building Type	End Use	Program Name			First Year of Participation (So Year)	First Year Annual Participation Rate (So)	Year of Maximum Annual Participation (Smax)	Maximum Annual Participation Rate (Smax)	Final Year of Participation (Fo Year)
1	NWS	Residential	All	All	Lighting	Residential Lighting Efficiency	Residential Lighting & Appliances	2016	71.814%	2015	71.813712%	2020	9.695750%
2	NWS	Residential	All	All	Lighting	Residential Lighting Efficiency	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
3	NWS	Residential	All	All	Lighting	Residential Lighting Efficiency	Residential Lighting & Appliances	2016	8.542%	2020	12.770127%	2020	12.770127%
4	NWS	Residential	All	All	Lighting	Residential Lighting Efficiency	Residential Lighting & Appliances	2015	3.638%	2020	30.022955%	2034	1.003154%
5	NWS	Residential	All	All	Consumer Electronics	Consumer Electronics	Residential Lighting & Appliances	2015	3.933%	2034	15.732907%	2034	15.732907%
6	NWS	Residential	All	Gas WH	Appliances	ENERGYSTAR Clothes Washer and Dryer	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
7	NWS	Residential	All	Electric WH	Appliances	ENERGYSTAR Clothes Washer and Dryer	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
8	NWS	Residential	All	Electric WH	Appliances	ENERGYSTAR Clothes Washer and Dryer	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
9	NWS	Residential	All	Gas WH	Appliances	ENERGYSTAR Clothes Washer and Dryer	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
10	NWS	Residential	All	Electric WH	Appliances	ENERGYSTAR Dishwasher	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
11	NWS	Residential	All	Gas WH	Appliances	ENERGYSTAR Dishwasher	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
12	NWS	Residential	All	All	Appliances	HE Refrigerator	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
13	WS	Residential	All	Gas Heat (No AC)	HVAC	Room Air Conditioner	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
14	WS	Residential	All	Gas Heat (No AC)	HVAC	Room Air Conditioner	Residential Lighting & Appliances	2015	0.603%	2034	2.413405%	2034	2.413405%
15	NWS	Residential	All	All	Appliances	Advanced Power Strips	Residential Lighting & Appliances	2015	4.101%	2034	16.404007%	2034	16.404007%
16	NWS	Residential	All	All	Appliances	ENERGY STAR Dehumidifier	Residential Lighting & Appliances	2015	1.967%	2034	7.866454%	2034	7.866454%
17	NWS	Residential	All	Electric WH	Hot Water	Water Heater Replacement	Water Heating	2015	1.968%	2034	7.872757%	2034	7.872757%
18	NWS	Residential	All	Electric WH	Hot Water	Water Heater Replacement	Water Heating	2015	1.968%	2034	7.872757%	2034	7.872757%
19	NWS	Residential	All	Electric WH	Hot Water	Water Heater Replacement	Water Heating	2015	1.968%	2034	7.872757%	2034	7.872757%
20	NWS	Residential	All	Electric WH	Hot Water	Water Heater Replacements	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
21	NWS	Residential	SingleFamily&Duplex	All	Other	Home Energy Audit	Residential Home Audit & Retrofit	2015	0.250%	2018	1.250000%	2034	1.250000%
22	NWS	Residential	SingleFamily&Duplex	All	Lighting	Residential Lighting Efficiency	Residential Home Audit & Retrofit	2015	0.188%	2018	0.937500%	2034	0.937500%
23	NWS	Residential	SingleFamily&Duplex	Electric WH	Hot Water	Faucet Aerators	Residential Home Audit & Retrofit	2015	0.188%	2018	0.937500%	2034	0.937500%
24	NWS	Residential	SingleFamily&Duplex	Electric WH	Hot Water	Low Flow Showerheads	Residential Home Audit & Retrofit	2015	0.188%	2018	0.937500%	2034	0.937500%
25	NWS	Residential	SingleFamily&Duplex	AC/Gas Heat	Shell	Air Infiltration	Residential Home Audit & Retrofit	2015	0.050%	2018	0.250000%	2034	0.250000%
26	WS	Residential	SingleFamily&Duplex	Gas Heat (No AC)	Shell	Air Infiltration	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
27	WS	Residential	SingleFamily&Duplex	AC/Electric Resistance Heat	Shell	Air Infiltration	Residential Home Audit & Retrofit	2015	0.050%	2018	0.250000%	2034	0.250000%
28	WS	Residential	SingleFamily&Duplex	Heat Pump	Shell	Air Infiltration	Residential Home Audit & Retrofit	2015	0.050%	2018	0.250000%	2034	0.250000%
29	WS	Residential	SingleFamily&Duplex	AC/Gas Heat	Shell	Attic Knee Wall Insulation	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
30	WS	Residential	SingleFamily&Duplex	Gas Heat (No AC)	Shell	Attic Knee Wall Insulation	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
31	WS	Residential	SingleFamily&Duplex	AC/Electric Resistance Heat	Shell	Attic Knee Wall Insulation	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
32	WS	Residential	SingleFamily&Duplex	Heat Pump	Shell	Attic Knee Wall Insulation	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
33	WS	Residential	SingleFamily&Duplex	AC/Gas Heat	Shell	Ceiling Insulation	Residential Home Audit & Retrofit	2015	0.050%	2018	0.250000%	2034	0.250000%
34	WS	Residential	SingleFamily&Duplex	AC/Gas Heat	Shell	Ceiling Insulation	Residential Home Audit & Retrofit	2015	0.050%	2018	0.250000%	2034	0.250000%
35	WS	Residential	SingleFamily&Duplex	AC/Gas Heat	Shell	Ceiling Insulation	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
36	WS	Residential	SingleFamily&Duplex	AC/Gas Heat	Shell	Ceiling Insulation	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
37	WS	Residential	SingleFamily&Duplex	Gas Heat (No AC)	Shell	Ceiling Insulation	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
38	WS	Residential	SingleFamily&Duplex	Gas Heat (No AC)	Shell	Ceiling Insulation	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
39	WS	Residential	SingleFamily&Duplex	Gas Heat (No AC)	Shell	Ceiling Insulation	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
40	WS	Residential	SingleFamily&Duplex	Gas Heat (No AC)	Shell	Ceiling Insulation	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
41	WS	Residential	SingleFamily&Duplex	Gas Heat (No AC)	Shell	Ceiling Insulation	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
42	WS	Residential	SingleFamily&Duplex	AC/Electric Resistance Heat	Shell	Ceiling Insulation	Residential Home Audit & Retrofit	2015	0.050%	2018	0.250000%	2034	0.250000%
43	WS	Residential	SingleFamily&Duplex	AC/Electric Resistance Heat	Shell	Ceiling Insulation	Residential Home Audit & Retrofit	2015	0.050%	2018	0.250000%	2034	0.250000%
44	WS	Residential	SingleFamily&Duplex	AC/Electric Resistance Heat	Shell	Ceiling Insulation	Residential Home Audit & Retrofit	2015	0.050%	2018	0.250000%	2034	0.250000%
45	WS	Residential	SingleFamily&Duplex	AC/Electric Resistance Heat	Shell	Ceiling Insulation	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
46	WS	Residential	SingleFamily&Duplex	Heat Pump	Shell	Ceiling Insulation	Residential Home Audit & Retrofit	2015	0.050%	2018	0.250000%	2034	0.250000%
47	WS	Residential	SingleFamily&Duplex	Heat Pump	Shell	Ceiling Insulation	Residential Home Audit & Retrofit	2015	0.050%	2018	0.250000%	2034	0.250000%
48	WS	Residential	SingleFamily&Duplex	Heat Pump	Shell	Ceiling Insulation	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
49	WS	Residential	SingleFamily&Duplex	Heat Pump	Shell	Ceiling Insulation	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
50	WS	Residential	SingleFamily&Duplex	AC/Electric Resistance Heat	HVAC	Duct Sealing	Residential Home Audit & Retrofit	2015	0.050%	2018	0.250000%	2034	0.250000%
51	WS	Residential	SingleFamily&Duplex	Heat Pump	HVAC	Duct Sealing	Residential Home Audit & Retrofit	2015	0.050%	2018	0.250000%	2034	0.250000%
52	WS	Residential	SingleFamily&Duplex	AC/Gas Heat	HVAC	Duct Sealing	Residential Home Audit & Retrofit	2015	0.050%	2018	0.250000%	2034	0.250000%
53	WS	Residential	SingleFamily&Duplex	AC/Gas Heat	Shell	Energy Star Windows	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
54	WS	Residential	SingleFamily&Duplex	Gas Heat (No AC)	Shell	Energy Star Windows	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
55	WS	Residential	SingleFamily&Duplex	AC/Electric Resistance Heat	Shell	Energy Star Windows	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
56	WS	Residential	SingleFamily&Duplex	Heat Pump	Shell	Energy Star Windows	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
57	WS	Residential	SingleFamily&Duplex	AC/Gas Heat	Shell	Energy Star Windows	Residential Home Audit & Retrofit	2015	0.050%	2018	0.250000%	2034	0.250000%
58	WS	Residential	SingleFamily&Duplex	Gas Heat (No AC)	Shell	Energy Star Windows	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
59	WS	Residential	SingleFamily&Duplex	AC/Electric Resistance Heat	Shell	Energy Star Windows	Residential Home Audit & Retrofit	2015	0.050%	2018	0.250000%	2034	0.250000%
60	WS	Residential	SingleFamily&Duplex	Heat Pump	Shell	Energy Star Windows	Residential Home Audit & Retrofit	2015	0.050%	2018	0.250000%	2034	0.250000%

Residential Measures

Measure ID	Weather Sensitive	Sector	Sub-Sector	MEASURE DESCRIPTION			Measure Name	PROGRAM	PARTICIPATION REFERENCE CASE					
				Building Type	End Use				Program Name	First Year of Participation (So Year)	First Year Annual Participation Rate (So)	Year of Maximum Annual Participation (Smax)	Maximum Annual Participation Rate (Smax)	Final Year of Participation (Fo Year)
61	WS	Residential	SingleFamily&Duplex	AC/Gas Heat	Shell		Floor Insulation	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
62	WS	Residential	SingleFamily&Duplex	Gas Heat (No AC)	Shell		Floor Insulation	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
63	WS	Residential	SingleFamily&Duplex	AC/Electric Resistance Heat	Shell		Floor Insulation	Residential Home Audit & Retrofit	2015	0.050%	2018	0.250000%	2034	0.250000%
64	WS	Residential	SingleFamily&Duplex	Heat Pump	Shell		Floor Insulation	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
65	WS	Residential	SingleFamily&Duplex	AC/Gas Heat	Shell		Radiant Barriers	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
66	WS	Residential	SingleFamily&Duplex	Gas Heat (No AC)	Shell		Radiant Barriers	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
67	WS	Residential	SingleFamily&Duplex	AC/Electric Resistance Heat	Shell		Radiant Barriers	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
68	WS	Residential	SingleFamily&Duplex	Heat Pump	Shell		Radiant Barriers	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
69	WS	Residential	SingleFamily&Duplex	AC/Gas Heat	Shell		Wall Insulation	Residential Home Audit & Retrofit	2015	0.050%	2018	0.250000%	2034	0.250000%
70	WS	Residential	SingleFamily&Duplex	Gas Heat (No AC)	Shell		Wall Insulation	Residential Home Audit & Retrofit	2015	0.050%	2018	0.250000%	2034	0.250000%
71	WS	Residential	SingleFamily&Duplex	AC/Electric Resistance Heat	Shell		Wall Insulation	Residential Home Audit & Retrofit	2015	0.050%	2018	0.250000%	2034	0.250000%
72	WS	Residential	SingleFamily&Duplex	Heat Pump	Shell		Wall Insulation	Residential Home Audit & Retrofit	2015	0.050%	2018	0.250000%	2034	0.250000%
73	WS	Residential	SingleFamily&Duplex	Electric WH	Hot Water		Water Heater Jackets	Residential Home Audit & Retrofit	2015	0.188%	2018	0.937500%	2034	0.937500%
74	WS	Residential	SingleFamily&Duplex	Electric WH	Hot Water		Water Heater Pipe Insulation	Residential Home Audit & Retrofit	2015	0.188%	2018	0.937500%	2034	0.937500%
75	WS	Residential	SingleFamily&Duplex	AC/Gas Heat	Shell		Window Film	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
76	WS	Residential	SingleFamily&Duplex	Gas Heat (No AC)	Shell		Window Film	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
77	WS	Residential	SingleFamily&Duplex	AC/Electric Resistance Heat	Shell		Window Film	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
78	WS	Residential	SingleFamily&Duplex	Heat Pump	Shell		Window Film	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
79	NWS	Residential	SingleFamily&Duplex	All	Other	ENERGY STAR Variable Speed Drive Pool Pump	Pool Pump	Pool Pump	2015	0.984%	2034	3.96378%	2034	3.96378%
80	NWS	Residential	SingleFamily&Duplex	All	HVAC	High Efficiency Bathroom Exhaust Fan	High Efficiency Bathroom Exhaust Fan	Residential Home Audit & Retrofit	2015	0.050%	2018	0.250000%	2034	0.250000%
82	WS	Residential	All	AC/Electric Resistance Heat	HVAC		Central AC Replacement	ENERGY STAR Air Conditioning	2015	0.000%	2034	26.689083%	2015	0.000000%
83	WS	Residential	All	AC/Electric Resistance Heat	HVAC		Central AC Replacement	ENERGY STAR Air Conditioning	2015	0.000%	2034	26.319358%	2015	0.000000%
84	WS	Residential	All	AC/Electric Resistance Heat	HVAC		Central AC Replacement	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
85	WS	Residential	All	AC/Electric Resistance Heat	HVAC		Central AC Replacement	ENERGY STAR Air Conditioning	2016	6.773%	2015	6.772746%	2015	6.772746%
86	WS	Residential	All	AC/Electric Resistance Heat	HVAC		Central AC Replacement	ENERGY STAR Air Conditioning	2016	6.686%	2015	6.685581%	2015	6.685581%
87	WS	Residential	All	AC/Electric Resistance Heat	HVAC		Central AC Replacement	ENERGY STAR Air Conditioning	2016	6.512%	2015	6.512050%	2015	6.512050%
88	WS	Residential	All	AC/Gas Heat	HVAC		Central AC Replacement	ENERGY STAR Air Conditioning	2015	0.000%	2034	28.590942%	2015	0.000000%
89	WS	Residential	All	AC/Gas Heat	HVAC		Central AC Replacement	ENERGY STAR Air Conditioning	2015	0.000%	2034	27.565537%	2015	0.000000%
90	WS	Residential	All	AC/Gas Heat	HVAC		Central AC Replacement	ENERGY STAR Air Conditioning	2015	0.000%	2034	26.420476%	2015	0.000000%
91	WS	Residential	All	AC/Gas Heat	HVAC		Central AC Replacement	ENERGY STAR Air Conditioning	2016	7.021%	2015	7.021184%	2015	7.021184%
92	WS	Residential	All	AC/Gas Heat	HVAC		Central AC Replacement	ENERGY STAR Air Conditioning	2016	6.881%	2015	6.881422%	2015	6.881422%
93	WS	Residential	All	AC/Gas Heat	HVAC		Central AC Replacement	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
94	WS	Residential	All	Heat Pump	HVAC		Heat Pump Replacement	ENERGY STAR Air Conditioning	2015	0.000%	2034	27.548125%	2015	0.000000%
95	WS	Residential	All	Heat Pump	HVAC		Heat Pump Replacement	ENERGY STAR Air Conditioning	2015	0.000%	2034	27.292472%	2015	0.000000%
96	WS	Residential	All	Heat Pump	HVAC		Heat Pump Replacement	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
97	WS	Residential	All	Heat Pump	HVAC		Heat Pump Replacement	ENERGY STAR Air Conditioning	2016	7.104%	2015	7.104465%	2015	7.104465%
98	WS	Residential	All	Heat Pump	HVAC		Heat Pump Replacement	ENERGY STAR Air Conditioning	2016	7.007%	2015	7.007478%	2015	7.007478%
99	WS	Residential	All	Heat Pump	HVAC		Heat Pump Replacement	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
100	WS	Residential	All	AC	HVAC		Mini-Split AC	ENERGY STAR Air Conditioning	2015	0.000%	2034	30.300281%	2015	0.000000%
101	WS	Residential	All	AC	HVAC		Mini-Split AC	ENERGY STAR Air Conditioning	2015	0.000%	2034	28.515555%	2015	0.000000%
102	WS	Residential	All	Heat Pump	HVAC		Mini-Split Heat Pump	ENERGY STAR Air Conditioning	2015	7.789%	2034	31.155965%	2034	31.155965%
103	WS	Residential	All	Heat Pump	HVAC		Mini-Split Heat Pump	ENERGY STAR Air Conditioning	2015	7.475%	2034	29.900125%	2034	29.900125%
104	WS	Residential	All	AC	HVAC		Mini-Split AC	ENERGY STAR Air Conditioning	2016	7.382%	2015	7.381555%	2015	7.381555%
105	WS	Residential	All	AC	HVAC		Mini-Split AC	ENERGY STAR Air Conditioning	2016	6.991%	2015	6.991033%	2015	6.991033%
106	WS	Residential	All	Heat Pump	HVAC		Mini-Split Heat Pump	ENERGY STAR Air Conditioning	2015	7.680%	2034	30.719454%	2034	30.719454%
107	WS	Residential	All	Heat Pump	HVAC		Mini-Split Heat Pump	ENERGY STAR Air Conditioning	2015	7.401%	2034	29.605610%	2034	29.605610%
108	WS	Residential	SingleFamily&Duplex	Heat Pump	HVAC		Ground Source Heatpump	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
109	WS	Residential	SingleFamily&Duplex	Heat Pump	HVAC		Ground Source Heatpump	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
111	WS	Residential	All	AC	HVAC		Central AC Tune-up	ENERGY STAR Air Conditioning	2015	7.374%	2034	29.496968%	2034	29.496968%
112	WS	Residential	All	Heat Pump	HVAC		Heat Pump Tune-up	ENERGY STAR Air Conditioning	2015	7.701%	2034	30.805807%	2034	30.805807%
114	NWS	Residential	All	All	Appliances		Refrigerator/Freezer Recycling	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
115	NWS	Residential	All	Gas Heat (No AC)	HVAC		Room Air Conditioner Recycling	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
117	NWS	Residential	Multifamily	All	Other		Home Energy Audit	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
118	NWS	Residential	Multifamily	All	Lighting		Residential Lighting Efficiency	Multifamily	2015	22.500%	2016	40.000000%	2034	1.600000%
119	NWS	Residential	Multifamily	Electric WH	Hot Water		Faucet Aerators	Multifamily	2015	22.500%	2016	40.000000%	2034	1.600000%
120	NWS	Residential	Multifamily	Electric WH	Hot Water		Low Flow Showerheads	Multifamily	2015	22.500%	2016	40.000000%	2034	1.600000%

Residential Measures

Measure ID	Weather Sensitive	MEASURE DESCRIPTION				End Use	Measure Name	PROGRAM	PARTICIPATION REFERENCE CASE				
		Sector	Sub-Sector	Building Type					Program Name	First Year of Participation (So Year)	First Year Annual Participation Rate (So)	Year of Maximum Annual Participation (Smax)	Maximum Annual Participation Rate (Smax)
121	NWS	Residential	Multifamily	Common Area	Lighting	Hallway Lighting Efficiency	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
122	NWS	Residential	Multifamily	Common Area	Lighting	Exterior Lighting Efficiency	Multifamily	2015	22.500%	2016	40.000000%	2034	1.600000%
124	WS	Residential	SingleFamily&Duplex	All	Lighting	New home - lighting	Efficient New Homes	2016	2.750%	2017	13.200000%	2020	13.200000%
125	WS	Residential	SingleFamily&Duplex	All	Other	New home - nonlighting	Efficient New Homes	2016	2.750%	2015	2.750000%	2015	2.750000%
126	WS	Residential	SingleFamily&Duplex	All	Other	New home - nonlighting	Efficient New Homes	2015	0.000%	2017	13.200000%	2015	0.000000%
127	WS	Residential	SingleFamily&Duplex	All	Other	New home - furnace	Efficient New Homes	2016	2.750%	2015	2.750000%	2015	2.750000%
129	WS	Residential	All	All	Other	Benchmarking	Home Energy Use Benchmarking	2015	2.500%	2016	5.000000%	2034	5.000000%
130	WS	Residential	All	AC	Other	Direct Load Control Switch	Direct Load Control	2015	0.655%	2017	1.965000%	2034	1.965000%
131	WS	Residential	All	Heat Pump	Other	Direct Load Control Switch	Direct Load Control	2015	0.655%	2017	1.965000%	2034	1.965000%
132	WS	Residential	All	AC	Other	Direct Load Control Thermostat	Direct Load Control	2015	0.655%	2017	1.965000%	2034	1.965000%
133	WS	Residential	All	Heat Pump	Other	Direct Load Control Thermostat	Direct Load Control	2015	0.655%	2017	1.965000%	2034	1.965000%
134	WS	Residential	All	AC	Other	Enabled Dynamic Pricing (Res)	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
135	WS	Residential	All	AC	Other	Non-Enabled Dynamic Pricing (Res)	Dynamic Pricing	2015	0.385%	2018	1.538462%	2034	1.538462%
136	WS	Residential	All	All	Other	Low-Income Weatherization Package	Low-Income Weatherization	2015	0.200%	2015	0.200000%	2034	0.200000%
137	WS	Residential	All	Electric WH	Hot Water	Solar Hot Water	Solar Hot Water	2016	0.005%	2015	0.004912%	2017	0.004912%
138	WS	Residential	All	Electric WH	Hot Water	Solar Hot Water	Solar Hot Water	2015	0.000%	2018	0.002456%	2015	0.000000%
140	WS	Residential	SingleFamily&Duplex	AC/Gas Heat	HVAC	Duct Insulation	Residential Home Audit & Retrofit	2015	0.050%	2018	0.250000%	2034	0.250000%
141	WS	Residential	SingleFamily&Duplex	Gas Heat (No AC)	HVAC	Duct Insulation	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
142	WS	Residential	SingleFamily&Duplex	AC/Electric Resistance Heat	HVAC	Duct Insulation	Residential Home Audit & Retrofit	2015	0.050%	2018	0.250000%	2034	0.250000%
143	WS	Residential	SingleFamily&Duplex	Heat Pump	HVAC	Duct Insulation	Residential Home Audit & Retrofit	2015	0.050%	2018	0.250000%	2034	0.250000%
144	WS	Residential	SingleFamily&Duplex	AC/Gas Heat	HVAC	Gas Furnace Replacement	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
145	WS	Residential	SingleFamily&Duplex	Gas Heat (No AC)	HVAC	Gas Furnace Replacement	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
146	WS	Residential	Multifamily	AC/Gas Heat	HVAC	Gas Furnace Replacement	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
147	WS	Residential	Multifamily	Gas Heat (No AC)	HVAC	Gas Furnace Replacement	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
148	WS	Residential	All	AC/Gas Heat	HVAC	Gas Furnace Tune-Up	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
149	WS	Residential	All	Gas Heat (No AC)	HVAC	Gas Furnace Tune-Up	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
150	WS	Residential	All	Gas WH	Hot Water	Efficient Gas water heaters	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
151	WS	Residential	All	Gas WH	Hot Water	Tankless Gas water heater	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
152	WS	Residential	All	Gas WH	Hot Water	Gas WH jacket	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
153	WS	Residential	All	Gas WH	Hot Water	Gas WH pipe insulation	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
154	NWS	Residential	All	Gas WH	Hot Water	Faucet aerators - Gas WH	Residential Home Audit & Retrofit	2015	0.188%	2018	0.937500%	2034	0.937500%
155	NWS	Residential	All	Gas WH	Hot Water	Low Flow Showerheads	Residential Home Audit & Retrofit	2015	0.188%	2018	0.937500%	2034	0.937500%

MEASURE DESCRIPTION							
Measure ID	Weather Sensitive	Sector	Sub-Sector	Building Type	End Use	Measure Name	Fuel Type
1	NWS	Industrial	Small Industrial	All	Motors - Other Applications	Operations and maintenance	Electric
2	NWS	Industrial	Small Industrial	All	Motors - Other Applications	Match Motor Size to Load	Electric
3	NWS	Industrial	Small Industrial	All	Motors - Other Applications	Motor Efficiency Upgrade	Electric
4	NWS	Industrial	Small Industrial	All	Motors - Other Applications	Variable Speed Drives	Electric
5	NWS	Industrial	Small Industrial	All	Pumps	Reduce Overall System Requirements	Electric
6	NWS	Industrial	Small Industrial	All	Pumps	Match Pump Size to Load	Electric
7	NWS	Industrial	Small Industrial	All	Pumps	Reduce or Control Pump Speed	Electric
8	NWS	Industrial	Small Industrial	All	Pumps	Improve Pump Components	Electric
9	NWS	Industrial	Small Industrial	All	Pumps	Operation and Maintenance	Electric
10	NWS	Industrial	Small Industrial	All	Compressed Air	Reduce Overall System Requirements	Electric
11	NWS	Industrial	Small Industrial	All	Compressed Air	Match Compressor Size to Load	Electric
12	NWS	Industrial	Small Industrial	All	Compressed Air	Compressor Control	Electric
13	NWS	Industrial	Small Industrial	All	Compressed Air	Improve Compressor Components	Electric
14	NWS	Industrial	Small Industrial	All	Compressed Air	Operation and Maintenance	Electric
15	NWS	Industrial	Small Industrial	All	Fans	Reduce Overall System Requirements	Electric
16	NWS	Industrial	Small Industrial	All	Fans	Reduce or Control Fan Speed	Electric
17	NWS	Industrial	Small Industrial	All	Fans	Improve Fan Components	Electric
18	NWS	Industrial	Small Industrial	All	Fans	Operation and Maintenance	Electric
19	NWS	Industrial	Small Industrial	All	PH	Advanced water heater controls	Electric
20	NWS	Industrial	Small Industrial	All	PH	Process Heat Recovery to Preheat Makeup Water	Electric
21	NWS	Industrial	Small Industrial	All	PH	Air Curtains (Oven)	Electric
22	NWS	Industrial	Small Industrial	All	PH	Insulation (Oven)	Electric
23	NWS	Industrial	Small Industrial	All	PH	Preventative Oven Maintenance	Electric
24	NWS	Industrial	Small Industrial	All	PH	Air Curtains (Dryer)	Electric
25	NWS	Industrial	Small Industrial	All	PH	Insulation (Dryer)	Electric
26	NWS	Industrial	Small Industrial	All	PH	Preventative Dryer Maintenance	Electric
27	NWS	Industrial	Small Industrial	All	PH	Preventative Furnace Maintenance	Electric
28	NWS	Industrial	Small Industrial	All	PH	Insulation (Furnace)	Electric
29	NWS	Industrial	Small Industrial	All	PH	Preventative Kiln Maintenance	Electric
30	NWS	Industrial	Small Industrial	All	PH	Insulation (Kiln)	Electric
31	NWS	Industrial	Small Industrial	All	PCR	High Efficiency Chiller	Electric
32	NWS	Industrial	Small Industrial	All	PCR	Optimized Distribution System	Electric
33	NWS	Industrial	Small Industrial	All	PCR	Floating head pressure controls	Electric
34	NWS	Industrial	Small Industrial	All	PCR	Premium efficiency refrigeration control system	Electric
35	NWS	Industrial	Small Industrial	All	PCR	Smart Defrost Controls	Electric
36	NWS	Industrial	Small Industrial	All	PCR	Doors, Covers and Curtains	Electric
37	NWS	Industrial	Small Industrial	All	PCR	Optimized chilled water temperature and/or optimized condenser temperature	Electric
38	NWS	Industrial	Small Industrial	All	PCR	Preventative refrigeration/cooling system maintenance	Electric
39	NWS	Industrial	Small Industrial	All	PCR	Optimized condenser pressure	Electric
40	NWS	Industrial	Small Industrial	All	PCR	VSD on chiller compressor	Electric
41	NWS	Industrial	Small Industrial	All	PCR	Free-cooling	Electric
42	NWS	Industrial	Small Industrial	All	PCR	Improve insulation of refrigeration system	Electric
43	NWS	Industrial	Small Industrial	All	HVAC	Optimized duct design to improve efficiency	Electric
44	NWS	Industrial	Small Industrial	All	HVAC	Air Source Heat Pump for Backup Generators	Electric
45	NWS	Industrial	Small Industrial	All	ONPU	High efficiency battery charger (for forklifts)	Electric
46	NWS	Industrial	Small Industrial	All	ONPU	HE Dry-Type Transformers	Electric
47	NWS	Industrial	Small Industrial	All	HVAC	Free cooling	Electric
48	NWS	Industrial	Small Industrial	All	HVAC	Radiant Heaters	Electric
49	NWS	Industrial	Small Industrial	All	HVAC	High efficiency non-packaged HVAC equipment	Electric
50	NWS	Industrial	Small Industrial	All	HVAC	Seasonal Temperature Settings Adjustments	Electric
51	NWS	Industrial	Small Industrial	All	HVAC	High-efficiency rooftop AC with an EER of 13.5	Electric
52	NWS	Industrial	Small Industrial	All	HVAC	Ground Source Heat Pump	Electric
53	NWS	Industrial	Small Industrial	All	HVAC	Ventilation Heat Recovery	Electric
54	NWS	Industrial	Small Industrial	All	HVAC	Automated Temperature Control	Electric
55	NWS	Industrial	Small Industrial	All	HVAC	Reduced Temperature Settings	Electric
56	NWS	Industrial	Small Industrial	All	HVAC	Destratification Fans	Electric
57	NWS	Industrial	Small Industrial	All	HVAC	Warehouse Loading Dock Seals	Electric
58	NWS	Industrial	Small Industrial	All	HVAC	Preventative Packaged HVAC Maintenance	Electric
59	NWS	Industrial	Small Industrial	All	HVAC	Heat Recovery from Processes to Heat Ventilation Make-up Air	Electric
60	NWS	Industrial	Small Industrial	All	FL	High efficiency ballasts for lighting	Electric

MEASURE DESCRIPTION							
Measure ID	Weather Sensitive	Sector	Sub-Sector	Building Type	End Use	Measure Name	Fuel Type
61	NWS	Industrial	Small Industrial	All	FL	High Efficiency Light fixtures	Electric
62	NWS	Industrial	Small Industrial	All	FL	Efficient Lighting Design	Electric
63	NWS	Industrial	Small Industrial	All	FL	Lighting controls: on/off timer settings	Electric
64	NWS	Industrial	Small Industrial	All	FL	Lighting controls: occupancy sensors	Electric
65	NWS	Industrial	Small Industrial	All	HVAC	Ventilation Optimization	Electric
66	NWS	Industrial	Small Industrial	All	HVAC	Premium efficiency ventilation control with VSD	Electric
67	NWS	Industrial	Small Industrial	All	HVAC	Demand-Controlled Ventilation	Electric
68	NWS	Industrial	Other - Combined	All	Motors - Other Applications	Operations and maintenance	Electric
69	NWS	Industrial	Other - Combined	All	Motors - Other Applications	Match Motor Size to Load	Electric
70	NWS	Industrial	Other - Combined	All	Motors - Other Applications	Motor Efficiency Upgrade	Electric
71	NWS	Industrial	Other - Combined	All	Motors - Other Applications	Variable Speed Drives	Electric
72	NWS	Industrial	Other - Combined	All	Pumps	Reduce Overall System Requirements	Electric
73	NWS	Industrial	Other - Combined	All	Pumps	Match Pump Size to Load	Electric
74	NWS	Industrial	Other - Combined	All	Pumps	Reduce or Control Pump Speed	Electric
75	NWS	Industrial	Other - Combined	All	Pumps	Improve Pump Components	Electric
76	NWS	Industrial	Other - Combined	All	Pumps	Operation and Maintenance	Electric
77	NWS	Industrial	Other - Combined	All	Compressed Air	Reduce Overall System Requirements	Electric
78	NWS	Industrial	Other - Combined	All	Compressed Air	Match Compressor Size to Load	Electric
79	NWS	Industrial	Other - Combined	All	Compressed Air	Compressor Control	Electric
80	NWS	Industrial	Other - Combined	All	Compressed Air	Improve Compressor Components	Electric
81	NWS	Industrial	Other - Combined	All	Compressed Air	Operation and Maintenance	Electric
82	NWS	Industrial	Other - Combined	All	Fans	Reduce Overall System Requirements	Electric
83	NWS	Industrial	Other - Combined	All	Fans	Reduce or Control Fan Speed	Electric
84	NWS	Industrial	Other - Combined	All	Fans	Improve Fan Components	Electric
85	NWS	Industrial	Other - Combined	All	Fans	Operation and Maintenance	Electric
86	NWS	Industrial	Other - Combined	All	HVAC	Optimized Duct Design to Improve Efficiency	Electric
87	NWS	Industrial	Other - Combined	All	PH	Advanced Water Heater Controls	Electric
88	NWS	Industrial	Other - Combined	All	PH	Process Heat Recovery to Preheat Makeup Water	Electric
89	NWS	Industrial	Other - Combined	All	PH	Air Curtains (Oven)	Electric
90	NWS	Industrial	Other - Combined	All	PH	Insulation (Oven)	Electric
91	NWS	Industrial	Other - Combined	All	PH	Preventative Oven Maintenance	Electric
92	NWS	Industrial	Other - Combined	All	PH	Air Curtains (Dryer)	Electric
93	NWS	Industrial	Other - Combined	All	PH	Insulation (Dryer)	Electric
94	NWS	Industrial	Other - Combined	All	PH	Preventative Dryer Maintenance	Electric
95	NWS	Industrial	Other - Combined	All	PH	Optimized Distribution System	Electric
96	NWS	Industrial	Other - Combined	All	PH	Insulation (Dryer)	Electric
97	NWS	Industrial	Other - Combined	All	PH	Preventative Dryer Maintenance	Electric
98	NWS	Industrial	Other - Combined	All	PH	Preventative Furnace Maintenance	Electric
99	NWS	Industrial	Other - Combined	All	PH	Insulation (Furnace)	Electric
100	NWS	Industrial	Other - Combined	All	PCR	High Efficiency Chiller	Electric
101	NWS	Industrial	Other - Combined	All	PCR	Floating head pressure controls	Electric
102	NWS	Industrial	Other - Combined	All	PCR	Premium Efficiency Refrigeration Control System	Electric
103	NWS	Industrial	Other - Combined	All	PCR	Smart Defrost Controls	Electric
104	NWS	Industrial	Other - Combined	All	PCR	Doors, Covers and Curtains	Electric
105	NWS	Industrial	Other - Combined	All	PCR	Optimized chilled water temperature and/or optimized condenser temperature	Electric
106	NWS	Industrial	Other - Combined	All	PCR	Preventative Refrigeration/cooling System Maintenance	Electric
107	NWS	Industrial	Other - Combined	All	PCR	Optimized condenser pressure	Electric
108	NWS	Industrial	Other - Combined	All	PCR	Free-cooling	Electric
109	NWS	Industrial	Other - Combined	All	PCR	Improve Insulation of Refrigeration System	Electric
110	NWS	Industrial	Other - Combined	All	ONPU	HE Dry-Type Transformers	Electric
111	NWS	Industrial	Other - Combined	All	HVAC	Air Source Heat Pump for Backup Generators	Electric
112	NWS	Industrial	Other - Combined	All	ONPU	High efficiency battery charger (for forklifts)	Electric
113	NWS	Industrial	Other - Combined	All	HVAC	Radiant Heaters	Electric
114	NWS	Industrial	Other - Combined	All	HVAC	High efficiency non-packaged HVAC equipment	Electric
115	NWS	Industrial	Other - Combined	All	HVAC	Seasonal Temperature Settings Adjustments	Electric
116	NWS	Industrial	Other - Combined	All	HVAC	High-efficiency rooftop AC with an EER of 13.5	Electric
117	NWS	Industrial	Other - Combined	All	HVAC	Ground Source Heat Pump	Electric
118	NWS	Industrial	Other - Combined	All	HVAC	Ventilation Heat Recovery	Electric
119	NWS	Industrial	Other - Combined	All	HVAC	Automated Temperature Control	Electric
120	NWS	Industrial	Other - Combined	All	HVAC	Reduced Temperature Settings	Electric

MEASURE DESCRIPTION							
Measure ID	Weather Sensitive	Sector	Sub-Sector	Building Type	End Use	Measure Name	Fuel Type
121	NWS	Industrial	Other - Combined	All	HVAC	Destratification Fans	Electric
122	NWS	Industrial	Other - Combined	All	HVAC	Warehouse Loading Dock Seals	Electric
123	NWS	Industrial	Other - Combined	All	HVAC	Preventative Packaged HVAC Maintenance	Electric
124	NWS	Industrial	Other - Combined	All	HVAC	Heat Recovery from Processes to Heat Ventilation Make-up Air	Electric
125	NWS	Industrial	Other - Combined	All	FL	High efficiency ballasts for lighting	Electric
126	NWS	Industrial	Other - Combined	All	FL	High Efficiency Light fixtures	Electric
127	NWS	Industrial	Other - Combined	All	FL	Efficient Lighting Design	Electric
128	NWS	Industrial	Other - Combined	All	FL	Lighting controls: on/off timer settings	Electric
129	NWS	Industrial	Other - Combined	All	FL	Lighting controls: occupancy sensors	Electric
130	NWS	Industrial	Other - Combined	All	HVAC	Ventilation Optimization	Electric
131	NWS	Industrial	Other - Combined	All	HVAC	Premium efficiency ventilation control with VSD	Electric
132	NWS	Industrial	Other - Combined	All	HVAC	Demand-Controlled Ventilation	Electric
133	NWS	Industrial	Food Products	All	Motors - Other Applications	Operations and maintenance	Electric
134	NWS	Industrial	Food Products	All	Motors - Other Applications	Match Motor Size to Load	Electric
135	NWS	Industrial	Food Products	All	Motors - Other Applications	Motor Efficiency Upgrade	Electric
136	NWS	Industrial	Food Products	All	Motors - Other Applications	Variable Speed Drives	Electric
137	NWS	Industrial	Food Products	All	Pumps	Reduce Overall System Requirements	Electric
138	NWS	Industrial	Food Products	All	Pumps	Match Pump Size to Load	Electric
139	NWS	Industrial	Food Products	All	Pumps	Reduce or Control Pump Speed	Electric
140	NWS	Industrial	Food Products	All	Pumps	Improve Pump Components	Electric
141	NWS	Industrial	Food Products	All	Pumps	Operation and Maintenance	Electric
142	NWS	Industrial	Food Products	All	Compressed Air	Reduce Overall System Requirements	Electric
143	NWS	Industrial	Food Products	All	Compressed Air	Match Compressor Size to Load	Electric
144	NWS	Industrial	Food Products	All	Compressed Air	Compressor Control	Electric
145	NWS	Industrial	Food Products	All	Compressed Air	Improve Compressor Components	Electric
146	NWS	Industrial	Food Products	All	Compressed Air	Operation and Maintenance	Electric
147	NWS	Industrial	Food Products	All	Fans	Reduce Overall System Requirements	Electric
148	NWS	Industrial	Food Products	All	Fans	Reduce or Control Fan Speed	Electric
149	NWS	Industrial	Food Products	All	Fans	Improve Fan Components	Electric
150	NWS	Industrial	Food Products	All	Fans	Operation and Maintenance	Electric
151	NWS	Industrial	Food Products	All	HVAC	Optimized Duct Design to Improve Efficiency	Electric
152	NWS	Industrial	Food Products	All	PH	Advanced Water Heater Controls	Electric
153	NWS	Industrial	Food Products	All	PH	Process Heat Recovery to Preheat Makeup Water	Electric
154	NWS	Industrial	Food Products	All	PH	Air Curtains (Oven)	Electric
155	NWS	Industrial	Food Products	All	PH	Insulation (Oven)	Electric
156	NWS	Industrial	Food Products	All	PH	Preventative Oven Maintenance	Electric
157	NWS	Industrial	Food Products	All	PH	Air Curtains (Dryer)	Electric
158	NWS	Industrial	Food Products	All	PH	Insulation (Dryer)	Electric
159	NWS	Industrial	Food Products	All	PH	Preventative Dryer Maintenance	Electric
160	NWS	Industrial	Food Products	All	PH	Optimized Distribution System	Electric
161	NWS	Industrial	Food Products	All	PH	Insulation (Dryer)	Electric
162	NWS	Industrial	Food Products	All	PH	Preventative Dryer Maintenance	Electric
163	NWS	Industrial	Food Products	All	PH	Preventative Furnace Maintenance	Electric
164	NWS	Industrial	Food Products	All	PH	Insulation (Furnace)	Electric
165	NWS	Industrial	Food Products	All	PCR	High Efficiency Chiller	Electric
166	NWS	Industrial	Food Products	All	PCR	Floating head pressure controls	Electric
167	NWS	Industrial	Food Products	All	PCR	Premium Efficiency Refrigeration Control System	Electric
168	NWS	Industrial	Food Products	All	PCR	Smart Defrost Controls	Electric
169	NWS	Industrial	Food Products	All	PCR	Doors, Covers and Curtains	Electric
170	NWS	Industrial	Food Products	All	PCR	Optimized chilled water temperature and/or optimized condenser temperature	Electric
171	NWS	Industrial	Food Products	All	PCR	Preventative Refrigeration/cooling System Maintenance	Electric
172	NWS	Industrial	Food Products	All	PCR	Optimized condenser pressure	Electric
173	NWS	Industrial	Food Products	All	PCR	Free-cooling	Electric
174	NWS	Industrial	Food Products	All	PCR	Improve Insulation of Refrigeration System	Electric
175	NWS	Industrial	Food Products	All	ONPU	HE Dry-Type Transformers	Electric
176	NWS	Industrial	Food Products	All	HVAC	Air Source Heat Pump for Backup Generators	Electric
177	NWS	Industrial	Food Products	All	ONPU	High efficiency battery charger (for forklifts)	Electric
178	NWS	Industrial	Food Products	All	HVAC	Radiant Heaters	Electric
179	NWS	Industrial	Food Products	All	HVAC	High efficiency non-packaged HVAC equipment	Electric
180	NWS	Industrial	Food Products	All	HVAC	Seasonal Temperature Settings Adjustments	Electric

MEASURE DESCRIPTION							
Measure ID	Weather Sensitive	Sector	Sub-Sector	Building Type	End Use	Measure Name	Fuel Type
181	NWS	Industrial	Food Products	All	HVAC	High-efficiency rooftop AC with an EER of 13.5	Electric
182	NWS	Industrial	Food Products	All	HVAC	Ground Source Heat Pump	Electric
183	NWS	Industrial	Food Products	All	HVAC	Ventilation Heat Recovery	Electric
184	NWS	Industrial	Food Products	All	HVAC	Automated Temperature Control	Electric
185	NWS	Industrial	Food Products	All	HVAC	Reduced Temperature Settings	Electric
186	NWS	Industrial	Food Products	All	HVAC	Destratification Fans	Electric
187	NWS	Industrial	Food Products	All	HVAC	Warehouse Loading Dock Seals	Electric
188	NWS	Industrial	Food Products	All	HVAC	Preventative Packaged HVAC Maintenance	Electric
189	NWS	Industrial	Food Products	All	HVAC	Heat Recovery from Processes to Heat Ventilation Make-up Air	Electric
190	NWS	Industrial	Food Products	All	FL	High efficiency ballasts for lighting	Electric
191	NWS	Industrial	Food Products	All	FL	High Efficiency Light fixtures	Electric
192	NWS	Industrial	Food Products	All	FL	Efficient Lighting Design	Electric
193	NWS	Industrial	Food Products	All	FL	Lighting controls: on/off timer settings	Electric
194	NWS	Industrial	Food Products	All	FL	Lighting controls: occupancy sensors	Electric
195	NWS	Industrial	Food Products	All	HVAC	Ventilation Optimization	Electric
196	NWS	Industrial	Food Products	All	HVAC	Premium efficiency ventilation control with VSD	Electric
197	NWS	Industrial	Food Products	All	HVAC	Demand-Controlled Ventilation	Electric
199	NWS	Industrial	Industrial Gases	All	Total	Integrated Control System	Gas
200	NWS	Industrial	Industrial Gases	All	Total	Process Integration and Pinch Analysis	Gas
201	NWS	Industrial	Industrial Gases	All	Total	Sub-Metering	Gas
202	NWS	Industrial	Industrial Gases	All	HVAC	High-efficiency rooftop AC with an EER of 13.13	Gas
203	NWS	Industrial	Industrial Gases	All	Process Heating	Water-heater right sizing and load management	Gas
204	NWS	Industrial	Industrial Gases	All	Process Heating	Insulation	Gas
205	NWS	Industrial	Industrial Gases	All	Boilers	Blowdown Control	Gas
206	NWS	Industrial	Industrial Gases	All	Boilers	Boiler Right Sizing	Gas
207	NWS	Industrial	Industrial Gases	All	Boilers	Condensing Boiler	Gas
208	NWS	Industrial	Industrial Gases	All	Boilers	Direct-Contact Hot Water Heaters	Gas
209	NWS	Industrial	Industrial Gases	All	Boilers	High Efficiency Burner	Gas
210	NWS	Industrial	Industrial Gases	All	Boilers	Instantaneous Steam Generation	Gas
211	NWS	Industrial	Industrial Gases	All	Boilers	Blowdown Heat Recovery	Gas
212	NWS	Industrial	Industrial Gases	All	Boilers	Boiler combustion air preheat	Gas
213	NWS	Industrial	Industrial Gases	All	Boilers	Preventative Boiler Maintenance	Gas
214	NWS	Industrial	Industrial Gases	All	Boilers	Boiler Water Treatment	Gas
215	NWS	Industrial	Industrial Gases	All	Boilers	Condensate Return	Gas
216	NWS	Industrial	Industrial Gases	All	Boilers	Economizer	Gas
217	NWS	Industrial	Industrial Gases	All	Boilers	Insulation	Gas
218	NWS	Industrial	Industrial Gases	All	Boilers	Minimize Deaerator Vent Losses	Gas
219	NWS	Industrial	Industrial Gases	All	Boilers	Process Heat Recovery to Preheat Makeup Water	Gas
220	NWS	Industrial	Industrial Gases	All	Boilers	Steam Trap Survey and Repair	Gas
221	NWS	Industrial	Industrial Gases	All	Boilers	First Generation Super Boilers	Gas
222	NWS	Industrial	Industrial Gases	All	Process Heating	High Efficiency Burner	Gas
223	NWS	Industrial	Industrial Gases	All	Process Heating	Infrared Ovens	Gas
224	NWS	Industrial	Industrial Gases	All	Process Heating	Process Heat Recovery to Preheat Makeup Water	Gas
225	NWS	Industrial	Industrial Gases	All	Process Heating	Air Curtains	Gas
226	NWS	Industrial	Industrial Gases	All	Process Heating	Exhaust Gas Heat Recovery	Gas
227	NWS	Industrial	Industrial Gases	All	Process Heating	Insulation	Gas
228	NWS	Industrial	Industrial Gases	All	Process Heating	Advanced heating and Process Control	Gas
229	NWS	Industrial	Industrial Gases	All	Process Heating	Combustion Optimization	Gas
230	NWS	Industrial	Industrial Gases	All	Process Heating	Radiant Tube burners	Gas
231	NWS	Industrial	Industrial Gases	All	HVAC	Radiant Heaters	Gas
232	NWS	Industrial	Industrial Gases	All	Process Heating	Solar Walls	Gas
233	NWS	Industrial	Industrial Gases	All	HVAC	Air Compressor Heat Recovery	Gas
234	NWS	Industrial	Industrial Gases	All	HVAC	Air Curtains	Gas
235	NWS	Industrial	Industrial Gases	All	HVAC	Destratification Fans	Gas
236	NWS	Industrial	Industrial Gases	All	HVAC	Ventilation Heat Recovery	Gas
237	NWS	Industrial	Industrial Gases	All	HVAC	Ventilation Optimization	Gas
238	NWS	Industrial	Industrial Gases	All	HVAC	Warehouse Loading Dock Seals	Gas
239	NWS	Industrial	Industrial Gases	All	HVAC	Automated Temperature reset Control	Gas
240	NWS	Industrial	Industrial Gases	All	HVAC	Reduced Temperature Settings	Gas

MEASURE DESCRIPTION							
Measure ID	Weather Sensitive	Sector	Sub-Sector	Building Type	End Use	Measure Name	Fuel Type
241	NWS	Industrial	Industrial Gases	All	Total	Pollution Control Measures	Gas
242	NWS	Industrial	Industrial Gases	All	Process Heating	CFD Modelling	Gas
243	NWS	Industrial	Industrial Gases	All	Total	Energy Management	Gas
244	NWS	Industrial	Industrial Gases	All	Process Heating	Improved airflow in dryer windbox	Gas
245	NWS	Industrial	Industrial Gases	All	Process Heating	Preventative Oven Maintenance	Gas
246	NWS	Industrial	Industrial Gases	All	Process Heating	Preventative Furnace Maintenance	Gas
247	NWS	Industrial	Industrial Gases	All	Process Heating	Preventative Dryer Maintenance	Gas
248	NWS	Industrial	Industrial Gases	All	Process Heating	High Efficiency Burner	Gas
249	NWS	Industrial	Industrial Gases	All	Process Heating	Air Curtains	Gas
250	NWS	Industrial	Industrial Gases	All	Process Heating	Exhaust Gas Heat Recovery	Gas
251	NWS	Industrial	Industrial Gases	All	Process Heating	Insulation	Gas
252	NWS	Industrial	Industrial Gases	All	Process Heating	Advanced heating and Process Control	Gas
253	NWS	Industrial	Industrial Gases	All	Process Heating	Combustion Optimization	Gas
254	NWS	Industrial	Industrial Gases	All	Process Heating	High Efficiency Burner	Gas
255	NWS	Industrial	Industrial Gases	All	Process Heating	Air Curtains	Gas
256	NWS	Industrial	Industrial Gases	All	Process Heating	Exhaust Gas Heat Recovery	Gas
257	NWS	Industrial	Industrial Gases	All	Process Heating	Insulation	Gas
258	NWS	Industrial	Industrial Gases	All	Process Heating	Advanced heating and Process Control	Gas
259	NWS	Industrial	Industrial Gases	All	Process Heating	Combustion Optimization	Gas
260	NWS	Industrial	All Other	All	Total	Integrated Control System	Gas
261	NWS	Industrial	All Other	All	Total	Process Integration and Pinch Analysis	Gas
262	NWS	Industrial	All Other	All	Total	Sub-Metering	Gas
263	NWS	Industrial	All Other	All	HVAC	High-efficiency rooftop AC with an EER of 13.13	Gas
264	NWS	Industrial	All Other	All	Process Heating	Water-heater right sizing and load management	Gas
265	NWS	Industrial	All Other	All	Process Heating	Insulation	Gas
266	NWS	Industrial	All Other	All	Boilers	Blowdown Control	Gas
267	NWS	Industrial	All Other	All	Boilers	Boiler Right Sizing	Gas
268	NWS	Industrial	All Other	All	Boilers	Condensing Boiler	Gas
269	NWS	Industrial	All Other	All	Boilers	Direct-Contact Hot Water Heaters	Gas
270	NWS	Industrial	All Other	All	Boilers	High Efficiency Burner	Gas
271	NWS	Industrial	All Other	All	Boilers	Instantaneous Steam Generation	Gas
272	NWS	Industrial	All Other	All	Boilers	Blowdown Heat Recovery	Gas
273	NWS	Industrial	All Other	All	Boilers	Boiler combustion air preheat	Gas
274	NWS	Industrial	All Other	All	Boilers	Preventative Boiler Maintenance	Gas
275	NWS	Industrial	All Other	All	Boilers	Boiler Water Treatment	Gas
276	NWS	Industrial	All Other	All	Boilers	Condensate Return	Gas
277	NWS	Industrial	All Other	All	Boilers	Economizer	Gas
278	NWS	Industrial	All Other	All	Boilers	Insulation	Gas
279	NWS	Industrial	All Other	All	Boilers	Minimize Deaerator Vent Losses	Gas
280	NWS	Industrial	All Other	All	Boilers	Process Heat Recovery to Preheat Makeup Water	Gas
281	NWS	Industrial	All Other	All	Boilers	Steam Trap Survey and Repair	Gas
282	NWS	Industrial	All Other	All	Boilers	First Generation Super Boilers	Gas
283	NWS	Industrial	All Other	All	Process Heating	High Efficiency Burner	Gas
284	NWS	Industrial	All Other	All	Process Heating	Infrared Ovens	Gas
285	NWS	Industrial	All Other	All	Process Heating	Process Heat Recovery to Preheat Makeup Water	Gas
286	NWS	Industrial	All Other	All	Process Heating	Air Curtains	Gas
287	NWS	Industrial	All Other	All	Process Heating	Exhaust Gas Heat Recovery	Gas
288	NWS	Industrial	All Other	All	Process Heating	Insulation	Gas
289	NWS	Industrial	All Other	All	Process Heating	Advanced heating and Process Control	Gas
290	NWS	Industrial	All Other	All	Process Heating	Combustion Optimization	Gas
291	NWS	Industrial	All Other	All	Process Heating	Radiant Tube burners	Gas
292	NWS	Industrial	All Other	All	Process Heating	Radiant Heaters	Gas
293	NWS	Industrial	All Other	All	Process Heating	Solar Walls	Gas
294	NWS	Industrial	All Other	All	HVAC	Air Compressor Heat Recovery	Gas
295	NWS	Industrial	All Other	All	HVAC	Air Curtains	Gas
296	NWS	Industrial	All Other	All	HVAC	Destratification Fans	Gas
297	NWS	Industrial	All Other	All	HVAC	Ventilation Heat Recovery	Gas
298	NWS	Industrial	All Other	All	HVAC	Ventilation Optimization	Gas
299	NWS	Industrial	All Other	All	HVAC	Warehouse Loading Dock Seals	Gas
300	NWS	Industrial	All Other	All	HVAC	Automated Temperature reset Control	Gas

MEASURE DESCRIPTION							
Measure ID	Weather Sensitive	Sector	Sub-Sector	Building Type	End Use	Measure Name	Fuel Type
301	NWS	Industrial	All Other	All	HVAC	Reduced Temperature Settings	Gas
302	NWS	Industrial	All Other	All	Process Heating	Pollution Control Measures	Gas
303	NWS	Industrial	All Other	All	Process Heating	CFD Modelling	Gas
304	NWS	Industrial	All Other	All	Total	Energy Management	Gas
305	NWS	Industrial	All Other	All	Process Heating	Improved airflow in dryer windbox	Gas
306	NWS	Industrial	All Other	All	Process Heating	Preventative Oven Maintenance	Gas
307	NWS	Industrial	All Other	All	Process Heating	Preventative Furnace Maintenance	Gas
308	NWS	Industrial	All Other	All	Process Heating	Preventative Dryer Maintenance	Gas
309	NWS	Industrial	All Other	All	Process Heating	High Efficiency Burner	Gas
310	NWS	Industrial	All Other	All	Process Heating	Air Curtains	Gas
311	NWS	Industrial	All Other	All	Process Heating	Exhaust Gas Heat Recovery	Gas
312	NWS	Industrial	All Other	All	Process Heating	Insulation	Gas
313	NWS	Industrial	All Other	All	Process Heating	Advanced heating and Process Control	Gas
314	NWS	Industrial	All Other	All	Process Heating	Combustion Optimization	Gas
315	NWS	Industrial	All Other	All	Process Heating	High Efficiency Burner	Gas
316	NWS	Industrial	All Other	All	Process Heating	Air Curtains	Gas
317	NWS	Industrial	All Other	All	Process Heating	Exhaust Gas Heat Recovery	Gas
318	NWS	Industrial	All Other	All	Process Heating	Insulation	Gas
319	NWS	Industrial	All Other	All	Process Heating	Advanced heating and Process Control	Gas
320	NWS	Industrial	All Other	All	Process Heating	Combustion Optimization	Gas
321	NWS	Industrial	Small Industrial	All	Total	Integrated Control System	Gas
322	NWS	Industrial	Small Industrial	All	Total	Process Integration and Pinch Analysis	Gas
323	NWS	Industrial	Small Industrial	All	Total	Sub-Metering	Gas
324	NWS	Industrial	Small Industrial	All	HVAC	High-efficiency rooftop AC with an EER of 13.13	Gas
325	NWS	Industrial	Small Industrial	All	Process Heating	Water-heater right sizing and load management	Gas
326	NWS	Industrial	Small Industrial	All	Process Heating	Insulation	Gas
327	NWS	Industrial	Small Industrial	All	Boilers	Blowdown Control	Gas
328	NWS	Industrial	Small Industrial	All	Boilers	Boiler Right Sizing	Gas
329	NWS	Industrial	Small Industrial	All	Boilers	Condensing Boiler	Gas
330	NWS	Industrial	Small Industrial	All	Boilers	Direct-Contact Hot Water Heaters	Gas
331	NWS	Industrial	Small Industrial	All	Boilers	High Efficiency Burner	Gas
332	NWS	Industrial	Small Industrial	All	Boilers	Instantaneous Steam Generation	Gas
333	NWS	Industrial	Small Industrial	All	Boilers	Blowdown Heat Recovery	Gas
334	NWS	Industrial	Small Industrial	All	Boilers	Boiler combustion air preheat	Gas
335	NWS	Industrial	Small Industrial	All	Boilers	Preventative Boiler Maintenance	Gas
336	NWS	Industrial	Small Industrial	All	Boilers	Boiler Water Treatment	Gas
337	NWS	Industrial	Small Industrial	All	Boilers	Condensate Return	Gas
338	NWS	Industrial	Small Industrial	All	Boilers	Economizer	Gas
339	NWS	Industrial	Small Industrial	All	Boilers	Insulation	Gas
340	NWS	Industrial	Small Industrial	All	Boilers	Minimize Deaerator Vent Losses	Gas
341	NWS	Industrial	Small Industrial	All	Boilers	Process Heat Recovery to Preheat Makeup Water	Gas
342	NWS	Industrial	Small Industrial	All	Boilers	Steam Trap Survey and Repair	Gas
343	NWS	Industrial	Small Industrial	All	Boilers	First Generation Super Boilers	Gas
344	NWS	Industrial	Small Industrial	All	Process Heating	High Efficiency Burner	Gas
345	NWS	Industrial	Small Industrial	All	Process Heating	Infrared Ovens	Gas
346	NWS	Industrial	Small Industrial	All	Process Heating	Process Heat Recovery to Preheat Makeup Water	Gas
347	NWS	Industrial	Small Industrial	All	Process Heating	Air Curtains	Gas
348	NWS	Industrial	Small Industrial	All	Process Heating	Exhaust Gas Heat Recovery	Gas
349	NWS	Industrial	Small Industrial	All	Process Heating	Insulation	Gas
350	NWS	Industrial	Small Industrial	All	Process Heating	Advanced heating and Process Control	Gas
351	NWS	Industrial	Small Industrial	All	Process Heating	Combustion Optimization	Gas
352	NWS	Industrial	Small Industrial	All	Process Heating	Radiant Tube burners	Gas
353	NWS	Industrial	Small Industrial	All	HVAC	Radiant Heaters	Gas
354	NWS	Industrial	Small Industrial	All	Process Heating	Solar Walls	Gas
355	NWS	Industrial	Small Industrial	All	HVAC	Air Compressor Heat Recovery	Gas
356	NWS	Industrial	Small Industrial	All	HVAC	Air Curtains	Gas
357	NWS	Industrial	Small Industrial	All	HVAC	Destratification Fans	Gas
358	NWS	Industrial	Small Industrial	All	HVAC	Ventilation Heat Recovery	Gas
359	NWS	Industrial	Small Industrial	All	HVAC	Ventilation Optimization	Gas
360	NWS	Industrial	Small Industrial	All	HVAC	Warehouse Loading Dock Seals	Gas

MEASURE DESCRIPTION							
Measure ID	Weather Sensitive	Sector	Sub-Sector	Building Type	End Use	Measure Name	Fuel Type
361	NWS	Industrial	Small Industrial	All	HVAC	Automated Temperature reset Control	Gas
362	NWS	Industrial	Small Industrial	All	HVAC	Reduced Temperature Settings	Gas
363	NWS	Industrial	Small Industrial	All	Total	Pollution Control Measures	Gas
364	NWS	Industrial	Small Industrial	All	Process Heating	CFD Modelling	Gas
365	NWS	Industrial	Small Industrial	All	Total	Energy Management	Gas
366	NWS	Industrial	Small Industrial	All	Process Heating	Improved airflow in dryer windbox	Gas
367	NWS	Industrial	Small Industrial	All	Process Heating	Preventative Oven Maintenance	Gas
368	NWS	Industrial	Small Industrial	All	Process Heating	Preventative Furnace Maintenance	Gas
369	NWS	Industrial	Small Industrial	All	Process Heating	Preventative Dryer Maintenance	Gas
370	NWS	Industrial	Small Industrial	All	Process Heating	High Efficiency Burner	Gas
371	NWS	Industrial	Small Industrial	All	Process Heating	Air Curtains	Gas
372	NWS	Industrial	Small Industrial	All	Process Heating	Exhaust Gas Heat Recovery	Gas
373	NWS	Industrial	Small Industrial	All	Process Heating	Insulation	Gas
374	NWS	Industrial	Small Industrial	All	Process Heating	Advanced heating and Process Control	Gas
375	NWS	Industrial	Small Industrial	All	Process Heating	Combustion Optimization	Gas
376	NWS	Industrial	Small Industrial	All	Process Heating	High Efficiency Burner	Gas
377	NWS	Industrial	Small Industrial	All	Process Heating	Air Curtains	Gas
378	NWS	Industrial	Small Industrial	All	Process Heating	Exhaust Gas Heat Recovery	Gas
379	NWS	Industrial	Small Industrial	All	Process Heating	Insulation	Gas
380	NWS	Industrial	Small Industrial	All	Process Heating	Advanced heating and Process Control	Gas
381	NWS	Industrial	Small Industrial	All	Process Heating	Combustion Optimization	Gas

Industrial Measures

MEASURE DESCRIPTION															MEASURE INCREMENTAL SAVING PER UNIT				
Measure ID	Weather Sensitive	Sector	Sub-Sector	Building Type	End Use	Measure Name	EPM Logic (RET/RO B/NEW)	Baseline Unit Lifetime (Years)	Efficient Unit Lifetime (Years)	Total Incremental Cost	Annual kWh Savings	Annual kW Coincident Peak Savings	Annual Gas Savings (Therms)	Annual kWh Increases	Annual kW Coincident Peak Increases				
1	NWS	Industrial	Small Industrial	All	Motors - Other Applications	Operations and maintenance	RET	3	3	0.00	0.0500	0.00001	0	0	0				
2	NWS	Industrial	Small Industrial	All	Motors - Other Applications	Match Motor Size to Load	RET	15	15	0.00	0.0120	0.00000	0	0	0				
3	NWS	Industrial	Small Industrial	All	Motors - Other Applications	Motor Efficiency Upgrade	RET	15	15	0.00	0.0200	0.00000	0	0	0				
4	NWS	Industrial	Small Industrial	All	Motors - Other Applications	Variable Speed Drives	RET	15	15	0.00	0.2000	0.00002	0	0	0				
5	NWS	Industrial	Small Industrial	All	Pumps	Reduce Overall System Requirements	RET	3	3	0.00	0.1000	0.00001	0	0	0				
6	NWS	Industrial	Small Industrial	All	Pumps	Match Pump Size to Load	RET	15	15	0.00	0.2000	0.00002	0	0	0				
7	NWS	Industrial	Small Industrial	All	Pumps	Reduce or Control Pump Speed	RET	15	15	0.01	0.3000	0.00003	0	0	0				
8	NWS	Industrial	Small Industrial	All	Pumps	Improve Pump Components	RET	15	15	0.00	0.0500	0.00001	0	0	0				
9	NWS	Industrial	Small Industrial	All	Pumps	Operation and Maintenance	RET	3	3	0.00	0.0200	0.00000	0	0	0				
10	NWS	Industrial	Small Industrial	All	Compressed Air	Reduce Overall System Requirements	RET	15	15	0.00	0.2000	0.00002	0	0	0				
11	NWS	Industrial	Small Industrial	All	Compressed Air	Match Compressor Size to Load	RET	15	15	0.00	0.0300	0.00000	0	0	0				
12	NWS	Industrial	Small Industrial	All	Compressed Air	Compressor Control	RET	15	15	0.00	0.1000	0.00001	0	0	0				
13	NWS	Industrial	Small Industrial	All	Compressed Air	Improve Compressor Components	RET	15	15	0.00	0.0500	0.00001	0	0	0				
14	NWS	Industrial	Small Industrial	All	Compressed Air	Operation and Maintenance	RET	3	3	0.00	0.1000	0.00001	0	0	0				
15	NWS	Industrial	Small Industrial	All	Fans	Reduce Overall System Requirements	RET	15	15	0.00	0.1000	0.00001	0	0	0				
16	NWS	Industrial	Small Industrial	All	Fans	Reduce or Control Fan Speed	RET	15	15	0.00	0.2000	0.00002	0	0	0				
17	NWS	Industrial	Small Industrial	All	Fans	Improve Fan Components	RET	15	15	0.00	0.0500	0.00001	0	0	0				
18	NWS	Industrial	Small Industrial	All	Fans	Operation and Maintenance	RET	3	3	0.00	0.0200	0.00000	0	0	0				
19	NWS	Industrial	Small Industrial	All	PH	Advanced water heater controls	RET	20	20	0.00	0.0300	0.00000	0	0	0				
20	NWS	Industrial	Small Industrial	All	PH	Process Heat Recovery to Preheat Makeup Water	RET	20	20	0.00	0.0600	0.00001	0	0	0				
21	NWS	Industrial	Small Industrial	All	PH	Air Curtains (Oven)	RET	20	20	0.00	0.1500	0.00002	0	0	0				
22	NWS	Industrial	Small Industrial	All	PH	Insulation (Oven)	RET	15	15	0.00	0.0500	0.00001	0	0	0				
23	NWS	Industrial	Small Industrial	All	PH	Preventative Oven Maintenance	RET	3	3	0.00	0.0500	0.00001	0	0	0				
24	NWS	Industrial	Small Industrial	All	PH	Air Curtains (Dryer)	RET	20	20	0.00	0.1500	0.00002	0	0	0				
25	NWS	Industrial	Small Industrial	All	PH	Insulation (Dryer)	RET	15	15	0.00	0.0500	0.00001	0	0	0				
26	NWS	Industrial	Small Industrial	All	PH	Preventative Dryer Maintenance	RET	3	3	0.00	0.0500	0.00001	0	0	0				
27	NWS	Industrial	Small Industrial	All	PH	Preventative Furnace Maintenance	RET	3	3	0.00	0.0500	0.00001	0	0	0				
28	NWS	Industrial	Small Industrial	All	PH	Insulation (Furnace)	RET	15	15	0.00	0.0500	0.00001	0	0	0				
29	NWS	Industrial	Small Industrial	All	PH	Preventative Kiln Maintenance	RET	3	3	0.00	0.0500	0.00001	0	0	0				
30	NWS	Industrial	Small Industrial	All	PH	Insulation (Kiln)	RET	15	15	0.00	0.0500	0.00001	0	0	0				
31	NWS	Industrial	Small Industrial	All	PCR	High Efficiency Chiller	RET	20	20	0.03	0.1900	0.00002	0	0	0				
32	NWS	Industrial	Small Industrial	All	PCR	Optimized Distribution System	RET	25	25	0.00	0.0300	0.00000	0	0	0				
33	NWS	Industrial	Small Industrial	All	PCR	Floating head pressure controls	RET	15	15	0.00	0.0650	0.00001	0	0	0				
34	NWS	Industrial	Small Industrial	All	PCR	Premium efficiency refrigeration control system	RET	15	15	0.02	0.0900	0.00001	0	0	0				
35	NWS	Industrial	Small Industrial	All	PCR	Smart Defrost Controls	RET	16	16	0.00	0.1000	0.00001	0	0	0				
36	NWS	Industrial	Small Industrial	All	PCR	Doors, Covers and Curtains	RET	5	5	0.00	0.0700	0.00001	0	0	0				
37	NWS	Industrial	Small Industrial	All	PCR	Optimized chilled water temperature and/or optimized condenser temperature	RET	3	3	0.00	0.0205	0.00000	0	0	0				
38	NWS	Industrial	Small Industrial	All	PCR	Preventative refrigeration/cooling system maintenance	RET	3	3	0.00	0.0500	0.00001	0	0	0				
39	NWS	Industrial	Small Industrial	All	PCR	Optimized condenser pressure	RET	3	3	0.00	0.0600	0.00001	0	0	0				
40	NWS	Industrial	Small Industrial	All	PCR	VSD on chiller compressor	RET	15	15	0.02	0.3000	0.00003	0	0	0				
41	NWS	Industrial	Small Industrial	All	PCR	Free-cooling	RET	12	12	0.00	0.2100	0.00002	0	0	0				
42	NWS	Industrial	Small Industrial	All	PCR	Improve insulation of refrigeration system	RET	10	10	0.00	0.0500	0.00001	0	0	0				
43	NWS	Industrial	Small Industrial	All	HVAC	Optimized duct design to improve efficiency	RET	15	15	0.01	0.1000	0.00001	0	0	0				
44	NWS	Industrial	Small Industrial	All	HVAC	Air Source Heat Pump for Backup Generators	RET	15	15	0.27	0.6800	0.00008	0	0	0				
45	NWS	Industrial	Small Industrial	All	ONPU	High efficiency battery charger (for forklifts)	RET	20	20	0.00	0.1000	0.00001	0	0	0				
46	NWS	Industrial	Small Industrial	All	ONPU	HE Dry-Type Transformers	RET	30	30	0.00	0.0100	0.00000	0	0	0				
47	NWS	Industrial	Small Industrial	All	HVAC	Free cooling	RET	15	15	0.01	0.5250	0.00006	0	0	0				
48	NWS	Industrial	Small Industrial	All	HVAC	Radiant Heaters	RET	20	20	0.00	0.0000	0.00000	0	0	0				
49	NWS	Industrial	Small Industrial	All	HVAC	High efficiency non-packaged HVAC equipment	RET	20	20	0.65	0.2500	0.00003	0	0	0				
50	NWS	Industrial	Small Industrial	All	HVAC	Seasonal Temperature Settings Adjustments	RET	3	3	0.00	0.0700	0.00001	0	0	0				
51	NWS	Industrial	Small Industrial	All	HVAC	High-efficiency rooftop AC with an EER of 13.5	RET	15	15	0.01	0.1680	0.00002	0	0	0				
52	NWS	Industrial	Small Industrial	All	HVAC	Ground Source Heat Pump	RET	20	20	0.40	0.5100	0.00006	0	0	0				
53	NWS	Industrial	Small Industrial	All	HVAC	Ventilation Heat Recovery	RET	20	20	0.26	0.2000	0.00002	0	0	0				
54	NWS	Industrial	Small Industrial	All	HVAC	Automated Temperature Control	RET	25	25	0.00	0.0700	0.00001	0	0	0				
55	NWS	Industrial	Small Industrial	All	HVAC	Reduced Temperature Settings	RET	3	3	0.00	0.0700	0.00001	0	0	0				
56	NWS	Industrial	Small Industrial	All	HVAC	Destratification Fans	RET	20	20	0.00	0.0800	0.00001	0	0	0				
57	NWS	Industrial	Small Industrial	All	HVAC	Warehouse Loading Dock Seals	RET	10	10	0.00	0.0500	0.00001	0	0	0				
58	NWS	Industrial	Small Industrial	All	HVAC	Preventative Packaged HVAC Maintenance	RET	3	3	0.00	0.0500	0.00001	0	0	0				
59	NWS	Industrial	Small Industrial	All	HVAC	Heat Recovery from Processes to Heat Ventilation Make-up Air	RET	15	15	0.75	0.1500	0.00002	0	0	0				
60	NWS	Industrial	Small Industrial	All	FL	High efficiency ballasts for lighting	RET	11	11	0.00	0.2500	0.00003	0	0	0				

Industrial Measures

MEASURE DESCRIPTION															
Measure ID	Weather Sensitive	Sector	Sub-Sector	Building Type	End Use	Measure Name	EPM Logic (RET/RO B/NEW)	Baseline Unit Lifetime (Years)	Efficient Unit Lifetime (Years)	Total Incremental Cost	MEASURE INCREMENTAL SAVING PER UNIT				
											Annual kWh Savings	Annual kW Coincident Peak Savings	Annual Gas Savings (Therms)	Annual kWh Increases	Annual kW Coincident Peak Increases
61	NWS	Industrial	Small Industrial	All	FL	High Efficiency Light fixtures	RET	16	16	0.05	0.4500	0.00005	0	0	0
62	NWS	Industrial	Small Industrial	All	FL	Efficient Lighting Design	RET	16	16	0.00	0.1500	0.00002	0	0	0
63	NWS	Industrial	Small Industrial	All	FL	Lighting controls: on/off timer settings	RET	8	8	0.00	0.1500	0.00002	0	0	0
64	NWS	Industrial	Small Industrial	All	FL	Lighting controls: occupancy sensors	RET	8	8	0.04	0.1500	0.00002	0	0	0
65	NWS	Industrial	Small Industrial	All	HVAC	Ventilation Optimization	RET	15	15	0.03	0.2000	0.00002	0	0	0
66	NWS	Industrial	Small Industrial	All	HVAC	Premium efficiency ventilation control with VSD	RET	10	10	0.01	0.3000	0.00003	0	0	0
67	NWS	Industrial	Small Industrial	All	HVAC	Demand-Controlled Ventilation	RET	15	15	0.05	0.2000	0.00002	0	0	0
68	NWS	Industrial	Other - Combined	All	Motors - Other Applications	Operations and maintenance	RET	3	3	0.00	0.0500	0.00001	0	0	0
69	NWS	Industrial	Other - Combined	All	Motors - Other Applications	Match Motor Size to Load	RET	15	15	0.00	0.0120	0.00000	0	0	0
70	NWS	Industrial	Other - Combined	All	Motors - Other Applications	Motor Efficiency Upgrade	RET	15	15	0.00	0.0200	0.00000	0	0	0
71	NWS	Industrial	Other - Combined	All	Motors - Other Applications	Variable Speed Drives	RET	15	15	0.00	0.2000	0.00002	0	0	0
72	NWS	Industrial	Other - Combined	All	Pumps	Reduce Overall System Requirements	RET	3	3	0.00	0.1000	0.00001	0	0	0
73	NWS	Industrial	Other - Combined	All	Pumps	Match Pump Size to Load	RET	15	15	0.00	0.2000	0.00002	0	0	0
74	NWS	Industrial	Other - Combined	All	Pumps	Reduce or Control Pump Speed	RET	15	15	0.00	0.3000	0.00003	0	0	0
75	NWS	Industrial	Other - Combined	All	Pumps	Improve Pump Components	RET	15	15	0.00	0.0500	0.00001	0	0	0
76	NWS	Industrial	Other - Combined	All	Pumps	Operation and Maintenance	RET	3	3	0.00	0.0200	0.00000	0	0	0
77	NWS	Industrial	Other - Combined	All	Compressed Air	Reduce Overall System Requirements	RET	15	15	0.00	0.2000	0.00002	0	0	0
78	NWS	Industrial	Other - Combined	All	Compressed Air	Match Compressor Size to Load	RET	15	15	0.00	0.0300	0.00000	0	0	0
79	NWS	Industrial	Other - Combined	All	Compressed Air	Compressor Control	RET	15	15	0.00	0.1000	0.00001	0	0	0
80	NWS	Industrial	Other - Combined	All	Compressed Air	Improve Compressor Components	RET	15	15	0.00	0.0500	0.00001	0	0	0
81	NWS	Industrial	Other - Combined	All	Compressed Air	Operation and Maintenance	RET	3	3	0.00	0.1000	0.00001	0	0	0
82	NWS	Industrial	Other - Combined	All	Fans	Reduce Overall System Requirements	RET	15	15	0.00	0.1000	0.00001	0	0	0
83	NWS	Industrial	Other - Combined	All	Fans	Reduce or Control Fan Speed	RET	15	15	0.00	0.2000	0.00002	0	0	0
84	NWS	Industrial	Other - Combined	All	Fans	Improve Fan Components	RET	15	15	0.00	0.0500	0.00001	0	0	0
85	NWS	Industrial	Other - Combined	All	Fans	Operation and Maintenance	RET	3	3	0.00	0.0200	0.00000	0	0	0
86	NWS	Industrial	Other - Combined	All	HVAC	Optimized Duct Design to Improve Efficiency	RET	15	15	0.01	0.1000	0.00001	0	0	0
87	NWS	Industrial	Other - Combined	All	PH	Advanced Water Heater Controls	RET	20	20	0.00	0.0300	0.00000	0	0	0
88	NWS	Industrial	Other - Combined	All	PH	Process Heat Recovery to Preheat Makeup Water	RET	20	20	0.00	0.0600	0.00001	0	0	0
89	NWS	Industrial	Other - Combined	All	PH	Air Curtains (Oven)	RET	20	20	0.00	0.1500	0.00002	0	0	0
90	NWS	Industrial	Other - Combined	All	PH	Insulation (Oven)	RET	15	15	0.00	0.0500	0.00001	0	0	0
91	NWS	Industrial	Other - Combined	All	PH	Preventative Oven Maintenance	RET	3	3	0.00	0.0500	0.00001	0	0	0
92	NWS	Industrial	Other - Combined	All	PH	Air Curtains (Dryer)	RET	20	20	0.00	0.1500	0.00002	0	0	0
93	NWS	Industrial	Other - Combined	All	PH	Insulation (Dryer)	RET	15	15	0.00	0.0500	0.00001	0	0	0
94	NWS	Industrial	Other - Combined	All	PH	Preventative Dryer Maintenance	RET	3	3	0.00	0.0500	0.00001	0	0	0
95	NWS	Industrial	Other - Combined	All	PH	Optimized Distribution System	RET	25	25	0.00	0.0300	0.00000	0	0	0
96	NWS	Industrial	Other - Combined	All	PH	Insulation (Dryer)	RET	15	15	0.00	0.0500	0.00001	0	0	0
97	NWS	Industrial	Other - Combined	All	PH	Preventative Dryer Maintenance	RET	3	3	0.00	0.0500	0.00001	0	0	0
98	NWS	Industrial	Other - Combined	All	PH	Preventative Furnace Maintenance	RET	3	3	0.00	0.0500	0.00001	0	0	0
99	NWS	Industrial	Other - Combined	All	PH	Insulation (Furnace)	RET	15	15	0.00	0.0500	0.00001	0	0	0
100	NWS	Industrial	Other - Combined	All	PCR	High Efficiency Chiller	RET	20	20	0.02	0.1900	0.00002	0	0	0
101	NWS	Industrial	Other - Combined	All	PCR	Floating head pressure controls	RET	15	15	0.00	0.0650	0.00001	0	0	0
102	NWS	Industrial	Other - Combined	All	PCR	Premium Efficiency Refrigeration Control System	RET	15	15	0.01	0.0900	0.00001	0	0	0
103	NWS	Industrial	Other - Combined	All	PCR	Smart Defrost Controls	RET	16	16	0.00	0.1000	0.00001	0	0	0
104	NWS	Industrial	Other - Combined	All	PCR	Doors, Covers and Curtains	RET	5	5	0.00	0.0700	0.00001	0	0	0
105	NWS	Industrial	Other - Combined	All	PCR	Optimized chilled water temperature and/or optimized condenser temperature	RET	3	3	0.00	0.0205	0.00000	0	0	0
106	NWS	Industrial	Other - Combined	All	PCR	Preventative Refrigeration/cooling System Maintenance	RET	3	3	0.00	0.0500	0.00001	0	0	0
107	NWS	Industrial	Other - Combined	All	PCR	Optimized condenser pressure	RET	3	3	0.00	0.0600	0.00001	0	0	0
108	NWS	Industrial	Other - Combined	All	PCR	Free-cooling	RET	12	12	0.00	0.3000	0.00003	0	0	0
109	NWS	Industrial	Other - Combined	All	PCR	Improve Insulation of Refrigeration System	RET	10	10	0.00	0.0500	0.00001	0	0	0
110	NWS	Industrial	Other - Combined	All	ONPU	HE Dry-Type Transformers	RET	30	30	0.00	0.0100	0.00000	0	0	0
111	NWS	Industrial	Other - Combined	All	HVAC	Air Source Heat Pump for Backup Generators	RET	15	15	0.18	0.6800	0.00008	0	0	0
112	NWS	Industrial	Other - Combined	All	ONPU	High efficiency battery charger (for forklifts)	RET	20	20	0.00	0.1000	0.00001	0	0	0
113	NWS	Industrial	Other - Combined	All	HVAC	Radiant Heaters	RET	20	20	0.00	0.0000	0.00000	0	0	0
114	NWS	Industrial	Other - Combined	All	HVAC	High efficiency non-packaged HVAC equipment	RET	20	20	0.43	0.2500	0.00003	0	0	0
115	NWS	Industrial	Other - Combined	All	HVAC	Seasonal Temperature Settings Adjustments	RET	3	3	0.00	0.0700	0.00001	0	0	0
116	NWS	Industrial	Other - Combined	All	HVAC	High-efficiency rooftop AC with an EER of 13.5	RET	15	15	0.01	0.1680	0.00002	0	0	0
117	NWS	Industrial	Other - Combined	All	HVAC	Ground Source Heat Pump	RET	20	20	0.26	0.5100	0.00006	0	0	0
118	NWS	Industrial	Other - Combined	All	HVAC	Ventilation Heat Recovery	RET	20	20	0.18	0.2000	0.00002	0	0	0
119	NWS	Industrial	Other - Combined	All	HVAC	Automated Temperature Control	RET	25	25	0.00	0.0700	0.00001	0	0	0
120	NWS	Industrial	Other - Combined	All	HVAC	Reduced Temperature Settings	RET	3	3	0.00	0.0700	0.00001	0	0	0

MEASURE DESCRIPTION															MEASURE INCREMENTAL SAVING PER UNIT			
Measure ID	Weather Sensitive	Sector	Sub-Sector	Building Type	End Use	Measure Name	EPPM Logic (RET/RO B/NEW)	Baseline Unit Lifetime (Years)	Efficient Unit Lifetime (Years)	Total Incremental Cost	Annual kWh Savings	Annual kW Coincident Peak Savings	Annual Gas Savings (Therms)	Annual kWh Increases	Annual kW Coincident Peak Increases			
121	NWS	Industrial	Other - Combined	All	HVAC	De-stratification Fans	RET	20	20	0.00	0.0800	0.00001	0	0	0			
122	NWS	Industrial	Other - Combined	All	HVAC	Warehouse Loading Dock Seals	RET	10	10	0.00	0.0500	0.00001	0	0	0			
123	NWS	Industrial	Other - Combined	All	HVAC	Preventative Packaged HVAC Maintenance	RET	3	3	0.00	0.0500	0.00001	0	0	0			
124	NWS	Industrial	Other - Combined	All	HVAC	Heat Recovery from Processes to Heat Ventilation Make-up Air	RET	15	15	0.50	0.1500	0.00002	0	0	0			
125	NWS	Industrial	Other - Combined	All	FL	High efficiency ballasts for lighting	RET	11	11	0.00	0.2500	0.00003	0	0	0			
126	NWS	Industrial	Other - Combined	All	FL	High Efficiency Light fixtures	RET	16	16	0.03	0.4500	0.00006	0	0	0			
127	NWS	Industrial	Other - Combined	All	FL	Efficient Lighting Design	RET	16	16	0.00	0.1500	0.00002	0	0	0			
128	NWS	Industrial	Other - Combined	All	FL	Lighting controls: on/off timer settings	RET	8	8	0.00	0.1500	0.00002	0	0	0			
129	NWS	Industrial	Other - Combined	All	FL	Lighting controls: occupancy sensors	RET	8	8	0.03	0.1500	0.00002	0	0	0			
130	NWS	Industrial	Other - Combined	All	HVAC	Ventilation Optimization	RET	15	15	0.02	0.2000	0.00002	0	0	0			
131	NWS	Industrial	Other - Combined	All	HVAC	Premium efficiency ventilation control with VSD	RET	10	10	0.01	0.3000	0.00003	0	0	0			
132	NWS	Industrial	Other - Combined	All	HVAC	Demand-Controlled Ventilation	RET	15	15	0.03	0.2000	0.00002	0	0	0			
133	NWS	Industrial	Food Products	All	Motors - Other Applications	Operations and maintenance	RET	3	3	0.00	0.0500	0.00001	0	0	0			
134	NWS	Industrial	Food Products	All	Motors - Other Applications	Match Motor Size to Load	RET	15	15	0.00	0.0120	0.00000	0	0	0			
135	NWS	Industrial	Food Products	All	Motors - Other Applications	Motor Efficiency Upgrade	RET	15	15	0.00	0.0200	0.00000	0	0	0			
136	NWS	Industrial	Food Products	All	Motors - Other Applications	Variable Speed Drives	RET	15	15	0.00	0.2000	0.00002	0	0	0			
137	NWS	Industrial	Food Products	All	Pumps	Reduce Overall System Requirements	RET	3	3	0.00	0.1000	0.00001	0	0	0			
138	NWS	Industrial	Food Products	All	Pumps	Match Pump Size to Load	RET	15	15	0.00	0.2000	0.00002	0	0	0			
139	NWS	Industrial	Food Products	All	Pumps	Reduce or Control Pump Speed	RET	15	15	0.00	0.3000	0.00003	0	0	0			
140	NWS	Industrial	Food Products	All	Pumps	Improve Pump Components	RET	15	15	0.00	0.0500	0.00001	0	0	0			
141	NWS	Industrial	Food Products	All	Pumps	Operation and Maintenance	RET	3	3	0.00	0.0200	0.00000	0	0	0			
142	NWS	Industrial	Food Products	All	Compressed Air	Reduce Overall System Requirements	RET	15	15	0.00	0.2000	0.00002	0	0	0			
143	NWS	Industrial	Food Products	All	Compressed Air	Match Compressor Size to Load	RET	15	15	0.00	0.0300	0.00000	0	0	0			
144	NWS	Industrial	Food Products	All	Compressed Air	Compressor Control	RET	15	15	0.00	0.1000	0.00001	0	0	0			
145	NWS	Industrial	Food Products	All	Compressed Air	Improve Compressor Components	RET	15	15	0.00	0.0500	0.00001	0	0	0			
146	NWS	Industrial	Food Products	All	Compressed Air	Operation and Maintenance	RET	3	3	0.00	0.1000	0.00001	0	0	0			
147	NWS	Industrial	Food Products	All	Fans	Reduce Overall System Requirements	RET	15	15	0.00	0.1000	0.00001	0	0	0			
148	NWS	Industrial	Food Products	All	Fans	Reduce or Control Fan Speed	RET	15	15	0.00	0.2000	0.00002	0	0	0			
149	NWS	Industrial	Food Products	All	Fans	Improve Fan Components	RET	15	15	0.00	0.0500	0.00001	0	0	0			
150	NWS	Industrial	Food Products	All	Fans	Operation and Maintenance	RET	3	3	0.00	0.0200	0.00000	0	0	0			
151	NWS	Industrial	Food Products	All	HVAC	Optimized Duct Design to Improve Efficiency	RET	15	15	0.01	0.1000	0.00001	0	0	0			
152	NWS	Industrial	Food Products	All	PH	Advanced Water Heater Controls	RET	20	20	0.00	0.0300	0.00000	0	0	0			
153	NWS	Industrial	Food Products	All	PH	Process Heat Recovery to Preheat Makeup Water	RET	20	20	0.00	0.0600	0.00001	0	0	0			
154	NWS	Industrial	Food Products	All	PH	Air Curtains (Oven)	RET	20	20	0.00	0.1500	0.00002	0	0	0			
155	NWS	Industrial	Food Products	All	PH	Insulation (Oven)	RET	15	15	0.00	0.0500	0.00001	0	0	0			
156	NWS	Industrial	Food Products	All	PH	Preventative Oven Maintenance	RET	3	3	0.00	0.0500	0.00001	0	0	0			
157	NWS	Industrial	Food Products	All	PH	Air Curtains (Dryer)	RET	20	20	0.00	0.1500	0.00002	0	0	0			
158	NWS	Industrial	Food Products	All	PH	Insulation (Dryer)	RET	15	15	0.00	0.0500	0.00001	0	0	0			
159	NWS	Industrial	Food Products	All	PH	Preventative Dryer Maintenance	RET	3	3	0.00	0.0500	0.00001	0	0	0			
160	NWS	Industrial	Food Products	All	PH	Optimized Distribution System	RET	25	25	0.00	0.0300	0.00000	0	0	0			
161	NWS	Industrial	Food Products	All	PH	Insulation (Dryer)	RET	15	15	0.00	0.0500	0.00001	0	0	0			
162	NWS	Industrial	Food Products	All	PH	Preventative Dryer Maintenance	RET	3	3	0.00	0.0500	0.00001	0	0	0			
163	NWS	Industrial	Food Products	All	PH	Preventative Furnace Maintenance	RET	3	3	0.00	0.0500	0.00001	0	0	0			
164	NWS	Industrial	Food Products	All	PH	Insulation (Furnace)	RET	15	15	0.00	0.0500	0.00001	0	0	0			
165	NWS	Industrial	Food Products	All	PCR	High Efficiency Chiller	RET	20	20	0.02	0.1900	0.00002	0	0	0			
166	NWS	Industrial	Food Products	All	PCR	Floating head pressure controls	RET	15	15	0.00	0.0650	0.00001	0	0	0			
167	NWS	Industrial	Food Products	All	PCR	Premium Efficiency Refrigeration Control System	RET	15	15	0.01	0.0900	0.00001	0	0	0			
168	NWS	Industrial	Food Products	All	PCR	Smart Defrost Controls	RET	16	16	0.00	0.1000	0.00001	0	0	0			
169	NWS	Industrial	Food Products	All	PCR	Doors, Covers and Curtains	RET	5	5	0.00	0.0700	0.00001	0	0	0			
170	NWS	Industrial	Food Products	All	PCR	Optimized chilled water temperature and/or optimized condenser temperature	RET	3	3	0.00	0.0205	0.00000	0	0	0			
171	NWS	Industrial	Food Products	All	PCR	Preventative Refrigeration/cooling System Maintenance	RET	3	3	0.00	0.0500	0.00001	0	0	0			
172	NWS	Industrial	Food Products	All	PCR	Optimized condenser pressure	RET	3	3	0.00	0.0600	0.00001	0	0	0			
173	NWS	Industrial	Food Products	All	PCR	Free-cooling	RET	12	12	0.00	0.3000	0.00003	0	0	0			
174	NWS	Industrial	Food Products	All	PCR	Improve Insulation of Refrigeration System	RET	10	10	0.00	0.0500	0.00001	0	0	0			
175	NWS	Industrial	Food Products	All	ONPU	HE Dry-Type Transformers	RET	30	30	0.00	0.0100	0.00000	0	0	0			
176	NWS	Industrial	Food Products	All	HVAC	Air Source Heat Pump for Backup Generators	RET	15	15	0.18	0.6800	0.00008	0	0	0			
177	NWS	Industrial	Food Products	All	ONPU	High efficiency battery charger (for forklifts)	RET	20	20	0.00	0.1000	0.00001	0	0	0			
178	NWS	Industrial	Food Products	All	HVAC	Radiant Heaters	RET	20	20	0.00	0.0000	0.00000	0	0	0			
179	NWS	Industrial	Food Products	All	HVAC	High efficiency non-packaged HVAC equipment	RET	20	20	0.43	0.2500	0.00003	0	0	0			
180	NWS	Industrial	Food Products	All	HVAC	Seasonal Temperature Settings Adjustments	RET	3	3	0.00	0.0700	0.00001	0	0	0			

MEASURE DESCRIPTION										MEASURE INCREMENTAL SAVING PER UNIT					
Measure ID	Weather Sensitive	Sector	Sub-Sector	Building Type	End Use	Measure Name	EPPM Logic (RET/RO B/NEW)	Baseline Unit Lifetime (Years)	Efficient Unit Lifetime (Years)	Total Incremental Cost	Annual kWh Savings	Annual kW Coincident Peak Savings	Annual Gas Savings (Therms)	Annual kWh Increases	Annual kW Coincident Peak Increases
181	NWS	Industrial	Food Products	All	HVAC	High-efficiency rooftop AC with an EER of 13.5	RET	15	15	0.01	0.1680	0.00002	0	0	0
182	NWS	Industrial	Food Products	All	HVAC	Ground Source Heat Pump	RET	20	20	0.26	0.5100	0.00006	0	0	0
183	NWS	Industrial	Food Products	All	HVAC	Ventilation Heat Recovery	RET	20	20	0.18	0.2000	0.00002	0	0	0
184	NWS	Industrial	Food Products	All	HVAC	Automated Temperature Control	RET	25	25	0.00	0.0700	0.00001	0	0	0
185	NWS	Industrial	Food Products	All	HVAC	Reduced Temperature Settings	RET	3	3	0.00	0.0700	0.00001	0	0	0
186	NWS	Industrial	Food Products	All	HVAC	Destratification Fans	RET	20	20	0.00	0.0800	0.00001	0	0	0
187	NWS	Industrial	Food Products	All	HVAC	Warehouse Loading Dock Seals	RET	10	10	0.00	0.0500	0.00001	0	0	0
188	NWS	Industrial	Food Products	All	HVAC	Preventative Packaged HVAC Maintenance	RET	3	3	0.00	0.0500	0.00001	0	0	0
189	NWS	Industrial	Food Products	All	HVAC	Heat Recovery from Processes to Heat Ventilation Make-up Air	RET	15	15	0.50	0.1500	0.00002	0	0	0
190	NWS	Industrial	Food Products	All	FL	High efficiency ballasts for lighting	RET	11	11	0.00	0.2500	0.00003	0	0	0
191	NWS	Industrial	Food Products	All	FL	High Efficiency Light fixtures	RET	16	16	0.03	0.4500	0.00006	0	0	0
192	NWS	Industrial	Food Products	All	FL	Efficient Lighting Design	RET	16	16	0.00	0.1500	0.00002	0	0	0
193	NWS	Industrial	Food Products	All	FL	Lighting controls: on/off timer settings	RET	8	8	0.00	0.1500	0.00002	0	0	0
194	NWS	Industrial	Food Products	All	FL	Lighting controls: occupancy sensors	RET	8	8	0.03	0.1500	0.00002	0	0	0
195	NWS	Industrial	Food Products	All	HVAC	Ventilation Optimization	RET	15	15	0.02	0.2000	0.00002	0	0	0
196	NWS	Industrial	Food Products	All	HVAC	Premium efficiency ventilation control with VSD	RET	10	10	0.01	0.3000	0.00003	0	0	0
197	NWS	Industrial	Food Products	All	HVAC	Demand-Controlled Ventilation	RET	15	15	0.03	0.2000	0.00002	0	0	0
199	NWS	Industrial	Industrial Gases	All	Total	Integrated Control System	RET	10	10	0.00	0	0.00000	0	0	0
200	NWS	Industrial	Industrial Gases	All	Total	Process Integration and Pinch Analysis	RET	5	5	0.00	0	0.00000	0	0	0
201	NWS	Industrial	Industrial Gases	All	Total	Sub-Metering	RET	15	15	0.00	0	0.00000	0	0	0
202	NWS	Industrial	Industrial Gases	All	HVAC	High-efficiency rooftop AC with an EER of 13.13	RET	15	15	0.00	0	0.00000	0	0	0
203	NWS	Industrial	Industrial Gases	All	Process Heating	Water-heater right sizing and load management	RET	20	20	0.00	0	0.00000	0	0	0
204	NWS	Industrial	Industrial Gases	All	Process Heating	Insulation	RET	15	15	0.00	0	0.00000	0	0	0
205	NWS	Industrial	Industrial Gases	All	Boilers	Blowdown Control	RET	20	20	0.17	0	0.00000	0	0	0
206	NWS	Industrial	Industrial Gases	All	Boilers	Boiler Right Sizing	RET	20	20	3.62	0	0.00000	0	0	0
207	NWS	Industrial	Industrial Gases	All	Boilers	Condensing Boiler	RET	20	20	4.73	0	0.00000	0	0	0
208	NWS	Industrial	Industrial Gases	All	Boilers	Direct-Contact Hot Water Heaters	RET	20	20	3.62	0	0.00000	0	0	0
209	NWS	Industrial	Industrial Gases	All	Boilers	High Efficiency Burner	RET	20	20	0.59	0	0.00000	0	0	0
210	NWS	Industrial	Industrial Gases	All	Boilers	Instantaneous Steam Generation	RET	15	15	4.73	0	0.00000	0	0	0
211	NWS	Industrial	Industrial Gases	All	Boilers	Blowdown Heat Recovery	RET	20	20	0.29	0	0.00000	0	0	0
212	NWS	Industrial	Industrial Gases	All	Boilers	Boiler combustion air preheat	RET	15	15	0.72	0	0.00000	0	0	0
213	NWS	Industrial	Industrial Gases	All	Boilers	Preventative Boiler Maintenance	RET	5	5	0.25	0	0.00000	0	0	0
214	NWS	Industrial	Industrial Gases	All	Boilers	Boiler Water Treatment	RET	10	10	0.08	0	0.00000	0	0	0
215	NWS	Industrial	Industrial Gases	All	Boilers	Condensate Return	RET	20	20	0.56	0	0.00000	0	0	0
216	NWS	Industrial	Industrial Gases	All	Boilers	Economizer	RET	20	20	0.50	0	0.00000	0	0	0
217	NWS	Industrial	Industrial Gases	All	Boilers	Insulation	RET	15	15	0.23	0	0.00000	0	0	0
218	NWS	Industrial	Industrial Gases	All	Boilers	Minimize Deaerator Vent Losses	RET	20	20	0.21	0	0.00000	0	0	0
219	NWS	Industrial	Industrial Gases	All	Boilers	Process Heat Recovery to Preheat Makeup Water	RET	20	20	0.58	0	0.00000	0	0	0
220	NWS	Industrial	Industrial Gases	All	Boilers	Steam Trap Survey and Repair	RET	3	3	0.29	0	0.00000	0	0	0
221	NWS	Industrial	Industrial Gases	All	Boilers	First Generation Super Boilers	RET	30	30	39.88	0	0.00000	0	0	0
222	NWS	Industrial	Industrial Gases	All	Process Heating	High Efficiency Burner	RET	20	20	3.75	0	0.00000	0	0	0
223	NWS	Industrial	Industrial Gases	All	Process Heating	Infrared Ovens	RET	20	20	7.05	0	0.00000	0	0	0
224	NWS	Industrial	Industrial Gases	All	Process Heating	Process Heat Recovery to Preheat Makeup Water	RET	15	15	1.50	0	0.00000	0	0	0
225	NWS	Industrial	Industrial Gases	All	Process Heating	Air Curtains	RET	20	20	0.72	0	0.00000	0	0	0
226	NWS	Industrial	Industrial Gases	All	Process Heating	Exhaust Gas Heat Recovery	RET	15	15	6.98	0	0.00000	0	0	0
227	NWS	Industrial	Industrial Gases	All	Process Heating	Insulation	RET	15	15	1.00	0	0.00000	0	0	0
228	NWS	Industrial	Industrial Gases	All	Process Heating	Advanced heating and Process Control	RET	15	15	3.30	0	0.00000	0	0	0
229	NWS	Industrial	Industrial Gases	All	Process Heating	Combustion Optimization	RET	3	3	0.00	0	0.00000	0	0	0
230	NWS	Industrial	Industrial Gases	All	Process Heating	Radiant Tube burners	RET	20	20	0.00	0	0.00000	0	0	0
231	NWS	Industrial	Industrial Gases	All	HVAC	Radiant Heaters	RET	20	20	5.77	0	0.00000	0	0	0
232	NWS	Industrial	Industrial Gases	All	Process Heating	Solar Walls	RET	20	20	0.00	0	0.00000	0	0	0
233	NWS	Industrial	Industrial Gases	All	HVAC	Air Compressor Heat Recovery	RET	20	20	0.00	0	0.00000	0	0	0
234	NWS	Industrial	Industrial Gases	All	HVAC	Air Curtains	RET	15	15	0.00	0	0.00000	0	0	0
235	NWS	Industrial	Industrial Gases	All	HVAC	Destratification Fans	RET	20	20	0.00	0	0.00000	0	0	0
236	NWS	Industrial	Industrial Gases	All	HVAC	Ventilation Heat Recovery	RET	20	20	2.33	0	0.00000	0	0	0
237	NWS	Industrial	Industrial Gases	All	HVAC	Ventilation Optimization	RET	15	15	2.24	0	0.00000	0	0	0
238	NWS	Industrial	Industrial Gases	All	HVAC	Warehouse Loading Dock Seals	RET	10	10	0.00	0	0.00000	0	0	0
239	NWS	Industrial	Industrial Gases	All	HVAC	Automated Temperature reset Control	RET	25	25	0.00	0	0.00000	0	0	0
240	NWS	Industrial	Industrial Gases	All	HVAC	Reduced Temperature Settings	RET	5	5	0.00	0	0.00000	0	0	0

Industrial Measures

MEASURE DESCRIPTION						MEASURE INCREMENTAL SAVING PER UNIT									
Measure ID	Weather Sensitive	Sector	Sub-Sector	Building Type	End Use	Measure Name	EPM Logic (RET/RO B/NEW)	Baseline Unit Lifetime (Years)	Efficient Unit Lifetime (Years)	Total Incremental Cost	Annual kWh Savings	Annual kW Coincident Peak Savings	Annual Gas Savings (Therms)	Annual kWh Increases	Annual kW Coincident Peak Increases
241	NWS	Industrial	Industrial Gases	All	Total	Pollution Control Measures	RET	20	20	0.00	0	0.00000	0	0	0
242	NWS	Industrial	Industrial Gases	All	Process Heating	CFD Modelling	RET	15	15	0.51	0	0.00000	0	0	0
243	NWS	Industrial	Industrial Gases	All	Total	Energy Management	RET	5	5	0.12	0	0.00000	0	0	0
244	NWS	Industrial	Industrial Gases	All	Process Heating	Improved airflow in dryer windbox	RET	3	3	0.00	0	0.00000	0	0	0
245	NWS	Industrial	Industrial Gases	All	Process Heating	Preventative Oven Maintenance	RET	3	3	0.00	0	0.00000	0	0	0
246	NWS	Industrial	Industrial Gases	All	Process Heating	Preventative Furnace Maintenance	RET	3	3	0.00	0	0.00000	0	0	0
247	NWS	Industrial	Industrial Gases	All	Process Heating	Preventative Dryer Maintenance	RET	3	3	0.00	0	0.00000	0	0	0
248	NWS	Industrial	Industrial Gases	All	Process Heating	High Efficiency Burner	RET	20	20	0.75	0	0.00000	0	0	0
249	NWS	Industrial	Industrial Gases	All	Process Heating	Air Curtains	RET	20	20	0.14	0	0.00000	0	0	0
250	NWS	Industrial	Industrial Gases	All	Process Heating	Exhaust Gas Heat Recovery	RET	15	15	1.40	0	0.00000	0	0	0
251	NWS	Industrial	Industrial Gases	All	Process Heating	Insulation	RET	15	15	0.20	0	0.00000	0	0	0
252	NWS	Industrial	Industrial Gases	All	Process Heating	Advanced heating and Process Control	RET	15	15	0.66	0	0.00000	0	0	0
253	NWS	Industrial	Industrial Gases	All	Process Heating	Combustion Optimization	RET	3	3	0.00	0	0.00000	0	0	0
254	NWS	Industrial	Industrial Gases	All	Process Heating	High Efficiency Burner	RET	20	20	3.75	0	0.00000	0	0	0
255	NWS	Industrial	Industrial Gases	All	Process Heating	Air Curtains	RET	20	20	0.72	0	0.00000	0	0	0
256	NWS	Industrial	Industrial Gases	All	Process Heating	Exhaust Gas Heat Recovery	RET	15	15	6.98	0	0.00000	0	0	0
257	NWS	Industrial	Industrial Gases	All	Process Heating	Insulation	RET	15	15	1.00	0	0.00000	0	0	0
258	NWS	Industrial	Industrial Gases	All	Process Heating	Advanced heating and Process Control	RET	15	15	3.30	0	0.00000	0	0	0
259	NWS	Industrial	Industrial Gases	All	Process Heating	Combustion Optimization	RET	3	3	0.00	0	0.00000	0	0	0
260	NWS	Industrial	All Other	All	Total	Integrated Control System	RET	10	10	0.00	0	0.00000	0	0	0
261	NWS	Industrial	All Other	All	Total	Process Integration and Pinch Analysis	RET	5	5	0.00	0	0.00000	0	0	0
262	NWS	Industrial	All Other	All	Total	Sub-Metering	RET	15	15	0.00	0	0.00000	0	0	0
263	NWS	Industrial	All Other	All	HVAC	High-efficiency rooftop AC with an EER of 13.13	RET	15	15	0.00	0	0.00000	0	0	0
264	NWS	Industrial	All Other	All	Process Heating	Water-heater right sizing and load management	RET	20	20	0.00	0	0.00000	0	0	0
265	NWS	Industrial	All Other	All	Process Heating	Insulation	RET	15	15	0.00	0	0.00000	0	0	0
266	NWS	Industrial	All Other	All	Boilers	Blowdown Control	RET	20	20	0.17	0	0.00000	0	0	0
267	NWS	Industrial	All Other	All	Boilers	Boiler Right Sizing	RET	20	20	3.62	0	0.00000	0	0	0
268	NWS	Industrial	All Other	All	Boilers	Condensing Boiler	RET	20	20	4.73	0	0.00000	0	0	0
269	NWS	Industrial	All Other	All	Boilers	Direct-Contact Hot Water Heaters	RET	20	20	3.62	0	0.00000	0	0	0
270	NWS	Industrial	All Other	All	Boilers	High Efficiency Burner	RET	20	20	0.59	0	0.00000	0	0	0
271	NWS	Industrial	All Other	All	Boilers	Instantaneous Steam Generation	RET	15	15	4.73	0	0.00000	0	0	0
272	NWS	Industrial	All Other	All	Boilers	Blowdown Heat Recovery	RET	20	20	0.29	0	0.00000	0	0	0
273	NWS	Industrial	All Other	All	Boilers	Boiler combustion air preheat	RET	15	15	0.72	0	0.00000	0	0	0
274	NWS	Industrial	All Other	All	Boilers	Preventative Boiler Maintenance	RET	5	5	0.25	0	0.00000	0	0	0
275	NWS	Industrial	All Other	All	Boilers	Boiler Water Treatment	RET	10	10	0.08	0	0.00000	0	0	0
276	NWS	Industrial	All Other	All	Boilers	Condensate Return	RET	20	20	0.56	0	0.00000	0	0	0
277	NWS	Industrial	All Other	All	Boilers	Economizer	RET	20	20	0.50	0	0.00000	0	0	0
278	NWS	Industrial	All Other	All	Boilers	Insulation	RET	15	15	0.23	0	0.00000	0	0	0
279	NWS	Industrial	All Other	All	Boilers	Minimize Deaerator Vent Losses	RET	20	20	0.21	0	0.00000	0	0	0
280	NWS	Industrial	All Other	All	Boilers	Process Heat Recovery to Preheat Makeup Water	RET	20	20	0.58	0	0.00000	0	0	0
281	NWS	Industrial	All Other	All	Boilers	Steam Trap Survey and Repair	RET	3	3	0.29	0	0.00000	0	0	0
282	NWS	Industrial	All Other	All	Boilers	First Generation Super Boilers	RET	30	30	39.88	0	0.00000	0	0	0
283	NWS	Industrial	All Other	All	Process Heating	High Efficiency Burner	RET	20	20	3.75	0	0.00000	0	0	0
284	NWS	Industrial	All Other	All	Process Heating	Infrared Ovens	RET	20	20	7.05	0	0.00000	0	0	0
285	NWS	Industrial	All Other	All	Process Heating	Process Heat Recovery to Preheat Makeup Water	RET	15	15	1.50	0	0.00000	0	0	0
286	NWS	Industrial	All Other	All	Process Heating	Air Curtains	RET	20	20	0.72	0	0.00000	0	0	0
287	NWS	Industrial	All Other	All	Process Heating	Exhaust Gas Heat Recovery	RET	15	15	6.98	0	0.00000	0	0	0
288	NWS	Industrial	All Other	All	Process Heating	Insulation	RET	15	15	1.00	0	0.00000	0	0	0
289	NWS	Industrial	All Other	All	Process Heating	Advanced heating and Process Control	RET	15	15	3.30	0	0.00000	0	0	0
290	NWS	Industrial	All Other	All	Process Heating	Combustion Optimization	RET	3	3	0.00	0	0.00000	0	0	0
291	NWS	Industrial	All Other	All	Process Heating	Radiant Tube burners	RET	20	20	0.00	0	0.00000	0	0	0
292	NWS	Industrial	All Other	All	Process Heating	Radiant Heaters	RET	20	20	5.77	0	0.00000	0	0	0
293	NWS	Industrial	All Other	All	Process Heating	Solar Walls	RET	20	20	0.00	0	0.00000	0	0	0
294	NWS	Industrial	All Other	All	HVAC	Air Compressor Heat Recovery	RET	20	20	0.00	0	0.00000	0	0	0
295	NWS	Industrial	All Other	All	HVAC	Air Curtains	RET	15	15	0.00	0	0.00000	0	0	0
296	NWS	Industrial	All Other	All	HVAC	Destratification Fans	RET	20	20	0.00	0	0.00000	0	0	0
297	NWS	Industrial	All Other	All	HVAC	Ventilation Heat Recovery	RET	20	20	2.33	0	0.00000	0	0	0
298	NWS	Industrial	All Other	All	HVAC	Ventilation Optimization	RET	15	15	2.24	0	0.00000	0	0	0
299	NWS	Industrial	All Other	All	HVAC	Warehouse Loading Dock Seals	RET	10	10	0.00	0	0.00000	0	0	0
300	NWS	Industrial	All Other	All	HVAC	Automated Temperature reset Control	RET	25	25	0.00	0	0.00000	0	0	0

Measure ID	Weather Sensitive	Sector	Sub-Sector	Building Type	End Use	MEASURE DESCRIPTION Measure Name	EPPM Logic (RET/RO B/NEW)	Baseline Unit Lifetime (Years)	Efficient Unit Lifetime (Years)	Total Incremental Cost	MEASURE INCREMENTAL SAVING PER UNIT				
											Annual kWh Savings	Annual kW Coincident Peak Savings	Annual Gas Savings (Therms)	Annual kWh Increases	Annual kW Coincident Peak Increases
301	NWS	Industrial	All Other	All	HVAC	Reduced Temperature Settings	RET	5	5	0.00	0	0.00000	0	0	0
302	NWS	Industrial	All Other	All	Process Heating	Pollution Control Measures	RET	20	20	0.00	0	0.00000	0	0	0
303	NWS	Industrial	All Other	All	Process Heating	CFD Modelling	RET	15	15	0.51	0	0.00000	0	0	0
304	NWS	Industrial	All Other	All	Total	Energy Management	RET	5	5	0.00	0	0.00000	0	0	0
305	NWS	Industrial	All Other	All	Process Heating	Improved airflow in dryer windbox	RET	3	3	0.00	0	0.00000	0	0	0
306	NWS	Industrial	All Other	All	Process Heating	Preventative Oven Maintenance	RET	3	3	0.00	0	0.00000	0	0	0
307	NWS	Industrial	All Other	All	Process Heating	Preventative Furnace Maintenance	RET	3	3	0.00	0	0.00000	0	0	0
308	NWS	Industrial	All Other	All	Process Heating	Preventative Dryer Maintenance	RET	3	3	0.00	0	0.00000	0	0	0
309	NWS	Industrial	All Other	All	Process Heating	High Efficiency Burner	RET	20	20	0.75	0	0.00000	0	0	0
310	NWS	Industrial	All Other	All	Process Heating	Air Curtains	RET	20	20	0.14	0	0.00000	0	0	0
311	NWS	Industrial	All Other	All	Process Heating	Exhaust Gas Heat Recovery	RET	15	15	1.40	0	0.00000	0	0	0
312	NWS	Industrial	All Other	All	Process Heating	Insulation	RET	15	15	0.20	0	0.00000	0	0	0
313	NWS	Industrial	All Other	All	Process Heating	Advanced heating and Process Control	RET	15	15	0.66	0	0.00000	0	0	0
314	NWS	Industrial	All Other	All	Process Heating	Combustion Optimization	RET	3	3	0.00	0	0.00000	0	0	0
315	NWS	Industrial	All Other	All	Process Heating	High Efficiency Burner	RET	20	20	3.75	0	0.00000	0	0	0
316	NWS	Industrial	All Other	All	Process Heating	Air Curtains	RET	20	20	0.72	0	0.00000	0	0	0
317	NWS	Industrial	All Other	All	Process Heating	Exhaust Gas Heat Recovery	RET	15	15	6.98	0	0.00000	0	0	0
318	NWS	Industrial	All Other	All	Process Heating	Insulation	RET	15	15	1.00	0	0.00000	0	0	0
319	NWS	Industrial	All Other	All	Process Heating	Advanced heating and Process Control	RET	15	15	3.30	0	0.00000	0	0	0
320	NWS	Industrial	All Other	All	Process Heating	Combustion Optimization	RET	3	3	0.00	0	0.00000	0	0	0
321	NWS	Industrial	Small Industrial	All	Total	Integrated Control System	RET	10	10	0.00	0	0.00000	0	0	0
322	NWS	Industrial	Small Industrial	All	Total	Process Integration and Pinch Analysis	RET	5	5	0.00	0	0.00000	0	0	0
323	NWS	Industrial	Small Industrial	All	Total	Sub-Metering	RET	15	15	0.00	0	0.00000	0	0	0
324	NWS	Industrial	Small Industrial	All	HVAC	High-efficiency rooftop AC with an EER of 13.13	RET	15	15	0.00	0	0.00000	0	0	0
325	NWS	Industrial	Small Industrial	All	Process Heating	Water-heater right sizing and load management	RET	20	20	2.41	0	0.00000	0	0	0
326	NWS	Industrial	Small Industrial	All	Process Heating	Insulation	RET	15	15	0.67	0	0.00000	0	0	0
327	NWS	Industrial	Small Industrial	All	Boilers	Blowdown Control	RET	20	20	1.12	0	0.00000	0	0	0
328	NWS	Industrial	Small Industrial	All	Boilers	Boiler Right Sizing	RET	20	20	2.29	0	0.00000	0	0	0
329	NWS	Industrial	Small Industrial	All	Boilers	Condensing Boiler	RET	20	20	4.04	0	0.00000	0	0	0
330	NWS	Industrial	Small Industrial	All	Boilers	Direct-Contact Hot Water Heaters	RET	20	20	2.44	0	0.00000	0	0	0
331	NWS	Industrial	Small Industrial	All	Boilers	High Efficiency Burner	RET	20	20	1.55	0	0.00000	0	0	0
332	NWS	Industrial	Small Industrial	All	Boilers	Instantaneous Steam Generation	RET	15	15	4.04	0	0.00000	0	0	0
333	NWS	Industrial	Small Industrial	All	Boilers	Blowdown Heat Recovery	RET	20	20	0.74	0	0.00000	0	0	0
334	NWS	Industrial	Small Industrial	All	Boilers	Boiler combustion air preheat	RET	15	15	1.78	0	0.00000	0	0	0
335	NWS	Industrial	Small Industrial	All	Boilers	Preventative Boiler Maintenance	RET	5	5	1.15	0	0.00000	0	0	0
336	NWS	Industrial	Small Industrial	All	Boilers	Boiler Water Treatment	RET	10	10	0.36	0	0.00000	0	0	0
337	NWS	Industrial	Small Industrial	All	Boilers	Condensate Return	RET	20	20	1.40	0	0.00000	0	0	0
338	NWS	Industrial	Small Industrial	All	Boilers	Economizer	RET	20	20	0.89	0	0.00000	0	0	0
339	NWS	Industrial	Small Industrial	All	Boilers	Insulation	RET	15	15	0.62	0	0.00000	0	0	0
340	NWS	Industrial	Small Industrial	All	Boilers	Minimize Deaerator Vent Losses	RET	20	20	1.12	0	0.00000	0	0	0
341	NWS	Industrial	Small Industrial	All	Boilers	Process Heat Recovery to Preheat Makeup Water	RET	20	20	2.28	0	0.00000	0	0	0
342	NWS	Industrial	Small Industrial	All	Boilers	Steam Trap Survey and Repair	RET	3	3	0.60	0	0.00000	0	0	0
343	NWS	Industrial	Small Industrial	All	Boilers	First Generation Super Boilers	RET	30	30	18.27	0	0.00000	0	0	0
344	NWS	Industrial	Small Industrial	All	Process Heating	High Efficiency Burner	RET	20	20	1.63	0	0.00000	0	0	0
345	NWS	Industrial	Small Industrial	All	Process Heating	Infrared Ovens	RET	20	20	1.92	0	0.00000	0	0	0
346	NWS	Industrial	Small Industrial	All	Process Heating	Process Heat Recovery to Preheat Makeup Water	RET	15	15	1.03	0	0.00000	0	0	0
347	NWS	Industrial	Small Industrial	All	Process Heating	Air Curtains	RET	20	20	1.73	0	0.00000	0	0	0
348	NWS	Industrial	Small Industrial	All	Process Heating	Exhaust Gas Heat Recovery	RET	15	15	3.46	0	0.00000	0	0	0
349	NWS	Industrial	Small Industrial	All	Process Heating	Insulation	RET	15	15	0.00	0	0.00000	0	0	0
350	NWS	Industrial	Small Industrial	All	Process Heating	Advanced heating and Process Control	RET	15	15	0.00	0	0.00000	0	0	0
351	NWS	Industrial	Small Industrial	All	Process Heating	Combustion Optimization	RET	3	3	0.00	0	0.00000	0	0	0
352	NWS	Industrial	Small Industrial	All	Process Heating	Radiant Tube burners	RET	20	20	0.00	0	0.00000	0	0	0
353	NWS	Industrial	Small Industrial	All	HVAC	Radiant Heaters	RET	20	20	8.40	0	0.00000	0	0	0
354	NWS	Industrial	Small Industrial	All	Process Heating	Solar Walls	RET	20	20	0.00	0	0.00000	0	0	0
355	NWS	Industrial	Small Industrial	All	HVAC	Air Compressor Heat Recovery	RET	20	20	0.00	0	0.00000	0	0	0
356	NWS	Industrial	Small Industrial	All	HVAC	Air Curtains	RET	15	15	0.00	0	0.00000	0	0	0
357	NWS	Industrial	Small Industrial	All	HVAC	Deaerification Fans	RET	20	20	0.00	0	0.00000	0	0	0
358	NWS	Industrial	Small Industrial	All	HVAC	Ventilation Heat Recovery	RET	20	20	5.40	0	0.00000	0	0	0
359	NWS	Industrial	Small Industrial	All	HVAC	Ventilation Optimization	RET	15	15	5.23	0	0.00000	0	0	0
360	NWS	Industrial	Small Industrial	All	HVAC	Warehouse Loading Dock Seals	RET	10	10	0.00	0	0.00000	0	0	0

MEASURE DESCRIPTION															
Measure ID	Weather Sensitive	Sector	Sub-Sector	Building Type	End Use	Measure Name	EPPM Logic (RET/RO B/NEW)	Baseline Unit Lifetime (Years)	Efficient Unit Lifetime (Years)	Total Incremental Cost	MEASURE INCREMENTAL SAVING PER UNIT				
											Annual kWh Savings	Annual kW Coincident Peak Savings	Annual Gas Savings (Therms)	Annual kWh Increases	Annual kW Coincident Peak Increases
361	NWS	Industrial	Small Industrial	All	HVAC	Automated Temperature reset Control	RET	25	25	0.00	0	0.00000	0	0	0
362	NWS	Industrial	Small Industrial	All	HVAC	Reduced Temperature Settings	RET	5	5	0.00	0	0.00000	0	0	0
363	NWS	Industrial	Small Industrial	All	Total	Pollution Control Measures	RET	20	20	0.00	0	0.00000	0	0	0
364	NWS	Industrial	Small Industrial	All	Process Heating	CFD Modelling	RET	15	15	0.00	0	0.00000	0	0	0
365	NWS	Industrial	Small Industrial	All	Total	Energy Management	RET	5	5	0.00	0	0.00000	0	0	0
366	NWS	Industrial	Small Industrial	All	Process Heating	Improved airflow in dryer windbox	RET	3	3	0.00	0	0.00000	0	0	0
367	NWS	Industrial	Small Industrial	All	Process Heating	Preventative Oven Maintenance	RET	3	3	0.00	0	0.00000	0	0	0
368	NWS	Industrial	Small Industrial	All	Process Heating	Preventative Furnace Maintenance	RET	3	3	0.00	0	0.00000	0	0	0
369	NWS	Industrial	Small Industrial	All	Process Heating	Preventative Dryer Maintenance	RET	3	3	0.00	0	0.00000	0	0	0
370	NWS	Industrial	Small Industrial	All	Process Heating	High Efficiency Burner	RET	20	20	0.03	0	0.00000	0	0	0
371	NWS	Industrial	Small Industrial	All	Process Heating	Air Curtains	RET	20	20	0.03	0	0.00000	0	0	0
372	NWS	Industrial	Small Industrial	All	Process Heating	Exhaust Gas Heat Recovery	RET	15	15	0.07	0	0.00000	0	0	0
373	NWS	Industrial	Small Industrial	All	Process Heating	Insulation	RET	15	15	0.00	0	0.00000	0	0	0
374	NWS	Industrial	Small Industrial	All	Process Heating	Advanced heating and Process Control	RET	15	15	0.00	0	0.00000	0	0	0
375	NWS	Industrial	Small Industrial	All	Process Heating	Combustion Optimization	RET	3	3	0.00	0	0.00000	0	0	0
376	NWS	Industrial	Small Industrial	All	Process Heating	High Efficiency Burner	RET	20	20	1.63	0	0.00000	0	0	0
377	NWS	Industrial	Small Industrial	All	Process Heating	Air Curtains	RET	20	20	1.73	0	0.00000	0	0	0
378	NWS	Industrial	Small Industrial	All	Process Heating	Exhaust Gas Heat Recovery	RET	15	15	3.46	0	0.00000	0	0	0
379	NWS	Industrial	Small Industrial	All	Process Heating	Insulation	RET	15	15	0.00	0	0.00000	0	0	0
380	NWS	Industrial	Small Industrial	All	Process Heating	Advanced heating and Process Control	RET	15	15	0.00	0	0.00000	0	0	0
381	NWS	Industrial	Small Industrial	All	Process Heating	Combustion Optimization	RET	3	3	0.00	0	0.00000	0	0	0

Industrial Measures

MEASURE DESCRIPTION						MEASURE SELECTION				APPLICABILITY							PROGRAM			
Measure ID	Weather Sensitive	Sector	Sub-Sector	Building Type	End Use	Measure Name	Measure TRC calculated for 2014	Measure TRC calculated for 2020	Measure TRC calculated for 2022	Passed Measure Screening? (1=Yes, 0=No)	Total Sub-Sector Units	Measure Units per Sub-Sector Unit	Applicability	Technical Feasibility	Distribution by size/model but not Efficiency Level	Distribution by Efficiency Level	Not Yet Adopted	Annual Replacement Eligibility	Total Applicable Measure Units	Program Name
1	NWS	Industrial	Small Industrial	All	Motors - Other Applications	Operations and maintenance	77.6	101.0	110.9	1	150,244,951	2%	100%	5%	0%	0%	37%	100%	55,591	Machine Drive
2	NWS	Industrial	Small Industrial	All	Motors - Other Applications	Match Motor Size to Load	38.5	45.7	47.6	1	150,244,951	2%	100%	20%	0%	0%	20%	100%	120,196	Machine Drive
3	NWS	Industrial	Small Industrial	All	Motors - Other Applications	Motor Efficiency Upgrade	24.3	28.9	30.1	1	150,244,951	2%	100%	20%	0%	0%	92%	100%	552,901	Machine Drive
4	NWS	Industrial	Small Industrial	All	Motors - Other Applications	Variable Speed Drives	97.3	115.7	120.5	1	150,244,951	2%	100%	35%	0%	0%	9%	100%	94,654	Machine Drive
5	NWS	Industrial	Small Industrial	All	Pumps	Reduce Overall System Requirements	30.6	39.8	43.7	1	150,244,951	14%	100%	50%	0%	0%	82%	100%	8,561,794	Machine Drive
6	NWS	Industrial	Small Industrial	All	Pumps	Match Pump Size to Load	28.1	33.4	34.8	1	150,244,951	14%	100%	20%	0%	0%	20%	100%	835,297	Machine Drive
7	NWS	Industrial	Small Industrial	All	Pumps	Reduce or Control Pump Speed	29.2	34.7	36.1	1	150,244,951	14%	100%	35%	0%	0%	94%	100%	6,870,318	Machine Drive
8	NWS	Industrial	Small Industrial	All	Pumps	Improve Pump Components	22.5	26.7	27.8	1	150,244,951	14%	100%	10%	0%	0%	4%	100%	83,530	Machine Drive
9	NWS	Industrial	Small Industrial	All	Pumps	Operation and Maintenance	66.5	86.5	95.0	1	150,244,951	14%	100%	5%	0%	0%	37%	100%	386,325	Machine Drive
10	NWS	Industrial	Small Industrial	All	Compressed Air	Reduce Overall System Requirements	144.5	171.8	178.9	1	150,244,951	9%	100%	30%	0%	0%	85%	100%	3,394,077	Machine Drive
11	NWS	Industrial	Small Industrial	All	Compressed Air	Match Compressor Size to Load	21.8	25.9	27.0	1	150,244,951	9%	100%	10%	0%	0%	79%	100%	1,051,498	Machine Drive
12	NWS	Industrial	Small Industrial	All	Compressed Air	Compressor Control	70.3	83.6	87.0	1	150,244,951	9%	100%	25%	0%	0%	72%	100%	2,395,819	Machine Drive
13	NWS	Industrial	Small Industrial	All	Compressed Air	Improve Compressor Components	16.9	20.1	21.0	1	150,244,951	9%	100%	15%	0%	0%	92%	100%	1,836,795	Machine Drive
14	NWS	Industrial	Small Industrial	All	Compressed Air	Operation and Maintenance	127.4	165.8	182.1	1	150,244,951	9%	100%	75%	0%	0%	37%	100%	3,693,554	Machine Drive
15	NWS	Industrial	Small Industrial	All	Fans	Reduce Overall System Requirements	73.0	86.7	90.3	1	150,244,951	8%	100%	15%	0%	0%	75%	100%	1,295,393	Machine Drive
16	NWS	Industrial	Small Industrial	All	Fans	Reduce or Control Fan Speed	36.8	43.8	45.6	1	150,244,951	8%	100%	10%	0%	0%	90%	100%	1,036,315	Machine Drive
17	NWS	Industrial	Small Industrial	All	Fans	Improve Fan Components	18.9	22.5	23.4	1	150,244,951	8%	100%	20%	0%	0%	35%	100%	806,023	Machine Drive
18	NWS	Industrial	Small Industrial	All	Fans	Operation and Maintenance	42.5	55.2	60.7	1	150,244,951	8%	100%	50%	0%	0%	37%	100%	2,130,202	Machine Drive
19	NWS	Industrial	Small Industrial	All	PH	Advanced water heater controls	266.9	307.0	317.5	1	150,244,951	11%	100%	90%	0%	0%	77%	100%	11,872,247	Process Heating
20	NWS	Industrial	Small Industrial	All	PH	Process Heat Recovery to Preheat Makeup Water	31.8	36.5	37.8	1	150,244,951	11%	100%	70%	0%	0%	69%	100%	8,331,627	Process Heating
21	NWS	Industrial	Small Industrial	All	PH	Air Curtains (Oven)	24.6	28.4	29.3	1	150,244,951	11%	100%	9%	0%	0%	79%	100%	1,222,029	Process Heating
22	NWS	Industrial	Small Industrial	All	PH	Insulation (Oven)	36.7	43.6	45.4	1	150,244,951	11%	100%	90%	0%	0%	42%	100%	6,535,536	Process Heating
23	NWS	Industrial	Small Industrial	All	PH	Preventative Oven Maintenance	12,809.4	16,662.8	18,304.3	1	150,244,951	11%	100%	100%	0%	0%	36%	100%	6,230,459	Process Heating
24	NWS	Industrial	Small Industrial	All	PH	Air Curtains (Dryer)	246.7	283.8	293.4	1	150,244,951	11%	100%	9%	0%	0%	79%	100%	1,222,029	Process Heating
25	NWS	Industrial	Small Industrial	All	PH	Insulation (Dryer)	367.3	436.6	454.7	1	150,244,951	11%	100%	9%	0%	0%	42%	100%	6,535,536	Process Heating
26	NWS	Industrial	Small Industrial	All	PH	Preventative Dryer Maintenance	12,809.4	16,662.8	18,304.3	1	150,244,951	11%	100%	100%	0%	0%	36%	100%	6,230,459	Process Heating
27	NWS	Industrial	Small Industrial	All	PH	Preventative Furnace Maintenance	12,809.4	16,662.8	18,304.3	1	150,244,951	11%	100%	100%	0%	0%	36%	100%	6,230,459	Process Heating
28	NWS	Industrial	Small Industrial	All	PH	Insulation (Furnace)	367.3	436.6	454.7	1	150,244,951	11%	100%	90%	0%	0%	42%	100%	6,535,536	Process Heating
29	NWS	Industrial	Small Industrial	All	PH	Preventative Kiln Maintenance	12,809.4	16,662.8	18,304.3	1	150,244,951	11%	100%	100%	0%	0%	36%	100%	6,230,459	Process Heating
30	NWS	Industrial	Small Industrial	All	PH	Insulation (Kiln)	1,836.5	2,182.9	2,273.4	1	150,244,951	11%	100%	90%	0%	0%	42%	100%	6,535,536	Process Heating
31	NWS	Industrial	Small Industrial	All	PCR	High Efficiency Chiller	5.4	6.2	6.4	1	150,244,951	7%	100%	15%	0%	0%	82%	100%	1,379,017	Process Cooling and Refrigeration
32	NWS	Industrial	Small Industrial	All	PCR	Optimized Distribution System	53.5	60.4	62.2	1	150,244,951	7%	100%	90%	0%	0%	94%	100%	9,484,946	Process Cooling and Refrigeration
33	NWS	Industrial	Small Industrial	All	PCR	Floating head pressure controls	260.7	309.9	322.7	1	150,244,951	7%	100%	10%	0%	0%	75%	100%	843,667	Process Cooling and Refrigeration
34	NWS	Industrial	Small Industrial	All	PCR	Premium efficiency refrigeration control system	3.1	3.7	3.9	1	150,244,951	7%	100%	80%	0%	0%	84%	100%	7,489,296	Process Cooling and Refrigeration
35	NWS	Industrial	Small Industrial	All	PCR	Smart Defrost Controls	482.2	568.6	591.1	1	150,244,951	7%	100%	15%	0%	0%	87%	100%	1,467,308	Process Cooling and Refrigeration
36	NWS	Industrial	Small Industrial	All	PCR	Doors, Covers and Curtains	34.0	43.7	46.9	1	150,244,951	7%	100%	40%	0%	0%	61%	100%	2,735,611	Process Cooling and Refrigeration
37	NWS	Industrial	Small Industrial	All	PCR	Optimized chilled water temperature and/or optimized condenser temperature	12,809.4	16,662.8	18,304.3	1	150,244,951	7%	100%	60%	0%	0%	84%	100%	5,616,972	Process Cooling and Refrigeration
38	NWS	Industrial	Small Industrial	All	PCR	Preventative refrigeration/cooling system maintenance	12,809.4	16,662.8	18,304.3	1	150,244,951	7%	100%	100%	0%	0%	42%	100%	4,652,781	Process Cooling and Refrigeration
39	NWS	Industrial	Small Industrial	All	PCR	Optimized condenser pressure	12,809.4	16,662.8	18,304.3	1	150,244,951	7%	100%	60%	0%	0%	84%	100%	5,616,972	Process Cooling and Refrigeration
40	NWS	Industrial	Small Industrial	All	PCR	VSD on chiller compressor	12.2	14.5	15.1	1	150,244,951	7%	100%	80%	0%	0%	84%	100%	7,489,296	Process Cooling and Refrigeration
41	NWS	Industrial	Small Industrial	All	PCR	Free-cooling	22.2	27.0	28.3	1	150,244,951	7%	100%	35%	0%	0%	80%	100%	3,129,416	Process Cooling and Refrigeration
42	NWS	Industrial	Small Industrial	All	PCR	Improve insulation of refrigeration system	11.5	14.2	15.0	1	150,244,951	7%	100%	80%	0%	0%	61%	100%	5,471,222	Process Cooling and Refrigeration
43	NWS	Industrial	Small Industrial	All	HVAC	Optimized duct design to improve efficiency	4.7	5.6	5.9	1	150,244,951	8%	100%	80%	0%	0%	100%	100%	10,196,137	Facility HVAC
44	NWS	Industrial	Small Industrial	All	HVAC	Air Source Heat Pump for Backup Generators	1.6	1.9	1.9	1	150,244,951	8%	100%	80%	0%	0%	96%	100%	9,813,782	Facility HVAC
45	NWS	Industrial	Small Industrial	All	ONPU	High efficiency battery charger (for forklifts)	35.7	41.0	42.4	1	150,244,951	4%	100%	100%	0%	0%	89%	100%	5,491,397	Other Process/Non-Process Use
46	NWS	Industrial	Small Industrial	All	ONPU	HE Dry-Type Transformers	99,419.7	110,998.2	114,010.9	1	150,244,951	4%	100%	100%	0%	0%	100%	100%	6,187,490	Other Process/Non-Process Use
47	NWS	Industrial	Small Industrial	All	HVAC	Free cooling	37.9	45.0	46.9	1	150,244,951	8%	100%	10%	0%	0%	80%	100%	1,016,427	Facility HVAC
48	NWS	Industrial	Small Industrial	All	HVAC	Radiant Heaters	0.0	0.0	0.0	0	0	0%	0%	0%	0%	0%	0%	0%	0	*N/A
49	NWS	Industrial	Small Industrial	All	HVAC	High efficiency non-packaged HVAC equipment	0.3	0.3	0.4	0	0	0%	0%	0%	0%	0%	0%	0%	0	*N/A
50	NWS	Industrial	Small Industrial	All	HVAC	Seasonal Temperature Settings Adjustments	12,809.4	16,662.8	18,304.3	1	150,244,951	8%	100%	100%	0%	0%	42%	100%	5,384,835	Facility HVAC
51	NWS	Industrial	Small Industrial	All	HVAC	High-efficiency rooftop AC with an EER of 13.5	10.1	12.0	12.5	1	150,244,951	8%	100%	80%	0%	0%	70%	100%	7,137,296	Facility HVAC
52	NWS	Industrial	Small Industrial	All	HVAC	Ground Source Heat Pump	1.0	1.1	1.2	1	150,244,951	8%	100%	5%	0%	0%	89%	100%	565,567	Facility HVAC
53	NWS	Industrial	Small Industrial	All	HVAC	Ventilation Heat Recovery	0.6	0.7	0.7	0	0	0%	0%	0%	0%	0%	0%	0%	0	*N/A
54	NWS	Industrial	Small Industrial	All	HVAC	Automated Temperature Control	34.7	39.2	40.3	1	150,244,951	8%	100%	80%	0%	0%	46%	100%	4,690,223	Facility HVAC
55	NWS	Industrial	Small Industrial	All	HVAC	Reduced Temperature Settings	12,809.4	16,662.8	18,304.3	1	150,244,951	8%	100%	80%	0%	0%	42%	100%	4,307,868	Facility HVAC
56	NWS	Industrial	Small Industrial	All	HVAC	Destratification Fans	21.7	25.0	25.8	1	150,244,951	8%	100%	40%	0%	0%	94%	100%	4,792,185	Facility HVAC
57	NWS	Industrial	Small Industrial	All	HVAC	Warehouse Loading Dock Seals	5.5	6.7	7.1	1	150,244,951	8%	100%	30%	0%	0%	66%	100%	2,504,426	Facility HVAC
58	NWS	Industrial	Small Industrial	All	HVAC	Preventative Packaged HVAC Maintenance	12,809.4	16,662.8	18,304.3	1	150,244,951	8%	100%	100%	0%	0%	36%	100%	4,620,125	Facility HVAC
59	NWS	Industrial	Small Industrial	All	HVAC	Heat Recovery from Processes to Heat Ventilation Make-up Air	0.1	0.1	0.2	0	0	0%	0%	0%	0%	0%	0%	0%	0	*N/A
60	NWS	Industrial	Small Industrial	All	FL	High efficiency ballasts for lighting	41.5	51.1	53.8	1	150,244,951	6%	100%	100%	0%	0%	86%	100%	8,208,076	Facility Lighting

Industrial Measures

Measure ID	Weather Sensitive	Sector	Sub-Sector	Building Type	End Use	Measure Name	MEASURE SELECTION				APPLICABILITY							PROGRAM		
							Measure TRC calculated for 2014	Measure TRC calculated for 2020	Measure TRC calculated for 2022	Passed Measure Screening? (1=Yes, 0=No)	Total Sub-Sector Units	Measure Units per Sub-Sector Unit	Applicability	Technical Feasibility	Distribution by size/model but not Efficiency Level	Distribution by Efficiency Level	Not Yet Adopted		Annual Replacement Eligibility	Total Applicable Measure Units
61	NWS	Industrial	Small Industrial	All	FL	High Efficiency Light fixtures	5.9	7.0	7.2	1	150,244,951	6%	100%	100%	0%	0%	74%	100%	7,083,354	Facility Lighting
62	NWS	Industrial	Small Industrial	All	FL	Efficient Lighting Design	20.2	23.9	24.9	1	150,244,951	6%	100%	100%	0%	0%	96%	100%	9,213,146	Facility Lighting
63	NWS	Industrial	Small Industrial	All	FL	Lighting controls: on/off timer settings	14.7	18.6	19.8	1	150,244,951	6%	100%	80%	0%	0%	100%	100%	7,657,680	Facility Lighting
64	NWS	Industrial	Small Industrial	All	FL	Lighting controls: occupancy sensors	1.2	1.5	1.6	1	150,244,951	6%	100%	80%	0%	0%	99%	100%	7,600,247	Facility Lighting
65	NWS	Industrial	Small Industrial	All	HVAC	Ventilation Optimization	4.7	5.6	5.9	1	150,244,951	8%	100%	80%	0%	0%	89%	100%	9,049,072	Facility HVAC
66	NWS	Industrial	Small Industrial	All	HVAC	Premium efficiency ventilation control with VSD	9.5	11.7	12.3	1	150,244,951	8%	100%	80%	0%	0%	89%	100%	9,049,072	Facility HVAC
67	NWS	Industrial	Small Industrial	All	HVAC	Demand-Controlled Ventilation	2.4	2.8	2.9	1	150,244,951	8%	100%	80%	0%	0%	99%	100%	10,043,195	Facility HVAC
68	NWS	Industrial	Other - Combined	All	Motors - Other Applications	Operations and maintenance	116.4	151.4	166.3	1	331,000,380	21%	100%	5%	0%	0%	37%	100%	1,312,421	Machine Drive
69	NWS	Industrial	Other - Combined	All	Motors - Other Applications	Match Motor Size to Load	57.7	68.5	71.4	1	331,000,380	21%	100%	20%	0%	0%	20%	100%	2,837,667	Machine Drive
70	NWS	Industrial	Other - Combined	All	Motors - Other Applications	Motor Efficiency Upgrade	36.5	43.4	45.1	1	331,000,380	21%	100%	20%	0%	0%	92%	100%	13,053,269	Machine Drive
71	NWS	Industrial	Other - Combined	All	Motors - Other Applications	Variable Speed Drives	145.9	173.4	180.6	1	331,000,380	21%	100%	35%	0%	0%	9%	100%	2,234,663	Machine Drive
72	NWS	Industrial	Other - Combined	All	Pumps	Reduce Overall System Requirements	45.8	59.6	65.5	1	331,000,380	14%	100%	50%	0%	0%	82%	100%	18,862,245	Machine Drive
73	NWS	Industrial	Other - Combined	All	Pumps	Match Pump Size to Load	42.1	50.0	52.1	1	331,000,380	14%	100%	20%	0%	0%	20%	100%	1,840,219	Machine Drive
74	NWS	Industrial	Other - Combined	All	Pumps	Reduce or Control Pump Speed	43.8	52.0	54.2	1	331,000,380	14%	100%	35%	0%	0%	94%	100%	15,135,801	Machine Drive
75	NWS	Industrial	Other - Combined	All	Pumps	Improve Pump Components	33.7	40.1	41.7	1	331,000,380	14%	100%	10%	0%	0%	4%	100%	184,022	Machine Drive
76	NWS	Industrial	Other - Combined	All	Pumps	Operation and Maintenance	99.7	129.7	142.4	1	331,000,380	14%	100%	5%	0%	0%	37%	100%	851,101	Machine Drive
77	NWS	Industrial	Other - Combined	All	Compressed Air	Reduce Overall System Requirements	216.7	257.5	268.2	1	331,000,380	9%	100%	30%	0%	0%	85%	100%	7,477,395	Machine Drive
78	NWS	Industrial	Other - Combined	All	Compressed Air	Match Compressor Size to Load	32.7	38.8	40.5	1	331,000,380	9%	100%	10%	0%	0%	79%	100%	2,316,526	Machine Drive
79	NWS	Industrial	Other - Combined	All	Compressed Air	Compressor Control	105.4	125.3	130.5	1	331,000,380	9%	100%	25%	0%	0%	72%	100%	5,278,161	Machine Drive
80	NWS	Industrial	Other - Combined	All	Compressed Air	Improve Compressor Components	25.4	30.2	31.4	1	331,000,380	9%	100%	15%	0%	0%	92%	100%	4,046,590	Machine Drive
81	NWS	Industrial	Other - Combined	All	Compressed Air	Operation and Maintenance	191.0	248.5	273.0	1	331,000,380	9%	100%	75%	0%	0%	37%	100%	8,137,165	Machine Drive
82	NWS	Industrial	Other - Combined	All	Fans	Reduce Overall System Requirements	109.4	130.0	135.4	1	331,000,380	8%	100%	15%	0%	0%	75%	100%	2,853,844	Machine Drive
83	NWS	Industrial	Other - Combined	All	Fans	Reduce or Control Fan Speed	55.2	65.7	68.4	1	331,000,380	8%	100%	10%	0%	0%	90%	100%	2,283,075	Machine Drive
84	NWS	Industrial	Other - Combined	All	Fans	Improve Fan Components	28.3	33.7	35.1	1	331,000,380	8%	100%	20%	0%	0%	35%	100%	1,775,725	Machine Drive
85	NWS	Industrial	Other - Combined	All	Fans	Operation and Maintenance	63.6	82.8	91.0	1	331,000,380	8%	100%	50%	0%	0%	37%	100%	4,692,988	Machine Drive
86	NWS	Industrial	Other - Combined	All	HVAC	Optimized Duct Design to Improve Efficiency	7.1	8.4	8.8	1	331,000,380	8%	100%	80%	0%	0%	59%	100%	13,253,064	Facility HVAC
87	NWS	Industrial	Other - Combined	All	PH	Advanced Water Heater Controls	400.1	460.2	475.9	1	331,000,380	11%	100%	90%	0%	0%	83%	100%	28,285,328	Process Heating
88	NWS	Industrial	Other - Combined	All	PH	Process Heat Recovery to Preheat Makeup Water	47.6	54.8	56.6	1	331,000,380	11%	100%	15%	0%	0%	83%	100%	4,714,221	Process Heating
89	NWS	Industrial	Other - Combined	All	PH	Air Curtains (Oven)	36.9	42.5	43.9	1	331,000,380	11%	100%	9%	0%	0%	83%	100%	2,828,533	Process Heating
90	NWS	Industrial	Other - Combined	All	PH	Insulation (Oven)	55.0	65.4	68.1	1	331,000,380	11%	100%	90%	0%	0%	10%	100%	3,407,871	Process Heating
91	NWS	Industrial	Other - Combined	All	PH	Preventative Oven Maintenance	12,809.4	16,662.8	18,304.3	1	331,000,380	11%	100%	100%	0%	0%	15%	100%	5,679,785	Process Heating
92	NWS	Industrial	Other - Combined	All	PH	Air Curtains (Dryer)	369.9	425.4	439.8	1	331,000,380	11%	100%	9%	0%	0%	83%	100%	2,828,533	Process Heating
93	NWS	Industrial	Other - Combined	All	PH	Insulation (Dryer)	550.6	654.4	681.5	1	331,000,380	11%	100%	90%	0%	0%	10%	100%	3,407,871	Process Heating
94	NWS	Industrial	Other - Combined	All	PH	Preventative Dryer Maintenance	12,809.4	16,662.8	18,304.3	1	331,000,380	11%	100%	100%	0%	0%	15%	100%	5,679,785	Process Heating
95	NWS	Industrial	Other - Combined	All	PH	Optimized Distribution System	80.2	90.6	93.3	1	331,000,380	11%	100%	93%	0%	0%	76%	100%	26,763,146	Process Heating
96	NWS	Industrial	Other - Combined	All	PH	Insulation (Dryer)	550.6	654.4	681.5	1	331,000,380	11%	100%	90%	0%	0%	42%	100%	14,398,254	Process Heating
97	NWS	Industrial	Other - Combined	All	PH	Preventative Dryer Maintenance	12,809.4	16,662.8	18,304.3	1	331,000,380	11%	100%	100%	0%	0%	36%	100%	13,726,147	Process Heating
98	NWS	Industrial	Other - Combined	All	PH	Preventative Furnace Maintenance	12,809.4	16,662.8	18,304.3	1	331,000,380	11%	100%	100%	0%	0%	36%	100%	13,726,147	Process Heating
99	NWS	Industrial	Other - Combined	All	PH	Insulation (Furnace)	550.6	654.4	681.5	1	331,000,380	11%	100%	90%	0%	0%	42%	100%	14,398,254	Process Heating
100	NWS	Industrial	Other - Combined	All	PCR	High Efficiency Chiller	8.1	9.3	9.6	1	331,000,380	7%	100%	10%	0%	0%	91%	100%	2,247,680	Process Cooling and Refrigeration
101	NWS	Industrial	Other - Combined	All	PCR	Floating head pressure controls	390.8	464.5	483.7	1	331,000,380	7%	100%	10%	0%	0%	74%	100%	1,827,784	Process Cooling and Refrigeration
102	NWS	Industrial	Other - Combined	All	PCR	Premium Efficiency Refrigeration Control System	4.7	5.6	5.8	1	331,000,380	7%	100%	80%	0%	0%	86%	100%	16,993,450	Process Cooling and Refrigeration
103	NWS	Industrial	Other - Combined	All	PCR	Smart Defrost Controls	722.8	852.3	886.0	1	331,000,380	7%	100%	10%	0%	0%	91%	100%	2,247,680	Process Cooling and Refrigeration
104	NWS	Industrial	Other - Combined	All	PCR	Doors, Covers and Curtains	51.0	65.6	70.3	1	331,000,380	7%	100%	10%	0%	0%	75%	100%	1,852,484	Process Cooling and Refrigeration
105	NWS	Industrial	Other - Combined	All	PCR	Optimized chilled water temperature and/or optimized condenser temperature	12,809.4	16,662.8	18,304.3	1	331,000,380	7%	100%	80%	0%	0%	86%	100%	16,993,450	Process Cooling and Refrigeration
106	NWS	Industrial	Other - Combined	All	PCR	Preventative Refrigeration/cooling System Maintenance	12,809.4	16,662.8	18,304.3	1	331,000,380	7%	100%	100%	0%	0%	15%	100%	3,704,967	Process Cooling and Refrigeration
107	NWS	Industrial	Other - Combined	All	PCR	Optimized condenser pressure	12,809.4	16,662.8	18,304.3	1	331,000,380	7%	100%	80%	0%	0%	86%	100%	16,993,450	Process Cooling and Refrigeration
108	NWS	Industrial	Other - Combined	All	PCR	Free-cooling	33.2	40.4	42.4	1	331,000,380	7%	100%	35%	0%	0%	60%	100%	5,186,954	Process Cooling and Refrigeration
109	NWS	Industrial	Other - Combined	All	PCR	Improve Insulation of Refrigeration System	17.2	21.2	22.5	1	331,000,380	7%	100%	80%	0%	0%	43%	100%	8,496,725	Process Cooling and Refrigeration
110	NWS	Industrial	Other - Combined	All	ONPU	HE Dry-Type Transformers	99,419.7	110,998.2	114,010.9	1	331,000,380	4%	100%	100%	0%	0%	100%	100%	13,631,483	Other Process/Non-Process Use
111	NWS	Industrial	Other - Combined	All	HVAC	Air Source Heat Pump for Backup Generators	2.3	2.8	2.9	1	331,000,380	8%	100%	80%	0%	0%	96%	100%	21,620,465	Facility HVAC
112	NWS	Industrial	Other - Combined	All	ONPU	High efficiency battery charger (for forklifts)	53.5	61.5	63.6	1	331,000,380	4%	100%	100%	0%	0%	89%	100%	12,097,942	Other Process/Non-Process Use
113	NWS	Industrial	Other - Combined	All	HVAC	Radiant Heaters	0.0	0.0	0.0	0	0	0%	0%	0%	0%	0%	0%	0%	0	*N/A
114	NWS	Industrial	Other - Combined	All	HVAC	High efficiency non-packaged HVAC equipment	0.4	0.5	0.5	0	0	0%	0%	0%	0%	0%	0%	0%	0	*N/A
115	NWS	Industrial	Other - Combined	All	HVAC	Seasonal Temperature Settings Adjustments	12,809.4	16,662.8	18,304.3	1	331,000,380	8%	100%	100%	0%	0%	42%	100%	11,863,177	Facility HVAC
116	NWS	Industrial	Other - Combined	All	HVAC	High-efficiency rooftop AC with an EER of 13.5	15.1	18.0	18.7	1	331,000,380	8%	100%	80%	0%	0%	70%	100%	15,723,974	Facility HVAC
117	NWS	Industrial	Other - Combined	All	HVAC	Ground Source Heat Pump	1.5	1.7	1.8	1	331,000,380	8%	100%	5%	0%	0%	89%	100%	1,245,985	Facility HVAC
118	NWS	Industrial	Other - Combined	All	HVAC	Ventilation Heat Recovery	0.9	1.0	1.0	1	331,000,380	8%	100%	40%	0%	0%	92%	100%	10,304,819	Facility HVAC
119	NWS	Industrial	Other - Combined	All	HVAC	Automated Temperature Control	52.0	58.7	60.4	1	331,000,380	8%	100%	80%	0%	0%	46%	100%	10,332,897	Facility HVAC
120	NWS	Industrial	Other - Combined	All	HVAC	Reduced Temperature Settings	12,809.4	16,662.8	18,304.3	1	331,000,380	8%	100%	80%	0%	0%	42%	100%	9,490,542	Facility HVAC

Industrial Measures

Measure ID	Weather Sensitive	Sector	Sub-Sector	Building Type	End Use	Measure Name	MEASURE SELECTION				APPLICABILITY							PROGRAM		
							Measure TRC calculated for 2014	Measure TRC calculated for 2020	Measure TRC calculated for 2022	Passed Measure Screening? (1=Yes, 0=No)	Total Sub-Sector Units	Measure Units per Sub-Sector Unit	Applicability	Technical Feasibility	Distribution by size/model but not Efficiency Level	Distribution by Efficiency Level	Not Yet Adopted		Annual Replacement Eligibility	Total Applicable Measure Units
121	NWS	Industrial	Other - Combined	All	HVAC	Destratification Fans	32.5	37.4	38.7	1	331,000,380	8%	100%	40%	0%	0%	94%	100%	10,557,526	Facility HVAC
122	NWS	Industrial	Other - Combined	All	HVAC	Warehouse Loading Dock Seals	8.2	10.1	10.7	1	331,000,380	8%	100%	30%	0%	0%	66%	100%	5,517,430	Facility HVAC
123	NWS	Industrial	Other - Combined	All	HVAC	Preventative Packaged HVAC Maintenance	12,809.4	16,662.8	18,304.3	1	331,000,380	8%	100%	100%	0%	0%	36%	100%	10,178,466	Facility HVAC
124	NWS	Industrial	Other - Combined	All	HVAC	Heat Recovery from Processes to Heat Ventilation Make-up Air	0.2	0.2	0.2	0	0	0%	0%	0%	0%	0%	0%	0%	0	*N/A
125	NWS	Industrial	Other - Combined	All	FL	High efficiency ballasts for lighting	62.3	76.9	81.0	1	331,000,380	6%	100%	100%	0%	0%	86%	100%	18,082,978	Facility Lighting
126	NWS	Industrial	Other - Combined	All	FL	High Efficiency Light fixtures	8.8	10.5	10.9	1	331,000,380	6%	100%	100%	0%	0%	74%	100%	15,605,136	Facility Lighting
127	NWS	Industrial	Other - Combined	All	FL	Efficient Lighting Design	30.4	36.0	37.5	1	331,000,380	6%	100%	100%	0%	0%	96%	100%	20,297,221	Facility Lighting
128	NWS	Industrial	Other - Combined	All	FL	Lighting controls: on/off timer settings	22.0	28.0	29.9	1	331,000,380	6%	100%	80%	0%	0%	100%	100%	16,870,417	Facility Lighting
129	NWS	Industrial	Other - Combined	All	FL	Lighting controls: occupancy sensors	1.8	2.3	2.4	1	331,000,380	6%	100%	80%	0%	0%	99%	100%	16,743,889	Facility Lighting
130	NWS	Industrial	Other - Combined	All	HVAC	Ventilation Optimization	7.1	8.4	8.8	1	331,000,380	8%	100%	80%	0%	0%	89%	100%	19,935,753	Facility HVAC
131	NWS	Industrial	Other - Combined	All	HVAC	Premium efficiency ventilation control with VSD	14.2	17.5	18.5	1	331,000,380	8%	100%	80%	0%	0%	89%	100%	19,935,753	Facility HVAC
132	NWS	Industrial	Other - Combined	All	HVAC	Demand-Controlled Ventilation	3.6	4.2	4.4	1	331,000,380	8%	100%	80%	0%	0%	99%	100%	22,125,878	Facility HVAC
133	NWS	Industrial	Food Products	All	Motors - Other Applications	Operations and maintenance	116.4	151.4	166.3	1	64,528,380	4%	100%	5%	0%	0%	37%	100%	47,751	Machine Drive
134	NWS	Industrial	Food Products	All	Motors - Other Applications	Match Motor Size to Load	57.7	68.5	71.4	1	64,528,380	4%	100%	20%	0%	0%	20%	100%	103,245	Machine Drive
135	NWS	Industrial	Food Products	All	Motors - Other Applications	Motor Efficiency Upgrade	36.5	43.4	45.1	1	64,528,380	4%	100%	20%	0%	0%	92%	100%	474,929	Machine Drive
136	NWS	Industrial	Food Products	All	Motors - Other Applications	Variable Speed Drives	145.9	173.4	180.6	1	64,528,380	4%	100%	35%	0%	0%	9%	100%	81,306	Machine Drive
137	NWS	Industrial	Food Products	All	Pumps	Reduce Overall System Requirements	45.8	59.6	65.5	1	64,528,380	11%	100%	50%	0%	0%	62%	100%	2,906,860	Machine Drive
138	NWS	Industrial	Food Products	All	Pumps	Match Pump Size to Load	42.1	50.0	52.1	1	64,528,380	11%	100%	20%	0%	0%	20%	100%	283,596	Machine Drive
139	NWS	Industrial	Food Products	All	Pumps	Reduce or Control Pump Speed	43.8	52.0	54.2	1	64,528,380	11%	100%	35%	0%	0%	94%	100%	2,332,578	Machine Drive
140	NWS	Industrial	Food Products	All	Pumps	Improve Pump Components	33.7	40.1	41.7	1	64,528,380	11%	100%	10%	0%	0%	4%	100%	28,360	Machine Drive
141	NWS	Industrial	Food Products	All	Pumps	Operation and Maintenance	99.7	129.7	142.4	1	64,528,380	11%	100%	5%	0%	0%	37%	100%	131,163	Machine Drive
142	NWS	Industrial	Food Products	All	Compressed Air	Reduce Overall System Requirements	216.7	257.5	268.2	1	64,528,380	5%	100%	30%	0%	0%	85%	100%	830,668	Machine Drive
143	NWS	Industrial	Food Products	All	Compressed Air	Match Compressor Size to Load	32.7	38.8	40.5	1	64,528,380	5%	100%	10%	0%	0%	79%	100%	257,344	Machine Drive
144	NWS	Industrial	Food Products	All	Compressed Air	Compressor Control	105.4	125.3	130.5	1	64,528,380	5%	100%	25%	0%	0%	72%	100%	586,354	Machine Drive
145	NWS	Industrial	Food Products	All	Compressed Air	Improve Compressor Components	25.4	30.2	31.4	1	64,528,380	5%	100%	15%	0%	0%	92%	100%	449,538	Machine Drive
146	NWS	Industrial	Food Products	All	Compressed Air	Operation and Maintenance	191.0	248.5	273.0	1	64,528,380	5%	100%	75%	0%	0%	37%	100%	903,962	Machine Drive
147	NWS	Industrial	Food Products	All	Fans	Reduce Overall System Requirements	109.4	130.0	135.4	1	64,528,380	5%	100%	15%	0%	0%	75%	100%	366,471	Machine Drive
148	NWS	Industrial	Food Products	All	Fans	Reduce or Control Fan Speed	55.2	65.7	68.4	1	64,528,380	5%	100%	10%	0%	0%	90%	100%	293,177	Machine Drive
149	NWS	Industrial	Food Products	All	Fans	Improve Fan Components	28.3	33.7	35.1	1	64,528,380	5%	100%	20%	0%	0%	35%	100%	228,027	Machine Drive
150	NWS	Industrial	Food Products	All	Fans	Operation and Maintenance	63.6	82.8	91.0	1	64,528,380	5%	100%	50%	0%	0%	37%	100%	602,642	Machine Drive
151	NWS	Industrial	Food Products	All	HVAC	Optimized Duct Design to Improve Efficiency	7.1	8.4	8.8	1	64,528,380	8%	100%	80%	0%	0%	59%	100%	2,572,415	Facility HVAC
152	NWS	Industrial	Food Products	All	PH	Advanced Water Heater Controls	400.1	460.2	475.9	1	64,528,380	5%	100%	90%	0%	0%	83%	100%	2,279,857	Process Heating
153	NWS	Industrial	Food Products	All	PH	Process Heat Recovery to Preheat Makeup Water	47.6	54.8	56.6	1	64,528,380	5%	100%	15%	0%	0%	83%	100%	379,976	Process Heating
154	NWS	Industrial	Food Products	All	PH	Air Curtains (Oven)	36.9	42.5	43.9	1	64,528,380	5%	100%	9%	0%	0%	83%	100%	227,986	Process Heating
155	NWS	Industrial	Food Products	All	PH	Insulation (Oven)	55.0	65.4	68.1	1	64,528,380	5%	100%	90%	0%	0%	10%	100%	274,682	Process Heating
156	NWS	Industrial	Food Products	All	PH	Preventative Oven Maintenance	12,809.4	16,662.8	18,304.3	1	64,528,380	5%	100%	100%	0%	0%	15%	100%	457,803	Process Heating
157	NWS	Industrial	Food Products	All	PH	Air Curtains (Dryer)	369.9	425.4	439.8	1	64,528,380	5%	100%	9%	0%	0%	83%	100%	227,986	Process Heating
158	NWS	Industrial	Food Products	All	PH	Insulation (Dryer)	550.6	654.4	681.5	1	64,528,380	5%	100%	90%	0%	0%	10%	100%	274,682	Process Heating
159	NWS	Industrial	Food Products	All	PH	Preventative Dryer Maintenance	12,809.4	16,662.8	18,304.3	1	64,528,380	5%	100%	100%	0%	0%	15%	100%	457,803	Process Heating
160	NWS	Industrial	Food Products	All	PH	Optimized Distribution System	80.2	90.6	93.3	1	64,528,380	5%	100%	93%	0%	0%	76%	100%	2,157,166	Process Heating
161	NWS	Industrial	Food Products	All	PH	Insulation (Dryer)	550.6	654.4	681.5	1	64,528,380	5%	100%	90%	0%	0%	42%	100%	1,160,530	Process Heating
162	NWS	Industrial	Food Products	All	PH	Preventative Dryer Maintenance	12,809.4	16,662.8	18,304.3	1	64,528,380	5%	100%	100%	0%	0%	36%	100%	1,106,357	Process Heating
163	NWS	Industrial	Food Products	All	PH	Preventative Furnace Maintenance	12,809.4	16,662.8	18,304.3	1	64,528,380	5%	100%	100%	0%	0%	36%	100%	1,106,357	Process Heating
164	NWS	Industrial	Food Products	All	PH	Insulation (Furnace)	550.6	654.4	681.5	1	64,528,380	5%	100%	90%	0%	0%	42%	100%	1,160,530	Process Heating
165	NWS	Industrial	Food Products	All	PCR	High Efficiency Chiller	8.1	9.3	9.6	1	64,528,380	28%	100%	10%	0%	0%	91%	100%	1,666,402	Process Cooling and Refrigeration
166	NWS	Industrial	Food Products	All	PCR	Floating head pressure controls	390.8	464.5	483.7	1	64,528,380	28%	100%	10%	0%	0%	74%	100%	1,355,096	Process Cooling and Refrigeration
167	NWS	Industrial	Food Products	All	PCR	Premium Efficiency Refrigeration Control System	4.7	5.6	5.8	1	64,528,380	28%	100%	80%	0%	0%	86%	100%	12,598,730	Process Cooling and Refrigeration
168	NWS	Industrial	Food Products	All	PCR	Smart Defrost Controls	722.8	852.3	886.0	1	64,528,380	28%	100%	10%	0%	0%	91%	100%	1,666,402	Process Cooling and Refrigeration
169	NWS	Industrial	Food Products	All	PCR	Doors, Covers and Curtains	51.0	65.6	70.3	1	64,528,380	28%	100%	10%	0%	0%	75%	100%	1,373,408	Process Cooling and Refrigeration
170	NWS	Industrial	Food Products	All	PCR	Optimized chilled water temperature and/or optimized condenser temperature	12,809.4	16,662.8	18,304.3	1	64,528,380	28%	100%	80%	0%	0%	86%	100%	12,598,730	Process Cooling and Refrigeration
171	NWS	Industrial	Food Products	All	PCR	Preventative Refrigeration/cooling System Maintenance	12,809.4	16,662.8	18,304.3	1	64,528,380	28%	100%	100%	0%	0%	15%	100%	2,746,816	Process Cooling and Refrigeration
172	NWS	Industrial	Food Products	All	PCR	Optimized condenser pressure	12,809.4	16,662.8	18,304.3	1	64,528,380	28%	100%	80%	0%	0%	86%	100%	12,598,730	Process Cooling and Refrigeration
173	NWS	Industrial	Food Products	All	PCR	Free-cooling	33.2	40.4	42.4	1	64,528,380	28%	100%	35%	0%	0%	60%	100%	3,845,543	Process Cooling and Refrigeration
174	NWS	Industrial	Food Products	All	PCR	Improve Insulation of Refrigeration System	17.2	21.2	22.5	1	64,528,380	28%	100%	80%	0%	0%	43%	100%	6,299,365	Process Cooling and Refrigeration
175	NWS	Industrial	Food Products	All	ONPU	HE Dry-Type Transformers	99,419.7	110,998.2	114,010.9	1	64,528,380	3%	100%	100%	0%	0%	100%	100%	1,962,012	Other Process/Non-Process Use
176	NWS	Industrial	Food Products	All	HVAC	Air Source Heat Pump for Backup Generators	2.3	2.8	2.9	1	64,528,380	8%	100%	80%	0%	0%	96%	100%	4,196,525	Facility HVAC
177	NWS	Industrial	Food Products	All	ONPU	High efficiency battery charger (for forklifts)	53.5	61.5	63.6	1	64,528,380	3%	100%	100%	0%	0%	89%	100%	1,741,285	Other Process/Non-Process Use
178	NWS	Industrial	Food Products	All	HVAC	Radiant Heaters	0.0	0.0	0.0	0	0	0%	0%	0%	0%	0%	0%	0%	0	*N/A
179	NWS	Industrial	Food Products	All	HVAC	High efficiency non-packaged HVAC equipment	0.4	0.5	0.5	0	0	0%	0%	0%	0%	0%	0%	0%	0	*N/A
180	NWS	Industrial	Food Products	All	HVAC	Seasonal Temperature Settings Adjustments	12,809.4	16,662.8	18,304.3	1	64,528,380	8%	100%	100%	0%	0%	42%	100%	2,302,639	Facility HVAC

Industrial Measures

Measure ID	Weather Sensitive	Sector	Sub-Sector	Building Type	End Use	Measure Name	MEASURE SELECTION				APPLICABILITY										PROGRAM
							Measure TRC calculated for 2014	Measure TRC calculated for 2020	Measure TRC calculated for 2022	Passed Measure Screening? (1=Yes, 0=No)	Total Sub-Sector Units	Measure Units per Sub-Sector Unit	Applicability	Technical Feasibility	Distribution by size/model but not Efficiency Level	Distribution by Efficiency Level	Not Yet Adopted	Annual Replacement Eligibility	Total Applicable Measure Units	Program Name	
181	NWS	Industrial	Food Products	All	HVAC	High-efficiency rooftop AC with an EER of 13.5	15.1	18.0	18.7	1	64,528,380	8%	100%	80%	0%	0%	70%	100%	3,052,018	Facility HVAC	
182	NWS	Industrial	Food Products	All	HVAC	Ground Source Heat Pump	1.5	1.7	1.8	1	64,528,380	8%	100%	5%	0%	0%	89%	100%	241,845	Facility HVAC	
183	NWS	Industrial	Food Products	All	HVAC	Ventilation Heat Recovery	0.9	1.0	1.0	1	64,528,380	8%	100%	40%	0%	0%	92%	100%	2,000,162	Facility HVAC	
184	NWS	Industrial	Food Products	All	HVAC	Automated Temperature Control	52.0	58.7	60.4	1	64,528,380	8%	100%	80%	0%	0%	46%	100%	2,005,612	Facility HVAC	
185	NWS	Industrial	Food Products	All	HVAC	Reduced Temperature Settings	12,809.4	16,662.8	18,304.3	1	64,528,380	8%	100%	80%	0%	0%	42%	100%	1,842,111	Facility HVAC	
186	NWS	Industrial	Food Products	All	HVAC	De-stratification Fans	32.5	37.4	38.7	1	64,528,380	8%	100%	40%	0%	0%	94%	100%	2,049,212	Facility HVAC	
187	NWS	Industrial	Food Products	All	HVAC	Warehouse Loading Dock Seals	8.2	10.1	10.7	1	64,528,380	8%	100%	30%	0%	0%	66%	100%	1,070,931	Facility HVAC	
188	NWS	Industrial	Food Products	All	HVAC	Preventative Packaged HVAC Maintenance	12,809.4	16,662.8	18,304.3	1	64,528,380	8%	100%	100%	0%	0%	36%	100%	1,975,637	Facility HVAC	
189	NWS	Industrial	Food Products	All	HVAC	Heat Recovery from Processes to Heat Ventilation Make-up Air	0.2	0.2	0.2	0	0	0	0%	0%	0%	0%	0%	0%	0	*N/A	
190	NWS	Industrial	Food Products	All	FL	High efficiency ballasts for lighting	62.3	76.9	81.0	1	64,528,380	8%	100%	100%	0%	0%	86%	100%	4,486,466	Facility Lighting	
191	NWS	Industrial	Food Products	All	FL	High Efficiency Light fixtures	8.8	10.5	10.9	1	64,528,380	8%	100%	100%	0%	0%	74%	100%	3,871,703	Facility Lighting	
192	NWS	Industrial	Food Products	All	FL	Efficient Lighting Design	30.4	36.0	37.5	1	64,528,380	8%	100%	100%	0%	0%	96%	100%	5,035,830	Facility Lighting	
193	NWS	Industrial	Food Products	All	FL	Lighting controls: on/off timer settings	22.0	28.0	29.9	1	64,528,380	8%	100%	80%	0%	0%	100%	100%	4,185,625	Facility Lighting	
194	NWS	Industrial	Food Products	All	FL	Lighting controls: occupancy sensors	1.8	2.3	2.4	1	64,528,380	8%	100%	80%	0%	0%	99%	100%	4,154,232	Facility Lighting	
195	NWS	Industrial	Food Products	All	HVAC	Ventilation Optimization	7.1	8.4	8.8	1	64,528,380	8%	100%	80%	0%	0%	89%	100%	3,869,523	Facility HVAC	
196	NWS	Industrial	Food Products	All	HVAC	Premium efficiency ventilation control with VSD	14.2	17.5	18.5	1	64,528,380	8%	100%	80%	0%	0%	89%	100%	3,869,523	Facility HVAC	
197	NWS	Industrial	Food Products	All	HVAC	Demand-Controlled Ventilation	3.6	4.2	4.4	1	64,528,380	8%	100%	80%	0%	0%	99%	100%	4,294,625	Facility HVAC	
199	NWS	Industrial	Industrial Gases	All	Total	Integrated Control System	*N/A	*N/A	*N/A	0	0	0	0%	0%	0%	0%	0%	0	*N/A		
200	NWS	Industrial	Industrial Gases	All	Total	Process Integration and Pinch Analysis	*N/A	*N/A	*N/A	0	0	0	0%	0%	0%	0%	0%	0	*N/A		
201	NWS	Industrial	Industrial Gases	All	Total	Sub-Metering	*N/A	*N/A	*N/A	0	0	0	0%	0%	0%	0%	0%	0	*N/A		
202	NWS	Industrial	Industrial Gases	All	HVAC	High-efficiency rooftop AC with an EER of 13.13	*N/A	*N/A	*N/A	0	0	0	0%	0%	0%	0%	0%	0	*N/A		
203	NWS	Industrial	Industrial Gases	All	Process Heating	Water-heater right sizing and load management	*N/A	*N/A	*N/A	0	0	0	0%	0%	0%	0%	0%	0	*N/A		
204	NWS	Industrial	Industrial Gases	All	Process Heating	Insulation	*N/A	*N/A	*N/A	0	0	0	0%	0%	0%	0%	0%	0	*N/A		
205	NWS	Industrial	Industrial Gases	All	Boilers	Blowdown Control	3.9	4.3	4.4	1	105,174	0.17695	100%	100%	0%	0%	65%	100%	12,097	Boilers	
206	NWS	Industrial	Industrial Gases	All	Boilers	Boiler Right Sizing	1.8	2.0	2.1	1	105,174	0.17695	100%	100%	0%	0%	79%	100%	14,703	Boilers	
207	NWS	Industrial	Industrial Gases	All	Boilers	Condensing Boiler	1.4	1.5	1.6	1	105,174	0.17695	100%	100%	0%	0%	79%	100%	14,703	Boilers	
208	NWS	Industrial	Industrial Gases	All	Boilers	Direct-Contact Hot Water Heaters	1.8	2.0	2.1	1	105,174	0.17695	100%	100%	0%	0%	64%	100%	11,911	Boilers	
209	NWS	Industrial	Industrial Gases	All	Boilers	High Efficiency Burner	5.6	6.2	6.3	1	105,174	0.17695	100%	100%	0%	0%	64%	100%	11,911	Boilers	
210	NWS	Industrial	Industrial Gases	All	Boilers	Instantaneous Steam Generation	1.7	1.9	1.9	1	105,174	0.17695	100%	100%	0%	0%	64%	100%	11,911	Boilers	
211	NWS	Industrial	Industrial Gases	All	Boilers	Blowdown Heat Recovery	4.5	5.0	5.1	1	105,174	0.17695	100%	100%	0%	0%	64%	100%	11,911	Boilers	
212	NWS	Industrial	Industrial Gases	All	Boilers	Boiler combustion air preheat	3.7	4.2	4.3	1	105,174	0.17695	100%	100%	0%	0%	100%	100%	18,611	Boilers	
213	NWS	Industrial	Industrial Gases	All	Boilers	Preventative Boiler Maintenance	4.0	4.6	4.9	1	105,174	0.17695	100%	100%	0%	0%	71%	100%	13,214	Boilers	
214	NWS	Industrial	Industrial Gases	All	Boilers	Boiler Water Treatment	4.7	5.4	5.6	1	105,174	0.17695	100%	100%	0%	0%	95%	100%	17,680	Boilers	
215	NWS	Industrial	Industrial Gases	All	Boilers	Condensate Return	2.4	2.6	2.7	1	105,174	0.17695	100%	100%	0%	0%	19%	100%	3,536	Boilers	
216	NWS	Industrial	Industrial Gases	All	Boilers	Economizer	5.3	5.8	5.9	1	105,174	0.17695	100%	100%	0%	0%	46%	100%	8,561	Boilers	
217	NWS	Industrial	Industrial Gases	All	Boilers	Insulation	11.5	13.0	13.4	1	105,174	0.17695	100%	100%	0%	0%	46%	100%	8,561	Boilers	
218	NWS	Industrial	Industrial Gases	All	Boilers	Minimize Deaerator Vent Losses	6.3	6.9	7.1	1	105,174	0.17695	100%	100%	0%	0%	57%	100%	10,608	Boilers	
219	NWS	Industrial	Industrial Gases	All	Boilers	Process Heat Recovery to Preheat Makeup Water	6.8	7.5	7.7	1	105,174	0.17695	100%	100%	0%	0%	71%	100%	13,214	Boilers	
220	NWS	Industrial	Industrial Gases	All	Boilers	Steam Trap Survey and Repair	1.7	2.0	2.0	1	105,174	0.17695	100%	100%	0%	0%	95%	100%	17,680	Boilers	
221	NWS	Industrial	Industrial Gases	All	Boilers	First Generation Super Boilers	0.3	0.3	0.3	0	0	0	0%	0%	0%	0%	0%	0	*N/A		
222	NWS	Industrial	Industrial Gases	All	Process Heating	High Efficiency Burner	1.8	1.9	2.0	1	105,174	0.31712	100%	100%	0%	0%	46%	100%	15,342	Process Heating	
223	NWS	Industrial	Industrial Gases	All	Process Heating	Infrared Ovens	1.1	1.2	1.3	1	105,174	0.31712	100%	100%	0%	0%	46%	100%	15,342	Process Heating	
224	NWS	Industrial	Industrial Gases	All	Process Heating	Process Heat Recovery to Preheat Makeup Water	5.3	6.0	6.1	1	105,174	0.31712	100%	100%	0%	0%	50%	100%	16,677	Process Heating	
225	NWS	Industrial	Industrial Gases	All	Process Heating	Air Curtains	13.7	15.2	15.5	1	105,174	0.31712	100%	100%	0%	0%	50%	100%	16,677	Process Heating	
226	NWS	Industrial	Industrial Gases	All	Process Heating	Exhaust Gas Heat Recovery	1.1	1.3	1.3	1	105,174	0.31712	100%	100%	0%	0%	50%	100%	16,677	Process Heating	
227	NWS	Industrial	Industrial Gases	All	Process Heating	Insulation	2.7	3.0	3.1	1	105,174	0.31712	100%	100%	0%	0%	50%	100%	16,677	Process Heating	
228	NWS	Industrial	Industrial Gases	All	Process Heating	Advanced heating and Process Control	1.6	1.8	1.9	1	105,174	0.31712	100%	100%	0%	0%	50%	100%	16,677	Process Heating	
229	NWS	Industrial	Industrial Gases	All	Process Heating	Combustion Optimization	*N/A	*N/A	*N/A	0	0	0	0%	0%	0%	0%	0%	0	*N/A		
230	NWS	Industrial	Industrial Gases	All	Process Heating	Radiant Tube burners	*N/A	*N/A	*N/A	0	0	0	0%	0%	0%	0%	0%	0	*N/A		
231	NWS	Industrial	Industrial Gases	All	HVAC	Radiant Heaters	2.9	3.2	3.2	1	105,174	0.01226	100%	100%	0%	0%	50%	100%	645	HVAC	
232	NWS	Industrial	Industrial Gases	All	Process Heating	Solar Walls	*N/A	*N/A	*N/A	0	0	0	0%	0%	0%	0%	0%	0	*N/A		
233	NWS	Industrial	Industrial Gases	All	HVAC	Air Compressor Heat Recovery	*N/A	*N/A	*N/A	0	0	0	0%	0%	0%	0%	0%	0	*N/A		
234	NWS	Industrial	Industrial Gases	All	HVAC	Air Curtains	*N/A	*N/A	*N/A	0	0	0	0%	0%	0%	0%	0%	0	*N/A		
235	NWS	Industrial	Industrial Gases	All	HVAC	De-stratification Fans	*N/A	*N/A	*N/A	0	0	0	0%	0%	0%	0%	0%	0	*N/A		
236	NWS	Industrial	Industrial Gases	All	HVAC	Ventilation Heat Recovery	5.7	6.2	6.4	1	105,174	0.01226	100%	0%	0%	0%	50%	100%	0	HVAC	
237	NWS	Industrial	Industrial Gases	All	HVAC	Ventilation Optimization	4.7	5.3	5.5	1	105,174	0.01226	100%	100%	0%	0%	50%	100%	645	HVAC	
238	NWS	Industrial	Industrial Gases	All	HVAC	Warehouse Loading Dock Seals	*N/A	*N/A	*N/A	0	0	0	0%	0%	0%	0%	0%	0	*N/A		
239	NWS	Industrial	Industrial Gases	All	HVAC	Automated Temperature reset Control	*N/A	*N/A	*N/A	0	0	0	0%	0%	0%	0%	0%	0	*N/A		
240	NWS	Industrial	Industrial Gases	All	HVAC	Reduced Temperature Settings	*N/A	*N/A	*N/A	0	0	0	0%	0%	0%	0%	0%	0	*N/A		

Industrial Measures

MEASURE DESCRIPTION						MEASURE SELECTION					APPLICABILITY							PROGRAM		
Measure ID	Weather Sensitive	Sector	Sub-Sector	Building Type	End Use	Measure Name	Measure TRC calculated for 2014	Measure TRC calculated for 2020	Measure TRC calculated for 2022	Passed Measure Screening? (1=Yes, 0=No)	Total Sub-Sector Units	Measure Units per Sub-Sector Unit	Applicability	Technical Feasibility	Distribution by size/model but not Efficiency Level	Distribution by Efficiency Level	Not Yet Adopted	Annual Replacement Eligibility	Total Applicable Measure Units	Program Name
241	NWS	Industrial	Industrial Gases	All	Total	Pollution Control Measures	*N/A	*N/A	*N/A	0	0	0	0%	0%	0%	0%	0%	0%	0	*N/A
242	NWS	Industrial	Industrial Gases	All	Process Heating	CFD Modelling	10.4	11.7	12.1	1	105,174	0.31712	100%	0%	0%	0%	50%	100%	0	Process Heating
243	NWS	Industrial	Industrial Gases	All	Total	Energy Management	5.0	5.8	6.1	1	105,174	1	100%	0%	0%	0%	50%	100%	0	All
244	NWS	Industrial	Industrial Gases	All	Process Heating	Improved airflow in dryer windbox	*N/A	*N/A	*N/A	0	0	0	0%	0%	0%	0%	0%	0%	0	*N/A
245	NWS	Industrial	Industrial Gases	All	Process Heating	Preventative Oven Maintenance	*N/A	*N/A	*N/A	0	0	0	0%	0%	0%	0%	0%	0%	0	*N/A
246	NWS	Industrial	Industrial Gases	All	Process Heating	Preventative Furnace Maintenance	*N/A	*N/A	*N/A	0	0	0	0%	0%	0%	0%	0%	0%	0	*N/A
247	NWS	Industrial	Industrial Gases	All	Process Heating	Preventative Dryer Maintenance	*N/A	*N/A	*N/A	0	0	0	0%	0%	0%	0%	0%	0%	0	*N/A
248	NWS	Industrial	Industrial Gases	All	Process Heating	High Efficiency Burner	8.8	9.7	9.9	1	105,174	0.31712	100%	100%	0%	0%	50%	100%	16,677	Process Heating
249	NWS	Industrial	Industrial Gases	All	Process Heating	Air Curtains	70.7	77.9	79.7	1	105,174	0.31712	100%	100%	0%	0%	50%	100%	16,677	Process Heating
250	NWS	Industrial	Industrial Gases	All	Process Heating	Exhaust Gas Heat Recovery	5.7	6.4	6.6	1	105,174	0.31712	100%	100%	0%	0%	50%	100%	16,677	Process Heating
251	NWS	Industrial	Industrial Gases	All	Process Heating	Insulation	13.3	15.0	15.4	1	105,174	0.31712	100%	100%	0%	0%	50%	100%	16,677	Process Heating
252	NWS	Industrial	Industrial Gases	All	Process Heating	Advanced heating and Process Control	8.0	9.1	9.3	1	105,174	0.31712	100%	100%	0%	0%	50%	100%	16,677	Process Heating
253	NWS	Industrial	Industrial Gases	All	Process Heating	Combustion Optimization	*N/A	*N/A	*N/A	0	0	0	0%	0%	0%	0%	0%	0%	0	*N/A
254	NWS	Industrial	Industrial Gases	All	Process Heating	High Efficiency Burner	1.8	1.9	2.0	1	105,174	0.31712	100%	100%	0%	0%	50%	100%	16,677	Process Heating
255	NWS	Industrial	Industrial Gases	All	Process Heating	Air Curtains	13.7	15.2	15.5	1	105,174	0.31712	100%	100%	0%	0%	50%	100%	16,677	Process Heating
256	NWS	Industrial	Industrial Gases	All	Process Heating	Exhaust Gas Heat Recovery	1.1	1.3	1.3	1	105,174	0.31712	100%	100%	0%	0%	50%	100%	16,677	Process Heating
257	NWS	Industrial	Industrial Gases	All	Process Heating	Insulation	2.7	3.0	3.1	1	105,174	0.31712	100%	100%	0%	0%	50%	100%	16,677	Process Heating
258	NWS	Industrial	Industrial Gases	All	Process Heating	Advanced heating and Process Control	1.6	1.8	1.9	1	105,174	0.31712	100%	100%	0%	0%	50%	100%	16,677	Process Heating
259	NWS	Industrial	Industrial Gases	All	Process Heating	Combustion Optimization	*N/A	*N/A	*N/A	0	0	0	0%	0%	0%	0%	0%	0%	0	*N/A
260	NWS	Industrial	All Other	All	Total	Integrated Control System	*N/A	*N/A	*N/A	0	0	0	0%	0%	0%	0%	0%	0%	0	*N/A
261	NWS	Industrial	All Other	All	Total	Process Integration and Pinch Analysis	*N/A	*N/A	*N/A	0	0	0	0%	0%	0%	0%	0%	0%	0	*N/A
262	NWS	Industrial	All Other	All	Total	Sub-Metering	*N/A	*N/A	*N/A	0	0	0	0%	0%	0%	0%	0%	0%	0	*N/A
263	NWS	Industrial	All Other	All	HVAC	High-efficiency rooftop AC with an EER of 13.13	*N/A	*N/A	*N/A	0	0	0	0%	0%	0%	0%	0%	0%	0	*N/A
264	NWS	Industrial	All Other	All	Process Heating	Water-heater right sizing and load management	*N/A	*N/A	*N/A	0	0	0	0%	0%	0%	0%	0%	0%	0	*N/A
265	NWS	Industrial	All Other	All	Process Heating	Insulation	*N/A	*N/A	*N/A	0	0	0	0%	0%	0%	0%	0%	0%	0	*N/A
266	NWS	Industrial	All Other	All	Boilers	Blowdown Control	3.9	4.3	4.4	1	18,672	0.13	100%	100%	0%	0%	50%	100%	1,214	Boilers
267	NWS	Industrial	All Other	All	Boilers	Boiler Right Sizing	1.8	2.0	2.1	1	18,672	0.13	100%	100%	0%	0%	50%	100%	1,214	Boilers
268	NWS	Industrial	All Other	All	Boilers	Condensing Boiler	1.4	1.5	1.6	1	18,672	0.13	100%	100%	0%	0%	50%	100%	1,214	Boilers
269	NWS	Industrial	All Other	All	Boilers	Direct-Contact Hot Water Heaters	1.8	2.0	2.1	1	18,672	0.13	100%	100%	0%	0%	50%	100%	1,214	Boilers
270	NWS	Industrial	All Other	All	Boilers	High Efficiency Burner	5.6	6.2	6.3	1	18,672	0.13	100%	100%	0%	0%	50%	100%	1,214	Boilers
271	NWS	Industrial	All Other	All	Boilers	Instantaneous Steam Generation	1.7	1.9	1.9	1	18,672	0.13	100%	100%	0%	0%	50%	100%	1,214	Boilers
272	NWS	Industrial	All Other	All	Boilers	Blowdown Heat Recovery	4.5	5.0	5.1	1	18,672	0.13	100%	100%	0%	0%	50%	100%	1,214	Boilers
273	NWS	Industrial	All Other	All	Boilers	Boiler combustion air preheat	3.7	4.2	4.3	1	18,672	0.13	100%	100%	0%	0%	50%	100%	1,214	Boilers
274	NWS	Industrial	All Other	All	Boilers	Preventative Boiler Maintenance	4.0	4.6	4.9	1	18,672	0.13	100%	100%	0%	0%	50%	100%	1,214	Boilers
275	NWS	Industrial	All Other	All	Boilers	Boiler Water Treatment	4.7	5.4	5.6	1	18,672	0.13	100%	100%	0%	0%	50%	100%	1,214	Boilers
276	NWS	Industrial	All Other	All	Boilers	Condensate Return	2.4	2.6	2.7	1	18,672	0.13	100%	100%	0%	0%	50%	100%	1,214	Boilers
277	NWS	Industrial	All Other	All	Boilers	Economizer	5.3	5.8	5.9	1	18,672	0.13	100%	100%	0%	0%	50%	100%	1,214	Boilers
278	NWS	Industrial	All Other	All	Boilers	Insulation	11.5	13.0	13.4	1	18,672	0.13	100%	100%	0%	0%	50%	100%	1,214	Boilers
279	NWS	Industrial	All Other	All	Boilers	Minimize Deaerator Vent Losses	6.3	6.9	7.1	1	18,672	0.13	100%	100%	0%	0%	50%	100%	1,214	Boilers
280	NWS	Industrial	All Other	All	Boilers	Process Heat Recovery to Preheat Makeup Water	6.8	7.5	7.7	1	18,672	0.13	100%	100%	0%	0%	50%	100%	1,214	Boilers
281	NWS	Industrial	All Other	All	Boilers	Steam Trap Survey and Repair	1.7	2.0	2.0	1	18,672	0.13	100%	100%	0%	0%	50%	100%	1,214	Boilers
282	NWS	Industrial	All Other	All	Boilers	First Generation Super Boilers	0.3	0.3	0.3	0	0	0	0%	0%	0%	0%	0%	0%	0	*N/A
283	NWS	Industrial	All Other	All	Process Heating	High Efficiency Burner	1.8	1.9	2.0	1	18,672	0.42	100%	100%	0%	0%	50%	100%	3,921	Process Heating
284	NWS	Industrial	All Other	All	Process Heating	Infrared Ovens	1.1	1.2	1.3	1	18,672	0.42	100%	100%	0%	0%	50%	100%	3,921	Process Heating
285	NWS	Industrial	All Other	All	Process Heating	Process Heat Recovery to Preheat Makeup Water	5.3	6.0	6.1	1	18,672	0.42	100%	100%	0%	0%	50%	100%	3,921	Process Heating
286	NWS	Industrial	All Other	All	Process Heating	Air Curtains	13.7	15.2	15.5	1	18,672	0.42	100%	100%	0%	0%	50%	100%	3,921	Process Heating
287	NWS	Industrial	All Other	All	Process Heating	Exhaust Gas Heat Recovery	1.1	1.3	1.3	1	18,672	0.42	100%	100%	0%	0%	50%	100%	3,921	Process Heating
288	NWS	Industrial	All Other	All	Process Heating	Insulation	2.7	3.0	3.1	1	18,672	0.42	100%	100%	0%	0%	50%	100%	3,921	Process Heating
289	NWS	Industrial	All Other	All	Process Heating	Advanced heating and Process Control	1.6	1.8	1.9	1	18,672	0.42	100%	100%	0%	0%	50%	100%	3,921	Process Heating
290	NWS	Industrial	All Other	All	Process Heating	Combustion Optimization	*N/A	*N/A	*N/A	0	0	0	0%	0%	0%	0%	0%	0%	0	*N/A
291	NWS	Industrial	All Other	All	Process Heating	Radiant Tube burners	*N/A	*N/A	*N/A	0	0	0	0%	0%	0%	0%	0%	0%	0	*N/A
292	NWS	Industrial	All Other	All	Process Heating	Radiant Heaters	2.9	3.2	3.2	1	18,672	0.42	100%	100%	0%	0%	50%	100%	3,921	Process Heating
293	NWS	Industrial	All Other	All	Process Heating	Solar Walls	*N/A	*N/A	*N/A	0	0	0	0%	0%	0%	0%	0%	0%	0	*N/A
294	NWS	Industrial	All Other	All	HVAC	Air Compressor Heat Recovery	*N/A	*N/A	*N/A	0	0	0	0%	0%	0%	0%	0%	0%	0	*N/A
295	NWS	Industrial	All Other	All	HVAC	Air Curtains	*N/A	*N/A	*N/A	0	0	0	0%	0%	0%	0%	0%	0%	0	*N/A
296	NWS	Industrial	All Other	All	HVAC	Destratification Fans	*N/A	*N/A	*N/A	0	0	0	0%	0%	0%	0%	0%	0%	0	*N/A
297	NWS	Industrial	All Other	All	HVAC	Ventilation Heat Recovery	5.7	6.2	6.4	1	18,672	0.03	100%	0%	0%	0%	50%	100%	0	HVAC
298	NWS	Industrial	All Other	All	HVAC	Ventilation Optimization	4.7	5.3	5.5	1	18,672	0.03	100%	100%	0%	0%	50%	100%	280	HVAC
299	NWS	Industrial	All Other	All	HVAC	Warehouse Loading Dock Seals	*N/A	*N/A	*N/A	0	0	0	0%	0%	0%	0%	0%	0%	0	*N/A
300	NWS	Industrial	All Other	All	HVAC	Automated Temperature reset Control	*N/A	*N/A	*N/A	0	0	0	0%	0%	0%	0%	0%	0%	0	*N/A

Industrial Measures

MEASURE DESCRIPTION						MEASURE SELECTION					APPLICABILITY							PROGRAM		
Measure ID	Weather Sensitive	Sector	Sub-Sector	Building Type	End Use	Measure Name	Measure TRC calculated for 2014	Measure TRC calculated for 2020	Measure TRC calculated for 2022	Passed Measure Screening? (1=Yes, 0=No)	Total Sub-Sector Units	Measure Units per Sub-Sector Unit	Applicability	Technical Feasibility	Distribution by size/model but not Efficiency Level	Distribution by Efficiency Level	Not Yet Adopted	Annual Replacement Eligibility	Total Applicable Measure Units	Program Name
301	NWS	Industrial	All Other	All	HVAC	Reduced Temperature Settings	*N/A	*N/A	*N/A	0	0	0	0%	0%	0%	0%	0%	0%	0	*N/A
302	NWS	Industrial	All Other	All	Process Heating	Pollution Control Measures	*N/A	*N/A	*N/A	0	0	0	0%	0%	0%	0%	0%	0%	0	*N/A
303	NWS	Industrial	All Other	All	Process Heating	CFD Modelling	10.4	11.7	12.1	1	18,672	0.42	100%	0%	0%	0%	50%	100%	0	Process Heating
304	NWS	Industrial	All Other	All	Total	Energy Management	*N/A	*N/A	*N/A	0	0	0	0%	0%	0%	0%	0%	0%	0	*N/A
305	NWS	Industrial	All Other	All	Process Heating	Improved airflow in dryer windbox	*N/A	*N/A	*N/A	0	0	0	0%	0%	0%	0%	0%	0%	0	*N/A
306	NWS	Industrial	All Other	All	Process Heating	Preventative Oven Maintenance	*N/A	*N/A	*N/A	0	0	0	0%	0%	0%	0%	0%	0%	0	*N/A
307	NWS	Industrial	All Other	All	Process Heating	Preventative Furnace Maintenance	*N/A	*N/A	*N/A	0	0	0	0%	0%	0%	0%	0%	0%	0	*N/A
308	NWS	Industrial	All Other	All	Process Heating	Preventative Dryer Maintenance	*N/A	*N/A	*N/A	0	0	0	0%	0%	0%	0%	0%	0%	0	*N/A
309	NWS	Industrial	All Other	All	Process Heating	High Efficiency Burner	8.8	9.7	9.9	1	18,672	0.42	100%	100%	0%	0%	50%	100%	3,921	Process Heating
310	NWS	Industrial	All Other	All	Process Heating	Air Curtains	70.7	77.9	79.7	1	18,672	0.42	100%	100%	0%	0%	50%	100%	3,921	Process Heating
311	NWS	Industrial	All Other	All	Process Heating	Exhaust Gas Heat Recovery	5.7	6.4	6.6	1	18,672	0.42	100%	100%	0%	0%	50%	100%	3,921	Process Heating
312	NWS	Industrial	All Other	All	Process Heating	Insulation	13.3	15.0	15.4	1	18,672	0.42	100%	100%	0%	0%	50%	100%	3,921	Process Heating
313	NWS	Industrial	All Other	All	Process Heating	Advanced heating and Process Control	8.0	9.1	9.3	1	18,672	0.42	100%	100%	0%	0%	50%	100%	3,921	Process Heating
314	NWS	Industrial	All Other	All	Process Heating	Combustion Optimization	*N/A	*N/A	*N/A	0	0	0	0%	0%	0%	0%	0%	0%	0	*N/A
315	NWS	Industrial	All Other	All	Process Heating	High Efficiency Burner	1.8	1.9	2.0	1	18,672	0.42	100%	100%	0%	0%	50%	100%	3,921	Process Heating
316	NWS	Industrial	All Other	All	Process Heating	Air Curtains	13.7	15.2	15.5	1	18,672	0.42	100%	100%	0%	0%	50%	100%	3,921	Process Heating
317	NWS	Industrial	All Other	All	Process Heating	Exhaust Gas Heat Recovery	1.1	1.3	1.3	1	18,672	0.42	100%	100%	0%	0%	50%	100%	3,921	Process Heating
318	NWS	Industrial	All Other	All	Process Heating	Insulation	2.7	3.0	3.1	1	18,672	0.42	100%	100%	0%	0%	50%	100%	3,921	Process Heating
319	NWS	Industrial	All Other	All	Process Heating	Advanced heating and Process Control	1.6	1.8	1.9	1	18,672	0.42	100%	100%	0%	0%	50%	100%	3,921	Process Heating
320	NWS	Industrial	All Other	All	Process Heating	Combustion Optimization	*N/A	*N/A	*N/A	0	0	0	0%	0%	0%	0%	0%	0%	0	*N/A
321	NWS	Industrial	Small Industrial	All	Total	Integrated Control System	*N/A	*N/A	*N/A	0	0	0	0%	0%	0%	0%	0%	0%	0	*N/A
322	NWS	Industrial	Small Industrial	All	Total	Process Integration and Pinch Analysis	*N/A	*N/A	*N/A	0	0	0	0%	0%	0%	0%	0%	0%	0	*N/A
323	NWS	Industrial	Small Industrial	All	Total	Sub-Metering	*N/A	*N/A	*N/A	0	0	0	0%	0%	0%	0%	0%	0%	0	*N/A
324	NWS	Industrial	Small Industrial	All	HVAC	High-efficiency rooftop AC with an EER of 13.13	*N/A	*N/A	*N/A	0	0	0	0%	0%	0%	0%	0%	0%	0	*N/A
325	NWS	Industrial	Small Industrial	All	Process Heating	Water-heater right sizing and load management	2.7	3.0	3.1	1	69,829	0.42	100%	0%	0%	0%	50%	100%	0	Process Heating
326	NWS	Industrial	Small Industrial	All	Process Heating	Insulation	4.0	4.5	4.6	1	69,829	0.42	100%	0%	0%	0%	50%	100%	0	Process Heating
327	NWS	Industrial	Small Industrial	All	Boilers	Blowdown Control	0.6	0.6	0.7	0	0	0	0%	0%	0%	0%	0%	0%	0	*N/A
328	NWS	Industrial	Small Industrial	All	Boilers	Boiler Right Sizing	2.9	3.2	3.2	1	69,829	0.13	100%	100%	0%	0%	50%	100%	4,539	Boilers
329	NWS	Industrial	Small Industrial	All	Boilers	Condensing Boiler	1.6	1.8	1.8	1	69,829	0.13	100%	100%	0%	0%	50%	100%	4,539	Boilers
330	NWS	Industrial	Small Industrial	All	Boilers	Direct-Contact Hot Water Heaters	2.7	3.0	3.0	1	69,829	0.13	100%	100%	0%	0%	50%	100%	4,539	Boilers
331	NWS	Industrial	Small Industrial	All	Boilers	High Efficiency Burner	2.1	2.3	2.4	1	69,829	0.13	100%	100%	0%	0%	50%	100%	4,539	Boilers
332	NWS	Industrial	Small Industrial	All	Boilers	Instantaneous Steam Generation	2.0	2.2	2.3	1	69,829	0.13	100%	100%	0%	0%	50%	100%	4,539	Boilers
333	NWS	Industrial	Small Industrial	All	Boilers	Blowdown Heat Recovery	1.8	2.0	2.0	1	69,829	0.13	100%	100%	0%	0%	50%	100%	4,539	Boilers
334	NWS	Industrial	Small Industrial	All	Boilers	Boiler combustion air preheat	1.5	1.7	1.7	1	69,829	0.13	100%	100%	0%	0%	50%	100%	4,539	Boilers
335	NWS	Industrial	Small Industrial	All	Boilers	Preventative Boiler Maintenance	0.9	1.0	1.1	1	69,829	0.13	100%	100%	0%	0%	50%	100%	4,539	Boilers
336	NWS	Industrial	Small Industrial	All	Boilers	Boiler Water Treatment	1.0	1.2	1.2	1	69,829	0.13	100%	100%	0%	0%	50%	100%	4,539	Boilers
337	NWS	Industrial	Small Industrial	All	Boilers	Condensate Return	0.9	1.0	1.1	1	69,829	0.13	100%	100%	0%	0%	50%	100%	4,539	Boilers
338	NWS	Industrial	Small Industrial	All	Boilers	Economizer	3.0	3.3	3.3	1	69,829	0.13	100%	100%	0%	0%	50%	100%	4,539	Boilers
339	NWS	Industrial	Small Industrial	All	Boilers	Insulation	4.3	4.8	5.0	1	69,829	0.13	100%	100%	0%	0%	50%	100%	4,539	Boilers
340	NWS	Industrial	Small Industrial	All	Boilers	Minimize Deaerator Vent Losses	1.2	1.3	1.3	1	69,829	0.13	100%	100%	0%	0%	50%	100%	4,539	Boilers
341	NWS	Industrial	Small Industrial	All	Boilers	Process Heat Recovery to Preheat Makeup Water	1.7	1.9	2.0	1	69,829	0.13	100%	100%	0%	0%	50%	100%	4,539	Boilers
342	NWS	Industrial	Small Industrial	All	Boilers	Steam Trap Survey and Repair	0.8	1.0	1.0	0	0	0	0%	0%	0%	0%	0%	0%	0	*N/A
343	NWS	Industrial	Small Industrial	All	Boilers	First Generation Super Boilers	0.7	0.7	0.8	0	0	0	0%	0%	0%	0%	0%	0%	0	*N/A
344	NWS	Industrial	Small Industrial	All	Process Heating	High Efficiency Burner	4.0	4.5	4.6	1	69,829	0.42	100%	100%	0%	0%	50%	100%	14,664	Process Heating
345	NWS	Industrial	Small Industrial	All	Process Heating	Infrared Ovens	4.1	4.5	4.6	1	69,829	0.42	100%	100%	0%	0%	50%	100%	14,664	Process Heating
346	NWS	Industrial	Small Industrial	All	Process Heating	Process Heat Recovery to Preheat Makeup Water	7.7	8.7	8.9	1	69,829	0.42	100%	100%	0%	0%	50%	100%	14,664	Process Heating
347	NWS	Industrial	Small Industrial	All	Process Heating	Air Curtains	5.7	6.3	6.4	1	69,829	0.42	100%	100%	0%	0%	50%	100%	14,664	Process Heating
348	NWS	Industrial	Small Industrial	All	Process Heating	Exhaust Gas Heat Recovery	2.3	2.6	2.7	1	69,829	0.42	100%	100%	0%	0%	50%	100%	14,664	Process Heating
349	NWS	Industrial	Small Industrial	All	Process Heating	Insulation	0.0	0.0	0.0	0	0	0	0%	0%	0%	0%	0%	0%	0	*N/A
350	NWS	Industrial	Small Industrial	All	Process Heating	Advanced heating and Process Control	*N/A	*N/A	*N/A	0	0	0	0%	0%	0%	0%	0%	0%	0	*N/A
351	NWS	Industrial	Small Industrial	All	Process Heating	Combustion Optimization	*N/A	*N/A	*N/A	0	0	0	0%	0%	0%	0%	0%	0%	0	*N/A
352	NWS	Industrial	Small Industrial	All	Process Heating	Radiant Tube burners	*N/A	*N/A	*N/A	0	0	0	0%	0%	0%	0%	0%	0%	0	*N/A
353	NWS	Industrial	Small Industrial	All	HVAC	Radiant Heaters	2.0	2.2	2.2	1	69,829	0.03	100%	100%	0%	0%	50%	100%	1,047	HVAC
354	NWS	Industrial	Small Industrial	All	Process Heating	Solar Walls	*N/A	*N/A	*N/A	0	0	0	0%	0%	0%	0%	0%	0%	0	*N/A
355	NWS	Industrial	Small Industrial	All	HVAC	Air Compressor Heat Recovery	*N/A	*N/A	*N/A	0	0	0	0%	0%	0%	0%	0%	0%	0	*N/A
356	NWS	Industrial	Small Industrial	All	HVAC	Air Curtains	*N/A	*N/A	*N/A	0	0	0	0%	0%	0%	0%	0%	0%	0	*N/A
357	NWS	Industrial	Small Industrial	All	HVAC	Destratification Fans	*N/A	*N/A	*N/A	0	0	0	0%	0%	0%	0%	0%	0%	0	*N/A
358	NWS	Industrial	Small Industrial	All	HVAC	Ventilation Heat Recovery	2.4	2.7	2.8	1	69,829	0.03	100%	0%	0%	0%	50%	100%	0	HVAC
359	NWS	Industrial	Small Industrial	All	HVAC	Ventilation Optimization	2.0	2.3	2.4	1	69,829	0.03	100%	100%	0%	0%	50%	100%	1,047	HVAC
360	NWS	Industrial	Small Industrial	All	HVAC	Warehouse Loading Dock Seals	*N/A	*N/A	*N/A	0	0	0	0%	0%	0%	0%	0%	0%	0	*N/A

Industrial Measures

MEASURE DESCRIPTION						MEASURE SELECTION				APPLICABILITY								PROGRAM		
Measure ID	Weather Sensitive	Sector	Sub-Sector	Building Type	End Use	Measure Name	Measure TRC calculated for 2014	Measure TRC calculated for 2020	Measure TRC calculated for 2022	Passed Measure Screening? (1=Yes, 0=No)	Total Sub-Sector Units	Measure Units per Sub-Sector Unit	Applicability	Technical Feasibility	Distribution by size/model but not Efficiency Level	Distribution by Efficiency Level	Not Yet Adopted	Annual Replacement Eligibility	Total Applicable Measure Units	Program Name
361	NWS	Industrial	Small Industrial	All	HVAC	Automated Temperature reset Control	*N/A	*N/A	*N/A	0	0	0	0%	0%	0%	0%	0%	0%	0	*N/A
362	NWS	Industrial	Small Industrial	All	HVAC	Reduced Temperature Settings	*N/A	*N/A	*N/A	0	0	0	0%	0%	0%	0%	0%	0%	0	*N/A
363	NWS	Industrial	Small Industrial	All	Total	Pollution Control Measures	*N/A	*N/A	*N/A	0	0	0	0%	0%	0%	0%	0%	0%	0	*N/A
364	NWS	Industrial	Small Industrial	All	Process Heating	CFD Modelling	*N/A	*N/A	*N/A	0	0	0	0%	0%	0%	0%	0%	0%	0	*N/A
365	NWS	Industrial	Small Industrial	All	Total	Energy Management	*N/A	*N/A	*N/A	0	0	0	0%	0%	0%	0%	0%	0%	0	*N/A
366	NWS	Industrial	Small Industrial	All	Process Heating	Improved airflow in dryer windbox	*N/A	*N/A	*N/A	0	0	0	0%	0%	0%	0%	0%	0%	0	*N/A
367	NWS	Industrial	Small Industrial	All	Process Heating	Preventative Oven Maintenance	*N/A	*N/A	*N/A	0	0	0	0%	0%	0%	0%	0%	0%	0	*N/A
368	NWS	Industrial	Small Industrial	All	Process Heating	Preventative Furnace Maintenance	*N/A	*N/A	*N/A	0	0	0	0%	0%	0%	0%	0%	0%	0	*N/A
369	NWS	Industrial	Small Industrial	All	Process Heating	Preventative Dryer Maintenance	*N/A	*N/A	*N/A	0	0	0	0%	0%	0%	0%	0%	0%	0	*N/A
370	NWS	Industrial	Small Industrial	All	Process Heating	High Efficiency Burner	219.8	242.5	247.8	1	69,829	0.42	100%	100%	0%	0%	50%	100%	14,664	Process Heating
371	NWS	Industrial	Small Industrial	All	Process Heating	Air Curtains	329.8	363.7	371.7	1	69,829	0.42	100%	100%	0%	0%	50%	100%	14,664	Process Heating
372	NWS	Industrial	Small Industrial	All	Process Heating	Exhaust Gas Heat Recovery	113.8	128.3	131.7	1	69,829	0.42	100%	100%	0%	0%	50%	100%	14,664	Process Heating
373	NWS	Industrial	Small Industrial	All	Process Heating	Insulation	*N/A	*N/A	*N/A	0	0	0	0%	0%	0%	0%	0%	0%	0	*N/A
374	NWS	Industrial	Small Industrial	All	Process Heating	Advanced heating and Process Control	*N/A	*N/A	*N/A	0	0	0	0%	0%	0%	0%	0%	0%	0	*N/A
375	NWS	Industrial	Small Industrial	All	Process Heating	Combustion Optimization	*N/A	*N/A	*N/A	0	0	0	0%	0%	0%	0%	0%	0%	0	*N/A
376	NWS	Industrial	Small Industrial	All	Process Heating	High Efficiency Burner	4.0	4.5	4.6	1	69,829	0.42	100%	100%	0%	0%	50%	100%	14,664	Process Heating
377	NWS	Industrial	Small Industrial	All	Process Heating	Air Curtains	5.7	6.3	6.4	1	69,829	0.42	100%	100%	0%	0%	50%	100%	14,664	Process Heating
378	NWS	Industrial	Small Industrial	All	Process Heating	Exhaust Gas Heat Recovery	2.3	2.6	2.7	1	69,829	0.42	100%	100%	0%	0%	50%	100%	14,664	Process Heating
379	NWS	Industrial	Small Industrial	All	Process Heating	Insulation	*N/A	*N/A	*N/A	0	0	0	0%	0%	0%	0%	0%	0%	0	*N/A
380	NWS	Industrial	Small Industrial	All	Process Heating	Advanced heating and Process Control	*N/A	*N/A	*N/A	0	0	0	0%	0%	0%	0%	0%	0%	0	*N/A
381	NWS	Industrial	Small Industrial	All	Process Heating	Combustion Optimization	*N/A	*N/A	*N/A	0	0	0	0%	0%	0%	0%	0%	0%	0	*N/A

Industrial Measures

Measure ID	Weather Sensitive	Sector	Sub-Sector	Building Type	MEASURE DESCRIPTION		MEASURE DOCUMENTATION			
					End Use	Measure Name	Measure Cost Source	Measure Savings Source	Measure Lifetime Source	Measure Unit per SubSector Unit Source
1	NWS	Industrial	Small Industrial	All	Motors - Other Applications	Operations and maintenance	US Department of Energy			
2	NWS	Industrial	Small Industrial	All	Motors - Other Applications	Match Motor Size to Load	US Department of Energy			
3	NWS	Industrial	Small Industrial	All	Motors - Other Applications	Motor Efficiency Upgrade	US Department of Energy			
4	NWS	Industrial	Small Industrial	All	Motors - Other Applications	Variable Speed Drives	US Department of Energy			
5	NWS	Industrial	Small Industrial	All	Pumps	Reduce Overall System Requirements	US Department of Energy			
6	NWS	Industrial	Small Industrial	All	Pumps	Match Pump Size to Load	US Department of Energy			
7	NWS	Industrial	Small Industrial	All	Pumps	Reduce or Control Pump Speed	US Department of Energy			
8	NWS	Industrial	Small Industrial	All	Pumps	Improve Pump Components	US Department of Energy			
9	NWS	Industrial	Small Industrial	All	Pumps	Operation and Maintenance	US Department of Energy			
10	NWS	Industrial	Small Industrial	All	Compressed Air	Reduce Overall System Requirements	US Department of Energy			
11	NWS	Industrial	Small Industrial	All	Compressed Air	Match Compressor Size to Load	US Department of Energy			
12	NWS	Industrial	Small Industrial	All	Compressed Air	Compressor Control	US Department of Energy			
13	NWS	Industrial	Small Industrial	All	Compressed Air	Improve Compressor Components	US Department of Energy			
14	NWS	Industrial	Small Industrial	All	Compressed Air	Operation and Maintenance	US Department of Energy			
15	NWS	Industrial	Small Industrial	All	Fans	Reduce Overall System Requirements	US Department of Energy			
16	NWS	Industrial	Small Industrial	All	Fans	Reduce or Control Fan Speed	US Department of Energy			
17	NWS	Industrial	Small Industrial	All	Fans	Improve Fan Components	US Department of Energy			
18	NWS	Industrial	Small Industrial	All	Fans	Operation and Maintenance	US Department of Energy			
19	NWS	Industrial	Small Industrial	All	PH	Advanced water heater controls	ICF	ICF	ICF	ICF
20	NWS	Industrial	Small Industrial	All	PH	Process Heat Recovery to Preheat Makeup Water	ICF	ICF	ICF	ICF
21	NWS	Industrial	Small Industrial	All	PH	Air Curtains (Oven)	ICF	ICF	ICF	ICF
22	NWS	Industrial	Small Industrial	All	PH	Insulation (Oven)	US Environmental Protection Agency			
23	NWS	Industrial	Small Industrial	All	PH	Preventative Oven Maintenance	ICF	ICF	ICF	ICF
24	NWS	Industrial	Small Industrial	All	PH	Air Curtains (Dryer)	ICF	ICF	ICF	ICF
25	NWS	Industrial	Small Industrial	All	PH	Insulation (Dryer)	US Environmental Protection Agency			
26	NWS	Industrial	Small Industrial	All	PH	Preventative Dryer Maintenance	ICF	ICF	ICF	ICF
27	NWS	Industrial	Small Industrial	All	PH	Preventative Furnace Maintenance	ICF	ICF	ICF	ICF
28	NWS	Industrial	Small Industrial	All	PH	Insulation (Furnace)	US Environmental Protection Agency			
29	NWS	Industrial	Small Industrial	All	PH	Preventative Kiln Maintenance	ICF	ICF	ICF	ICF
30	NWS	Industrial	Small Industrial	All	PH	Insulation (Kiln)	US Environmental Protection Agency			
31	NWS	Industrial	Small Industrial	All	PCR	High Efficiency Chiller	FEMP	FEMP	FEMP	FEMP
32	NWS	Industrial	Small Industrial	All	PCR	Optimized Distribution System	ICF	ICF	ICF	ICF
33	NWS	Industrial	Small Industrial	All	PCR	Floating head pressure controls	NRCAn	NRCAn	NRCAn	NRCAn
34	NWS	Industrial	Small Industrial	All	PCR	Premium efficiency refrigeration control system	ICF	ICF	ICF	ICF
35	NWS	Industrial	Small Industrial	All	PCR	Smart Defrost Controls	BC Hydro	BC Hydro	BC Hydro	BC Hydro
36	NWS	Industrial	Small Industrial	All	PCR	Doors, Covers and Curtains	Ontario Power Authority	Ontario Power Authority	Ontario Power Authority	Ontario Power Authority
37	NWS	Industrial	Small Industrial	All	PCR	Optimized chilled water temperature and/or optimized condenser temperature	US Environmental Protection Agency			
38	NWS	Industrial	Small Industrial	All	PCR	Preventative refrigeration/cooling system maintenance	Betterbricks	Betterbricks	Betterbricks	Betterbricks
39	NWS	Industrial	Small Industrial	All	PCR	Optimized condenser pressure	US Environmental Protection Agency			
40	NWS	Industrial	Small Industrial	All	PCR	VSD on chiller compressor	Ontario Power Authority	Ontario Power Authority	Ontario Power Authority	Ontario Power Authority
41	NWS	Industrial	Small Industrial	All	PCR	Free-cooling	US Environmental Protection Agency			
42	NWS	Industrial	Small Industrial	All	PCR	Improve insulation of refrigeration system	Heschong Machone Group	Heschong Machone Group	Heschong Machone Group	Heschong Machone Group
43	NWS	Industrial	Small Industrial	All	HVAC	Optimized duct design to improve efficiency	ICF	ICF	ICF	ICF
44	NWS	Industrial	Small Industrial	All	HVAC	Air Source Heat Pump for Backup Generators	Design & Engineering Services			
45	NWS	Industrial	Small Industrial	All	ONPU	High efficiency battery charger (for forklifts)	NRCAn	NRCAn	NRCAn	NRCAn
46	NWS	Industrial	Small Industrial	All	ONPU	HE Dry-Type Transformers	NRCAn	NRCAn	NRCAn	NRCAn
47	NWS	Industrial	Small Industrial	All	HVAC	Free cooling	ICF	ICF	ICF	ICF
48	NWS	Industrial	Small Industrial	All	HVAC	Radiant Heaters	ICF	ICF	ICF	ICF
49	NWS	Industrial	Small Industrial	All	HVAC	High efficiency non-packaged HVAC equipment	ICF	ICF	ICF	ICF
50	NWS	Industrial	Small Industrial	All	HVAC	Seasonal Temperature Settings Adjustments	ICF	ICF	ICF	ICF
51	NWS	Industrial	Small Industrial	All	HVAC	High-efficiency rooftop AC with an EER of 13.5	ICF	ICF	ICF	ICF
52	NWS	Industrial	Small Industrial	All	HVAC	Ground Source Heat Pump	ICF	ICF	ICF	ICF
53	NWS	Industrial	Small Industrial	All	HVAC	Ventilation Heat Recovery	ICF	ICF	ICF	ICF
54	NWS	Industrial	Small Industrial	All	HVAC	Automated Temperature Control	ICF	ICF	ICF	ICF
55	NWS	Industrial	Small Industrial	All	HVAC	Reduced Temperature Settings	ICF	ICF	ICF	ICF
56	NWS	Industrial	Small Industrial	All	HVAC	Destratification Fans	ICF	ICF	ICF	ICF
57	NWS	Industrial	Small Industrial	All	HVAC	Warehouse Loading Dock Seals	ICF	ICF	ICF	ICF
58	NWS	Industrial	Small Industrial	All	HVAC	Preventative Packaged HVAC Maintenance	ICF	ICF	ICF	ICF
59	NWS	Industrial	Small Industrial	All	HVAC	Heat Recovery from Processes to Heat Ventilation Make-up Air	US Department of Energy			
60	NWS	Industrial	Small Industrial	All	FL	High efficiency ballasts for lighting	CADET Energy Efficiency	CADET Energy Efficiency	CADET Energy Efficiency	CADET Energy Efficiency

Industrial Measures

Measure ID	Weather Sensitive	Sector	Sub-Sector	Building Type	MEASURE DESCRIPTION		MEASURE DOCUMENTATION			
					End Use	Measure Name	Measure Cost Source	Measure Savings Source	Measure Lifetime Source	Measure Unit per SubSector Unit Source
61	NWS	Industrial	Small Industrial	All	FL	High Efficiency Light fixtures	Ontario Power Authority	Ontario Power Authority	Ontario Power Authority	Ontario Power Authority
62	NWS	Industrial	Small Industrial	All	FL	Efficient Lighting Design	ICF	ICF	ICF	ICF
63	NWS	Industrial	Small Industrial	All	FL	Lighting controls: on/off timer settings	ICF	ICF	ICF	ICF
64	NWS	Industrial	Small Industrial	All	FL	Lighting controls: occupancy sensors	ICF	ICF	ICF	ICF
65	NWS	Industrial	Small Industrial	All	HVAC	Ventilation Optimization	ICF	ICF	ICF	ICF
66	NWS	Industrial	Small Industrial	All	HVAC	Premium efficiency ventilation control with VSD	BC Hydro	BC Hydro	BC Hydro	BC Hydro
67	NWS	Industrial	Small Industrial	All	HVAC	Demand-Controlled Ventilation	US Department of Energy			
68	NWS	Industrial	Other - Combined	All	Motors - Other Applications	Operations and maintenance	US Department of Energy			
69	NWS	Industrial	Other - Combined	All	Motors - Other Applications	Match Motor Size to Load	US Department of Energy			
70	NWS	Industrial	Other - Combined	All	Motors - Other Applications	Motor Efficiency Upgrade	US Department of Energy			
71	NWS	Industrial	Other - Combined	All	Motors - Other Applications	Variable Speed Drives	US Department of Energy			
72	NWS	Industrial	Other - Combined	All	Pumps	Reduce Overall System Requirements	US Department of Energy			
73	NWS	Industrial	Other - Combined	All	Pumps	Match Pump Size to Load	US Department of Energy			
74	NWS	Industrial	Other - Combined	All	Pumps	Reduce or Control Pump Speed	US Department of Energy			
75	NWS	Industrial	Other - Combined	All	Pumps	Improve Pump Components	US Department of Energy			
76	NWS	Industrial	Other - Combined	All	Pumps	Operation and Maintenance	US Department of Energy			
77	NWS	Industrial	Other - Combined	All	Compressed Air	Reduce Overall System Requirements	US Department of Energy			
78	NWS	Industrial	Other - Combined	All	Compressed Air	Match Compressor Size to Load	US Department of Energy			
79	NWS	Industrial	Other - Combined	All	Compressed Air	Compressor Control	US Department of Energy			
80	NWS	Industrial	Other - Combined	All	Compressed Air	Improve Compressor Components	US Department of Energy			
81	NWS	Industrial	Other - Combined	All	Compressed Air	Operation and Maintenance	US Department of Energy			
82	NWS	Industrial	Other - Combined	All	Fans	Reduce Overall System Requirements	US Department of Energy			
83	NWS	Industrial	Other - Combined	All	Fans	Reduce or Control Fan Speed	US Department of Energy			
84	NWS	Industrial	Other - Combined	All	Fans	Improve Fan Components	US Department of Energy			
85	NWS	Industrial	Other - Combined	All	Fans	Operation and Maintenance	US Department of Energy			
86	NWS	Industrial	Other - Combined	All	HVAC	Optimized Duct Design to Improve Efficiency	ICF	ICF	ICF	ICF
87	NWS	Industrial	Other - Combined	All	PH	Advanced Water Heater Controls	ICF	ICF	ICF	ICF
88	NWS	Industrial	Other - Combined	All	PH	Process Heat Recovery to Preheat Makeup Water	ICF	ICF	ICF	ICF
89	NWS	Industrial	Other - Combined	All	PH	Air Curtains (Oven)	ICF	ICF	ICF	ICF
90	NWS	Industrial	Other - Combined	All	PH	Insulation (Oven)	US Department of Energy			
91	NWS	Industrial	Other - Combined	All	PH	Preventative Oven Maintenance	ICF	ICF	ICF	ICF
92	NWS	Industrial	Other - Combined	All	PH	Air Curtains (Dryer)	ICF	ICF	ICF	ICF
93	NWS	Industrial	Other - Combined	All	PH	Insulation (Dryer)	US Department of Energy			
94	NWS	Industrial	Other - Combined	All	PH	Preventative Dryer Maintenance	ICF	ICF	ICF	ICF
95	NWS	Industrial	Other - Combined	All	PH	Optimized Distribution System	ICF	ICF	ICF	ICF
96	NWS	Industrial	Other - Combined	All	PH	Insulation (Dryer)	US Department of Energy			
97	NWS	Industrial	Other - Combined	All	PH	Preventative Dryer Maintenance	ICF	ICF	ICF	ICF
98	NWS	Industrial	Other - Combined	All	PH	Preventative Furnace Maintenance	ICF	ICF	ICF	ICF
99	NWS	Industrial	Other - Combined	All	PH	Insulation (Furnace)	ICF	ICF	ICF	ICF
100	NWS	Industrial	Other - Combined	All	PCR	High Efficiency Chiller	FEMP	FEMP	FEMP	FEMP
101	NWS	Industrial	Other - Combined	All	PCR	Floating head pressure controls	NRCAn	NRCAn	NRCAn	NRCAn
102	NWS	Industrial	Other - Combined	All	PCR	Premium Efficiency Refrigeration Control System	ICF	ICF	ICF	ICF
103	NWS	Industrial	Other - Combined	All	PCR	Smart Defrost Controls	BC Hydro	BC Hydro	BC Hydro	BC Hydro
104	NWS	Industrial	Other - Combined	All	PCR	Doors, Covers and Curtains	Ontario Power Authority	Ontario Power Authority	Ontario Power Authority	Ontario Power Authority
105	NWS	Industrial	Other - Combined	All	PCR	Optimized chilled water temperature and/or optimized condenser temperature	US Environmental Protection Agency			
106	NWS	Industrial	Other - Combined	All	PCR	Preventative Refrigeration/cooling System Maintenance	Betterbricks	Betterbricks	Betterbricks	Betterbricks
107	NWS	Industrial	Other - Combined	All	PCR	Optimized condenser pressure	US Environmental Protection Agency			
108	NWS	Industrial	Other - Combined	All	PCR	Free-cooling	US Environmental Protection Agency			
109	NWS	Industrial	Other - Combined	All	PCR	Improve Insulation of Refrigeration System	Heschong Machone Group	Heschong Machone Group	Heschong Machone Group	Heschong Machone Group
110	NWS	Industrial	Other - Combined	All	ONPU	HE Dry-Type Transformers	NRCAn	NRCAn	NRCAn	NRCAn
111	NWS	Industrial	Other - Combined	All	HVAC	Air Source Heat Pump for Backup Generators	Design & Engineering Services			
112	NWS	Industrial	Other - Combined	All	ONPU	High efficiency battery charger (for forklifts)	NRCAn	NRCAn	NRCAn	NRCAn
113	NWS	Industrial	Other - Combined	All	HVAC	Radiant Heaters	ICF	ICF	ICF	ICF
114	NWS	Industrial	Other - Combined	All	HVAC	High efficiency non-packaged HVAC equipment	ICF	ICF	ICF	ICF
115	NWS	Industrial	Other - Combined	All	HVAC	Seasonal Temperature Settings Adjustments	ICF	ICF	ICF	ICF
116	NWS	Industrial	Other - Combined	All	HVAC	High-efficiency rooftop AC with an EER of 13.5	ICF	ICF	ICF	ICF
117	NWS	Industrial	Other - Combined	All	HVAC	Ground Source Heat Pump	ICF	ICF	ICF	ICF
118	NWS	Industrial	Other - Combined	All	HVAC	Ventilation Heat Recovery	ICF	ICF	ICF	ICF
119	NWS	Industrial	Other - Combined	All	HVAC	Automated Temperature Control	ICF	ICF	ICF	ICF
120	NWS	Industrial	Other - Combined	All	HVAC	Reduced Temperature Settings	ICF	ICF	ICF	ICF

Industrial Measures

MEASURE DESCRIPTION							MEASURE DOCUMENTATION			
Measure ID	Weather Sensitive	Sector	Sub-Sector	Building Type	End Use	Measure Name	Measure Cost Source	Measure Savings Source	Measure Lifetime Source	Measure Unit per SubSector Unit Source
121	NWS	Industrial	Other - Combined	All	HVAC	Deaerification Fans	ICF	ICF	ICF	ICF
122	NWS	Industrial	Other - Combined	All	HVAC	Warehouse Loading Dock Seals	ICF	ICF	ICF	ICF
123	NWS	Industrial	Other - Combined	All	HVAC	Preventative Packaged HVAC Maintenance	ICF	ICF	ICF	ICF
124	NWS	Industrial	Other - Combined	All	HVAC	Heat Recovery from Processes to Heat Ventilation Make-up Air	US Department of Energy			
125	NWS	Industrial	Other - Combined	All	FL	High efficiency ballasts for lighting	CADDET Energy Efficiency	CADDET Energy Efficiency	CADDET Energy Efficiency	CADDET Energy Efficiency
126	NWS	Industrial	Other - Combined	All	FL	High Efficiency Light fixtures	Ontario Power Authority	Ontario Power Authority	Ontario Power Authority	Ontario Power Authority
127	NWS	Industrial	Other - Combined	All	FL	Efficient Lighting Design	ICF	ICF	ICF	ICF
128	NWS	Industrial	Other - Combined	All	FL	Lighting controls: on/off timer settings	ICF	ICF	ICF	ICF
129	NWS	Industrial	Other - Combined	All	FL	Lighting controls: occupancy sensors	ICF	ICF	ICF	ICF
130	NWS	Industrial	Other - Combined	All	HVAC	Ventilation Optimization	ICF	ICF	ICF	ICF
131	NWS	Industrial	Other - Combined	All	HVAC	Premium efficiency ventilation control with VSD	BC Hydro	BC Hydro	BC Hydro	BC Hydro
132	NWS	Industrial	Other - Combined	All	HVAC	Demand-Controlled Ventilation	Oregon Office of Energy			
133	NWS	Industrial	Food Products	All	Motors - Other Applications	Operations and maintenance	US Department of Energy			
134	NWS	Industrial	Food Products	All	Motors - Other Applications	Match Motor Size to Load	US Department of Energy			
135	NWS	Industrial	Food Products	All	Motors - Other Applications	Motor Efficiency Upgrade	US Department of Energy			
136	NWS	Industrial	Food Products	All	Motors - Other Applications	Variable Speed Drives	US Department of Energy			
137	NWS	Industrial	Food Products	All	Pumps	Reduce Overall System Requirements	US Department of Energy			
138	NWS	Industrial	Food Products	All	Pumps	Match Pump Size to Load	US Department of Energy			
139	NWS	Industrial	Food Products	All	Pumps	Reduce or Control Pump Speed	US Department of Energy			
140	NWS	Industrial	Food Products	All	Pumps	Improve Pump Components	US Department of Energy			
141	NWS	Industrial	Food Products	All	Pumps	Operation and Maintenance	US Department of Energy			
142	NWS	Industrial	Food Products	All	Compressed Air	Reduce Overall System Requirements	US Department of Energy			
143	NWS	Industrial	Food Products	All	Compressed Air	Match Compressor Size to Load	US Department of Energy			
144	NWS	Industrial	Food Products	All	Compressed Air	Compressor Control	US Department of Energy			
145	NWS	Industrial	Food Products	All	Compressed Air	Improve Compressor Components	US Department of Energy			
146	NWS	Industrial	Food Products	All	Compressed Air	Operation and Maintenance	US Department of Energy			
147	NWS	Industrial	Food Products	All	Fans	Reduce Overall System Requirements	US Department of Energy			
148	NWS	Industrial	Food Products	All	Fans	Reduce or Control Fan Speed	US Department of Energy			
149	NWS	Industrial	Food Products	All	Fans	Improve Fan Components	US Department of Energy			
150	NWS	Industrial	Food Products	All	Fans	Operation and Maintenance	US Department of Energy			
151	NWS	Industrial	Food Products	All	HVAC	Optimized Duct Design to Improve Efficiency	ICF	ICF	ICF	ICF
152	NWS	Industrial	Food Products	All	PH	Advanced Water Heater Controls	ICF	ICF	ICF	ICF
153	NWS	Industrial	Food Products	All	PH	Process Heat Recovery to Preheat Makeup Water	ICF	ICF	ICF	ICF
154	NWS	Industrial	Food Products	All	PH	Air Curtains (Oven)	ICF	ICF	ICF	ICF
155	NWS	Industrial	Food Products	All	PH	Insulation (Oven)	US Department of Energy			
156	NWS	Industrial	Food Products	All	PH	Preventative Oven Maintenance	ICF	ICF	ICF	ICF
157	NWS	Industrial	Food Products	All	PH	Air Curtains (Dryer)	ICF	ICF	ICF	ICF
158	NWS	Industrial	Food Products	All	PH	Insulation (Dryer)	US Department of Energy			
159	NWS	Industrial	Food Products	All	PH	Preventative Dryer Maintenance	ICF	ICF	ICF	ICF
160	NWS	Industrial	Food Products	All	PH	Optimized Distribution System	ICF	ICF	ICF	ICF
161	NWS	Industrial	Food Products	All	PH	Insulation (Dryer)	US Department of Energy			
162	NWS	Industrial	Food Products	All	PH	Preventative Dryer Maintenance	ICF	ICF	ICF	ICF
163	NWS	Industrial	Food Products	All	PH	Preventative Furnace Maintenance	ICF	ICF	ICF	ICF
164	NWS	Industrial	Food Products	All	PH	Insulation (Furnace)	ICF	ICF	ICF	ICF
165	NWS	Industrial	Food Products	All	PCR	High Efficiency Chiller	FEMP	FEMP	FEMP	FEMP
166	NWS	Industrial	Food Products	All	PCR	Floating head pressure controls	NRCAN	NRCAN	NRCAN	NRCAN
167	NWS	Industrial	Food Products	All	PCR	Premium Efficiency Refrigeration Control System	ICF	ICF	ICF	ICF
168	NWS	Industrial	Food Products	All	PCR	Smart Defrost Controls	BC Hydro	BC Hydro	BC Hydro	BC Hydro
169	NWS	Industrial	Food Products	All	PCR	Doors, Covers and Curtains	Ontario Power Authority	Ontario Power Authority	Ontario Power Authority	Ontario Power Authority
170	NWS	Industrial	Food Products	All	PCR	Optimized chilled water temperature and/or optimized condenser temperature	US Environmental Protection Agency			
171	NWS	Industrial	Food Products	All	PCR	Preventative Refrigeration/cooling System Maintenance	Betterbricks	Betterbricks	Betterbricks	Betterbricks
172	NWS	Industrial	Food Products	All	PCR	Optimized condenser pressure	US Environmental Protection Agency			
173	NWS	Industrial	Food Products	All	PCR	Free-cooling	US Environmental Protection Agency			
174	NWS	Industrial	Food Products	All	PCR	Improve Insulation of Refrigeration System	Heshchong Machone Group	Heshchong Machone Group	Heshchong Machone Group	Heshchong Machone Group
175	NWS	Industrial	Food Products	All	ONPU	HE Dry-Type Transformers	NRCAN	NRCAN	NRCAN	NRCAN
176	NWS	Industrial	Food Products	All	HVAC	Air Source Heat Pump for Backup Generators	Design & Engineering Services			
177	NWS	Industrial	Food Products	All	ONPU	High efficiency battery charger (for forklifts)	NRCAN	NRCAN	NRCAN	NRCAN
178	NWS	Industrial	Food Products	All	HVAC	Radiant Heaters	ICF	ICF	ICF	ICF
179	NWS	Industrial	Food Products	All	HVAC	High efficiency non-packaged HVAC equipment	ICF	ICF	ICF	ICF
180	NWS	Industrial	Food Products	All	HVAC	Seasonal Temperature Settings Adjustments	ICF	ICF	ICF	ICF

Industrial Measures

MEASURE DESCRIPTION						MEASURE DOCUMENTATION				
Measure ID	Weather Sensitive	Sector	Sub-Sector	Building Type	End Use	Measure Name	Measure Cost Source	Measure Savings Source	Measure Lifetime Source	Measure Unit per SubSector Unit Source
181	NWS	Industrial	Food Products	All	HVAC	High-efficiency rooftop AC with an EER of 13.5	ICF	ICF	ICF	ICF
182	NWS	Industrial	Food Products	All	HVAC	Ground Source Heat Pump	ICF	ICF	ICF	ICF
183	NWS	Industrial	Food Products	All	HVAC	Ventilation Heat Recovery	ICF	ICF	ICF	ICF
184	NWS	Industrial	Food Products	All	HVAC	Automated Temperature Control	ICF	ICF	ICF	ICF
185	NWS	Industrial	Food Products	All	HVAC	Reduced Temperature Settings	ICF	ICF	ICF	ICF
186	NWS	Industrial	Food Products	All	HVAC	Destratification Fans	ICF	ICF	ICF	ICF
187	NWS	Industrial	Food Products	All	HVAC	Warehouse Loading Dock Seals	ICF	ICF	ICF	ICF
188	NWS	Industrial	Food Products	All	HVAC	Preventative Packaged HVAC Maintenance	ICF	ICF	ICF	ICF
189	NWS	Industrial	Food Products	All	HVAC	Heat Recovery from Processes to Heat Ventilation Make-up Air	US Department of Energy			
190	NWS	Industrial	Food Products	All	FL	High efficiency ballasts for lighting	CADDET Energy Efficiency	CADDET Energy Efficiency	CADDET Energy Efficiency	CADDET Energy Efficiency
191	NWS	Industrial	Food Products	All	FL	High Efficiency Light fixtures	Ontario Power Authority	Ontario Power Authority	Ontario Power Authority	Ontario Power Authority
192	NWS	Industrial	Food Products	All	FL	Efficient Lighting Design	ICF	ICF	ICF	ICF
193	NWS	Industrial	Food Products	All	FL	Lighting controls: on/off timer settings	ICF	ICF	ICF	ICF
194	NWS	Industrial	Food Products	All	FL	Lighting controls: occupancy sensors	ICF	ICF	ICF	ICF
195	NWS	Industrial	Food Products	All	HVAC	Ventilation Optimization	ICF	ICF	ICF	ICF
196	NWS	Industrial	Food Products	All	HVAC	Premium efficiency ventilation control with VSD	BC Hydro	BC Hydro	BC Hydro	BC Hydro
197	NWS	Industrial	Food Products	All	HVAC	Demand-Controlled Ventilation	Oregon Office of Energy			
199	NWS	Industrial	Industrial Gases	All	Total	Integrated Control System	ICF	ICF	ICF	ICF
200	NWS	Industrial	Industrial Gases	All	Total	Process Integration and Pinch Analysis	ICF	ICF	ICF	ICF
201	NWS	Industrial	Industrial Gases	All	Total	Sub-Metering	ICF	ICF	ICF	ICF
202	NWS	Industrial	Industrial Gases	All	HVAC	High-efficiency rooftop AC with an EER of 13.13	ICF	ICF	ICF	ICF
203	NWS	Industrial	Industrial Gases	All	Process Heating	Water-heater right sizing and load management	ICF	ICF	ICF	ICF
204	NWS	Industrial	Industrial Gases	All	Process Heating	Insulation	ICF	ICF	ICF	ICF
205	NWS	Industrial	Industrial Gases	All	Boilers	Blowdown Control	ICF	ICF	ICF	ICF
206	NWS	Industrial	Industrial Gases	All	Boilers	Boiler Right Sizing	ICF	ICF	ICF	ICF
207	NWS	Industrial	Industrial Gases	All	Boilers	Condensing Boiler	ICF	ICF	ICF	ICF
208	NWS	Industrial	Industrial Gases	All	Boilers	Direct-Contact Hot Water Heaters	ICF	ICF	ICF	ICF
209	NWS	Industrial	Industrial Gases	All	Boilers	High Efficiency Burner	ICF	ICF	ICF	ICF
210	NWS	Industrial	Industrial Gases	All	Boilers	Instantaneous Steam Generation	ICF	ICF	ICF	ICF
211	NWS	Industrial	Industrial Gases	All	Boilers	Blowdown Heat Recovery	ICF	ICF	ICF	ICF
212	NWS	Industrial	Industrial Gases	All	Boilers	Boiler combustion air preheat	ICF	ICF	ICF	ICF
213	NWS	Industrial	Industrial Gases	All	Boilers	Preventative Boiler Maintenance	ICF	ICF	ICF	ICF
214	NWS	Industrial	Industrial Gases	All	Boilers	Boiler Water Treatment	ICF	ICF	ICF	ICF
215	NWS	Industrial	Industrial Gases	All	Boilers	Condensate Return	ICF	ICF	ICF	ICF
216	NWS	Industrial	Industrial Gases	All	Boilers	Economizer	ICF	ICF	ICF	ICF
217	NWS	Industrial	Industrial Gases	All	Boilers	Insulation	ICF	ICF	ICF	ICF
218	NWS	Industrial	Industrial Gases	All	Boilers	Minimize Deaerator Vent Losses	ICF	ICF	ICF	ICF
219	NWS	Industrial	Industrial Gases	All	Boilers	Process Heat Recovery to Preheat Makeup Water	ICF	ICF	ICF	ICF
220	NWS	Industrial	Industrial Gases	All	Boilers	Steam Trap Survey and Repair	ICF	ICF	ICF	ICF
221	NWS	Industrial	Industrial Gases	All	Boilers	First Generation Super Boilers	ICF	ICF	ICF	ICF
222	NWS	Industrial	Industrial Gases	All	Process Heating	High Efficiency Burner	ICF	ICF	ICF	ICF
223	NWS	Industrial	Industrial Gases	All	Process Heating	Infrared Ovens	ICF	ICF	ICF	ICF
224	NWS	Industrial	Industrial Gases	All	Process Heating	Process Heat Recovery to Preheat Makeup Water	ICF	ICF	ICF	ICF
225	NWS	Industrial	Industrial Gases	All	Process Heating	Air Curtains	ICF	ICF	ICF	ICF
226	NWS	Industrial	Industrial Gases	All	Process Heating	Exhaust Gas Heat Recovery	ICF	ICF	ICF	ICF
227	NWS	Industrial	Industrial Gases	All	Process Heating	Insulation	ICF	ICF	ICF	ICF
228	NWS	Industrial	Industrial Gases	All	Process Heating	Advanced heating and Process Control	ICF	ICF	ICF	ICF
229	NWS	Industrial	Industrial Gases	All	Process Heating	Combustion Optimization	ICF	ICF	ICF	ICF
230	NWS	Industrial	Industrial Gases	All	Process Heating	Radiant Tube burners	ICF	ICF	ICF	ICF
231	NWS	Industrial	Industrial Gases	All	HVAC	Radiant Heaters	ICF	ICF	ICF	ICF
232	NWS	Industrial	Industrial Gases	All	Process Heating	Solar Walls	ICF	ICF	ICF	ICF
233	NWS	Industrial	Industrial Gases	All	HVAC	Air Compressor Heat Recovery	ICF	ICF	ICF	ICF
234	NWS	Industrial	Industrial Gases	All	HVAC	Air Curtains	ICF	ICF	ICF	ICF
235	NWS	Industrial	Industrial Gases	All	HVAC	Destratification Fans	ICF	ICF	ICF	ICF
236	NWS	Industrial	Industrial Gases	All	HVAC	Ventilation Heat Recovery	ICF	ICF	ICF	ICF
237	NWS	Industrial	Industrial Gases	All	HVAC	Ventilation Optimization	ICF	ICF	ICF	ICF
238	NWS	Industrial	Industrial Gases	All	HVAC	Warehouse Loading Dock Seals	ICF	ICF	ICF	ICF
239	NWS	Industrial	Industrial Gases	All	HVAC	Automated Temperature reset Control	ICF	ICF	ICF	ICF
240	NWS	Industrial	Industrial Gases	All	HVAC	Reduced Temperature Settings	ICF	ICF	ICF	ICF

Industrial Measures

Measure ID	Weather Sensitive	Sector	Sub-Sector	MEASURE DESCRIPTION			MEASURE DOCUMENTATION			
				Building Type	End Use	Measure Name	Measure Cost Source	Measure Savings Source	Measure Lifetime Source	Measure Unit per SubSector Unit Source
241	NWS	Industrial	Industrial Gases	All	Total	Pollution Control Measures	ICF	ICF	ICF	ICF
242	NWS	Industrial	Industrial Gases	All	Process Heating	CFD Modelling	ICF	ICF	ICF	ICF
243	NWS	Industrial	Industrial Gases	All	Total	Energy Management	ICF	ICF	ICF	ICF
244	NWS	Industrial	Industrial Gases	All	Process Heating	Improved airflow in dryer windbox	ICF	ICF	ICF	ICF
245	NWS	Industrial	Industrial Gases	All	Process Heating	Preventative Oven Maintenance	ICF	ICF	ICF	ICF
246	NWS	Industrial	Industrial Gases	All	Process Heating	Preventative Furnace Maintenance	ICF	ICF	ICF	ICF
247	NWS	Industrial	Industrial Gases	All	Process Heating	Preventative Dryer Maintenance	ICF	ICF	ICF	ICF
248	NWS	Industrial	Industrial Gases	All	Process Heating	High Efficiency Burner	ICF	ICF	ICF	ICF
249	NWS	Industrial	Industrial Gases	All	Process Heating	Air Curtains	ICF	ICF	ICF	ICF
250	NWS	Industrial	Industrial Gases	All	Process Heating	Exhaust Gas Heat Recovery	ICF	ICF	ICF	ICF
251	NWS	Industrial	Industrial Gases	All	Process Heating	Insulation	ICF	ICF	ICF	ICF
252	NWS	Industrial	Industrial Gases	All	Process Heating	Advanced heating and Process Control	ICF	ICF	ICF	ICF
253	NWS	Industrial	Industrial Gases	All	Process Heating	Combustion Optimization	ICF	ICF	ICF	ICF
254	NWS	Industrial	Industrial Gases	All	Process Heating	High Efficiency Burner	ICF	ICF	ICF	ICF
255	NWS	Industrial	Industrial Gases	All	Process Heating	Air Curtains	ICF	ICF	ICF	ICF
256	NWS	Industrial	Industrial Gases	All	Process Heating	Exhaust Gas Heat Recovery	ICF	ICF	ICF	ICF
257	NWS	Industrial	Industrial Gases	All	Process Heating	Insulation	ICF	ICF	ICF	ICF
258	NWS	Industrial	Industrial Gases	All	Process Heating	Advanced heating and Process Control	ICF	ICF	ICF	ICF
259	NWS	Industrial	Industrial Gases	All	Process Heating	Combustion Optimization	ICF	ICF	ICF	ICF
260	NWS	Industrial	All Other	All	Total	Integrated Control System	ICF	ICF	ICF	ICF
261	NWS	Industrial	All Other	All	Total	Process Integration and Pinch Analysis	ICF	ICF	ICF	ICF
262	NWS	Industrial	All Other	All	Total	Sub-Metering	ICF	ICF	ICF	ICF
263	NWS	Industrial	All Other	All	HVAC	High-efficiency rooftop AC with an EER of 13.13	ICF	ICF	ICF	ICF
264	NWS	Industrial	All Other	All	Process Heating	Water-heater right sizing and load management	ICF	ICF	ICF	ICF
265	NWS	Industrial	All Other	All	Process Heating	Insulation	ICF	ICF	ICF	ICF
266	NWS	Industrial	All Other	All	Boilers	Blowdown Control	ICF	ICF	ICF	ICF
267	NWS	Industrial	All Other	All	Boilers	Boiler Right Sizing	ICF	ICF	ICF	ICF
268	NWS	Industrial	All Other	All	Boilers	Condensing Boiler	ICF	ICF	ICF	ICF
269	NWS	Industrial	All Other	All	Boilers	Direct-Contact Hot Water Heaters	ICF	ICF	ICF	ICF
270	NWS	Industrial	All Other	All	Boilers	High Efficiency Burner	ICF	ICF	ICF	ICF
271	NWS	Industrial	All Other	All	Boilers	Instantaneous Steam Generation	ICF	ICF	ICF	ICF
272	NWS	Industrial	All Other	All	Boilers	Blowdown Heat Recovery	ICF	ICF	ICF	ICF
273	NWS	Industrial	All Other	All	Boilers	Boiler combustion air preheat	ICF	ICF	ICF	ICF
274	NWS	Industrial	All Other	All	Boilers	Preventative Boiler Maintenance	ICF	ICF	ICF	ICF
275	NWS	Industrial	All Other	All	Boilers	Boiler Water Treatment	ICF	ICF	ICF	ICF
276	NWS	Industrial	All Other	All	Boilers	Condensate Return	ICF	ICF	ICF	ICF
277	NWS	Industrial	All Other	All	Boilers	Economizer	ICF	ICF	ICF	ICF
278	NWS	Industrial	All Other	All	Boilers	Insulation	ICF	ICF	ICF	ICF
279	NWS	Industrial	All Other	All	Boilers	Minimize Deaerator Vent Losses	ICF	ICF	ICF	ICF
280	NWS	Industrial	All Other	All	Boilers	Process Heat Recovery to Preheat Makeup Water	ICF	ICF	ICF	ICF
281	NWS	Industrial	All Other	All	Boilers	Steam Trap Survey and Repair	ICF	ICF	ICF	ICF
282	NWS	Industrial	All Other	All	Boilers	First Generation Super Boilers	ICF	ICF	ICF	ICF
283	NWS	Industrial	All Other	All	Process Heating	High Efficiency Burner	ICF	ICF	ICF	ICF
284	NWS	Industrial	All Other	All	Process Heating	Infrared Ovens	ICF	ICF	ICF	ICF
285	NWS	Industrial	All Other	All	Process Heating	Process Heat Recovery to Preheat Makeup Water	ICF	ICF	ICF	ICF
286	NWS	Industrial	All Other	All	Process Heating	Air Curtains	ICF	ICF	ICF	ICF
287	NWS	Industrial	All Other	All	Process Heating	Exhaust Gas Heat Recovery	ICF	ICF	ICF	ICF
288	NWS	Industrial	All Other	All	Process Heating	Insulation	ICF	ICF	ICF	ICF
289	NWS	Industrial	All Other	All	Process Heating	Advanced heating and Process Control	ICF	ICF	ICF	ICF
290	NWS	Industrial	All Other	All	Process Heating	Combustion Optimization	ICF	ICF	ICF	ICF
291	NWS	Industrial	All Other	All	Process Heating	Radiant Tube burners	ICF	ICF	ICF	ICF
292	NWS	Industrial	All Other	All	Process Heating	Radiant Heaters	ICF	ICF	ICF	ICF
293	NWS	Industrial	All Other	All	Process Heating	Solar Walls	ICF	ICF	ICF	ICF
294	NWS	Industrial	All Other	All	HVAC	Air Compressor Heat Recovery	ICF	ICF	ICF	ICF
295	NWS	Industrial	All Other	All	HVAC	Air Curtains	ICF	ICF	ICF	ICF
296	NWS	Industrial	All Other	All	HVAC	Destratification Fans	ICF	ICF	ICF	ICF
297	NWS	Industrial	All Other	All	HVAC	Ventilation Heat Recovery	ICF	ICF	ICF	ICF
298	NWS	Industrial	All Other	All	HVAC	Ventilation Optimization	ICF	ICF	ICF	ICF
299	NWS	Industrial	All Other	All	HVAC	Warehouse Loading Dock Seals	ICF	ICF	ICF	ICF
300	NWS	Industrial	All Other	All	HVAC	Automated Temperature reset Control	ICF	ICF	ICF	ICF

Industrial Measures

Measure ID	Weather Sensitive	Sector	Sub-Sector	Building Type	MEASURE DESCRIPTION		MEASURE DOCUMENTATION			
					End Use	Measure Name	Measure Cost Source	Measure Savings Source	Measure Lifetime Source	Measure Unit per SubSector Unit Source
301	NWS	Industrial	All Other	All	HVAC	Reduced Temperature Settings	ICF	ICF	ICF	ICF
302	NWS	Industrial	All Other	All	Process Heating	Pollution Control Measures	ICF	ICF	ICF	ICF
303	NWS	Industrial	All Other	All	Process Heating	CFD Modelling	ICF	ICF	ICF	ICF
304	NWS	Industrial	All Other	All	Total	Energy Management	ICF	ICF	ICF	ICF
305	NWS	Industrial	All Other	All	Process Heating	Improved airflow in dryer windbox	ICF	ICF	ICF	ICF
306	NWS	Industrial	All Other	All	Process Heating	Preventative Oven Maintenance	ICF	ICF	ICF	ICF
307	NWS	Industrial	All Other	All	Process Heating	Preventative Furnace Maintenance	ICF	ICF	ICF	ICF
308	NWS	Industrial	All Other	All	Process Heating	Preventative Dryer Maintenance	ICF	ICF	ICF	ICF
309	NWS	Industrial	All Other	All	Process Heating	High Efficiency Burner	ICF	ICF	ICF	ICF
310	NWS	Industrial	All Other	All	Process Heating	Air Curtains	ICF	ICF	ICF	ICF
311	NWS	Industrial	All Other	All	Process Heating	Exhaust Gas Heat Recovery	ICF	ICF	ICF	ICF
312	NWS	Industrial	All Other	All	Process Heating	Insulation	ICF	ICF	ICF	ICF
313	NWS	Industrial	All Other	All	Process Heating	Advanced heating and Process Control	ICF	ICF	ICF	ICF
314	NWS	Industrial	All Other	All	Process Heating	Combustion Optimization	ICF	ICF	ICF	ICF
315	NWS	Industrial	All Other	All	Process Heating	High Efficiency Burner	ICF	ICF	ICF	ICF
316	NWS	Industrial	All Other	All	Process Heating	Air Curtains	ICF	ICF	ICF	ICF
317	NWS	Industrial	All Other	All	Process Heating	Exhaust Gas Heat Recovery	ICF	ICF	ICF	ICF
318	NWS	Industrial	All Other	All	Process Heating	Insulation	ICF	ICF	ICF	ICF
319	NWS	Industrial	All Other	All	Process Heating	Advanced heating and Process Control	ICF	ICF	ICF	ICF
320	NWS	Industrial	All Other	All	Process Heating	Combustion Optimization	ICF	ICF	ICF	ICF
321	NWS	Industrial	Small Industrial	All	Total	Integrated Control System	ICF	ICF	ICF	ICF
322	NWS	Industrial	Small Industrial	All	Total	Process Integration and Pinch Analysis	ICF	ICF	ICF	ICF
323	NWS	Industrial	Small Industrial	All	Total	Sub-Metering	ICF	ICF	ICF	ICF
324	NWS	Industrial	Small Industrial	All	HVAC	High-efficiency rooftop AC with an EER of 13.13	ICF	ICF	ICF	ICF
325	NWS	Industrial	Small Industrial	All	Process Heating	Water-heater right sizing and load management	ICF	ICF	ICF	ICF
326	NWS	Industrial	Small Industrial	All	Process Heating	Insulation	ICF	ICF	ICF	ICF
327	NWS	Industrial	Small Industrial	All	Boilers	Blowdown Control	ICF	ICF	ICF	ICF
328	NWS	Industrial	Small Industrial	All	Boilers	Boiler Right Sizing	ICF	ICF	ICF	ICF
329	NWS	Industrial	Small Industrial	All	Boilers	Condensing Boiler	ICF	ICF	ICF	ICF
330	NWS	Industrial	Small Industrial	All	Boilers	Direct-Contact Hot Water Heaters	ICF	ICF	ICF	ICF
331	NWS	Industrial	Small Industrial	All	Boilers	High Efficiency Burner	ICF	ICF	ICF	ICF
332	NWS	Industrial	Small Industrial	All	Boilers	Instantaneous Steam Generation	ICF	ICF	ICF	ICF
333	NWS	Industrial	Small Industrial	All	Boilers	Blowdown Heat Recovery	ICF	ICF	ICF	ICF
334	NWS	Industrial	Small Industrial	All	Boilers	Boiler combustion air preheat	ICF	ICF	ICF	ICF
335	NWS	Industrial	Small Industrial	All	Boilers	Preventative Boiler Maintenance	ICF	ICF	ICF	ICF
336	NWS	Industrial	Small Industrial	All	Boilers	Boiler Water Treatment	ICF	ICF	ICF	ICF
337	NWS	Industrial	Small Industrial	All	Boilers	Condensate Return	ICF	ICF	ICF	ICF
338	NWS	Industrial	Small Industrial	All	Boilers	Economizer	ICF	ICF	ICF	ICF
339	NWS	Industrial	Small Industrial	All	Boilers	Insulation	ICF	ICF	ICF	ICF
340	NWS	Industrial	Small Industrial	All	Boilers	Minimize Deaerator Vent Losses	ICF	ICF	ICF	ICF
341	NWS	Industrial	Small Industrial	All	Boilers	Process Heat Recovery to Preheat Makeup Water	ICF	ICF	ICF	ICF
342	NWS	Industrial	Small Industrial	All	Boilers	Steam Trap Survey and Repair	ICF	ICF	ICF	ICF
343	NWS	Industrial	Small Industrial	All	Boilers	First Generation Super Boilers	ICF	ICF	ICF	ICF
344	NWS	Industrial	Small Industrial	All	Process Heating	High Efficiency Burner	ICF	ICF	ICF	ICF
345	NWS	Industrial	Small Industrial	All	Process Heating	Infrared Ovens	ICF	ICF	ICF	ICF
346	NWS	Industrial	Small Industrial	All	Process Heating	Process Heat Recovery to Preheat Makeup Water	ICF	ICF	ICF	ICF
347	NWS	Industrial	Small Industrial	All	Process Heating	Air Curtains	ICF	ICF	ICF	ICF
348	NWS	Industrial	Small Industrial	All	Process Heating	Exhaust Gas Heat Recovery	ICF	ICF	ICF	ICF
349	NWS	Industrial	Small Industrial	All	Process Heating	Insulation	ICF	ICF	ICF	ICF
350	NWS	Industrial	Small Industrial	All	Process Heating	Advanced heating and Process Control	ICF	ICF	ICF	ICF
351	NWS	Industrial	Small Industrial	All	Process Heating	Combustion Optimization	ICF	ICF	ICF	ICF
352	NWS	Industrial	Small Industrial	All	Process Heating	Radiant Tube burners	ICF	ICF	ICF	ICF
353	NWS	Industrial	Small Industrial	All	HVAC	Radiant Heaters	ICF	ICF	ICF	ICF
354	NWS	Industrial	Small Industrial	All	Process Heating	Solar Walls	ICF	ICF	ICF	ICF
355	NWS	Industrial	Small Industrial	All	HVAC	Air Compressor Heat Recovery	ICF	ICF	ICF	ICF
356	NWS	Industrial	Small Industrial	All	HVAC	Air Curtains	ICF	ICF	ICF	ICF
357	NWS	Industrial	Small Industrial	All	HVAC	Destratification Fans	ICF	ICF	ICF	ICF
358	NWS	Industrial	Small Industrial	All	HVAC	Ventilation Heat Recovery	ICF	ICF	ICF	ICF
359	NWS	Industrial	Small Industrial	All	HVAC	Ventilation Optimization	ICF	ICF	ICF	ICF
360	NWS	Industrial	Small Industrial	All	HVAC	Warehouse Loading Dock Seals	ICF	ICF	ICF	ICF

Industrial Measures

MEASURE DESCRIPTION						MEASURE DOCUMENTATION				
Measure ID	Weather Sensitive	Sector	Sub-Sector	Building Type	End Use	Measure Name	Measure Cost Source	Measure Savings Source	Measure Lifetime Source	Measure Unit per SubSector Unit Source
361	NWS	Industrial	Small Industrial	All	HVAC	Automated Temperature reset Control	ICF	ICF	ICF	ICF
362	NWS	Industrial	Small Industrial	All	HVAC	Reduced Temperature Settings	ICF	ICF	ICF	ICF
363	NWS	Industrial	Small Industrial	All	Total	Pollution Control Measures	ICF	ICF	ICF	ICF
364	NWS	Industrial	Small Industrial	All	Process Heating	CFD Modelling	ICF	ICF	ICF	ICF
365	NWS	Industrial	Small Industrial	All	Total	Energy Management	ICF	ICF	ICF	ICF
366	NWS	Industrial	Small Industrial	All	Process Heating	Improved airflow in dryer windbox	ICF	ICF	ICF	ICF
367	NWS	Industrial	Small Industrial	All	Process Heating	Preventative Oven Maintenance	ICF	ICF	ICF	ICF
368	NWS	Industrial	Small Industrial	All	Process Heating	Preventative Furnace Maintenance	ICF	ICF	ICF	ICF
369	NWS	Industrial	Small Industrial	All	Process Heating	Preventative Dryer Maintenance	ICF	ICF	ICF	ICF
370	NWS	Industrial	Small Industrial	All	Process Heating	High Efficiency Burner	ICF	ICF	ICF	ICF
371	NWS	Industrial	Small Industrial	All	Process Heating	Air Curtains	ICF	ICF	ICF	ICF
372	NWS	Industrial	Small Industrial	All	Process Heating	Exhaust Gas Heat Recovery	ICF	ICF	ICF	ICF
373	NWS	Industrial	Small Industrial	All	Process Heating	Insulation	ICF	ICF	ICF	ICF
374	NWS	Industrial	Small Industrial	All	Process Heating	Advanced heating and Process Control	ICF	ICF	ICF	ICF
375	NWS	Industrial	Small Industrial	All	Process Heating	Combustion Optimization	ICF	ICF	ICF	ICF
376	NWS	Industrial	Small Industrial	All	Process Heating	High Efficiency Burner	ICF	ICF	ICF	ICF
377	NWS	Industrial	Small Industrial	All	Process Heating	Air Curtains	ICF	ICF	ICF	ICF
378	NWS	Industrial	Small Industrial	All	Process Heating	Exhaust Gas Heat Recovery	ICF	ICF	ICF	ICF
379	NWS	Industrial	Small Industrial	All	Process Heating	Insulation	ICF	ICF	ICF	ICF
380	NWS	Industrial	Small Industrial	All	Process Heating	Advanced heating and Process Control	ICF	ICF	ICF	ICF
381	NWS	Industrial	Small Industrial	All	Process Heating	Combustion Optimization	ICF	ICF	ICF	ICF

Industrial Measures

MEASURE DESCRIPTION					MEASURE DOCUMENTATION						
Measure ID	Weather Sensitive	Sector	Sub-Sector	Building Type	End Use	Measure Name	Measure Cost Source	Measure Savings Source	Measure Lifetime Source	Measure Unit per SubSector Unit Source	Applicability
1	NWS	Industrial	Small Industrial	All	Motors - Other Applications	Operations and maintenance	US Department of Energy	US Department of Energy			
2	NWS	Industrial	Small Industrial	All	Motors - Other Applications	Match Motor Size to Load	US Department of Energy	US Department of Energy			
3	NWS	Industrial	Small Industrial	All	Motors - Other Applications	Motor Efficiency Upgrade	US Department of Energy	US Department of Energy			
4	NWS	Industrial	Small Industrial	All	Motors - Other Applications	Variable Speed Drives	US Department of Energy	US Department of Energy			
5	NWS	Industrial	Small Industrial	All	Pumps	Reduce Overall System Requirements	US Department of Energy	US Department of Energy			
6	NWS	Industrial	Small Industrial	All	Pumps	Match Pump Size to Load	US Department of Energy	US Department of Energy			
7	NWS	Industrial	Small Industrial	All	Pumps	Reduce or Control Pump Speed	US Department of Energy	US Department of Energy			
8	NWS	Industrial	Small Industrial	All	Pumps	Improve Pump Components	US Department of Energy	US Department of Energy			
9	NWS	Industrial	Small Industrial	All	Pumps	Operation and Maintenance	US Department of Energy	US Department of Energy			
10	NWS	Industrial	Small Industrial	All	Compressed Air	Reduce Overall System Requirements	US Department of Energy	US Department of Energy			
11	NWS	Industrial	Small Industrial	All	Compressed Air	Match Compressor Size to Load	US Department of Energy	US Department of Energy			
12	NWS	Industrial	Small Industrial	All	Compressed Air	Compressor Control	US Department of Energy	US Department of Energy			
13	NWS	Industrial	Small Industrial	All	Compressed Air	Improve Compressor Components	US Department of Energy	US Department of Energy			
14	NWS	Industrial	Small Industrial	All	Compressed Air	Operation and Maintenance	US Department of Energy	US Department of Energy			
15	NWS	Industrial	Small Industrial	All	Fans	Reduce Overall System Requirements	US Department of Energy	US Department of Energy			
16	NWS	Industrial	Small Industrial	All	Fans	Reduce or Control Fan Speed	US Department of Energy	US Department of Energy			
17	NWS	Industrial	Small Industrial	All	Fans	Improve Fan Components	US Department of Energy	US Department of Energy			
18	NWS	Industrial	Small Industrial	All	Fans	Operation and Maintenance	US Department of Energy	US Department of Energy			
19	NWS	Industrial	Small Industrial	All	PH	Advanced water heater controls	ICF	ICF	ICF	ICF	ICF
20	NWS	Industrial	Small Industrial	All	PH	Process Heat Recovery to Preheat Makeup Water	ICF	ICF	ICF	ICF	ICF
21	NWS	Industrial	Small Industrial	All	PH	Air Curtains (Oven)	ICF	ICF	ICF	ICF	ICF
22	NWS	Industrial	Small Industrial	All	PH	Insulation (Oven)	US Environmental Protection Agency	US Environmental Protection Agency			
23	NWS	Industrial	Small Industrial	All	PH	Preventative Oven Maintenance	ICF	ICF	ICF	ICF	ICF
24	NWS	Industrial	Small Industrial	All	PH	Air Curtains (Dryer)	ICF	ICF	ICF	ICF	ICF
25	NWS	Industrial	Small Industrial	All	PH	Insulation (Dryer)	US Environmental Protection Agency	US Environmental Protection Agency			
26	NWS	Industrial	Small Industrial	All	PH	Preventative Dryer Maintenance	ICF	ICF	ICF	ICF	ICF
27	NWS	Industrial	Small Industrial	All	PH	Preventative Furnace Maintenance	ICF	ICF	ICF	ICF	ICF
28	NWS	Industrial	Small Industrial	All	PH	Insulation (Furnace)	US Environmental Protection Agency	US Environmental Protection Agency			
29	NWS	Industrial	Small Industrial	All	PH	Preventative Kiln Maintenance	ICF	ICF	ICF	ICF	ICF
30	NWS	Industrial	Small Industrial	All	PH	Insulation (Kiln)	US Environmental Protection Agency	US Environmental Protection Agency			
31	NWS	Industrial	Small Industrial	All	PCR	High Efficiency Chiller	FEMP	FEMP	FEMP	FEMP	FEMP
32	NWS	Industrial	Small Industrial	All	PCR	Optimized Distribution System	ICF	ICF	ICF	ICF	ICF
33	NWS	Industrial	Small Industrial	All	PCR	Floating head pressure controls	NRCAn	NRCAn	NRCAn	NRCAn	NRCAn
34	NWS	Industrial	Small Industrial	All	PCR	Premium efficiency refrigeration control system	ICF	ICF	ICF	ICF	ICF
35	NWS	Industrial	Small Industrial	All	PCR	Smart Defrost Controls	BC Hydro	BC Hydro	BC Hydro	BC Hydro	BC Hydro
36	NWS	Industrial	Small Industrial	All	PCR	Doors, Covers and Curtains	Ontario Power Authority	Ontario Power Authority	Ontario Power Authority	Ontario Power Authority	Ontario Power Authority
37	NWS	Industrial	Small Industrial	All	PCR	Optimized chilled water temperature and/or optimized condenser temperature	US Environmental Protection Agency	US Environmental Protection Agency			
38	NWS	Industrial	Small Industrial	All	PCR	Preventative refrigeration/cooling system maintenance	Betterbricks	Betterbricks	Betterbricks	Betterbricks	Betterbricks
39	NWS	Industrial	Small Industrial	All	PCR	Optimized condenser pressure	US Environmental Protection Agency	US Environmental Protection Agency			
40	NWS	Industrial	Small Industrial	All	PCR	VSD on chiller compressor	Ontario Power Authority	Ontario Power Authority	Ontario Power Authority	Ontario Power Authority	Ontario Power Authority
41	NWS	Industrial	Small Industrial	All	PCR	Free-cooling	US Environmental Protection Agency	US Environmental Protection Agency			
42	NWS	Industrial	Small Industrial	All	PCR	Improve insulation of refrigeration system	Heschong Machone Group	Heschong Machone Group	Heschong Machone Group	Heschong Machone Group	Heschong Machone Group
43	NWS	Industrial	Small Industrial	All	HVAC	Optimized duct design to improve efficiency	ICF	ICF	ICF	ICF	ICF
44	NWS	Industrial	Small Industrial	All	HVAC	Air Source Heat Pump for Backup Generators	Design & Engineering Services	Design & Engineering Services			
45	NWS	Industrial	Small Industrial	All	ONPU	High efficiency battery charger (for forklifts)	NRCAn	NRCAn	NRCAn	NRCAn	NRCAn
46	NWS	Industrial	Small Industrial	All	ONPU	HE Dry-Type Transformers	NRCAn	NRCAn	NRCAn	NRCAn	NRCAn
47	NWS	Industrial	Small Industrial	All	HVAC	Free cooling	ICF	ICF	ICF	ICF	ICF
48	NWS	Industrial	Small Industrial	All	HVAC	Radiant Heaters	ICF	ICF	ICF	ICF	ICF
49	NWS	Industrial	Small Industrial	All	HVAC	High efficiency non-packaged HVAC equipment	ICF	ICF	ICF	ICF	ICF
50	NWS	Industrial	Small Industrial	All	HVAC	Seasonal Temperature Settings Adjustments	ICF	ICF	ICF	ICF	ICF
51	NWS	Industrial	Small Industrial	All	HVAC	High-efficiency rooftop AC with an EER of 13.5	ICF	ICF	ICF	ICF	ICF
52	NWS	Industrial	Small Industrial	All	HVAC	Ground Source Heat Pump	ICF	ICF	ICF	ICF	ICF
53	NWS	Industrial	Small Industrial	All	HVAC	Ventilation Heat Recovery	ICF	ICF	ICF	ICF	ICF
54	NWS	Industrial	Small Industrial	All	HVAC	Automated Temperature Control	ICF	ICF	ICF	ICF	ICF
55	NWS	Industrial	Small Industrial	All	HVAC	Reduced Temperature Settings	ICF	ICF	ICF	ICF	ICF
56	NWS	Industrial	Small Industrial	All	HVAC	Destratification Fans	ICF	ICF	ICF	ICF	ICF
57	NWS	Industrial	Small Industrial	All	HVAC	Warehouse Loading Dock Seals	ICF	ICF	ICF	ICF	ICF
58	NWS	Industrial	Small Industrial	All	HVAC	Preventative Packaged HVAC Maintenance	ICF	ICF	ICF	ICF	ICF
59	NWS	Industrial	Small Industrial	All	HVAC	Heat Recovery from Processes to Heat Ventilation Make-up Air	US Department of Energy	US Department of Energy			
60	NWS	Industrial	Small Industrial	All	FL	High efficiency ballasts for lighting	CADDET Energy Efficiency	CADDET Energy Efficiency	CADDET Energy Efficiency	CADDET Energy Efficiency	CADDET Energy Efficiency

Supplement 1
 ENO Docket No. UD-08-01
 Page 105 of 210

Industrial Measures

MEASURE DESCRIPTION					MEASURE DOCUMENTATION						
Measure ID	Weather Sensitive	Sector	Sub-Sector	Building Type	End Use	Measure Name	Measure Cost Source	Measure Savings Source	Measure Lifetime Source	Measure Unit per SubSector Unit Source	Applicability
61	NWS	Industrial	Small Industrial	All	FL	High Efficiency Light fixtures	Ontario Power Authority	Ontario Power Authority	Ontario Power Authority	Ontario Power Authority	Ontario Power Authority
62	NWS	Industrial	Small Industrial	All	FL	Efficient Lighting Design	ICF	ICF	ICF	ICF	ICF
63	NWS	Industrial	Small Industrial	All	FL	Lighting controls: on/off timer settings	ICF	ICF	ICF	ICF	ICF
64	NWS	Industrial	Small Industrial	All	FL	Lighting controls: occupancy sensors	ICF	ICF	ICF	ICF	ICF
65	NWS	Industrial	Small Industrial	All	HVAC	Ventilation Optimization	ICF	ICF	ICF	ICF	ICF
66	NWS	Industrial	Small Industrial	All	HVAC	Premium efficiency ventilation control with VSD	BC Hydro	BC Hydro	BC Hydro	BC Hydro	BC Hydro
67	NWS	Industrial	Small Industrial	All	HVAC	Demand-Controlled Ventilation	US Department of Energy	US Department of Energy			
68	NWS	Industrial	Other - Combined	All	Motors - Other Applications	Operations and maintenance	US Department of Energy	US Department of Energy			
69	NWS	Industrial	Other - Combined	All	Motors - Other Applications	Match Motor Size to Load	US Department of Energy	US Department of Energy			
70	NWS	Industrial	Other - Combined	All	Motors - Other Applications	Motor Efficiency Upgrade	US Department of Energy	US Department of Energy			
71	NWS	Industrial	Other - Combined	All	Motors - Other Applications	Variable Speed Drives	US Department of Energy	US Department of Energy			
72	NWS	Industrial	Other - Combined	All	Pumps	Reduce Overall System Requirements	US Department of Energy	US Department of Energy			
73	NWS	Industrial	Other - Combined	All	Pumps	Match Pump Size to Load	US Department of Energy	US Department of Energy			
74	NWS	Industrial	Other - Combined	All	Pumps	Reduce or Control Pump Speed	US Department of Energy	US Department of Energy			
75	NWS	Industrial	Other - Combined	All	Pumps	Improve Pump Components	US Department of Energy	US Department of Energy			
76	NWS	Industrial	Other - Combined	All	Pumps	Operation and Maintenance	US Department of Energy	US Department of Energy			
77	NWS	Industrial	Other - Combined	All	Compressed Air	Reduce Overall System Requirements	US Department of Energy	US Department of Energy			
78	NWS	Industrial	Other - Combined	All	Compressed Air	Match Compressor Size to Load	US Department of Energy	US Department of Energy			
79	NWS	Industrial	Other - Combined	All	Compressed Air	Compressor Control	US Department of Energy	US Department of Energy			
80	NWS	Industrial	Other - Combined	All	Compressed Air	Improve Compressor Components	US Department of Energy	US Department of Energy			
81	NWS	Industrial	Other - Combined	All	Compressed Air	Operation and Maintenance	US Department of Energy	US Department of Energy			
82	NWS	Industrial	Other - Combined	All	Fans	Reduce Overall System Requirements	US Department of Energy	US Department of Energy			
83	NWS	Industrial	Other - Combined	All	Fans	Reduce or Control Fan Speed	US Department of Energy	US Department of Energy			
84	NWS	Industrial	Other - Combined	All	Fans	Improve Fan Components	US Department of Energy	US Department of Energy			
85	NWS	Industrial	Other - Combined	All	Fans	Operation and Maintenance	US Department of Energy	US Department of Energy			
86	NWS	Industrial	Other - Combined	All	HVAC	Optimized Duct Design to Improve Efficiency	ICF	ICF	ICF	ICF	ICF
87	NWS	Industrial	Other - Combined	All	PH	Advanced Water Heater Controls	ICF	ICF	ICF	ICF	ICF
88	NWS	Industrial	Other - Combined	All	PH	Process Heat Recovery to Preheat Makeup Water	ICF	ICF	ICF	ICF	ICF
89	NWS	Industrial	Other - Combined	All	PH	Air Curtains (Oven)	ICF	ICF	ICF	ICF	ICF
90	NWS	Industrial	Other - Combined	All	PH	Insulation (Oven)	US Department of Energy	US Department of Energy			
91	NWS	Industrial	Other - Combined	All	PH	Preventative Oven Maintenance	ICF	ICF	ICF	ICF	ICF
92	NWS	Industrial	Other - Combined	All	PH	Air Curtains (Dryer)	ICF	ICF	ICF	ICF	ICF
93	NWS	Industrial	Other - Combined	All	PH	Insulation (Dryer)	US Department of Energy	US Department of Energy			
94	NWS	Industrial	Other - Combined	All	PH	Preventative Dryer Maintenance	ICF	ICF	ICF	ICF	ICF
95	NWS	Industrial	Other - Combined	All	PH	Optimized Distribution System	ICF	ICF	ICF	ICF	ICF
96	NWS	Industrial	Other - Combined	All	PH	Insulation (Dryer)	US Department of Energy	US Department of Energy			
97	NWS	Industrial	Other - Combined	All	PH	Preventative Dryer Maintenance	ICF	ICF	ICF	ICF	ICF
98	NWS	Industrial	Other - Combined	All	PH	Preventative Furnace Maintenance	ICF	ICF	ICF	ICF	ICF
99	NWS	Industrial	Other - Combined	All	PH	Insulation (Furnace)	ICF	ICF	ICF	ICF	ICF
100	NWS	Industrial	Other - Combined	All	PCR	High Efficiency Chiller	FEMP	FEMP	FEMP	FEMP	FEMP
101	NWS	Industrial	Other - Combined	All	PCR	Floating head pressure controls	NRCan	NRCan	NRCan	NRCan	NRCan
102	NWS	Industrial	Other - Combined	All	PCR	Premium Efficiency Refrigeration Control System	ICF	ICF	ICF	ICF	ICF
103	NWS	Industrial	Other - Combined	All	PCR	Smart Defrost Controls	BC Hydro	BC Hydro	BC Hydro	BC Hydro	BC Hydro
104	NWS	Industrial	Other - Combined	All	PCR	Doors, Covers and Curtains	Ontario Power Authority	Ontario Power Authority	Ontario Power Authority	Ontario Power Authority	Ontario Power Authority
105	NWS	Industrial	Other - Combined	All	PCR	Optimized chilled water temperature and/or optimized condenser temperature	US Environmental Protection Agency	US Environmental Protection Agency			
106	NWS	Industrial	Other - Combined	All	PCR	Preventative Refrigeration/cooling System Maintenance	Betterbricks	Betterbricks	Betterbricks	Betterbricks	Betterbricks
107	NWS	Industrial	Other - Combined	All	PCR	Optimized condenser pressure	US Environmental Protection Agency	US Environmental Protection Agency			
108	NWS	Industrial	Other - Combined	All	PCR	Free-cooling	US Environmental Protection Agency	US Environmental Protection Agency			
109	NWS	Industrial	Other - Combined	All	PCR	Improve Insulation of Refrigeration System	Heschong Machone Group	Heschong Machone Group	Heschong Machone Group	Heschong Machone Group	Heschong Machone Group
110	NWS	Industrial	Other - Combined	All	ONPU	HE Dry-Type Transformers	NRCan	NRCan	NRCan	NRCan	NRCan
111	NWS	Industrial	Other - Combined	All	HVAC	Air Source Heat Pump for Backup Generators	Design & Engineering Services	Design & Engineering Services			
112	NWS	Industrial	Other - Combined	All	ONPU	High efficiency battery charger (for forklifts)	NRCan	NRCan	NRCan	NRCan	NRCan
113	NWS	Industrial	Other - Combined	All	HVAC	Radiant Heaters	ICF	ICF	ICF	ICF	ICF
114	NWS	Industrial	Other - Combined	All	HVAC	High efficiency non-packaged HVAC equipment	ICF	ICF	ICF	ICF	ICF
115	NWS	Industrial	Other - Combined	All	HVAC	Seasonal Temperature Settings Adjustments	ICF	ICF	ICF	ICF	ICF
116	NWS	Industrial	Other - Combined	All	HVAC	High-efficiency rooftop AC with an EER of 13.5	ICF	ICF	ICF	ICF	ICF
117	NWS	Industrial	Other - Combined	All	HVAC	Ground Source Heat Pump	ICF	ICF	ICF	ICF	ICF
118	NWS	Industrial	Other - Combined	All	HVAC	Ventilation Heat Recovery	ICF	ICF	ICF	ICF	ICF
119	NWS	Industrial	Other - Combined	All	HVAC	Automated Temperature Control	ICF	ICF	ICF	ICF	ICF
120	NWS	Industrial	Other - Combined	All	HVAC	Reduced Temperature Settings	ICF	ICF	ICF	ICF	ICF

Industrial Measures

MEASURE DESCRIPTION					MEASURE DOCUMENTATION						
Measure ID	Weather Sensitive	Sector	Sub-Sector	Building Type	End Use	Measure Name	Measure Cost Source	Measure Savings Source	Measure Lifetime Source	Measure Unit per SubSector Unit Source	Applicability
121	NWS	Industrial	Other - Combined	All	HVAC	Destratification Fans	ICF	ICF	ICF	ICF	ICF
122	NWS	Industrial	Other - Combined	All	HVAC	Warehouse Loading Dock Seals	ICF	ICF	ICF	ICF	ICF
123	NWS	Industrial	Other - Combined	All	HVAC	Preventative Packaged HVAC Maintenance	ICF	ICF	ICF	ICF	ICF
124	NWS	Industrial	Other - Combined	All	HVAC	Heat Recovery from Processes to Heat Ventilation Make-up Air	US Department of Energy	US Department of Energy			
125	NWS	Industrial	Other - Combined	All	FL	High efficiency ballasts for lighting	CADET Energy Efficiency	CADET Energy Efficiency	CADET Energy Efficiency	CADET Energy Efficiency	CADET Energy Efficiency
126	NWS	Industrial	Other - Combined	All	FL	High Efficiency Light fixtures	Ontario Power Authority	Ontario Power Authority	Ontario Power Authority	Ontario Power Authority	Ontario Power Authority
127	NWS	Industrial	Other - Combined	All	FL	Efficient Lighting Design	ICF	ICF	ICF	ICF	ICF
128	NWS	Industrial	Other - Combined	All	FL	Lighting controls: on/off timer settings	ICF	ICF	ICF	ICF	ICF
129	NWS	Industrial	Other - Combined	All	FL	Lighting controls: occupancy sensors	ICF	ICF	ICF	ICF	ICF
130	NWS	Industrial	Other - Combined	All	HVAC	Ventilation Optimization	ICF	ICF	ICF	ICF	ICF
131	NWS	Industrial	Other - Combined	All	HVAC	Premium efficiency ventilation control with VSD	BC Hydro	BC Hydro	BC Hydro	BC Hydro	BC Hydro
132	NWS	Industrial	Other - Combined	All	HVAC	Demand-Controlled Ventilation	Oregon Office of Energy	Oregon Office of Energy			
133	NWS	Industrial	Food Products	All	Motors - Other Applications	Operations and maintenance	US Department of Energy	US Department of Energy			
134	NWS	Industrial	Food Products	All	Motors - Other Applications	Match Motor Size to Load	US Department of Energy	US Department of Energy			
135	NWS	Industrial	Food Products	All	Motors - Other Applications	Motor Efficiency Upgrade	US Department of Energy	US Department of Energy			
136	NWS	Industrial	Food Products	All	Motors - Other Applications	Variable Speed Drives	US Department of Energy	US Department of Energy			
137	NWS	Industrial	Food Products	All	Pumps	Reduce Overall System Requirements	US Department of Energy	US Department of Energy			
138	NWS	Industrial	Food Products	All	Pumps	Match Pump Size to Load	US Department of Energy	US Department of Energy			
139	NWS	Industrial	Food Products	All	Pumps	Reduce or Control Pump Speed	US Department of Energy	US Department of Energy			
140	NWS	Industrial	Food Products	All	Pumps	Improve Pump Components	US Department of Energy	US Department of Energy			
141	NWS	Industrial	Food Products	All	Pumps	Operation and Maintenance	US Department of Energy	US Department of Energy			
142	NWS	Industrial	Food Products	All	Compressed Air	Reduce Overall System Requirements	US Department of Energy	US Department of Energy			
143	NWS	Industrial	Food Products	All	Compressed Air	Match Compressor Size to Load	US Department of Energy	US Department of Energy			
144	NWS	Industrial	Food Products	All	Compressed Air	Compressor Control	US Department of Energy	US Department of Energy			
145	NWS	Industrial	Food Products	All	Compressed Air	Improve Compressor Components	US Department of Energy	US Department of Energy			
146	NWS	Industrial	Food Products	All	Compressed Air	Operation and Maintenance	US Department of Energy	US Department of Energy			
147	NWS	Industrial	Food Products	All	Fans	Reduce Overall System Requirements	US Department of Energy	US Department of Energy			
148	NWS	Industrial	Food Products	All	Fans	Reduce or Control Fan Speed	US Department of Energy	US Department of Energy			
149	NWS	Industrial	Food Products	All	Fans	Improve Fan Components	US Department of Energy	US Department of Energy			
150	NWS	Industrial	Food Products	All	Fans	Operation and Maintenance	US Department of Energy	US Department of Energy			
151	NWS	Industrial	Food Products	All	HVAC	Optimized Duct Design to Improve Efficiency	ICF	ICF	ICF	ICF	ICF
152	NWS	Industrial	Food Products	All	PH	Advanced Water Heater Controls	ICF	ICF	ICF	ICF	ICF
153	NWS	Industrial	Food Products	All	PH	Process Heat Recovery to Preheat Makeup Water	ICF	ICF	ICF	ICF	ICF
154	NWS	Industrial	Food Products	All	PH	Air Curtains (Oven)	ICF	ICF	ICF	ICF	ICF
155	NWS	Industrial	Food Products	All	PH	Insulation (Oven)	US Department of Energy	US Department of Energy			
156	NWS	Industrial	Food Products	All	PH	Preventative Oven Maintenance	ICF	ICF	ICF	ICF	ICF
157	NWS	Industrial	Food Products	All	PH	Air Curtains (Dryer)	ICF	ICF	ICF	ICF	ICF
158	NWS	Industrial	Food Products	All	PH	Insulation (Dryer)	US Department of Energy	US Department of Energy			
159	NWS	Industrial	Food Products	All	PH	Preventative Dryer Maintenance	ICF	ICF	ICF	ICF	ICF
160	NWS	Industrial	Food Products	All	PH	Optimized Distribution System	ICF	ICF	ICF	ICF	ICF
161	NWS	Industrial	Food Products	All	PH	Insulation (Dryer)	US Department of Energy	US Department of Energy			
162	NWS	Industrial	Food Products	All	PH	Preventative Dryer Maintenance	ICF	ICF	ICF	ICF	ICF
163	NWS	Industrial	Food Products	All	PH	Preventative Furnace Maintenance	ICF	ICF	ICF	ICF	ICF
164	NWS	Industrial	Food Products	All	PH	Insulation (Furnace)	ICF	ICF	ICF	ICF	ICF
165	NWS	Industrial	Food Products	All	PCR	High Efficiency Chiller	FEMP	FEMP	FEMP	FEMP	FEMP
166	NWS	Industrial	Food Products	All	PCR	Floating head pressure controls	NRCAN	NRCAN	NRCAN	NRCAN	NRCAN
167	NWS	Industrial	Food Products	All	PCR	Premium Efficiency Refrigeration Control System	ICF	ICF	ICF	ICF	ICF
168	NWS	Industrial	Food Products	All	PCR	Smart Defrost Controls	BC Hydro	BC Hydro	BC Hydro	BC Hydro	BC Hydro
169	NWS	Industrial	Food Products	All	PCR	Doors, Covers and Curtains	Ontario Power Authority	Ontario Power Authority	Ontario Power Authority	Ontario Power Authority	Ontario Power Authority
170	NWS	Industrial	Food Products	All	PCR	Optimized chilled water temperature and/or optimized condenser temperature	US Environmental Protection Agency	US Environmental Protection Agency			
171	NWS	Industrial	Food Products	All	PCR	Preventative Refrigeration/cooling System Maintenance	Betterbricks	Betterbricks	Betterbricks	Betterbricks	Betterbricks
172	NWS	Industrial	Food Products	All	PCR	Optimized condenser pressure	US Environmental Protection Agency	US Environmental Protection Agency			
173	NWS	Industrial	Food Products	All	PCR	Free-cooling	US Environmental Protection Agency	US Environmental Protection Agency			
174	NWS	Industrial	Food Products	All	PCR	Improve Insulation of Refrigeration System	Heschong Machone Group	Heschong Machone Group	Heschong Machone Group	Heschong Machone Group	Heschong Machone Group
175	NWS	Industrial	Food Products	All	ONPU	HE Dry-Type Transformers	NRCAN	NRCAN	NRCAN	NRCAN	NRCAN
176	NWS	Industrial	Food Products	All	HVAC	Air Source Heat Pump for Backup Generators	Design & Engineering Services	Design & Engineering Services			
177	NWS	Industrial	Food Products	All	ONPU	High efficiency battery charger (for forklifts)	NRCAN	NRCAN	NRCAN	NRCAN	NRCAN
178	NWS	Industrial	Food Products	All	HVAC	Radiant Heaters	ICF	ICF	ICF	ICF	ICF
179	NWS	Industrial	Food Products	All	HVAC	High efficiency non-packaged HVAC equipment	ICF	ICF	ICF	ICF	ICF
180	NWS	Industrial	Food Products	All	HVAC	Seasonal Temperature Settings Adjustments	ICF	ICF	ICF	ICF	ICF

CNO Document ID: 2015-08-02
 Page 215 of 215
 Supplement 1

Industrial Measures

Measure ID	Weather Sensitive	MEASURE DESCRIPTION					MEASURE DOCUMENTATION				
		Sector	Sub-Sector	Building Type	End Use	Measure Name	Measure Cost Source	Measure Savings Source	Measure Lifetime Source	Measure Unit per SubSector Unit Source	Applicability
181	NWS	Industrial	Food Products	All	HVAC	High-efficiency rooftop AC with an EER of 13.5	ICF	ICF	ICF	ICF	ICF
182	NWS	Industrial	Food Products	All	HVAC	Ground Source Heat Pump	ICF	ICF	ICF	ICF	ICF
183	NWS	Industrial	Food Products	All	HVAC	Ventilation Heat Recovery	ICF	ICF	ICF	ICF	ICF
184	NWS	Industrial	Food Products	All	HVAC	Automated Temperature Control	ICF	ICF	ICF	ICF	ICF
185	NWS	Industrial	Food Products	All	HVAC	Reduced Temperature Settings	ICF	ICF	ICF	ICF	ICF
186	NWS	Industrial	Food Products	All	HVAC	Destratification Fans	ICF	ICF	ICF	ICF	ICF
187	NWS	Industrial	Food Products	All	HVAC	Warehouse Loading Dock Seals	ICF	ICF	ICF	ICF	ICF
188	NWS	Industrial	Food Products	All	HVAC	Preventative Packaged HVAC Maintenance	ICF	ICF	ICF	ICF	ICF
189	NWS	Industrial	Food Products	All	HVAC	Heat Recovery from Processes to Heat Ventilation Make-up Air	US Department of Energy	US Department of Energy			
190	NWS	Industrial	Food Products	All	FL	High efficiency ballasts for lighting	CADET Energy Efficiency	CADET Energy Efficiency	CADET Energy Efficiency	CADET Energy Efficiency	CADET Energy Efficiency
191	NWS	Industrial	Food Products	All	FL	High Efficiency Light fixtures	Ontario Power Authority	Ontario Power Authority	Ontario Power Authority	Ontario Power Authority	Ontario Power Authority
192	NWS	Industrial	Food Products	All	FL	Efficient Lighting Design	ICF	ICF	ICF	ICF	ICF
193	NWS	Industrial	Food Products	All	FL	Lighting controls: on/off timer settings	ICF	ICF	ICF	ICF	ICF
194	NWS	Industrial	Food Products	All	FL	Lighting controls: occupancy sensors	ICF	ICF	ICF	ICF	ICF
195	NWS	Industrial	Food Products	All	HVAC	Ventilation Optimization	ICF	ICF	ICF	ICF	ICF
196	NWS	Industrial	Food Products	All	HVAC	Premium efficiency ventilation control with VSD	BC Hydro	BC Hydro	BC Hydro	BC Hydro	BC Hydro
197	NWS	Industrial	Food Products	All	HVAC	Demand-Controlled Ventilation	Oregon Office of Energy	Oregon Office of Energy			
199	NWS	Industrial	Industrial Gases	All	Total	Integrated Control System	ICF	ICF	ICF	ICF	ICF
200	NWS	Industrial	Industrial Gases	All	Total	Process Integration and Pinch Analysis	ICF	ICF	ICF	ICF	ICF
201	NWS	Industrial	Industrial Gases	All	Total	Sub-Metering	ICF	ICF	ICF	ICF	ICF
202	NWS	Industrial	Industrial Gases	All	HVAC	High-efficiency rooftop AC with an EER of 13.13	ICF	ICF	ICF	ICF	ICF
203	NWS	Industrial	Industrial Gases	All	Process Heating	Water-heater right sizing and load management	ICF	ICF	ICF	ICF	ICF
204	NWS	Industrial	Industrial Gases	All	Process Heating	Insulation	ICF	ICF	ICF	ICF	ICF
205	NWS	Industrial	Industrial Gases	All	Boilers	Blowdown Control	ICF	ICF	ICF	ICF	ICF
206	NWS	Industrial	Industrial Gases	All	Boilers	Boiler Right Sizing	ICF	ICF	ICF	ICF	ICF
207	NWS	Industrial	Industrial Gases	All	Boilers	Condensing Boiler	ICF	ICF	ICF	ICF	ICF
208	NWS	Industrial	Industrial Gases	All	Boilers	Direct-Contact Hot Water Heaters	ICF	ICF	ICF	ICF	ICF
209	NWS	Industrial	Industrial Gases	All	Boilers	High Efficiency Burner	ICF	ICF	ICF	ICF	ICF
210	NWS	Industrial	Industrial Gases	All	Boilers	Instantaneous Steam Generation	ICF	ICF	ICF	ICF	ICF
211	NWS	Industrial	Industrial Gases	All	Boilers	Blowdown Heat Recovery	ICF	ICF	ICF	ICF	ICF
212	NWS	Industrial	Industrial Gases	All	Boilers	Boiler combustion air preheat	ICF	ICF	ICF	ICF	ICF
213	NWS	Industrial	Industrial Gases	All	Boilers	Preventative Boiler Maintenance	ICF	ICF	ICF	ICF	ICF
214	NWS	Industrial	Industrial Gases	All	Boilers	Boiler Water Treatment	ICF	ICF	ICF	ICF	ICF
215	NWS	Industrial	Industrial Gases	All	Boilers	Condensate Return	ICF	ICF	ICF	ICF	ICF
216	NWS	Industrial	Industrial Gases	All	Boilers	Economizer	ICF	ICF	ICF	ICF	ICF
217	NWS	Industrial	Industrial Gases	All	Boilers	Insulation	ICF	ICF	ICF	ICF	ICF
218	NWS	Industrial	Industrial Gases	All	Boilers	Minimize Deaerator Vent Losses	ICF	ICF	ICF	ICF	ICF
219	NWS	Industrial	Industrial Gases	All	Boilers	Process Heat Recovery to Preheat Makeup Water	ICF	ICF	ICF	ICF	ICF
220	NWS	Industrial	Industrial Gases	All	Boilers	Steam Trap Survey and Repair	ICF	ICF	ICF	ICF	ICF
221	NWS	Industrial	Industrial Gases	All	Boilers	First Generation Super Boilers	ICF	ICF	ICF	ICF	ICF
222	NWS	Industrial	Industrial Gases	All	Process Heating	High Efficiency Burner	ICF	ICF	ICF	ICF	ICF
223	NWS	Industrial	Industrial Gases	All	Process Heating	Infrared Ovens	ICF	ICF	ICF	ICF	ICF
224	NWS	Industrial	Industrial Gases	All	Process Heating	Process Heat Recovery to Preheat Makeup Water	ICF	ICF	ICF	ICF	ICF
225	NWS	Industrial	Industrial Gases	All	Process Heating	Air Curtains	ICF	ICF	ICF	ICF	ICF
226	NWS	Industrial	Industrial Gases	All	Process Heating	Exhaust Gas Heat Recovery	ICF	ICF	ICF	ICF	ICF
227	NWS	Industrial	Industrial Gases	All	Process Heating	Insulation	ICF	ICF	ICF	ICF	ICF
228	NWS	Industrial	Industrial Gases	All	Process Heating	Advanced heating and Process Control	ICF	ICF	ICF	ICF	ICF
229	NWS	Industrial	Industrial Gases	All	Process Heating	Combustion Optimization	ICF	ICF	ICF	ICF	ICF
230	NWS	Industrial	Industrial Gases	All	Process Heating	Radiant Tube burners	ICF	ICF	ICF	ICF	ICF
231	NWS	Industrial	Industrial Gases	All	HVAC	Radiant Heaters	ICF	ICF	ICF	ICF	ICF
232	NWS	Industrial	Industrial Gases	All	Process Heating	Solar Walls	ICF	ICF	ICF	ICF	ICF
233	NWS	Industrial	Industrial Gases	All	HVAC	Air Compressor Heat Recovery	ICF	ICF	ICF	ICF	ICF
234	NWS	Industrial	Industrial Gases	All	HVAC	Air Curtains	ICF	ICF	ICF	ICF	ICF
235	NWS	Industrial	Industrial Gases	All	HVAC	Destratification Fans	ICF	ICF	ICF	ICF	ICF
236	NWS	Industrial	Industrial Gases	All	HVAC	Ventilation Heat Recovery	ICF	ICF	ICF	ICF	ICF
237	NWS	Industrial	Industrial Gases	All	HVAC	Ventilation Optimization	ICF	ICF	ICF	ICF	ICF
238	NWS	Industrial	Industrial Gases	All	HVAC	Warehouse Loading Dock Seals	ICF	ICF	ICF	ICF	ICF
239	NWS	Industrial	Industrial Gases	All	HVAC	Automated Temperature reset Control	ICF	ICF	ICF	ICF	ICF
240	NWS	Industrial	Industrial Gases	All	HVAC	Reduced Temperature Settings	ICF	ICF	ICF	ICF	ICF

Industrial Measures

MEASURE DESCRIPTION					MEASURE DOCUMENTATION						
Measure ID	Weather Sensitive	Sector	Sub-Sector	Building Type	End Use	Measure Name	Measure Cost Source	Measure Savings Source	Measure Lifetime Source	Measure Unit per SubSector Unit Source	Applicability
241	NWS	Industrial	Industrial Gases	All	Total	Pollution Control Measures	ICF	ICF	ICF	ICF	ICF
242	NWS	Industrial	Industrial Gases	All	Process Heating	CFD Modelling	ICF	ICF	ICF	ICF	ICF
243	NWS	Industrial	Industrial Gases	All	Total	Energy Management	ICF	ICF	ICF	ICF	ICF
244	NWS	Industrial	Industrial Gases	All	Process Heating	Improved airflow in dryer windbox	ICF	ICF	ICF	ICF	ICF
245	NWS	Industrial	Industrial Gases	All	Process Heating	Preventative Oven Maintenance	ICF	ICF	ICF	ICF	ICF
246	NWS	Industrial	Industrial Gases	All	Process Heating	Preventative Furnace Maintenance	ICF	ICF	ICF	ICF	ICF
247	NWS	Industrial	Industrial Gases	All	Process Heating	Preventative Dryer Maintenance	ICF	ICF	ICF	ICF	ICF
248	NWS	Industrial	Industrial Gases	All	Process Heating	High Efficiency Burner	ICF	ICF	ICF	ICF	ICF
249	NWS	Industrial	Industrial Gases	All	Process Heating	Air Curtains	ICF	ICF	ICF	ICF	ICF
250	NWS	Industrial	Industrial Gases	All	Process Heating	Exhaust Gas Heat Recovery	ICF	ICF	ICF	ICF	ICF
251	NWS	Industrial	Industrial Gases	All	Process Heating	Insulation	ICF	ICF	ICF	ICF	ICF
252	NWS	Industrial	Industrial Gases	All	Process Heating	Advanced heating and Process Control	ICF	ICF	ICF	ICF	ICF
253	NWS	Industrial	Industrial Gases	All	Process Heating	Combustion Optimization	ICF	ICF	ICF	ICF	ICF
254	NWS	Industrial	Industrial Gases	All	Process Heating	High Efficiency Burner	ICF	ICF	ICF	ICF	ICF
255	NWS	Industrial	Industrial Gases	All	Process Heating	Air Curtains	ICF	ICF	ICF	ICF	ICF
256	NWS	Industrial	Industrial Gases	All	Process Heating	Exhaust Gas Heat Recovery	ICF	ICF	ICF	ICF	ICF
257	NWS	Industrial	Industrial Gases	All	Process Heating	Insulation	ICF	ICF	ICF	ICF	ICF
258	NWS	Industrial	Industrial Gases	All	Process Heating	Advanced heating and Process Control	ICF	ICF	ICF	ICF	ICF
259	NWS	Industrial	Industrial Gases	All	Process Heating	Combustion Optimization	ICF	ICF	ICF	ICF	ICF
260	NWS	Industrial	All Other	All	Total	Integrated Control System	ICF	ICF	ICF	ICF	ICF
261	NWS	Industrial	All Other	All	Total	Process Integration and Pinch Analysis	ICF	ICF	ICF	ICF	ICF
262	NWS	Industrial	All Other	All	Total	Sub-Metering	ICF	ICF	ICF	ICF	ICF
263	NWS	Industrial	All Other	All	HVAC	High-efficiency rooftop AC with an EER of 13.13	ICF	ICF	ICF	ICF	ICF
264	NWS	Industrial	All Other	All	Process Heating	Water-heater right sizing and load management	ICF	ICF	ICF	ICF	ICF
265	NWS	Industrial	All Other	All	Process Heating	Insulation	ICF	ICF	ICF	ICF	ICF
266	NWS	Industrial	All Other	All	Boilers	Blowdown Control	ICF	ICF	ICF	ICF	ICF
267	NWS	Industrial	All Other	All	Boilers	Boiler Right Sizing	ICF	ICF	ICF	ICF	ICF
268	NWS	Industrial	All Other	All	Boilers	Condensing Boiler	ICF	ICF	ICF	ICF	ICF
269	NWS	Industrial	All Other	All	Boilers	Direct-Contact Hot Water Heaters	ICF	ICF	ICF	ICF	ICF
270	NWS	Industrial	All Other	All	Boilers	High Efficiency Burner	ICF	ICF	ICF	ICF	ICF
271	NWS	Industrial	All Other	All	Boilers	Instantaneous Steam Generation	ICF	ICF	ICF	ICF	ICF
272	NWS	Industrial	All Other	All	Boilers	Blowdown Heat Recovery	ICF	ICF	ICF	ICF	ICF
273	NWS	Industrial	All Other	All	Boilers	Boiler combustion air preheat	ICF	ICF	ICF	ICF	ICF
274	NWS	Industrial	All Other	All	Boilers	Preventative Boiler Maintenance	ICF	ICF	ICF	ICF	ICF
275	NWS	Industrial	All Other	All	Boilers	Boiler Water Treatment	ICF	ICF	ICF	ICF	ICF
276	NWS	Industrial	All Other	All	Boilers	Condensate Return	ICF	ICF	ICF	ICF	ICF
277	NWS	Industrial	All Other	All	Boilers	Economizer	ICF	ICF	ICF	ICF	ICF
278	NWS	Industrial	All Other	All	Boilers	Insulation	ICF	ICF	ICF	ICF	ICF
279	NWS	Industrial	All Other	All	Boilers	Minimize Deaerator Vent Losses	ICF	ICF	ICF	ICF	ICF
280	NWS	Industrial	All Other	All	Boilers	Process Heat Recovery to Preheat Makeup Water	ICF	ICF	ICF	ICF	ICF
281	NWS	Industrial	All Other	All	Boilers	Steam Trap Survey and Repair	ICF	ICF	ICF	ICF	ICF
282	NWS	Industrial	All Other	All	Boilers	First Generation Super Boilers	ICF	ICF	ICF	ICF	ICF
283	NWS	Industrial	All Other	All	Process Heating	High Efficiency Burner	ICF	ICF	ICF	ICF	ICF
284	NWS	Industrial	All Other	All	Process Heating	Infrared Ovens	ICF	ICF	ICF	ICF	ICF
285	NWS	Industrial	All Other	All	Process Heating	Process Heat Recovery to Preheat Makeup Water	ICF	ICF	ICF	ICF	ICF
286	NWS	Industrial	All Other	All	Process Heating	Air Curtains	ICF	ICF	ICF	ICF	ICF
287	NWS	Industrial	All Other	All	Process Heating	Exhaust Gas Heat Recovery	ICF	ICF	ICF	ICF	ICF
288	NWS	Industrial	All Other	All	Process Heating	Insulation	ICF	ICF	ICF	ICF	ICF
289	NWS	Industrial	All Other	All	Process Heating	Advanced heating and Process Control	ICF	ICF	ICF	ICF	ICF
290	NWS	Industrial	All Other	All	Process Heating	Combustion Optimization	ICF	ICF	ICF	ICF	ICF
291	NWS	Industrial	All Other	All	Process Heating	Radiant Tube burners	ICF	ICF	ICF	ICF	ICF
292	NWS	Industrial	All Other	All	Process Heating	Radiant Heaters	ICF	ICF	ICF	ICF	ICF
293	NWS	Industrial	All Other	All	Process Heating	Solar Walls	ICF	ICF	ICF	ICF	ICF
294	NWS	Industrial	All Other	All	HVAC	Air Compressor Heat Recovery	ICF	ICF	ICF	ICF	ICF
295	NWS	Industrial	All Other	All	HVAC	Air Curtains	ICF	ICF	ICF	ICF	ICF
296	NWS	Industrial	All Other	All	HVAC	Destratification Fans	ICF	ICF	ICF	ICF	ICF
297	NWS	Industrial	All Other	All	HVAC	Ventilation Heat Recovery	ICF	ICF	ICF	ICF	ICF
298	NWS	Industrial	All Other	All	HVAC	Ventilation Optimization	ICF	ICF	ICF	ICF	ICF
299	NWS	Industrial	All Other	All	HVAC	Warehouse Loading Dock Seals	ICF	ICF	ICF	ICF	ICF
300	NWS	Industrial	All Other	All	HVAC	Automated Temperature reset Control	ICF	ICF	ICF	ICF	ICF

Industrial Measures

Measure ID	Weather Sensitive	Sector	Sub-Sector	Building Type	MEASURE DESCRIPTION		MEASURE DOCUMENTATION				
					End Use	Measure Name	Measure Cost Source	Measure Savings Source	Measure Lifetime Source	Measure Unit per SubSector Unit Source	Applicability
301	NWS	Industrial	All Other	All	HVAC	Reduced Temperature Settings	ICF	ICF	ICF	ICF	ICF
302	NWS	Industrial	All Other	All	Process Heating	Pollution Control Measures	ICF	ICF	ICF	ICF	ICF
303	NWS	Industrial	All Other	All	Process Heating	CFD Modelling	ICF	ICF	ICF	ICF	ICF
304	NWS	Industrial	All Other	All	Total	Energy Management	ICF	ICF	ICF	ICF	ICF
305	NWS	Industrial	All Other	All	Process Heating	Improved airflow in dryer windbox	ICF	ICF	ICF	ICF	ICF
306	NWS	Industrial	All Other	All	Process Heating	Preventative Oven Maintenance	ICF	ICF	ICF	ICF	ICF
307	NWS	Industrial	All Other	All	Process Heating	Preventative Furnace Maintenance	ICF	ICF	ICF	ICF	ICF
308	NWS	Industrial	All Other	All	Process Heating	Preventative Dryer Maintenance	ICF	ICF	ICF	ICF	ICF
309	NWS	Industrial	All Other	All	Process Heating	High Efficiency Burner	ICF	ICF	ICF	ICF	ICF
310	NWS	Industrial	All Other	All	Process Heating	Air Curtains	ICF	ICF	ICF	ICF	ICF
311	NWS	Industrial	All Other	All	Process Heating	Exhaust Gas Heat Recovery	ICF	ICF	ICF	ICF	ICF
312	NWS	Industrial	All Other	All	Process Heating	Insulation	ICF	ICF	ICF	ICF	ICF
313	NWS	Industrial	All Other	All	Process Heating	Advanced heating and Process Control	ICF	ICF	ICF	ICF	ICF
314	NWS	Industrial	All Other	All	Process Heating	Combustion Optimization	ICF	ICF	ICF	ICF	ICF
315	NWS	Industrial	All Other	All	Process Heating	High Efficiency Burner	ICF	ICF	ICF	ICF	ICF
316	NWS	Industrial	All Other	All	Process Heating	Air Curtains	ICF	ICF	ICF	ICF	ICF
317	NWS	Industrial	All Other	All	Process Heating	Exhaust Gas Heat Recovery	ICF	ICF	ICF	ICF	ICF
318	NWS	Industrial	All Other	All	Process Heating	Insulation	ICF	ICF	ICF	ICF	ICF
319	NWS	Industrial	All Other	All	Process Heating	Advanced heating and Process Control	ICF	ICF	ICF	ICF	ICF
320	NWS	Industrial	All Other	All	Process Heating	Combustion Optimization	ICF	ICF	ICF	ICF	ICF
321	NWS	Industrial	Small Industrial	All	Total	Integrated Control System	ICF	ICF	ICF	ICF	ICF
322	NWS	Industrial	Small Industrial	All	Total	Process Integration and Pinch Analysis	ICF	ICF	ICF	ICF	ICF
323	NWS	Industrial	Small Industrial	All	Total	Sub-Metering	ICF	ICF	ICF	ICF	ICF
324	NWS	Industrial	Small Industrial	All	HVAC	High-efficiency rooftop AC with an EER of 13.13	ICF	ICF	ICF	ICF	ICF
325	NWS	Industrial	Small Industrial	All	Process Heating	Water-heater right sizing and load management	ICF	ICF	ICF	ICF	ICF
326	NWS	Industrial	Small Industrial	All	Process Heating	Insulation	ICF	ICF	ICF	ICF	ICF
327	NWS	Industrial	Small Industrial	All	Boilers	Blowdown Control	ICF	ICF	ICF	ICF	ICF
328	NWS	Industrial	Small Industrial	All	Boilers	Boiler Right Sizing	ICF	ICF	ICF	ICF	ICF
329	NWS	Industrial	Small Industrial	All	Boilers	Condensing Boiler	ICF	ICF	ICF	ICF	ICF
330	NWS	Industrial	Small Industrial	All	Boilers	Direct-Contact Hot Water Heaters	ICF	ICF	ICF	ICF	ICF
331	NWS	Industrial	Small Industrial	All	Boilers	High Efficiency Burner	ICF	ICF	ICF	ICF	ICF
332	NWS	Industrial	Small Industrial	All	Boilers	Instantaneous Steam Generation	ICF	ICF	ICF	ICF	ICF
333	NWS	Industrial	Small Industrial	All	Boilers	Blowdown Heat Recovery	ICF	ICF	ICF	ICF	ICF
334	NWS	Industrial	Small Industrial	All	Boilers	Boiler combustion air preheat	ICF	ICF	ICF	ICF	ICF
335	NWS	Industrial	Small Industrial	All	Boilers	Preventative Boiler Maintenance	ICF	ICF	ICF	ICF	ICF
336	NWS	Industrial	Small Industrial	All	Boilers	Boiler Water Treatment	ICF	ICF	ICF	ICF	ICF
337	NWS	Industrial	Small Industrial	All	Boilers	Condensate Return	ICF	ICF	ICF	ICF	ICF
338	NWS	Industrial	Small Industrial	All	Boilers	Economizer	ICF	ICF	ICF	ICF	ICF
339	NWS	Industrial	Small Industrial	All	Boilers	Insulation	ICF	ICF	ICF	ICF	ICF
340	NWS	Industrial	Small Industrial	All	Boilers	Minimize Deaerator Vent Losses	ICF	ICF	ICF	ICF	ICF
341	NWS	Industrial	Small Industrial	All	Boilers	Process Heat Recovery to Preheat Makeup Water	ICF	ICF	ICF	ICF	ICF
342	NWS	Industrial	Small Industrial	All	Boilers	Steam Trap Survey and Repair	ICF	ICF	ICF	ICF	ICF
343	NWS	Industrial	Small Industrial	All	Boilers	First Generation Super Boilers	ICF	ICF	ICF	ICF	ICF
344	NWS	Industrial	Small Industrial	All	Process Heating	High Efficiency Burner	ICF	ICF	ICF	ICF	ICF
345	NWS	Industrial	Small Industrial	All	Process Heating	Infrared Ovens	ICF	ICF	ICF	ICF	ICF
346	NWS	Industrial	Small Industrial	All	Process Heating	Process Heat Recovery to Preheat Makeup Water	ICF	ICF	ICF	ICF	ICF
347	NWS	Industrial	Small Industrial	All	Process Heating	Air Curtains	ICF	ICF	ICF	ICF	ICF
348	NWS	Industrial	Small Industrial	All	Process Heating	Exhaust Gas Heat Recovery	ICF	ICF	ICF	ICF	ICF
349	NWS	Industrial	Small Industrial	All	Process Heating	Insulation	ICF	ICF	ICF	ICF	ICF
350	NWS	Industrial	Small Industrial	All	Process Heating	Advanced heating and Process Control	ICF	ICF	ICF	ICF	ICF
351	NWS	Industrial	Small Industrial	All	Process Heating	Combustion Optimization	ICF	ICF	ICF	ICF	ICF
352	NWS	Industrial	Small Industrial	All	Process Heating	Radiant Tube burners	ICF	ICF	ICF	ICF	ICF
353	NWS	Industrial	Small Industrial	All	HVAC	Radiant Heaters	ICF	ICF	ICF	ICF	ICF
354	NWS	Industrial	Small Industrial	All	Process Heating	Solar Walls	ICF	ICF	ICF	ICF	ICF
355	NWS	Industrial	Small Industrial	All	HVAC	Air Compressor Heat Recovery	ICF	ICF	ICF	ICF	ICF
356	NWS	Industrial	Small Industrial	All	HVAC	Air Curtains	ICF	ICF	ICF	ICF	ICF
357	NWS	Industrial	Small Industrial	All	HVAC	Destratification Fans	ICF	ICF	ICF	ICF	ICF
358	NWS	Industrial	Small Industrial	All	HVAC	Ventilation Heat Recovery	ICF	ICF	ICF	ICF	ICF
359	NWS	Industrial	Small Industrial	All	HVAC	Ventilation Optimization	ICF	ICF	ICF	ICF	ICF
360	NWS	Industrial	Small Industrial	All	HVAC	Warehouse Loading Dock Seals	ICF	ICF	ICF	ICF	ICF

Industrial Measures

MEASURE DESCRIPTION					MEASURE DOCUMENTATION						
Measure ID	Weather Sensitive	Sector	Sub-Sector	Building Type	End Use	Measure Name	Measure Cost Source	Measure Savings Source	Measure Lifetime Source	Measure Unit per SubSector Unit Source	Applicability
361	NWS	Industrial	Small Industrial	All	HVAC	Automated Temperature reset Control	ICF	ICF	ICF	ICF	ICF
362	NWS	Industrial	Small Industrial	All	HVAC	Reduced Temperature Settings	ICF	ICF	ICF	ICF	ICF
363	NWS	Industrial	Small Industrial	All	Total	Pollution Control Measures	ICF	ICF	ICF	ICF	ICF
364	NWS	Industrial	Small Industrial	All	Process Heating	CFD Modelling	ICF	ICF	ICF	ICF	ICF
365	NWS	Industrial	Small Industrial	All	Total	Energy Management	ICF	ICF	ICF	ICF	ICF
366	NWS	Industrial	Small Industrial	All	Process Heating	Improved airflow in dryer windbox	ICF	ICF	ICF	ICF	ICF
367	NWS	Industrial	Small Industrial	All	Process Heating	Preventative Oven Maintenance	ICF	ICF	ICF	ICF	ICF
368	NWS	Industrial	Small Industrial	All	Process Heating	Preventative Furnace Maintenance	ICF	ICF	ICF	ICF	ICF
369	NWS	Industrial	Small Industrial	All	Process Heating	Preventative Dryer Maintenance	ICF	ICF	ICF	ICF	ICF
370	NWS	Industrial	Small Industrial	All	Process Heating	High Efficiency Burner	ICF	ICF	ICF	ICF	ICF
371	NWS	Industrial	Small Industrial	All	Process Heating	Air Curtains	ICF	ICF	ICF	ICF	ICF
372	NWS	Industrial	Small Industrial	All	Process Heating	Exhaust Gas Heat Recovery	ICF	ICF	ICF	ICF	ICF
373	NWS	Industrial	Small Industrial	All	Process Heating	Insulation	ICF	ICF	ICF	ICF	ICF
374	NWS	Industrial	Small Industrial	All	Process Heating	Advanced heating and Process Control	ICF	ICF	ICF	ICF	ICF
375	NWS	Industrial	Small Industrial	All	Process Heating	Combustion Optimization	ICF	ICF	ICF	ICF	ICF
376	NWS	Industrial	Small Industrial	All	Process Heating	High Efficiency Burner	ICF	ICF	ICF	ICF	ICF
377	NWS	Industrial	Small Industrial	All	Process Heating	Air Curtains	ICF	ICF	ICF	ICF	ICF
378	NWS	Industrial	Small Industrial	All	Process Heating	Exhaust Gas Heat Recovery	ICF	ICF	ICF	ICF	ICF
379	NWS	Industrial	Small Industrial	All	Process Heating	Insulation	ICF	ICF	ICF	ICF	ICF
380	NWS	Industrial	Small Industrial	All	Process Heating	Advanced heating and Process Control	ICF	ICF	ICF	ICF	ICF
381	NWS	Industrial	Small Industrial	All	Process Heating	Combustion Optimization	ICF	ICF	ICF	ICF	ICF

Industrial Measures

Measure ID	Weather Sensitive	Sector	Sub-Sector	Building Type	End Use	Measure Description	Program	PARTICIPATION LOW CASE					
								First Year of Participation (So Year)	First Year Participation Rate (So)	Year of Maximum Annual Participation (Smax)	Maximum Annual Participation Rate (Smax)	Final Year of Participation, Fo (<2034 if baseline shift)	Final Year Participation Rate (Fo)
1	NWS	Industrial	Small Industrial	All	Motors - Other Applications	Operations and maintenance	Machine Drive	2015	0.3%	2034	1.5%	2034	1.5%
2	NWS	Industrial	Small Industrial	All	Motors - Other Applications	Match Motor Size to Load	Machine Drive	2015	0.0%	2034	1.5%	2015	0.0%
3	NWS	Industrial	Small Industrial	All	Motors - Other Applications	Motor Efficiency Upgrade	Machine Drive	2015	0.0%	2034	1.5%	2015	0.0%
4	NWS	Industrial	Small Industrial	All	Motors - Other Applications	Variable Speed Drives	Machine Drive	2015	0.0%	2034	1.5%	2015	0.0%
5	NWS	Industrial	Small Industrial	All	Pumps	Reduce Overall System Requirements	Machine Drive	2015	0.0%	2034	1.5%	2015	0.0%
6	NWS	Industrial	Small Industrial	All	Pumps	Match Pump Size to Load	Machine Drive	2015	0.0%	2034	1.5%	2015	0.0%
7	NWS	Industrial	Small Industrial	All	Pumps	Reduce or Control Pump Speed	Machine Drive	2015	0.3%	2034	1.5%	2034	1.5%
8	NWS	Industrial	Small Industrial	All	Pumps	Improve Pump Components	Machine Drive	2015	0.3%	2034	1.5%	2034	1.5%
9	NWS	Industrial	Small Industrial	All	Pumps	Operation and Maintenance	Machine Drive	2015	0.3%	2034	1.5%	2034	1.5%
10	NWS	Industrial	Small Industrial	All	Compressed Air	Reduce Overall System Requirements	Machine Drive	2015	0.0%	2034	1.5%	2015	0.0%
11	NWS	Industrial	Small Industrial	All	Compressed Air	Match Compressor Size to Load	Machine Drive	2015	0.3%	2034	1.5%	2034	1.5%
12	NWS	Industrial	Small Industrial	All	Compressed Air	Compressor Control	Machine Drive	2015	0.3%	2034	1.5%	2034	1.5%
13	NWS	Industrial	Small Industrial	All	Compressed Air	Improve Compressor Components	Machine Drive	2015	0.0%	2034	1.5%	2015	0.0%
14	NWS	Industrial	Small Industrial	All	Compressed Air	Operation and Maintenance	Machine Drive	2015	0.3%	2034	1.5%	2034	1.5%
15	NWS	Industrial	Small Industrial	All	Fans	Reduce Overall System Requirements	Machine Drive	2015	0.0%	2034	1.5%	2015	0.0%
16	NWS	Industrial	Small Industrial	All	Fans	Reduce or Control Fan Speed	Machine Drive	2015	0.0%	2034	1.5%	2015	0.0%
17	NWS	Industrial	Small Industrial	All	Fans	Improve Fan Components	Machine Drive	2015	0.0%	2034	1.5%	2015	0.0%
18	NWS	Industrial	Small Industrial	All	Fans	Operation and Maintenance	Machine Drive	2015	0.0%	2034	1.5%	2015	0.0%
19	NWS	Industrial	Small Industrial	All	PH	Advanced water heater controls	Process Heating	2015	0.0%	2034	1.5%	2015	0.0%
20	NWS	Industrial	Small Industrial	All	PH	Process Heat Recovery to Preheat Makeup Water	Process Heating	2015	0.0%	2034	1.5%	2015	0.0%
21	NWS	Industrial	Small Industrial	All	PH	Air Curtains (Oven)	Process Heating	2015	0.0%	2034	1.5%	2015	0.0%
22	NWS	Industrial	Small Industrial	All	PH	Insulation (Oven)	Process Heating	2015	0.3%	2034	1.5%	2034	1.5%
23	NWS	Industrial	Small Industrial	All	PH	Preventative Oven Maintenance	Process Heating	2015	0.3%	2034	1.5%	2034	1.5%
24	NWS	Industrial	Small Industrial	All	PH	Air Curtains (Dryer)	Process Heating	2015	0.3%	2034	1.5%	2034	1.5%
25	NWS	Industrial	Small Industrial	All	PH	Insulation (Dryer)	Process Heating	2015	0.0%	2034	1.5%	2015	0.0%
26	NWS	Industrial	Small Industrial	All	PH	Preventative Dryer Maintenance	Process Heating	2015	0.0%	2034	1.5%	2015	0.0%
27	NWS	Industrial	Small Industrial	All	PH	Preventative Furnace Maintenance	Process Heating	2015	0.0%	2034	1.5%	2015	0.0%
28	NWS	Industrial	Small Industrial	All	PH	Insulation (Furnace)	Process Heating	2015	0.0%	2034	1.5%	2015	0.0%
29	NWS	Industrial	Small Industrial	All	PH	Preventative Kiln Maintenance	Process Heating	2015	0.0%	2034	1.5%	2015	0.0%
30	NWS	Industrial	Small Industrial	All	PH	Insulation (Kiln)	Process Heating	2015	0.0%	2034	1.5%	2015	0.0%
31	NWS	Industrial	Small Industrial	All	PCR	High Efficiency Chiller	Process Cooling and Refrigeration	2015	0.0%	2034	0.5%	2015	0.0%
32	NWS	Industrial	Small Industrial	All	PCR	Optimized Distribution System	Process Cooling and Refrigeration	2015	0.3%	2034	1.5%	2034	1.5%
33	NWS	Industrial	Small Industrial	All	PCR	Floating head pressure controls	Process Cooling and Refrigeration	2015	0.0%	2034	1.5%	2015	0.0%
34	NWS	Industrial	Small Industrial	All	PCR	Premium efficiency refrigeration control system	Process Cooling and Refrigeration	2015	0.0%	2034	0.2%	2015	0.0%
35	NWS	Industrial	Small Industrial	All	PCR	Smart Defrost Controls	Process Cooling and Refrigeration	2015	0.3%	2034	1.5%	2034	1.5%
36	NWS	Industrial	Small Industrial	All	PCR	Doors, Covers and Curtains	Process Cooling and Refrigeration	2015	0.0%	2034	1.5%	2015	0.0%
37	NWS	Industrial	Small Industrial	All	PCR	Optimized chilled water temperature and/or optimized condenser temperature	Process Cooling and Refrigeration	2015	0.0%	2034	1.5%	2015	0.0%
38	NWS	Industrial	Small Industrial	All	PCR	Preventative refrigeration/cooling system maintenance	Process Cooling and Refrigeration	2015	0.3%	2034	1.5%	2034	1.5%
39	NWS	Industrial	Small Industrial	All	PCR	Optimized condenser pressure	Process Cooling and Refrigeration	2015	0.0%	2034	1.5%	2015	0.0%
40	NWS	Industrial	Small Industrial	All	PCR	VSD on chiller compressor	Process Cooling and Refrigeration	2015	0.0%	2034	1.4%	2015	0.0%
41	NWS	Industrial	Small Industrial	All	PCR	Free-cooling	Process Cooling and Refrigeration	2015	0.0%	2034	1.5%	2015	0.0%
42	NWS	Industrial	Small Industrial	All	PCR	Improve insulation of refrigeration system	Process Cooling and Refrigeration	2015	0.0%	2034	1.5%	2015	0.0%
43	NWS	Industrial	Small Industrial	All	HVAC	Optimized duct design to improve efficiency	Facility HVAC	2015	0.0%	2034	0.5%	2015	0.0%
44	NWS	Industrial	Small Industrial	All	HVAC	Air Source Heat Pump for Backup Generators	Facility HVAC	2015	0.0%	2034	0.0%	2034	0.0%
45	NWS	Industrial	Small Industrial	All	ONPU	High efficiency battery charger (for forklifts)	Other Process/Non-Process Use	2015	0.0%	2034	1.5%	2015	0.0%
46	NWS	Industrial	Small Industrial	All	ONPU	HE Dry-Type Transformers	Other Process/Non-Process Use	2015	0.0%	2034	1.5%	2015	0.0%
47	NWS	Industrial	Small Industrial	All	HVAC	Free cooling	Facility HVAC	2015	0.3%	2034	1.5%	2034	1.5%
48	NWS	Industrial	Small Industrial	All	HVAC	Radiant Heaters	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
49	NWS	Industrial	Small Industrial	All	HVAC	High efficiency non-packaged HVAC equipment	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
50	NWS	Industrial	Small Industrial	All	HVAC	Seasonal Temperature Settings Adjustments	Facility HVAC	2015	0.0%	2034	1.5%	2015	0.0%
51	NWS	Industrial	Small Industrial	All	HVAC	High-efficiency rooftop AC with an EER of 13.5	Facility HVAC	2015	0.0%	2034	1.2%	2015	0.0%
52	NWS	Industrial	Small Industrial	All	HVAC	Ground Source Heat Pump	Facility HVAC	2015	0.0%	2034	0.0%	2015	0.0%
53	NWS	Industrial	Small Industrial	All	HVAC	Ventilation Heat Recovery	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
54	NWS	Industrial	Small Industrial	All	HVAC	Automated Temperature Control	Facility HVAC	2015	0.0%	2034	1.5%	2015	0.0%
55	NWS	Industrial	Small Industrial	All	HVAC	Reduced Temperature Settings	Facility HVAC	2015	0.0%	2034	1.5%	2015	0.0%
56	NWS	Industrial	Small Industrial	All	HVAC	Destratification Fans	Facility HVAC	2015	0.0%	2034	1.5%	2015	0.0%
57	NWS	Industrial	Small Industrial	All	HVAC	Warehouse Loading Dock Seals	Facility HVAC	2015	0.0%	2034	1.0%	2015	0.0%
58	NWS	Industrial	Small Industrial	All	HVAC	Preventative Packaged HVAC Maintenance	Facility HVAC	2015	0.0%	2034	1.5%	2015	0.0%
59	NWS	Industrial	Small Industrial	All	HVAC	Heat Recovery from Processes to Heat Ventilation Make-up Air	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
60	NWS	Industrial	Small Industrial	All	FL	High efficiency ballasts for lighting	Facility Lighting	2015	0.0%	2034	1.5%	2015	0.0%

Industrial Measures

Measure ID	Weather Sensitive	Sector	Sub-Sector	Building Type	MEASURE DESCRIPTION		PROGRAM	PARTICIPATION LOW CASE					
					End Use	Measure Name		Program Name	First Year of Participation (So Year)	First Year Participation Rate (So)	Year of Maximum Annual Participation (Smax)	Maximum Annual Participation Rate (Smax)	Final Year of Participation, Fo (<2034 if baseline shift)
61	NWS	Industrial	Small Industrial	All	FL	High Efficiency Light fixtures	Facility Lighting	2015	0.0%	2034	0.7%	2015	0.0%
62	NWS	Industrial	Small Industrial	All	FL	Efficient Lighting Design	Facility Lighting	2015	0.0%	2034	1.5%	2015	0.0%
63	NWS	Industrial	Small Industrial	All	FL	Lighting controls: on/off timer settings	Facility Lighting	2015	0.0%	2034	1.5%	2015	0.0%
64	NWS	Industrial	Small Industrial	All	FL	Lighting controls: occupancy sensors	Facility Lighting	2015	0.0%	2034	0.1%	2015	0.0%
65	NWS	Industrial	Small Industrial	All	HVAC	Ventilation Optimization	Facility HVAC	2015	0.1%	2034	0.5%	2034	0.5%
66	NWS	Industrial	Small Industrial	All	HVAC	Premium efficiency ventilation control with VSD	Facility HVAC	2015	0.0%	2034	1.5%	2015	0.0%
67	NWS	Industrial	Small Industrial	All	HVAC	Demand-Controlled Ventilation	Facility HVAC	2015	0.0%	2034	0.1%	2015	0.0%
68	NWS	Industrial	Other - Combined	All	Motors - Other Applications	Operations and maintenance	Machine Drive	2015	0.3%	2034	1.5%	2034	1.5%
69	NWS	Industrial	Other - Combined	All	Motors - Other Applications	Match Motor Size to Load	Machine Drive	2015	0.3%	2034	1.5%	2034	1.5%
70	NWS	Industrial	Other - Combined	All	Motors - Other Applications	Motor Efficiency Upgrade	Machine Drive	2015	0.3%	2034	1.5%	2034	1.5%
71	NWS	Industrial	Other - Combined	All	Motors - Other Applications	Variable Speed Drives	Machine Drive	2015	0.3%	2034	1.5%	2034	1.5%
72	NWS	Industrial	Other - Combined	All	Pumps	Reduce Overall System Requirements	Machine Drive	2015	0.3%	2034	1.5%	2034	1.5%
73	NWS	Industrial	Other - Combined	All	Pumps	Match Pump Size to Load	Machine Drive	2015	0.3%	2034	1.5%	2034	1.5%
74	NWS	Industrial	Other - Combined	All	Pumps	Reduce or Control Pump Speed	Machine Drive	2015	0.3%	2034	1.5%	2034	1.5%
75	NWS	Industrial	Other - Combined	All	Pumps	Improve Pump Components	Machine Drive	2015	0.3%	2034	1.5%	2034	1.5%
76	NWS	Industrial	Other - Combined	All	Pumps	Operation and Maintenance	Machine Drive	2015	0.3%	2034	1.5%	2034	1.5%
77	NWS	Industrial	Other - Combined	All	Compressed Air	Reduce Overall System Requirements	Machine Drive	2015	0.3%	2034	1.5%	2034	1.5%
78	NWS	Industrial	Other - Combined	All	Compressed Air	Match Compressor Size to Load	Machine Drive	2015	0.3%	2034	1.5%	2034	1.5%
79	NWS	Industrial	Other - Combined	All	Compressed Air	Compressor Control	Machine Drive	2015	0.3%	2034	1.5%	2034	1.5%
80	NWS	Industrial	Other - Combined	All	Compressed Air	Improve Compressor Components	Machine Drive	2015	0.3%	2034	1.5%	2034	1.5%
81	NWS	Industrial	Other - Combined	All	Compressed Air	Operation and Maintenance	Machine Drive	2015	0.3%	2034	1.5%	2034	1.5%
82	NWS	Industrial	Other - Combined	All	Fans	Reduce Overall System Requirements	Machine Drive	2015	0.3%	2034	1.5%	2034	1.5%
83	NWS	Industrial	Other - Combined	All	Fans	Reduce or Control Fan Speed	Machine Drive	2015	0.3%	2034	1.5%	2034	1.5%
84	NWS	Industrial	Other - Combined	All	Fans	Improve Fan Components	Machine Drive	2015	0.3%	2034	1.5%	2034	1.5%
85	NWS	Industrial	Other - Combined	All	Fans	Operation and Maintenance	Machine Drive	2015	0.3%	2034	1.5%	2034	1.5%
86	NWS	Industrial	Other - Combined	All	HVAC	Optimized Duct Design to Improve Efficiency	Facility HVAC	2015	0.2%	2034	0.9%	2034	0.9%
87	NWS	Industrial	Other - Combined	All	PH	Advanced Water Heater Controls	Process Heating	2015	1.2%	2034	6.0%	2034	6.0%
88	NWS	Industrial	Other - Combined	All	PH	Process Heat Recovery to Preheat Makeup Water	Process Heating	2015	0.0%	2034	6.0%	2015	0.0%
89	NWS	Industrial	Other - Combined	All	PH	Air Curtains (Oven)	Process Heating	2015	0.0%	2034	6.0%	2015	0.0%
90	NWS	Industrial	Other - Combined	All	PH	Insulation (Oven)	Process Heating	2015	0.0%	2034	6.0%	2015	0.0%
91	NWS	Industrial	Other - Combined	All	PH	Preventative Oven Maintenance	Process Heating	2015	0.0%	2034	6.0%	2015	0.0%
92	NWS	Industrial	Other - Combined	All	PH	Air Curtains (Dryer)	Process Heating	2015	0.0%	2034	6.0%	2015	0.0%
93	NWS	Industrial	Other - Combined	All	PH	Insulation (Dryer)	Process Heating	2015	0.0%	2034	6.0%	2015	0.0%
94	NWS	Industrial	Other - Combined	All	PH	Preventative Dryer Maintenance	Process Heating	2015	0.0%	2034	6.0%	2015	0.0%
95	NWS	Industrial	Other - Combined	All	PH	Optimized Distribution System	Process Heating	2015	1.2%	2034	6.0%	2034	6.0%
96	NWS	Industrial	Other - Combined	All	PH	Insulation (Dryer)	Process Heating	2015	0.0%	2034	6.0%	2015	0.0%
97	NWS	Industrial	Other - Combined	All	PH	Preventative Dryer Maintenance	Process Heating	2015	0.0%	2034	6.0%	2015	0.0%
98	NWS	Industrial	Other - Combined	All	PH	Preventative Furnace Maintenance	Process Heating	2015	0.0%	2034	6.0%	2015	0.0%
99	NWS	Industrial	Other - Combined	All	PH	Insulation (Furnace)	Process Heating	2015	0.0%	2034	6.0%	2015	0.0%
100	NWS	Industrial	Other - Combined	All	PCR	High Efficiency Chiller	Process Cooling and Refrigeration	2015	0.6%	2034	3.2%	2034	3.2%
101	NWS	Industrial	Other - Combined	All	PCR	Floating head pressure controls	Process Cooling and Refrigeration	2015	0.0%	2034	6.0%	2015	0.0%
102	NWS	Industrial	Other - Combined	All	PCR	Premium Efficiency Refrigeration Control System	Process Cooling and Refrigeration	2015	0.0%	2034	2.1%	2015	0.0%
103	NWS	Industrial	Other - Combined	All	PCR	Smart Defrost Controls	Process Cooling and Refrigeration	2015	0.0%	2034	6.0%	2015	0.0%
104	NWS	Industrial	Other - Combined	All	PCR	Doors, Covers and Curtains	Process Cooling and Refrigeration	2015	1.2%	2034	6.0%	2034	6.0%
105	NWS	Industrial	Other - Combined	All	PCR	Optimized chilled water temperature and/or optimized condenser temperature	Process Cooling and Refrigeration	2015	1.2%	2034	6.0%	2034	6.0%
106	NWS	Industrial	Other - Combined	All	PCR	Preventative Refrigeration/cooling System Maintenance	Process Cooling and Refrigeration	2015	0.0%	2034	6.0%	2015	0.0%
107	NWS	Industrial	Other - Combined	All	PCR	Optimized condenser pressure	Process Cooling and Refrigeration	2015	0.0%	2034	6.0%	2015	0.0%
108	NWS	Industrial	Other - Combined	All	PCR	Free-cooling	Process Cooling and Refrigeration	2015	0.0%	2034	6.0%	2015	0.0%
109	NWS	Industrial	Other - Combined	All	PCR	Improve Insulation of Refrigeration System	Process Cooling and Refrigeration	2015	0.0%	2034	6.0%	2015	0.0%
110	NWS	Industrial	Other - Combined	All	ONPU	HE Dry-Type Transformers	Other Process/Non-Process Use	2015	0.0%	2034	6.0%	2015	0.0%
111	NWS	Industrial	Other - Combined	All	HVAC	Air Source Heat Pump for Backup Generators	Facility HVAC	2015	0.0%	2034	0.5%	2015	0.0%
112	NWS	Industrial	Other - Combined	All	ONPU	High efficiency battery charger (for forklifts)	Other Process/Non-Process Use	2015	0.0%	2034	6.0%	2015	0.0%
113	NWS	Industrial	Other - Combined	All	HVAC	Radiant Heaters	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
114	NWS	Industrial	Other - Combined	All	HVAC	High efficiency non-packaged HVAC equipment	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
115	NWS	Industrial	Other - Combined	All	HVAC	Seasonal Temperature Settings Adjustments	Facility HVAC	2015	0.0%	2034	6.0%	2015	0.0%
116	NWS	Industrial	Other - Combined	All	HVAC	High-efficiency rooftop AC with an EER of 13.5	Facility HVAC	2015	0.0%	2034	6.0%	2015	0.0%
117	NWS	Industrial	Other - Combined	All	HVAC	Ground Source Heat Pump	Facility HVAC	2015	0.0%	2034	0.0%	2015	0.0%
118	NWS	Industrial	Other - Combined	All	HVAC	Ventilation Heat Recovery	Facility HVAC	2015	0.0%	2034	0.0%	2015	0.0%
119	NWS	Industrial	Other - Combined	All	HVAC	Automated Temperature Control	Facility HVAC	2015	0.0%	2034	6.0%	2015	0.0%
120	NWS	Industrial	Other - Combined	All	HVAC	Reduced Temperature Settings	Facility HVAC	2015	0.0%	2034	6.0%	2015	0.0%

Industrial Measures

Measure ID	Weather Sensitive	MEASURE DESCRIPTION				PROGRAM	PARTICIPATION LOW CASE						
		Sector	Sub-Sector	Building Type	End Use		Measure Name	Program Name	First Year of Participation (So Year)	First Year Participation Rate (So)	Year of Maximum Annual Participation (Smax)	Maximum Annual Participation Rate (Smax)	Final Year of Participation, Fo (<2034 if baseline shift)
121	NWS	Industrial	Other - Combined	All	HVAC	Destratification Fans	Facility HVAC	2015	0.0%	2034	6.0%	2015	0.0%
122	NWS	Industrial	Other - Combined	All	HVAC	Warehouse Loading Dock Seals	Facility HVAC	2015	0.0%	2034	5.4%	2015	0.0%
123	NWS	Industrial	Other - Combined	All	HVAC	Preventative Packaged HVAC Maintenance	Facility HVAC	2015	0.0%	2034	6.0%	2015	0.0%
124	NWS	Industrial	Other - Combined	All	HVAC	Heat Recovery from Processes to Heat Ventilation Make-up Air	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
125	NWS	Industrial	Other - Combined	All	FL	High efficiency ballasts for lighting	Facility Lighting	2015	0.0%	2034	6.0%	2015	0.0%
126	NWS	Industrial	Other - Combined	All	FL	High Efficiency Light fixtures	Facility Lighting	2015	0.8%	2034	4.1%	2034	4.1%
127	NWS	Industrial	Other - Combined	All	FL	Efficient Lighting Design	Facility Lighting	2015	0.0%	2034	6.0%	2015	0.0%
128	NWS	Industrial	Other - Combined	All	FL	Lighting controls: on/off timer settings	Facility Lighting	2015	1.2%	2034	6.0%	2034	6.0%
129	NWS	Industrial	Other - Combined	All	FL	Lighting controls: occupancy sensors	Facility Lighting	2015	0.2%	2034	1.1%	2034	1.1%
130	NWS	Industrial	Other - Combined	All	HVAC	Ventilation Optimization	Facility HVAC	2015	0.7%	2034	3.6%	2034	3.6%
131	NWS	Industrial	Other - Combined	All	HVAC	Premium efficiency ventilation control with VSD	Facility HVAC	2015	1.2%	2034	6.0%	2034	6.0%
132	NWS	Industrial	Other - Combined	All	HVAC	Demand-Controlled Ventilation	Facility HVAC	2015	0.3%	2034	1.3%	2034	1.3%
133	NWS	Industrial	Food Products	All	Motors - Other Applications	Operations and maintenance	Machine Drive	2015	1.4%	2034	7.0%	2034	7.0%
134	NWS	Industrial	Food Products	All	Motors - Other Applications	Match Motor Size to Load	Machine Drive	2015	1.4%	2034	7.0%	2034	7.0%
135	NWS	Industrial	Food Products	All	Motors - Other Applications	Motor Efficiency Upgrade	Machine Drive	2015	1.4%	2034	7.0%	2034	7.0%
136	NWS	Industrial	Food Products	All	Motors - Other Applications	Variable Speed Drives	Machine Drive	2015	1.4%	2034	7.0%	2034	7.0%
137	NWS	Industrial	Food Products	All	Pumps	Reduce Overall System Requirements	Machine Drive	2015	1.4%	2034	7.0%	2034	7.0%
138	NWS	Industrial	Food Products	All	Pumps	Match Pump Size to Load	Machine Drive	2015	1.4%	2034	7.0%	2034	7.0%
139	NWS	Industrial	Food Products	All	Pumps	Reduce or Control Pump Speed	Machine Drive	2015	1.4%	2034	7.0%	2034	7.0%
140	NWS	Industrial	Food Products	All	Pumps	Improve Pump Components	Machine Drive	2015	1.4%	2034	7.0%	2034	7.0%
141	NWS	Industrial	Food Products	All	Pumps	Operation and Maintenance	Machine Drive	2015	1.4%	2034	7.0%	2034	7.0%
142	NWS	Industrial	Food Products	All	Compressed Air	Reduce Overall System Requirements	Machine Drive	2015	1.4%	2034	7.0%	2034	7.0%
143	NWS	Industrial	Food Products	All	Compressed Air	Match Compressor Size to Load	Machine Drive	2015	1.4%	2034	7.0%	2034	7.0%
144	NWS	Industrial	Food Products	All	Compressed Air	Compressor Control	Machine Drive	2015	1.4%	2034	7.0%	2034	7.0%
145	NWS	Industrial	Food Products	All	Compressed Air	Improve Compressor Components	Machine Drive	2015	1.4%	2034	7.0%	2034	7.0%
146	NWS	Industrial	Food Products	All	Compressed Air	Operation and Maintenance	Machine Drive	2015	1.4%	2034	7.0%	2034	7.0%
147	NWS	Industrial	Food Products	All	Fans	Reduce Overall System Requirements	Machine Drive	2015	1.4%	2034	7.0%	2034	7.0%
148	NWS	Industrial	Food Products	All	Fans	Reduce or Control Fan Speed	Machine Drive	2015	1.4%	2034	7.0%	2034	7.0%
149	NWS	Industrial	Food Products	All	Fans	Improve Fan Components	Machine Drive	2015	1.4%	2034	7.0%	2034	7.0%
150	NWS	Industrial	Food Products	All	Fans	Operation and Maintenance	Machine Drive	2015	1.4%	2034	7.0%	2034	7.0%
151	NWS	Industrial	Food Products	All	HVAC	Optimized Duct Design to Improve Efficiency	Facility HVAC	2015	0.7%	2034	3.6%	2034	3.6%
152	NWS	Industrial	Food Products	All	PH	Advanced Water Heater Controls	Process Heating	2015	1.2%	2034	6.0%	2034	6.0%
153	NWS	Industrial	Food Products	All	PH	Process Heat Recovery to Preheat Makeup Water	Process Heating	2015	1.2%	2034	6.0%	2034	6.0%
154	NWS	Industrial	Food Products	All	PH	Air Curtains (Oven)	Process Heating	2015	1.2%	2034	6.0%	2034	6.0%
155	NWS	Industrial	Food Products	All	PH	Insulation (Oven)	Process Heating	2015	1.2%	2034	6.0%	2034	6.0%
156	NWS	Industrial	Food Products	All	PH	Preventative Oven Maintenance	Process Heating	2015	1.2%	2034	6.0%	2034	6.0%
157	NWS	Industrial	Food Products	All	PH	Air Curtains (Dryer)	Process Heating	2015	1.2%	2034	6.0%	2034	6.0%
158	NWS	Industrial	Food Products	All	PH	Insulation (Dryer)	Process Heating	2015	1.2%	2034	6.0%	2034	6.0%
159	NWS	Industrial	Food Products	All	PH	Preventative Dryer Maintenance	Process Heating	2015	1.2%	2034	6.0%	2034	6.0%
160	NWS	Industrial	Food Products	All	PH	Optimized Distribution System	Process Heating	2015	1.2%	2034	6.0%	2034	6.0%
161	NWS	Industrial	Food Products	All	PH	Insulation (Dryer)	Process Heating	2015	1.2%	2034	6.0%	2034	6.0%
162	NWS	Industrial	Food Products	All	PH	Preventative Dryer Maintenance	Process Heating	2015	1.2%	2034	6.0%	2034	6.0%
163	NWS	Industrial	Food Products	All	PH	Preventative Furnace Maintenance	Process Heating	2015	1.2%	2034	6.0%	2034	6.0%
164	NWS	Industrial	Food Products	All	PH	Insulation (Furnace)	Process Heating	2015	1.2%	2034	6.0%	2034	6.0%
165	NWS	Industrial	Food Products	All	PCR	High Efficiency Chiller	Process Cooling and Refrigeration	2015	0.6%	2034	3.2%	2034	3.2%
166	NWS	Industrial	Food Products	All	PCR	Floating head pressure controls	Process Cooling and Refrigeration	2015	1.2%	2034	6.0%	2034	6.0%
167	NWS	Industrial	Food Products	All	PCR	Premium Efficiency Refrigeration Control System	Process Cooling and Refrigeration	2015	0.4%	2034	2.1%	2034	2.1%
168	NWS	Industrial	Food Products	All	PCR	Smart Defrost Controls	Process Cooling and Refrigeration	2015	1.2%	2034	6.0%	2034	6.0%
169	NWS	Industrial	Food Products	All	PCR	Doors, Covers and Curtains	Process Cooling and Refrigeration	2015	1.2%	2034	6.0%	2034	6.0%
170	NWS	Industrial	Food Products	All	PCR	Optimized chilled water temperature and/or optimized condenser temperature	Process Cooling and Refrigeration	2015	1.2%	2034	6.0%	2034	6.0%
171	NWS	Industrial	Food Products	All	PCR	Preventative Refrigeration/cooling System Maintenance	Process Cooling and Refrigeration	2015	1.2%	2034	6.0%	2034	6.0%
172	NWS	Industrial	Food Products	All	PCR	Optimized condenser pressure	Process Cooling and Refrigeration	2015	1.2%	2034	6.0%	2034	6.0%
173	NWS	Industrial	Food Products	All	PCR	Free-cooling	Process Cooling and Refrigeration	2015	1.2%	2034	6.0%	2034	6.0%
174	NWS	Industrial	Food Products	All	PCR	Improve Insulation of Refrigeration System	Process Cooling and Refrigeration	2015	1.2%	2034	6.0%	2034	6.0%
175	NWS	Industrial	Food Products	All	ONPU	HE Dry-Type Transformers	Other Process/Non-Process Use	2015	1.2%	2034	6.0%	2034	6.0%
176	NWS	Industrial	Food Products	All	HVAC	Air Source Heat Pump for Backup Generators	Facility HVAC	2015	0.1%	2034	0.5%	2034	0.5%
177	NWS	Industrial	Food Products	All	ONPU	High efficiency battery charger (for forklifts)	Other Process/Non-Process Use	2015	1.2%	2034	6.0%	2034	6.0%
178	NWS	Industrial	Food Products	All	HVAC	Radiant Heaters	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
179	NWS	Industrial	Food Products	All	HVAC	High efficiency non-packaged HVAC equipment	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
180	NWS	Industrial	Food Products	All	HVAC	Seasonal Temperature Settings Adjustments	Facility HVAC	2015	1.2%	2034	6.0%	2034	6.0%

Industrial Measures

Measure ID	Weather Sensitive	Sector	Sub-Sector	Building Type	End Use	Measure Name	Program Name	PARTICIPATION LOW CASE					
								First Year of Participation (So Year)	First Year Participation Rate (So)	Year of Maximum Annual Participation (Smax)	Maximum Annual Participation Rate (Smax)	Final Year of Participation, Fo (<2034 if baseline shift)	Final Year Participation Rate (Fo)
181	NWS	Industrial	Food Products	All	HVAC	High-efficiency rooftop AC with an EER of 13.5	Facility HVAC	2015	1.2%	2034	6.0%	2034	6.0%
182	NWS	Industrial	Food Products	All	HVAC	Ground Source Heat Pump	Facility HVAC	2015	0.0%	2034	0.0%	2034	0.0%
183	NWS	Industrial	Food Products	All	HVAC	Ventilation Heat Recovery	Facility HVAC	2015	0.0%	2034	0.0%	2015	0.0%
184	NWS	Industrial	Food Products	All	HVAC	Automated Temperature Control	Facility HVAC	2015	1.2%	2034	6.0%	2034	6.0%
185	NWS	Industrial	Food Products	All	HVAC	Reduced Temperature Settings	Facility HVAC	2015	1.2%	2034	6.0%	2034	6.0%
186	NWS	Industrial	Food Products	All	HVAC	Destratification Fans	Facility HVAC	2015	1.2%	2034	6.0%	2034	6.0%
187	NWS	Industrial	Food Products	All	HVAC	Warehouse Loading Dock Seals	Facility HVAC	2015	1.1%	2034	5.4%	2034	5.4%
188	NWS	Industrial	Food Products	All	HVAC	Preventative Packaged HVAC Maintenance	Facility HVAC	2015	1.2%	2034	6.0%	2034	6.0%
189	NWS	Industrial	Food Products	All	HVAC	Heat Recovery from Processes to Heat Ventilation Make-up Air	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
190	NWS	Industrial	Food Products	All	FL	High efficiency ballasts for lighting	Facility Lighting	2015	1.2%	2034	6.0%	2034	6.0%
191	NWS	Industrial	Food Products	All	FL	High Efficiency Light fixtures	Facility Lighting	2015	0.8%	2034	4.1%	2034	4.1%
192	NWS	Industrial	Food Products	All	FL	Efficient Lighting Design	Facility Lighting	2015	1.2%	2034	6.0%	2034	6.0%
193	NWS	Industrial	Food Products	All	FL	Lighting controls: on/off timer settings	Facility Lighting	2015	1.2%	2034	6.0%	2034	6.0%
194	NWS	Industrial	Food Products	All	FL	Lighting controls: occupancy sensors	Facility Lighting	2015	0.2%	2034	1.1%	2034	1.1%
195	NWS	Industrial	Food Products	All	HVAC	Ventilation Optimization	Facility HVAC	2015	0.7%	2034	3.6%	2034	3.6%
196	NWS	Industrial	Food Products	All	HVAC	Premium efficiency ventilation control with VSD	Facility HVAC	2015	1.2%	2034	6.0%	2034	6.0%
197	NWS	Industrial	Food Products	All	HVAC	Demand-Controlled Ventilation	Facility HVAC	2015	0.3%	2034	1.3%	2034	1.3%
199	NWS	Industrial	Industrial Gases	All	Total	Integrated Control System	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
200	NWS	Industrial	Industrial Gases	All	Total	Process Integration and Pinch Analysis	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
201	NWS	Industrial	Industrial Gases	All	Total	Sub-Metering	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
202	NWS	Industrial	Industrial Gases	All	HVAC	High-efficiency rooftop AC with an EER of 13.13	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
203	NWS	Industrial	Industrial Gases	All	Process Heating	Water-heater right sizing and load management	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
204	NWS	Industrial	Industrial Gases	All	Process Heating	Insulation	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
205	NWS	Industrial	Industrial Gases	All	Boilers	Blowdown Control	Boilers	2015	0.0%	2034	0.2%	2034	0.2%
206	NWS	Industrial	Industrial Gases	All	Boilers	Boiler Right Sizing	Boilers	2015	0.0%	2034	0.0%	2015	0.0%
207	NWS	Industrial	Industrial Gases	All	Boilers	Condensing Boiler	Boilers	2015	0.0%	2034	0.0%	2015	0.0%
208	NWS	Industrial	Industrial Gases	All	Boilers	Direct-Contact Hot Water Heaters	Boilers	2015	0.0%	2034	0.0%	2015	0.0%
209	NWS	Industrial	Industrial Gases	All	Boilers	High Efficiency Burner	Boilers	2015	0.1%	2034	0.9%	2034	0.9%
210	NWS	Industrial	Industrial Gases	All	Boilers	Instantaneous Steam Generation	Boilers	2015	0.0%	2034	0.0%	2015	0.0%
211	NWS	Industrial	Industrial Gases	All	Boilers	Blowdown Heat Recovery	Boilers	2015	0.1%	2034	0.4%	2034	0.4%
212	NWS	Industrial	Industrial Gases	All	Boilers	Boiler combustion air preheat	Boilers	2015	0.1%	2034	0.4%	2034	0.4%
213	NWS	Industrial	Industrial Gases	All	Boilers	Preventative Boiler Maintenance	Boilers	2015	0.8%	2034	6.0%	2034	6.0%
214	NWS	Industrial	Industrial Gases	All	Boilers	Boiler Water Treatment	Boilers	2015	0.3%	2034	2.6%	2034	2.6%
215	NWS	Industrial	Industrial Gases	All	Boilers	Condensate Return	Boilers	2015	0.0%	2034	0.0%	2034	0.0%
216	NWS	Industrial	Industrial Gases	All	Boilers	Economizer	Boilers	2015	0.1%	2034	0.8%	2034	0.8%
217	NWS	Industrial	Industrial Gases	All	Boilers	Insulation	Boilers	2015	0.8%	2034	6.0%	2034	6.0%
218	NWS	Industrial	Industrial Gases	All	Boilers	Minimize Deaerator Vent Losses	Boilers	2015	0.2%	2034	1.3%	2034	1.3%
219	NWS	Industrial	Industrial Gases	All	Boilers	Process Heat Recovery to Preheat Makeup Water	Boilers	2015	0.2%	2034	1.7%	2034	1.7%
220	NWS	Industrial	Industrial Gases	All	Boilers	Steam Trap Survey and Repair	Boilers	2015	0.4%	2034	3.2%	2034	3.2%
221	NWS	Industrial	Industrial Gases	All	Boilers	First Generation Super Boilers	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
222	NWS	Industrial	Industrial Gases	All	Process Heating	High Efficiency Burner	Process Heating	2015	0.0%	2034	0.0%	2015	0.0%
223	NWS	Industrial	Industrial Gases	All	Process Heating	Infrared Ovens	Process Heating	2015	0.0%	2034	0.0%	2015	0.0%
224	NWS	Industrial	Industrial Gases	All	Process Heating	Process Heat Recovery to Preheat Makeup Water	Process Heating	2015	0.1%	2034	0.4%	2034	0.4%
225	NWS	Industrial	Industrial Gases	All	Process Heating	Air Curtains	Process Heating	2015	0.2%	2034	1.5%	2034	1.5%
226	NWS	Industrial	Industrial Gases	All	Process Heating	Exhaust Gas Heat Recovery	Process Heating	2015	0.0%	2034	0.0%	2015	0.0%
227	NWS	Industrial	Industrial Gases	All	Process Heating	Insulation	Process Heating	2015	0.0%	2034	0.0%	2034	0.0%
228	NWS	Industrial	Industrial Gases	All	Process Heating	Advanced heating and Process Control	Process Heating	2015	0.0%	2034	0.0%	2015	0.0%
229	NWS	Industrial	Industrial Gases	All	Process Heating	Combustion Optimization	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
230	NWS	Industrial	Industrial Gases	All	Process Heating	Radiant Tube burners	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
231	NWS	Industrial	Industrial Gases	All	HVAC	Radiant Heaters	HVAC	2015	0.0%	2034	0.0%	2034	0.0%
232	NWS	Industrial	Industrial Gases	All	Process Heating	Solar Walls	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
233	NWS	Industrial	Industrial Gases	All	HVAC	Air Compressor Heat Recovery	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
234	NWS	Industrial	Industrial Gases	All	HVAC	Air Curtains	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
235	NWS	Industrial	Industrial Gases	All	HVAC	Destratification Fans	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
236	NWS	Industrial	Industrial Gases	All	HVAC	Ventilation Heat Recovery	HVAC	2015	0.1%	2034	1.0%	2034	1.0%
237	NWS	Industrial	Industrial Gases	All	HVAC	Ventilation Optimization	HVAC	2015	0.1%	2034	1.1%	2034	1.1%
238	NWS	Industrial	Industrial Gases	All	HVAC	Warehouse Loading Dock Seals	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
239	NWS	Industrial	Industrial Gases	All	HVAC	Automated Temperature reset Control	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
240	NWS	Industrial	Industrial Gases	All	HVAC	Reduced Temperature Settings	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A

Industrial Measures

Measure ID	Weather Sensitive	MEASURE DESCRIPTION				Measure Name	PROGRAM	PARTICIPATION LOW CASE						
		Sector	Sub-Sector	Building Type	End Use			Program Name	First Year of Participation (So Year)	First Year Participation Rate (So)	Year of Maximum Annual Participation (Smax)	Maximum Annual Participation Rate (Smax)	Final Year of Participation, Fo (<2034 if baseline shift)	Final Year Participation Rate (Fo)
241	NWS	Industrial	Industrial Gases	All	Total	Pollution Control Measures	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
242	NWS	Industrial	Industrial Gases	All	Process Heating	CFD Modelling	Process Heating	2015	0.2%	2034	1.5%	2034	1.5%	
243	NWS	Industrial	Industrial Gases	All	Total	Energy Management	All	2015	0.1%	2034	1.0%	2034	1.0%	
244	NWS	Industrial	Industrial Gases	All	Process Heating	Improved airflow in dryer windbox	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
245	NWS	Industrial	Industrial Gases	All	Process Heating	Preventative Oven Maintenance	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
246	NWS	Industrial	Industrial Gases	All	Process Heating	Preventative Furnace Maintenance	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
247	NWS	Industrial	Industrial Gases	All	Process Heating	Preventative Dryer Maintenance	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
248	NWS	Industrial	Industrial Gases	All	Process Heating	High Efficiency Burner	Process Heating	2015	0.1%	2034	0.8%	2034	0.8%	
249	NWS	Industrial	Industrial Gases	All	Process Heating	Air Curtains	Process Heating	2015	0.2%	2034	1.5%	2034	1.5%	
250	NWS	Industrial	Industrial Gases	All	Process Heating	Exhaust Gas Heat Recovery	Process Heating	2015	0.1%	2034	0.5%	2034	0.5%	
251	NWS	Industrial	Industrial Gases	All	Process Heating	Insulation	Process Heating	2015	0.2%	2034	1.5%	2034	1.5%	
252	NWS	Industrial	Industrial Gases	All	Process Heating	Advanced heating and Process Control	Process Heating	2015	0.1%	2034	1.0%	2034	1.0%	
253	NWS	Industrial	Industrial Gases	All	Process Heating	Combustion Optimization	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
254	NWS	Industrial	Industrial Gases	All	Process Heating	High Efficiency Burner	Process Heating	2015	0.0%	2034	0.0%	2015	0.0%	
255	NWS	Industrial	Industrial Gases	All	Process Heating	Air Curtains	Process Heating	2015	0.2%	2034	1.5%	2034	1.5%	
256	NWS	Industrial	Industrial Gases	All	Process Heating	Exhaust Gas Heat Recovery	Process Heating	2015	0.0%	2034	0.0%	2015	0.0%	
257	NWS	Industrial	Industrial Gases	All	Process Heating	Insulation	Process Heating	2015	0.0%	2034	0.0%	2034	0.0%	
258	NWS	Industrial	Industrial Gases	All	Process Heating	Advanced heating and Process Control	Process Heating	2015	0.0%	2034	0.0%	2015	0.0%	
259	NWS	Industrial	Industrial Gases	All	Process Heating	Combustion Optimization	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
260	NWS	Industrial	All Other	All	Total	Integrated Control System	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
261	NWS	Industrial	All Other	All	Total	Process Integration and Pinch Analysis	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
262	NWS	Industrial	All Other	All	Total	Sub-Metering	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
263	NWS	Industrial	All Other	All	HVAC	High-efficiency rooftop AC with an EER of 13.13	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
264	NWS	Industrial	All Other	All	Process Heating	Water-heater right sizing and load management	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
265	NWS	Industrial	All Other	All	Process Heating	Insulation	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
266	NWS	Industrial	All Other	All	Boilers	Blowdown Control	Boilers	2015	0.0%	2034	0.2%	2034	0.2%	
267	NWS	Industrial	All Other	All	Boilers	Boiler Right Sizing	Boilers	2015	0.0%	2034	0.0%	2015	0.0%	
268	NWS	Industrial	All Other	All	Boilers	Condensing Boiler	Boilers	2015	0.0%	2034	0.0%	2015	0.0%	
269	NWS	Industrial	All Other	All	Boilers	Direct-Contact Hot Water Heaters	Boilers	2015	0.0%	2034	0.0%	2015	0.0%	
270	NWS	Industrial	All Other	All	Boilers	High Efficiency Burner	Boilers	2015	0.1%	2034	0.9%	2034	0.9%	
271	NWS	Industrial	All Other	All	Boilers	Instantaneous Steam Generation	Boilers	2015	0.0%	2034	0.0%	2015	0.0%	
272	NWS	Industrial	All Other	All	Boilers	Blowdown Heat Recovery	Boilers	2015	0.1%	2034	0.4%	2034	0.4%	
273	NWS	Industrial	All Other	All	Boilers	Boiler combustion air preheat	Boilers	2015	0.1%	2034	0.4%	2034	0.4%	
274	NWS	Industrial	All Other	All	Boilers	Preventative Boiler Maintenance	Boilers	2015	0.8%	2034	6.0%	2034	6.0%	
275	NWS	Industrial	All Other	All	Boilers	Boiler Water Treatment	Boilers	2015	0.3%	2034	2.6%	2034	2.6%	
276	NWS	Industrial	All Other	All	Boilers	Condensate Return	Boilers	2015	0.0%	2034	0.0%	2034	0.0%	
277	NWS	Industrial	All Other	All	Boilers	Economizer	Boilers	2015	0.1%	2034	0.8%	2034	0.8%	
278	NWS	Industrial	All Other	All	Boilers	Insulation	Boilers	2015	0.8%	2034	6.0%	2034	6.0%	
279	NWS	Industrial	All Other	All	Boilers	Minimize Deaerator Vent Losses	Boilers	2015	0.2%	2034	1.3%	2034	1.3%	
280	NWS	Industrial	All Other	All	Boilers	Process Heat Recovery to Preheat Makeup Water	Boilers	2015	0.2%	2034	1.7%	2034	1.7%	
281	NWS	Industrial	All Other	All	Boilers	Steam Trap Survey and Repair	Boilers	2015	0.4%	2034	3.2%	2034	3.2%	
282	NWS	Industrial	All Other	All	Boilers	First Generation Super Boilers	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
283	NWS	Industrial	All Other	All	Process Heating	High Efficiency Burner	Process Heating	2015	0.0%	2034	0.0%	2015	0.0%	
284	NWS	Industrial	All Other	All	Process Heating	Infrared Ovens	Process Heating	2015	0.0%	2034	0.0%	2015	0.0%	
285	NWS	Industrial	All Other	All	Process Heating	Process Heat Recovery to Preheat Makeup Water	Process Heating	2015	0.1%	2034	0.4%	2034	0.4%	
286	NWS	Industrial	All Other	All	Process Heating	Air Curtains	Process Heating	2015	0.2%	2034	1.5%	2034	1.5%	
287	NWS	Industrial	All Other	All	Process Heating	Exhaust Gas Heat Recovery	Process Heating	2015	0.0%	2034	0.0%	2015	0.0%	
288	NWS	Industrial	All Other	All	Process Heating	Insulation	Process Heating	2015	0.0%	2034	0.0%	2034	0.0%	
289	NWS	Industrial	All Other	All	Process Heating	Advanced heating and Process Control	Process Heating	2015	0.0%	2034	0.0%	2015	0.0%	
290	NWS	Industrial	All Other	All	Process Heating	Combustion Optimization	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
291	NWS	Industrial	All Other	All	Process Heating	Radiant Tube burners	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
292	NWS	Industrial	All Other	All	Process Heating	Radiant Heaters	Process Heating	2015	0.0%	2034	0.0%	2034	0.0%	
293	NWS	Industrial	All Other	All	Process Heating	Solar Walls	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
294	NWS	Industrial	All Other	All	HVAC	Air Compressor Heat Recovery	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
295	NWS	Industrial	All Other	All	HVAC	Air Curtains	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
296	NWS	Industrial	All Other	All	HVAC	Destratification Fans	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
297	NWS	Industrial	All Other	All	HVAC	Ventilation Heat Recovery	HVAC	2015	0.1%	2034	1.0%	2034	1.0%	
298	NWS	Industrial	All Other	All	HVAC	Ventilation Optimization	HVAC	2015	0.1%	2034	1.1%	2034	1.1%	
299	NWS	Industrial	All Other	All	HVAC	Warehouse Loading Dock Seals	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
300	NWS	Industrial	All Other	All	HVAC	Automated Temperature reset Control	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	

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		Sector	Sub-Sector	Building Type	End Use	Measure Name		Program Name	First Year of Participation (So Year)	First Year Participation Rate (So)	Year of Maximum Annual Participation (Smax)	Maximum Annual Participation Rate (Smax)	Final Year of Participation, Fo (<2034 if baseline shift)
301	NWS	Industrial	All Other	All	HVAC	Reduced Temperature Settings	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
302	NWS	Industrial	All Other	All	Process Heating	Pollution Control Measures	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
303	NWS	Industrial	All Other	All	Process Heating	CFD Modelling	Process Heating	2015	0.2%	2034	1.5%	2034	1.5%
304	NWS	Industrial	All Other	All	Total	Energy Management	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
305	NWS	Industrial	All Other	All	Process Heating	Improved airflow in dryer windbox	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
306	NWS	Industrial	All Other	All	Process Heating	Preventative Oven Maintenance	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
307	NWS	Industrial	All Other	All	Process Heating	Preventative Furnace Maintenance	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
308	NWS	Industrial	All Other	All	Process Heating	Preventative Dryer Maintenance	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
309	NWS	Industrial	All Other	All	Process Heating	High Efficiency Burner	Process Heating	2015	0.1%	2034	0.8%	2034	0.8%
310	NWS	Industrial	All Other	All	Process Heating	Air Curtains	Process Heating	2015	0.2%	2034	1.5%	2034	1.5%
311	NWS	Industrial	All Other	All	Process Heating	Exhaust Gas Heat Recovery	Process Heating	2015	0.1%	2034	0.5%	2034	0.5%
312	NWS	Industrial	All Other	All	Process Heating	Insulation	Process Heating	2015	0.2%	2034	1.5%	2034	1.5%
313	NWS	Industrial	All Other	All	Process Heating	Advanced heating and Process Control	Process Heating	2015	0.1%	2034	1.0%	2034	1.0%
314	NWS	Industrial	All Other	All	Process Heating	Combustion Optimization	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
315	NWS	Industrial	All Other	All	Process Heating	High Efficiency Burner	Process Heating	2015	0.0%	2034	0.0%	2015	0.0%
316	NWS	Industrial	All Other	All	Process Heating	Air Curtains	Process Heating	2015	0.2%	2034	1.5%	2034	1.5%
317	NWS	Industrial	All Other	All	Process Heating	Exhaust Gas Heat Recovery	Process Heating	2015	0.0%	2034	0.0%	2015	0.0%
318	NWS	Industrial	All Other	All	Process Heating	Insulation	Process Heating	2015	0.0%	2034	0.0%	2034	0.0%
319	NWS	Industrial	All Other	All	Process Heating	Advanced heating and Process Control	Process Heating	2015	0.0%	2034	0.0%	2015	0.0%
320	NWS	Industrial	All Other	All	Process Heating	Combustion Optimization	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
321	NWS	Industrial	Small Industrial	All	Total	Integrated Control System	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
322	NWS	Industrial	Small Industrial	All	Total	Process Integration and Pinch Analysis	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
323	NWS	Industrial	Small Industrial	All	Total	Sub-Metering	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
324	NWS	Industrial	Small Industrial	All	HVAC	High-efficiency rooftop AC with an EER of 13.13	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
325	NWS	Industrial	Small Industrial	All	Process Heating	Water-heater right sizing and load management	Process Heating	2015	0.0%	2034	0.0%	#N/A	#N/A
326	NWS	Industrial	Small Industrial	All	Process Heating	Insulation	Process Heating	2015	0.0%	2034	0.1%	2034	0.1%
327	NWS	Industrial	Small Industrial	All	Boilers	Blowdown Control	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
328	NWS	Industrial	Small Industrial	All	Boilers	Boiler Right Sizing	Boilers	2015	0.0%	2034	0.0%	2034	0.0%
329	NWS	Industrial	Small Industrial	All	Boilers	Condensing Boiler	Boilers	2015	0.0%	2034	0.0%	2015	0.0%
330	NWS	Industrial	Small Industrial	All	Boilers	Direct-Contact Hot Water Heaters	Boilers	2015	0.0%	2034	0.0%	2034	0.0%
331	NWS	Industrial	Small Industrial	All	Boilers	High Efficiency Burner	Boilers	2015	0.0%	2034	0.0%	2015	0.0%
332	NWS	Industrial	Small Industrial	All	Boilers	Instantaneous Steam Generation	Boilers	2015	0.0%	2034	0.0%	2034	0.0%
333	NWS	Industrial	Small Industrial	All	Boilers	Blowdown Heat Recovery	Boilers	2015	0.0%	2034	0.0%	2015	0.0%
334	NWS	Industrial	Small Industrial	All	Boilers	Boiler combustion air preheat	Boilers	2015	0.0%	2034	0.0%	2015	0.0%
335	NWS	Industrial	Small Industrial	All	Boilers	Preventative Boiler Maintenance	Boilers	2015	0.0%	2034	0.0%	2034	0.0%
336	NWS	Industrial	Small Industrial	All	Boilers	Boiler Water Treatment	Boilers	2015	0.0%	2034	0.0%	2015	0.0%
337	NWS	Industrial	Small Industrial	All	Boilers	Condensate Return	Boilers	2015	0.0%	2034	0.0%	2015	0.0%
338	NWS	Industrial	Small Industrial	All	Boilers	Economizer	Boilers	2015	0.0%	2034	0.1%	2034	0.1%
339	NWS	Industrial	Small Industrial	All	Boilers	Insulation	Boilers	2015	0.1%	2034	0.8%	2034	0.8%
340	NWS	Industrial	Small Industrial	All	Boilers	Minimize Deaerator Vent Losses	Boilers	2015	0.0%	2034	0.0%	2015	0.0%
341	NWS	Industrial	Small Industrial	All	Boilers	Process Heat Recovery to Preheat Makeup Water	Boilers	2015	0.0%	2034	0.0%	2015	0.0%
342	NWS	Industrial	Small Industrial	All	Boilers	Steam Trap Survey and Repair	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
343	NWS	Industrial	Small Industrial	All	Boilers	First Generation Super Boilers	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
344	NWS	Industrial	Small Industrial	All	Process Heating	High Efficiency Burner	Process Heating	2015	0.0%	2034	0.1%	2034	0.1%
345	NWS	Industrial	Small Industrial	All	Process Heating	Infrared Ovens	Process Heating	2015	0.0%	2034	0.1%	2034	0.1%
346	NWS	Industrial	Small Industrial	All	Process Heating	Process Heat Recovery to Preheat Makeup Water	Process Heating	2015	0.1%	2034	0.9%	2034	0.9%
347	NWS	Industrial	Small Industrial	All	Process Heating	Air Curtains	Process Heating	2015	0.0%	2034	0.2%	2034	0.2%
348	NWS	Industrial	Small Industrial	All	Process Heating	Exhaust Gas Heat Recovery	Process Heating	2015	0.0%	2034	0.0%	2034	0.0%
349	NWS	Industrial	Small Industrial	All	Process Heating	Insulation	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
350	NWS	Industrial	Small Industrial	All	Process Heating	Advanced heating and Process Control	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
351	NWS	Industrial	Small Industrial	All	Process Heating	Combustion Optimization	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
352	NWS	Industrial	Small Industrial	All	Process Heating	Radiant Tube burners	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
353	NWS	Industrial	Small Industrial	All	HVAC	Radiant Heaters	HVAC	2015	0.0%	2034	0.0%	2015	0.0%
354	NWS	Industrial	Small Industrial	All	Process Heating	Solar Walls	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
355	NWS	Industrial	Small Industrial	All	HVAC	Air Compressor Heat Recovery	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
356	NWS	Industrial	Small Industrial	All	HVAC	Air Curtains	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
357	NWS	Industrial	Small Industrial	All	HVAC	Destratification Fans	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
358	NWS	Industrial	Small Industrial	All	HVAC	Ventilation Heat Recovery	HVAC	2015	0.0%	2034	0.0%	2034	0.0%
359	NWS	Industrial	Small Industrial	All	HVAC	Ventilation Optimization	HVAC	2015	0.0%	2034	0.0%	2034	0.0%
360	NWS	Industrial	Small Industrial	All	HVAC	Warehouse Loading Dock Seals	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A

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					End Use	Measure Name		Program Name	First Year of Participation (So Year)	First Year Participation Rate (So)	Year of Maximum Annual Participation (Smax)	Maximum Annual Participation Rate (Smax)	Final Year of Participation, Fo (<2034 if baseline shift)
361	NWS	Industrial	Small Industrial	All	HVAC	Automated Temperature reset Control	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
362	NWS	Industrial	Small Industrial	All	HVAC	Reduced Temperature Settings	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
363	NWS	Industrial	Small Industrial	All	Total	Pollution Control Measures	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
364	NWS	Industrial	Small Industrial	All	Process Heating	CFD Modelling	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
365	NWS	Industrial	Small Industrial	All	Total	Energy Management	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
366	NWS	Industrial	Small Industrial	All	Process Heating	Improved airflow in dryer windbox	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
367	NWS	Industrial	Small Industrial	All	Process Heating	Preventative Oven Maintenance	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
368	NWS	Industrial	Small Industrial	All	Process Heating	Preventative Furnace Maintenance	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
369	NWS	Industrial	Small Industrial	All	Process Heating	Preventative Dryer Maintenance	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
370	NWS	Industrial	Small Industrial	All	Process Heating	High Efficiency Burner	Process Heating	2015	0.2%	2034	1.5%	2034	1.5%
371	NWS	Industrial	Small Industrial	All	Process Heating	Air Curtains	Process Heating	2015	0.2%	2034	1.5%	2034	1.5%
372	NWS	Industrial	Small Industrial	All	Process Heating	Exhaust Gas Heat Recovery	Process Heating	2015	0.2%	2034	1.5%	2034	1.5%
373	NWS	Industrial	Small Industrial	All	Process Heating	Insulation	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
374	NWS	Industrial	Small Industrial	All	Process Heating	Advanced heating and Process Control	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
375	NWS	Industrial	Small Industrial	All	Process Heating	Combustion Optimization	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
376	NWS	Industrial	Small Industrial	All	Process Heating	High Efficiency Burner	Process Heating	2015	0.0%	2034	0.1%	2034	0.1%
377	NWS	Industrial	Small Industrial	All	Process Heating	Air Curtains	Process Heating	2015	0.0%	2034	0.2%	2034	0.2%
378	NWS	Industrial	Small Industrial	All	Process Heating	Exhaust Gas Heat Recovery	Process Heating	2015	0.0%	2034	0.0%	2034	0.0%
379	NWS	Industrial	Small Industrial	All	Process Heating	Insulation	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
380	NWS	Industrial	Small Industrial	All	Process Heating	Advanced heating and Process Control	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
381	NWS	Industrial	Small Industrial	All	Process Heating	Combustion Optimization	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A

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		Sector	Sub-Sector	Building Type					First Year of Participation (So Year)	First Year Participation Rate (So)	Year of Maximum Annual Participation (Smax)	Maximum Annual Participation Rate (Smax)	Final Year of Participation, Fo (-2034 if baseline shift)	Final Year Participation Rate (Fo)
1	NWS	Industrial	Small Industrial	All	Motors - Other Applications	Operations and maintenance	Machine Drive	2015	0.3%	2034	1.5%	2034	1.5%	
2	NWS	Industrial	Small Industrial	All	Motors - Other Applications	Match Motor Size to Load	Machine Drive	2015	0.0%	2034	1.5%	2015	0.0%	
3	NWS	Industrial	Small Industrial	All	Motors - Other Applications	Motor Efficiency Upgrade	Machine Drive	2015	0.0%	2034	1.5%	2015	0.0%	
4	NWS	Industrial	Small Industrial	All	Motors - Other Applications	Variable Speed Drives	Machine Drive	2015	0.0%	2034	1.5%	2015	0.0%	
5	NWS	Industrial	Small Industrial	All	Pumps	Reduce Overall System Requirements	Machine Drive	2015	0.0%	2034	1.5%	2015	0.0%	
6	NWS	Industrial	Small Industrial	All	Pumps	Match Pump Size to Load	Machine Drive	2015	0.0%	2034	1.5%	2015	0.0%	
7	NWS	Industrial	Small Industrial	All	Pumps	Reduce or Control Pump Speed	Machine Drive	2015	0.3%	2034	1.5%	2034	1.5%	
8	NWS	Industrial	Small Industrial	All	Pumps	Improve Pump Components	Machine Drive	2015	0.3%	2034	1.5%	2034	1.5%	
9	NWS	Industrial	Small Industrial	All	Pumps	Operation and Maintenance	Machine Drive	2015	0.3%	2034	1.5%	2034	1.5%	
10	NWS	Industrial	Small Industrial	All	Compressed Air	Reduce Overall System Requirements	Machine Drive	2015	0.0%	2034	1.5%	2015	0.0%	
11	NWS	Industrial	Small Industrial	All	Compressed Air	Match Compressor Size to Load	Machine Drive	2015	0.3%	2034	1.5%	2034	1.5%	
12	NWS	Industrial	Small Industrial	All	Compressed Air	Compressor Control	Machine Drive	2015	0.3%	2034	1.5%	2034	1.5%	
13	NWS	Industrial	Small Industrial	All	Compressed Air	Improve Compressor Components	Machine Drive	2015	0.0%	2034	1.5%	2015	0.0%	
14	NWS	Industrial	Small Industrial	All	Compressed Air	Operation and Maintenance	Machine Drive	2015	0.3%	2034	1.5%	2034	1.5%	
15	NWS	Industrial	Small Industrial	All	Fans	Reduce Overall System Requirements	Machine Drive	2015	0.0%	2034	1.5%	2015	0.0%	
16	NWS	Industrial	Small Industrial	All	Fans	Reduce or Control Fan Speed	Machine Drive	2015	0.0%	2034	1.5%	2015	0.0%	
17	NWS	Industrial	Small Industrial	All	Fans	Improve Fan Components	Machine Drive	2015	0.0%	2034	1.5%	2015	0.0%	
18	NWS	Industrial	Small Industrial	All	Fans	Operation and Maintenance	Machine Drive	2015	0.0%	2034	1.5%	2015	0.0%	
19	NWS	Industrial	Small Industrial	All	PH	Advanced water heater controls	Process Heating	2015	0.0%	2034	1.5%	2015	0.0%	
20	NWS	Industrial	Small Industrial	All	PH	Process Heat Recovery to Preheat Makeup Water	Process Heating	2015	0.0%	2034	1.5%	2015	0.0%	
21	NWS	Industrial	Small Industrial	All	PH	Air Curtains (Oven)	Process Heating	2015	0.0%	2034	1.5%	2015	0.0%	
22	NWS	Industrial	Small Industrial	All	PH	Insulation (Oven)	Process Heating	2015	0.3%	2034	1.5%	2034	1.5%	
23	NWS	Industrial	Small Industrial	All	PH	Preventative Oven Maintenance	Process Heating	2015	0.3%	2034	1.5%	2034	1.5%	
24	NWS	Industrial	Small Industrial	All	PH	Air Curtains (Dryer)	Process Heating	2015	0.3%	2034	1.5%	2034	1.5%	
25	NWS	Industrial	Small Industrial	All	PH	Insulation (Dryer)	Process Heating	2015	0.0%	2034	1.5%	2015	0.0%	
26	NWS	Industrial	Small Industrial	All	PH	Preventative Dryer Maintenance	Process Heating	2015	0.0%	2034	1.5%	2015	0.0%	
27	NWS	Industrial	Small Industrial	All	PH	Preventative Furnace Maintenance	Process Heating	2015	0.0%	2034	1.5%	2015	0.0%	
28	NWS	Industrial	Small Industrial	All	PH	Insulation (Furnace)	Process Heating	2015	0.0%	2034	1.5%	2015	0.0%	
29	NWS	Industrial	Small Industrial	All	PH	Preventative Kiln Maintenance	Process Heating	2015	0.0%	2034	1.5%	2015	0.0%	
30	NWS	Industrial	Small Industrial	All	PH	Insulation (Kiln)	Process Heating	2015	0.0%	2034	1.5%	2015	0.0%	
31	NWS	Industrial	Small Industrial	All	PCR	High Efficiency Chiller	Process Cooling and Refrigeration	2015	0.0%	2034	0.9%	2015	0.0%	
32	NWS	Industrial	Small Industrial	All	PCR	Optimized Distribution System	Process Cooling and Refrigeration	2015	0.3%	2034	1.5%	2034	1.5%	
33	NWS	Industrial	Small Industrial	All	PCR	Floating head pressure controls	Process Cooling and Refrigeration	2015	0.0%	2034	1.5%	2015	0.0%	
34	NWS	Industrial	Small Industrial	All	PCR	Premium efficiency refrigeration control system	Process Cooling and Refrigeration	2015	0.0%	2034	0.5%	2015	0.0%	
35	NWS	Industrial	Small Industrial	All	PCR	Smart Defrost Controls	Process Cooling and Refrigeration	2015	0.3%	2034	1.5%	2034	1.5%	
36	NWS	Industrial	Small Industrial	All	PCR	Doors, Covers and Curtains	Process Cooling and Refrigeration	2015	0.0%	2034	1.5%	2015	0.0%	
37	NWS	Industrial	Small Industrial	All	PCR	Optimized chilled water temperature and/or optimized condenser temperature	Process Cooling and Refrigeration	2015	0.0%	2034	1.5%	2015	0.0%	
38	NWS	Industrial	Small Industrial	All	PCR	Preventative refrigeration/cooling system maintenance	Process Cooling and Refrigeration	2015	0.3%	2034	1.5%	2034	1.5%	
39	NWS	Industrial	Small Industrial	All	PCR	Optimized condenser pressure	Process Cooling and Refrigeration	2015	0.0%	2034	1.5%	2015	0.0%	
40	NWS	Industrial	Small Industrial	All	PCR	VSD on chiller compressor	Process Cooling and Refrigeration	2015	0.0%	2034	1.5%	2015	0.0%	
41	NWS	Industrial	Small Industrial	All	PCR	Free-cooling	Process Cooling and Refrigeration	2015	0.0%	2034	1.5%	2015	0.0%	
42	NWS	Industrial	Small Industrial	All	PCR	Improve insulation of refrigeration system	Process Cooling and Refrigeration	2015	0.0%	2034	1.5%	2015	0.0%	
43	NWS	Industrial	Small Industrial	All	HVAC	Optimized duct design to improve efficiency	Facility HVAC	2015	0.0%	2034	1.1%	2015	0.0%	
44	NWS	Industrial	Small Industrial	All	HVAC	Air Source Heat Pump for Backup Generators	Facility HVAC	2015	0.0%	2034	0.0%	2034	0.0%	
45	NWS	Industrial	Small Industrial	All	ONPU	High efficiency battery charger (for forklifts)	Other Process/Non-Process Use	2015	0.0%	2034	1.5%	2015	0.0%	
46	NWS	Industrial	Small Industrial	All	ONPU	HE Dry-Type Transformers	Other Process/Non-Process Use	2015	0.0%	2034	1.5%	2015	0.0%	
47	NWS	Industrial	Small Industrial	All	HVAC	Free cooling	Facility HVAC	2015	0.3%	2034	1.5%	2034	1.5%	
48	NWS	Industrial	Small Industrial	All	HVAC	Radiant Heaters	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
49	NWS	Industrial	Small Industrial	All	HVAC	High efficiency non-packaged HVAC equipment	*N/A	2015	0.0%	2034	0.0%	2015	0.0%	
50	NWS	Industrial	Small Industrial	All	HVAC	Seasonal Temperature Settings Adjustments	Facility HVAC	2015	0.0%	2034	1.5%	2015	0.0%	
51	NWS	Industrial	Small Industrial	All	HVAC	High-efficiency rooftop AC with an EER of 13.5	Facility HVAC	2015	0.0%	2034	1.5%	2015	0.0%	
52	NWS	Industrial	Small Industrial	All	HVAC	Ground Source Heat Pump	Facility HVAC	2015	0.0%	2034	0.0%	2015	0.0%	
53	NWS	Industrial	Small Industrial	All	HVAC	Ventilation Heat Recovery	*N/A	2015	0.0%	2034	0.0%	2015	0.0%	
54	NWS	Industrial	Small Industrial	All	HVAC	Automated Temperature Control	Facility HVAC	2015	0.0%	2034	1.5%	2015	0.0%	
55	NWS	Industrial	Small Industrial	All	HVAC	Reduced Temperature Settings	Facility HVAC	2015	0.0%	2034	1.5%	2015	0.0%	
56	NWS	Industrial	Small Industrial	All	HVAC	Destratification Fans	Facility HVAC	2015	0.0%	2034	1.5%	2015	0.0%	
57	NWS	Industrial	Small Industrial	All	HVAC	Warehouse Loading Dock Seals	Facility HVAC	2015	0.0%	2034	1.5%	2015	0.0%	
58	NWS	Industrial	Small Industrial	All	HVAC	Preventative Packaged HVAC Maintenance	Facility HVAC	2015	0.0%	2034	1.5%	2015	0.0%	
59	NWS	Industrial	Small Industrial	All	HVAC	Heat Recovery from Processes to Heat Ventilation Make-up Air	*N/A	2015	0.0%	2034	0.0%	2015	0.0%	
60	NWS	Industrial	Small Industrial	All	FL	High efficiency ballasts for lighting	Facility Lighting	2015	0.0%	2034	1.5%	2015	0.0%	

Industrial Measures

Measure ID	Weather Sensitive	MEASURE DESCRIPTION				End Use	Measure Name	PROGRAM	PARTICIPATION HIGH CASE					
		Sector	Sub-Sector	Building Type					First Year of Participation (So Year)	First Year Participation Rate (So)	Year of Maximum Annual Participation (Smax)	Maximum Annual Participation Rate (Smax)	Final Year of Participation, Fo (-2034 if baseline shift)	Final Year Participation Rate (Fo)
61	NWS	Industrial	Small Industrial	All	FL	High Efficiency Light fixtures	Facility Lighting	2015	0.0%	2034	1.3%	2015	0.0%	
62	NWS	Industrial	Small Industrial	All	FL	Efficient Lighting Design	Facility Lighting	2015	0.0%	2034	1.5%	2015	0.0%	
63	NWS	Industrial	Small Industrial	All	FL	Lighting controls: on/off timer settings	Facility Lighting	2015	0.0%	2034	1.5%	2015	0.0%	
64	NWS	Industrial	Small Industrial	All	FL	Lighting controls: occupancy sensors	Facility Lighting	2015	0.0%	2034	0.2%	2015	0.0%	
65	NWS	Industrial	Small Industrial	All	HVAC	Ventilation Optimization	Facility HVAC	2015	0.2%	2034	1.1%	2034	1.1%	
66	NWS	Industrial	Small Industrial	All	HVAC	Premium efficiency ventilation control with VSD	Facility HVAC	2015	0.0%	2034	1.5%	2015	0.0%	
67	NWS	Industrial	Small Industrial	All	HVAC	Demand-Controlled Ventilation	Facility HVAC	2015	0.0%	2034	0.2%	2015	0.0%	
68	NWS	Industrial	Other - Combined	All	Motors - Other Applications	Operations and maintenance	Machine Drive	2015	0.3%	2034	1.5%	2034	1.5%	
69	NWS	Industrial	Other - Combined	All	Motors - Other Applications	Match Motor Size to Load	Machine Drive	2015	0.3%	2034	1.5%	2034	1.5%	
70	NWS	Industrial	Other - Combined	All	Motors - Other Applications	Motor Efficiency Upgrade	Machine Drive	2015	0.3%	2034	1.5%	2034	1.5%	
71	NWS	Industrial	Other - Combined	All	Motors - Other Applications	Variable Speed Drives	Machine Drive	2015	0.3%	2034	1.5%	2034	1.5%	
72	NWS	Industrial	Other - Combined	All	Pumps	Reduce Overall System Requirements	Machine Drive	2015	0.3%	2034	1.5%	2034	1.5%	
73	NWS	Industrial	Other - Combined	All	Pumps	Match Pump Size to Load	Machine Drive	2015	0.3%	2034	1.5%	2034	1.5%	
74	NWS	Industrial	Other - Combined	All	Pumps	Reduce or Control Pump Speed	Machine Drive	2015	0.3%	2034	1.5%	2034	1.5%	
75	NWS	Industrial	Other - Combined	All	Pumps	Improve Pump Components	Machine Drive	2015	0.3%	2034	1.5%	2034	1.5%	
76	NWS	Industrial	Other - Combined	All	Pumps	Operation and Maintenance	Machine Drive	2015	0.3%	2034	1.5%	2034	1.5%	
77	NWS	Industrial	Other - Combined	All	Compressed Air	Reduce Overall System Requirements	Machine Drive	2015	0.3%	2034	1.5%	2034	1.5%	
78	NWS	Industrial	Other - Combined	All	Compressed Air	Match Compressor Size to Load	Machine Drive	2015	0.3%	2034	1.5%	2034	1.5%	
79	NWS	Industrial	Other - Combined	All	Compressed Air	Compressor Control	Machine Drive	2015	0.3%	2034	1.5%	2034	1.5%	
80	NWS	Industrial	Other - Combined	All	Compressed Air	Improve Compressor Components	Machine Drive	2015	0.3%	2034	1.5%	2034	1.5%	
81	NWS	Industrial	Other - Combined	All	Compressed Air	Operation and Maintenance	Machine Drive	2015	0.3%	2034	1.5%	2034	1.5%	
82	NWS	Industrial	Other - Combined	All	Fans	Reduce Overall System Requirements	Machine Drive	2015	0.3%	2034	1.5%	2034	1.5%	
83	NWS	Industrial	Other - Combined	All	Fans	Reduce or Control Fan Speed	Machine Drive	2015	0.3%	2034	1.5%	2034	1.5%	
84	NWS	Industrial	Other - Combined	All	Fans	Improve Fan Components	Machine Drive	2015	0.3%	2034	1.5%	2034	1.5%	
85	NWS	Industrial	Other - Combined	All	Fans	Operation and Maintenance	Machine Drive	2015	0.3%	2034	1.5%	2034	1.5%	
86	NWS	Industrial	Other - Combined	All	HVAC	Optimized Duct Design to Improve Efficiency	Facility HVAC	2015	0.3%	2034	1.5%	2034	1.5%	
87	NWS	Industrial	Other - Combined	All	PH	Advanced Water Heater Controls	Process Heating	2015	1.3%	2034	6.0%	2034	6.0%	
88	NWS	Industrial	Other - Combined	All	PH	Process Heat Recovery to Preheat Makeup Water	Process Heating	2015	0.0%	2034	6.0%	2015	0.0%	
89	NWS	Industrial	Other - Combined	All	PH	Air Curtains (Oven)	Process Heating	2015	0.0%	2034	6.0%	2015	0.0%	
90	NWS	Industrial	Other - Combined	All	PH	Insulation (Oven)	Process Heating	2015	0.0%	2034	6.0%	2015	0.0%	
91	NWS	Industrial	Other - Combined	All	PH	Preventative Oven Maintenance	Process Heating	2015	0.0%	2034	6.0%	2015	0.0%	
92	NWS	Industrial	Other - Combined	All	PH	Air Curtains (Dryer)	Process Heating	2015	0.0%	2034	6.0%	2015	0.0%	
93	NWS	Industrial	Other - Combined	All	PH	Insulation (Dryer)	Process Heating	2015	0.0%	2034	6.0%	2015	0.0%	
94	NWS	Industrial	Other - Combined	All	PH	Preventative Dryer Maintenance	Process Heating	2015	0.0%	2034	6.0%	2015	0.0%	
95	NWS	Industrial	Other - Combined	All	PH	Optimized Distribution System	Process Heating	2015	1.3%	2034	6.0%	2034	6.0%	
96	NWS	Industrial	Other - Combined	All	PH	Insulation (Dryer)	Process Heating	2015	0.0%	2034	6.0%	2015	0.0%	
97	NWS	Industrial	Other - Combined	All	PH	Preventative Dryer Maintenance	Process Heating	2015	0.0%	2034	6.0%	2015	0.0%	
98	NWS	Industrial	Other - Combined	All	PH	Preventative Furnace Maintenance	Process Heating	2015	0.0%	2034	6.0%	2015	0.0%	
99	NWS	Industrial	Other - Combined	All	PH	Insulation (Furnace)	Process Heating	2015	0.0%	2034	6.0%	2015	0.0%	
100	NWS	Industrial	Other - Combined	All	PCR	High Efficiency Chiller	Process Cooling and Refrigeration	2015	1.3%	2034	6.0%	2034	6.0%	
101	NWS	Industrial	Other - Combined	All	PCR	Floating head pressure controls	Process Cooling and Refrigeration	2015	0.0%	2034	6.0%	2015	0.0%	
102	NWS	Industrial	Other - Combined	All	PCR	Premium Efficiency Refrigeration Control System	Process Cooling and Refrigeration	2015	0.0%	2034	4.2%	2015	0.0%	
103	NWS	Industrial	Other - Combined	All	PCR	Smart Defrost Controls	Process Cooling and Refrigeration	2015	0.0%	2034	6.0%	2015	0.0%	
104	NWS	Industrial	Other - Combined	All	PCR	Doors, Covers and Curtains	Process Cooling and Refrigeration	2015	1.3%	2034	6.0%	2034	6.0%	
105	NWS	Industrial	Other - Combined	All	PCR	Optimized chilled water temperature and/or optimized condenser temperature	Process Cooling and Refrigeration	2015	1.3%	2034	6.0%	2034	6.0%	
106	NWS	Industrial	Other - Combined	All	PCR	Preventative Refrigeration/cooling System Maintenance	Process Cooling and Refrigeration	2015	0.0%	2034	6.0%	2015	0.0%	
107	NWS	Industrial	Other - Combined	All	PCR	Optimized condenser pressure	Process Cooling and Refrigeration	2015	0.0%	2034	6.0%	2015	0.0%	
108	NWS	Industrial	Other - Combined	All	PCR	Free-cooling	Process Cooling and Refrigeration	2015	0.0%	2034	6.0%	2015	0.0%	
109	NWS	Industrial	Other - Combined	All	PCR	Improve Insulation of Refrigeration System	Process Cooling and Refrigeration	2015	0.0%	2034	6.0%	2015	0.0%	
110	NWS	Industrial	Other - Combined	All	ONPU	HE Dry-Type Transformers	Other Process/Non-Process Use	2015	0.0%	2034	6.0%	2015	0.0%	
111	NWS	Industrial	Other - Combined	All	HVAC	Air Source Heat Pump for Backup Generators	Facility HVAC	2015	0.0%	2034	0.9%	2015	0.0%	
112	NWS	Industrial	Other - Combined	All	ONPU	High efficiency battery charger (for forklifts)	Other Process/Non-Process Use	2015	0.0%	2034	6.0%	2015	0.0%	
113	NWS	Industrial	Other - Combined	All	HVAC	Radiant Heaters	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
114	NWS	Industrial	Other - Combined	All	HVAC	High efficiency non-packaged HVAC equipment	*N/A	2015	0.0%	2034	0.0%	2015	0.0%	
115	NWS	Industrial	Other - Combined	All	HVAC	Seasonal Temperature Settings Adjustments	Facility HVAC	2015	0.0%	2034	6.0%	2015	0.0%	
116	NWS	Industrial	Other - Combined	All	HVAC	High-efficiency rooftop AC with an EER of 13.5	Facility HVAC	2015	0.0%	2034	6.0%	2015	0.0%	
117	NWS	Industrial	Other - Combined	All	HVAC	Ground Source Heat Pump	Facility HVAC	2015	0.0%	2034	0.0%	2015	0.0%	
118	NWS	Industrial	Other - Combined	All	HVAC	Ventilation Heat Recovery	Facility HVAC	2015	0.0%	2034	0.0%	2015	0.0%	
119	NWS	Industrial	Other - Combined	All	HVAC	Automated Temperature Control	Facility HVAC	2015	0.0%	2034	6.0%	2015	0.0%	
120	NWS	Industrial	Other - Combined	All	HVAC	Reduced Temperature Settings	Facility HVAC	2015	0.0%	2034	6.0%	2015	0.0%	

Industrial Measures

Measure ID	Weather Sensitive	MEASURE DESCRIPTION				End Use	Measure Name	PROGRAM	PARTICIPATION HIGH CASE				
		Sector	Sub-Sector	Building Type					First Year of Participation (So Year)	First Year Participation Rate (So)	Year of Maximum Annual Participation (Smax)	Maximum Annual Participation Rate (Smax)	Final Year of Participation, Fo (-2034 if baseline shift)
121	NWS	Industrial	Other - Combined	All	HVAC	Destratification Fans	Facility HVAC	2015	0.0%	2034	6.0%	2015	0.0%
122	NWS	Industrial	Other - Combined	All	HVAC	Warehouse Loading Dock Seals	Facility HVAC	2015	0.0%	2034	6.0%	2015	0.0%
123	NWS	Industrial	Other - Combined	All	HVAC	Preventative Packaged HVAC Maintenance	Facility HVAC	2015	0.0%	2034	6.0%	2015	0.0%
124	NWS	Industrial	Other - Combined	All	HVAC	Heat Recovery from Processes to Heat Ventilation Make-up Air	*N/A	2015	0.0%	2034	0.0%	2015	0.0%
125	NWS	Industrial	Other - Combined	All	FL	High efficiency ballasts for lighting	Facility Lighting	2015	0.0%	2034	6.0%	2015	0.0%
126	NWS	Industrial	Other - Combined	All	FL	High Efficiency Light fixtures	Facility Lighting	2015	1.3%	2034	6.0%	2034	6.0%
127	NWS	Industrial	Other - Combined	All	FL	Efficient Lighting Design	Facility Lighting	2015	0.0%	2034	6.0%	2015	0.0%
128	NWS	Industrial	Other - Combined	All	FL	Lighting controls: on/off timer settings	Facility Lighting	2015	1.3%	2034	6.0%	2034	6.0%
129	NWS	Industrial	Other - Combined	All	FL	Lighting controls: occupancy sensors	Facility Lighting	2015	0.5%	2034	2.1%	2034	2.1%
130	NWS	Industrial	Other - Combined	All	HVAC	Ventilation Optimization	Facility HVAC	2015	1.3%	2034	6.0%	2034	6.0%
131	NWS	Industrial	Other - Combined	All	HVAC	Premium efficiency ventilation control with VSD	Facility HVAC	2015	1.3%	2034	6.0%	2034	6.0%
132	NWS	Industrial	Other - Combined	All	HVAC	Demand-Controlled Ventilation	Facility HVAC	2015	0.6%	2034	2.6%	2034	2.6%
133	NWS	Industrial	Food Products	All	Motors - Other Applications	Operations and maintenance	Machine Drive	2015	1.6%	2034	7.0%	2034	7.0%
134	NWS	Industrial	Food Products	All	Motors - Other Applications	Match Motor Size to Load	Machine Drive	2015	1.6%	2034	7.0%	2034	7.0%
135	NWS	Industrial	Food Products	All	Motors - Other Applications	Motor Efficiency Upgrade	Machine Drive	2015	1.6%	2034	7.0%	2034	7.0%
136	NWS	Industrial	Food Products	All	Motors - Other Applications	Variable Speed Drives	Machine Drive	2015	1.6%	2034	7.0%	2034	7.0%
137	NWS	Industrial	Food Products	All	Pumps	Reduce Overall System Requirements	Machine Drive	2015	1.6%	2034	7.0%	2034	7.0%
138	NWS	Industrial	Food Products	All	Pumps	Match Pump Size to Load	Machine Drive	2015	1.6%	2034	7.0%	2034	7.0%
139	NWS	Industrial	Food Products	All	Pumps	Reduce or Control Pump Speed	Machine Drive	2015	1.6%	2034	7.0%	2034	7.0%
140	NWS	Industrial	Food Products	All	Pumps	Improve Pump Components	Machine Drive	2015	1.6%	2034	7.0%	2034	7.0%
141	NWS	Industrial	Food Products	All	Pumps	Operation and Maintenance	Machine Drive	2015	1.6%	2034	7.0%	2034	7.0%
142	NWS	Industrial	Food Products	All	Compressed Air	Reduce Overall System Requirements	Machine Drive	2015	1.6%	2034	7.0%	2034	7.0%
143	NWS	Industrial	Food Products	All	Compressed Air	Match Compressor Size to Load	Machine Drive	2015	1.6%	2034	7.0%	2034	7.0%
144	NWS	Industrial	Food Products	All	Compressed Air	Compressor Control	Machine Drive	2015	1.6%	2034	7.0%	2034	7.0%
145	NWS	Industrial	Food Products	All	Compressed Air	Improve Compressor Components	Machine Drive	2015	1.6%	2034	7.0%	2034	7.0%
146	NWS	Industrial	Food Products	All	Compressed Air	Operation and Maintenance	Machine Drive	2015	1.6%	2034	7.0%	2034	7.0%
147	NWS	Industrial	Food Products	All	Fans	Reduce Overall System Requirements	Machine Drive	2015	1.6%	2034	7.0%	2034	7.0%
148	NWS	Industrial	Food Products	All	Fans	Reduce or Control Fan Speed	Machine Drive	2015	1.6%	2034	7.0%	2034	7.0%
149	NWS	Industrial	Food Products	All	Fans	Improve Fan Components	Machine Drive	2015	1.6%	2034	7.0%	2034	7.0%
150	NWS	Industrial	Food Products	All	Fans	Operation and Maintenance	Machine Drive	2015	1.6%	2034	7.0%	2034	7.0%
151	NWS	Industrial	Food Products	All	HVAC	Optimized Duct Design to Improve Efficiency	Facility HVAC	2015	1.3%	2034	6.0%	2034	6.0%
152	NWS	Industrial	Food Products	All	PH	Advanced Water Heater Controls	Process Heating	2015	1.3%	2034	6.0%	2034	6.0%
153	NWS	Industrial	Food Products	All	PH	Process Heat Recovery to Preheat Makeup Water	Process Heating	2015	1.3%	2034	6.0%	2034	6.0%
154	NWS	Industrial	Food Products	All	PH	Air Curtains (Oven)	Process Heating	2015	1.3%	2034	6.0%	2034	6.0%
155	NWS	Industrial	Food Products	All	PH	Insulation (Oven)	Process Heating	2015	1.3%	2034	6.0%	2034	6.0%
156	NWS	Industrial	Food Products	All	PH	Preventative Oven Maintenance	Process Heating	2015	1.3%	2034	6.0%	2034	6.0%
157	NWS	Industrial	Food Products	All	PH	Air Curtains (Dryer)	Process Heating	2015	1.3%	2034	6.0%	2034	6.0%
158	NWS	Industrial	Food Products	All	PH	Insulation (Dryer)	Process Heating	2015	1.3%	2034	6.0%	2034	6.0%
159	NWS	Industrial	Food Products	All	PH	Preventative Dryer Maintenance	Process Heating	2015	1.3%	2034	6.0%	2034	6.0%
160	NWS	Industrial	Food Products	All	PH	Optimized Distribution System	Process Heating	2015	1.3%	2034	6.0%	2034	6.0%
161	NWS	Industrial	Food Products	All	PH	Insulation (Dryer)	Process Heating	2015	1.3%	2034	6.0%	2034	6.0%
162	NWS	Industrial	Food Products	All	PH	Preventative Dryer Maintenance	Process Heating	2015	1.3%	2034	6.0%	2034	6.0%
163	NWS	Industrial	Food Products	All	PH	Preventative Furnace Maintenance	Process Heating	2015	1.3%	2034	6.0%	2034	6.0%
164	NWS	Industrial	Food Products	All	PH	Insulation (Furnace)	Process Heating	2015	1.3%	2034	6.0%	2034	6.0%
165	NWS	Industrial	Food Products	All	PCR	High Efficiency Chiller	Process Cooling and Refrigeration	2015	1.3%	2034	6.0%	2034	6.0%
166	NWS	Industrial	Food Products	All	PCR	Floating head pressure controls	Process Cooling and Refrigeration	2015	1.3%	2034	6.0%	2034	6.0%
167	NWS	Industrial	Food Products	All	PCR	Premium Efficiency Refrigeration Control System	Process Cooling and Refrigeration	2015	0.9%	2034	4.2%	2034	4.2%
168	NWS	Industrial	Food Products	All	PCR	Smart Defrost Controls	Process Cooling and Refrigeration	2015	1.3%	2034	6.0%	2034	6.0%
169	NWS	Industrial	Food Products	All	PCR	Doors, Covers and Curtains	Process Cooling and Refrigeration	2015	1.3%	2034	6.0%	2034	6.0%
170	NWS	Industrial	Food Products	All	PCR	Optimized chilled water temperature and/or optimized condenser temperature	Process Cooling and Refrigeration	2015	1.3%	2034	6.0%	2034	6.0%
171	NWS	Industrial	Food Products	All	PCR	Preventative Refrigeration/cooling System Maintenance	Process Cooling and Refrigeration	2015	1.3%	2034	6.0%	2034	6.0%
172	NWS	Industrial	Food Products	All	PCR	Optimized condenser pressure	Process Cooling and Refrigeration	2015	1.3%	2034	6.0%	2034	6.0%
173	NWS	Industrial	Food Products	All	PCR	Free-cooling	Process Cooling and Refrigeration	2015	1.3%	2034	6.0%	2034	6.0%
174	NWS	Industrial	Food Products	All	PCR	Improve Insulation of Refrigeration System	Process Cooling and Refrigeration	2015	1.3%	2034	6.0%	2034	6.0%
175	NWS	Industrial	Food Products	All	ONPU	HE Dry-Type Transformers	Other Process/Non-Process Use	2015	1.3%	2034	6.0%	2034	6.0%
176	NWS	Industrial	Food Products	All	HVAC	Air Source Heat Pump for Backup Generators	Facility HVAC	2015	0.2%	2034	0.9%	2034	0.9%
177	NWS	Industrial	Food Products	All	ONPU	High efficiency battery charger (for forklifts)	Other Process/Non-Process Use	2015	1.3%	2034	6.0%	2034	6.0%
178	NWS	Industrial	Food Products	All	HVAC	Radiant Heaters	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
179	NWS	Industrial	Food Products	All	HVAC	High efficiency non-packaged HVAC equipment	*N/A	2015	0.0%	2034	0.0%	2015	0.0%
180	NWS	Industrial	Food Products	All	HVAC	Seasonal Temperature Settings Adjustments	Facility HVAC	2015	1.3%	2034	6.0%	2034	6.0%

Industrial Measures

Measure ID	Weather Sensitive	Sector	Sub-Sector	Building Type	End Use	Measure Name	PROGRAM	PARTICIPATION HIGH CASE					
								First Year of Participation (So Year)	First Year Participation Rate (So)	Year of Maximum Annual Participation (Smax)	Maximum Annual Participation Rate (Smax)	Final Year of Participation, Fo (-2034 if baseline shift)	Final Year Participation Rate (Fo)
181	NWS	Industrial	Food Products	All	HVAC	High-efficiency rooftop AC with an EER of 13.5	Facility HVAC	2015	1.3%	2034	6.0%	2034	6.0%
182	NWS	Industrial	Food Products	All	HVAC	Ground Source Heat Pump	Facility HVAC	2015	0.0%	2034	0.0%	2034	0.0%
183	NWS	Industrial	Food Products	All	HVAC	Ventilation Heat Recovery	Facility HVAC	2015	0.0%	2034	0.0%	2015	0.0%
184	NWS	Industrial	Food Products	All	HVAC	Automated Temperature Control	Facility HVAC	2015	1.3%	2034	6.0%	2034	6.0%
185	NWS	Industrial	Food Products	All	HVAC	Reduced Temperature Settings	Facility HVAC	2015	1.3%	2034	6.0%	2034	6.0%
186	NWS	Industrial	Food Products	All	HVAC	Destratification Fans	Facility HVAC	2015	1.3%	2034	6.0%	2034	6.0%
187	NWS	Industrial	Food Products	All	HVAC	Warehouse Loading Dock Seals	Facility HVAC	2015	1.3%	2034	6.0%	2034	6.0%
188	NWS	Industrial	Food Products	All	HVAC	Preventative Packaged HVAC Maintenance	Facility HVAC	2015	1.3%	2034	6.0%	2034	6.0%
189	NWS	Industrial	Food Products	All	HVAC	Heat Recovery from Processes to Heat Ventilation Make-up Air	*N/A	2015	0.0%	2034	0.0%	2015	0.0%
190	NWS	Industrial	Food Products	All	FL	High efficiency ballasts for lighting	Facility Lighting	2015	1.3%	2034	6.0%	2034	6.0%
191	NWS	Industrial	Food Products	All	FL	High Efficiency Light fixtures	Facility Lighting	2015	1.3%	2034	6.0%	2034	6.0%
192	NWS	Industrial	Food Products	All	FL	Efficient Lighting Design	Facility Lighting	2015	1.3%	2034	6.0%	2034	6.0%
193	NWS	Industrial	Food Products	All	FL	Lighting controls: on/off timer settings	Facility Lighting	2015	1.3%	2034	6.0%	2034	6.0%
194	NWS	Industrial	Food Products	All	FL	Lighting controls: occupancy sensors	Facility Lighting	2015	0.5%	2034	2.1%	2034	2.1%
195	NWS	Industrial	Food Products	All	HVAC	Ventilation Optimization	Facility HVAC	2015	1.3%	2034	6.0%	2034	6.0%
196	NWS	Industrial	Food Products	All	HVAC	Premium efficiency ventilation control with VSD	Facility HVAC	2015	1.3%	2034	6.0%	2034	6.0%
197	NWS	Industrial	Food Products	All	HVAC	Demand-Controlled Ventilation	Facility HVAC	2015	0.6%	2034	2.6%	2034	2.6%
199	NWS	Industrial	Industrial Gases	All	Total	Integrated Control System	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
200	NWS	Industrial	Industrial Gases	All	Total	Process Integration and Pinch Analysis	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
201	NWS	Industrial	Industrial Gases	All	Total	Sub-Metering	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
202	NWS	Industrial	Industrial Gases	All	HVAC	High-efficiency rooftop AC with an EER of 13.13	*N/A	2015	0.8%	2034	6.0%	2034	6.0%
203	NWS	Industrial	Industrial Gases	All	Process Heating	Water-heater right sizing and load management	*N/A	2015	0.2%	2034	1.5%	2034	1.5%
204	NWS	Industrial	Industrial Gases	All	Process Heating	Insulation	*N/A	2015	0.2%	2034	1.5%	2034	1.5%
205	NWS	Industrial	Industrial Gases	All	Boilers	Blowdown Control	Boilers	2015	0.5%	2034	3.5%	2034	3.5%
206	NWS	Industrial	Industrial Gases	All	Boilers	Boiler Right Sizing	Boilers	2015	0.0%	2034	0.0%	2034	0.0%
207	NWS	Industrial	Industrial Gases	All	Boilers	Condensing Boiler	Boilers	2015	0.0%	2034	0.0%	2015	0.0%
208	NWS	Industrial	Industrial Gases	All	Boilers	Direct-Contact Hot Water Heaters	Boilers	2015	0.0%	2034	0.0%	2034	0.0%
209	NWS	Industrial	Industrial Gases	All	Boilers	High Efficiency Burner	Boilers	2015	0.9%	2034	6.0%	2034	6.0%
210	NWS	Industrial	Industrial Gases	All	Boilers	Instantaneous Steam Generation	Boilers	2015	0.0%	2034	0.1%	2034	0.1%
211	NWS	Industrial	Industrial Gases	All	Boilers	Blowdown Heat Recovery	Boilers	2015	0.9%	2034	6.0%	2034	6.0%
212	NWS	Industrial	Industrial Gases	All	Boilers	Boiler combustion air preheat	Boilers	2015	0.9%	2034	6.0%	2034	6.0%
213	NWS	Industrial	Industrial Gases	All	Boilers	Preventative Boiler Maintenance	Boilers	2015	0.9%	2034	6.0%	2034	6.0%
214	NWS	Industrial	Industrial Gases	All	Boilers	Boiler Water Treatment	Boilers	2015	0.9%	2034	6.0%	2034	6.0%
215	NWS	Industrial	Industrial Gases	All	Boilers	Condensate Return	Boilers	2015	0.0%	2034	0.2%	2034	0.2%
216	NWS	Industrial	Industrial Gases	All	Boilers	Economizer	Boilers	2015	0.9%	2034	6.0%	2034	6.0%
217	NWS	Industrial	Industrial Gases	All	Boilers	Insulation	Boilers	2015	0.9%	2034	6.0%	2034	6.0%
218	NWS	Industrial	Industrial Gases	All	Boilers	Minimize Deaerator Vent Losses	Boilers	2015	0.9%	2034	6.0%	2034	6.0%
219	NWS	Industrial	Industrial Gases	All	Boilers	Process Heat Recovery to Preheat Makeup Water	Boilers	2015	0.9%	2034	6.0%	2034	6.0%
220	NWS	Industrial	Industrial Gases	All	Boilers	Steam Trap Survey and Repair	Boilers	2015	0.9%	2034	6.0%	2034	6.0%
221	NWS	Industrial	Industrial Gases	All	Boilers	First Generation Super Boilers	*N/A	2015	0.0%	2034	0.0%	2015	0.0%
222	NWS	Industrial	Industrial Gases	All	Process Heating	High Efficiency Burner	Process Heating	2015	0.0%	2034	0.0%	2015	0.0%
223	NWS	Industrial	Industrial Gases	All	Process Heating	Infrared Ovens	Process Heating	2015	0.0%	2034	0.0%	2015	0.0%
224	NWS	Industrial	Industrial Gases	All	Process Heating	Process Heat Recovery to Preheat Makeup Water	Process Heating	2015	0.2%	2034	1.5%	2034	1.5%
225	NWS	Industrial	Industrial Gases	All	Process Heating	Air Curtains	Process Heating	2015	0.2%	2034	1.5%	2034	1.5%
226	NWS	Industrial	Industrial Gases	All	Process Heating	Exhaust Gas Heat Recovery	Process Heating	2015	0.0%	2034	0.0%	2015	0.0%
227	NWS	Industrial	Industrial Gases	All	Process Heating	Insulation	Process Heating	2015	0.1%	2034	0.4%	2034	0.4%
228	NWS	Industrial	Industrial Gases	All	Process Heating	Advanced heating and Process Control	Process Heating	2015	0.0%	2034	0.0%	2034	0.0%
229	NWS	Industrial	Industrial Gases	All	Process Heating	Combustion Optimization	*N/A	2015	0.2%	2034	1.5%	2034	1.5%
230	NWS	Industrial	Industrial Gases	All	Process Heating	Radiant Tube burners	*N/A	2015	0.2%	2034	1.5%	2034	1.5%
231	NWS	Industrial	Industrial Gases	All	HVAC	Radiant Heaters	HVAC	2015	0.1%	2034	0.6%	2034	0.6%
232	NWS	Industrial	Industrial Gases	All	Process Heating	Solar Walls	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
233	NWS	Industrial	Industrial Gases	All	HVAC	Air Compressor Heat Recovery	*N/A	2015	0.8%	2034	6.0%	2034	6.0%
234	NWS	Industrial	Industrial Gases	All	HVAC	Air Curtains	*N/A	2015	0.8%	2034	6.0%	2034	6.0%
235	NWS	Industrial	Industrial Gases	All	HVAC	Destratification Fans	*N/A	2015	0.8%	2034	6.0%	2034	6.0%
236	NWS	Industrial	Industrial Gases	All	HVAC	Ventilation Heat Recovery	HVAC	2015	0.8%	2034	6.0%	2034	6.0%
237	NWS	Industrial	Industrial Gases	All	HVAC	Ventilation Optimization	HVAC	2015	0.8%	2034	6.0%	2034	6.0%
238	NWS	Industrial	Industrial Gases	All	HVAC	Warehouse Loading Dock Seals	*N/A	2015	0.8%	2034	6.0%	2034	6.0%
239	NWS	Industrial	Industrial Gases	All	HVAC	Automated Temperature reset Control	*N/A	2015	0.8%	2034	6.0%	2034	6.0%
240	NWS	Industrial	Industrial Gases	All	HVAC	Reduced Temperature Settings	*N/A	2015	0.8%	2034	6.0%	2034	6.0%

Industrial Measures

Measure ID	Weather Sensitive	MEASURE DESCRIPTION					PROGRAM	PARTICIPATION HIGH CASE					
		Sector	Sub-Sector	Building Type	End Use	Measure Name		Program Name	First Year of Participation (So Year)	First Year Participation Rate (So)	Year of Maximum Annual Participation (Smax)	Maximum Annual Participation Rate (Smax)	Final Year of Participation, Fo (-2034 if baseline shift)
241	NWS	Industrial	Industrial Gases	All	Total	Pollution Control Measures	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
242	NWS	Industrial	Industrial Gases	All	Process Heating	CFD Modelling	Process Heating	2015	0.2%	2034	1.5%	2034	1.5%
243	NWS	Industrial	Industrial Gases	All	Total	Energy Management	All	2015	0.1%	2034	1.0%	2034	1.0%
244	NWS	Industrial	Industrial Gases	All	Process Heating	Improved airflow in dryer windbox	*N/A	2015	0.2%	2034	1.5%	2034	1.5%
245	NWS	Industrial	Industrial Gases	All	Process Heating	Preventative Oven Maintenance	*N/A	2015	0.2%	2034	1.5%	2034	1.5%
246	NWS	Industrial	Industrial Gases	All	Process Heating	Preventative Furnace Maintenance	*N/A	2015	0.2%	2034	1.5%	2034	1.5%
247	NWS	Industrial	Industrial Gases	All	Process Heating	Preventative Dryer Maintenance	*N/A	2015	0.2%	2034	1.5%	2034	1.5%
248	NWS	Industrial	Industrial Gases	All	Process Heating	High Efficiency Burner	Process Heating	2015	0.2%	2034	1.5%	2034	1.5%
249	NWS	Industrial	Industrial Gases	All	Process Heating	Air Curtains	Process Heating	2015	0.2%	2034	1.5%	2034	1.5%
250	NWS	Industrial	Industrial Gases	All	Process Heating	Exhaust Gas Heat Recovery	Process Heating	2015	0.2%	2034	1.5%	2034	1.5%
251	NWS	Industrial	Industrial Gases	All	Process Heating	Insulation	Process Heating	2015	0.2%	2034	1.5%	2034	1.5%
252	NWS	Industrial	Industrial Gases	All	Process Heating	Advanced heating and Process Control	Process Heating	2015	0.2%	2034	1.5%	2034	1.5%
253	NWS	Industrial	Industrial Gases	All	Process Heating	Combustion Optimization	*N/A	2015	0.2%	2034	1.5%	2034	1.5%
254	NWS	Industrial	Industrial Gases	All	Process Heating	High Efficiency Burner	Process Heating	2015	0.0%	2034	0.0%	2015	0.0%
255	NWS	Industrial	Industrial Gases	All	Process Heating	Air Curtains	Process Heating	2015	0.2%	2034	1.5%	2034	1.5%
256	NWS	Industrial	Industrial Gases	All	Process Heating	Exhaust Gas Heat Recovery	Process Heating	2015	0.0%	2034	0.0%	2015	0.0%
257	NWS	Industrial	Industrial Gases	All	Process Heating	Insulation	Process Heating	2015	0.1%	2034	0.4%	2034	0.4%
258	NWS	Industrial	Industrial Gases	All	Process Heating	Advanced heating and Process Control	Process Heating	2015	0.0%	2034	0.0%	2034	0.0%
259	NWS	Industrial	Industrial Gases	All	Process Heating	Combustion Optimization	*N/A	2015	0.2%	2034	1.5%	2034	1.5%
260	NWS	Industrial	All Other	All	Total	Integrated Control System	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
261	NWS	Industrial	All Other	All	Total	Process Integration and Pinch Analysis	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
262	NWS	Industrial	All Other	All	Total	Sub-Metering	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
263	NWS	Industrial	All Other	All	HVAC	High-efficiency rooftop AC with an EER of 13.13	*N/A	2015	0.8%	2034	6.0%	2034	6.0%
264	NWS	Industrial	All Other	All	Process Heating	Water-heater right sizing and load management	*N/A	2015	0.2%	2034	1.5%	2034	1.5%
265	NWS	Industrial	All Other	All	Process Heating	Insulation	*N/A	2015	0.2%	2034	1.5%	2034	1.5%
266	NWS	Industrial	All Other	All	Boilers	Blowdown Control	Boilers	2015	0.5%	2034	3.5%	2034	3.5%
267	NWS	Industrial	All Other	All	Boilers	Boiler Right Sizing	Boilers	2015	0.0%	2034	0.0%	2034	0.0%
268	NWS	Industrial	All Other	All	Boilers	Condensing Boiler	Boilers	2015	0.0%	2034	0.0%	2015	0.0%
269	NWS	Industrial	All Other	All	Boilers	Direct-Contact Hot Water Heaters	Boilers	2015	0.0%	2034	0.0%	2034	0.0%
270	NWS	Industrial	All Other	All	Boilers	High Efficiency Burner	Boilers	2015	0.9%	2034	6.0%	2034	6.0%
271	NWS	Industrial	All Other	All	Boilers	Instantaneous Steam Generation	Boilers	2015	0.0%	2034	0.1%	2034	0.1%
272	NWS	Industrial	All Other	All	Boilers	Blowdown Heat Recovery	Boilers	2015	0.9%	2034	6.0%	2034	6.0%
273	NWS	Industrial	All Other	All	Boilers	Boiler combustion air preheat	Boilers	2015	0.9%	2034	6.0%	2034	6.0%
274	NWS	Industrial	All Other	All	Boilers	Preventative Boiler Maintenance	Boilers	2015	0.9%	2034	6.0%	2034	6.0%
275	NWS	Industrial	All Other	All	Boilers	Boiler Water Treatment	Boilers	2015	0.9%	2034	6.0%	2034	6.0%
276	NWS	Industrial	All Other	All	Boilers	Condensate Return	Boilers	2015	0.0%	2034	0.2%	2034	0.2%
277	NWS	Industrial	All Other	All	Boilers	Economizer	Boilers	2015	0.9%	2034	6.0%	2034	6.0%
278	NWS	Industrial	All Other	All	Boilers	Insulation	Boilers	2015	0.9%	2034	6.0%	2034	6.0%
279	NWS	Industrial	All Other	All	Boilers	Minimize Deaerator Vent Losses	Boilers	2015	0.9%	2034	6.0%	2034	6.0%
280	NWS	Industrial	All Other	All	Boilers	Process Heat Recovery to Preheat Makeup Water	Boilers	2015	0.9%	2034	6.0%	2034	6.0%
281	NWS	Industrial	All Other	All	Boilers	Steam Trap Survey and Repair	Boilers	2015	0.9%	2034	6.0%	2034	6.0%
282	NWS	Industrial	All Other	All	Boilers	First Generation Super Boilers	*N/A	2015	0.0%	2034	0.0%	2015	0.0%
283	NWS	Industrial	All Other	All	Process Heating	High Efficiency Burner	Process Heating	2015	0.0%	2034	0.0%	2015	0.0%
284	NWS	Industrial	All Other	All	Process Heating	Infrared Ovens	Process Heating	2015	0.0%	2034	0.0%	2015	0.0%
285	NWS	Industrial	All Other	All	Process Heating	Process Heat Recovery to Preheat Makeup Water	Process Heating	2015	0.2%	2034	1.5%	2034	1.5%
286	NWS	Industrial	All Other	All	Process Heating	Air Curtains	Process Heating	2015	0.2%	2034	1.5%	2034	1.5%
287	NWS	Industrial	All Other	All	Process Heating	Exhaust Gas Heat Recovery	Process Heating	2015	0.0%	2034	0.0%	2015	0.0%
288	NWS	Industrial	All Other	All	Process Heating	Insulation	Process Heating	2015	0.1%	2034	0.4%	2034	0.4%
289	NWS	Industrial	All Other	All	Process Heating	Advanced heating and Process Control	Process Heating	2015	0.0%	2034	0.0%	2034	0.0%
290	NWS	Industrial	All Other	All	Process Heating	Combustion Optimization	*N/A	2015	0.2%	2034	1.5%	2034	1.5%
291	NWS	Industrial	All Other	All	Process Heating	Radiant Tube burners	*N/A	2015	0.2%	2034	1.5%	2034	1.5%
292	NWS	Industrial	All Other	All	Process Heating	Radiant Heaters	Process Heating	2015	0.0%	2034	0.2%	2034	0.2%
293	NWS	Industrial	All Other	All	Process Heating	Solar Walls	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
294	NWS	Industrial	All Other	All	HVAC	Air Compressor Heat Recovery	*N/A	2015	0.8%	2034	6.0%	2034	6.0%
295	NWS	Industrial	All Other	All	HVAC	Air Curtains	*N/A	2015	0.8%	2034	6.0%	2034	6.0%
296	NWS	Industrial	All Other	All	HVAC	Destratification Fans	*N/A	2015	0.8%	2034	6.0%	2034	6.0%
297	NWS	Industrial	All Other	All	HVAC	Ventilation Heat Recovery	HVAC	2015	0.8%	2034	6.0%	2034	6.0%
298	NWS	Industrial	All Other	All	HVAC	Ventilation Optimization	HVAC	2015	0.8%	2034	6.0%	2034	6.0%
299	NWS	Industrial	All Other	All	HVAC	Warehouse Loading Dock Seals	*N/A	2015	0.8%	2034	6.0%	2034	6.0%
300	NWS	Industrial	All Other	All	HVAC	Automated Temperature reset Control	*N/A	2015	0.8%	2034	6.0%	2034	6.0%

Industrial Measures

Measure ID	Weather Sensitive	MEASURE DESCRIPTION				End Use	Measure Name	PROGRAM	PARTICIPATION HIGH CASE					
		Sector	Sub-Sector	Building Type	Program Name				First Year of Participation (So Year)	First Year Participation Rate (So)	Year of Maximum Annual Participation (Smax)	Maximum Annual Participation Rate (Smax)	Final Year of Participation, Fo (-2034 if baseline shift)	Final Year Participation Rate (Fo)
301	NWS	Industrial	All Other	All	HVAC	Reduced Temperature Settings	*N/A	2015	0.8%	2034	6.0%	2034	6.0%	
302	NWS	Industrial	All Other	All	Process Heating	Pollution Control Measures	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
303	NWS	Industrial	All Other	All	Process Heating	CFD Modelling	Process Heating	2015	0.2%	2034	1.5%	2034	1.5%	
304	NWS	Industrial	All Other	All	Total	Energy Management	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
305	NWS	Industrial	All Other	All	Process Heating	Improved airflow in dryer windbox	*N/A	2015	0.2%	2034	1.5%	2034	1.5%	
306	NWS	Industrial	All Other	All	Process Heating	Preventative Oven Maintenance	*N/A	2015	0.2%	2034	1.5%	2034	1.5%	
307	NWS	Industrial	All Other	All	Process Heating	Preventative Furnace Maintenance	*N/A	2015	0.2%	2034	1.5%	2034	1.5%	
308	NWS	Industrial	All Other	All	Process Heating	Preventative Dryer Maintenance	*N/A	2015	0.2%	2034	1.5%	2034	1.5%	
309	NWS	Industrial	All Other	All	Process Heating	High Efficiency Burner	Process Heating	2015	0.2%	2034	1.5%	2034	1.5%	
310	NWS	Industrial	All Other	All	Process Heating	Air Curtains	Process Heating	2015	0.2%	2034	1.5%	2034	1.5%	
311	NWS	Industrial	All Other	All	Process Heating	Exhaust Gas Heat Recovery	Process Heating	2015	0.2%	2034	1.5%	2034	1.5%	
312	NWS	Industrial	All Other	All	Process Heating	Insulation	Process Heating	2015	0.2%	2034	1.5%	2034	1.5%	
313	NWS	Industrial	All Other	All	Process Heating	Advanced heating and Process Control	Process Heating	2015	0.2%	2034	1.5%	2034	1.5%	
314	NWS	Industrial	All Other	All	Process Heating	Combustion Optimization	*N/A	2015	0.2%	2034	1.5%	2034	1.5%	
315	NWS	Industrial	All Other	All	Process Heating	High Efficiency Burner	Process Heating	2015	0.0%	2034	0.0%	2015	0.0%	
316	NWS	Industrial	All Other	All	Process Heating	Air Curtains	Process Heating	2015	0.2%	2034	1.5%	2034	1.5%	
317	NWS	Industrial	All Other	All	Process Heating	Exhaust Gas Heat Recovery	Process Heating	2015	0.0%	2034	0.0%	2015	0.0%	
318	NWS	Industrial	All Other	All	Process Heating	Insulation	Process Heating	2015	0.1%	2034	0.4%	2034	0.4%	
319	NWS	Industrial	All Other	All	Process Heating	Advanced heating and Process Control	Process Heating	2015	0.0%	2034	0.0%	2034	0.0%	
320	NWS	Industrial	All Other	All	Process Heating	Combustion Optimization	*N/A	2015	0.2%	2034	1.5%	2034	1.5%	
321	NWS	Industrial	Small Industrial	All	Total	Integrated Control System	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
322	NWS	Industrial	Small Industrial	All	Total	Process Integration and Pinch Analysis	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
323	NWS	Industrial	Small Industrial	All	Total	Sub-Metering	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
324	NWS	Industrial	Small Industrial	All	HVAC	High-efficiency rooftop AC with an EER of 13.13	*N/A	2015	0.8%	2034	6.0%	2034	6.0%	
325	NWS	Industrial	Small Industrial	All	Process Heating	Water-heater right sizing and load management	Process Heating	2015	0.0%	2034	0.1%	2034	0.1%	
326	NWS	Industrial	Small Industrial	All	Process Heating	Insulation	Process Heating	2015	0.2%	2034	1.5%	2034	1.5%	
327	NWS	Industrial	Small Industrial	All	Boilers	Blowdown Control	*N/A	2015	0.0%	2034	0.0%	2015	0.0%	
328	NWS	Industrial	Small Industrial	All	Boilers	Boiler Right Sizing	Boilers	2015	0.1%	2034	0.7%	2034	0.7%	
329	NWS	Industrial	Small Industrial	All	Boilers	Condensing Boiler	Boilers	2015	0.0%	2034	0.0%	2015	0.0%	
330	NWS	Industrial	Small Industrial	All	Boilers	Direct-Contact Hot Water Heaters	Boilers	2015	0.1%	2034	0.4%	2034	0.4%	
331	NWS	Industrial	Small Industrial	All	Boilers	High Efficiency Burner	Boilers	2015	0.0%	2034	0.1%	2034	0.1%	
332	NWS	Industrial	Small Industrial	All	Boilers	Instantaneous Steam Generation	Boilers	2015	0.0%	2034	0.2%	2034	0.2%	
333	NWS	Industrial	Small Industrial	All	Boilers	Blowdown Heat Recovery	Boilers	2015	0.0%	2034	0.0%	2034	0.0%	
334	NWS	Industrial	Small Industrial	All	Boilers	Boiler combustion air preheat	Boilers	2015	0.0%	2034	0.0%	2034	0.0%	
335	NWS	Industrial	Small Industrial	All	Boilers	Preventative Boiler Maintenance	Boilers	2015	0.1%	2034	0.7%	2034	0.7%	
336	NWS	Industrial	Small Industrial	All	Boilers	Boiler Water Treatment	Boilers	2015	0.0%	2034	0.0%	2034	0.0%	
337	NWS	Industrial	Small Industrial	All	Boilers	Condensate Return	Boilers	2015	0.0%	2034	0.0%	2015	0.0%	
338	NWS	Industrial	Small Industrial	All	Boilers	Economizer	Boilers	2015	0.1%	2034	0.8%	2034	0.8%	
339	NWS	Industrial	Small Industrial	All	Boilers	Insulation	Boilers	2015	0.9%	2034	6.0%	2034	6.0%	
340	NWS	Industrial	Small Industrial	All	Boilers	Minimize Deaerator Vent Losses	Boilers	2015	0.0%	2034	0.0%	2015	0.0%	
341	NWS	Industrial	Small Industrial	All	Boilers	Process Heat Recovery to Preheat Makeup Water	Boilers	2015	0.0%	2034	0.0%	2034	0.0%	
342	NWS	Industrial	Small Industrial	All	Boilers	Steam Trap Survey and Repair	*N/A	2015	0.9%	2034	6.0%	2034	6.0%	
343	NWS	Industrial	Small Industrial	All	Boilers	First Generation Super Boilers	*N/A	2015	0.0%	2034	0.0%	2015	0.0%	
344	NWS	Industrial	Small Industrial	All	Process Heating	High Efficiency Burner	Process Heating	2015	0.1%	2034	1.0%	2034	1.0%	
345	NWS	Industrial	Small Industrial	All	Process Heating	Infrared Ovens	Process Heating	2015	0.2%	2034	1.1%	2034	1.1%	
346	NWS	Industrial	Small Industrial	All	Process Heating	Process Heat Recovery to Preheat Makeup Water	Process Heating	2015	0.2%	2034	1.5%	2034	1.5%	
347	NWS	Industrial	Small Industrial	All	Process Heating	Air Curtains	Process Heating	2015	0.2%	2034	1.5%	2034	1.5%	
348	NWS	Industrial	Small Industrial	All	Process Heating	Exhaust Gas Heat Recovery	Process Heating	2015	0.0%	2034	0.2%	2034	0.2%	
349	NWS	Industrial	Small Industrial	All	Process Heating	Insulation	*N/A	2015	0.2%	2034	1.5%	2034	1.5%	
350	NWS	Industrial	Small Industrial	All	Process Heating	Advanced heating and Process Control	*N/A	2015	0.2%	2034	1.5%	2034	1.5%	
351	NWS	Industrial	Small Industrial	All	Process Heating	Combustion Optimization	*N/A	2015	0.2%	2034	1.5%	2034	1.5%	
352	NWS	Industrial	Small Industrial	All	Process Heating	Radiant Tube burners	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
353	NWS	Industrial	Small Industrial	All	HVAC	Radiant Heaters	HVAC	2015	0.0%	2034	0.0%	2034	0.0%	
354	NWS	Industrial	Small Industrial	All	Process Heating	Solar Walls	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
355	NWS	Industrial	Small Industrial	All	HVAC	Air Compressor Heat Recovery	*N/A	2015	0.8%	2034	6.0%	2034	6.0%	
356	NWS	Industrial	Small Industrial	All	HVAC	Air Curtains	*N/A	2015	0.8%	2034	6.0%	2034	6.0%	
357	NWS	Industrial	Small Industrial	All	HVAC	Destratification Fans	*N/A	2015	0.8%	2034	6.0%	2034	6.0%	
358	NWS	Industrial	Small Industrial	All	HVAC	Ventilation Heat Recovery	HVAC	2015	0.0%	2034	0.2%	2034	0.2%	
359	NWS	Industrial	Small Industrial	All	HVAC	Ventilation Optimization	HVAC	2015	0.0%	2034	0.3%	2034	0.3%	
360	NWS	Industrial	Small Industrial	All	HVAC	Warehouse Loading Dock Seals	*N/A	2015	0.8%	2034	6.0%	2034	6.0%	

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					End Use	Measure Name		Program Name	First Year of Participation (So Year)	First Year Participation Rate (So)	Year of Maximum Annual Participation (Smax)	Maximum Annual Participation Rate (Smax)	Final Year of Participation, Fo (<2034 if baseline shift)
361	NWS	Industrial	Small Industrial	All	HVAC	Automated Temperature reset Control	*N/A	2015	0.8%	2034	6.0%	2034	6.0%
362	NWS	Industrial	Small Industrial	All	HVAC	Reduced Temperature Settings	*N/A	2015	0.8%	2034	6.0%	2034	6.0%
363	NWS	Industrial	Small Industrial	All	Total	Pollution Control Measures	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
364	NWS	Industrial	Small Industrial	All	Process Heating	CFD Modelling	*N/A	2015	0.2%	2034	1.5%	2034	1.5%
365	NWS	Industrial	Small Industrial	All	Total	Energy Management	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
366	NWS	Industrial	Small Industrial	All	Process Heating	Improved airflow in dryer windbox	*N/A	2015	0.2%	2034	1.5%	2034	1.5%
367	NWS	Industrial	Small Industrial	All	Process Heating	Preventative Oven Maintenance	*N/A	2015	0.2%	2034	1.5%	2034	1.5%
368	NWS	Industrial	Small Industrial	All	Process Heating	Preventative Furnace Maintenance	*N/A	2015	0.2%	2034	1.5%	2034	1.5%
369	NWS	Industrial	Small Industrial	All	Process Heating	Preventative Dryer Maintenance	*N/A	2015	0.2%	2034	1.5%	2034	1.5%
370	NWS	Industrial	Small Industrial	All	Process Heating	High Efficiency Burner	Process Heating	2015	0.2%	2034	1.5%	2034	1.5%
371	NWS	Industrial	Small Industrial	All	Process Heating	Air Curtains	Process Heating	2015	0.2%	2034	1.5%	2034	1.5%
372	NWS	Industrial	Small Industrial	All	Process Heating	Exhaust Gas Heat Recovery	Process Heating	2015	0.2%	2034	1.5%	2034	1.5%
373	NWS	Industrial	Small Industrial	All	Process Heating	Insulation	*N/A	2015	0.2%	2034	1.5%	2034	1.5%
374	NWS	Industrial	Small Industrial	All	Process Heating	Advanced heating and Process Control	*N/A	2015	0.2%	2034	1.5%	2034	1.5%
375	NWS	Industrial	Small Industrial	All	Process Heating	Combustion Optimization	*N/A	2015	0.2%	2034	1.5%	2034	1.5%
376	NWS	Industrial	Small Industrial	All	Process Heating	High Efficiency Burner	Process Heating	2015	0.1%	2034	1.0%	2034	1.0%
377	NWS	Industrial	Small Industrial	All	Process Heating	Air Curtains	Process Heating	2015	0.2%	2034	1.5%	2034	1.5%
378	NWS	Industrial	Small Industrial	All	Process Heating	Exhaust Gas Heat Recovery	Process Heating	2015	0.0%	2034	0.2%	2034	0.2%
379	NWS	Industrial	Small Industrial	All	Process Heating	Insulation	*N/A	2015	0.2%	2034	1.5%	2034	1.5%
380	NWS	Industrial	Small Industrial	All	Process Heating	Advanced heating and Process Control	*N/A	2015	0.2%	2034	1.5%	2034	1.5%
381	NWS	Industrial	Small Industrial	All	Process Heating	Combustion Optimization	*N/A	2015	0.2%	2034	1.5%	2034	1.5%

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1	NWS	Industrial	Small Industrial	All	Motors - Other Applications	Operations and maintenance	Machine Drive	2015	0.3%	2034	1.5%	2034	1.5%
2	NWS	Industrial	Small Industrial	All	Motors - Other Applications	Match Motor Size to Load	Machine Drive	2015	0.0%	2034	1.5%	2015	0.0%
3	NWS	Industrial	Small Industrial	All	Motors - Other Applications	Motor Efficiency Upgrade	Machine Drive	2015	0.0%	2034	1.5%	2015	0.0%
4	NWS	Industrial	Small Industrial	All	Motors - Other Applications	Variable Speed Drives	Machine Drive	2015	0.0%	2034	1.5%	2015	0.0%
5	NWS	Industrial	Small Industrial	All	Pumps	Reduce Overall System Requirements	Machine Drive	2015	0.0%	2034	1.5%	2015	0.0%
6	NWS	Industrial	Small Industrial	All	Pumps	Match Pump Size to Load	Machine Drive	2015	0.0%	2034	1.5%	2015	0.0%
7	NWS	Industrial	Small Industrial	All	Pumps	Reduce or Control Pump Speed	Machine Drive	2015	0.3%	2034	1.5%	2034	1.5%
8	NWS	Industrial	Small Industrial	All	Pumps	Improve Pump Components	Machine Drive	2015	0.3%	2034	1.5%	2034	1.5%
9	NWS	Industrial	Small Industrial	All	Pumps	Operation and Maintenance	Machine Drive	2015	0.3%	2034	1.5%	2034	1.5%
10	NWS	Industrial	Small Industrial	All	Compressed Air	Reduce Overall System Requirements	Machine Drive	2015	0.0%	2034	1.5%	2015	0.0%
11	NWS	Industrial	Small Industrial	All	Compressed Air	Match Compressor Size to Load	Machine Drive	2015	0.3%	2034	1.5%	2034	1.5%
12	NWS	Industrial	Small Industrial	All	Compressed Air	Compressor Control	Machine Drive	2015	0.3%	2034	1.5%	2034	1.5%
13	NWS	Industrial	Small Industrial	All	Compressed Air	Improve Compressor Components	Machine Drive	2015	0.0%	2034	1.5%	2015	0.0%
14	NWS	Industrial	Small Industrial	All	Compressed Air	Operation and Maintenance	Machine Drive	2015	0.3%	2034	1.5%	2034	1.5%
15	NWS	Industrial	Small Industrial	All	Fans	Reduce Overall System Requirements	Machine Drive	2015	0.0%	2034	1.5%	2015	0.0%
16	NWS	Industrial	Small Industrial	All	Fans	Reduce or Control Fan Speed	Machine Drive	2015	0.0%	2034	1.5%	2015	0.0%
17	NWS	Industrial	Small Industrial	All	Fans	Improve Fan Components	Machine Drive	2015	0.0%	2034	1.5%	2015	0.0%
18	NWS	Industrial	Small Industrial	All	Fans	Operation and Maintenance	Machine Drive	2015	0.0%	2034	1.5%	2015	0.0%
19	NWS	Industrial	Small Industrial	All	PH	Advanced water heater controls	Process Heating	2015	0.0%	2034	1.5%	2015	0.0%
20	NWS	Industrial	Small Industrial	All	PH	Process Heat Recovery to Preheat Makeup Water	Process Heating	2015	0.0%	2034	1.5%	2015	0.0%
21	NWS	Industrial	Small Industrial	All	PH	Air Curtains (Oven)	Process Heating	2015	0.0%	2034	1.5%	2015	0.0%
22	NWS	Industrial	Small Industrial	All	PH	Insulation (Oven)	Process Heating	2015	0.3%	2034	1.5%	2034	1.5%
23	NWS	Industrial	Small Industrial	All	PH	Preventative Oven Maintenance	Process Heating	2015	0.3%	2034	1.5%	2034	1.5%
24	NWS	Industrial	Small Industrial	All	PH	Air Curtains (Dryer)	Process Heating	2015	0.3%	2034	1.5%	2034	1.5%
25	NWS	Industrial	Small Industrial	All	PH	Insulation (Dryer)	Process Heating	2015	0.0%	2034	1.5%	2015	0.0%
26	NWS	Industrial	Small Industrial	All	PH	Preventative Dryer Maintenance	Process Heating	2015	0.0%	2034	1.5%	2015	0.0%
27	NWS	Industrial	Small Industrial	All	PH	Preventative Furnace Maintenance	Process Heating	2015	0.0%	2034	1.5%	2015	0.0%
28	NWS	Industrial	Small Industrial	All	PH	Insulation (Furnace)	Process Heating	2015	0.0%	2034	1.5%	2015	0.0%
29	NWS	Industrial	Small Industrial	All	PH	Preventative Kiln Maintenance	Process Heating	2015	0.0%	2034	1.5%	2015	0.0%
30	NWS	Industrial	Small Industrial	All	PH	Insulation (Kiln)	Process Heating	2015	0.0%	2034	1.5%	2015	0.0%
31	NWS	Industrial	Small Industrial	All	PCR	High Efficiency Chiller	Process Cooling and Refrigeration	2015	0.0%	2034	0.7%	2015	0.0%
32	NWS	Industrial	Small Industrial	All	PCR	Optimized Distribution System	Process Cooling and Refrigeration	2015	0.3%	2034	1.5%	2034	1.5%
33	NWS	Industrial	Small Industrial	All	PCR	Floating head pressure controls	Process Cooling and Refrigeration	2015	0.0%	2034	1.5%	2015	0.0%
34	NWS	Industrial	Small Industrial	All	PCR	Premium efficiency refrigeration control system	Process Cooling and Refrigeration	2015	0.0%	2034	0.4%	2015	0.0%
35	NWS	Industrial	Small Industrial	All	PCR	Smart Defrost Controls	Process Cooling and Refrigeration	2015	0.3%	2034	1.5%	2034	1.5%
36	NWS	Industrial	Small Industrial	All	PCR	Doors, Covers and Curtains	Process Cooling and Refrigeration	2015	0.0%	2034	1.5%	2015	0.0%
37	NWS	Industrial	Small Industrial	All	PCR	Optimized chilled water temperature and/or optimized condenser temperature	Process Cooling and Refrigeration	2015	0.0%	2034	1.5%	2015	0.0%
38	NWS	Industrial	Small Industrial	All	PCR	Preventative refrigeration/cooling system maintenance	Process Cooling and Refrigeration	2015	0.3%	2034	1.5%	2034	1.5%
39	NWS	Industrial	Small Industrial	All	PCR	Optimized condenser pressure	Process Cooling and Refrigeration	2015	0.0%	2034	1.5%	2015	0.0%
40	NWS	Industrial	Small Industrial	All	PCR	VSD on chiller compressor	Process Cooling and Refrigeration	2015	0.0%	2034	1.5%	2015	0.0%
41	NWS	Industrial	Small Industrial	All	PCR	Free-cooling	Process Cooling and Refrigeration	2015	0.0%	2034	1.5%	2015	0.0%
42	NWS	Industrial	Small Industrial	All	PCR	Improve insulation of refrigeration system	Process Cooling and Refrigeration	2015	0.0%	2034	1.5%	2015	0.0%
43	NWS	Industrial	Small Industrial	All	HVAC	Optimized duct design to improve efficiency	Facility HVAC	2015	0.0%	2034	0.8%	2015	0.0%
44	NWS	Industrial	Small Industrial	All	HVAC	Air Source Heat Pump for Backup Generators	Facility HVAC	2015	0.0%	2034	0.0%	2034	0.0%
45	NWS	Industrial	Small Industrial	All	ONPU	High efficiency battery charger (for forklifts)	Other Process/Non-Process Use	2015	0.0%	2034	1.5%	2015	0.0%
46	NWS	Industrial	Small Industrial	All	ONPU	HE Dry-Type Transformers	Other Process/Non-Process Use	2015	0.0%	2034	1.5%	2015	0.0%
47	NWS	Industrial	Small Industrial	All	HVAC	Free cooling	Facility HVAC	2015	0.3%	2034	1.5%	2034	1.5%
48	NWS	Industrial	Small Industrial	All	HVAC	Radiant Heaters	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
49	NWS	Industrial	Small Industrial	All	HVAC	High efficiency non-packaged HVAC equipment	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
50	NWS	Industrial	Small Industrial	All	HVAC	Seasonal Temperature Settings Adjustments	Facility HVAC	2015	0.0%	2034	1.5%	2015	0.0%
51	NWS	Industrial	Small Industrial	All	HVAC	High-efficiency rooftop AC with an EER of 13.5	Facility HVAC	2015	0.0%	2034	1.5%	2015	0.0%
52	NWS	Industrial	Small Industrial	All	HVAC	Ground Source Heat Pump	Facility HVAC	2015	0.0%	2034	0.0%	2015	0.0%
53	NWS	Industrial	Small Industrial	All	HVAC	Ventilation Heat Recovery	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
54	NWS	Industrial	Small Industrial	All	HVAC	Automated Temperature Control	Facility HVAC	2015	0.0%	2034	1.5%	2015	0.0%
55	NWS	Industrial	Small Industrial	All	HVAC	Reduced Temperature Settings	Facility HVAC	2015	0.0%	2034	1.5%	2015	0.0%
56	NWS	Industrial	Small Industrial	All	HVAC	Destratification Fans	Facility HVAC	2015	0.0%	2034	1.5%	2015	0.0%
57	NWS	Industrial	Small Industrial	All	HVAC	Warehouse Loading Dock Seals	Facility HVAC	2015	0.0%	2034	1.5%	2015	0.0%
58	NWS	Industrial	Small Industrial	All	HVAC	Preventative Packaged HVAC Maintenance	Facility HVAC	2015	0.0%	2034	1.5%	2015	0.0%
59	NWS	Industrial	Small Industrial	All	HVAC	Heat Recovery from Processes to Heat Ventilation Make-up Air	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
60	NWS	Industrial	Small Industrial	All	FL	High efficiency ballasts for lighting	Facility Lighting	2015	0.0%	2034	1.5%	2015	0.0%

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61	NWS	Industrial	Small Industrial	All	FL	High Efficiency Light fixtures	Facility Lighting	2015	0.0%	2034	1.0%	2015	0.0%	
62	NWS	Industrial	Small Industrial	All	FL	Efficient Lighting Design	Facility Lighting	2015	0.0%	2034	1.5%	2015	0.0%	
63	NWS	Industrial	Small Industrial	All	FL	Lighting controls: on/off timer settings	Facility Lighting	2015	0.0%	2034	1.5%	2015	0.0%	
64	NWS	Industrial	Small Industrial	All	FL	Lighting controls: occupancy sensors	Facility Lighting	2015	0.0%	2034	0.1%	2015	0.0%	
65	NWS	Industrial	Small Industrial	All	HVAC	Ventilation Optimization	Facility HVAC	2015	0.2%	2034	0.8%	2034	0.8%	
66	NWS	Industrial	Small Industrial	All	HVAC	Premium efficiency ventilation control with VSD	Facility HVAC	2015	0.0%	2034	1.5%	2015	0.0%	
67	NWS	Industrial	Small Industrial	All	HVAC	Demand-Controlled Ventilation	Facility HVAC	2015	0.0%	2034	0.2%	2015	0.0%	
68	NWS	Industrial	Other - Combined	All	Motors - Other Applications	Operations and maintenance	Machine Drive	2015	0.3%	2034	1.5%	2034	1.5%	
69	NWS	Industrial	Other - Combined	All	Motors - Other Applications	Match Motor Size to Load	Machine Drive	2015	0.3%	2034	1.5%	2034	1.5%	
70	NWS	Industrial	Other - Combined	All	Motors - Other Applications	Motor Efficiency Upgrade	Machine Drive	2015	0.3%	2034	1.5%	2034	1.5%	
71	NWS	Industrial	Other - Combined	All	Motors - Other Applications	Variable Speed Drives	Machine Drive	2015	0.3%	2034	1.5%	2034	1.5%	
72	NWS	Industrial	Other - Combined	All	Pumps	Reduce Overall System Requirements	Machine Drive	2015	0.3%	2034	1.5%	2034	1.5%	
73	NWS	Industrial	Other - Combined	All	Pumps	Match Pump Size to Load	Machine Drive	2015	0.3%	2034	1.5%	2034	1.5%	
74	NWS	Industrial	Other - Combined	All	Pumps	Reduce or Control Pump Speed	Machine Drive	2015	0.3%	2034	1.5%	2034	1.5%	
75	NWS	Industrial	Other - Combined	All	Pumps	Improve Pump Components	Machine Drive	2015	0.3%	2034	1.5%	2034	1.5%	
76	NWS	Industrial	Other - Combined	All	Pumps	Operation and Maintenance	Machine Drive	2015	0.3%	2034	1.5%	2034	1.5%	
77	NWS	Industrial	Other - Combined	All	Compressed Air	Reduce Overall System Requirements	Machine Drive	2015	0.3%	2034	1.5%	2034	1.5%	
78	NWS	Industrial	Other - Combined	All	Compressed Air	Match Compressor Size to Load	Machine Drive	2015	0.3%	2034	1.5%	2034	1.5%	
79	NWS	Industrial	Other - Combined	All	Compressed Air	Compressor Control	Machine Drive	2015	0.3%	2034	1.5%	2034	1.5%	
80	NWS	Industrial	Other - Combined	All	Compressed Air	Improve Compressor Components	Machine Drive	2015	0.3%	2034	1.5%	2034	1.5%	
81	NWS	Industrial	Other - Combined	All	Compressed Air	Operation and Maintenance	Machine Drive	2015	0.3%	2034	1.5%	2034	1.5%	
82	NWS	Industrial	Other - Combined	All	Fans	Reduce Overall System Requirements	Machine Drive	2015	0.3%	2034	1.5%	2034	1.5%	
83	NWS	Industrial	Other - Combined	All	Fans	Reduce or Control Fan Speed	Machine Drive	2015	0.3%	2034	1.5%	2034	1.5%	
84	NWS	Industrial	Other - Combined	All	Fans	Improve Fan Components	Machine Drive	2015	0.3%	2034	1.5%	2034	1.5%	
85	NWS	Industrial	Other - Combined	All	Fans	Operation and Maintenance	Machine Drive	2015	0.3%	2034	1.5%	2034	1.5%	
86	NWS	Industrial	Other - Combined	All	HVAC	Optimized Duct Design to Improve Efficiency	Facility HVAC	2015	0.3%	2034	1.4%	2034	1.4%	
87	NWS	Industrial	Other - Combined	All	PH	Advanced Water Heater Controls	Process Heating	2015	1.2%	2034	6.0%	2034	6.0%	
88	NWS	Industrial	Other - Combined	All	PH	Process Heat Recovery to Preheat Makeup Water	Process Heating	2015	0.0%	2034	6.0%	2015	0.0%	
89	NWS	Industrial	Other - Combined	All	PH	Air Curtains (Oven)	Process Heating	2015	0.0%	2034	6.0%	2015	0.0%	
90	NWS	Industrial	Other - Combined	All	PH	Insulation (Oven)	Process Heating	2015	0.0%	2034	6.0%	2015	0.0%	
91	NWS	Industrial	Other - Combined	All	PH	Preventative Oven Maintenance	Process Heating	2015	0.0%	2034	6.0%	2015	0.0%	
92	NWS	Industrial	Other - Combined	All	PH	Air Curtains (Dryer)	Process Heating	2015	0.0%	2034	6.0%	2015	0.0%	
93	NWS	Industrial	Other - Combined	All	PH	Insulation (Dryer)	Process Heating	2015	0.0%	2034	6.0%	2015	0.0%	
94	NWS	Industrial	Other - Combined	All	PH	Preventative Dryer Maintenance	Process Heating	2015	0.0%	2034	6.0%	2015	0.0%	
95	NWS	Industrial	Other - Combined	All	PH	Optimized Distribution System	Process Heating	2015	1.2%	2034	6.0%	2034	6.0%	
96	NWS	Industrial	Other - Combined	All	PH	Insulation (Dryer)	Process Heating	2015	0.0%	2034	6.0%	2015	0.0%	
97	NWS	Industrial	Other - Combined	All	PH	Preventative Dryer Maintenance	Process Heating	2015	0.0%	2034	6.0%	2015	0.0%	
98	NWS	Industrial	Other - Combined	All	PH	Preventative Furnace Maintenance	Process Heating	2015	0.0%	2034	6.0%	2015	0.0%	
99	NWS	Industrial	Other - Combined	All	PH	Insulation (Furnace)	Process Heating	2015	0.0%	2034	6.0%	2015	0.0%	
100	NWS	Industrial	Other - Combined	All	PCR	High Efficiency Chiller	Process Cooling and Refrigeration	2015	1.0%	2034	5.0%	2034	5.0%	
101	NWS	Industrial	Other - Combined	All	PCR	Floating head pressure controls	Process Cooling and Refrigeration	2015	0.0%	2034	6.0%	2015	0.0%	
102	NWS	Industrial	Other - Combined	All	PCR	Premium Efficiency Refrigeration Control System	Process Cooling and Refrigeration	2015	0.0%	2034	3.3%	2015	0.0%	
103	NWS	Industrial	Other - Combined	All	PCR	Smart Defrost Controls	Process Cooling and Refrigeration	2015	0.0%	2034	6.0%	2015	0.0%	
104	NWS	Industrial	Other - Combined	All	PCR	Doors, Covers and Curtains	Process Cooling and Refrigeration	2015	1.2%	2034	6.0%	2034	6.0%	
105	NWS	Industrial	Other - Combined	All	PCR	Optimized chilled water temperature and/or optimized condenser temperature	Process Cooling and Refrigeration	2015	1.2%	2034	6.0%	2034	6.0%	
106	NWS	Industrial	Other - Combined	All	PCR	Preventative Refrigeration/cooling System Maintenance	Process Cooling and Refrigeration	2015	0.0%	2034	6.0%	2015	0.0%	
107	NWS	Industrial	Other - Combined	All	PCR	Optimized condenser pressure	Process Cooling and Refrigeration	2015	0.0%	2034	6.0%	2015	0.0%	
108	NWS	Industrial	Other - Combined	All	PCR	Free-cooling	Process Cooling and Refrigeration	2015	0.0%	2034	6.0%	2015	0.0%	
109	NWS	Industrial	Other - Combined	All	PCR	Improve Insulation of Refrigeration System	Process Cooling and Refrigeration	2015	0.0%	2034	6.0%	2015	0.0%	
110	NWS	Industrial	Other - Combined	All	ONPU	HE Dry-Type Transformers	Other Process/Non-Process Use	2015	0.0%	2034	6.0%	2015	0.0%	
111	NWS	Industrial	Other - Combined	All	HVAC	Air Source Heat Pump for Backup Generators	Facility HVAC	2015	0.0%	2034	0.7%	2015	0.0%	
112	NWS	Industrial	Other - Combined	All	ONPU	High efficiency battery charger (for forklifts)	Other Process/Non-Process Use	2015	0.0%	2034	6.0%	2015	0.0%	
113	NWS	Industrial	Other - Combined	All	HVAC	Radiant Heaters	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
114	NWS	Industrial	Other - Combined	All	HVAC	High efficiency non-packaged HVAC equipment	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
115	NWS	Industrial	Other - Combined	All	HVAC	Seasonal Temperature Settings Adjustments	Facility HVAC	2015	0.0%	2034	6.0%	2015	0.0%	
116	NWS	Industrial	Other - Combined	All	HVAC	High-efficiency rooftop AC with an EER of 13.5	Facility HVAC	2015	0.0%	2034	6.0%	2015	0.0%	
117	NWS	Industrial	Other - Combined	All	HVAC	Ground Source Heat Pump	Facility HVAC	2015	0.0%	2034	0.0%	2015	0.0%	
118	NWS	Industrial	Other - Combined	All	HVAC	Ventilation Heat Recovery	Facility HVAC	2015	0.0%	2034	0.0%	2015	0.0%	
119	NWS	Industrial	Other - Combined	All	HVAC	Automated Temperature Control	Facility HVAC	2015	0.0%	2034	6.0%	2015	0.0%	
120	NWS	Industrial	Other - Combined	All	HVAC	Reduced Temperature Settings	Facility HVAC	2015	0.0%	2034	6.0%	2015	0.0%	

Industrial Measures

Measure ID	Weather Sensitive	MEASURE DESCRIPTION				End Use	Measure Name	PROGRAM	PARTICIPATION HIGH CASE					
		Sector	Sub-Sector	Building Type					First Year of Participation (So Year)	First Year Participation Rate (So)	Year of Maximum Annual Participation (Smax)	Maximum Annual Participation Rate (Smax)	Final Year of Participation, Fo (<2034 if baseline shift)	Final Year Participation Rate (Fo)
121	NWS	Industrial	Other - Combined	All	HVAC	Destratification Fans	Facility HVAC	2015	0.0%	2034	6.0%	2015	0.0%	
122	NWS	Industrial	Other - Combined	All	HVAC	Warehouse Loading Dock Seals	Facility HVAC	2015	0.0%	2034	6.0%	2015	0.0%	
123	NWS	Industrial	Other - Combined	All	HVAC	Preventative Packaged HVAC Maintenance	Facility HVAC	2015	0.0%	2034	6.0%	2015	0.0%	
124	NWS	Industrial	Other - Combined	All	HVAC	Heat Recovery from Processes to Heat Ventilation Make-up Air	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
125	NWS	Industrial	Other - Combined	All	FL	High efficiency ballasts for lighting	Facility Lighting	2015	0.0%	2034	6.0%	2015	0.0%	
126	NWS	Industrial	Other - Combined	All	FL	High Efficiency Light fixtures	Facility Lighting	2015	1.2%	2034	6.0%	2034	6.0%	
127	NWS	Industrial	Other - Combined	All	FL	Efficient Lighting Design	Facility Lighting	2015	0.0%	2034	6.0%	2015	0.0%	
128	NWS	Industrial	Other - Combined	All	FL	Lighting controls: on/off timer settings	Facility Lighting	2015	1.2%	2034	6.0%	2034	6.0%	
129	NWS	Industrial	Other - Combined	All	FL	Lighting controls: occupancy sensors	Facility Lighting	2015	0.3%	2034	1.7%	2034	1.7%	
130	NWS	Industrial	Other - Combined	All	HVAC	Ventilation Optimization	Facility HVAC	2015	1.1%	2034	5.6%	2034	5.6%	
131	NWS	Industrial	Other - Combined	All	HVAC	Premium efficiency ventilation control with VSD	Facility HVAC	2015	1.2%	2034	6.0%	2034	6.0%	
132	NWS	Industrial	Other - Combined	All	HVAC	Demand-Controlled Ventilation	Facility HVAC	2015	0.4%	2034	2.0%	2034	2.0%	
133	NWS	Industrial	Food Products	All	Motors - Other Applications	Operations and maintenance	Machine Drive	2015	1.4%	2034	7.0%	2034	7.0%	
134	NWS	Industrial	Food Products	All	Motors - Other Applications	Match Motor Size to Load	Machine Drive	2015	1.4%	2034	7.0%	2034	7.0%	
135	NWS	Industrial	Food Products	All	Motors - Other Applications	Motor Efficiency Upgrade	Machine Drive	2015	1.4%	2034	7.0%	2034	7.0%	
136	NWS	Industrial	Food Products	All	Motors - Other Applications	Variable Speed Drives	Machine Drive	2015	1.4%	2034	7.0%	2034	7.0%	
137	NWS	Industrial	Food Products	All	Pumps	Reduce Overall System Requirements	Machine Drive	2015	1.4%	2034	7.0%	2034	7.0%	
138	NWS	Industrial	Food Products	All	Pumps	Match Pump Size to Load	Machine Drive	2015	1.4%	2034	7.0%	2034	7.0%	
139	NWS	Industrial	Food Products	All	Pumps	Reduce or Control Pump Speed	Machine Drive	2015	1.4%	2034	7.0%	2034	7.0%	
140	NWS	Industrial	Food Products	All	Pumps	Improve Pump Components	Machine Drive	2015	1.4%	2034	7.0%	2034	7.0%	
141	NWS	Industrial	Food Products	All	Pumps	Operation and Maintenance	Machine Drive	2015	1.4%	2034	7.0%	2034	7.0%	
142	NWS	Industrial	Food Products	All	Compressed Air	Reduce Overall System Requirements	Machine Drive	2015	1.4%	2034	7.0%	2034	7.0%	
143	NWS	Industrial	Food Products	All	Compressed Air	Match Compressor Size to Load	Machine Drive	2015	1.4%	2034	7.0%	2034	7.0%	
144	NWS	Industrial	Food Products	All	Compressed Air	Compressor Control	Machine Drive	2015	1.4%	2034	7.0%	2034	7.0%	
145	NWS	Industrial	Food Products	All	Compressed Air	Improve Compressor Components	Machine Drive	2015	1.4%	2034	7.0%	2034	7.0%	
146	NWS	Industrial	Food Products	All	Compressed Air	Operation and Maintenance	Machine Drive	2015	1.4%	2034	7.0%	2034	7.0%	
147	NWS	Industrial	Food Products	All	Fans	Reduce Overall System Requirements	Machine Drive	2015	1.4%	2034	7.0%	2034	7.0%	
148	NWS	Industrial	Food Products	All	Fans	Reduce or Control Fan Speed	Machine Drive	2015	1.4%	2034	7.0%	2034	7.0%	
149	NWS	Industrial	Food Products	All	Fans	Improve Fan Components	Machine Drive	2015	1.4%	2034	7.0%	2034	7.0%	
150	NWS	Industrial	Food Products	All	Fans	Operation and Maintenance	Machine Drive	2015	1.4%	2034	7.0%	2034	7.0%	
151	NWS	Industrial	Food Products	All	HVAC	Optimized Duct Design to Improve Efficiency	Facility HVAC	2015	1.1%	2034	5.6%	2034	5.6%	
152	NWS	Industrial	Food Products	All	PH	Advanced Water Heater Controls	Process Heating	2015	1.2%	2034	6.0%	2034	6.0%	
153	NWS	Industrial	Food Products	All	PH	Process Heat Recovery to Preheat Makeup Water	Process Heating	2015	1.2%	2034	6.0%	2034	6.0%	
154	NWS	Industrial	Food Products	All	PH	Air Curtains (Oven)	Process Heating	2015	1.2%	2034	6.0%	2034	6.0%	
155	NWS	Industrial	Food Products	All	PH	Insulation (Oven)	Process Heating	2015	1.2%	2034	6.0%	2034	6.0%	
156	NWS	Industrial	Food Products	All	PH	Preventative Oven Maintenance	Process Heating	2015	1.2%	2034	6.0%	2034	6.0%	
157	NWS	Industrial	Food Products	All	PH	Air Curtains (Dryer)	Process Heating	2015	1.2%	2034	6.0%	2034	6.0%	
158	NWS	Industrial	Food Products	All	PH	Insulation (Dryer)	Process Heating	2015	1.2%	2034	6.0%	2034	6.0%	
159	NWS	Industrial	Food Products	All	PH	Preventative Dryer Maintenance	Process Heating	2015	1.2%	2034	6.0%	2034	6.0%	
160	NWS	Industrial	Food Products	All	PH	Optimized Distribution System	Process Heating	2015	1.2%	2034	6.0%	2034	6.0%	
161	NWS	Industrial	Food Products	All	PH	Insulation (Dryer)	Process Heating	2015	1.2%	2034	6.0%	2034	6.0%	
162	NWS	Industrial	Food Products	All	PH	Preventative Dryer Maintenance	Process Heating	2015	1.2%	2034	6.0%	2034	6.0%	
163	NWS	Industrial	Food Products	All	PH	Preventative Furnace Maintenance	Process Heating	2015	1.2%	2034	6.0%	2034	6.0%	
164	NWS	Industrial	Food Products	All	PH	Insulation (Furnace)	Process Heating	2015	1.2%	2034	6.0%	2034	6.0%	
165	NWS	Industrial	Food Products	All	PCR	High Efficiency Chiller	Process Cooling and Refrigeration	2015	1.0%	2034	5.0%	2034	5.0%	
166	NWS	Industrial	Food Products	All	PCR	Floating head pressure controls	Process Cooling and Refrigeration	2015	1.2%	2034	6.0%	2034	6.0%	
167	NWS	Industrial	Food Products	All	PCR	Premium Efficiency Refrigeration Control System	Process Cooling and Refrigeration	2015	0.7%	2034	3.3%	2034	3.3%	
168	NWS	Industrial	Food Products	All	PCR	Smart Defrost Controls	Process Cooling and Refrigeration	2015	1.2%	2034	6.0%	2034	6.0%	
169	NWS	Industrial	Food Products	All	PCR	Doors, Covers and Curtains	Process Cooling and Refrigeration	2015	1.2%	2034	6.0%	2034	6.0%	
170	NWS	Industrial	Food Products	All	PCR	Optimized chilled water temperature and/or optimized condenser temperature	Process Cooling and Refrigeration	2015	1.2%	2034	6.0%	2034	6.0%	
171	NWS	Industrial	Food Products	All	PCR	Preventative Refrigeration/cooling System Maintenance	Process Cooling and Refrigeration	2015	1.2%	2034	6.0%	2034	6.0%	
172	NWS	Industrial	Food Products	All	PCR	Optimized condenser pressure	Process Cooling and Refrigeration	2015	1.2%	2034	6.0%	2034	6.0%	
173	NWS	Industrial	Food Products	All	PCR	Free-cooling	Process Cooling and Refrigeration	2015	1.2%	2034	6.0%	2034	6.0%	
174	NWS	Industrial	Food Products	All	PCR	Improve Insulation of Refrigeration System	Process Cooling and Refrigeration	2015	1.2%	2034	6.0%	2034	6.0%	
175	NWS	Industrial	Food Products	All	ONPU	HE Dry-Type Transformers	Other Process/Non-Process Use	2015	1.2%	2034	6.0%	2034	6.0%	
176	NWS	Industrial	Food Products	All	HVAC	Air Source Heat Pump for Backup Generators	Facility HVAC	2015	0.1%	2034	0.7%	2034	0.7%	
177	NWS	Industrial	Food Products	All	ONPU	High efficiency battery charger (for forklifts)	Other Process/Non-Process Use	2015	1.2%	2034	6.0%	2034	6.0%	
178	NWS	Industrial	Food Products	All	HVAC	Radiant Heaters	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
179	NWS	Industrial	Food Products	All	HVAC	High efficiency non-packaged HVAC equipment	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
180	NWS	Industrial	Food Products	All	HVAC	Seasonal Temperature Settings Adjustments	Facility HVAC	2015	1.2%	2034	6.0%	2034	6.0%	

Industrial Measures

Measure ID	Weather Sensitive	Sector	Sub-Sector	Building Type	End Use	Measure Name	Program Name	PARTICIPATION HIGH CASE					
								First Year of Participation (So Year)	First Year Participation Rate (So)	Year of Maximum Annual Participation (Smax)	Maximum Annual Participation Rate (Smax)	Final Year of Participation, Fo (<2034 if baseline shift)	Final Year Participation Rate (Fo)
181	NWS	Industrial	Food Products	All	HVAC	High-efficiency rooftop AC with an EER of 13.5	Facility HVAC	2015	1.2%	2034	6.0%	2034	6.0%
182	NWS	Industrial	Food Products	All	HVAC	Ground Source Heat Pump	Facility HVAC	2015	0.0%	2034	0.0%	2034	0.0%
183	NWS	Industrial	Food Products	All	HVAC	Ventilation Heat Recovery	Facility HVAC	2015	0.0%	2034	0.0%	2015	0.0%
184	NWS	Industrial	Food Products	All	HVAC	Automated Temperature Control	Facility HVAC	2015	1.2%	2034	6.0%	2034	6.0%
185	NWS	Industrial	Food Products	All	HVAC	Reduced Temperature Settings	Facility HVAC	2015	1.2%	2034	6.0%	2034	6.0%
186	NWS	Industrial	Food Products	All	HVAC	Destratification Fans	Facility HVAC	2015	1.2%	2034	6.0%	2034	6.0%
187	NWS	Industrial	Food Products	All	HVAC	Warehouse Loading Dock Seals	Facility HVAC	2015	1.2%	2034	6.0%	2034	6.0%
188	NWS	Industrial	Food Products	All	HVAC	Preventative Packaged HVAC Maintenance	Facility HVAC	2015	1.2%	2034	6.0%	2034	6.0%
189	NWS	Industrial	Food Products	All	HVAC	Heat Recovery from Processes to Heat Ventilation Make-up Air	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
190	NWS	Industrial	Food Products	All	FL	High efficiency ballasts for lighting	Facility Lighting	2015	1.2%	2034	6.0%	2034	6.0%
191	NWS	Industrial	Food Products	All	FL	High Efficiency Light fixtures	Facility Lighting	2015	1.2%	2034	6.0%	2034	6.0%
192	NWS	Industrial	Food Products	All	FL	Efficient Lighting Design	Facility Lighting	2015	1.2%	2034	6.0%	2034	6.0%
193	NWS	Industrial	Food Products	All	FL	Lighting controls: on/off timer settings	Facility Lighting	2015	1.2%	2034	6.0%	2034	6.0%
194	NWS	Industrial	Food Products	All	FL	Lighting controls: occupancy sensors	Facility Lighting	2015	0.3%	2034	1.7%	2034	1.7%
195	NWS	Industrial	Food Products	All	HVAC	Ventilation Optimization	Facility HVAC	2015	1.1%	2034	5.6%	2034	5.6%
196	NWS	Industrial	Food Products	All	HVAC	Premium efficiency ventilation control with VSD	Facility HVAC	2015	1.2%	2034	6.0%	2034	6.0%
197	NWS	Industrial	Food Products	All	HVAC	Demand-Controlled Ventilation	Facility HVAC	2015	0.4%	2034	2.0%	2034	2.0%
199	NWS	Industrial	Industrial Gases	All	Total	Integrated Control System	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
200	NWS	Industrial	Industrial Gases	All	Total	Process Integration and Pinch Analysis	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
201	NWS	Industrial	Industrial Gases	All	Total	Sub-Metering	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
202	NWS	Industrial	Industrial Gases	All	HVAC	High-efficiency rooftop AC with an EER of 13.13	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
203	NWS	Industrial	Industrial Gases	All	Process Heating	Water-heater right sizing and load management	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
204	NWS	Industrial	Industrial Gases	All	Process Heating	Insulation	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
205	NWS	Industrial	Industrial Gases	All	Boilers	Blowdown Control	Boilers	2015	0.1%	2034	0.9%	2034	0.9%
206	NWS	Industrial	Industrial Gases	All	Boilers	Boiler Right Sizing	Boilers	2015	0.0%	2034	0.0%	2015	0.0%
207	NWS	Industrial	Industrial Gases	All	Boilers	Condensing Boiler	Boilers	2015	0.0%	2034	0.0%	2015	0.0%
208	NWS	Industrial	Industrial Gases	All	Boilers	Direct-Contact Hot Water Heaters	Boilers	2015	0.0%	2034	0.0%	2015	0.0%
209	NWS	Industrial	Industrial Gases	All	Boilers	High Efficiency Burner	Boilers	2015	0.5%	2034	3.7%	2034	3.7%
210	NWS	Industrial	Industrial Gases	All	Boilers	Instantaneous Steam Generation	Boilers	2015	0.0%	2034	0.0%	2034	0.0%
211	NWS	Industrial	Industrial Gases	All	Boilers	Blowdown Heat Recovery	Boilers	2015	0.2%	2034	1.7%	2034	1.7%
212	NWS	Industrial	Industrial Gases	All	Boilers	Boiler combustion air preheat	Boilers	2015	0.2%	2034	1.8%	2034	1.8%
213	NWS	Industrial	Industrial Gases	All	Boilers	Preventative Boiler Maintenance	Boilers	2015	0.8%	2034	6.0%	2034	6.0%
214	NWS	Industrial	Industrial Gases	All	Boilers	Boiler Water Treatment	Boilers	2015	0.8%	2034	6.0%	2034	6.0%
215	NWS	Industrial	Industrial Gases	All	Boilers	Condensate Return	Boilers	2015	0.0%	2034	0.0%	2034	0.0%
216	NWS	Industrial	Industrial Gases	All	Boilers	Economizer	Boilers	2015	0.4%	2034	3.0%	2034	3.0%
217	NWS	Industrial	Industrial Gases	All	Boilers	Insulation	Boilers	2015	0.8%	2034	6.0%	2034	6.0%
218	NWS	Industrial	Industrial Gases	All	Boilers	Minimize Deaerator Vent Losses	Boilers	2015	0.7%	2034	5.2%	2034	5.2%
219	NWS	Industrial	Industrial Gases	All	Boilers	Process Heat Recovery to Preheat Makeup Water	Boilers	2015	0.8%	2034	6.0%	2034	6.0%
220	NWS	Industrial	Industrial Gases	All	Boilers	Steam Trap Survey and Repair	Boilers	2015	0.8%	2034	6.0%	2034	6.0%
221	NWS	Industrial	Industrial Gases	All	Boilers	First Generation Super Boilers	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
222	NWS	Industrial	Industrial Gases	All	Process Heating	High Efficiency Burner	Process Heating	2015	0.0%	2034	0.0%	2015	0.0%
223	NWS	Industrial	Industrial Gases	All	Process Heating	Infrared Ovens	Process Heating	2015	0.0%	2034	0.0%	2015	0.0%
224	NWS	Industrial	Industrial Gases	All	Process Heating	Process Heat Recovery to Preheat Makeup Water	Process Heating	2015	0.2%	2034	1.5%	2034	1.5%
225	NWS	Industrial	Industrial Gases	All	Process Heating	Air Curtains	Process Heating	2015	0.2%	2034	1.5%	2034	1.5%
226	NWS	Industrial	Industrial Gases	All	Process Heating	Exhaust Gas Heat Recovery	Process Heating	2015	0.0%	2034	0.0%	2015	0.0%
227	NWS	Industrial	Industrial Gases	All	Process Heating	Insulation	Process Heating	2015	0.0%	2034	0.1%	2034	0.1%
228	NWS	Industrial	Industrial Gases	All	Process Heating	Advanced heating and Process Control	Process Heating	2015	0.0%	2034	0.0%	2015	0.0%
229	NWS	Industrial	Industrial Gases	All	Process Heating	Combustion Optimization	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
230	NWS	Industrial	Industrial Gases	All	Process Heating	Radiant Tube burners	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
231	NWS	Industrial	Industrial Gases	All	HVAC	Radiant Heaters	HVAC	2015	0.0%	2034	0.2%	2034	0.2%
232	NWS	Industrial	Industrial Gases	All	Process Heating	Solar Walls	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
233	NWS	Industrial	Industrial Gases	All	HVAC	Air Compressor Heat Recovery	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
234	NWS	Industrial	Industrial Gases	All	HVAC	Air Curtains	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
235	NWS	Industrial	Industrial Gases	All	HVAC	Destratification Fans	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
236	NWS	Industrial	Industrial Gases	All	HVAC	Ventilation Heat Recovery	HVAC	2015	0.5%	2034	3.8%	2034	3.8%
237	NWS	Industrial	Industrial Gases	All	HVAC	Ventilation Optimization	HVAC	2015	0.6%	2034	4.3%	2034	4.3%
238	NWS	Industrial	Industrial Gases	All	HVAC	Warehouse Loading Dock Seals	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
239	NWS	Industrial	Industrial Gases	All	HVAC	Automated Temperature reset Control	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
240	NWS	Industrial	Industrial Gases	All	HVAC	Reduced Temperature Settings	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A

Industrial Measures

Measure ID	Weather Sensitive	MEASURE DESCRIPTION				End Use	Measure Name	PROGRAM	PARTICIPATION HIGH CASE					
		Sector	Sub-Sector	Building Type					Program Name	First Year of Participation (So Year)	First Year Participation Rate (So)	Year of Maximum Annual Participation (Smax)	Maximum Annual Participation Rate (Smax)	Final Year of Participation, Fo (<2034 if baseline shift)
241	NWS	Industrial	Industrial Gases	All	Total	Pollution Control Measures	"N/A	"N/A	"N/A	"N/A	"N/A	"N/A	"N/A	"N/A
242	NWS	Industrial	Industrial Gases	All	Process Heating	CFD Modelling	Process Heating	2015	0.2%	2034	1.5%	2034	1.5%	
243	NWS	Industrial	Industrial Gases	All	Total	Energy Management	All	2015	0.1%	2034	1.0%	2034	1.0%	
244	NWS	Industrial	Industrial Gases	All	Process Heating	Improved airflow in dryer windbox	"N/A	"N/A	"N/A	"N/A	"N/A	"N/A	"N/A	"N/A
245	NWS	Industrial	Industrial Gases	All	Process Heating	Preventative Oven Maintenance	"N/A	"N/A	"N/A	"N/A	"N/A	"N/A	"N/A	"N/A
246	NWS	Industrial	Industrial Gases	All	Process Heating	Preventative Furnace Maintenance	"N/A	"N/A	"N/A	"N/A	"N/A	"N/A	"N/A	"N/A
247	NWS	Industrial	Industrial Gases	All	Process Heating	Preventative Dryer Maintenance	"N/A	"N/A	"N/A	"N/A	"N/A	"N/A	"N/A	"N/A
248	NWS	Industrial	Industrial Gases	All	Process Heating	High Efficiency Burner	Process Heating	2015	0.2%	2034	1.5%	2034	1.5%	
249	NWS	Industrial	Industrial Gases	All	Process Heating	Air Curtains	Process Heating	2015	0.2%	2034	1.5%	2034	1.5%	
250	NWS	Industrial	Industrial Gases	All	Process Heating	Exhaust Gas Heat Recovery	Process Heating	2015	0.2%	2034	1.5%	2034	1.5%	
251	NWS	Industrial	Industrial Gases	All	Process Heating	Insulation	Process Heating	2015	0.2%	2034	1.5%	2034	1.5%	
252	NWS	Industrial	Industrial Gases	All	Process Heating	Advanced heating and Process Control	Process Heating	2015	0.2%	2034	1.5%	2034	1.5%	
253	NWS	Industrial	Industrial Gases	All	Process Heating	Combustion Optimization	"N/A	"N/A	"N/A	"N/A	"N/A	"N/A	"N/A	"N/A
254	NWS	Industrial	Industrial Gases	All	Process Heating	High Efficiency Burner	Process Heating	2015	0.0%	2034	0.0%	2015	0.0%	
255	NWS	Industrial	Industrial Gases	All	Process Heating	Air Curtains	Process Heating	2015	0.2%	2034	1.5%	2034	1.5%	
256	NWS	Industrial	Industrial Gases	All	Process Heating	Exhaust Gas Heat Recovery	Process Heating	2015	0.0%	2034	0.0%	2015	0.0%	
257	NWS	Industrial	Industrial Gases	All	Process Heating	Insulation	Process Heating	2015	0.0%	2034	0.1%	2034	0.1%	
258	NWS	Industrial	Industrial Gases	All	Process Heating	Advanced heating and Process Control	Process Heating	2015	0.0%	2034	0.0%	2015	0.0%	
259	NWS	Industrial	Industrial Gases	All	Process Heating	Combustion Optimization	"N/A	"N/A	"N/A	"N/A	"N/A	"N/A	"N/A	"N/A
260	NWS	Industrial	All Other	All	Total	Integrated Control System	"N/A	"N/A	"N/A	"N/A	"N/A	"N/A	"N/A	"N/A
261	NWS	Industrial	All Other	All	Total	Process Integration and Pinch Analysis	"N/A	"N/A	"N/A	"N/A	"N/A	"N/A	"N/A	"N/A
262	NWS	Industrial	All Other	All	Total	Sub-Metering	"N/A	"N/A	"N/A	"N/A	"N/A	"N/A	"N/A	"N/A
263	NWS	Industrial	All Other	All	HVAC	High-efficiency rooftop AC with an EER of 13.13	"N/A	"N/A	"N/A	"N/A	"N/A	"N/A	"N/A	"N/A
264	NWS	Industrial	All Other	All	Process Heating	Water-heater right sizing and load management	"N/A	"N/A	"N/A	"N/A	"N/A	"N/A	"N/A	"N/A
265	NWS	Industrial	All Other	All	Process Heating	Insulation	"N/A	"N/A	"N/A	"N/A	"N/A	"N/A	"N/A	"N/A
266	NWS	Industrial	All Other	All	Boilers	Blowdown Control	Boilers	2015	0.1%	2034	0.9%	2034	0.9%	
267	NWS	Industrial	All Other	All	Boilers	Boiler Right Sizing	Boilers	2015	0.0%	2034	0.0%	2015	0.0%	
268	NWS	Industrial	All Other	All	Boilers	Condensing Boiler	Boilers	2015	0.0%	2034	0.0%	2015	0.0%	
269	NWS	Industrial	All Other	All	Boilers	Direct-Contact Hot Water Heaters	Boilers	2015	0.0%	2034	0.0%	2015	0.0%	
270	NWS	Industrial	All Other	All	Boilers	High Efficiency Burner	Boilers	2015	0.5%	2034	3.7%	2034	3.7%	
271	NWS	Industrial	All Other	All	Boilers	Instantaneous Steam Generation	Boilers	2015	0.0%	2034	0.0%	2034	0.0%	
272	NWS	Industrial	All Other	All	Boilers	Blowdown Heat Recovery	Boilers	2015	0.2%	2034	1.7%	2034	1.7%	
273	NWS	Industrial	All Other	All	Boilers	Boiler combustion air preheat	Boilers	2015	0.2%	2034	1.8%	2034	1.8%	
274	NWS	Industrial	All Other	All	Boilers	Preventative Boiler Maintenance	Boilers	2015	0.8%	2034	6.0%	2034	6.0%	
275	NWS	Industrial	All Other	All	Boilers	Boiler Water Treatment	Boilers	2015	0.8%	2034	6.0%	2034	6.0%	
276	NWS	Industrial	All Other	All	Boilers	Condensate Return	Boilers	2015	0.0%	2034	0.0%	2034	0.0%	
277	NWS	Industrial	All Other	All	Boilers	Economizer	Boilers	2015	0.4%	2034	3.0%	2034	3.0%	
278	NWS	Industrial	All Other	All	Boilers	Insulation	Boilers	2015	0.8%	2034	6.0%	2034	6.0%	
279	NWS	Industrial	All Other	All	Boilers	Minimize Deaerator Vent Losses	Boilers	2015	0.7%	2034	5.2%	2034	5.2%	
280	NWS	Industrial	All Other	All	Boilers	Process Heat Recovery to Preheat Makeup Water	Boilers	2015	0.8%	2034	6.0%	2034	6.0%	
281	NWS	Industrial	All Other	All	Boilers	Steam Trap Survey and Repair	Boilers	2015	0.8%	2034	6.0%	2034	6.0%	
282	NWS	Industrial	All Other	All	Boilers	First Generation Super Boilers	"N/A	"N/A	"N/A	"N/A	"N/A	"N/A	"N/A	"N/A
283	NWS	Industrial	All Other	All	Process Heating	High Efficiency Burner	Process Heating	2015	0.0%	2034	0.0%	2015	0.0%	
284	NWS	Industrial	All Other	All	Process Heating	Infrared Ovens	Process Heating	2015	0.0%	2034	0.0%	2015	0.0%	
285	NWS	Industrial	All Other	All	Process Heating	Process Heat Recovery to Preheat Makeup Water	Process Heating	2015	0.2%	2034	1.5%	2034	1.5%	
286	NWS	Industrial	All Other	All	Process Heating	Air Curtains	Process Heating	2015	0.2%	2034	1.5%	2034	1.5%	
287	NWS	Industrial	All Other	All	Process Heating	Exhaust Gas Heat Recovery	Process Heating	2015	0.0%	2034	0.0%	2015	0.0%	
288	NWS	Industrial	All Other	All	Process Heating	Insulation	Process Heating	2015	0.0%	2034	0.1%	2034	0.1%	
289	NWS	Industrial	All Other	All	Process Heating	Advanced heating and Process Control	Process Heating	2015	0.0%	2034	0.0%	2015	0.0%	
290	NWS	Industrial	All Other	All	Process Heating	Combustion Optimization	"N/A	"N/A	"N/A	"N/A	"N/A	"N/A	"N/A	"N/A
291	NWS	Industrial	All Other	All	Process Heating	Radiant Tube burners	"N/A	"N/A	"N/A	"N/A	"N/A	"N/A	"N/A	"N/A
292	NWS	Industrial	All Other	All	Process Heating	Radiant Heaters	Process Heating	2015	0.0%	2034	0.0%	2034	0.0%	
293	NWS	Industrial	All Other	All	Process Heating	Solar Walls	"N/A	"N/A	"N/A	"N/A	"N/A	"N/A	"N/A	"N/A
294	NWS	Industrial	All Other	All	HVAC	Air Compressor Heat Recovery	"N/A	"N/A	"N/A	"N/A	"N/A	"N/A	"N/A	"N/A
295	NWS	Industrial	All Other	All	HVAC	Air Curtains	"N/A	"N/A	"N/A	"N/A	"N/A	"N/A	"N/A	"N/A
296	NWS	Industrial	All Other	All	HVAC	Destratification Fans	"N/A	"N/A	"N/A	"N/A	"N/A	"N/A	"N/A	"N/A
297	NWS	Industrial	All Other	All	HVAC	Ventilation Heat Recovery	HVAC	2015	0.5%	2034	3.8%	2034	3.8%	
298	NWS	Industrial	All Other	All	HVAC	Ventilation Optimization	HVAC	2015	0.6%	2034	4.3%	2034	4.3%	
299	NWS	Industrial	All Other	All	HVAC	Warehouse Loading Dock Seals	"N/A	"N/A	"N/A	"N/A	"N/A	"N/A	"N/A	"N/A
300	NWS	Industrial	All Other	All	HVAC	Automated Temperature reset Control	"N/A	"N/A	"N/A	"N/A	"N/A	"N/A	"N/A	"N/A

Industrial Measures

Measure ID	Weather Sensitive	MEASURE DESCRIPTION				End Use	Measure Name	PROGRAM	PARTICIPATION HIGH CASE					
		Sector	Sub-Sector	Building Type					First Year of Participation (So Year)	First Year Participation Rate (So)	Year of Maximum Annual Participation (Smax)	Maximum Annual Participation Rate (Smax)	Final Year of Participation, Fo (<2034 if baseline shift)	Final Year Participation Rate (Fo)
301	NWS	Industrial	All Other	All	HVAC	Reduced Temperature Settings	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
302	NWS	Industrial	All Other	All	Process Heating	Pollution Control Measures	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
303	NWS	Industrial	All Other	All	Process Heating	CFD Modelling	Process Heating	2015	0.2%	2034	1.5%	2034	1.5%	
304	NWS	Industrial	All Other	All	Total	Energy Management	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
305	NWS	Industrial	All Other	All	Process Heating	Improved airflow in dryer windbox	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
306	NWS	Industrial	All Other	All	Process Heating	Preventative Oven Maintenance	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
307	NWS	Industrial	All Other	All	Process Heating	Preventative Furnace Maintenance	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
308	NWS	Industrial	All Other	All	Process Heating	Preventative Dryer Maintenance	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
309	NWS	Industrial	All Other	All	Process Heating	High Efficiency Burner	Process Heating	2015	0.2%	2034	1.5%	2034	1.5%	
310	NWS	Industrial	All Other	All	Process Heating	Air Curtains	Process Heating	2015	0.2%	2034	1.5%	2034	1.5%	
311	NWS	Industrial	All Other	All	Process Heating	Exhaust Gas Heat Recovery	Process Heating	2015	0.2%	2034	1.5%	2034	1.5%	
312	NWS	Industrial	All Other	All	Process Heating	Insulation	Process Heating	2015	0.2%	2034	1.5%	2034	1.5%	
313	NWS	Industrial	All Other	All	Process Heating	Advanced heating and Process Control	Process Heating	2015	0.2%	2034	1.5%	2034	1.5%	
314	NWS	Industrial	All Other	All	Process Heating	Combustion Optimization	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
315	NWS	Industrial	All Other	All	Process Heating	High Efficiency Burner	Process Heating	2015	0.0%	2034	0.0%	2015	0.0%	
316	NWS	Industrial	All Other	All	Process Heating	Air Curtains	Process Heating	2015	0.2%	2034	1.5%	2034	1.5%	
317	NWS	Industrial	All Other	All	Process Heating	Exhaust Gas Heat Recovery	Process Heating	2015	0.0%	2034	0.0%	2015	0.0%	
318	NWS	Industrial	All Other	All	Process Heating	Insulation	Process Heating	2015	0.0%	2034	0.1%	2034	0.1%	
319	NWS	Industrial	All Other	All	Process Heating	Advanced heating and Process Control	Process Heating	2015	0.0%	2034	0.0%	2015	0.0%	
320	NWS	Industrial	All Other	All	Process Heating	Combustion Optimization	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
321	NWS	Industrial	Small Industrial	All	Total	Integrated Control System	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
322	NWS	Industrial	Small Industrial	All	Total	Process Integration and Pinch Analysis	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
323	NWS	Industrial	Small Industrial	All	Total	Sub-Metering	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
324	NWS	Industrial	Small Industrial	All	HVAC	High-efficiency rooftop AC with an EER of 13.13	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
325	NWS	Industrial	Small Industrial	All	Process Heating	Water-heater right sizing and load management	Process Heating	2015	0.0%	2034	0.0%	2034	0.0%	
326	NWS	Industrial	Small Industrial	All	Process Heating	Insulation	Process Heating	2015	0.1%	2034	0.6%	2034	0.6%	
327	NWS	Industrial	Small Industrial	All	Boilers	Blowdown Control	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
328	NWS	Industrial	Small Industrial	All	Boilers	Boiler Right Sizing	Boilers	2015	0.0%	2034	0.2%	2034	0.2%	
329	NWS	Industrial	Small Industrial	All	Boilers	Condensing Boiler	Boilers	2015	0.0%	2034	0.0%	2015	0.0%	
330	NWS	Industrial	Small Industrial	All	Boilers	Direct-Contact Hot Water Heaters	Boilers	2015	0.0%	2034	0.1%	2034	0.1%	
331	NWS	Industrial	Small Industrial	All	Boilers	High Efficiency Burner	Boilers	2015	0.0%	2034	0.0%	2034	0.0%	
332	NWS	Industrial	Small Industrial	All	Boilers	Instantaneous Steam Generation	Boilers	2015	0.0%	2034	0.1%	2034	0.1%	
333	NWS	Industrial	Small Industrial	All	Boilers	Blowdown Heat Recovery	Boilers	2015	0.0%	2034	0.0%	2015	0.0%	
334	NWS	Industrial	Small Industrial	All	Boilers	Boiler combustion air preheat	Boilers	2015	0.0%	2034	0.0%	2015	0.0%	
335	NWS	Industrial	Small Industrial	All	Boilers	Preventative Boiler Maintenance	Boilers	2015	0.0%	2034	0.2%	2034	0.2%	
336	NWS	Industrial	Small Industrial	All	Boilers	Boiler Water Treatment	Boilers	2015	0.0%	2034	0.0%	2015	0.0%	
337	NWS	Industrial	Small Industrial	All	Boilers	Condensate Return	Boilers	2015	0.0%	2034	0.0%	2015	0.0%	
338	NWS	Industrial	Small Industrial	All	Boilers	Economizer	Boilers	2015	0.0%	2034	0.2%	2034	0.2%	
339	NWS	Industrial	Small Industrial	All	Boilers	Insulation	Boilers	2015	0.4%	2034	3.1%	2034	3.1%	
340	NWS	Industrial	Small Industrial	All	Boilers	Minimize Deaerator Vent Losses	Boilers	2015	0.0%	2034	0.0%	2015	0.0%	
341	NWS	Industrial	Small Industrial	All	Boilers	Process Heat Recovery to Preheat Makeup Water	Boilers	2015	0.0%	2034	0.0%	2015	0.0%	
342	NWS	Industrial	Small Industrial	All	Boilers	Steam Trap Survey and Repair	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
343	NWS	Industrial	Small Industrial	All	Boilers	First Generation Super Boilers	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
344	NWS	Industrial	Small Industrial	All	Process Heating	High Efficiency Burner	Process Heating	2015	0.0%	2034	0.3%	2034	0.3%	
345	NWS	Industrial	Small Industrial	All	Process Heating	Infrared Ovens	Process Heating	2015	0.0%	2034	0.3%	2034	0.3%	
346	NWS	Industrial	Small Industrial	All	Process Heating	Process Heat Recovery to Preheat Makeup Water	Process Heating	2015	0.2%	2034	1.5%	2034	1.5%	
347	NWS	Industrial	Small Industrial	All	Process Heating	Air Curtains	Process Heating	2015	0.1%	2034	1.0%	2034	1.0%	
348	NWS	Industrial	Small Industrial	All	Process Heating	Exhaust Gas Heat Recovery	Process Heating	2015	0.0%	2034	0.0%	2034	0.0%	
349	NWS	Industrial	Small Industrial	All	Process Heating	Insulation	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
350	NWS	Industrial	Small Industrial	All	Process Heating	Advanced heating and Process Control	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
351	NWS	Industrial	Small Industrial	All	Process Heating	Combustion Optimization	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
352	NWS	Industrial	Small Industrial	All	Process Heating	Radiant Tube burners	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
353	NWS	Industrial	Small Industrial	All	HVAC	Radiant Heaters	HVAC	2015	0.0%	2034	0.0%	#N/A	#N/A	
354	NWS	Industrial	Small Industrial	All	Process Heating	Solar Walls	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
355	NWS	Industrial	Small Industrial	All	HVAC	Air Compressor Heat Recovery	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
356	NWS	Industrial	Small Industrial	All	HVAC	Air Curtains	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
357	NWS	Industrial	Small Industrial	All	HVAC	Destratification Fans	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
358	NWS	Industrial	Small Industrial	All	HVAC	Ventilation Heat Recovery	HVAC	2015	0.0%	2034	0.1%	2034	0.1%	
359	NWS	Industrial	Small Industrial	All	HVAC	Ventilation Optimization	HVAC	2015	0.0%	2034	0.1%	2034	0.1%	
360	NWS	Industrial	Small Industrial	All	HVAC	Warehouse Loading Dock Seals	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	

Industrial Measures

Measure ID	Weather Sensitive	Sector	Sub-Sector	Building Type	MEASURE DESCRIPTION		PROGRAM	PARTICIPATION HIGH CASE					
					End Use	Measure Name		Program Name	First Year of Participation (So Year)	First Year Participation Rate (So)	Year of Maximum Annual Participation (Smax)	Maximum Annual Participation Rate (Smax)	Final Year of Participation, Fo (<2034 if baseline shift)
361	NWS	Industrial	Small Industrial	All	HVAC	Automated Temperature reset Control	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
362	NWS	Industrial	Small Industrial	All	HVAC	Reduced Temperature Settings	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
363	NWS	Industrial	Small Industrial	All	Total	Pollution Control Measures	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
364	NWS	Industrial	Small Industrial	All	Process Heating	CFD Modelling	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
365	NWS	Industrial	Small Industrial	All	Total	Energy Management	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
366	NWS	Industrial	Small Industrial	All	Process Heating	Improved airflow in dryer windbox	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
367	NWS	Industrial	Small Industrial	All	Process Heating	Preventative Oven Maintenance	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
368	NWS	Industrial	Small Industrial	All	Process Heating	Preventative Furnace Maintenance	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
369	NWS	Industrial	Small Industrial	All	Process Heating	Preventative Dryer Maintenance	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
370	NWS	Industrial	Small Industrial	All	Process Heating	High Efficiency Burner	Process Heating	2015	0.2%	2034	1.5%	2034	1.5%
371	NWS	Industrial	Small Industrial	All	Process Heating	Air Curtains	Process Heating	2015	0.2%	2034	1.5%	2034	1.5%
372	NWS	Industrial	Small Industrial	All	Process Heating	Exhaust Gas Heat Recovery	Process Heating	2015	0.2%	2034	1.5%	2034	1.5%
373	NWS	Industrial	Small Industrial	All	Process Heating	Insulation	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
374	NWS	Industrial	Small Industrial	All	Process Heating	Advanced heating and Process Control	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
375	NWS	Industrial	Small Industrial	All	Process Heating	Combustion Optimization	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
376	NWS	Industrial	Small Industrial	All	Process Heating	High Efficiency Burner	Process Heating	2015	0.0%	2034	0.3%	2034	0.3%
377	NWS	Industrial	Small Industrial	All	Process Heating	Air Curtains	Process Heating	2015	0.1%	2034	1.0%	2034	1.0%
378	NWS	Industrial	Small Industrial	All	Process Heating	Exhaust Gas Heat Recovery	Process Heating	2015	0.0%	2034	0.0%	2034	0.0%
379	NWS	Industrial	Small Industrial	All	Process Heating	Insulation	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
380	NWS	Industrial	Small Industrial	All	Process Heating	Advanced heating and Process Control	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
381	NWS	Industrial	Small Industrial	All	Process Heating	Combustion Optimization	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A

Commercial Measures

Measure ID	Weather Sensitive	Sector	Sub-Sector	Building Type	End Use	Measure Name	MEASURE DESCRIPTION	
							Efficient Measure Definition	Base Measure Definition
61	WS	Non-Residential	Large Commercial	General Large Commercial	HVAC	Air or Water Cooled Chilling Equipment (Chillers)	Water-Cooled Non-Centrifugal Chiller - 200 tons - 0.65 kW/ton full load & 0.4 kW/ton IPLV	Water-Cooled Non-Centrifugal Chiller - 200 tons - ASHRAE 90.1-2013 Path A: 0.66kW/ton full load & 0.54kW/ton IPLV
62	WS	Non-Residential	Large Commercial	Hospital	HVAC	Air or Water Cooled Chilling Equipment (Chillers)	Water-Cooled Centrifugal Chiller - 500 tons - 0.53 kW/ton full load & 0.45 kW/ton IPLV	Water-Cooled Centrifugal Chiller - 500 tons - ASHRAE 90.1-2013 Path A: 0.56kW/ton full load & 0.5kW/ton IPLV
63	WS	Non-Residential	Large Commercial	Education with Summer Sessions	HVAC	Air or Water Cooled Chilling Equipment (Chillers)	Water-Cooled Centrifugal Chiller - 500 tons - 0.53 kW/ton full load & 0.45 kW/ton IPLV	Water-Cooled Centrifugal Chiller - 500 tons - ASHRAE 90.1-2013 Path A: 0.56kW/ton full load & 0.5kW/ton IPLV
64	WS	Non-Residential	Large Commercial	Lodging	HVAC	Air or Water Cooled Chilling Equipment (Chillers)	Water-Cooled Centrifugal Chiller - 500 tons - 0.53 kW/ton full load & 0.45 kW/ton IPLV	Water-Cooled Centrifugal Chiller - 500 tons - ASHRAE 90.1-2013 Path A: 0.56kW/ton full load & 0.5kW/ton IPLV
65	WS	Non-Residential	Large Commercial	General Large Commercial	HVAC	Air or Water Cooled Chilling Equipment (Chillers)	Water-Cooled Centrifugal Chiller - 500 tons - 0.53 kW/ton full load & 0.45 kW/ton IPLV	Water-Cooled Centrifugal Chiller - 500 tons - ASHRAE 90.1-2013 Path A: 0.56kW/ton full load & 0.5kW/ton IPLV
66	WS	Non-Residential	Large Commercial	Hospital	HVAC	Air or Water Cooled Chilling Equipment (Chillers)	Water-Cooled Centrifugal Chiller - 500 tons - 0.53 kW/ton full load & 0.45 kW/ton IPLV	Water-Cooled Centrifugal Chiller - 500 tons - ASHRAE 90.1-2013 Path A: 0.56kW/ton full load & 0.5kW/ton IPLV
67	WS	Non-Residential	Large Commercial	Education with Summer Sessions	HVAC	Air or Water Cooled Chilling Equipment (Chillers)	Water-Cooled Centrifugal Chiller - 500 tons - 0.53 kW/ton full load & 0.45 kW/ton IPLV	Water-Cooled Centrifugal Chiller - 500 tons - ASHRAE 90.1-2013 Path A: 0.56kW/ton full load & 0.5kW/ton IPLV
68	WS	Non-Residential	Large Commercial	Lodging	HVAC	Air or Water Cooled Chilling Equipment (Chillers)	Water-Cooled Centrifugal Chiller - 500 tons - 0.53 kW/ton full load & 0.45 kW/ton IPLV	Water-Cooled Centrifugal Chiller - 500 tons - ASHRAE 90.1-2013 Path A: 0.56kW/ton full load & 0.5kW/ton IPLV
69	WS	Non-Residential	Large Commercial	General Large Commercial	HVAC	Air or Water Cooled Chilling Equipment (Chillers)	Water-Cooled Centrifugal Chiller - 500 tons - 0.53 kW/ton full load & 0.45 kW/ton IPLV	Water-Cooled Centrifugal Chiller - 500 tons - ASHRAE 90.1-2013 Path A: 0.56kW/ton full load & 0.5kW/ton IPLV
71	NWS	Non-Residential	Large Commercial	Hospital	HVAC	Variable Speed Drives for HVAC	Supply & Return Fans with VFD	Supply & Return Fans without VFD
72	NWS	Non-Residential	Large Commercial	Hospital	HVAC	Variable Speed Drives for HVAC	Chilled Water Pumps with VFD	Chilled Water Pumps without VFD
73	NWS	Non-Residential	Large Commercial	Hospital	HVAC	Variable Speed Drives for HVAC	Heating Pumps with VFD	Heating Pumps without VFD
74	NWS	Non-Residential	Large Commercial	Hospital	HVAC	Variable Speed Drives for HVAC	Cooling Tower Fan with VFD	Cooling Tower Fan without VFD
75	NWS	Non-Residential	Large Commercial	K12 Education	HVAC	Variable Speed Drives for HVAC	Supply & Return Fans with VFD	Supply & Return Fans without VFD
76	NWS	Non-Residential	Large Commercial	K12 Education	HVAC	Variable Speed Drives for HVAC	Chilled Water Pumps with VFD	Chilled Water Pumps without VFD
77	NWS	Non-Residential	Large Commercial	K12 Education	HVAC	Variable Speed Drives for HVAC	Heating Pumps with VFD	Heating Pumps without VFD
78	NWS	Non-Residential	Large Commercial	K12 Education	HVAC	Variable Speed Drives for HVAC	Cooling Tower Fan with VFD	Cooling Tower Fan without VFD
79	NWS	Non-Residential	Large Commercial	Education with Summer Sessions	HVAC	Variable Speed Drives for HVAC	Supply & Return Fans with VFD	Supply & Return Fans without VFD
80	NWS	Non-Residential	Large Commercial	Education with Summer Sessions	HVAC	Variable Speed Drives for HVAC	Chilled Water Pumps with VFD	Chilled Water Pumps without VFD
81	NWS	Non-Residential	Large Commercial	Education with Summer Sessions	HVAC	Variable Speed Drives for HVAC	Heating Pumps with VFD	Heating Pumps without VFD
82	NWS	Non-Residential	Large Commercial	Education with Summer Sessions	HVAC	Variable Speed Drives for HVAC	Cooling Tower Fan with VFD	Cooling Tower Fan without VFD
83	NWS	Non-Residential	Large Commercial	Lodging	HVAC	Variable Speed Drives for HVAC	Supply & Return Fans with VFD	Supply & Return Fans without VFD
84	NWS	Non-Residential	Large Commercial	Lodging	HVAC	Variable Speed Drives for HVAC	Chilled Water Pumps with VFD	Chilled Water Pumps without VFD
85	NWS	Non-Residential	Large Commercial	Lodging	HVAC	Variable Speed Drives for HVAC	Heating Pumps with VFD	Heating Pumps without VFD
86	NWS	Non-Residential	Large Commercial	Lodging	HVAC	Variable Speed Drives for HVAC	Cooling Tower Fan with VFD	Cooling Tower Fan without VFD
87	NWS	Non-Residential	Large Commercial	General Large Commercial	HVAC	Variable Speed Drives for HVAC	Supply & Return Fans with VFD	Supply & Return Fans without VFD
88	NWS	Non-Residential	Large Commercial	General Large Commercial	HVAC	Variable Speed Drives for HVAC	Chilled Water Pumps with VFD	Chilled Water Pumps without VFD
89	NWS	Non-Residential	Large Commercial	General Large Commercial	HVAC	Variable Speed Drives for HVAC	Heating Pumps with VFD	Heating Pumps without VFD
90	NWS	Non-Residential	Large Commercial	General Large Commercial	HVAC	Variable Speed Drives for HVAC	Cooling Tower Fan with VFD	Cooling Tower Fan without VFD
92	NWS	Non-Residential	Small Commercial	All	HVAC	Dual Enthalpy Economizer	Differential Enthalpy Economizer	Fixed Enthalpy Economizer
93	NWS	Non-Residential	Large Commercial	All	HVAC	Dual Enthalpy Economizer	Differential Enthalpy Economizer	Fixed Enthalpy Economizer
95	NWS	Non-Residential	Small Commercial	All	HVAC	Demand Controlled Ventilation	Demand Controlled Ventilation	Standard Ventilation Rates
96	NWS	Non-Residential	Large Commercial	All	HVAC	Demand Controlled Ventilation	Demand Controlled Ventilation	Standard Ventilation Rates
98	WS	Non-Residential	Small Commercial	All	HVAC	Ground Source Heatpump	GSHP - 16 EER	Standard Unitary ASHP - 10 Ton Unit - 11.2 EER
100	WS	Non-Residential	Small Commercial	All	HVAC	AC Tune-Up	Tuned-up Unitary AC	Unserviced Unitary AC
102	NWS	Non-Residential	Small Commercial	All	HVAC	Electronically Commutated Motors for Refrigeration and HVAC Applications	ECM HVAC Fan Motor less than 1HP	Shaded Pole HVAC Fan Motor less than 1HP
103	NWS	Non-Residential	All	Hospital	Lighting	High Performance T8/T5 with Low-BF Ballast	1-Lamp 32W HPT8/T5 with Low-BF Ballast	1-Lamp 34w T12 and 32w T8 w/ Elec. ballast
104	NWS	Non-Residential	All	Hospital	Lighting	High Performance T8/T5 with Low-BF Ballast	2-Lamp 32W HPT8/T5 with Low-BF Ballast	2-Lamp 34w T12 and 32w T8 w/ Elec. Ballast
105	NWS	Non-Residential	All	Hospital	Lighting	High Performance T8/T5 with Low-BF Ballast	3-Lamp 32W HPT8/T5 with Low-BF Ballast	3-Lamp 34w T12 and 32w T8 w/ Elec. Ballast
106	NWS	Non-Residential	All	Hospital	Lighting	High Performance T8/T5 with Low-BF Ballast	4-Lamp 32W HPT8/T5 with Low-BF Ballast	4-Lamp 34w T12 and 32w T8 w/ Elec. Ballast
107	NWS	Non-Residential	All	K12 Education	Lighting	High Performance T8/T5 with Low-BF Ballast	1-Lamp 32W HPT8/T5 with Low-BF Ballast	1-Lamp 34w T12 and 32w T8 w/ Elec. ballast
108	NWS	Non-Residential	All	K12 Education	Lighting	High Performance T8/T5 with Low-BF Ballast	2-Lamp 32W HPT8/T5 with Low-BF Ballast	2-Lamp 34w T12 and 32w T8 w/ Elec. Ballast
109	NWS	Non-Residential	All	K12 Education	Lighting	High Performance T8/T5 with Low-BF Ballast	3-Lamp 32W HPT8/T5 with Low-BF Ballast	3-Lamp 34w T12 and 32w T8 w/ Elec. Ballast
110	NWS	Non-Residential	All	K12 Education	Lighting	High Performance T8/T5 with Low-BF Ballast	4-Lamp 32W HPT8/T5 with Low-BF Ballast	4-Lamp 34w T12 and 32w T8 w/ Elec. Ballast
111	NWS	Non-Residential	All	Education with Summer Sessions	Lighting	High Performance T8/T5 with Low-BF Ballast	1-Lamp 32W HPT8/T5 with Low-BF Ballast	1-Lamp 34w T12 and 32w T8 w/ Elec. ballast
112	NWS	Non-Residential	All	Education with Summer Sessions	Lighting	High Performance T8/T5 with Low-BF Ballast	2-Lamp 32W HPT8/T5 with Low-BF Ballast	2-Lamp 34w T12 and 32w T8 w/ Elec. Ballast
113	NWS	Non-Residential	All	Education with Summer Sessions	Lighting	High Performance T8/T5 with Low-BF Ballast	3-Lamp 32W HPT8/T5 with Low-BF Ballast	3-Lamp 34w T12 and 32w T8 w/ Elec. Ballast
114	NWS	Non-Residential	All	Education with Summer Sessions	Lighting	High Performance T8/T5 with Low-BF Ballast	4-Lamp 32W HPT8/T5 with Low-BF Ballast	4-Lamp 34w T12 and 32w T8 w/ Elec. Ballast
115	NWS	Non-Residential	All	Lodging	Lighting	High Performance T8/T5 with Low-BF Ballast	1-Lamp 32W HPT8/T5 with Low-BF Ballast	1-Lamp 34w T12 and 32w T8 w/ Elec. ballast
116	NWS	Non-Residential	All	Lodging	Lighting	High Performance T8/T5 with Low-BF Ballast	2-Lamp 32W HPT8/T5 with Low-BF Ballast	2-Lamp 34w T12 and 32w T8 w/ Elec. Ballast
117	NWS	Non-Residential	All	Lodging	Lighting	High Performance T8/T5 with Low-BF Ballast	3-Lamp 32W HPT8/T5 with Low-BF Ballast	3-Lamp 34w T12 and 32w T8 w/ Elec. Ballast
118	NWS	Non-Residential	All	Lodging	Lighting	High Performance T8/T5 with Low-BF Ballast	4-Lamp 32W HPT8/T5 with Low-BF Ballast	4-Lamp 34w T12 and 32w T8 w/ Elec. Ballast
119	NWS	Non-Residential	All	General Large Commercial	Lighting	High Performance T8/T5 with Low-BF Ballast	1-Lamp 32W HPT8/T5 with Low-BF Ballast	1-Lamp 34w T12 and 32w T8 w/ Elec. ballast
120	NWS	Non-Residential	All	General Large Commercial	Lighting	High Performance T8/T5 with Low-BF Ballast	2-Lamp 32W HPT8/T5 with Low-BF Ballast	2-Lamp 34w T12 and 32w T8 w/ Elec. Ballast

Commercial Measures

						MEASURE DESCRIPTION		
Measure ID	Weather Sensitive	Sector	Sub-Sector	Building Type	End Use	Measure Name	Efficient Measure Definition	Base Measure Definition
121	NWS	Non-Residential	All	General Large Commercial	Lighting	High Performance T8/T5 with Low-BF Ballast	3-Lamp 32W HPT8/T5 with Low-BF Ballast	3-Lamp 34w T12 and 32w T8 w/ Elec. Ballast
122	NWS	Non-Residential	All	General Large Commercial	Lighting	High Performance T8/T5 with Low-BF Ballast	4-Lamp 32W HPT8/T5 with Low-BF Ballast	4-Lamp 34w T12 and 32w T8 w/ Elec. Ballast
123	NWS	Non-Residential	All	General Small Commercial	Lighting	High Performance T8/T5 with Low-BF Ballast	1-Lamp 32W HPT8/T5 with Low-BF Ballast	1-Lamp 34w T12 and 32w T8 w/ Elec. ballast
124	NWS	Non-Residential	All	General Small Commercial	Lighting	High Performance T8/T5 with Low-BF Ballast	2-Lamp 32W HPT8/T5 with Low-BF Ballast	2-Lamp 34w T12 and 32w T8 w/ Elec. Ballast
125	NWS	Non-Residential	All	General Small Commercial	Lighting	High Performance T8/T5 with Low-BF Ballast	3-Lamp 32W HPT8/T5 with Low-BF Ballast	3-Lamp 34w T12 and 32w T8 w/ Elec. Ballast
126	NWS	Non-Residential	All	General Small Commercial	Lighting	High Performance T8/T5 with Low-BF Ballast	4-Lamp 32W HPT8/T5 with Low-BF Ballast	4-Lamp 34w T12 and 32w T8 w/ Elec. Ballast
127	NWS	Non-Residential	All	Hospital	Lighting	Reduced Wattage T8/T5 Lamps	RWT8 - F32/25W T8 Extra Lamp Life	F32 T8 standard lamp
128	NWS	Non-Residential	All	K12 Education	Lighting	Reduced Wattage T8/T5 Lamps	RWT8 - F32/25W T8 Extra Lamp Life	F32 T8 standard lamp
129	NWS	Non-Residential	All	Education with Summer Sessions	Lighting	Reduced Wattage T8/T5 Lamps	RWT8 - F32/25W T8 Extra Lamp Life	F32 T8 standard lamp
130	NWS	Non-Residential	All	Lodging	Lighting	Reduced Wattage T8/T5 Lamps	RWT8 - F32/25W T8 Extra Lamp Life	F32 T8 standard lamp
131	NWS	Non-Residential	All	General Large Commercial	Lighting	Reduced Wattage T8/T5 Lamps	RWT8 - F32/25W T8 Extra Lamp Life	F32 T8 standard lamp
132	NWS	Non-Residential	All	General Small Commercial	Lighting	Reduced Wattage T8/T5 Lamps	RWT8 - F32/25W T8 Extra Lamp Life	F32 T8 standard lamp
133	NWS	Non-Residential	All	Hospital	Lighting	Reduced Wattage T8/T5 Lamps	RWT8 - F32/25W T8 Extra Lamp Life	F32 T8 standard lamp
134	NWS	Non-Residential	All	K12 Education	Lighting	Reduced Wattage T8/T5 Lamps	RWT8 - F32/25W T8 Extra Lamp Life	F32 T8 standard lamp
135	NWS	Non-Residential	All	Education with Summer Sessions	Lighting	Reduced Wattage T8/T5 Lamps	RWT8 - F32/25W T8 Extra Lamp Life	F32 T8 standard lamp
136	NWS	Non-Residential	All	Lodging	Lighting	Reduced Wattage T8/T5 Lamps	RWT8 - F32/25W T8 Extra Lamp Life	F32 T8 standard lamp
137	NWS	Non-Residential	All	General Large Commercial	Lighting	Reduced Wattage T8/T5 Lamps	RWT8 - F32/25W T8 Extra Lamp Life	F32 T8 standard lamp
138	NWS	Non-Residential	All	General Small Commercial	Lighting	Reduced Wattage T8/T5 Lamps	RWT8 - F32/25W T8 Extra Lamp Life	F32 T8 standard lamp
139	NWS	Non-Residential	All	Hospital	Lighting	Linear Fluorescent Fixture Upgrade	20 W Reduction - 4 T8 Lamp Removal with Reflector	4 Standard T8 / T12 Lamp with Electronic Ballast
140	NWS	Non-Residential	All	K12 Education	Lighting	Linear Fluorescent Fixture Upgrade	20 W Reduction - 4 T8 Lamp Removal with Reflector	4 Standard T8 / T12 Lamp with Electronic Ballast
141	NWS	Non-Residential	All	Education with Summer Sessions	Lighting	Linear Fluorescent Fixture Upgrade	20 W Reduction - 4 T8 Lamp Removal with Reflector	4 Standard T8 / T12 Lamp with Electronic Ballast
142	NWS	Non-Residential	All	Lodging	Lighting	Linear Fluorescent Fixture Upgrade	20 W Reduction - 4 T8 Lamp Removal with Reflector	4 Standard T8 / T12 Lamp with Electronic Ballast
143	NWS	Non-Residential	All	General Large Commercial	Lighting	Linear Fluorescent Fixture Upgrade	20 W Reduction - 4 T8 Lamp Removal with Reflector	4 Standard T8 / T12 Lamp with Electronic Ballast
144	NWS	Non-Residential	All	General Small Commercial	Lighting	Linear Fluorescent Fixture Upgrade	20 W Reduction - 4 T8 Lamp Removal with Reflector	4 Standard T8 / T12 Lamp with Electronic Ballast
145	NWS	Non-Residential	All	Hospital	Lighting	Linear Fluorescent Fixture Upgrade	40 W Reduction - 2*4 T8 Lamp Removal with Reflector	4 Standard T8 / T12 Lamp with Electronic Ballast
146	NWS	Non-Residential	All	K12 Education	Lighting	Linear Fluorescent Fixture Upgrade	40 W Reduction - 2*4 T8 Lamp Removal with Reflector	4 Standard T8 / T12 Lamp with Electronic Ballast
147	NWS	Non-Residential	All	Education with Summer Sessions	Lighting	Linear Fluorescent Fixture Upgrade	40 W Reduction - 2*4 T8 Lamp Removal with Reflector	4 Standard T8 / T12 Lamp with Electronic Ballast
148	NWS	Non-Residential	All	Lodging	Lighting	Linear Fluorescent Fixture Upgrade	40 W Reduction - 2*4 T8 Lamp Removal with Reflector	4 Standard T8 / T12 Lamp with Electronic Ballast
149	NWS	Non-Residential	All	General Large Commercial	Lighting	Linear Fluorescent Fixture Upgrade	40 W Reduction - 2*4 T8 Lamp Removal with Reflector	4 Standard T8 / T12 Lamp with Electronic Ballast
150	NWS	Non-Residential	All	General Small Commercial	Lighting	Linear Fluorescent Fixture Upgrade	40 W Reduction - 2*4 T8 Lamp Removal with Reflector	4 Standard T8 / T12 Lamp with Electronic Ballast
151	NWS	Non-Residential	All	Hospital	Lighting	Linear Fluorescent Fixture Upgrade	20 W Reduction - 2*4 LED Retrofit Kit	4 Standard T8 / T12 Lamp with Electronic Ballast
152	NWS	Non-Residential	All	K12 Education	Lighting	Linear Fluorescent Fixture Upgrade	20 W Reduction - 2*4 LED Retrofit Kit	4 Standard T8 / T12 Lamp with Electronic Ballast
153	NWS	Non-Residential	All	Education with Summer Sessions	Lighting	Linear Fluorescent Fixture Upgrade	20 W Reduction - 2*4 LED Retrofit Kit	4 Standard T8 / T12 Lamp with Electronic Ballast
154	NWS	Non-Residential	All	Lodging	Lighting	Linear Fluorescent Fixture Upgrade	20 W Reduction - 2*4 LED Retrofit Kit	4 Standard T8 / T12 Lamp with Electronic Ballast
155	NWS	Non-Residential	All	General Large Commercial	Lighting	Linear Fluorescent Fixture Upgrade	20 W Reduction - 2*4 LED Retrofit Kit	4 Standard T8 / T12 Lamp with Electronic Ballast
156	NWS	Non-Residential	All	General Small Commercial	Lighting	Linear Fluorescent Fixture Upgrade	20 W Reduction - 2*4 LED Retrofit Kit	4 Standard T8 / T12 Lamp with Electronic Ballast
157	NWS	Non-Residential	All	Hospital	Lighting	Linear Fluorescent Fixture Upgrade	40 W Reduction - 2*4 LED Retrofit Kit	4 Standard T8 / T12 Lamp with Electronic Ballast
158	NWS	Non-Residential	All	K12 Education	Lighting	Linear Fluorescent Fixture Upgrade	40 W Reduction - 2*4 LED Retrofit Kit	4 Standard T8 / T12 Lamp with Electronic Ballast
159	NWS	Non-Residential	All	Education with Summer Sessions	Lighting	Linear Fluorescent Fixture Upgrade	40 W Reduction - 2*4 LED Retrofit Kit	4 Standard T8 / T12 Lamp with Electronic Ballast
160	NWS	Non-Residential	All	Lodging	Lighting	Linear Fluorescent Fixture Upgrade	40 W Reduction - 2*4 LED Retrofit Kit	4 Standard T8 / T12 Lamp with Electronic Ballast
161	NWS	Non-Residential	All	General Large Commercial	Lighting	Linear Fluorescent Fixture Upgrade	40 W Reduction - 2*4 LED Retrofit Kit	4 Standard T8 / T12 Lamp with Electronic Ballast
162	NWS	Non-Residential	All	General Small Commercial	Lighting	Linear Fluorescent Fixture Upgrade	40 W Reduction - 2*4 LED Retrofit Kit	4 Standard T8 / T12 Lamp with Electronic Ballast
163	NWS	Non-Residential	All	Hospital	Lighting	Commercial Standard CFL	15 W CFL	43W EISA compliant lamp
164	NWS	Non-Residential	All	Hospital	Lighting	Commercial Standard CFL	21 W CFL replacing EISA-exempt incandescent lamp	79W EISA-exempt incandescent lamp
165	NWS	Non-Residential	All	K12 Education	Lighting	Commercial Standard CFL	15 W CFL	43W EISA compliant lamp
166	NWS	Non-Residential	All	K12 Education	Lighting	Commercial Standard CFL	21 W CFL replacing EISA-exempt incandescent lamp	79W EISA-exempt incandescent lamp
167	NWS	Non-Residential	All	Education with Summer Sessions	Lighting	Commercial Standard CFL	15 W CFL	43W EISA compliant lamp
168	NWS	Non-Residential	All	Education with Summer Sessions	Lighting	Commercial Standard CFL	21 W CFL replacing EISA-exempt incandescent lamp	79W EISA-exempt incandescent lamp
169	NWS	Non-Residential	All	Lodging	Lighting	Commercial Standard CFL	15 W CFL	43W EISA compliant lamp
170	NWS	Non-Residential	All	Lodging	Lighting	Commercial Standard CFL	21 W CFL replacing EISA-exempt incandescent lamp	79W EISA-exempt incandescent lamp
171	NWS	Non-Residential	All	General Large Commercial	Lighting	Commercial Standard CFL	15 W CFL	43W EISA compliant lamp
172	NWS	Non-Residential	All	General Large Commercial	Lighting	Commercial Standard CFL	21 W CFL replacing EISA-exempt incandescent lamp	79W EISA-exempt incandescent lamp
173	NWS	Non-Residential	All	General Small Commercial	Lighting	Commercial Standard CFL	15 W CFL	43W EISA compliant lamp
174	NWS	Non-Residential	All	General Small Commercial	Lighting	Commercial Standard CFL	21 W CFL replacing EISA-exempt incandescent lamp	79W EISA-exempt incandescent lamp
175	NWS	Non-Residential	All	Hospital	Lighting	LED Bulbs	12.5 W Omni-directional Energystar LED	43W EISA compliant lamp
176	NWS	Non-Residential	All	Hospital	Lighting	LED Bulbs	19 W LED replacing EISA-exempt incandescent lamp	79W EISA-exempt incandescent lamp
177	NWS	Non-Residential	All	K12 Education	Lighting	LED Bulbs	12.5 W Omni-directional Energystar LED	43W EISA compliant lamp
178	NWS	Non-Residential	All	K12 Education	Lighting	LED Bulbs	19 W LED replacing EISA-exempt incandescent lamp	79W EISA-exempt incandescent lamp
179	NWS	Non-Residential	All	Education with Summer Sessions	Lighting	LED Bulbs	12.5 W Omni-directional Energystar LED	43W EISA compliant lamp
180	NWS	Non-Residential	All	Education with Summer Sessions	Lighting	LED Bulbs	19 W LED replacing EISA-exempt incandescent lamp	79W EISA-exempt incandescent lamp

Commercial Measures

							MEASURE DESCRIPTION		
Measure ID	Weather Sensitive	Sector	Sub-Sector	Building Type	End Use	Measure Name	Efficient Measure Definition	Base Measure Definition	
181	NWS	Non-Residential	All	Lodging	Lighting	LED Bulbs	12.5 W Omni-directional Energystar LED	43W EISA compliant lamp	
182	NWS	Non-Residential	All	Lodging	Lighting	LED Bulbs	19 W LED replacing EISA-exempt incandescent lamp	79W EISA-exempt incandescent lamp	
183	NWS	Non-Residential	All	General Large Commercial	Lighting	LED Bulbs	12.5 W Omni-directional Energystar LED	43W EISA compliant lamp	
184	NWS	Non-Residential	All	General Large Commercial	Lighting	LED Bulbs	19 W LED replacing EISA-exempt incandescent lamp	79W EISA-exempt incandescent lamp	
185	NWS	Non-Residential	All	General Small Commercial	Lighting	LED Bulbs	12.5 W Omni-directional Energystar LED	43W EISA compliant lamp	
186	NWS	Non-Residential	All	General Small Commercial	Lighting	LED Bulbs	19 W LED replacing EISA-exempt incandescent lamp	79W EISA-exempt incandescent lamp	
187	NWS	Non-Residential	Large Commercial	All	Lighting	Efficient High Bay Lighting	4-Lamp 32W HPT8 with High-BF Ballast	200W Pulse Start Metal-Halide	
188	NWS	Non-Residential	Small Commercial	All	Lighting	Efficient High Bay Lighting	4-Lamp 32W HPT8 with High-BF Ballast	200W Pulse Start Metal-Halide	
189	NWS	Non-Residential	Large Commercial	All	Lighting	Efficient High Bay Lighting	6-Lamp 32W HPT8 with High-BF Ballast or Equivalent LED	320W Pulse Start Metal-Halide	
190	NWS	Non-Residential	Small Commercial	All	Lighting	Efficient High Bay Lighting	6-Lamp 32W HPT8 with High-BF Ballast or Equivalent LED	320W Pulse Start Metal-Halide	
191	NWS	Non-Residential	Large Commercial	All	Lighting	Efficient High Bay Lighting	4-Lamp 32W HPT8 with High-BF Ballast	250 W Metal-Halide	
192	NWS	Non-Residential	Small Commercial	All	Lighting	Efficient High Bay Lighting	4-Lamp 32W HPT8 with High-BF Ballast	250 W Metal-Halide	
193	NWS	Non-Residential	Large Commercial	All	Lighting	Efficient High Bay Lighting	6-Lamp 32W HPT8 with High-BF Ballast or Equivalent LED	400W Metal-Halide	
194	NWS	Non-Residential	Small Commercial	All	Lighting	Efficient High Bay Lighting	6-Lamp 32W HPT8 with High-BF Ballast or Equivalent LED	400W Metal-Halide	
195	NWS	Non-Residential	Large Commercial	All	Lighting	Efficient High Bay Lighting	75W LED High Bay Fixtures	250 W Metal-Halide	
196	NWS	Non-Residential	Small Commercial	All	Lighting	Efficient High Bay Lighting	75W LED High Bay Fixtures	250 W Metal-Halide	
197	NWS	Non-Residential	Large Commercial	All	Lighting	Efficient High Bay Lighting	75W LED High Bay Fixtures	200W Pulse Start Metal-Halide	
198	NWS	Non-Residential	Small Commercial	All	Lighting	Efficient High Bay Lighting	75W LED High Bay Fixtures	200W Pulse Start Metal-Halide	
199	NWS	Non-Residential	Large Commercial	All	Lighting	Lighting Controls	Daylighting Control – Continuous Dimming	Uncontrolled Lighting System	
200	NWS	Non-Residential	Large Commercial	All	Lighting	Lighting Controls	Daylighting Control – Multiple Step Dimming	Uncontrolled Lighting System	
201	NWS	Non-Residential	Large Commercial	All	Lighting	Lighting Controls	Daylighting Control – ON/OFF (Indoor)	Uncontrolled Lighting System	
202	NWS	Non-Residential	Large Commercial	All	Lighting	Lighting Controls	Occupancy Sensor	Uncontrolled Lighting System	
203	NWS	Non-Residential	Large Commercial	All	Lighting	Lighting Controls	Occupancy Sensor w/ Daylighting Control – Continuous Dimming	Uncontrolled Lighting System	
204	NWS	Non-Residential	Large Commercial	All	Lighting	Lighting Controls	Occupancy Sensor w/ Daylighting Control – Multiple Step Dimming	Uncontrolled Lighting System	
205	NWS	Non-Residential	Large Commercial	All	Lighting	Lighting Controls	Occupancy Sensor w/ Daylighting Control – ON/OFF	Uncontrolled Lighting System	
206	NWS	Non-Residential	Small Commercial	All	Lighting	Lighting Controls	Daylighting Control – Continuous Dimming	Uncontrolled Lighting System	
207	NWS	Non-Residential	Small Commercial	All	Lighting	Lighting Controls	Daylighting Control – Multiple Step Dimming	Uncontrolled Lighting System	
208	NWS	Non-Residential	Small Commercial	All	Lighting	Lighting Controls	Daylighting Control – ON/OFF (Indoor)	Uncontrolled Lighting System	
209	NWS	Non-Residential	Small Commercial	All	Lighting	Lighting Controls	Occupancy Sensor	Uncontrolled Lighting System	
210	NWS	Non-Residential	Small Commercial	All	Lighting	Lighting Controls	Occupancy Sensor w/ Daylighting Control – Continuous Dimming	Uncontrolled Lighting System	
211	NWS	Non-Residential	Small Commercial	All	Lighting	Lighting Controls	Occupancy Sensor w/ Daylighting Control – Multiple Step Dimming	Uncontrolled Lighting System	
212	NWS	Non-Residential	Small Commercial	All	Lighting	Lighting Controls	Occupancy Sensor w/ Daylighting Control – ON/OFF	Uncontrolled Lighting System	
213	NWS	Non-Residential	Small Commercial	All	Lighting	LED Exit Signs	LED exit sign	non-LED light-source	
214	NWS	Non-Residential	All	Hospital	Refrigeration	Electronically Commutated Motors (ECM) for Walk-in and Reach-in Coolers/Freezers	Electronically Commutated Motors (ECM) for Walk-in and Reach-in Coolers/Freezers	Shaded Pole Motor	
215	NWS	Non-Residential	All	K12 Education	Refrigeration	Electronically Commutated Motors (ECM) for Walk-in and Reach-in Coolers/Freezers	Electronically Commutated Motors (ECM) for Walk-in and Reach-in Coolers/Freezers	Shaded Pole Motor	
216	NWS	Non-Residential	All	Education with Summer Sessions	Refrigeration	Electronically Commutated Motors (ECM) for Walk-in and Reach-in Coolers/Freezers	Electronically Commutated Motors (ECM) for Walk-in and Reach-in Coolers/Freezers	Shaded Pole Motor	
217	NWS	Non-Residential	All	Lodging	Refrigeration	Electronically Commutated Motors (ECM) for Walk-in and Reach-in Coolers/Freezers	Electronically Commutated Motors (ECM) for Walk-in and Reach-in Coolers/Freezers	Shaded Pole Motor	
218	NWS	Non-Residential	All	Food Sales	Refrigeration	Electronically Commutated Motors (ECM) for Walk-in and Reach-in Coolers/Freezers	Electronically Commutated Motors (ECM) for Walk-in and Reach-in Coolers/Freezers	Shaded Pole Motor	
219	NWS	Non-Residential	All	Restaurant	Refrigeration	Electronically Commutated Motors (ECM) for Walk-in and Reach-in Coolers/Freezers	Electronically Commutated Motors (ECM) for Walk-in and Reach-in Coolers/Freezers	Shaded Pole Motor	
220	NWS	Non-Residential	All	Hospital	Refrigeration	ENERGY STAR Solid Door Refrigerator	Estar Commercial Refrigerators - Solid Door - up to 15 ft3 capacity	Existing EPAAct 2005-Compliant Refrigerator	
221	NWS	Non-Residential	All	Hospital	Refrigeration	ENERGY STAR Solid Door Refrigerator	Estar Commercial Refrigerators - Solid Door - 15 to 30ft3 capacity	Existing EPAAct 2005-Compliant Refrigerator	
222	NWS	Non-Residential	All	Hospital	Refrigeration	ENERGY STAR Solid Door Refrigerator	Estar Commercial Refrigerators - Solid Door - 30 to 50 ft3	Existing EPAAct 2005-Compliant Refrigerator	
223	NWS	Non-Residential	All	Hospital	Refrigeration	ENERGY STAR Solid Door Refrigerator	Estar Commercial Refrigerators - Solid Door - greater than 50 ft3 capacity	Existing EPAAct 2005-Compliant Refrigerator	
224	NWS	Non-Residential	All	Hospital	Refrigeration	ENERGY STAR Solid Door Freezer	Estar Commercial Freezers - Solid Door - up to 15 ft3 capacity	Existing EPAAct 2005-Compliant Freezer	
225	NWS	Non-Residential	All	Hospital	Refrigeration	ENERGY STAR Solid Door Freezer	Estar Commercial Freezers - Solid Door - 15 to 30ft3 capacity	Existing EPAAct 2005-Compliant Freezer	
226	NWS	Non-Residential	All	Hospital	Refrigeration	ENERGY STAR Solid Door Freezer	Estar Commercial Freezers - Solid Door - 30 to 50 ft3	Existing EPAAct 2005-Compliant Freezer	
227	NWS	Non-Residential	All	Hospital	Refrigeration	ENERGY STAR Solid Door Freezer	Estar Commercial Freezers - Solid Door - greater than 50 ft3 capacity	Existing EPAAct 2005-Compliant Freezer	
228	NWS	Non-Residential	All	K12 Education	Refrigeration	ENERGY STAR Solid Door Refrigerator	Estar Commercial Refrigerators - Solid Door - up to 15 ft3 capacity	Existing EPAAct 2005-Compliant Refrigerator	
229	NWS	Non-Residential	All	K12 Education	Refrigeration	ENERGY STAR Solid Door Refrigerator	Estar Commercial Refrigerators - Solid Door - 15 to 30ft3 capacity	Existing EPAAct 2005-Compliant Refrigerator	
230	NWS	Non-Residential	All	K12 Education	Refrigeration	ENERGY STAR Solid Door Refrigerator	Estar Commercial Refrigerators - Solid Door - 30 to 50 ft3	Existing EPAAct 2005-Compliant Refrigerator	
231	NWS	Non-Residential	All	K12 Education	Refrigeration	ENERGY STAR Solid Door Refrigerator	Estar Commercial Refrigerators - Solid Door - greater than 50 ft3 capacity	Existing EPAAct 2005-Compliant Refrigerator	
232	NWS	Non-Residential	All	K12 Education	Refrigeration	ENERGY STAR Solid Door Freezer	Estar Commercial Freezers - Solid Door - up to 15 ft3 capacity	Existing EPAAct 2005-Compliant Freezer	
233	NWS	Non-Residential	All	K12 Education	Refrigeration	ENERGY STAR Solid Door Freezer	Estar Commercial Freezers - Solid Door - 15 to 30ft3 capacity	Existing EPAAct 2005-Compliant Freezer	
234	NWS	Non-Residential	All	K12 Education	Refrigeration	ENERGY STAR Solid Door Freezer	Estar Commercial Freezers - Solid Door - 30 to 50 ft3	Existing EPAAct 2005-Compliant Freezer	
235	NWS	Non-Residential	All	K12 Education	Refrigeration	ENERGY STAR Solid Door Freezer	Estar Commercial Freezers - Solid Door - greater than 50 ft3 capacity	Existing EPAAct 2005-Compliant Freezer	
236	NWS	Non-Residential	All	Education with Summer Sessions	Refrigeration	ENERGY STAR Solid Door Refrigerator	Estar Commercial Refrigerators - Solid Door - up to 15 ft3 capacity	Existing EPAAct 2005-Compliant Refrigerator	
237	NWS	Non-Residential	All	Education with Summer Sessions	Refrigeration	ENERGY STAR Solid Door Refrigerator	Estar Commercial Refrigerators - Solid Door - 15 to 30ft3 capacity	Existing EPAAct 2005-Compliant Refrigerator	
238	NWS	Non-Residential	All	Education with Summer Sessions	Refrigeration	ENERGY STAR Solid Door Refrigerator	Estar Commercial Refrigerators - Solid Door - 30 to 50 ft3	Existing EPAAct 2005-Compliant Refrigerator	
239	NWS	Non-Residential	All	Education with Summer Sessions	Refrigeration	ENERGY STAR Solid Door Refrigerator	Estar Commercial Refrigerators - Solid Door - greater than 50 ft3 capacity	Existing EPAAct 2005-Compliant Refrigerator	
240	NWS	Non-Residential	All	Education with Summer Sessions	Refrigeration	ENERGY STAR Solid Door Freezer	Estar Commercial Freezers - Solid Door - up to 15 ft3 capacity	Existing EPAAct 2005-Compliant Freezer	

Commercial Measures

Measure ID	Weather Sensitive	Sector	Sub-Sector	Building Type	End Use	Measure Name	MEASURE DESCRIPTION	
							Efficient Measure Definition	Base Measure Definition
421	NWS	Non-Residential	All	K12 Education	Food Services Equipment	ENERGY STAR Fryer	ENERGY STAR Certified Electric Large Vat Fryer	Non-ENERGY STAR Certified Electric Large Vat Fryer
422	NWS	Non-Residential	All	Education with Summer Sessions	Food Services Equipment	ENERGY STAR Fryer	ENERGY STAR Certified Electric Standard Fryer	Non-ENERGY STAR Certified Electric Standard Fryer
423	NWS	Non-Residential	All	Education with Summer Sessions	Food Services Equipment	ENERGY STAR Fryer	ENERGY STAR Certified Electric Large Vat Fryer	Non-ENERGY STAR Certified Electric Large Vat Fryer
424	NWS	Non-Residential	All	Lodging	Food Services Equipment	ENERGY STAR Fryer	ENERGY STAR Certified Electric Standard Fryer	Non-ENERGY STAR Certified Electric Standard Fryer
425	NWS	Non-Residential	All	Lodging	Food Services Equipment	ENERGY STAR Fryer	ENERGY STAR Certified Electric Large Vat Fryer	Non-ENERGY STAR Certified Electric Large Vat Fryer
426	NWS	Non-Residential	All	Restaurant	Food Services Equipment	ENERGY STAR Fryer	ENERGY STAR Certified Electric Standard Fryer	Non-ENERGY STAR Certified Electric Standard Fryer
427	NWS	Non-Residential	All	Restaurant	Food Services Equipment	ENERGY STAR Fryer	ENERGY STAR Certified Electric Large Vat Fryer	Non-ENERGY STAR Certified Electric Large Vat Fryer
428	NWS	Non-Residential	All	Hospital	Food Services Equipment	ENERGY STAR Griddle	ENERGY STAR electric griddle	Non-ENERGYSTAR electric griddle
429	NWS	Non-Residential	All	K12 Education	Food Services Equipment	ENERGY STAR Griddle	ENERGY STAR electric griddle	Non-ENERGYSTAR electric griddle
430	NWS	Non-Residential	All	Education with Summer Sessions	Food Services Equipment	ENERGY STAR Griddle	ENERGY STAR electric griddle	Non-ENERGYSTAR electric griddle
431	NWS	Non-Residential	All	Lodging	Food Services Equipment	ENERGY STAR Griddle	ENERGY STAR electric griddle	Non-ENERGYSTAR electric griddle
432	NWS	Non-Residential	All	Restaurant	Food Services Equipment	ENERGY STAR Griddle	ENERGY STAR electric griddle	Non-ENERGYSTAR electric griddle
433	NWS	Non-Residential	All	Hospital	Food Services Equipment	ENERGY STAR Hot Food Holding Cabinets	ENERGY STAR HFHC - Full Size	Non-ENERGYSTAR electric HFHC
434	NWS	Non-Residential	All	K12 Education	Food Services Equipment	ENERGY STAR Hot Food Holding Cabinets	ENERGY STAR HFHC - Full Size	Non-ENERGYSTAR electric HFHC
435	NWS	Non-Residential	All	Education with Summer Sessions	Food Services Equipment	ENERGY STAR Hot Food Holding Cabinets	ENERGY STAR HFHC - Full Size	Non-ENERGYSTAR electric HFHC
436	NWS	Non-Residential	All	Lodging	Food Services Equipment	ENERGY STAR Hot Food Holding Cabinets	ENERGY STAR HFHC - Full Size	Non-ENERGYSTAR electric HFHC
437	NWS	Non-Residential	All	Restaurant	Food Services Equipment	ENERGY STAR Hot Food Holding Cabinets	ENERGY STAR HFHC - Full Size	Non-ENERGYSTAR electric HFHC
438	NWS	Non-Residential	All	Hospital	Food Services Equipment	ENERGY STAR Electric Convection Ovens	ENERGY STAR Electric Convection Ovens - Full Size	Non-ENERGY STAR Electric Convection Ovens - Full Size
439	NWS	Non-Residential	All	Hospital	Food Services Equipment	ENERGY STAR Electric Convection Ovens	ENERGY STAR Electric Convection Ovens - Half Size	Non-ENERGY STAR Electric Convection Ovens - Half Size
440	NWS	Non-Residential	All	K12 Education	Food Services Equipment	ENERGY STAR Electric Convection Ovens	ENERGY STAR Electric Convection Ovens - Full Size	Non-ENERGY STAR Electric Convection Ovens - Full Size
441	NWS	Non-Residential	All	K12 Education	Food Services Equipment	ENERGY STAR Electric Convection Ovens	ENERGY STAR Electric Convection Ovens - Half Size	Non-ENERGY STAR Electric Convection Ovens - Half Size
442	NWS	Non-Residential	All	Education with Summer Sessions	Food Services Equipment	ENERGY STAR Electric Convection Ovens	ENERGY STAR Electric Convection Ovens - Full Size	Non-ENERGY STAR Electric Convection Ovens - Full Size
443	NWS	Non-Residential	All	Education with Summer Sessions	Food Services Equipment	ENERGY STAR Electric Convection Ovens	ENERGY STAR Electric Convection Ovens - Half Size	Non-ENERGY STAR Electric Convection Ovens - Half Size
444	NWS	Non-Residential	All	Lodging	Food Services Equipment	ENERGY STAR Electric Convection Ovens	ENERGY STAR Electric Convection Ovens - Full Size	Non-ENERGY STAR Electric Convection Ovens - Full Size
445	NWS	Non-Residential	All	Lodging	Food Services Equipment	ENERGY STAR Electric Convection Ovens	ENERGY STAR Electric Convection Ovens - Half Size	Non-ENERGY STAR Electric Convection Ovens - Half Size
446	NWS	Non-Residential	All	Restaurant	Food Services Equipment	ENERGY STAR Electric Convection Ovens	ENERGY STAR Electric Convection Ovens - Full Size	Non-ENERGY STAR Electric Convection Ovens - Full Size
447	NWS	Non-Residential	All	Restaurant	Food Services Equipment	ENERGY STAR Electric Convection Ovens	ENERGY STAR Electric Convection Ovens - Half Size	Non-ENERGY STAR Electric Convection Ovens - Half Size
448	NWS	Non-Residential	All	K12 Education	Food Services Equipment	ENERGY STAR Steam Cooker	ENERGY STAR Steam Cooker	Non-ENERGY STAR Steam Cooker
449	NWS	Non-Residential	All	Education with Summer Sessions	Food Services Equipment	ENERGY STAR Steam Cooker	ENERGY STAR Steam Cooker	Non-ENERGY STAR Steam Cooker
450	NWS	Non-Residential	All	Lodging	Food Services Equipment	ENERGY STAR Steam Cooker	ENERGY STAR Steam Cooker	Non-ENERGY STAR Steam Cooker
451	NWS	Non-Residential	All	Restaurant	Food Services Equipment	ENERGY STAR Steam Cooker	ENERGY STAR Steam Cooker	Non-ENERGY STAR Steam Cooker
452	NWS	Non-Residential	All	Hospital	Food Services Equipment	EPA WaterSense Pre-Rinse Spray Valve	EPA WaterSense pre-rinse spray valve w/ flow rate of 1.28 gpm	Conventional pre-rinse spray valve w/ flow rate of 1.6 gpm
453	NWS	Non-Residential	All	Education with Summer Sessions	Food Services Equipment	EPA WaterSense Pre-Rinse Spray Valve	EPA WaterSense pre-rinse spray valve w/ flow rate of 1.28 gpm	Conventional pre-rinse spray valve w/ flow rate of 1.6 gpm
454	NWS	Non-Residential	All	Lodging	Food Services Equipment	EPA WaterSense Pre-Rinse Spray Valve	EPA WaterSense pre-rinse spray valve w/ flow rate of 1.28 gpm	Conventional pre-rinse spray valve w/ flow rate of 1.6 gpm
455	NWS	Non-Residential	All	Restaurant	Food Services Equipment	EPA WaterSense Pre-Rinse Spray Valve	EPA WaterSense pre-rinse spray valve w/ flow rate of 1.28 gpm	Conventional pre-rinse spray valve w/ flow rate of 1.6 gpm
456	NWS	Non-Residential	All	Hospital	Service Hot Water	Electric Storage Water Heater	Electric, Storage Capacity = 50 gallons, EF = 0.95	Electric, Storage Capacity = 50 gallons
457	NWS	Non-Residential	All	Hospital	Service Hot Water	Electric Storage Water Heater	Electric, Storage Capacity = 80 gallons, EF = 0.95	Electric, Storage Capacity = 80 gallons
458	NWS	Non-Residential	All	K12 Education	Service Hot Water	Electric Storage Water Heater	Electric, Storage Capacity = 50 gallons, EF = 0.96	Electric, Storage Capacity = 50 gallons
459	NWS	Non-Residential	All	K12 Education	Service Hot Water	Electric Storage Water Heater	Electric, Storage Capacity = 80 gallons, EF = 0.96	Electric, Storage Capacity = 80 gallons
460	NWS	Non-Residential	All	K12 Education	Service Hot Water	Electric Storage Water Heater	Electric, Storage Capacity = 100 gallons, EF = 0.96	Electric, Storage Capacity = 100 gallons
461	NWS	Non-Residential	All	Education with Summer Sessions	Service Hot Water	Electric Storage Water Heater	Electric, Storage Capacity = 50 gallons, EF = 0.97	Electric, Storage Capacity = 50 gallons
462	NWS	Non-Residential	All	Education with Summer Sessions	Service Hot Water	Electric Storage Water Heater	Electric, Storage Capacity = 80 gallons, EF = 0.97	Electric, Storage Capacity = 80 gallons
463	NWS	Non-Residential	All	Education with Summer Sessions	Service Hot Water	Electric Storage Water Heater	Electric, Storage Capacity = 100 gallons, EF = 0.97	Electric, Storage Capacity = 100 gallons
464	NWS	Non-Residential	All	Lodging	Service Hot Water	Electric Storage Water Heater	Electric, Storage Capacity = 50 gallons, EF = 0.98	Electric, Storage Capacity = 50 gallons
465	NWS	Non-Residential	All	Lodging	Service Hot Water	Electric Storage Water Heater	Electric, Storage Capacity = 80 gallons, EF = 0.98	Electric, Storage Capacity = 80 gallons
466	NWS	Non-Residential	All	Lodging	Service Hot Water	Electric Storage Water Heater	Electric, Storage Capacity = 100 gallons, EF = 0.98	Electric, Storage Capacity = 100 gallons
467	NWS	Non-Residential	All	Restaurant	Service Hot Water	Electric Storage Water Heater	Electric, Storage Capacity = 50 gallons, EF = 0.99	Electric, Storage Capacity = 50 gallons
468	NWS	Non-Residential	All	Restaurant	Service Hot Water	Electric Storage Water Heater	Electric, Storage Capacity = 80 gallons, EF = 0.99	Electric, Storage Capacity = 80 gallons
469	NWS	Non-Residential	All	Restaurant	Service Hot Water	Electric Storage Water Heater	Electric, Storage Capacity = 100 gallons, EF = 0.99	Electric, Storage Capacity = 100 gallons
470	NWS	Non-Residential	All	Hospital	Service Hot Water	Heat Pump Storage Water Heater	Heat Pump Water Heater COP 2	Large Electric Resistance TE .98
471	NWS	Non-Residential	All	K12 Education	Service Hot Water	Heat Pump Storage Water Heater	Heat Pump Water Heater COP 2	Large Electric Resistance TE .98
472	NWS	Non-Residential	All	Education with Summer Sessions	Service Hot Water	Heat Pump Storage Water Heater	Heat Pump Water Heater COP 2	Large Electric Resistance TE .98
473	NWS	Non-Residential	All	Lodging	Service Hot Water	Heat Pump Storage Water Heater	Heat Pump Water Heater COP 2	Large Electric Resistance TE .98
474	NWS	Non-Residential	All	Restaurant	Service Hot Water	Heat Pump Storage Water Heater	Heat Pump Water Heater COP 2	Large Electric Resistance TE .98
475	NWS	Non-Residential	All	Hospital	Service Hot Water	Low Flow Faucet Aerators - Electric DHW fuel	Faucet aerator, < 1.5 GPM	Faucet aerator, 2.25 GPM
476	NWS	Non-Residential	All	K12 Education	Service Hot Water	Low Flow Faucet Aerators - Electric DHW fuel	Faucet aerator, < 1.5 GPM	Faucet aerator, 2.25 GPM
477	NWS	Non-Residential	All	Education with Summer Sessions	Service Hot Water	Low Flow Faucet Aerators - Electric DHW fuel	Faucet aerator, < 1.5 GPM	Faucet aerator, 2.25 GPM
478	NWS	Non-Residential	All	Lodging	Service Hot Water	Low Flow Faucet Aerators - Electric DHW fuel	Faucet aerator, < 1.5 GPM	Faucet aerator, 2.25 GPM
479	NWS	Non-Residential	All	Restaurant	Service Hot Water	Low Flow Faucet Aerators - Electric DHW fuel	Faucet aerator, < 1.5 GPM	Faucet aerator, 2.25 GPM

Commercial Measures

Measure ID	Weather Sensitive	Sector	Sub-Sector	Building Type	End Use	Measure Name	MEASURE DESCRIPTION	
							Efficient Measure Definition	Base Measure Definition
481	NWS	Non-Residential	Small Commercial	All	Misc	Small Business Program Audit & Direct Install	Small Business Program Audit & Direct Install Cost	
482	NWS	Non-Residential	Small Commercial	All	Lighting	Small Business Program Audit & Direct Install	15 W CFL	43W EISA compliant lamp
483	NWS	Non-Residential	Small Commercial	All	Lighting	Small Business Program Audit & Direct Install	12.5 W Omni-directional Energystar LED	43W EISA compliant lamp
484	NWS	Non-Residential	Small Commercial	All	Service Hot Water	Small Business Program Audit & Direct Install	Faucet Aerators and Pre-Rinse Valves	
485	NWS	Non-Residential	Small Commercial	All	Lighting	Small Business Program Lighting Upgrade Package	Lighting Upgrade Package Including Linear Fluorescents and LEDs	
486	NWS	Non-Residential	Small Commercial	All	Refrigeration	Small Business Program Refrigeration Upgrade Package	Refrigeration Upgrade Package	
488	NWS	Non-Residential	All	Data Center	HVAC	Air Flow Management	High-efficiency airflow configuration - Data Center - 5000 ft2	Baseline data center post energy audit - Data Center - 5000 ft2
489	NWS	Non-Residential	All	Data Center	HVAC	Air Flow Management	High-efficiency airflow configuration - Data Center - 10000 ft2	Baseline data center post energy audit - Data Center - 10000 ft2
490	NWS	Non-Residential	All	Data Center	HVAC	Air Flow Management	High-efficiency airflow configuration - Data Center - 25000 ft2	Baseline data center post energy audit - Data Center - 25000 ft2
491	NWS	Non-Residential	All	Data Center	HVAC	Air Flow Management	High-efficiency airflow configuration - Data Center - 50000 ft2	Baseline data center post energy audit - Data Center - 50000 ft2
492	NWS	Non-Residential	All	Data Center	Miscellaneous	Load Distribution	Data center with application optimization and load balancing - Data Center - 5000 ft2	Baseline data center post energy audit - Data Center - 5000 ft2
493	NWS	Non-Residential	All	Data Center	Miscellaneous	Load Distribution	Data center with application optimization and load balancing - Data Center - 10000 ft2	Baseline data center post energy audit - Data Center - 10000 ft2
494	NWS	Non-Residential	All	Data Center	Miscellaneous	Load Distribution	Data center with application optimization and load balancing - Data Center - 25000 ft2	Baseline data center post energy audit - Data Center - 25000 ft2
495	NWS	Non-Residential	All	Data Center	Miscellaneous	Load Distribution	Data center with application optimization and load balancing - Data Center - 50000 ft2	Baseline data center post energy audit - Data Center - 50000 ft2
496	NWS	Non-Residential	All	Data Center	HVAC	Waterside Economizer	Waterside economizer and associate controls installed - Data Center - 25000 ft2	Baseline data center post energy audit - Data Center - 25000 ft2
497	NWS	Non-Residential	All	Data Center	HVAC	Waterside Economizer	Waterside economizer and associate controls installed - Data Center - 50000 ft2	Baseline data center post energy audit - Data Center - 50000 ft2
498	NWS	Non-Residential	All	Data Center	HVAC	Air Flow Management	High-efficiency airflow configuration - Data Center - 5000 ft2	Baseline data center post energy audit - Data Center - 5000 ft2
499	NWS	Non-Residential	All	Data Center	HVAC	Air Flow Management	High-efficiency airflow configuration - Data Center - 10000 ft2	Baseline data center post energy audit - Data Center - 10000 ft2
500	NWS	Non-Residential	All	Data Center	HVAC	Air Flow Management	High-efficiency airflow configuration - Data Center - 25000 ft2	Baseline data center post energy audit - Data Center - 25000 ft2
501	NWS	Non-Residential	All	Data Center	HVAC	Air Flow Management	High-efficiency airflow configuration - Data Center - 50000 ft2	Baseline data center post energy audit - Data Center - 50000 ft2
502	NWS	Non-Residential	All	Data Center	Miscellaneous	Load Distribution	Data center with transformerless PDU's and load balancing - Data Center - 5000 ft2	Baseline data center post energy audit - Data Center - 5000 ft2
503	NWS	Non-Residential	All	Data Center	Miscellaneous	Load Distribution	Data center with transformerless PDU's and load balancing - Data Center - 10000 ft2	Baseline data center post energy audit - Data Center - 10000 ft2
504	NWS	Non-Residential	All	Data Center	Miscellaneous	Load Distribution	Data center with transformerless PDU's and load balancing - Data Center - 25000 ft2	Baseline data center post energy audit - Data Center - 25000 ft2
505	NWS	Non-Residential	All	Data Center	Miscellaneous	Load Distribution	Data center with transformerless PDU's and load balancing - Data Center - 50000 ft2	Baseline data center post energy audit - Data Center - 50000 ft2
506	NWS	Non-Residential	All	Data Center	HVAC	Waterside Economizer	Waterside economizer and associate controls installed - Data Center - 25000 ft2	Baseline data center post energy audit - Data Center - 25000 ft2
507	NWS	Non-Residential	All	Data Center	HVAC	Waterside Economizer	Waterside economizer and associate controls installed - Data Center - 50000 ft2	Baseline data center post energy audit - Data Center - 50000 ft2
509	WS	Non-Residential	Large Commercial	All	Misc	Commercial New Construction	Large Commercial Building performing 10% better than ASHRAE90.1-2010	ASHRAE90.1-2010 Compliant Building
510	WS	Non-Residential	Large Commercial	All	Misc	Commercial New Construction	Commercial Building performing 10% better than ASHRAE90.1-2013	ASHRAE90.1-2013 Compliant Building
511	WS	Non-Residential	Small Commercial	All	Misc	Commercial New Construction	Small Commercial Building performing 10% better than ASHRAE90.1-2010	ASHRAE90.1-2010 Compliant Building
512	WS	Non-Residential	Small Commercial	All	Misc	Commercial New Construction	Small Commercial Building performing 10% better than ASHRAE90.1-2013	ASHRAE90.1-2013 Compliant Building
514	WS	Non-Residential	Large Commercial	All	Misc	Retrocommissioning	RCx of Commercial Building over 100,000sqft area	
515	WS	Non-Residential	Large Commercial	All	Misc	Retrocommissioning	RCx of Commercial Building between 25,000 and 100,000 sqft area	
517	NWS	Non-Residential	All	All	Misc	Interruptible Rate	Interruptible Rate	
518	NWS	Non-Residential	All	All	Misc	Enabled Dynamic Pricing (Non-Res)	Enabled Pricing	
519	NWS	Non-Residential	All	All	Misc	Non-Enabled Dynamic Pricing (Non-Res)	Non-Enabled Pricing	
521	WS	Non-Residential	Large Commercial	K12 Education	HVAC	Boiler Cut-Out Control	Installation of boiler cutout controls,	Baseline boiler combustion efficiency of 70% w/o control
522	WS	Non-Residential	Large Commercial	Lodging	HVAC	Boiler Cut-Out Control	Installation of boiler cutout controls,	Baseline boiler combustion efficiency of 70% w/o control
523	WS	Non-Residential	Large Commercial	Education with Summer Sessions	HVAC	Boiler Cut-Out Control	Installation of boiler cutout controls,	Baseline boiler combustion efficiency of 70% w/o control
524	WS	Non-Residential	Large Commercial	Hospital	HVAC	Boiler Cut-Out Control	Installation of boiler cutout controls,	Baseline boiler combustion efficiency of 70% w/o control
525	WS	Non-Residential	Large Commercial	General Large Commercial	HVAC	Boiler Cut-Out Control	Installation of boiler cutout controls,	Baseline boiler combustion efficiency of 70% w/o control
526	WS	Non-Residential	Large Commercial	K12 Education	HVAC	Boiler or Furnace Vent Damper	Installation of a vent damper	Baseline boiler combustion efficiency of 70% w/o control
527	WS	Non-Residential	Large Commercial	Lodging	HVAC	Boiler or Furnace Vent Damper	Installation of a vent damper	Baseline boiler combustion efficiency of 70% w/o control
528	WS	Non-Residential	Large Commercial	Education with Summer Sessions	HVAC	Boiler or Furnace Vent Damper	Installation of a vent damper	Baseline boiler combustion efficiency of 70% w/o control
529	WS	Non-Residential	Large Commercial	Hospital	HVAC	Boiler or Furnace Vent Damper	Installation of a vent damper	Baseline boiler combustion efficiency of 70% w/o control
530	WS	Non-Residential	Large Commercial	General Large Commercial	HVAC	Boiler or Furnace Vent Damper	Installation of a vent damper	Baseline boiler combustion efficiency of 70% w/o control
531	WS	Non-Residential	Large Commercial	K12 Education	HVAC	Boiler Reset Control	Installation of a temprture controller	Baseline boiler combustion efficiency of 70% w/o control
532	WS	Non-Residential	Large Commercial	Lodging	HVAC	Boiler Reset Control	Installation of a temprture controller	Baseline boiler combustion efficiency of 70% w/o control
533	WS	Non-Residential	Large Commercial	Education with Summer Sessions	HVAC	Boiler Reset Control	Installation of a temprture controller	Baseline boiler combustion efficiency of 70% w/o control
534	WS	Non-Residential	Large Commercial	Hospital	HVAC	Boiler Reset Control	Installation of a temprture controller	Baseline boiler combustion efficiency of 70% w/o control
535	WS	Non-Residential	Large Commercial	General Large Commercial	HVAC	Boiler Reset Control	Installation of a temprture controller	Baseline boiler combustion efficiency of 70% w/o control
536	WS	Non-Residential	Large Commercial	K12 Education	HVAC	Boiler Tune-Up	Tune-up for an existing boiler	Baseline boiler combustion efficiency of 70% w/o control
537	WS	Non-Residential	Large Commercial	Lodging	HVAC	Boiler Tune-Up	Tune-up for an existing boiler	Baseline boiler combustion efficiency of 70% w/o control
538	WS	Non-Residential	Large Commercial	Education with Summer Sessions	HVAC	Boiler Tune-Up	Tune-up for an existing boiler	Baseline boiler combustion efficiency of 70% w/o control
539	WS	Non-Residential	Large Commercial	Hospital	HVAC	Boiler Tune-Up	Tune-up for an existing boiler	Baseline boiler combustion efficiency of 70% w/o control
540	WS	Non-Residential	Large Commercial	General Large Commercial	HVAC	Boiler Tune-Up	Tune-up for an existing boiler	Baseline boiler combustion efficiency of 70% w/o control

Commercial Measures

Measure ID	Weather Sensitive	Sector	Sub-Sector	Building Type	End Use	Measure Name	MEASURE DESCRIPTION	
							Efficient Measure Definition	Base Measure Definition
541	WS	Non-Residential	Large Commercial	K12 Education	HVAC	Burner Replacement for Commercial Boilers	70% baseline burner efficiency	75% new burner efficiency,
542	WS	Non-Residential	Large Commercial	Lodging	HVAC	Burner Replacement for Commercial Boilers	70% baseline burner efficiency	75% new burner efficiency,
543	WS	Non-Residential	Large Commercial	Education with Summer Sessions	HVAC	Burner Replacement for Commercial Boilers	70% baseline burner efficiency	75% new burner efficiency,
544	WS	Non-Residential	Large Commercial	Hospital	HVAC	Burner Replacement for Commercial Boilers	70% baseline burner efficiency	75% new burner efficiency,
545	WS	Non-Residential	Large Commercial	General Large Commercial	HVAC	Burner Replacement for Commercial Boilers	70% baseline burner efficiency	75% new burner efficiency,
546	WS	Non-Residential	Large Commercial	K12 Education	HVAC	Efficient Commercial Boilers	95% Efficient Energy Star Boiler	82% Efficient Energy Star Boiler
547	WS	Non-Residential	Large Commercial	Lodging	HVAC	Efficient Commercial Boilers	95% Efficient Energy Star Boiler	82% Efficient Energy Star Boiler
548	WS	Non-Residential	Large Commercial	Education with Summer Sessions	HVAC	Efficient Commercial Boilers	95% Efficient Energy Star Boiler	82% Efficient Energy Star Boiler
549	WS	Non-Residential	Large Commercial	Hospital	HVAC	Efficient Commercial Boilers	95% Efficient Energy Star Boiler	82% Efficient Energy Star Boiler
550	WS	Non-Residential	Large Commercial	General Large Commercial	HVAC	Efficient Commercial Boilers	95% Efficient Energy Star Boiler	82% Efficient Energy Star Boiler
551	NWS	Non-Residential	Small Commercial	All	HVAC	Direct Vent Heaters (Small Commercial)	Direct Vent Wall Furnace: 80.8% AFUE	Fan Driven Wall Furnace: 78% AFUE
552	WS	Non-Residential	Small Commercial	All	HVAC	Gas Furnace (Small Commercial)	Warm air furnaces, gas fired- TE of 90%	Warm air furnaces, gas fired- TE of 80%
553	WS	Non-Residential	Small Commercial	All	Water Heating	Efficient storage gas water heater	50 gallon Energy Star 0.67 EF Water Heater	50 gallon water heater with 0.525 EF
554	WS	Non-Residential	Small Commercial	All	Water Heating	Efficient instantaneous gas water heater	Instantaneous gas water heater with 0.95 EF	50 gallon water heater with 0.525 EF
555	NWS	Non-Residential	Small Commercial	All	Water Heating	Faucet Aerator	1 GPM	2.2 GPM
556	NWS	Non-Residential	Large Commercial	All	Water Heating	Faucet Aerator	1 GPM	2.2 GPM
557	NWS	Non-Residential	Small Commercial	All	Water Heating	Gas WH pipe insulation (Small Commercial)	High Efficiency Insulation R = 6.5	Baseline insulation of R = 1.85

Commercial Measures

Measure ID	Weather Sensitive	Sector	Sub-Sector	Building Type	End Use	Measure Description	Measure Name	Measure Unit	EEM Logic (RET/ROB/NEW)	Baseline Unit Lifetime (Years)	Efficient Unit Lifetime (Years)	MEASURE INCREMENTAL SAVING PER UNIT				
												Total Incremental Cost	Annual kWh Savings	Annual kW Coincident Peak Savings	Annual Gas Savings (Therms)	Annual kWh Increases
1	WS	Non-Residential	Small Commercial	All	HVAC	Unitary and Split System AC/HP Equipment	per ton	ROB	15	15	\$140.00	176	0.05300	0	0	0
2	WS	Non-Residential	Small Commercial	All	HVAC	Unitary and Split System AC/HP Equipment	per ton	ROB	15	15	\$160.00	168	0.07700	0	0	0
3	WS	Non-Residential	Small Commercial	All	HVAC	Unitary and Split System AC/HP Equipment	per ton	ROB	15	15	\$180.00	124	0.05300	0	0	0
4	WS	Non-Residential	Small Commercial	All	HVAC	Unitary and Split System AC/HP Equipment	per ton	ROB	15	15	\$200.00	293	0.07700	0	0	0
5	WS	Non-Residential	Small Commercial	All	HVAC	Unitary and Split System AC/HP Equipment	per ton	ROB	15	15	\$140.00	66	0.05300	0	0	0
6	WS	Non-Residential	Small Commercial	All	HVAC	Unitary and Split System AC/HP Equipment	per ton	ROB	15	15	\$160.00	150	0.07700	0	0	0
7	WS	Non-Residential	Small Commercial	All	HVAC	Unitary and Split System AC/HP Equipment	per ton	ROB	15	15	\$160.00	129	0.09400	0	0	0
8	WS	Non-Residential	Small Commercial	All	HVAC	Unitary and Split System AC/HP Equipment	per ton	ROB	15	15	\$160.00	247	0.07800	0	0	0
9	WS	Non-Residential	Small Commercial	All	HVAC	Unitary and Split System AC/HP Equipment	per ton	ROB	15	15	\$180.00	124	0.05300	0	0	0
10	WS	Non-Residential	Small Commercial	All	HVAC	Unitary and Split System AC/HP Equipment	per ton	ROB	15	15	\$200.00	293	0.07700	0	0	0
11	WS	Non-Residential	Small Commercial	All	HVAC	Unitary and Split System AC/HP Equipment	per ton	ROB	15	15	\$200.00	249	0.09400	0	0	0
12	WS	Non-Residential	Small Commercial	All	HVAC	Unitary and Split System AC/HP Equipment	per ton	ROB	15	15	\$200.00	308	0.07800	0	0	0
13	WS	Non-Residential	Large Commercial	K12 Education	HVAC	Unitary and Split System AC/HP Equipment	per ton	ROB	15	15	\$160.00	98	0.06300	0	0	0
14	WS	Non-Residential	Large Commercial	Education with Summer Sessions	HVAC	Unitary and Split System AC/HP Equipment	per ton	ROB	15	15	\$160.00	211	0.06300	0	0	0
15	WS	Non-Residential	Large Commercial	Lodging	HVAC	Unitary and Split System AC/HP Equipment	per ton	ROB	15	15	\$160.00	332	0.06800	0	0	0
16	WS	Non-Residential	Large Commercial	General Large Commercial	HVAC	Unitary and Split System AC/HP Equipment	per ton	ROB	15	15	\$160.00	217	0.07500	0	0	0
17	WS	Non-Residential	Large Commercial	K12 Education	HVAC	Unitary and Split System AC/HP Equipment	per ton	ROB	15	15	\$200.00	122	0.06300	0	0	0
18	WS	Non-Residential	Large Commercial	Education with Summer Sessions	HVAC	Unitary and Split System AC/HP Equipment	per ton	ROB	15	15	\$200.00	264	0.06300	0	0	0
19	WS	Non-Residential	Large Commercial	Lodging	HVAC	Unitary and Split System AC/HP Equipment	per ton	ROB	15	15	\$200.00	414	0.06800	0	0	0
20	WS	Non-Residential	Large Commercial	General Large Commercial	HVAC	Unitary and Split System AC/HP Equipment	per ton	ROB	15	15	\$200.00	270	0.07500	0	0	0
21	WS	Non-Residential	Large Commercial	K12 Education	HVAC	Unitary and Split System AC/HP Equipment	per ton	ROB	15	15	\$160.00	87	0.05900	0	0	0
22	WS	Non-Residential	Large Commercial	Education with Summer Sessions	HVAC	Unitary and Split System AC/HP Equipment	per ton	ROB	15	15	\$160.00	189	0.05900	0	0	0
23	WS	Non-Residential	Large Commercial	Lodging	HVAC	Unitary and Split System AC/HP Equipment	per ton	ROB	15	15	\$160.00	297	0.06400	0	0	0
24	WS	Non-Residential	Large Commercial	General Large Commercial	HVAC	Unitary and Split System AC/HP Equipment	per ton	ROB	15	15	\$160.00	194	0.07000	0	0	0
26	WS	Non-Residential	Small Commercial	All	HVAC	Unitary and Split System AC/HP Equipment	per ton	ROB	15	15	\$140.00	124	0.05300	0	0	0
27	WS	Non-Residential	Small Commercial	All	HVAC	Unitary and Split System AC/HP Equipment	per ton	ROB	15	15	\$160.00	151	0.07700	0	0	0
28	WS	Non-Residential	Small Commercial	All	HVAC	Unitary and Split System AC/HP Equipment	per ton	ROB	15	15	\$140.00	124	0.05300	0	0	0
29	WS	Non-Residential	Small Commercial	All	HVAC	Unitary and Split System AC/HP Equipment	per ton	ROB	15	15	\$160.00	151	0.07700	0	0	0
30	WS	Non-Residential	Small Commercial	All	HVAC	Unitary and Split System AC/HP Equipment	per ton	ROB	15	15	\$160.00	128	0.09400	0	0	0
31	WS	Non-Residential	Small Commercial	All	HVAC	Unitary and Split System AC/HP Equipment	per ton	ROB	15	15	\$160.00	129	0.07800	0	0	0
32	WS	Non-Residential	Large Commercial	K12 Education	HVAC	Unitary and Split System AC/HP Equipment	per ton	ROB	15	15	\$160.00	51	0.06300	0	0	0
33	WS	Non-Residential	Large Commercial	Education with Summer Sessions	HVAC	Unitary and Split System AC/HP Equipment	per ton	ROB	15	15	\$160.00	111	0.06300	0	0	0
34	WS	Non-Residential	Large Commercial	Lodging	HVAC	Unitary and Split System AC/HP Equipment	per ton	ROB	15	15	\$160.00	174	0.06800	0	0	0
35	WS	Non-Residential	Large Commercial	General Large Commercial	HVAC	Unitary and Split System AC/HP Equipment	per ton	ROB	15	15	\$160.00	114	0.07500	0	0	0
36	WS	Non-Residential	Large Commercial	K12 Education	HVAC	Unitary and Split System AC/HP Equipment	per ton	ROB	15	15	\$160.00	26	0.05900	0	0	0
37	WS	Non-Residential	Large Commercial	Education with Summer Sessions	HVAC	Unitary and Split System AC/HP Equipment	per ton	ROB	15	15	\$160.00	56	0.05900	0	0	0
38	WS	Non-Residential	Large Commercial	Lodging	HVAC	Unitary and Split System AC/HP Equipment	per ton	ROB	15	15	\$160.00	88	0.06400	0	0	0
39	WS	Non-Residential	Large Commercial	General Large Commercial	HVAC	Unitary and Split System AC/HP Equipment	per ton	ROB	15	15	\$160.00	58	0.07000	0	0	0
41	WS	Non-Residential	Small Commercial	Lodging	HVAC	PTAC	Per Guest Room	ROB	10	10	\$84.00	38	0.02800	0	0	0
42	NWS	Non-Residential	Small Commercial	Lodging	HVAC	Occupancy-Based PTAC/PTHP Controls	Retrofit	RET	8	8	\$260.00	305	0.18000	0	0	0
44	WS	Non-Residential	Large Commercial	K12 Education	HVAC	Air or Water Cooled Chilling Equipment (Chillers)	per ton	ROB	20	20	\$137.00	37	0.03979	0	0	0
45	WS	Non-Residential	Large Commercial	Education with Summer Sessions	HVAC	Air or Water Cooled Chilling Equipment (Chillers)	per ton	ROB	20	20	\$137.00	81	0.04708	0	0	0
46	WS	Non-Residential	Large Commercial	Lodging	HVAC	Air or Water Cooled Chilling Equipment (Chillers)	per ton	ROB	20	20	\$137.00	127	0.04315	0	0	0
47	WS	Non-Residential	Large Commercial	General Large Commercial	HVAC	Air or Water Cooled Chilling Equipment (Chillers)	per ton	ROB	20	20	\$137.00	83	0.04708	0	0	0
48	WS	Non-Residential	Large Commercial	K12 Education	HVAC	Air or Water Cooled Chilling Equipment (Chillers)	per ton	ROB	20	20	\$224.07	85	0.00827	0	0	0
49	WS	Non-Residential	Large Commercial	Education with Summer Sessions	HVAC	Air or Water Cooled Chilling Equipment (Chillers)	per ton	ROB	20	20	\$224.07	185	0.00978	0	0	0
50	WS	Non-Residential	Large Commercial	Lodging	HVAC	Air or Water Cooled Chilling Equipment (Chillers)	per ton	ROB	20	20	\$224.07	291	0.00897	0	0	0
51	WS	Non-Residential	Large Commercial	General Large Commercial	HVAC	Air or Water Cooled Chilling Equipment (Chillers)	per ton	ROB	20	20	\$224.07	190	0.00987	0	0	0
52	WS	Non-Residential	Large Commercial	Hospital	HVAC	Air or Water Cooled Chilling Equipment (Chillers)	per ton	ROB	20	20	\$80.00	91	0.02550	0	0	0
53	WS	Non-Residential	Large Commercial	K12 Education	HVAC	Air or Water Cooled Chilling Equipment (Chillers)	per ton	ROB	20	20	\$80.00	23	0.02130	0	0	0
54	WS	Non-Residential	Large Commercial	Education with Summer Sessions	HVAC	Air or Water Cooled Chilling Equipment (Chillers)	per ton	ROB	20	20	\$80.00	50	0.02520	0	0	0
55	WS	Non-Residential	Large Commercial	Lodging	HVAC	Air or Water Cooled Chilling Equipment (Chillers)	per ton	ROB	20	20	\$80.00	78	0.02310	0	0	0
56	WS	Non-Residential	Large Commercial	General Large Commercial	HVAC	Air or Water Cooled Chilling Equipment (Chillers)	per ton	ROB	20	20	\$80.00	51	0.02520	0	0	0
57	WS	Non-Residential	Large Commercial	Hospital	HVAC	Air or Water Cooled Chilling Equipment (Chillers)	per ton	ROB	20	20	\$80.00	253	0.00850	0	0	0
58	WS	Non-Residential	Large Commercial	K12 Education	HVAC	Air or Water Cooled Chilling Equipment (Chillers)	per ton	ROB	20	20	\$80.00	64	0.00710	0	0	0
59	WS	Non-Residential	Large Commercial	Education with Summer Sessions	HVAC	Air or Water Cooled Chilling Equipment (Chillers)	per ton	ROB	20	20	\$80.00	139	0.00840	0	0	0
60	WS	Non-Residential	Large Commercial	Lodging	HVAC	Air or Water Cooled Chilling Equipment (Chillers)	per ton	ROB	20	20	\$80.00	219	0.00770	0	0	0

Commercial Measures

MEASURE DESCRIPTION						MEASURE INCREMENTAL SAVING PER UNIT										
Measure ID	Weather Sensitive	Sector	Sub-Sector	Building Type	End Use	Measure Name	Measure Unit Name	EEPM Logic (RET/ROB/NEW)	Baseline Unit Lifetime (Years)	Efficient Unit Lifetime (Years)	Total Incremental Cost	Annual kWh Savings	Annual kW Coincident Peak Savings	Annual Gas Savings (Therms)	Annual kWh Increases	Annual kW Coincident Peak Increases
61	WS	Non-Residential	Large Commercial	General Large Commercial	HVAC	Air or Water Cooled Chilling Equipment (Chillers)	per ton	ROB	20	20	\$80.00	143	0.00848	0	0	0
62	WS	Non-Residential	Large Commercial	Hospital	HVAC	Air or Water Cooled Chilling Equipment (Chillers)	per ton	ROB	25	25	\$58.00	91	0.02550	0	0	0
63	WS	Non-Residential	Large Commercial	Education with Summer Sessions	HVAC	Air or Water Cooled Chilling Equipment (Chillers)	per ton	ROB	25	25	\$58.00	50	0.02520	0	0	0
64	WS	Non-Residential	Large Commercial	Lodging	HVAC	Air or Water Cooled Chilling Equipment (Chillers)	per ton	ROB	25	25	\$58.00	78	0.02310	0	0	0
65	WS	Non-Residential	Large Commercial	General Large Commercial	HVAC	Air or Water Cooled Chilling Equipment (Chillers)	per ton	ROB	25	25	\$58.00	51	0.02520	0	0	0
66	WS	Non-Residential	Large Commercial	Hospital	HVAC	Air or Water Cooled Chilling Equipment (Chillers)	per ton	ROB	25	25	\$138.09	290	0.00850	0	0	0
67	WS	Non-Residential	Large Commercial	Education with Summer Sessions	HVAC	Air or Water Cooled Chilling Equipment (Chillers)	per ton	ROB	25	25	\$138.09	159	0.00840	0	0	0
68	WS	Non-Residential	Large Commercial	Lodging	HVAC	Air or Water Cooled Chilling Equipment (Chillers)	per ton	ROB	25	25	\$138.09	250	0.00770	0	0	0
69	WS	Non-Residential	Large Commercial	General Large Commercial	HVAC	Air or Water Cooled Chilling Equipment (Chillers)	per ton	ROB	25	25	\$138.09	163	0.00848	0	0	0
71	NWS	Non-Residential	Large Commercial	Hospital	HVAC	Variable Speed Drives for HVAC	Per HP	RET	15	15	\$175.00	2,921	0.07800	0	0	0
72	NWS	Non-Residential	Large Commercial	Hospital	HVAC	Variable Speed Drives for HVAC	Per HP	RET	15	15	\$280.00	1,478	0.17700	0	0	0
73	NWS	Non-Residential	Large Commercial	Hospital	HVAC	Variable Speed Drives for HVAC	Per HP	RET	15	15	\$280.00	3,109	0.00000	0	0	0
74	NWS	Non-Residential	Large Commercial	Hospital	HVAC	Variable Speed Drives for HVAC	Per HP	RET	15	15	\$175.00	4,409	0.10500	0	0	0
75	NWS	Non-Residential	Large Commercial	K12 Education	HVAC	Variable Speed Drives for HVAC	Per HP	RET	15	15	\$175.00	833	0.07800	0	0	0
76	NWS	Non-Residential	Large Commercial	K12 Education	HVAC	Variable Speed Drives for HVAC	Per HP	RET	15	15	\$280.00	561	0.17700	0	0	0
77	NWS	Non-Residential	Large Commercial	K12 Education	HVAC	Variable Speed Drives for HVAC	Per HP	RET	15	15	\$280.00	3,109	0.00000	0	0	0
78	NWS	Non-Residential	Large Commercial	K12 Education	HVAC	Variable Speed Drives for HVAC	Per HP	RET	15	15	\$175.00	1,258	0.10500	0	0	0
79	NWS	Non-Residential	Large Commercial	Education with Summer Sessions	HVAC	Variable Speed Drives for HVAC	Per HP	RET	15	15	\$175.00	985	0.07800	0	0	0
80	NWS	Non-Residential	Large Commercial	Education with Summer Sessions	HVAC	Variable Speed Drives for HVAC	Per HP	RET	15	15	\$280.00	627	0.17700	0	0	0
81	NWS	Non-Residential	Large Commercial	Education with Summer Sessions	HVAC	Variable Speed Drives for HVAC	Per HP	RET	15	15	\$280.00	3,109	0.00000	0	0	0
82	NWS	Non-Residential	Large Commercial	Education with Summer Sessions	HVAC	Variable Speed Drives for HVAC	Per HP	RET	15	15	\$175.00	1,487	0.10500	0	0	0
83	NWS	Non-Residential	Large Commercial	Lodging	HVAC	Variable Speed Drives for HVAC	Per HP	RET	15	15	\$175.00	1,167	0.07800	0	0	0
84	NWS	Non-Residential	Large Commercial	Lodging	HVAC	Variable Speed Drives for HVAC	Per HP	RET	15	15	\$280.00	708	0.17700	0	0	0
85	NWS	Non-Residential	Large Commercial	Lodging	HVAC	Variable Speed Drives for HVAC	Per HP	RET	15	15	\$280.00	3,109	0.00000	0	0	0
86	NWS	Non-Residential	Large Commercial	Lodging	HVAC	Variable Speed Drives for HVAC	Per HP	RET	15	15	\$175.00	1,762	0.10500	0	0	0
87	NWS	Non-Residential	Large Commercial	General Large Commercial	HVAC	Variable Speed Drives for HVAC	Per HP	RET	15	15	\$175.00	1,428	0.07800	0	0	0
88	NWS	Non-Residential	Large Commercial	General Large Commercial	HVAC	Variable Speed Drives for HVAC	Per HP	RET	15	15	\$280.00	822	0.17700	0	0	0
89	NWS	Non-Residential	Large Commercial	General Large Commercial	HVAC	Variable Speed Drives for HVAC	Per HP	RET	15	15	\$280.00	3,109	0.00000	0	0	0
90	NWS	Non-Residential	Large Commercial	General Large Commercial	HVAC	Variable Speed Drives for HVAC	Per HP	RET	15	15	\$175.00	2,156	0.10500	0	0	0
92	NWS	Non-Residential	Small Commercial	All	HVAC	Dual Enthalpy Economizer	Per Sqft	ROB	10	10	\$250.00	896	0.00000	0	0	0
93	NWS	Non-Residential	Large Commercial	All	HVAC	Dual Enthalpy Economizer	Per Sqft	ROB	10	10	\$2,000.00	8,545	0.00000	0	0	0
95	NWS	Non-Residential	Small Commercial	All	HVAC	Demand Controlled Ventilation	Per Sqft	ROB	10	10	\$600.00	2,536	2.26414	0	0	0
96	NWS	Non-Residential	Large Commercial	All	HVAC	Demand Controlled Ventilation	Per Sqft	ROB	10	10	\$3,960.55	8,221	0.00000	0	0	0
98	WS	Non-Residential	Small Commercial	All	HVAC	Ground Source Heatpump	Per ton	ROB	15	15	\$750.00	345	0.29101	0	0	0
100	WS	Non-Residential	Small Commercial	All	HVAC	AC Tune-Up	Per ton	RET	5	5	\$35.00	56	0.05029	0	0	0
102	NWS	Non-Residential	Small Commercial	All	HVAC	Electronically Commutated Motors for Refrigeration and HVAC Applications	Per HP	RET	15	15	\$400.00	2,895	0.66000	0	0	0
103	NWS	Non-Residential	All	Hospital	Lighting	High Performance T8/T5 with Low-BF Ballast	Per Fixture	RET	12.21640489	12.21640489	\$50.00	39	0.00655	0	0	0
104	NWS	Non-Residential	All	Hospital	Lighting	High Performance T8/T5 with Low-BF Ballast	Per Fixture	RET	12.21640489	12.21640489	\$55.00	56	0.00936	0	0	0
105	NWS	Non-Residential	All	Hospital	Lighting	High Performance T8/T5 with Low-BF Ballast	Per Fixture	RET	12.21640489	12.21640489	\$60.00	90	0.01498	0	0	0
106	NWS	Non-Residential	All	Hospital	Lighting	High Performance T8/T5 with Low-BF Ballast	Per Fixture	RET	12.21640489	12.21640489	\$65.00	112	0.01872	0	0	0
107	NWS	Non-Residential	All	K12 Education	Lighting	High Performance T8/T5 with Low-BF Ballast	Per Fixture	RET	25.20705798	25.20705798	\$50.00	19	0.00395	0	0	0
108	NWS	Non-Residential	All	K12 Education	Lighting	High Performance T8/T5 with Low-BF Ballast	Per Fixture	RET	25.20705798	25.20705798	\$55.00	27	0.00564	0	0	0
109	NWS	Non-Residential	All	K12 Education	Lighting	High Performance T8/T5 with Low-BF Ballast	Per Fixture	RET	25.20705798	25.20705798	\$60.00	44	0.00902	0	0	0
110	NWS	Non-Residential	All	K12 Education	Lighting	High Performance T8/T5 with Low-BF Ballast	Per Fixture	RET	25.20705798	25.20705798	\$65.00	54	0.01128	0	0	0
111	NWS	Non-Residential	All	Education with Summer Sessions	Lighting	High Performance T8/T5 with Low-BF Ballast	Per Fixture	RET	19.56947162	19.56947162	\$50.00	25	0.00580	0	0	0
112	NWS	Non-Residential	All	Education with Summer Sessions	Lighting	High Performance T8/T5 with Low-BF Ballast	Per Fixture	RET	19.56947162	19.56947162	\$55.00	35	0.00828	0	0	0
113	NWS	Non-Residential	All	Education with Summer Sessions	Lighting	High Performance T8/T5 with Low-BF Ballast	Per Fixture	RET	19.56947162	19.56947162	\$60.00	56	0.01325	0	0	0
114	NWS	Non-Residential	All	Education with Summer Sessions	Lighting	High Performance T8/T5 with Low-BF Ballast	Per Fixture	RET	19.56947162	19.56947162	\$65.00	70	0.01656	0	0	0
115	NWS	Non-Residential	All	Lodging	Lighting	High Performance T8/T5 with Low-BF Ballast	Per Fixture	RET	10.55806938	10.55806938	\$50.00	45	0.00689	0	0	0
116	NWS	Non-Residential	All	Lodging	Lighting	High Performance T8/T5 with Low-BF Ballast	Per Fixture	RET	10.55806938	10.55806938	\$55.00	65	0.00984	0	0	0
117	NWS	Non-Residential	All	Lodging	Lighting	High Performance T8/T5 with Low-BF Ballast	Per Fixture	RET	10.55806938	10.55806938	\$60.00	104	0.01574	0	0	0
118	NWS	Non-Residential	All	Lodging	Lighting	High Performance T8/T5 with Low-BF Ballast	Per Fixture	RET	10.55806938	10.55806938	\$65.00	130	0.01968	0	0	0
119	NWS	Non-Residential	All	General Large Commercial	Lighting	High Performance T8/T5 with Low-BF Ballast	Per Fixture	RET	18.73160289	18.73160289	\$50.00	26	0.00647	0	0	0
120	NWS	Non-Residential	All	General Large Commercial	Lighting	High Performance T8/T5 with Low-BF Ballast	Per Fixture	RET	18.73160289	18.73160289	\$55.00	37	0.00924	0	0	0

Commercial Measures

Measure ID	Weather Sensitive	Sector	Sub-Sector	Building Type	End Use	Measure Description	Measure Name	Measure Unit	EPM Logic (RET/RO B/NEW)	Baseline Unit Lifetime (Years)	Efficient Unit Lifetime (Years)	Total Incremental Cost	MEASURE INCREMENTAL SAVING PER UNIT				
													Annual kWh Savings	Annual kW Coincident Peak Savings	Annual Gas Savings (Therms)	Annual kWh Increases	Annual kW Coincident Peak Increases
121	NWS	Non-Residential	All	General Large Commercial	Lighting	High Performance T8/T5 with Low-BF Ballast	Per Fixture	RET	18.73160289	18.73160289	\$60.00	59	0.01478	0	0	0	
122	NWS	Non-Residential	All	General Large Commercial	Lighting	High Performance T8/T5 with Low-BF Ballast	Per Fixture	RET	18.73160289	18.73160289	\$65.00	73	0.01848	0	0	0	
123	NWS	Non-Residential	All	General Small Commercial	Lighting	High Performance T8/T5 with Low-BF Ballast	Per Fixture	RET	16.87289089	16.87289089	\$50.00	28	0.00764	0	0	0	
124	NWS	Non-Residential	All	General Small Commercial	Lighting	High Performance T8/T5 with Low-BF Ballast	Per Fixture	RET	16.87289089	16.87289089	\$55.00	41	0.01092	0	0	0	
125	NWS	Non-Residential	All	General Small Commercial	Lighting	High Performance T8/T5 with Low-BF Ballast	Per Fixture	RET	16.87289089	16.87289089	\$60.00	65	0.01747	0	0	0	
126	NWS	Non-Residential	All	General Small Commercial	Lighting	High Performance T8/T5 with Low-BF Ballast	Per Fixture	RET	16.87289089	16.87289089	\$65.00	81	0.02184	0	0	0	
127	NWS	Non-Residential	All	Hospital	Lighting	Reduced Wattage T8/T5 Lamps	Per Lamp	ROB	2.617801047	6.282722513	\$2.00	34	0.00562	0	0	0	
128	NWS	Non-Residential	All	K12 Education	Lighting	Reduced Wattage T8/T5 Lamps	Per Lamp	ROB	5.401512423	12.96362982	\$2.00	16	0.00338	0	0	0	
129	NWS	Non-Residential	All	Education with Summer Sessions	Lighting	Reduced Wattage T8/T5 Lamps	Per Lamp	ROB	4.193458205	10.06429969	\$2.00	21	0.00497	0	0	0	
130	NWS	Non-Residential	All	Lodging	Lighting	Reduced Wattage T8/T5 Lamps	Per Lamp	ROB	2.262443439	5.429864253	\$2.00	39	0.00590	0	0	0	
131	NWS	Non-Residential	All	General Large Commercial	Lighting	Reduced Wattage T8/T5 Lamps	Per Lamp	ROB	4.013914905	9.633395772	\$2.00	22	0.00554	0	0	0	
132	NWS	Non-Residential	All	General Small Commercial	Lighting	Reduced Wattage T8/T5 Lamps	Per Lamp	ROB	3.615619476	8.677486743	\$2.00	24	0.00655	0	0	0	
133	NWS	Non-Residential	All	Hospital	Lighting	Reduced Wattage T8/T5 Lamps	Per Lamp	RET	2.617801047	6.282722513	\$7.17	34	0.00562	0	0	0	
134	NWS	Non-Residential	All	K12 Education	Lighting	Reduced Wattage T8/T5 Lamps	Per Lamp	RET	5.401512423	12.96362982	\$7.17	16	0.00338	0	0	0	
135	NWS	Non-Residential	All	Education with Summer Sessions	Lighting	Reduced Wattage T8/T5 Lamps	Per Lamp	RET	4.193458205	10.06429969	\$7.17	21	0.00497	0	0	0	
136	NWS	Non-Residential	All	Lodging	Lighting	Reduced Wattage T8/T5 Lamps	Per Lamp	RET	2.262443439	5.429864253	\$7.17	39	0.00590	0	0	0	
137	NWS	Non-Residential	All	General Large Commercial	Lighting	Reduced Wattage T8/T5 Lamps	Per Lamp	RET	4.013914905	9.633395772	\$7.17	22	0.00554	0	0	0	
138	NWS	Non-Residential	All	General Small Commercial	Lighting	Reduced Wattage T8/T5 Lamps	Per Lamp	RET	3.615619476	8.677486743	\$7.17	24	0.00655	0	0	0	
139	NWS	Non-Residential	All	Hospital	Lighting	Linear Florescent Fixture Upgrade	Per Lamp	RET	0	11	\$49.00	112	0.01872	0	0	0	
140	NWS	Non-Residential	All	K12 Education	Lighting	Linear Florescent Fixture Upgrade	Per Lamp	RET	0	11	\$49.00	54	0.01128	0	0	0	
141	NWS	Non-Residential	All	Education with Summer Sessions	Lighting	Linear Florescent Fixture Upgrade	Per Lamp	RET	0	11	\$49.00	42	0.01656	0	0	0	
142	NWS	Non-Residential	All	Lodging	Lighting	Linear Florescent Fixture Upgrade	Per Lamp	RET	0	11	\$49.00	130	0.01968	0	0	0	
143	NWS	Non-Residential	All	General Large Commercial	Lighting	Linear Florescent Fixture Upgrade	Per Lamp	RET	0	11	\$49.00	73	0.01848	0	0	0	
144	NWS	Non-Residential	All	General Small Commercial	Lighting	Linear Florescent Fixture Upgrade	Per Lamp	RET	0	11	\$49.00	81	0.02184	0	0	0	
145	NWS	Non-Residential	All	Hospital	Lighting	Linear Florescent Fixture Upgrade	Per Lamp	RET	0	11	\$53.00	225	0.03744	0	0	0	
146	NWS	Non-Residential	All	K12 Education	Lighting	Linear Florescent Fixture Upgrade	Per Lamp	RET	0	11	\$53.00	109	0.02256	0	0	0	
147	NWS	Non-Residential	All	Education with Summer Sessions	Lighting	Linear Florescent Fixture Upgrade	Per Lamp	RET	0	11	\$53.00	140	0.03312	0	0	0	
148	NWS	Non-Residential	All	Lodging	Lighting	Linear Florescent Fixture Upgrade	Per Lamp	RET	0	11	\$53.00	260	0.03936	0	0	0	
149	NWS	Non-Residential	All	General Large Commercial	Lighting	Linear Florescent Fixture Upgrade	Per Lamp	RET	0	11	\$53.00	146	0.03696	0	0	0	
150	NWS	Non-Residential	All	General Small Commercial	Lighting	Linear Florescent Fixture Upgrade	Per Lamp	RET	0	11	\$53.00	163	0.04368	0	0	0	
151	NWS	Non-Residential	All	Hospital	Lighting	Linear Florescent Fixture Upgrade	Per Lamp	RET	0	11	\$80.00	112	0.01872	0	0	0	
152	NWS	Non-Residential	All	K12 Education	Lighting	Linear Florescent Fixture Upgrade	Per Lamp	RET	0	11	\$80.00	54	0.01128	0	0	0	
153	NWS	Non-Residential	All	Education with Summer Sessions	Lighting	Linear Florescent Fixture Upgrade	Per Lamp	RET	0	11	\$80.00	70	0.01656	0	0	0	
154	NWS	Non-Residential	All	Lodging	Lighting	Linear Florescent Fixture Upgrade	Per Lamp	RET	0	11	\$80.00	130	0.01968	0	0	0	
155	NWS	Non-Residential	All	General Large Commercial	Lighting	Linear Florescent Fixture Upgrade	Per Lamp	RET	0	11	\$80.00	73	0.01848	0	0	0	
156	NWS	Non-Residential	All	General Small Commercial	Lighting	Linear Florescent Fixture Upgrade	Per Lamp	RET	0	11	\$80.00	81	0.02184	0	0	0	
157	NWS	Non-Residential	All	Hospital	Lighting	Linear Florescent Fixture Upgrade	Per Lamp	RET	0	11	\$80.00	225	0.03744	0	0	0	
158	NWS	Non-Residential	All	K12 Education	Lighting	Linear Florescent Fixture Upgrade	Per Lamp	RET	0	11	\$80.00	109	0.02256	0	0	0	
159	NWS	Non-Residential	All	Education with Summer Sessions	Lighting	Linear Florescent Fixture Upgrade	Per Lamp	RET	0	11	\$80.00	140	0.03312	0	0	0	
160	NWS	Non-Residential	All	Lodging	Lighting	Linear Florescent Fixture Upgrade	Per Lamp	RET	0	11	\$80.00	260	0.03936	0	0	0	
161	NWS	Non-Residential	All	General Large Commercial	Lighting	Linear Florescent Fixture Upgrade	Per Lamp	RET	0	11	\$80.00	146	0.03696	0	0	0	
162	NWS	Non-Residential	All	General Small Commercial	Lighting	Linear Florescent Fixture Upgrade	Per Lamp	RET	0	11	\$80.00	163	0.04368	0	0	0	
163	NWS	Non-Residential	All	Hospital	Lighting	Commercial Standard CFL	Per Lamp	ROB	0.17452007	1.396160558	\$1.50	160	0.02659	0	0	0	
164	NWS	Non-Residential	All	Hospital	Lighting	Commercial Standard CFL	Per Lamp	ROB	0.17452007	1.396160558	\$5.00	325	0.05419	0	0	0	
165	NWS	Non-Residential	All	K12 Education	Lighting	Commercial Standard CFL	Per Lamp	ROB	0.360100828	1	\$1.50	77	0.01602	0	0	0	
166	NWS	Non-Residential	All	K12 Education	Lighting	Commercial Standard CFL	Per Lamp	ROB	0.360100828	2.880806626	\$5.00	158	0.03266	0	0	0	
167	NWS	Non-Residential	All	Education with Summer Sessions	Lighting	Commercial Standard CFL	Per Lamp	ROB	0.27956388	2.236511043	\$1.50	100	0.02353	0	0	0	
168	NWS	Non-Residential	All	Education with Summer Sessions	Lighting	Commercial Standard CFL	Per Lamp	ROB	0.27956388	2.236511043	\$5.00	203	0.04794	0	0	0	
169	NWS	Non-Residential	All	Lodging	Lighting	Commercial Standard CFL	Per Lamp	ROB	0.327332242	2.618657938	\$1.50	85	0.00852	0	0	0	
170	NWS	Non-Residential	All	Lodging	Lighting	Commercial Standard CFL	Per Lamp	ROB	0.327332242	2	\$5.00	173	0.01737	0	0	0	
171	NWS	Non-Residential	All	General Large Commercial	Lighting	Commercial Standard CFL	Per Lamp	ROB	0.267594327	2.140754616	\$1.50	104	0.02625	0	0	0	
172	NWS	Non-Residential	All	General Large Commercial	Lighting	Commercial Standard CFL	Per Lamp	ROB	0.267594327	2.140754616	\$5.00	212	0.05350	0	0	0	
173	NWS	Non-Residential	All	General Small Commercial	Lighting	Commercial Standard CFL	Per Lamp	ROB	0.241041298	2	\$1.50	116	0.03103	0	0	0	
174	NWS	Non-Residential	All	General Small Commercial	Lighting	Commercial Standard CFL	Per Lamp	ROB	0.241041298	1	\$5.00	235	0.06323	0	0	0	
175	NWS	Non-Residential	All	Hospital	Lighting	LED Bulbs	Per Lamp	ROB	0.17452007	8.72600349	\$10.00	168	0.02801	0	0	0	
176	NWS	Non-Residential	All	Hospital	Lighting	LED Bulbs	Per Lamp	ROB	0.17452007	8.72600349	\$15.00	337	0.05625	0	0	0	
177	NWS	Non-Residential	All	K12 Education	Lighting	LED Bulbs	Per Lamp	ROB	0.360100828	18.00504141	\$10.00	81	0.01688	0	0	0	
178	NWS	Non-Residential	All	K12 Education	Lighting	LED Bulbs	Per Lamp	ROB	0.360100828	18.00504141	\$15.00	164	0.03390	0	0	0	
179	NWS	Non-Residential	All	Education with Summer Sessions	Lighting	LED Bulbs	Per Lamp	ROB	0.27956388	13.97819402	\$10.00	105	0.02478	0	0	0	
180	NWS	Non-Residential	All	Education with Summer Sessions	Lighting	LED Bulbs	Per Lamp	ROB	0.27956388	13.97819402	\$15.00	211	0.04976	0	0	0	

Commercial Measures

Measure ID	Weather Sensitive	Sector	Sub-Sector	Building Type	End Use	Measure Description	Measure Name	Measure Unit	EPPM Logic (RET/RO B/NEW)	Baseline Unit Lifetime (Years)	Efficient Unit Lifetime (Years)	Total Incremental Cost	MEASURE INCREMENTAL SAVING PER UNIT				
													Annual kWh Savings	Annual kW Coincident Peak Savings	Annual Gas Savings (Therms)	Annual kWh Increases	Annual kW Coincident Peak Increases
181	NWS	Non-Residential	All	Lodging	Lighting	LED Bulbs	Per Lamp	ROB	0.327332242	16.36661211	\$10.00	90	0.00898	0	0	0	
182	NWS	Non-Residential	All	Lodging	Lighting	LED Bulbs	Per Lamp	ROB	0.327332242	16.36661211	\$15.00	180	0.01803	0	0	0	
183	NWS	Non-Residential	All	General Large Commercial	Lighting	LED Bulbs	Per Lamp	ROB	0.267594327	13.37971635	\$10.00	110	0.02765	0	0	0	
184	NWS	Non-Residential	All	General Large Commercial	Lighting	LED Bulbs	Per Lamp	ROB	0.267594327	13.37971635	\$15.00	220	0.05535	0	0	0	
185	NWS	Non-Residential	All	General Small Commercial	Lighting	LED Bulbs	Per Lamp	ROB	0.241041298	12.05206492	\$10.00	122	0.03268	0	0	0	
186	NWS	Non-Residential	All	General Small Commercial	Lighting	LED Bulbs	Per Lamp	ROB	0.241041298	12.05206492	\$15.00	244	0.06563	0	0	0	
187	NWS	Non-Residential	Large Commercial	All	Lighting	Efficient High Bay Lighting	Per Fixture	RET	10.70377308	18.73160289	\$200.00	315	0.07946	0	0	0	
188	NWS	Non-Residential	Small Commercial	All	Lighting	Efficient High Bay Lighting	Per Fixture	RET	9.641651936	16.87289089	\$200.00	350	0.09391	0	0	0	
189	NWS	Non-Residential	Large Commercial	All	Lighting	Efficient High Bay Lighting	Per Fixture	RET	9.641651936	16.87289089	\$225.00	524	0.14087	0	0	0	
190	NWS	Non-Residential	Small Commercial	All	Lighting	Efficient High Bay Lighting	Per Fixture	RET	9.641651936	16.87289089	\$225.00	524	0.14087	0	0	0	
191	NWS	Non-Residential	Large Commercial	All	Lighting	Efficient High Bay Lighting	Per Fixture	RET	10.70377308	18.73160289	\$200.00	546	0.13768	0	0	0	
192	NWS	Non-Residential	Small Commercial	All	Lighting	Efficient High Bay Lighting	Per Fixture	RET	10.70377308	18.73160289	\$200.00	546	0.13768	0	0	0	
193	NWS	Non-Residential	Large Commercial	All	Lighting	Efficient High Bay Lighting	Per Fixture	RET	9.641651936	16.87289089	\$225.00	951	0.25553	0	0	0	
194	NWS	Non-Residential	Small Commercial	All	Lighting	Efficient High Bay Lighting	Per Fixture	RET	9.641651936	16.87289089	\$225.00	951	0.25553	0	0	0	
195	NWS	Non-Residential	Large Commercial	All	Lighting	Efficient High Bay Lighting	Per Fixture	RET	2.67594327	8.02782981	\$200.00	494	0.12456	0	0	0	
196	NWS	Non-Residential	Small Commercial	All	Lighting	Efficient High Bay Lighting	Per Fixture	RET	2.410412984	7.231238952	\$200.00	548	0.14720	0	0	0	
197	NWS	Non-Residential	Large Commercial	All	Lighting	Efficient High Bay Lighting	Per Fixture	RET	2.67594327	8.02782981	\$200.00	263	0.06600	0	0	0	
198	NWS	Non-Residential	Small Commercial	All	Lighting	Efficient High Bay Lighting	Per Fixture	RET	2.410412984	7.231238952	\$200.00	292	0.07800	0	0	0	
199	NWS	Non-Residential	Large Commercial	All	Lighting	Lighting Controls	Per Fixture	RET	0	8	\$77.67	370	0.09898	0	0	0	
200	NWS	Non-Residential	Large Commercial	All	Lighting	Lighting Controls	Per Fixture	RET	0	8	\$77.67	247	0.06599	0	0	0	
201	NWS	Non-Residential	Large Commercial	All	Lighting	Lighting Controls	Per Fixture	RET	0	8	\$77.67	123	0.03299	0	0	0	
202	NWS	Non-Residential	Large Commercial	All	Lighting	Lighting Controls	Per Fixture	RET	0	8	\$77.67	370	0.09898	0	0	0	
203	NWS	Non-Residential	Large Commercial	All	Lighting	Lighting Controls	Per Fixture	RET	0	8	\$77.67	493	0.13197	0	0	0	
204	NWS	Non-Residential	Large Commercial	All	Lighting	Lighting Controls	Per Fixture	RET	0	8	\$77.67	432	0.11548	0	0	0	
205	NWS	Non-Residential	Large Commercial	All	Lighting	Lighting Controls	Per Fixture	RET	0	8	\$77.67	432	0.11548	0	0	0	
206	NWS	Non-Residential	Small Commercial	All	Lighting	Lighting Controls	Per Fixture	RET	0	8	\$77.67	411	0.09898	0	0	0	
207	NWS	Non-Residential	Small Commercial	All	Lighting	Lighting Controls	Per Fixture	RET	0	8	\$77.67	274	0.06599	0	0	0	
208	NWS	Non-Residential	Small Commercial	All	Lighting	Lighting Controls	Per Fixture	RET	0	8	\$77.67	137	0.03299	0	0	0	
209	NWS	Non-Residential	Small Commercial	All	Lighting	Lighting Controls	Per Fixture	RET	0	8	\$77.67	411	0.09898	0	0	0	
210	NWS	Non-Residential	Small Commercial	All	Lighting	Lighting Controls	Per Fixture	RET	0	8	\$77.67	548	0.13197	0	0	0	
211	NWS	Non-Residential	Small Commercial	All	Lighting	Lighting Controls	Per Fixture	RET	0	8	\$77.67	479	0.11548	0	0	0	
212	NWS	Non-Residential	Small Commercial	All	Lighting	Lighting Controls	Per Fixture	RET	0	8	\$77.67	479	0.11548	0	0	0	
213	NWS	Non-Residential	Small Commercial	All	Lighting	LED Exit Signs	Per Fixture	RET	1.37	16	\$30.00	77	0.00983	0	0	0	
214	NWS	Non-Residential	All	Hospital	Refrigeration	Electronically Commutated Motors (ECM) for Walk-in and Reach-in Coolers/Freezers	Per Motor	RET	15	15	\$50.00	411	0.03300	0	0	0	
215	NWS	Non-Residential	All	K12 Education	Refrigeration	Electronically Commutated Motors (ECM) for Walk-in and Reach-in Coolers/Freezers	Per Motor	RET	15	15	\$50.00	411	0.03300	0	0	0	
216	NWS	Non-Residential	All	Education with Summer Sessions	Refrigeration	Electronically Commutated Motors (ECM) for Walk-in and Reach-in Coolers/Freezers	Per Motor	RET	15	15	\$50.00	411	0.03300	0	0	0	
217	NWS	Non-Residential	All	Lodging	Refrigeration	Electronically Commutated Motors (ECM) for Walk-in and Reach-in Coolers/Freezers	Per Motor	RET	15	15	\$50.00	411	0.03300	0	0	0	
218	NWS	Non-Residential	All	Food Sales	Refrigeration	Electronically Commutated Motors (ECM) for Walk-in and Reach-in Coolers/Freezers	Per Motor	RET	15	15	\$50.00	392	0.05100	0	0	0	
219	NWS	Non-Residential	All	Restaurant	Refrigeration	Electronically Commutated Motors (ECM) for Walk-in and Reach-in Coolers/Freezers	Per Motor	RET	15	15	\$50.00	411	0.03300	0	0	0	
220	NWS	Non-Residential	All	Hospital	Refrigeration	ENERGY STAR Solid Door Refrigerator	Per Unit	ROB	12	12	\$143.00	1,292	0.15000	0	0	0	
221	NWS	Non-Residential	All	Hospital	Refrigeration	ENERGY STAR Solid Door Refrigerator	Per Unit	ROB	12	12	\$164.00	1,840	0.21000	0	0	0	
222	NWS	Non-Residential	All	Hospital	Refrigeration	ENERGY STAR Solid Door Refrigerator	Per Unit	ROB	12	12	\$164.00	2,570	0.29000	0	0	0	
223	NWS	Non-Residential	All	Hospital	Refrigeration	ENERGY STAR Solid Door Refrigerator	Per Unit	ROB	12	12	\$249.00	3,300	0.38000	0	0	0	
224	NWS	Non-Residential	All	Hospital	Refrigeration	ENERGY STAR Solid Door Freezer	Per Unit	ROB	12	12	\$142.00	2,694	0.31000	0	0	0	
225	NWS	Non-Residential	All	Hospital	Refrigeration	ENERGY STAR Solid Door Freezer	Per Unit	ROB	12	12	\$166.00	4,884	0.56000	0	0	0	
226	NWS	Non-Residential	All	Hospital	Refrigeration	ENERGY STAR Solid Door Freezer	Per Unit	ROB	12	12	\$166.00	7,804	0.89000	0	0	0	
227	NWS	Non-Residential	All	Hospital	Refrigeration	ENERGY STAR Solid Door Freezer	Per Unit	ROB	12	12	\$407.00	10,724	1.22000	0	0	0	
228	NWS	Non-Residential	All	K12 Education	Refrigeration	ENERGY STAR Solid Door Refrigerator	Per Unit	ROB	12	12	\$143.00	1,292	0.15000	0	0	0	
229	NWS	Non-Residential	All	K12 Education	Refrigeration	ENERGY STAR Solid Door Refrigerator	Per Unit	ROB	12	12	\$164.00	1,840	0.21000	0	0	0	
230	NWS	Non-Residential	All	K12 Education	Refrigeration	ENERGY STAR Solid Door Refrigerator	Per Unit	ROB	12	12	\$164.00	2,570	0.29000	0	0	0	
231	NWS	Non-Residential	All	K12 Education	Refrigeration	ENERGY STAR Solid Door Refrigerator	Per Unit	ROB	12	12	\$249.00	3,300	0.38000	0	0	0	
232	NWS	Non-Residential	All	K12 Education	Refrigeration	ENERGY STAR Solid Door Freezer	Per Unit	ROB	12	12	\$142.00	2,694	0.31000	0	0	0	
233	NWS	Non-Residential	All	K12 Education	Refrigeration	ENERGY STAR Solid Door Freezer	Per Unit	ROB	12	12	\$166.00	4,884	0.56000	0	0	0	
234	NWS	Non-Residential	All	K12 Education	Refrigeration	ENERGY STAR Solid Door Freezer	Per Unit	ROB	12	12	\$166.00	7,804	0.89000	0	0	0	
235	NWS	Non-Residential	All	K12 Education	Refrigeration	ENERGY STAR Solid Door Freezer	Per Unit	ROB	12	12	\$407.00	10,724	1.22000	0	0	0	
236	NWS	Non-Residential	All	Education with Summer Sessions	Refrigeration	ENERGY STAR Solid Door Refrigerator	Per Unit	ROB	12	12	\$143.00	1,292	0.15000	0	0	0	
237	NWS	Non-Residential	All	Education with Summer Sessions	Refrigeration	ENERGY STAR Solid Door Refrigerator	Per Unit	ROB	12	12	\$164.00	1,840	0.21000	0	0	0	
238	NWS	Non-Residential	All	Education with Summer Sessions	Refrigeration	ENERGY STAR Solid Door Refrigerator	Per Unit	ROB	12	12	\$164.00	2,570	0.29000	0	0	0	
239	NWS	Non-Residential	All	Education with Summer Sessions	Refrigeration	ENERGY STAR Solid Door Refrigerator	Per Unit	ROB	12	12	\$249.00	3,300	0.38000	0	0	0	
240	NWS	Non-Residential	All	Education with Summer Sessions	Refrigeration	ENERGY STAR Solid Door Freezer	Per Unit	ROB	12	12	\$142.00	2,694	0.31000	0	0	0	

Commercial Measures

Measure ID	Weather Sensitive	Sector	Sub-Sector	Building Type	End Use	MEASURE DESCRIPTION Measure Name	Measure Unit Name	EPM Logic (RET/RO B/NEW)	Baseline Unit Lifetime (Years)	Efficient Unit Lifetime (Years)	MEASURE INCREMENTAL SAVING PER UNIT					
											Total Incremental Cost	Annual kWh Savings	Annual kW Coincident Peak Savings	Annual Gas Savings (Therms)	Annual kWh Increases	Annual kW Coincident Peak Increases
241	NWS	Non-Residential	All	Education with Summer Sessions	Refrigeration	ENERGY STAR Solid Door Freezer	Per Unit	ROB	12	12	\$166.00	4,884	0.56000	0	0	0
242	NWS	Non-Residential	All	Education with Summer Sessions	Refrigeration	ENERGY STAR Solid Door Freezer	Per Unit	ROB	12	12	\$166.00	7,804	0.89000	0	0	0
243	NWS	Non-Residential	All	Education with Summer Sessions	Refrigeration	ENERGY STAR Solid Door Freezer	Per Unit	ROB	12	12	\$407.00	10,724	1.22000	0	0	0
244	NWS	Non-Residential	All	Lodging	Refrigeration	ENERGY STAR Solid Door Refrigerator	Per Unit	ROB	12	12	\$143.00	1,292	0.15000	0	0	0
245	NWS	Non-Residential	All	Lodging	Refrigeration	ENERGY STAR Solid Door Refrigerator	Per Unit	ROB	12	12	\$164.00	1,840	0.21000	0	0	0
246	NWS	Non-Residential	All	Lodging	Refrigeration	ENERGY STAR Solid Door Refrigerator	Per Unit	ROB	12	12	\$164.00	2,570	0.29000	0	0	0
247	NWS	Non-Residential	All	Lodging	Refrigeration	ENERGY STAR Solid Door Refrigerator	Per Unit	ROB	12	12	\$249.00	3,300	0.38000	0	0	0
248	NWS	Non-Residential	All	Lodging	Refrigeration	ENERGY STAR Solid Door Freezer	Per Unit	ROB	12	12	\$142.00	2,694	0.31000	0	0	0
249	NWS	Non-Residential	All	Lodging	Refrigeration	ENERGY STAR Solid Door Freezer	Per Unit	ROB	12	12	\$166.00	4,884	0.56000	0	0	0
250	NWS	Non-Residential	All	Lodging	Refrigeration	ENERGY STAR Solid Door Freezer	Per Unit	ROB	12	12	\$166.00	7,804	0.89000	0	0	0
251	NWS	Non-Residential	All	Lodging	Refrigeration	ENERGY STAR Solid Door Freezer	Per Unit	ROB	12	12	\$407.00	10,724	1.22000	0	0	0
252	NWS	Non-Residential	All	Food Sales	Refrigeration	ENERGY STAR Solid Door Refrigerator	Per Unit	ROB	12	12	\$143.00	1,292	0.15000	0	0	0
253	NWS	Non-Residential	All	Food Sales	Refrigeration	ENERGY STAR Solid Door Refrigerator	Per Unit	ROB	12	12	\$164.00	1,840	0.21000	0	0	0
254	NWS	Non-Residential	All	Food Sales	Refrigeration	ENERGY STAR Solid Door Refrigerator	Per Unit	ROB	12	12	\$164.00	2,570	0.29000	0	0	0
255	NWS	Non-Residential	All	Food Sales	Refrigeration	ENERGY STAR Solid Door Refrigerator	Per Unit	ROB	12	12	\$249.00	3,300	0.38000	0	0	0
256	NWS	Non-Residential	All	Food Sales	Refrigeration	ENERGY STAR Solid Door Freezer	Per Unit	ROB	12	12	\$142.00	2,694	0.31000	0	0	0
257	NWS	Non-Residential	All	Food Sales	Refrigeration	ENERGY STAR Solid Door Freezer	Per Unit	ROB	12	12	\$166.00	4,884	0.56000	0	0	0
258	NWS	Non-Residential	All	Food Sales	Refrigeration	ENERGY STAR Solid Door Freezer	Per Unit	ROB	12	12	\$166.00	7,804	0.89000	0	0	0
259	NWS	Non-Residential	All	Food Sales	Refrigeration	ENERGY STAR Solid Door Freezer	Per Unit	ROB	12	12	\$407.00	10,724	1.22000	0	0	0
260	NWS	Non-Residential	All	Restaurant	Refrigeration	ENERGY STAR Solid Door Refrigerator	Per Unit	ROB	12	12	\$143.00	1,292	0.15000	0	0	0
261	NWS	Non-Residential	All	Restaurant	Refrigeration	ENERGY STAR Solid Door Refrigerator	Per Unit	ROB	12	12	\$164.00	1,840	0.21000	0	0	0
262	NWS	Non-Residential	All	Restaurant	Refrigeration	ENERGY STAR Solid Door Refrigerator	Per Unit	ROB	12	12	\$164.00	2,570	0.29000	0	0	0
263	NWS	Non-Residential	All	Restaurant	Refrigeration	ENERGY STAR Solid Door Refrigerator	Per Unit	ROB	12	12	\$249.00	3,300	0.38000	0	0	0
264	NWS	Non-Residential	All	Restaurant	Refrigeration	ENERGY STAR Solid Door Freezer	Per Unit	ROB	12	12	\$142.00	2,694	0.31000	0	0	0
265	NWS	Non-Residential	All	Restaurant	Refrigeration	ENERGY STAR Solid Door Freezer	Per Unit	ROB	12	12	\$166.00	4,884	0.56000	0	0	0
266	NWS	Non-Residential	All	Restaurant	Refrigeration	ENERGY STAR Solid Door Freezer	Per Unit	ROB	12	12	\$166.00	7,804	0.89000	0	0	0
267	NWS	Non-Residential	All	Restaurant	Refrigeration	ENERGY STAR Solid Door Freezer	Per Unit	ROB	12	12	\$407.00	10,724	1.22000	0	0	0
268	NWS	Non-Residential	All	Hospital	Refrigeration	Vending Machine Occupancy Controls	Per Unit	RET	5	5	\$180.00	1,612	0.03000	0	0	0
269	NWS	Non-Residential	All	Hospital	Refrigeration	Vending Machine Occupancy Controls	Per Unit	RET	5	5	\$180.00	1,086	0.03500	0	0	0
270	NWS	Non-Residential	All	Hospital	Refrigeration	Vending Machine Occupancy Controls	Per Unit	RET	5	5	\$80.00	387	0.00600	0	0	0
271	NWS	Non-Residential	All	K12 Education	Refrigeration	Vending Machine Occupancy Controls	Per Unit	RET	5	5	\$180.00	1,612	0.03000	0	0	0
272	NWS	Non-Residential	All	K12 Education	Refrigeration	Vending Machine Occupancy Controls	Per Unit	RET	5	5	\$180.00	1,086	0.03500	0	0	0
273	NWS	Non-Residential	All	K12 Education	Refrigeration	Vending Machine Occupancy Controls	Per Unit	RET	5	5	\$80.00	387	0.00600	0	0	0
274	NWS	Non-Residential	All	Education with Summer Sessions	Refrigeration	Vending Machine Occupancy Controls	Per Unit	RET	5	5	\$180.00	1,612	0.03000	0	0	0
275	NWS	Non-Residential	All	Education with Summer Sessions	Refrigeration	Vending Machine Occupancy Controls	Per Unit	RET	5	5	\$180.00	1,086	0.03500	0	0	0
276	NWS	Non-Residential	All	Education with Summer Sessions	Refrigeration	Vending Machine Occupancy Controls	Per Unit	RET	5	5	\$80.00	387	0.00600	0	0	0
277	NWS	Non-Residential	All	Lodging	Refrigeration	Vending Machine Occupancy Controls	Per Unit	RET	5	5	\$180.00	1,612	0.03000	0	0	0
278	NWS	Non-Residential	All	Lodging	Refrigeration	Vending Machine Occupancy Controls	Per Unit	RET	5	5	\$180.00	1,086	0.03500	0	0	0
279	NWS	Non-Residential	All	Lodging	Refrigeration	Vending Machine Occupancy Controls	Per Unit	RET	5	5	\$80.00	387	0.00600	0	0	0
280	NWS	Non-Residential	All	Food Sales	Refrigeration	Vending Machine Occupancy Controls	Per Unit	RET	5	5	\$180.00	1,612	0.03000	0	0	0
281	NWS	Non-Residential	All	Food Sales	Refrigeration	Vending Machine Occupancy Controls	Per Unit	RET	5	5	\$180.00	1,086	0.03500	0	0	0
282	NWS	Non-Residential	All	Food Sales	Refrigeration	Vending Machine Occupancy Controls	Per Unit	RET	5	5	\$80.00	387	0.00600	0	0	0
283	NWS	Non-Residential	All	Restaurant	Refrigeration	Vending Machine Occupancy Controls	Per Unit	RET	5	5	\$180.00	1,612	0.03000	0	0	0
284	NWS	Non-Residential	All	Restaurant	Refrigeration	Vending Machine Occupancy Controls	Per Unit	RET	5	5	\$180.00	1,086	0.03500	0	0	0
285	NWS	Non-Residential	All	Restaurant	Refrigeration	Vending Machine Occupancy Controls	Per Unit	RET	5	5	\$80.00	387	0.00600	0	0	0
286	NWS	Non-Residential	All	Hospital	Refrigeration	Automatic Door Closer for Walk-in Coolers and Freezers	Per Unit	RET	8	8	\$156.82	943	0.13700	0	0	0
287	NWS	Non-Residential	All	Hospital	Refrigeration	Automatic Door Closer for Walk-in Coolers and Freezers	Per Unit	RET	8	8	\$156.82	2,307	0.30900	0	0	0
288	NWS	Non-Residential	All	K12 Education	Refrigeration	Automatic Door Closer for Walk-in Coolers and Freezers	Per Unit	RET	8	8	\$156.82	943	0.13700	0	0	0
289	NWS	Non-Residential	All	K12 Education	Refrigeration	Automatic Door Closer for Walk-in Coolers and Freezers	Per Unit	RET	8	8	\$156.82	2,307	0.30900	0	0	0
290	NWS	Non-Residential	All	Education with Summer Sessions	Refrigeration	Automatic Door Closer for Walk-in Coolers and Freezers	Per Unit	RET	8	8	\$156.82	943	0.13700	0	0	0
291	NWS	Non-Residential	All	Education with Summer Sessions	Refrigeration	Automatic Door Closer for Walk-in Coolers and Freezers	Per Unit	RET	8	8	\$156.82	2,307	0.30900	0	0	0
292	NWS	Non-Residential	All	Lodging	Refrigeration	Automatic Door Closer for Walk-in Coolers and Freezers	Per Unit	RET	8	8	\$156.82	943	0.13700	0	0	0
293	NWS	Non-Residential	All	Lodging	Refrigeration	Automatic Door Closer for Walk-in Coolers and Freezers	Per Unit	RET	8	8	\$156.82	2,307	0.30900	0	0	0
294	NWS	Non-Residential	All	Food Sales	Refrigeration	Automatic Door Closer for Walk-in Coolers and Freezers	Per Unit	RET	8	8	\$156.82	943	0.13700	0	0	0
295	NWS	Non-Residential	All	Food Sales	Refrigeration	Automatic Door Closer for Walk-in Coolers and Freezers	Per Unit	RET	8	8	\$156.82	2,307	0.30900	0	0	0
296	NWS	Non-Residential	All	Restaurant	Refrigeration	Automatic Door Closer for Walk-in Coolers and Freezers	Per Unit	RET	8	8	\$156.82	943	0.13700	0	0	0
297	NWS	Non-Residential	All	Restaurant	Refrigeration	Automatic Door Closer for Walk-in Coolers and Freezers	Per Unit	RET	8	8	\$156.82	2,307	0.30900	0	0	0
298	NWS	Non-Residential	All	Food Sales	Refrigeration	Door Heater Controls for Cooler or Freezer	Per Unit	RET	12	12	\$300.00	2,555	0.00000	0	0	0
299	NWS	Non-Residential	All	Food Sales	Refrigeration	Door Heater Controls for Cooler or Freezer	Per Unit	RET	12	12	\$300.00	1,082	0.00000	0	0	0
300	NWS	Non-Residential	All	Food Sales	Refrigeration	Door Heater Controls for Cooler or Freezer	Per Unit	RET	12	12	\$300.00	1,082	0.00000	0	0	0

Commercial Measures

Measure ID	Weather Sensitive	Sector	Sub-Sector	Building Type	End Use	Measure Description	Measure Name	Measure Unit	EPM Logic (RET/RO B/NEW)	Baseline Unit Lifetime (Years)	Efficient Unit Lifetime (Years)	MEASURE INCREMENTAL SAVING PER UNIT				
												Total Incremental Cost	Annual kWh Savings	Annual kW Coincident Peak Savings	Annual Gas Savings (Therms)	Annual kWh Increases
301	NWS	Non-Residential	All	Food Sales	Refrigeration	Door Heater Controls for Cooler or Freezer	Per Unit	RET	12	12	\$200.00	3,252	0.00000	0	0	0
302	NWS	Non-Residential	All	Food Sales	Refrigeration	Door Heater Controls for Cooler or Freezer	Per Unit	RET	12	12	\$200.00	1,377	0.00000	0	0	0
303	NWS	Non-Residential	All	Food Sales	Refrigeration	Door Heater Controls for Cooler or Freezer	Per Unit	RET	12	12	\$200.00	1,377	0.00000	0	0	0
304	NWS	Non-Residential	All	Restaurant	Refrigeration	Door Heater Controls for Cooler or Freezer	Per Unit	RET	12	12	\$300.00	2,555	0.00000	0	0	0
305	NWS	Non-Residential	All	Restaurant	Refrigeration	Door Heater Controls for Cooler or Freezer	Per Unit	RET	12	12	\$300.00	1,082	0.00000	0	0	0
306	NWS	Non-Residential	All	Restaurant	Refrigeration	Door Heater Controls for Cooler or Freezer	Per Unit	RET	12	12	\$300.00	1,082	0.00000	0	0	0
307	NWS	Non-Residential	All	Restaurant	Refrigeration	Door Heater Controls for Cooler or Freezer	Per Unit	RET	12	12	\$200.00	3,252	0.00000	0	0	0
308	NWS	Non-Residential	All	Restaurant	Refrigeration	Door Heater Controls for Cooler or Freezer	Per Unit	RET	12	12	\$200.00	1,377	0.00000	0	0	0
309	NWS	Non-Residential	All	Restaurant	Refrigeration	Door Heater Controls for Cooler or Freezer	Per Unit	RET	12	12	\$200.00	1,377	0.00000	0	0	0
310	NWS	Non-Residential	All	Hospital	Refrigeration	Evaporator Fan Control	Per Unit	RET	16	16	\$291.00	478	0.06000	0	0	0
311	NWS	Non-Residential	All	K12 Education	Refrigeration	Evaporator Fan Control	Per Unit	RET	16	16	\$291.00	478	0.06000	0	0	0
312	NWS	Non-Residential	All	Education with Summer Sessions	Refrigeration	Evaporator Fan Control	Per Unit	RET	16	16	\$291.00	478	0.06000	0	0	0
313	NWS	Non-Residential	All	Lodging	Refrigeration	Evaporator Fan Control	Per Unit	RET	16	16	\$291.00	478	0.06000	0	0	0
314	NWS	Non-Residential	All	Food Sales	Refrigeration	Evaporator Fan Control	Per Unit	RET	16	16	\$291.00	478	0.06000	0	0	0
315	NWS	Non-Residential	All	Restaurant	Refrigeration	Evaporator Fan Control	Per Unit	RET	16	16	\$291.00	478	0.06000	0	0	0
316	NWS	Non-Residential	All	Hospital	Refrigeration	Strip Curtain for Walk-in Coolers and Freezers	Per Unit	RET	6	6	\$286.16	2,974	0.35000	0	0	0
317	NWS	Non-Residential	All	Hospital	Refrigeration	Strip Curtain for Walk-in Coolers and Freezers	Per Unit	RET	6	6	\$286.16	422	0.05000	0	0	0
318	NWS	Non-Residential	All	K12 Education	Refrigeration	Strip Curtain for Walk-in Coolers and Freezers	Per Unit	RET	6	6	\$286.16	2,974	0.35000	0	0	0
319	NWS	Non-Residential	All	K12 Education	Refrigeration	Strip Curtain for Walk-in Coolers and Freezers	Per Unit	RET	6	6	\$286.16	422	0.05000	0	0	0
320	NWS	Non-Residential	All	Education with Summer Sessions	Refrigeration	Strip Curtain for Walk-in Coolers and Freezers	Per Unit	RET	6	6	\$286.16	2,974	0.35000	0	0	0
321	NWS	Non-Residential	All	Education with Summer Sessions	Refrigeration	Strip Curtain for Walk-in Coolers and Freezers	Per Unit	RET	6	6	\$286.16	422	0.05000	0	0	0
322	NWS	Non-Residential	All	Lodging	Refrigeration	Strip Curtain for Walk-in Coolers and Freezers	Per Unit	RET	6	6	\$286.16	2,974	0.35000	0	0	0
323	NWS	Non-Residential	All	Lodging	Refrigeration	Strip Curtain for Walk-in Coolers and Freezers	Per Unit	RET	6	6	\$286.16	422	0.05000	0	0	0
324	NWS	Non-Residential	All	Food Sales	Refrigeration	Strip Curtain for Walk-in Coolers and Freezers	Per Unit	RET	6	6	\$286.16	2,974	0.35000	0	0	0
325	NWS	Non-Residential	All	Food Sales	Refrigeration	Strip Curtain for Walk-in Coolers and Freezers	Per Unit	RET	6	6	\$286.16	422	0.05000	0	0	0
326	NWS	Non-Residential	All	Restaurant	Refrigeration	Strip Curtain for Walk-in Coolers and Freezers	Per Unit	RET	6	6	\$286.16	2,974	0.35000	0	0	0
327	NWS	Non-Residential	All	Restaurant	Refrigeration	Strip Curtain for Walk-in Coolers and Freezers	Per Unit	RET	6	6	\$286.16	422	0.05000	0	0	0
328	NWS	Non-Residential	All	Hospital	Food Services Equipment	ENERGY STAR Dishwasher	Per Unit	ROB	10	10	\$50.00	2,540	0.32469	0	0	0
329	NWS	Non-Residential	All	Hospital	Food Services Equipment	ENERGY STAR Dishwasher	Per Unit	ROB	15	15	\$0.00	16,153	2.06517	0	0	0
330	NWS	Non-Residential	All	Hospital	Food Services Equipment	ENERGY STAR Dishwasher	Per Unit	ROB	20	20	\$0.00	13,626	1.74219	0	0	0
331	NWS	Non-Residential	All	Hospital	Food Services Equipment	ENERGY STAR Dishwasher	Per Unit	ROB	20	20	\$970.00	18,811	2.40509	0	0	0
332	NWS	Non-Residential	All	Hospital	Food Services Equipment	ENERGY STAR Dishwasher	Per Unit	ROB	10	10	\$120.00	3,171	0.40538	0	0	0
333	NWS	Non-Residential	All	Hospital	Food Services Equipment	ENERGY STAR Dishwasher	Per Unit	ROB	15	15	\$770.00	11,863	1.51676	0	0	0
334	NWS	Non-Residential	All	Hospital	Food Services Equipment	ENERGY STAR Dishwasher	Per Unit	ROB	20	20	\$2,050.00	9,212	1.17774	0	0	0
335	NWS	Non-Residential	All	Hospital	Food Services Equipment	ENERGY STAR Dishwasher	Per Unit	ROB	20	20	\$970.00	27,408	3.50417	0	0	0
336	NWS	Non-Residential	All	Hospital	Food Services Equipment	ENERGY STAR Dishwasher	Per Unit	ROB	10	10	\$1,710.00	3,311	0.42330	0	0	0
337	NWS	Non-Residential	All	Hospital	Food Services Equipment	ENERGY STAR Dishwasher	Per Unit	ROB	10	10	\$50.00	2,540	0.32469	0	0	0
338	NWS	Non-Residential	All	Hospital	Food Services Equipment	ENERGY STAR Dishwasher	Per Unit	ROB	15	15	\$0.00	16,153	2.06517	0	0	0
339	NWS	Non-Residential	All	Hospital	Food Services Equipment	ENERGY STAR Dishwasher	Per Unit	ROB	20	20	\$0.00	13,626	1.74219	0	0	0
340	NWS	Non-Residential	All	Hospital	Food Services Equipment	ENERGY STAR Dishwasher	Per Unit	ROB	20	20	\$970.00	18,811	2.40509	0	0	0
341	NWS	Non-Residential	All	Hospital	Food Services Equipment	ENERGY STAR Dishwasher	Per Unit	ROB	10	10	\$120.00	2,553	0.32636	25.84156083	0	0
342	NWS	Non-Residential	All	Hospital	Food Services Equipment	ENERGY STAR Dishwasher	Per Unit	ROB	15	15	\$770.00	7,850	1.00368	167.7828877	0	0
343	NWS	Non-Residential	All	Hospital	Food Services Equipment	ENERGY STAR Dishwasher	Per Unit	ROB	20	20	\$2,050.00	6,775	0.86622	101.8681818	0	0
344	NWS	Non-Residential	All	Hospital	Food Services Equipment	ENERGY STAR Dishwasher	Per Unit	ROB	20	20	\$970.00	18,163	2.32224	386.4998663	0	0
345	NWS	Non-Residential	All	Hospital	Food Services Equipment	ENERGY STAR Dishwasher	Per Unit	ROB	10	10	\$1,710.00	2,107	0.26937	50.33486631	0	0
346	NWS	Non-Residential	All	K12 Education	Food Services Equipment	ENERGY STAR Dishwasher	Per Unit	ROB	10	10	\$50.00	2,540	0.32469	0	0	0
347	NWS	Non-Residential	All	K12 Education	Food Services Equipment	ENERGY STAR Dishwasher	Per Unit	ROB	15	15	\$0.00	16,153	2.06517	0	0	0
348	NWS	Non-Residential	All	K12 Education	Food Services Equipment	ENERGY STAR Dishwasher	Per Unit	ROB	20	20	\$0.00	13,626	1.74219	0	0	0
349	NWS	Non-Residential	All	K12 Education	Food Services Equipment	ENERGY STAR Dishwasher	Per Unit	ROB	20	20	\$970.00	18,811	2.40509	0	0	0
350	NWS	Non-Residential	All	K12 Education	Food Services Equipment	ENERGY STAR Dishwasher	Per Unit	ROB	10	10	\$120.00	3,171	0.40538	0	0	0
351	NWS	Non-Residential	All	K12 Education	Food Services Equipment	ENERGY STAR Dishwasher	Per Unit	ROB	15	15	\$770.00	11,863	1.51676	0	0	0
352	NWS	Non-Residential	All	K12 Education	Food Services Equipment	ENERGY STAR Dishwasher	Per Unit	ROB	20	20	\$2,050.00	9,212	1.17774	0	0	0
353	NWS	Non-Residential	All	K12 Education	Food Services Equipment	ENERGY STAR Dishwasher	Per Unit	ROB	20	20	\$970.00	27,408	3.50417	0	0	0
354	NWS	Non-Residential	All	K12 Education	Food Services Equipment	ENERGY STAR Dishwasher	Per Unit	ROB	10	10	\$1,710.00	3,311	0.42330	0	0	0
355	NWS	Non-Residential	All	K12 Education	Food Services Equipment	ENERGY STAR Dishwasher	Per Unit	ROB	10	10	\$50.00	2,540	0.32469	0	0	0
356	NWS	Non-Residential	All	K12 Education	Food Services Equipment	ENERGY STAR Dishwasher	Per Unit	ROB	15	15	\$0.00	16,153	2.06517	0	0	0
357	NWS	Non-Residential	All	K12 Education	Food Services Equipment	ENERGY STAR Dishwasher	Per Unit	ROB	20	20	\$0.00	13,626	1.74219	0	0	0
358	NWS	Non-Residential	All	K12 Education	Food Services Equipment	ENERGY STAR Dishwasher	Per Unit	ROB	20	20	\$970.00	18,811	2.40509	0	0	0
359	NWS	Non-Residential	All	K12 Education	Food Services Equipment	ENERGY STAR Dishwasher	Per Unit	ROB	10	10	\$120.00	2,553	0.32636	25.84156083	0	0
360	NWS	Non-Residential	All	K12 Education	Food Services Equipment	ENERGY STAR Dishwasher	Per Unit	ROB	15	15	\$770.00	7,850	1.00368	167.7828877	0	0

Commercial Measures

Measure ID	Weather Sensitive	Sector	Sub-Sector	Building Type	End Use	Measure Description	Measure Name	Measure Unit	EPM Logic (RET/RO B/NEW)	Baseline Unit Lifetime (Years)	Efficient Unit Lifetime (Years)	MEASURE INCREMENTAL SAVING PER UNIT				
												Total Incremental Cost	Annual kWh Savings	Annual kW Coincident Peak Savings	Annual Gas Savings (Therms)	Annual kWh Increases
361	NWS	Non-Residential	All	K12 Education	Food Services Equipment	ENERGY STAR Dishwasher	Per Unit	ROB	20	20	\$2,050.00	6,775	0.86622	101.8681818	0	0
362	NWS	Non-Residential	All	K12 Education	Food Services Equipment	ENERGY STAR Dishwasher	Per Unit	ROB	20	20	\$970.00	18,163	2.32224	386.4998663	0	0
363	NWS	Non-Residential	All	K12 Education	Food Services Equipment	ENERGY STAR Dishwasher	Per Unit	ROB	10	10	\$1,710.00	2,107	0.26937	50.33486631	0	0
364	NWS	Non-Residential	All	Education with Summer Sessions	Food Services Equipment	ENERGY STAR Dishwasher	Per Unit	ROB	10	10	\$50.00	2,540	0.32469	0	0	0
365	NWS	Non-Residential	All	Education with Summer Sessions	Food Services Equipment	ENERGY STAR Dishwasher	Per Unit	ROB	15	15	\$0.00	16,153	2.06517	0	0	0
366	NWS	Non-Residential	All	Education with Summer Sessions	Food Services Equipment	ENERGY STAR Dishwasher	Per Unit	ROB	20	20	\$0.00	13,626	1.74219	0	0	0
367	NWS	Non-Residential	All	Education with Summer Sessions	Food Services Equipment	ENERGY STAR Dishwasher	Per Unit	ROB	20	20	\$970.00	18,811	2.40509	0	0	0
368	NWS	Non-Residential	All	Education with Summer Sessions	Food Services Equipment	ENERGY STAR Dishwasher	Per Unit	ROB	10	10	\$120.00	3,171	0.40538	0	0	0
369	NWS	Non-Residential	All	Education with Summer Sessions	Food Services Equipment	ENERGY STAR Dishwasher	Per Unit	ROB	15	15	\$770.00	11,863	1.51676	0	0	0
370	NWS	Non-Residential	All	Education with Summer Sessions	Food Services Equipment	ENERGY STAR Dishwasher	Per Unit	ROB	20	20	\$2,050.00	9,212	1.17774	0	0	0
371	NWS	Non-Residential	All	Education with Summer Sessions	Food Services Equipment	ENERGY STAR Dishwasher	Per Unit	ROB	20	20	\$970.00	27,408	3.50417	0	0	0
372	NWS	Non-Residential	All	Education with Summer Sessions	Food Services Equipment	ENERGY STAR Dishwasher	Per Unit	ROB	10	10	\$1,710.00	3,311	0.42330	0	0	0
373	NWS	Non-Residential	All	Education with Summer Sessions	Food Services Equipment	ENERGY STAR Dishwasher	Per Unit	ROB	10	10	\$50.00	2,540	0.32469	0	0	0
374	NWS	Non-Residential	All	Education with Summer Sessions	Food Services Equipment	ENERGY STAR Dishwasher	Per Unit	ROB	15	15	\$0.00	16,153	2.06517	0	0	0
375	NWS	Non-Residential	All	Education with Summer Sessions	Food Services Equipment	ENERGY STAR Dishwasher	Per Unit	ROB	20	20	\$0.00	13,626	1.74219	0	0	0
376	NWS	Non-Residential	All	Education with Summer Sessions	Food Services Equipment	ENERGY STAR Dishwasher	Per Unit	ROB	20	20	\$970.00	18,811	2.40509	0	0	0
377	NWS	Non-Residential	All	Education with Summer Sessions	Food Services Equipment	ENERGY STAR Dishwasher	Per Unit	ROB	10	10	\$120.00	2,553	0.32636	25.84156083	0	0
378	NWS	Non-Residential	All	Education with Summer Sessions	Food Services Equipment	ENERGY STAR Dishwasher	Per Unit	ROB	15	15	\$770.00	7,850	1.00368	167.7828877	0	0
379	NWS	Non-Residential	All	Education with Summer Sessions	Food Services Equipment	ENERGY STAR Dishwasher	Per Unit	ROB	20	20	\$2,050.00	6,775	0.86622	101.8681818	0	0
380	NWS	Non-Residential	All	Education with Summer Sessions	Food Services Equipment	ENERGY STAR Dishwasher	Per Unit	ROB	20	20	\$970.00	18,163	2.32224	386.4998663	0	0
381	NWS	Non-Residential	All	Education with Summer Sessions	Food Services Equipment	ENERGY STAR Dishwasher	Per Unit	ROB	10	10	\$1,710.00	2,107	0.26937	50.33486631	0	0
382	NWS	Non-Residential	All	Lodging	Food Services Equipment	ENERGY STAR Dishwasher	Per Unit	ROB	10	10	\$50.00	2,540	0.32469	0	0	0
383	NWS	Non-Residential	All	Lodging	Food Services Equipment	ENERGY STAR Dishwasher	Per Unit	ROB	15	15	\$0.00	16,153	2.06517	0	0	0
384	NWS	Non-Residential	All	Lodging	Food Services Equipment	ENERGY STAR Dishwasher	Per Unit	ROB	20	20	\$0.00	13,626	1.74219	0	0	0
385	NWS	Non-Residential	All	Lodging	Food Services Equipment	ENERGY STAR Dishwasher	Per Unit	ROB	20	20	\$970.00	18,811	2.40509	0	0	0
386	NWS	Non-Residential	All	Lodging	Food Services Equipment	ENERGY STAR Dishwasher	Per Unit	ROB	10	10	\$120.00	3,171	0.40538	0	0	0
387	NWS	Non-Residential	All	Lodging	Food Services Equipment	ENERGY STAR Dishwasher	Per Unit	ROB	15	15	\$770.00	11,863	1.51676	0	0	0
388	NWS	Non-Residential	All	Lodging	Food Services Equipment	ENERGY STAR Dishwasher	Per Unit	ROB	20	20	\$2,050.00	9,212	1.17774	0	0	0
389	NWS	Non-Residential	All	Lodging	Food Services Equipment	ENERGY STAR Dishwasher	Per Unit	ROB	20	20	\$970.00	27,408	3.50417	0	0	0
390	NWS	Non-Residential	All	Lodging	Food Services Equipment	ENERGY STAR Dishwasher	Per Unit	ROB	10	10	\$1,710.00	3,311	0.42330	0	0	0
391	NWS	Non-Residential	All	Lodging	Food Services Equipment	ENERGY STAR Dishwasher	Per Unit	ROB	10	10	\$50.00	2,540	0.32469	0	0	0
392	NWS	Non-Residential	All	Lodging	Food Services Equipment	ENERGY STAR Dishwasher	Per Unit	ROB	15	15	\$0.00	16,153	2.06517	0	0	0
393	NWS	Non-Residential	All	Lodging	Food Services Equipment	ENERGY STAR Dishwasher	Per Unit	ROB	20	20	\$0.00	13,626	1.74219	0	0	0
394	NWS	Non-Residential	All	Lodging	Food Services Equipment	ENERGY STAR Dishwasher	Per Unit	ROB	20	20	\$970.00	18,811	2.40509	0	0	0
395	NWS	Non-Residential	All	Lodging	Food Services Equipment	ENERGY STAR Dishwasher	Per Unit	ROB	10	10	\$120.00	2,553	0.32636	25.84156083	0	0
396	NWS	Non-Residential	All	Lodging	Food Services Equipment	ENERGY STAR Dishwasher	Per Unit	ROB	15	15	\$770.00	7,850	1.00368	167.7828877	0	0
397	NWS	Non-Residential	All	Lodging	Food Services Equipment	ENERGY STAR Dishwasher	Per Unit	ROB	20	20	\$2,050.00	6,775	0.86622	101.8681818	0	0
398	NWS	Non-Residential	All	Lodging	Food Services Equipment	ENERGY STAR Dishwasher	Per Unit	ROB	20	20	\$970.00	18,163	2.32224	386.4998663	0	0
399	NWS	Non-Residential	All	Lodging	Food Services Equipment	ENERGY STAR Dishwasher	Per Unit	ROB	10	10	\$1,710.00	2,107	0.26937	50.33486631	0	0
400	NWS	Non-Residential	All	Restaurant	Food Services Equipment	ENERGY STAR Dishwasher	Per Unit	ROB	10	10	\$50.00	2,540	0.32469	0	0	0
401	NWS	Non-Residential	All	Restaurant	Food Services Equipment	ENERGY STAR Dishwasher	Per Unit	ROB	15	15	\$0.00	16,153	2.06517	0	0	0
402	NWS	Non-Residential	All	Restaurant	Food Services Equipment	ENERGY STAR Dishwasher	Per Unit	ROB	20	20	\$0.00	13,626	1.74219	0	0	0
403	NWS	Non-Residential	All	Restaurant	Food Services Equipment	ENERGY STAR Dishwasher	Per Unit	ROB	20	20	\$970.00	18,811	2.40509	0	0	0
404	NWS	Non-Residential	All	Restaurant	Food Services Equipment	ENERGY STAR Dishwasher	Per Unit	ROB	10	10	\$120.00	3,171	0.40538	0	0	0
405	NWS	Non-Residential	All	Restaurant	Food Services Equipment	ENERGY STAR Dishwasher	Per Unit	ROB	15	15	\$770.00	11,863	1.51676	0	0	0
406	NWS	Non-Residential	All	Restaurant	Food Services Equipment	ENERGY STAR Dishwasher	Per Unit	ROB	20	20	\$2,050.00	9,212	1.17774	0	0	0
407	NWS	Non-Residential	All	Restaurant	Food Services Equipment	ENERGY STAR Dishwasher	Per Unit	ROB	20	20	\$970.00	27,408	3.50417	0	0	0
408	NWS	Non-Residential	All	Restaurant	Food Services Equipment	ENERGY STAR Dishwasher	Per Unit	ROB	10	10	\$1,710.00	3,311	0.42330	0	0	0
409	NWS	Non-Residential	All	Restaurant	Food Services Equipment	ENERGY STAR Dishwasher	Per Unit	ROB	10	10	\$50.00	2,540	0.32469	0	0	0
410	NWS	Non-Residential	All	Restaurant	Food Services Equipment	ENERGY STAR Dishwasher	Per Unit	ROB	15	15	\$0.00	16,153	2.06517	0	0	0
411	NWS	Non-Residential	All	Restaurant	Food Services Equipment	ENERGY STAR Dishwasher	Per Unit	ROB	20	20	\$0.00	13,626	1.74219	0	0	0
412	NWS	Non-Residential	All	Restaurant	Food Services Equipment	ENERGY STAR Dishwasher	Per Unit	ROB	20	20	\$970.00	18,811	2.40509	0	0	0
413	NWS	Non-Residential	All	Restaurant	Food Services Equipment	ENERGY STAR Dishwasher	Per Unit	ROB	10	10	\$120.00	2,553	0.32636	25.84156083	0	0
414	NWS	Non-Residential	All	Restaurant	Food Services Equipment	ENERGY STAR Dishwasher	Per Unit	ROB	15	15	\$770.00	7,850	1.00368	167.7828877	0	0
415	NWS	Non-Residential	All	Restaurant	Food Services Equipment	ENERGY STAR Dishwasher	Per Unit	ROB	20	20	\$2,050.00	6,775	0.86622	101.8681818	0	0
416	NWS	Non-Residential	All	Restaurant	Food Services Equipment	ENERGY STAR Dishwasher	Per Unit	ROB	20	20	\$970.00	18,163	2.32224	386.4998663	0	0
417	NWS	Non-Residential	All	Restaurant	Food Services Equipment	ENERGY STAR Dishwasher	Per Unit	ROB	10	10	\$1,710.00	2,107	0.26937	50.33486631	0	0
418	NWS	Non-Residential	All	Hospital	Food Services Equipment	ENERGY STAR Fryer	Per Unit	ROB	12	12	\$210.00	1,179	0.20000	0	0	0
419	NWS	Non-Residential	All	Hospital	Food Services Equipment	ENERGY STAR Fryer	Per Unit	ROB	12	12	\$0.00	2,659	0.51000	0	0	0
420	NWS	Non-Residential	All	K12 Education	Food Services Equipment	ENERGY STAR Fryer	Per Unit	ROB	12	12	\$210.00	1,179	0.20000	0	0	0

Commercial Measures

Measure ID	Weather Sensitive	Sector	Sub-Sector	Building Type	End Use	Measure Description	Measure Name	Measure Unit	EEM Logic (RET/RO B/NEW)	Baseline Unit Lifetime (Years)	Efficient Unit Lifetime (Years)	MEASURE INCREMENTAL SAVING PER UNIT					
												Total Incremental Cost	Annual kWh Savings	Annual kW Coincident Peak Savings	Annual Gas Savings (Therms)	Annual kWh Increases	Annual kW Coincident Peak Increases
421	NWS	Non-Residential	All	K12 Education	Food Services Equipment		ENERGY STAR Fryer	Per Unit	ROB	12	12	\$0.00	2,659	0.51000	0	0	0
422	NWS	Non-Residential	All	Education with Summer Sessions	Food Services Equipment		ENERGY STAR Fryer	Per Unit	ROB	12	12	\$210.00	1,179	0.20000	0	0	0
423	NWS	Non-Residential	All	Education with Summer Sessions	Food Services Equipment		ENERGY STAR Fryer	Per Unit	ROB	12	12	\$0.00	2,659	0.51000	0	0	0
424	NWS	Non-Residential	All	Lodging	Food Services Equipment		ENERGY STAR Fryer	Per Unit	ROB	12	12	\$210.00	1,179	0.20000	0	0	0
425	NWS	Non-Residential	All	Lodging	Food Services Equipment		ENERGY STAR Fryer	Per Unit	ROB	12	12	\$0.00	2,659	0.51000	0	0	0
426	NWS	Non-Residential	All	Restaurant	Food Services Equipment		ENERGY STAR Fryer	Per Unit	ROB	12	12	\$210.00	1,179	0.20000	0	0	0
427	NWS	Non-Residential	All	Restaurant	Food Services Equipment		ENERGY STAR Fryer	Per Unit	ROB	12	12	\$0.00	2,659	0.51000	0	0	0
428	NWS	Non-Residential	All	Hospital	Food Services Equipment		ENERGY STAR Griddle	Per Unit	ROB	12	12	\$0.00	2,595	0.49767	0	0	0
429	NWS	Non-Residential	All	K12 Education	Food Services Equipment		ENERGY STAR Griddle	Per Unit	ROB	12	12	\$0.00	2,595	0.49767	0	0	0
430	NWS	Non-Residential	All	Education with Summer Sessions	Food Services Equipment		ENERGY STAR Griddle	Per Unit	ROB	12	12	\$0.00	2,595	0.49767	0	0	0
431	NWS	Non-Residential	All	Lodging	Food Services Equipment		ENERGY STAR Griddle	Per Unit	ROB	12	12	\$0.00	2,595	0.49767	0	0	0
432	NWS	Non-Residential	All	Restaurant	Food Services Equipment		ENERGY STAR Griddle	Per Unit	ROB	12	12	\$0.00	2,595	0.49767	0	0	0
433	NWS	Non-Residential	All	Hospital	Food Services Equipment		ENERGY STAR Hot Food Holding Cabinets	Per Unit	ROB	12	12	\$0.00	1,730	0.26544	0	0	0
434	NWS	Non-Residential	All	K12 Education	Food Services Equipment		ENERGY STAR Hot Food Holding Cabinets	Per Unit	ROB	12	12	\$0.00	1,730	0.26544	0	0	0
435	NWS	Non-Residential	All	Education with Summer Sessions	Food Services Equipment		ENERGY STAR Hot Food Holding Cabinets	Per Unit	ROB	12	12	\$0.00	1,730	0.26544	0	0	0
436	NWS	Non-Residential	All	Lodging	Food Services Equipment		ENERGY STAR Hot Food Holding Cabinets	Per Unit	ROB	12	12	\$0.00	1,730	0.26544	0	0	0
437	NWS	Non-Residential	All	Restaurant	Food Services Equipment		ENERGY STAR Hot Food Holding Cabinets	Per Unit	ROB	12	12	\$0.00	1,730	0.26544	0	0	0
438	NWS	Non-Residential	All	Hospital	Food Services Equipment		ENERGY STAR Electric Convection Ovens	Per Unit	ROB	12	12	\$0.00	1,879	0.36036	0	0	0
439	NWS	Non-Residential	All	Hospital	Food Services Equipment		ENERGY STAR Electric Convection Ovens	Per Unit	ROB	12	12	\$0.00	1,988	0.38126	0	0	0
440	NWS	Non-Residential	All	K12 Education	Food Services Equipment		ENERGY STAR Electric Convection Ovens	Per Unit	ROB	12	12	\$0.00	1,879	0.36036	0	0	0
441	NWS	Non-Residential	All	K12 Education	Food Services Equipment		ENERGY STAR Electric Convection Ovens	Per Unit	ROB	12	12	\$0.00	1,988	0.38126	0	0	0
442	NWS	Non-Residential	All	Education with Summer Sessions	Food Services Equipment		ENERGY STAR Electric Convection Ovens	Per Unit	ROB	12	12	\$0.00	1,879	0.36036	0	0	0
443	NWS	Non-Residential	All	Education with Summer Sessions	Food Services Equipment		ENERGY STAR Electric Convection Ovens	Per Unit	ROB	12	12	\$0.00	1,988	0.38126	0	0	0
444	NWS	Non-Residential	All	Lodging	Food Services Equipment		ENERGY STAR Electric Convection Ovens	Per Unit	ROB	12	12	\$0.00	1,879	0.36036	0	0	0
445	NWS	Non-Residential	All	Lodging	Food Services Equipment		ENERGY STAR Electric Convection Ovens	Per Unit	ROB	12	12	\$0.00	1,988	0.38126	0	0	0
446	NWS	Non-Residential	All	Restaurant	Food Services Equipment		ENERGY STAR Electric Convection Ovens	Per Unit	ROB	12	12	\$0.00	1,879	0.36036	0	0	0
447	NWS	Non-Residential	All	Restaurant	Food Services Equipment		ENERGY STAR Electric Convection Ovens	Per Unit	ROB	12	12	\$0.00	1,988	0.38126	0	0	0
448	NWS	Non-Residential	All	K12 Education	Food Services Equipment		ENERGY STAR Steam Cooker	Per Unit	ROB	12	12	\$630.00	1,730	0.33180	0	0	0
449	NWS	Non-Residential	All	Education with Summer Sessions	Food Services Equipment		ENERGY STAR Steam Cooker	Per Unit	ROB	12	12	\$630.00	1,730	0.33180	0	0	0
450	NWS	Non-Residential	All	Lodging	Food Services Equipment		ENERGY STAR Steam Cooker	Per Unit	ROB	12	12	\$630.00	1,730	0.33180	0	0	0
451	NWS	Non-Residential	All	Restaurant	Food Services Equipment		ENERGY STAR Steam Cooker	Per Unit	ROB	12	12	\$630.00	1,730	0.33180	0	0	0
452	NWS	Non-Residential	All	Hospital	Food Services Equipment		EPA WaterSense Pre-Rinse Spray Valve	Per Unit	ROB	12	9	\$0.00	1,284	0.14843	0	0	0
453	NWS	Non-Residential	All	Education with Summer Sessions	Food Services Equipment		EPA WaterSense Pre-Rinse Spray Valve	Per Unit	ROB	12	9	\$0.00	964	0.14843	0	0	0
454	NWS	Non-Residential	All	Lodging	Food Services Equipment		EPA WaterSense Pre-Rinse Spray Valve	Per Unit	ROB	12	9	\$0.00	1,284	0.14843	0	0	0
455	NWS	Non-Residential	All	Restaurant	Food Services Equipment		EPA WaterSense Pre-Rinse Spray Valve	Per Unit	ROB	12	9	\$0.00	1,284	0.14843	0	0	0
456	NWS	Non-Residential	All	Hospital	Service Hot Water		Electric Storage Water Heater	Per 1000 sqft	ROB	15	15	\$1,050.00	1,185	0.09741	0	0	0
457	NWS	Non-Residential	All	Hospital	Service Hot Water		Electric Storage Water Heater	Per 1000 sqft	ROB	15	15	\$1,050.00	2,306	0.18956	0	0	0
458	NWS	Non-Residential	All	K12 Education	Service Hot Water		Electric Storage Water Heater	Per 1000 sqft	ROB	15	15	\$1,050.00	22	0.00541	0	0	0
459	NWS	Non-Residential	All	K12 Education	Service Hot Water		Electric Storage Water Heater	Per 1000 sqft	ROB	15	15	\$1,050.00	42	0.01053	0	0	0
460	NWS	Non-Residential	All	K12 Education	Service Hot Water		Electric Storage Water Heater	Per 1000 sqft	ROB	15	15	\$1,950.00	57	0.01421	0	0	0
461	NWS	Non-Residential	All	Education with Summer Sessions	Service Hot Water		Electric Storage Water Heater	Per 1000 sqft	ROB	15	15	\$1,050.00	29	0.00541	0	0	0
462	NWS	Non-Residential	All	Education with Summer Sessions	Service Hot Water		Electric Storage Water Heater	Per 1000 sqft	ROB	15	15	\$1,050.00	56	0.01053	0	0	0
463	NWS	Non-Residential	All	Education with Summer Sessions	Service Hot Water		Electric Storage Water Heater	Per 1000 sqft	ROB	15	15	\$1,950.00	76	0.01421	0	0	0
464	NWS	Non-Residential	All	Lodging	Service Hot Water		Electric Storage Water Heater	Per 1000 sqft	ROB	15	15	\$1,050.00	227	0.01242	0	0	0
465	NWS	Non-Residential	All	Lodging	Service Hot Water		Electric Storage Water Heater	Per 1000 sqft	ROB	15	15	\$1,050.00	441	0.02417	0	0	0
466	NWS	Non-Residential	All	Lodging	Service Hot Water		Electric Storage Water Heater	Per 1000 sqft	ROB	15	15	\$1,950.00	595	0.03262	0	0	0
467	NWS	Non-Residential	All	Restaurant	Service Hot Water		Electric Storage Water Heater	Per 1000 sqft	ROB	15	15	\$1,050.00	2,365	0.28082	0	0	0
468	NWS	Non-Residential	All	Restaurant	Service Hot Water		Electric Storage Water Heater	Per 1000 sqft	ROB	15	15	\$1,050.00	4,603	0.54651	0	0	0
469	NWS	Non-Residential	All	Restaurant	Service Hot Water		Electric Storage Water Heater	Per 1000 sqft	ROB	15	15	\$1,950.00	6,213	0.73758	0	0	0
470	NWS	Non-Residential	All	Hospital	Service Hot Water		Heat Pump Storage Water Heater	Per 1000 sqft	ROB	15	15	\$925.00	11,514	0.94638	0	0	0
471	NWS	Non-Residential	All	K12 Education	Service Hot Water		Heat Pump Storage Water Heater	Per 1000 sqft	ROB	15	15	\$925.00	210	0.05258	0	0	0
472	NWS	Non-Residential	All	Education with Summer Sessions	Service Hot Water		Heat Pump Storage Water Heater	Per 1000 sqft	ROB	15	15	\$925.00	280	0.05258	0	0	0
473	NWS	Non-Residential	All	Lodging	Service Hot Water		Heat Pump Storage Water Heater	Per 1000 sqft	ROB	15	15	\$925.00	2,202	0.12065	0	0	0
474	NWS	Non-Residential	All	Restaurant	Service Hot Water		Heat Pump Storage Water Heater	Per 1000 sqft	ROB	15	15	\$925.00	22,981	2.72838	0	0	0
475	NWS	Non-Residential	All	Hospital	Service Hot Water		Low Flow Faucet Aerators - Electric DHW fuel	Per Unit	RET	10	10	\$8.00	72	0.00590	0	0	0
476	NWS	Non-Residential	All	K12 Education	Service Hot Water		Low Flow Faucet Aerators - Electric DHW fuel	Per Unit	RET	10	10	\$8.00	393	0.09835	0	0	0
477	NWS	Non-Residential	All	Education with Summer Sessions	Service Hot Water		Low Flow Faucet Aerators - Electric DHW fuel	Per Unit	RET	10	10	\$8.00	525	0.09835	0	0	0
478	NWS	Non-Residential	All	Lodging	Service Hot Water		Low Flow Faucet Aerators - Electric DHW fuel	Per Unit	RET	10	10	\$8.00	72	0.00393	0	0	0
479	NWS	Non-Residential	All	Restaurant	Service Hot Water		Low Flow Faucet Aerators - Electric DHW fuel	Per Unit	RET	10	10	\$8.00	718	0.08524	0	0	0

Commercial Measures

Measure ID	Weather Sensitive	Sector	Sub-Sector	Building Type	End Use	Measure Description	Measure Name	Measure Unit	EEM Logic (RET/RO B/NEW)	Baseline Unit Lifetime (Years)	Efficient Unit Lifetime (Years)	Total Incremental Cost	MEASURE INCREMENTAL SAVING PER UNIT				
													Annual kWh Savings	Annual kW Coincident Peak Savings	Annual Gas Savings (Therms)	Annual kWh Increases	Annual kW Coincident Peak Increases
481	NWS	Non-Residential	Small Commercial	All	Misc		Small Business Program Audit & Direct Install	Per Participant	RET	1	1	\$200.00	0	0.00000	0	0	0
482	NWS	Non-Residential	Small Commercial	All	Lighting		Small Business Program Audit & Direct Install	Per Participant	RET	0.2	2	\$6.12	472	0.06700	0	0	0
483	NWS	Non-Residential	Small Commercial	All	Lighting		Small Business Program Audit & Direct Install	Per Participant	RET	0.2	12	\$40.82	497	0.13700	0	0	0
484	NWS	Non-Residential	Small Commercial	All	Service Hot Water		Small Business Program Audit & Direct Install	Per Participant	RET	9	9	\$95.81	2,752	0.74000	0	0	0
485	NWS	Non-Residential	Small Commercial	All	Lighting		Small Business Program Lighting Upgrade Package	Per Participant	RET	15	15	\$2,958.29	4,890	0.78000	0	0	0
486	NWS	Non-Residential	Small Commercial	All	Refrigeration		Small Business Program Refrigeration Upgrade Package	Per Participant	RET	15	15	\$90.85	552	0.04000	0	0	0
488	NWS	Non-Residential	All	Data Center	HVAC		Air Flow Management	per building	RET	12	12	\$41,851.85	496,692	57.00000	0	0	0
489	NWS	Non-Residential	All	Data Center	HVAC		Air Flow Management	per building	RET	12	12	\$83,703.70	722,700	83.00000	0	0	0
490	NWS	Non-Residential	All	Data Center	HVAC		Air Flow Management	per building	RET	12	12	\$209,259.26	658,051	75.00000	0	0	0
491	NWS	Non-Residential	All	Data Center	HVAC		Air Flow Management	per building	RET	12	12	\$418,518.52	1,314,000	150.00000	0	0	0
492	NWS	Non-Residential	All	Data Center	Miscellaneous		Load Distribution	per building	RET	12	12	\$37,037.04	115,895	13.00000	0	0	0
493	NWS	Non-Residential	All	Data Center	Miscellaneous		Load Distribution	per building	RET	12	12	\$74,074.07	229,950	26.00000	0	0	0
494	NWS	Non-Residential	All	Data Center	Miscellaneous		Load Distribution	per building	RET	12	12	\$185,185.19	575,795	66.00000	0	0	0
495	NWS	Non-Residential	All	Data Center	Miscellaneous		Load Distribution	per building	RET	12	12	\$370,370.37	1,149,750	131.00000	0	0	0
496	NWS	Non-Residential	All	Data Center	HVAC		Waterside Economizer	per building	RET	12	12	\$370,370.37	329,026	0.00000	0	0	0
497	NWS	Non-Residential	All	Data Center	HVAC		Waterside Economizer	per building	RET	12	12	\$740,740.74	657,000	0.00000	0	0	0
498	NWS	Non-Residential	All	Data Center	HVAC		Air Flow Management	per building	NEW	12	12	\$41,851.85	883,008	101.00000	0	0	0
499	NWS	Non-Residential	All	Data Center	HVAC		Air Flow Management	per building	NEW	12	12	\$83,703.70	2,518,500	288.00000	0	0	0
500	NWS	Non-Residential	All	Data Center	HVAC		Air Flow Management	per building	NEW	12	12	\$209,259.26	1,919,316	219.00000	0	0	0
501	NWS	Non-Residential	All	Data Center	HVAC		Air Flow Management	per building	NEW	12	12	\$418,518.52	3,832,500	437.00000	0	0	0
502	NWS	Non-Residential	All	Data Center	Miscellaneous		Load Distribution	per building	NEW	12	12	\$37,037.04	386,316	44.00000	0	0	0
503	NWS	Non-Residential	All	Data Center	Miscellaneous		Load Distribution	per building	NEW	12	12	\$74,074.07	766,500	87.00000	0	0	0
504	NWS	Non-Residential	All	Data Center	Miscellaneous		Load Distribution	per building	NEW	12	12	\$185,185.19	1,919,316	219.00000	0	0	0
505	NWS	Non-Residential	All	Data Center	Miscellaneous		Load Distribution	per building	NEW	12	12	\$370,370.37	3,832,500	437.00000	0	0	0
506	NWS	Non-Residential	All	Data Center	HVAC		Waterside Economizer	per building	NEW	12	12	\$370,370.37	822,564	0.00000	0	0	0
507	NWS	Non-Residential	All	Data Center	HVAC		Waterside Economizer	per building	NEW	12	12	\$740,740.74	1,642,500	0.00000	0	0	0
509	WS	Non-Residential	Large Commercial	All	Misc		Commercial New Construction	per building	NEW	15	15	\$36,768.00	132,429	13.60000	0	0	0
510	WS	Non-Residential	Large Commercial	All	Misc		Commercial New Construction	per building	NEW	15	15	\$36,768.00	117,026	12.02000	0	0	0
511	WS	Non-Residential	Small Commercial	All	Misc		Commercial New Construction	per building	NEW	15	15	\$1,479.00	5,574	0.44000	0	0	0
512	WS	Non-Residential	Small Commercial	All	Misc		Commercial New Construction	per building	NEW	15	15	\$1,479.00	4,926	0.39000	0	0	0
514	WS	Non-Residential	Large Commercial	All	Misc		Retrocommissioning	per building	RET	5	5	\$11,062.00	149,245	2.10000	0	0	0
515	WS	Non-Residential	Large Commercial	All	Misc		Retrocommissioning	per building	RET	5	5	\$1,216.00	28,212	0.40000	0	0	0
517	NWS	Non-Residential	All	All	Misc		Interruptible Rate	per customer	RET	10	10	\$1.00	0	25.71000	0	0	0
518	NWS	Non-Residential	All	All	Misc		Enabled Dynamic Pricing (Non-Res)	per customer	RET	10	10	\$504.00	0	3.07000	0	0	0
519	NWS	Non-Residential	All	All	Misc		Non-Enabled Dynamic Pricing (Non-Res)	per customer	RET	10	10	\$1.00	0	1.98000	0	0	0
521	WS	Non-Residential	Large Commercial	K12 Education	HVAC		Boiler Cut-Out Control	Building	RET	20	20	\$1,000.00	0	0.00000	75.86127968	0	0
522	WS	Non-Residential	Large Commercial	Lodging	HVAC		Boiler Cut-Out Control	Building	RET	20	20	\$1,000.00	0	0.00000	338.7474872	0	0
523	WS	Non-Residential	Large Commercial	Education with Summer Sessions	HVAC		Boiler Cut-Out Control	Building	RET	20	20	\$1,000.00	0	0.00000	63.63733774	0	0
524	WS	Non-Residential	Large Commercial	Hospital	HVAC		Boiler Cut-Out Control	Building	RET	20	20	\$1,000.00	0	0.00000	1071.912162	0	0
525	WS	Non-Residential	Large Commercial	General Large Commercial	HVAC		Boiler Cut-Out Control	Building	RET	20	20	\$1,000.00	0	0.00000	51.35424435	0	0
526	WS	Non-Residential	Large Commercial	K12 Education	HVAC		Boiler or Furnace Vent Damper	Building	RET	12	12	\$0.00	0	0.00000	312.4523281	0	0
527	WS	Non-Residential	Large Commercial	Lodging	HVAC		Boiler or Furnace Vent Damper	Building	RET	12	12	\$0.00	0	0.00000	1394.842594	0	0
528	WS	Non-Residential	Large Commercial	Education with Summer Sessions	HVAC		Boiler or Furnace Vent Damper	Building	RET	12	12	\$0.00	0	0.00000	262.0360966	0	0
529	WS	Non-Residential	Large Commercial	Hospital	HVAC		Boiler or Furnace Vent Damper	Building	RET	12	12	\$0.00	0	0.00000	4413.755963	0	0
530	WS	Non-Residential	Large Commercial	General Large Commercial	HVAC		Boiler or Furnace Vent Damper	Building	RET	12	12	\$0.00	0	0.00000	211.4586532	0	0
531	WS	Non-Residential	Large Commercial	K12 Education	HVAC		Boiler Reset Control	Building	RET	20	20	\$2,500.00	0	0.00000	169.6169781	0	0
532	WS	Non-Residential	Large Commercial	Lodging	HVAC		Boiler Reset Control	Building	RET	20	20	\$2,500.00	0	0.00000	757.2002655	0	0
533	WS	Non-Residential	Large Commercial	Education with Summer Sessions	HVAC		Boiler Reset Control	Building	RET	20	20	\$2,500.00	0	0.00000	142.2481667	0	0
534	WS	Non-Residential	Large Commercial	Hospital	HVAC		Boiler Reset Control	Building	RET	20	20	\$2,500.00	0	0.00000	2396.038951	0	0
535	WS	Non-Residential	Large Commercial	General Large Commercial	HVAC		Boiler Reset Control	Building	RET	20	20	\$2,500.00	0	0.00000	114.7918403	0	0
536	WS	Non-Residential	Large Commercial	K12 Education	HVAC		Boiler Tune-Up	Building	RET	2	2	\$2,818.86	0	0.00000	89.27209375	0	0
537	WS	Non-Residential	Large Commercial	Lodging	HVAC		Boiler Tune-Up	Building	RET	2	2	\$2,484.38	0	0.00000	398.5264555	0	0
538	WS	Non-Residential	Large Commercial	Education with Summer Sessions	HVAC		Boiler Tune-Up	Building	RET	2	2	\$2,364.02	0	0.00000	74.86745616	0	0
539	WS	Non-Residential	Large Commercial	Hospital	HVAC		Boiler Tune-Up	Building	RET	2	2	\$7,861.41	0	0.00000	1261.073132	0	0
540	WS	Non-Residential	Large Commercial	General Large Commercial	HVAC		Boiler Tune-Up	Building	RET	2	2	\$835.26	0	0.00000	60.41675806	0	0

Commercial Measures

MEASURE DESCRIPTION											MEASURE INCREMENTAL SAVING PER UNIT					
Measure ID	Weather Sensitive	Sector	Sub-Sector	Building Type	End Use	Measure Name	Measure Unit Name	EEPM Logic (RET/ROB/NEW)	Baseline Unit Lifetime (Years)	Efficient Unit Lifetime (Years)	Total Incremental Cost	Annual kWh Savings	Annual kW Coincident Peak Savings	Annual Gas Savings (Therms)	Annual kWh Increases	Annual kW Coincident Peak Increases
541	WS	Non-Residential	Large Commercial	K12 Education	HVAC	Burner Replacement for Commercial Boilers	Building	ROB	12	12	\$0.00	0	0.00000	312.4523281	0	0
542	WS	Non-Residential	Large Commercial	Lodging	HVAC	Burner Replacement for Commercial Boilers	Building	ROB	12	12	\$0.00	0	0.00000	1394.842594	0	0
543	WS	Non-Residential	Large Commercial	Education with Summer Sessions	HVAC	Burner Replacement for Commercial Boilers	Building	ROB	12	12	\$0.00	0	0.00000	262.0360966	0	0
544	WS	Non-Residential	Large Commercial	Hospital	HVAC	Burner Replacement for Commercial Boilers	Building	ROB	12	12	\$0.00	0	0.00000	4413.755963	0	0
545	WS	Non-Residential	Large Commercial	General Large Commercial	HVAC	Burner Replacement for Commercial Boilers	Building	ROB	12	12	\$0.00	0	0.00000	211.4586532	0	0
546	WS	Non-Residential	Large Commercial	K12 Education	HVAC	Efficient Commercial Boilers	Building	ROB	20	20	\$3,370.00	0	0.00000	521.4223704	0	0
547	WS	Non-Residential	Large Commercial	Lodging	HVAC	Efficient Commercial Boilers	Building	ROB	20	20	\$3,370.00	0	0.00000	2327.721916	0	0
548	WS	Non-Residential	Large Commercial	Education with Summer Sessions	HVAC	Efficient Commercial Boilers	Building	ROB	20	20	\$3,370.00	0	0.00000	437.2874525	0	0
549	WS	Non-Residential	Large Commercial	Hospital	HVAC	Efficient Commercial Boilers	Building	ROB	20	20	\$3,370.00	0	0.00000	7365.703147	0	0
550	WS	Non-Residential	Large Commercial	General Large Commercial	HVAC	Efficient Commercial Boilers	Building	ROB	20	20	\$3,370.00	0	0.00000	352.8835034	0	0
551	NWS	Non-Residential	Small Commercial	All	HVAC	Direct Vent Heaters (Small Commercial)	Building	ROB	20	20	\$0.00	0	0.00000	177.979518	0	0
552	WS	Non-Residential	Small Commercial	All	HVAC	Gas Furnace (Small Commercial)	Building	ROB	20	20	\$477.00	0	0.00000	25.86669038	0	0
553	WS	Non-Residential	Small Commercial	All	Water Heating	Efficient storage gas water heater	Building	ROB	15	15	\$209.00	0	0.00000	64.283698	0	0
554	WS	Non-Residential	Small Commercial	All	Water Heating	Efficient instantaneous gas water heater	Building	ROB	15	15	\$2,526.00	0	0.00000	132.8840872	0	0
555	NWS	Non-Residential	Small Commercial	All	Water Heating	Faucet Aerator	Building	RET	10	10	\$29.00	0	0.00000	122.8	0	0
556	NWS	Non-Residential	Large Commercial	All	Water Heating	Faucet Aerator	Building	RET	10	10	\$135.00	0	0.00000	428.3	0	0
557	NWS	Non-Residential	Small Commercial	All	Water Heating	Gas WH pipe insulation (Small Commercial)	Building	RET	15	15	\$24.00	0	0.00000	1.1	0	0

Commercial Measures

MEASURE DESCRIPTION						MEASURE SELECTION				APPLICABILITY							PROGRAM			
Measure ID	Weather Sensitive	Sector	Sub-Sector	Building Type	End Use	Measure Name	Measure TRC calculated for 2014	Measure TRC calculated for 2020	Measure TRC calculated for 2022	Passed Measure Screening? (1=Yes, 0=No)	Total Sub-Sector Units	Measure Units per Sub-Sector Unit	Applicability	Technical Feasibility	Distribution by size/model but not Efficiency Level	Distribution by Efficiency Level	Not Yet Adopted	Annual Replacement Eligibility	Total Applicable Measure Units	Program Name
1	WS	Non-Residential	Small Commercial	All	HVAC	Unitary and Split System AC/HP Equipment	1.0	1.3	1.3	1	12,887	11	100%	33%	82%	90%	0%	7%	2299.525617	Commercial Prescriptive & Custom
2	WS	Non-Residential	Small Commercial	All	HVAC	Unitary and Split System AC/HP Equipment	1.0	1.3	1.3	1	12,887	11	100%	33%	8%	28%	0%	7%	70.28806997	Commercial Prescriptive & Custom
3	WS	Non-Residential	Small Commercial	All	HVAC	Unitary and Split System AC/HP Equipment	0.6	0.8	0.9	0	0	0	0%	0%	0%	0%	0%	0%	0	*N/A
4	WS	Non-Residential	Small Commercial	All	HVAC	Unitary and Split System AC/HP Equipment	1.1	1.4	1.5	1	12,887	11	100%	33%	8%	72%	0%	7%	177.9326977	Commercial Prescriptive & Custom
5	WS	Non-Residential	Small Commercial	All	HVAC	Unitary and Split System AC/HP Equipment	0.6	0.8	0.8	0	12,887	11	100%	67%	82%	9%	0%	7%	474.1578128	Commercial Prescriptive & Custom
6	WS	Non-Residential	Small Commercial	All	HVAC	Unitary and Split System AC/HP Equipment	0.9	1.2	1.3	1	12,887	11	100%	67%	8%	21%	0%	7%	106.4952755	Commercial Prescriptive & Custom
7	WS	Non-Residential	Small Commercial	All	HVAC	Unitary and Split System AC/HP Equipment	0.9	1.3	1.4	1	12,887	11	100%	0%	5%	18%	0%	7%	86.33853833	Commercial Prescriptive & Custom
8	WS	Non-Residential	Small Commercial	All	HVAC	Unitary and Split System AC/HP Equipment	1.2	1.6	1.7	1	12,887	11	100%	0%	4%	50%	0%	7%	188.5073343	Commercial Prescriptive & Custom
9	WS	Non-Residential	Small Commercial	All	HVAC	Unitary and Split System AC/HP Equipment	0.6	0.8	0.9	0	12,887	11	100%	67%	82%	91%	0%	7%	4691.467362	Commercial Prescriptive & Custom
10	WS	Non-Residential	Small Commercial	All	HVAC	Unitary and Split System AC/HP Equipment	1.1	1.4	1.5	1	12,887	11	100%	67%	8%	79%	0%	7%	397.4681561	Commercial Prescriptive & Custom
11	WS	Non-Residential	Small Commercial	All	HVAC	Unitary and Split System AC/HP Equipment	1.1	1.4	1.4	1	12,887	11	100%	0%	5%	82%	0%	7%	383.7766032	Commercial Prescriptive & Custom
12	WS	Non-Residential	Small Commercial	All	HVAC	Unitary and Split System AC/HP Equipment	1.1	1.4	1.5	1	12,887	11	100%	0%	4%	52%	0%	7%	167.5847769	Commercial Prescriptive & Custom
13	WS	Non-Residential	Large Commercial	K12 Education	HVAC	Unitary and Split System AC/HP Equipment	0.6	0.9	0.9	0	0	0	0%	0%	0%	0%	0%	0%	0	*N/A
14	WS	Non-Residential	Large Commercial	Education with Summer Sessions	HVAC	Unitary and Split System AC/HP Equipment	1.0	1.3	1.4	1	4,833	191	0%	20%	4%	50%	0%	7%	0.660502714	Commercial Prescriptive & Custom
15	WS	Non-Residential	Large Commercial	Lodging	HVAC	Unitary and Split System AC/HP Equipment	1.5	1.8	1.9	1	4,833	354	2%	20%	4%	50%	0%	7%	8.94986368	Commercial Prescriptive & Custom
16	WS	Non-Residential	Large Commercial	General Large Commercial	HVAC	Unitary and Split System AC/HP Equipment	1.1	1.4	1.5	1	4,833	384	94%	20%	4%	50%	0%	7%	468.7738222	Commercial Prescriptive & Custom
17	WS	Non-Residential	Large Commercial	K12 Education	HVAC	Unitary and Split System AC/HP Equipment	0.6	0.8	0.8	0	0	0	0%	0%	0%	0%	0%	0%	0	*N/A
18	WS	Non-Residential	Large Commercial	Education with Summer Sessions	HVAC	Unitary and Split System AC/HP Equipment	1.0	1.2	1.3	1	4,833	191	0%	20%	4%	50%	0%	7%	0.656317405	Commercial Prescriptive & Custom
19	WS	Non-Residential	Large Commercial	Lodging	HVAC	Unitary and Split System AC/HP Equipment	1.4	1.7	1.8	1	4,833	354	2%	20%	4%	50%	0%	7%	8.91223069	Commercial Prescriptive & Custom
20	WS	Non-Residential	Large Commercial	General Large Commercial	HVAC	Unitary and Split System AC/HP Equipment	1.0	1.3	1.4	1	4,833	384	94%	20%	4%	50%	0%	7%	465.1798817	Commercial Prescriptive & Custom
21	WS	Non-Residential	Large Commercial	K12 Education	HVAC	Unitary and Split System AC/HP Equipment	0.6	0.8	0.9	0	0	0	0%	0%	0%	0%	0%	0%	0	*N/A
22	WS	Non-Residential	Large Commercial	Education with Summer Sessions	HVAC	Unitary and Split System AC/HP Equipment	0.9	1.2	1.3	1	4,833	191	0%	20%	1%	0%	0%	7%	0.32920503	Commercial Prescriptive & Custom
23	WS	Non-Residential	Large Commercial	Lodging	HVAC	Unitary and Split System AC/HP Equipment	1.3	1.6	1.7	1	4,833	354	2%	20%	1%	0%	0%	7%	4.465271687	Commercial Prescriptive & Custom
24	WS	Non-Residential	Large Commercial	General Large Commercial	HVAC	Unitary and Split System AC/HP Equipment	1.0	1.3	1.4	1	4,833	384	94%	20%	1%	0%	0%	7%	233.488426	Commercial Prescriptive & Custom
26	WS	Non-Residential	Small Commercial	All	HVAC	Unitary and Split System AC/HP Equipment	0.8	1.0	1.1	1	12,887	11	100%	33%	82%	0%	0%	7%	254.263146	Commercial Prescriptive & Custom
27	WS	Non-Residential	Small Commercial	All	HVAC	Unitary and Split System AC/HP Equipment	0.9	1.2	1.3	1	12,887	11	100%	33%	8%	0%	0%	7%	248.2207947	Commercial Prescriptive & Custom
28	WS	Non-Residential	Small Commercial	All	HVAC	Unitary and Split System AC/HP Equipment	0.8	1.0	1.1	1	12,887	11	100%	67%	82%	0%	0%	7%	5165.625175	Commercial Prescriptive & Custom
29	WS	Non-Residential	Small Commercial	All	HVAC	Unitary and Split System AC/HP Equipment	0.9	1.2	1.3	1	12,887	11	100%	67%	8%	0%	0%	7%	503.9634317	Commercial Prescriptive & Custom
30	WS	Non-Residential	Small Commercial	All	HVAC	Unitary and Split System AC/HP Equipment	0.9	1.3	1.4	1	12,887	11	100%	0%	5%	0%	0%	7%	470.1151415	Commercial Prescriptive & Custom
31	WS	Non-Residential	Small Commercial	All	HVAC	Unitary and Split System AC/HP Equipment	0.8	1.1	1.2	1	12,887	11	100%	0%	4%	0%	0%	7%	376.0921132	Commercial Prescriptive & Custom
32	WS	Non-Residential	Large Commercial	K12 Education	HVAC	Unitary and Split System AC/HP Equipment	0.5	0.7	0.8	0	0	0	0%	0%	0%	0%	0%	0%	0	*N/A
33	WS	Non-Residential	Large Commercial	Education with Summer Sessions	HVAC	Unitary and Split System AC/HP Equipment	0.7	0.9	1.0	1	4,833	191	0%	20%	4%	0%	0%	7%	1.316820119	Commercial Prescriptive & Custom
34	WS	Non-Residential	Large Commercial	Lodging	HVAC	Unitary and Split System AC/HP Equipment	0.9	1.2	1.3	1	4,833	354	2%	20%	4%	0%	0%	7%	17.86108675	Commercial Prescriptive & Custom
35	WS	Non-Residential	Large Commercial	General Large Commercial	HVAC	Unitary and Split System AC/HP Equipment	0.8	1.1	1.1	1	4,833	384	94%	20%	4%	0%	0%	7%	933.9537039	Commercial Prescriptive & Custom
36	WS	Non-Residential	Large Commercial	K12 Education	HVAC	Unitary and Split System AC/HP Equipment	0.4	0.6	0.6	0	0	0	0%	0%	0%	0%	0%	0%	0	*N/A
37	WS	Non-Residential	Large Commercial	Education with Summer Sessions	HVAC	Unitary and Split System AC/HP Equipment	0.5	0.7	0.8	0	0	0	0%	0%	0%	0%	0%	0%	0	*N/A
38	WS	Non-Residential	Large Commercial	Lodging	HVAC	Unitary and Split System AC/HP Equipment	0.6	0.9	0.9	0	0	0	0%	0%	0%	0%	0%	0%	0	*N/A
39	WS	Non-Residential	Large Commercial	General Large Commercial	HVAC	Unitary and Split System AC/HP Equipment	0.6	0.8	0.9	0	0	0	0%	0%	0%	0%	0%	0%	0	*N/A
41	WS	Non-Residential	Small Commercial	Lodging	HVAC	PTAC	0.3	0.5	0.6	0	0	0	0%	0%	0%	0%	0%	0%	0	*N/A
42	NWS	Non-Residential	Small Commercial	Lodging	HVAC	Occupancy-Based PTAC/PTHP Controls	0.6	1.0	1.1	1	12,887	27	0%	0%	0%	0%	0%	100%	1285.481319	Commercial Prescriptive & Custom
44	WS	Non-Residential	Large Commercial	K12 Education	HVAC	Air or Water Cooled Chilling Equipment (Chillers)	0.5	0.7	0.7	0	0	0	0%	0%	0%	0%	0%	0%	0	*N/A
45	WS	Non-Residential	Large Commercial	Education with Summer Sessions	HVAC	Air or Water Cooled Chilling Equipment (Chillers)	0.8	1.0	1.0	1	4,833	191	0%	80%	17%	0%	0%	5%	16.46025149	Commercial Prescriptive & Custom
46	WS	Non-Residential	Large Commercial	Lodging	HVAC	Air or Water Cooled Chilling Equipment (Chillers)	1.0	1.2	1.2	1	4,833	354	2%	80%	17%	0%	0%	5%	223.2635844	Commercial Prescriptive & Custom
47	WS	Non-Residential	Large Commercial	General Large Commercial	HVAC	Air or Water Cooled Chilling Equipment (Chillers)	0.8	1.0	1.1	1	4,833	384	94%	80%	17%	0%	0%	5%	11674.4213	Commercial Prescriptive & Custom
48	WS	Non-Residential	Large Commercial	K12 Education	HVAC	Air or Water Cooled Chilling Equipment (Chillers)	0.3	0.3	0.3	0	0	0	0%	0%	0%	0%	0%	0%	0	*N/A
49	WS	Non-Residential	Large Commercial	Education with Summer Sessions	HVAC	Air or Water Cooled Chilling Equipment (Chillers)	0.6	0.7	0.7	0	0	0	0%	0%	0%	0%	0%	0%	0	*N/A
50	WS	Non-Residential	Large Commercial	Lodging	HVAC	Air or Water Cooled Chilling Equipment (Chillers)	0.9	1.0	1.0	1	4,833	354	2%	80%	17%	0%	0%	5%	223.2635844	Commercial Prescriptive & Custom
51	WS	Non-Residential	Large Commercial	General Large Commercial	HVAC	Air or Water Cooled Chilling Equipment (Chillers)	0.6	0.7	0.7	0	0	0	0%	0%	0%	0%	0%	0%	0	*N/A
52	WS	Non-Residential	Large Commercial	Hospital	HVAC	Air or Water Cooled Chilling Equipment (Chillers)	1.1	1.3	1.4	1	4,833	608	1%	0%	25%	0%	0%	5%	193.0463764	Commercial Prescriptive & Custom
53	WS	Non-Residential	Large Commercial	K12 Education	HVAC	Air or Water Cooled Chilling Equipment (Chillers)	0.5	0.6	0.7	0	0	0	0%	0%	0%	0%	0%	0%	0	*N/A
54	WS	Non-Residential	Large Commercial	Education with Summer Sessions	HVAC	Air or Water Cooled Chilling Equipment (Chillers)	0.8	1.0	1.0	1	4,833	191	0%	0%	17%	0%	0%	5%	20.57531437	Commercial Prescriptive & Custom
55	WS	Non-Residential	Large Commercial	Lodging	HVAC	Air or Water Cooled Chilling Equipment (Chillers)	1.0	1.2	1.2	1	4,833	354	2%	0%	17%	0%	0%	5%	279.0794805	Commercial Prescriptive & Custom
56	WS	Non-Residential	Large Commercial	General Large Commercial	HVAC	Air or Water Cooled Chilling Equipment (Chillers)	0.8	1.0	1.0	1	4,833	384	94%	0%	17%	0%	0%	5%	14593.02662	Commercial Prescriptive & Custom
57	WS	Non-Residential	Large Commercial	Hospital	HVAC	Air or Water Cooled Chilling Equipment (Chillers)	2.2	2.5	2.5	1	4,833	608	1%	0%	25%	0%	0%	5%	193.0463764	Commercial Prescriptive & Custom
58	WS	Non-Residential	Large Commercial	K12 Education	HVAC	Air or Water Cooled Chilling Equipment (Chillers)	0.6	0.7	0.8	0	0	0	0%	0%	0%	0%	0%	0%	0	*N/A
59	WS	Non-Residential	Large Commercial	Education with Summer Sessions	HVAC	Air or Water Cooled Chilling Equipment (Chillers)	1.3	1.4	1.5	1	4,833	191	0%	0%	17%	0%	0%	5%	20.57531437	Commercial Prescriptive & Custom
60	WS	Non-Residential	Large Commercial	Lodging	HVAC	Air or Water Cooled Chilling Equipment (Chillers)	1.9	2.1	2.2	1	4,833	354	2%	0%	17%	0%	0%	5%	279.0794805	Commercial Prescriptive & Custom

Commercial Measures

MEASURE DESCRIPTION						MEASURE SELECTION				APPLICABILITY							PROGRAM			
Measure ID	Weather Sensitive	Sector	Sub-Sector	Building Type	End Use	Measure Name	Measure TRC calculated for 2014	Measure TRC calculated for 2020	Measure TRC calculated for 2022	Passed Measure Screening? (1=Yes, 0=No)	Total Sub-Sector Units	Measure Units per Sub-Sector Unit	Applicability	Technical Feasibility	Distribution by size model but not Efficiency Level	Distribution by Efficiency Level	Not Yet Adopted	Annual Replacement Eligibility	Total Applicable Measure Units	Program Name
61	WS	Non-Residential	Large Commercial	General Large Commercial	HVAC	Air or Water Cooled Chilling Equipment (Chillers)	1.3	1.5	1.5	1	4,833	384	94%	0%	17%	0%	0%	5%	14593.02662	Commercial Prescriptive & Custom
62	WS	Non-Residential	Large Commercial	Hospital	HVAC	Air or Water Cooled Chilling Equipment (Chillers)	1.8	2.1	2.2	1	4,833	608	1%	0%	25%	0%	0%	4%	154.4371011	Commercial Prescriptive & Custom
63	WS	Non-Residential	Large Commercial	Education with Summer Sessions	HVAC	Air or Water Cooled Chilling Equipment (Chillers)	1.2	1.5	1.6	1	4,833	191	0%	0%	17%	0%	0%	4%	16.46025149	Commercial Prescriptive & Custom
64	WS	Non-Residential	Large Commercial	Lodging	HVAC	Air or Water Cooled Chilling Equipment (Chillers)	1.6	1.9	1.9	1	4,833	354	2%	0%	17%	0%	0%	4%	223.2635844	Commercial Prescriptive & Custom
65	WS	Non-Residential	Large Commercial	General Large Commercial	HVAC	Air or Water Cooled Chilling Equipment (Chillers)	1.3	1.5	1.6	1	4,833	384	94%	0%	17%	0%	0%	4%	11674.4213	Commercial Prescriptive & Custom
66	WS	Non-Residential	Large Commercial	Hospital	HVAC	Air or Water Cooled Chilling Equipment (Chillers)	1.7	1.8	1.9	1	4,833	608	1%	0%	25%	0%	0%	4%	154.4371011	Commercial Prescriptive & Custom
67	WS	Non-Residential	Large Commercial	Education with Summer Sessions	HVAC	Air or Water Cooled Chilling Equipment (Chillers)	1.0	1.1	1.1	1	4,833	191	0%	0%	17%	0%	0%	4%	16.46025149	Commercial Prescriptive & Custom
68	WS	Non-Residential	Large Commercial	Lodging	HVAC	Air or Water Cooled Chilling Equipment (Chillers)	1.5	1.6	1.6	1	4,833	354	2%	0%	17%	0%	0%	4%	223.2635844	Commercial Prescriptive & Custom
69	WS	Non-Residential	Large Commercial	General Large Commercial	HVAC	Air or Water Cooled Chilling Equipment (Chillers)	1.0	1.1	1.1	1	4,833	384	94%	0%	17%	0%	0%	4%	11674.4213	Commercial Prescriptive & Custom
71	NWS	Non-Residential	Large Commercial	Hospital	HVAC	Variable Speed Drives for HVAC	9.3	10.5	10.8	1	4,833	365	1%	0%	0%	0%	75%	100%	6967.45437	Commercial Prescriptive & Custom
72	NWS	Non-Residential	Large Commercial	Hospital	HVAC	Variable Speed Drives for HVAC	3.3	4.0	4.1	1	4,833	36	1%	0%	0%	0%	75%	100%	696.745437	Commercial Prescriptive & Custom
73	NWS	Non-Residential	Large Commercial	Hospital	HVAC	Variable Speed Drives for HVAC	5.9	6.6	6.8	1	4,833	36	1%	0%	0%	0%	75%	100%	696.745437	Commercial Prescriptive & Custom
74	NWS	Non-Residential	Large Commercial	Hospital	HVAC	Variable Speed Drives for HVAC	13.9	15.7	16.2	1	4,833	36	1%	0%	0%	0%	75%	100%	696.745437	Commercial Prescriptive & Custom
75	NWS	Non-Residential	Large Commercial	K12 Education	HVAC	Variable Speed Drives for HVAC	2.9	3.4	3.6	1	4,833	137	3%	90%	0%	0%	75%	100%	11399.04848	Commercial Prescriptive & Custom
76	NWS	Non-Residential	Large Commercial	K12 Education	HVAC	Variable Speed Drives for HVAC	1.6	2.0	2.1	1	4,833	14	3%	80%	0%	0%	75%	100%	1013.248754	Commercial Prescriptive & Custom
77	NWS	Non-Residential	Large Commercial	K12 Education	HVAC	Variable Speed Drives for HVAC	5.9	6.6	6.8	1	4,833	14	3%	80%	0%	0%	75%	100%	1013.248754	Commercial Prescriptive & Custom
78	NWS	Non-Residential	Large Commercial	K12 Education	HVAC	Variable Speed Drives for HVAC	4.3	5.1	5.3	1	4,833	14	3%	80%	0%	0%	75%	100%	1013.248754	Commercial Prescriptive & Custom
79	NWS	Non-Residential	Large Commercial	Education with Summer Sessions	HVAC	Variable Speed Drives for HVAC	3.4	3.9	4.1	1	4,833	114	0%	0%	0%	0%	75%	100%	1113.910295	Commercial Prescriptive & Custom
80	NWS	Non-Residential	Large Commercial	Education with Summer Sessions	HVAC	Variable Speed Drives for HVAC	1.7	2.2	2.3	1	4,833	11	0%	90%	0%	0%	75%	100%	100.2519265	Commercial Prescriptive & Custom
81	NWS	Non-Residential	Large Commercial	Education with Summer Sessions	HVAC	Variable Speed Drives for HVAC	5.9	6.6	6.8	1	4,833	11	0%	80%	0%	0%	75%	100%	89.11282358	Commercial Prescriptive & Custom
82	NWS	Non-Residential	Large Commercial	Education with Summer Sessions	HVAC	Variable Speed Drives for HVAC	5.0	5.8	6.1	1	4,833	11	0%	80%	0%	0%	75%	100%	89.11282358	Commercial Prescriptive & Custom
83	NWS	Non-Residential	Large Commercial	Lodging	HVAC	Variable Speed Drives for HVAC	3.9	4.5	4.7	1	4,833	212	2%	0%	0%	0%	75%	100%	15108.85816	Commercial Prescriptive & Custom
84	NWS	Non-Residential	Large Commercial	Lodging	HVAC	Variable Speed Drives for HVAC	1.9	2.4	2.5	1	4,833	21	2%	90%	0%	0%	75%	100%	1359.797234	Commercial Prescriptive & Custom
85	NWS	Non-Residential	Large Commercial	Lodging	HVAC	Variable Speed Drives for HVAC	5.9	6.6	6.8	1	4,833	21	2%	80%	0%	0%	75%	100%	1208.708653	Commercial Prescriptive & Custom
86	NWS	Non-Residential	Large Commercial	Lodging	HVAC	Variable Speed Drives for HVAC	5.9	6.8	7.0	1	4,833	21	2%	80%	0%	0%	75%	100%	1208.708653	Commercial Prescriptive & Custom
87	NWS	Non-Residential	Large Commercial	General Large Commercial	HVAC	Variable Speed Drives for HVAC	4.7	5.4	5.6	1	4,833	230	94%	0%	0%	0%	75%	100%	790040.0595	Commercial Prescriptive & Custom
88	NWS	Non-Residential	Large Commercial	General Large Commercial	HVAC	Variable Speed Drives for HVAC	2.1	2.6	2.7	1	4,833	23	94%	90%	0%	0%	75%	100%	71103.60536	Commercial Prescriptive & Custom
89	NWS	Non-Residential	Large Commercial	General Large Commercial	HVAC	Variable Speed Drives for HVAC	5.9	6.6	6.8	1	4,833	23	94%	80%	0%	0%	75%	100%	63203.20476	Commercial Prescriptive & Custom
90	NWS	Non-Residential	Large Commercial	General Large Commercial	HVAC	Variable Speed Drives for HVAC	7.1	8.1	8.4	1	4,833	23	94%	80%	0%	0%	75%	100%	63203.20476	Commercial Prescriptive & Custom
92	NWS	Non-Residential	Small Commercial	All	HVAC	Dual Enthalpy Economizer	1.4	1.5	1.6	1	12,887	1	100%	0%	0%	0%	0%	10%	1288.661968	Commercial Prescriptive & Custom
93	NWS	Non-Residential	Large Commercial	All	HVAC	Dual Enthalpy Economizer	1.6	1.8	1.9	1	4,833	1	100%	0%	0%	0%	0%	10%	483.3282842	Commercial Prescriptive & Custom
95	NWS	Non-Residential	Small Commercial	All	HVAC	Demand Controlled Ventilation	3.3	5.5	6.0	1	12,887	1	100%	0%	0%	0%	0%	10%	1288.661968	Commercial Prescriptive & Custom
96	NWS	Non-Residential	Large Commercial	All	HVAC	Demand Controlled Ventilation	0.8	0.9	0.9	1	4,833	1	100%	0%	0%	0%	0%	10%	483.3282842	Commercial Prescriptive & Custom
98	WS	Non-Residential	Small Commercial	All	HVAC	Ground Source Heatpump	0.6	0.8	0.9	0	0	0	0%	0%	0%	0%	0%	0%	0	*N/A
100	WS	Non-Residential	Small Commercial	All	HVAC	AC Tune-Up	0.5	1.1	1.3	1	12,887	11	100%	0%	0%	0%	0%	100%	141034.5424	Small Business Solutions
102	NWS	Non-Residential	Small Commercial	All	HVAC	Electronically Commutated Motors for Refrigeration and HVAC Applications	5.2	6.5	6.8	1	12,887	2	100%	82%	0%	0%	0%	100%	21134.05464	Commercial Prescriptive & Custom
103	NWS	Non-Residential	All	Hospital	Lighting	High Performance T8/T5 with Low-BF Ballast	0.4	0.5	0.6	0	0	0	0%	0%	0%	0%	0%	0%	0	*N/A
104	NWS	Non-Residential	All	Hospital	Lighting	High Performance T8/T5 with Low-BF Ballast	0.5	0.7	0.7	0	0	0	0%	0%	0%	0%	0%	0%	0	*N/A
105	NWS	Non-Residential	All	Hospital	Lighting	High Performance T8/T5 with Low-BF Ballast	0.8	1.0	1.0	0	0	0	0%	0%	0%	0%	0%	0%	0	*N/A
106	NWS	Non-Residential	All	Hospital	Lighting	High Performance T8/T5 with Low-BF Ballast	0.9	1.1	1.2	0	0	0	0%	0%	0%	0%	0%	0%	0	*N/A
107	NWS	Non-Residential	All	K12 Education	Lighting	High Performance T8/T5 with Low-BF Ballast	0.4	0.5	0.5	0	0	0	0%	0%	0%	0%	0%	0%	0	*N/A
108	NWS	Non-Residential	All	K12 Education	Lighting	High Performance T8/T5 with Low-BF Ballast	0.5	0.6	0.6	0	0	0	0%	0%	0%	0%	0%	0%	0	*N/A
109	NWS	Non-Residential	All	K12 Education	Lighting	High Performance T8/T5 with Low-BF Ballast	0.7	0.9	0.9	0	0	0	0%	0%	0%	0%	0%	0%	0	*N/A
110	NWS	Non-Residential	All	K12 Education	Lighting	High Performance T8/T5 with Low-BF Ballast	0.9	1.0	1.0	0	0	0	0%	0%	0%	0%	0%	0%	0	*N/A
111	NWS	Non-Residential	All	Education with Summer Sessions	Lighting	High Performance T8/T5 with Low-BF Ballast	0.4	0.5	0.5	0	0	0	0%	0%	0%	0%	0%	0%	0	*N/A
112	NWS	Non-Residential	All	Education with Summer Sessions	Lighting	High Performance T8/T5 with Low-BF Ballast	0.6	0.7	0.7	0	0	0	0%	0%	0%	0%	0%	0%	0	*N/A
113	NWS	Non-Residential	All	Education with Summer Sessions	Lighting	High Performance T8/T5 with Low-BF Ballast	0.8	1.0	1.0	0	0	0	0%	0%	0%	0%	0%	0%	0	*N/A
114	NWS	Non-Residential	All	Education with Summer Sessions	Lighting	High Performance T8/T5 with Low-BF Ballast	0.9	1.1	1.2	0	0	0	0%	0%	0%	0%	0%	0%	0	*N/A
115	NWS	Non-Residential	All	Lodging	Lighting	High Performance T8/T5 with Low-BF Ballast	0.4	0.5	0.5	0	0	0	0%	0%	0%	0%	0%	0%	0	*N/A
116	NWS	Non-Residential	All	Lodging	Lighting	High Performance T8/T5 with Low-BF Ballast	0.5	0.7	0.7	0	0	0	0%	0%	0%	0%	0%	0%	0	*N/A
117	NWS	Non-Residential	All	Lodging	Lighting	High Performance T8/T5 with Low-BF Ballast	0.8	1.0	1.0	0	0	0	0%	0%	0%	0%	0%	0%	0	*N/A
118	NWS	Non-Residential	All	Lodging	Lighting	High Performance T8/T5 with Low-BF Ballast	0.9	1.1	1.2	0	0	0	0%	0%	0%	0%	0%	0%	0	*N/A
119	NWS	Non-Residential	All	General Large Commercial	Lighting	High Performance T8/T5 with Low-BF Ballast	0.4	0.5	0.6	0	0	0	0%	0%	0%	0%	0%	0%	0	*N/A
120	NWS	Non-Residential	All	General Large Commercial	Lighting	High Performance T8/T5 with Low-BF Ballast	0.6	0.7	0.7	0	0	0	0%	0%	0%	0%	0%	0%	0	*N/A

Commercial Measures

MEASURE DESCRIPTION						MEASURE SELECTION						APPLICABILITY						PROGRAM		
Measure ID	Weather Sensitive	Sector	Sub-Sector	Building Type	End Use	Measure Name	Measure TRC calculated for 2014	Measure TRC calculated for 2020	Measure TRC calculated for 2022	Passed Measure Screening? (1=Yes, 0=No)	Total Sub-Sector Units	Measure Units per Sub-Sector Unit	Applicability	Technical Feasibility	Distribution by size/model but not Efficiency Level	Distribution by Efficiency Level	Not Yet Adopted	Annual Replacement Eligibility	Total Applicable Measure Units	Program Name
121	NWS	Non-Residential	All	General Large Commercial	Lighting	High Performance T8/T5 with Low-BF Ballast	0.8	1.0	1.1	0	0	0	0%	0%	0%	0%	0%	0%	0	*N/A
122	NWS	Non-Residential	All	General Large Commercial	Lighting	High Performance T8/T5 with Low-BF Ballast	1.0	1.2	1.2	0	0	0	0%	0%	0%	0%	0%	0%	0	*N/A
123	NWS	Non-Residential	All	General Small Commercial	Lighting	High Performance T8/T5 with Low-BF Ballast	0.4	0.6	0.6	0	0	0	0%	0%	0%	0%	0%	0%	0	*N/A
124	NWS	Non-Residential	All	General Small Commercial	Lighting	High Performance T8/T5 with Low-BF Ballast	0.6	0.7	0.8	0	0	0	0%	0%	0%	0%	0%	0%	0	*N/A
125	NWS	Non-Residential	All	General Small Commercial	Lighting	High Performance T8/T5 with Low-BF Ballast	0.8	1.1	1.1	0	0	0	0%	0%	0%	0%	0%	0%	0	*N/A
126	NWS	Non-Residential	All	General Small Commercial	Lighting	High Performance T8/T5 with Low-BF Ballast	1.0	1.2	1.3	0	0	0	0%	0%	0%	0%	0%	0%	0	*N/A
127	NWS	Non-Residential	All	Hospital	Lighting	Reduced Wattage T8/T5 Lamps	4.0	5.2	5.6	1	17,695	9,056	0%	86%	58%	0%	0%	38%	43832.85797	Commercial Prescriptive & Custom
128	NWS	Non-Residential	All	K12 Education	Lighting	Reduced Wattage T8/T5 Lamps	4.1	5.1	5.4	1	17,695	1,956	1%	85%	58%	0%	0%	19%	26565.42027	Commercial Prescriptive & Custom
129	NWS	Non-Residential	All	Education with Summer Sessions	Lighting	Reduced Wattage T8/T5 Lamps	4.4	5.8	6.2	1	17,695	1,190	0%	85%	58%	0%	0%	24%	1809.592306	Commercial Prescriptive & Custom
130	NWS	Non-Residential	All	Lodging	Lighting	Reduced Wattage T8/T5 Lamps	3.8	5.0	5.4	1	17,695	1,363	1%	53%	58%	0%	0%	44%	26434.39367	Commercial Prescriptive & Custom
131	NWS	Non-Residential	All	General Large Commercial	Lighting	Reduced Wattage T8/T5 Lamps	4.2	5.7	6.1	1	17,695	2,292	26%	81%	58%	0%	0%	25%	1224028.611	Commercial Prescriptive & Custom
132	NWS	Non-Residential	All	General Small Commercial	Lighting	Reduced Wattage T8/T5 Lamps	4.1	5.8	6.3	1	17,695	190	72%	81%	58%	0%	0%	28%	315658.2643	Commercial Prescriptive & Custom
133	NWS	Non-Residential	All	Hospital	Lighting	Reduced Wattage T8/T5 Lamps	1.2	1.6	1.8	0	0	0	0%	0%	0%	0%	0%	0%	0	*N/A
134	NWS	Non-Residential	All	K12 Education	Lighting	Reduced Wattage T8/T5 Lamps	1.3	1.6	1.7	0	0	0	0%	0%	0%	0%	0%	0%	0	*N/A
135	NWS	Non-Residential	All	Education with Summer Sessions	Lighting	Reduced Wattage T8/T5 Lamps	1.4	1.8	2.0	0	0	0	0%	0%	0%	0%	0%	0%	0	*N/A
136	NWS	Non-Residential	All	Lodging	Lighting	Reduced Wattage T8/T5 Lamps	1.2	1.6	1.7	0	0	0	0%	0%	0%	0%	0%	0%	0	*N/A
137	NWS	Non-Residential	All	General Large Commercial	Lighting	Reduced Wattage T8/T5 Lamps	1.3	1.8	1.9	0	0	0	0%	0%	0%	0%	0%	0%	0	*N/A
138	NWS	Non-Residential	All	General Small Commercial	Lighting	Reduced Wattage T8/T5 Lamps	1.3	1.8	2.0	0	0	0	0%	0%	0%	0%	0%	0%	0	*N/A
139	NWS	Non-Residential	All	Hospital	Lighting	Linear Fluorescent Fixture Upgrade	1.1	1.4	1.5	1	17,695	2,821	0%	86%	73%	50%	90%	100%	20203.95162	Commercial Prescriptive & Custom
140	NWS	Non-Residential	All	K12 Education	Lighting	Linear Fluorescent Fixture Upgrade	0.6	0.7	0.8	1	17,695	609	1%	85%	73%	50%	90%	100%	23265.73662	Commercial Prescriptive & Custom
141	NWS	Non-Residential	All	Education with Summer Sessions	Lighting	Linear Fluorescent Fixture Upgrade	0.5	0.7	0.8	1	17,695	371	0%	85%	73%	50%	90%	100%	1336.143042	Commercial Prescriptive & Custom
142	NWS	Non-Residential	All	Lodging	Lighting	Linear Fluorescent Fixture Upgrade	1.3	1.6	1.7	1	17,695	424	1%	53%	73%	50%	90%	100%	10330.45117	Commercial Prescriptive & Custom
143	NWS	Non-Residential	All	General Large Commercial	Lighting	Linear Fluorescent Fixture Upgrade	0.8	1.1	1.1	1	17,695	714	26%	81%	73%	50%	90%	100%	850086.6799	Commercial Prescriptive & Custom
144	NWS	Non-Residential	All	General Small Commercial	Lighting	Linear Fluorescent Fixture Upgrade	0.9	1.2	1.3	1	17,695	59	72%	81%	73%	50%	90%	100%	200955.4438	Commercial Prescriptive & Custom
145	NWS	Non-Residential	All	Hospital	Lighting	Linear Fluorescent Fixture Upgrade	2.0	2.5	2.6	1	17,695	1,532	0%	86%	50%	50%	90%	100%	7528.944261	Commercial Prescriptive & Custom
146	NWS	Non-Residential	All	K12 Education	Lighting	Linear Fluorescent Fixture Upgrade	1.0	1.3	1.4	1	17,695	331	1%	85%	50%	50%	90%	100%	9415.203835	Commercial Prescriptive & Custom
147	NWS	Non-Residential	All	Education with Summer Sessions	Lighting	Linear Fluorescent Fixture Upgrade	1.4	1.8	1.9	1	17,695	201	0%	85%	50%	50%	90%	100%	497.909486	Commercial Prescriptive & Custom
148	NWS	Non-Residential	All	Lodging	Lighting	Linear Fluorescent Fixture Upgrade	2.2	2.8	2.9	1	17,695	230	1%	53%	50%	50%	90%	100%	3924.142226	Commercial Prescriptive & Custom
149	NWS	Non-Residential	All	General Large Commercial	Lighting	Linear Fluorescent Fixture Upgrade	1.5	1.9	2.0	1	17,695	388	26%	81%	50%	50%	90%	100%	322372.0546	Commercial Prescriptive & Custom
150	NWS	Non-Residential	All	General Small Commercial	Lighting	Linear Fluorescent Fixture Upgrade	1.6	2.2	2.3	1	17,695	32	72%	81%	50%	50%	90%	100%	74885.46619	Commercial Prescriptive & Custom
151	NWS	Non-Residential	All	Hospital	Lighting	Linear Fluorescent Fixture Upgrade	0.7	0.9	0.9	1	17,695	2,821	0%	86%	100%	50%	90%	100%	27732.89568	Commercial Prescriptive & Custom
152	NWS	Non-Residential	All	K12 Education	Lighting	Linear Fluorescent Fixture Upgrade	0.4	0.5	0.5	1	17,695	609	1%	85%	100%	50%	90%	100%	34880.94045	Commercial Prescriptive & Custom
153	NWS	Non-Residential	All	Education with Summer Sessions	Lighting	Linear Fluorescent Fixture Upgrade	0.5	0.6	0.7	1	17,695	371	0%	85%	100%	50%	90%	100%	1834.052891	Commercial Prescriptive & Custom
154	NWS	Non-Residential	All	Lodging	Lighting	Linear Fluorescent Fixture Upgrade	0.8	1.0	1.0	1	17,695	424	1%	53%	100%	50%	90%	100%	14454.5934	Commercial Prescriptive & Custom
155	NWS	Non-Residential	All	General Large Commercial	Lighting	Linear Fluorescent Fixture Upgrade	0.5	0.7	0.7	1	17,695	714	26%	81%	100%	50%	90%	100%	1187458.734	Commercial Prescriptive & Custom
156	NWS	Non-Residential	All	General Small Commercial	Lighting	Linear Fluorescent Fixture Upgrade	0.6	0.7	0.8	1	17,695	59	72%	81%	100%	50%	90%	100%	275840.91	Commercial Prescriptive & Custom
157	NWS	Non-Residential	All	Hospital	Lighting	Linear Fluorescent Fixture Upgrade	1.4	1.7	1.8	1	17,695	1,532	0%	86%	100%	50%	90%	100%	15057.88852	Commercial Prescriptive & Custom
158	NWS	Non-Residential	All	K12 Education	Lighting	Linear Fluorescent Fixture Upgrade	0.7	0.9	1.0	1	17,695	331	1%	85%	100%	50%	90%	100%	18830.40767	Commercial Prescriptive & Custom
159	NWS	Non-Residential	All	Education with Summer Sessions	Lighting	Linear Fluorescent Fixture Upgrade	0.9	1.2	1.3	1	17,695	201	0%	85%	100%	50%	90%	100%	995.8196971	Commercial Prescriptive & Custom
160	NWS	Non-Residential	All	Lodging	Lighting	Linear Fluorescent Fixture Upgrade	1.5	1.9	2.0	1	17,695	230	1%	53%	100%	50%	90%	100%	7848.284473	Commercial Prescriptive & Custom
161	NWS	Non-Residential	All	General Large Commercial	Lighting	Linear Fluorescent Fixture Upgrade	1.0	1.3	1.4	1	17,695	388	26%	81%	100%	50%	90%	100%	644744.1092	Commercial Prescriptive & Custom
162	NWS	Non-Residential	All	General Small Commercial	Lighting	Linear Fluorescent Fixture Upgrade	1.1	1.5	1.6	1	17,695	32	72%	81%	100%	50%	90%	100%	149770.9324	Commercial Prescriptive & Custom
163	NWS	Non-Residential	All	Hospital	Lighting	Commercial Standard CFL	4.2	5.1	6.3	0	0	0	0%	0%	0%	0%	0%	0%	0	*N/A
164	NWS	Non-Residential	All	Hospital	Lighting	Commercial Standard CFL	2.7	3.4	4.1	0	0	0	0%	0%	0%	0%	0%	0%	0	*N/A
165	NWS	Non-Residential	All	K12 Education	Lighting	Commercial Standard CFL	2.3	2.8	3.6	0	0	0	0%	0%	0%	0%	0%	0%	0	*N/A
166	NWS	Non-Residential	All	K12 Education	Lighting	Commercial Standard CFL	2.7	3.6	4.3	0	0	0	0%	0%	0%	0%	0%	0%	0	*N/A
167	NWS	Non-Residential	All	Education with Summer Sessions	Lighting	Commercial Standard CFL	5.2	6.9	8.4	0	0	0	0%	0%	0%	0%	0%	0%	0	*N/A
168	NWS	Non-Residential	All	Education with Summer Sessions	Lighting	Commercial Standard CFL	3.4	4.6	5.6	0	0	0	0%	0%	0%	0%	0%	0%	0	*N/A
169	NWS	Non-Residential	All	Lodging	Lighting	Commercial Standard CFL	4.2	5.1	5.7	1	17,695	881	1%	20%	90%	0%	100%	100%	22638.9089	Commercial Prescriptive & Custom
170	NWS	Non-Residential	All	Lodging	Lighting	Commercial Standard CFL	2.7	3.4	3.8	1	17,695	482	1%	20%	10%	52%	100%	100%	718.1310135	Commercial Prescriptive & Custom
171	NWS	Non-Residential	All	General Large Commercial	Lighting	Commercial Standard CFL	5.4	7.3	8.9	0	0	0	0%	0%	0%	0%	0%	0%	0	*N/A
172	NWS	Non-Residential	All	General Large Commercial	Lighting	Commercial Standard CFL	3.6	4.9	6.0	0	0	0	0%	0%	0%	0%	0%	0%	0	*N/A
173	NWS	Non-Residential	All	General Small Commercial	Lighting	Commercial Standard CFL	5.9	8.1	9.9	0	0	0	0%	0%	0%	0%	0%	0%	0	*N/A
174	NWS	Non-Residential	All	General Small Commercial	Lighting	Commercial Standard CFL	2.2	2.8	3.7	0	0	0	0%	0%	0%	0%	0%	0%	0	*N/A
175	NWS	Non-Residential	All	Hospital	Lighting	LED Bulbs	5.1	6.5	6.9	1	17,695	5,977	0%	2%	33%	0%	100%	100%	1002.051625	Commercial Prescriptive & Custom
176	NWS	Non-Residential	All	Hospital	Lighting	LED Bulbs	6.4	8.2	8.7	1	17,695	3,206	0%	2%	67%	0%	100%	100%	1091.179823	Commercial Prescriptive & Custom
177	NWS	Non-Residential	All	K12 Education	Lighting	LED Bulbs	5.6	6.6	6.9	1	17,695	1,291	1%	3%	33%	0%	100%	100%	1901.763579	Commercial Prescriptive & Custom
178	NWS	Non-Residential	All	K12 Education	Lighting	LED Bulbs	7.1	8.4	8.7	1	17,695	692	1%	3%	67%	0%	100%	100%	2070.9173	Commercial Prescriptive & Custom
179	NWS	Non-Residential	All	Education with Summer Sessions	Lighting	LED Bulbs	5.6	7.0	7.3	1	17,695	785	0%	3%	33%	0%	100%	100%	100.5720994	Commercial Prescriptive & Custom
180	NWS	Non-Residential	All	Education with Summer Sessions	Lighting	LED Bulbs	7.1	8.8	9.2	1	17,695	421	0%	3%	67%	0%	100%	100%	109.5175566	Commercial Prescriptive & Custom

Commercial Measures

MEASURE DESCRIPTION						MEASURE SELECTION					APPLICABILITY							PROGRAM			
Measure ID	Weather Sensitive	Sector	Sub-Sector	Building Type	End Use	Measure Name	Measure TRC calculated for 2014	Measure TRC calculated for 2020	Measure TRC calculated for 2022	Passed Measure Screening? (1=Yes, 0=No)	Total Sub-Sector Units	Measure Units per Sub-Sector Unit	Applicability	Technical Feasibility	Distribution by size/model but not Efficiency Level	Distribution by Efficiency Level	Not Yet Adopted	Annual Replacement Eligibility	Total Applicable Measure Units	Program Name	
181	NWS	Non-Residential	All	Lodging	Lighting	LED Bulbs	4.9	5.6	5.8	1	17,695	899	1%	20%	90%	45%	100%	100%	10509.48605	Commercial Prescriptive & Custom	
182	NWS	Non-Residential	All	Lodging	Lighting	LED Bulbs	6.2	7.0	7.3	1	17,695	482	1%	20%	10%	48%	100%	100%	659.2521321	Commercial Prescriptive & Custom	
183	NWS	Non-Residential	All	General Large Commercial	Lighting	LED Bulbs	5.9	7.4	7.8	1	17,695	1,513	26%	5%	33%	0%	100%	100%	124764.1643	Commercial Prescriptive & Custom	
184	NWS	Non-Residential	All	General Large Commercial	Lighting	LED Bulbs	7.5	9.3	9.8	1	17,695	811	26%	5%	67%	0%	100%	100%	135861.4021	Commercial Prescriptive & Custom	
185	NWS	Non-Residential	All	General Small Commercial	Lighting	LED Bulbs	6.1	7.8	8.3	1	17,695	126	72%	6%	33%	0%	100%	100%	30608.90234	Commercial Prescriptive & Custom	
186	NWS	Non-Residential	All	General Small Commercial	Lighting	LED Bulbs	7.7	9.9	10.4	1	17,695	67	72%	6%	67%	0%	100%	100%	33331.43305	Commercial Prescriptive & Custom	
187	NWS	Non-Residential	Large Commercial	All	Lighting	Efficient High Bay Lighting	1.3	1.6	1.7	1	4,833	279	100%	1%	25%	70%	88%	100%	2946.514911	Commercial Prescriptive & Custom	
188	NWS	Non-Residential	Small Commercial	All	Lighting	Efficient High Bay Lighting	1.3	1.7	1.8	1	12,887	23	100%	1%	25%	70%	88%	100%	645.3438799	Commercial Prescriptive & Custom	
189	NWS	Non-Residential	Large Commercial	All	Lighting	Efficient High Bay Lighting	1.8	2.2	2.3	1	4,833	185	100%	1%	25%	100%	88%	100%	2790.169222	Commercial Prescriptive & Custom	
190	NWS	Non-Residential	Small Commercial	All	Lighting	Efficient High Bay Lighting	1.8	2.2	2.3	1	12,887	15	100%	1%	25%	100%	88%	100%	611.1011434	Commercial Prescriptive & Custom	
191	NWS	Non-Residential	Large Commercial	All	Lighting	Efficient High Bay Lighting	2.2	2.7	2.8	1	4,833	220	100%	1%	25%	70%	88%	100%	2317.259184	Commercial Prescriptive & Custom	
192	NWS	Non-Residential	Small Commercial	All	Lighting	Efficient High Bay Lighting	2.2	2.7	2.8	1	12,887	18	100%	1%	25%	70%	88%	100%	507.5246784	Commercial Prescriptive & Custom	
193	NWS	Non-Residential	Large Commercial	All	Lighting	Efficient High Bay Lighting	3.1	3.8	4.0	1	4,833	142	100%	1%	25%	100%	88%	100%	2146.284017	Commercial Prescriptive & Custom	
194	NWS	Non-Residential	Small Commercial	All	Lighting	Efficient High Bay Lighting	3.1	3.8	4.0	1	12,887	12	100%	1%	25%	100%	88%	100%	470.0778026	Commercial Prescriptive & Custom	
195	NWS	Non-Residential	Large Commercial	All	Lighting	Efficient High Bay Lighting	0.9	1.3	1.4	1	4,833	220	100%	1%	25%	30%	88%	100%	993.110789	Commercial Prescriptive & Custom	
196	NWS	Non-Residential	Small Commercial	All	Lighting	Efficient High Bay Lighting	0.9	1.3	1.4	1	12,887	18	100%	1%	25%	30%	88%	100%	217.5105765	Commercial Prescriptive & Custom	
197	NWS	Non-Residential	Large Commercial	All	Lighting	Efficient High Bay Lighting	0.5	0.7	0.8	0	0	0	0%	0%	0%	0%	0%	0%	0	*N/A	
198	NWS	Non-Residential	Small Commercial	All	Lighting	Efficient High Bay Lighting	0.5	0.7	0.8	0	0	0	0%	0%	0%	0%	0%	0%	0	*N/A	
199	NWS	Non-Residential	Large Commercial	All	Lighting	Lighting Controls	1.8	2.5	2.7	1	4,833	193	100%	10%	33%	100%	77%	100%	23882.25293	Commercial Prescriptive & Custom	
200	NWS	Non-Residential	Large Commercial	All	Lighting	Lighting Controls	1.2	1.7	1.8	1	4,833	193	100%	10%	33%	100%	77%	100%	23882.25293	Commercial Prescriptive & Custom	
201	NWS	Non-Residential	Large Commercial	All	Lighting	Lighting Controls	0.6	0.9	0.9	1	4,833	193	100%	10%	33%	100%	77%	100%	23882.25293	Commercial Prescriptive & Custom	
202	NWS	Non-Residential	Large Commercial	All	Lighting	Lighting Controls	1.8	2.5	2.7	1	4,833	193	100%	90%	100%	100%	77%	100%	644820.8292	Commercial Prescriptive & Custom	
203	NWS	Non-Residential	Large Commercial	All	Lighting	Lighting Controls	2.3	3.3	3.5	1	4,833	193	100%	10%	33%	100%	77%	100%	23882.25293	Commercial Prescriptive & Custom	
204	NWS	Non-Residential	Large Commercial	All	Lighting	Lighting Controls	2.0	2.9	3.1	1	4,833	193	100%	10%	33%	100%	77%	100%	23882.25293	Commercial Prescriptive & Custom	
205	NWS	Non-Residential	Large Commercial	All	Lighting	Lighting Controls	2.0	2.9	3.1	1	4,833	193	100%	10%	33%	100%	77%	100%	23882.25293	Commercial Prescriptive & Custom	
206	NWS	Non-Residential	Small Commercial	All	Lighting	Lighting Controls	1.9	2.7	2.9	1	12,887	16	100%	10%	33%	100%	77%	100%	5230.676319	Commercial Prescriptive & Custom	
207	NWS	Non-Residential	Small Commercial	All	Lighting	Lighting Controls	1.3	1.8	2.0	1	12,887	16	100%	10%	33%	100%	77%	100%	5230.676319	Commercial Prescriptive & Custom	
208	NWS	Non-Residential	Small Commercial	All	Lighting	Lighting Controls	0.7	0.9	1.0	1	12,887	16	100%	10%	33%	100%	77%	100%	5230.676319	Commercial Prescriptive & Custom	
209	NWS	Non-Residential	Small Commercial	All	Lighting	Lighting Controls	1.9	2.7	2.9	1	12,887	16	100%	90%	100%	100%	77%	100%	14128.2606	Commercial Prescriptive & Custom	
210	NWS	Non-Residential	Small Commercial	All	Lighting	Lighting Controls	2.5	3.5	3.7	1	12,887	16	100%	10%	33%	100%	77%	100%	5230.676319	Commercial Prescriptive & Custom	
211	NWS	Non-Residential	Small Commercial	All	Lighting	Lighting Controls	2.2	3.1	3.3	1	12,887	16	100%	10%	33%	100%	77%	100%	5230.676319	Commercial Prescriptive & Custom	
212	NWS	Non-Residential	Small Commercial	All	Lighting	Lighting Controls	2.2	3.1	3.3	1	12,887	16	100%	10%	33%	100%	77%	100%	5230.676319	Commercial Prescriptive & Custom	
213	NWS	Non-Residential	Small Commercial	All	Lighting	LED Exit Signs	1.6	1.9	2.0	1	12,887	484	100%	1%	0%	100%	0%	100%	71701.05401	Commercial Prescriptive & Custom	
214	NWS	Non-Residential	All	Hospital	Refrigeration	Electronically Commutated Motors (ECM) for Walk-in and Reach-in Coolers/Freezers	4.9	5.8	6.0	1	17,695	27	0%	80%	0%	0%	100%	100%	548.2213432	Commercial Prescriptive & Custom	
215	NWS	Non-Residential	All	K12 Education	Refrigeration	Electronically Commutated Motors (ECM) for Walk-in and Reach-in Coolers/Freezers	4.9	5.8	6.0	1	17,695	13	1%	80%	0%	0%	100%	100%	1605.720437	Commercial Prescriptive & Custom	
216	NWS	Non-Residential	All	Education with Summer Sessions	Refrigeration	Electronically Commutated Motors (ECM) for Walk-in and Reach-in Coolers/Freezers	4.9	5.8	6.0	1	17,695	13	0%	80%	0%	0%	100%	100%	139.6278641	Commercial Prescriptive & Custom	
217	NWS	Non-Residential	All	Lodging	Refrigeration	Electronically Commutated Motors (ECM) for Walk-in and Reach-in Coolers/Freezers	4.9	5.8	6.0	1	17,695	13	1%	80%	0%	0%	67%	100%	1032.398454	Commercial Prescriptive & Custom	
218	NWS	Non-Residential	All	Food Sales	Refrigeration	Electronically Commutated Motors (ECM) for Walk-in and Reach-in Coolers/Freezers	5.0	6.0	6.3	1	17,695	101	1%	80%	0%	0%	67%	100%	7329.961319	Commercial Prescriptive & Custom	
219	NWS	Non-Residential	All	Restaurant	Refrigeration	Electronically Commutated Motors (ECM) for Walk-in and Reach-in Coolers/Freezers	4.9	5.8	6.0	1	17,695	13	2%	80%	0%	0%	0%	100%	3949.47387	Commercial Prescriptive & Custom	
220	NWS	Non-Residential	All	Hospital	Refrigeration	ENERGY STAR Solid Door Refrigerator	4.7	5.7	6.0	1	17,695	28	0%	0%	0%	100%	0%	0%	8%	59.27022348	Commercial Prescriptive & Custom
221	NWS	Non-Residential	All	Hospital	Refrigeration	ENERGY STAR Solid Door Refrigerator	5.8	7.0	7.4	1	17,695	1	0%	0%	33%	0%	0%	8%	0.987837058	Commercial Prescriptive & Custom	
222	NWS	Non-Residential	All	Hospital	Refrigeration	ENERGY STAR Solid Door Refrigerator	8.0	9.8	10.3	1	17,695	1	0%	0%	33%	0%	0%	8%	0.987837058	Commercial Prescriptive & Custom	
223	NWS	Non-Residential	All	Hospital	Refrigeration	ENERGY STAR Solid Door Refrigerator	6.8	8.3	8.7	1	17,695	1	0%	0%	33%	0%	0%	8%	0.987837058	Commercial Prescriptive & Custom	
224	NWS	Non-Residential	All	Hospital	Refrigeration	ENERGY STAR Solid Door Freezer	9.8	11.9	12.5	1	17,695	28	0%	0%	100%	0%	0%	8%	59.27022348	Commercial Prescriptive & Custom	
225	NWS	Non-Residential	All	Hospital	Refrigeration	ENERGY STAR Solid Door Freezer	15.1	18.4	19.3	1	17,695	1	0%	0%	33%	0%	0%	8%	0.987837058	Commercial Prescriptive & Custom	
226	NWS	Non-Residential	All	Hospital	Refrigeration	ENERGY STAR Solid Door Freezer	24.2	29.4	30.9	1	17,695	1	0%	0%	33%	0%	0%	8%	0.987837058	Commercial Prescriptive & Custom	
227	NWS	Non-Residential	All	Hospital	Refrigeration	ENERGY STAR Solid Door Freezer	13.5	16.5	17.3	1	17,695	1	0%	0%	33%	0%	0%	8%	0.987837058	Commercial Prescriptive & Custom	
228	NWS	Non-Residential	All	K12 Education	Refrigeration	ENERGY STAR Solid Door Refrigerator	4.7	5.7	6.0	1	17,695	1	1%	0%	25%	0%	0%	8%	4.34008389	Commercial Prescriptive & Custom	
229	NWS	Non-Residential	All	K12 Education	Refrigeration	ENERGY STAR Solid Door Refrigerator	5.8	7.0	7.4	1	17,695	1	1%	0%	25%	0%	0%	8%	4.34008389	Commercial Prescriptive & Custom	
230	NWS	Non-Residential	All	K12 Education	Refrigeration	ENERGY STAR Solid Door Refrigerator	8.0	9.8	10.3	1	17,695	1	1%	0%	25%	0%	0%	8%	4.34008389	Commercial Prescriptive & Custom	
231	NWS	Non-Residential	All	K12 Education	Refrigeration	ENERGY STAR Solid Door Refrigerator	6.8	8.3	8.7	1	17,695	1	1%	0%	25%	0%	0%	8%	4.34008389	Commercial Prescriptive & Custom	
232	NWS	Non-Residential	All	K12 Education	Refrigeration	ENERGY STAR Solid Door Freezer	9.8	11.9	12.5	1	17,695	1	1%	0%	25%	0%	0%	8%	4.34008389	Commercial Prescriptive & Custom	
233	NWS	Non-Residential	All	K12 Education	Refrigeration	ENERGY STAR Solid Door Freezer	15.1	18.4	19.3	1	17,695	1	1%	0%	25%	0%	0%	8%	4.34008389	Commercial Prescriptive & Custom	
234	NWS	Non-Residential	All	K12 Education	Refrigeration	ENERGY STAR Solid Door Freezer	24.2	29.4	30.9	1	17,695	1	1%	0%	25%	0%	0%	8%	4.34008389	Commercial Prescriptive & Custom	
235	NWS	Non-Residential	All	K12 Education	Refrigeration	ENERGY STAR Solid Door Freezer	13.5	16.5	17.3	1	17,695	1	1%	0%	25%	0%	0%	8%	4.34008389	Commercial Prescriptive & Custom	
236	NWS	Non-Residential	All	Education with Summer Sessions	Refrigeration	ENERGY STAR Solid Door Refrigerator	4.7	5.7	6.0	1	17,695	1	0%	0%	25%	0%	0%	8%	0.377392034	Commercial Prescriptive & Custom	
237	NWS	Non-Residential	All	Education with Summer Sessions	Refrigeration	ENERGY STAR Solid Door Refrigerator	5.8	7.0	7.4	1	17,695	1	0%	0%	25%	0%	0%	8%	0.377392034	Commercial Prescriptive & Custom	
238	NWS	Non-Residential	All	Education with Summer Sessions	Refrigeration	ENERGY STAR Solid Door Refrigerator	8.0	9.8	10.3	1	17,695	1	0%	0%	25%	0%	0%	8%	0.377392034	Commercial Prescriptive & Custom	
239	NWS	Non-Residential	All	Education with Summer Sessions	Refrigeration	ENERGY STAR Solid Door Refrigerator	6.8	8.3	8.7	1	17,695	1	0%	0%	25%	0%	0%	8%	0.377392034	Commercial Prescriptive & Custom	
240	NWS	Non-Residential	All	Education with Summer Sessions	Refrigeration	ENERGY STAR Solid Door Freezer	9.8	11.9	12.5	1	17,695	1	0%	0%	25%	0%	0%	8%	0.377392034	Commercial Prescriptive & Custom	

Commercial Measures

MEASURE DESCRIPTION						MEASURE SELECTION				APPLICABILITY							PROGRAM			
Measure ID	Weather Sensitive	Sector	Sub-Sector	Building Type	End Use	Measure Name	Measure TRC calculated for 2014	Measure TRC calculated for 2020	Measure TRC calculated for 2022	Passed Measure Screening? (1=Yes, 0=No)	Total Sub-Sector Units	Measure Units per Sub-Sector Unit	Applicability	Technical Feasibility	Distribution by size/model but not Efficiency Level	Distribution by Efficiency Level	Not Yet Adopted	Annual Replacement Eligibility	Total Applicable Measure Units	Program Name
241	NWS	Non-Residential	All	Education with Summer Sessions	Refrigeration	ENERGY STAR Solid Door Freezer	15.1	18.4	19.3	1	17,695	1	0%	0%	25%	0%	0%	8%	0.377392034	Commercial Prescriptive & Custom
242	NWS	Non-Residential	All	Education with Summer Sessions	Refrigeration	ENERGY STAR Solid Door Freezer	24.2	29.4	30.9	1	17,695	1	0%	0%	25%	0%	0%	8%	0.377392034	Commercial Prescriptive & Custom
243	NWS	Non-Residential	All	Education with Summer Sessions	Refrigeration	ENERGY STAR Solid Door Freezer	13.5	16.5	17.3	1	17,695	1	0%	0%	25%	0%	0%	8%	0.377392034	Commercial Prescriptive & Custom
244	NWS	Non-Residential	All	Lodging	Refrigeration	ENERGY STAR Solid Door Refrigerator	4.7	5.7	6.0	1	17,695	1	1%	0%	25%	0%	0%	8%	4.164790659	Commercial Prescriptive & Custom
245	NWS	Non-Residential	All	Lodging	Refrigeration	ENERGY STAR Solid Door Refrigerator	5.8	7.0	7.4	1	17,695	1	1%	0%	25%	0%	0%	8%	4.164790659	Commercial Prescriptive & Custom
246	NWS	Non-Residential	All	Lodging	Refrigeration	ENERGY STAR Solid Door Refrigerator	8.0	9.8	10.3	1	17,695	1	1%	0%	25%	0%	0%	8%	4.164790659	Commercial Prescriptive & Custom
247	NWS	Non-Residential	All	Lodging	Refrigeration	ENERGY STAR Solid Door Refrigerator	6.8	8.3	8.7	1	17,695	1	1%	0%	25%	0%	0%	8%	4.164790659	Commercial Prescriptive & Custom
248	NWS	Non-Residential	All	Lodging	Refrigeration	ENERGY STAR Solid Door Freezer	9.8	11.9	12.5	1	17,695	1	1%	0%	25%	0%	0%	8%	4.164790659	Commercial Prescriptive & Custom
249	NWS	Non-Residential	All	Lodging	Refrigeration	ENERGY STAR Solid Door Freezer	15.1	18.4	19.3	1	17,695	1	1%	0%	25%	0%	0%	8%	4.164790659	Commercial Prescriptive & Custom
250	NWS	Non-Residential	All	Lodging	Refrigeration	ENERGY STAR Solid Door Freezer	24.2	29.4	30.9	1	17,695	1	1%	0%	25%	0%	0%	8%	4.164790659	Commercial Prescriptive & Custom
251	NWS	Non-Residential	All	Lodging	Refrigeration	ENERGY STAR Solid Door Freezer	13.5	16.5	17.3	1	17,695	1	1%	0%	25%	0%	0%	8%	4.164790659	Commercial Prescriptive & Custom
252	NWS	Non-Residential	All	Food Sales	Refrigeration	ENERGY STAR Solid Door Refrigerator	4.7	5.7	6.0	1	17,695	1	1%	0%	25%	0%	0%	8%	3.949138068	Commercial Prescriptive & Custom
253	NWS	Non-Residential	All	Food Sales	Refrigeration	ENERGY STAR Solid Door Refrigerator	5.8	7.0	7.4	1	17,695	1	1%	0%	25%	0%	0%	8%	3.949138068	Commercial Prescriptive & Custom
254	NWS	Non-Residential	All	Food Sales	Refrigeration	ENERGY STAR Solid Door Refrigerator	8.0	9.8	10.3	1	17,695	1	1%	0%	25%	0%	0%	8%	3.949138068	Commercial Prescriptive & Custom
255	NWS	Non-Residential	All	Food Sales	Refrigeration	ENERGY STAR Solid Door Refrigerator	6.8	8.3	8.7	1	17,695	1	1%	0%	25%	0%	0%	8%	3.949138068	Commercial Prescriptive & Custom
256	NWS	Non-Residential	All	Food Sales	Refrigeration	ENERGY STAR Solid Door Freezer	9.8	11.9	12.5	1	17,695	1	1%	0%	25%	0%	0%	8%	3.949138068	Commercial Prescriptive & Custom
257	NWS	Non-Residential	All	Food Sales	Refrigeration	ENERGY STAR Solid Door Freezer	15.1	18.4	19.3	1	17,695	1	1%	0%	25%	0%	0%	8%	3.949138068	Commercial Prescriptive & Custom
258	NWS	Non-Residential	All	Food Sales	Refrigeration	ENERGY STAR Solid Door Freezer	24.2	29.4	30.9	1	17,695	1	1%	0%	25%	0%	0%	8%	3.949138068	Commercial Prescriptive & Custom
259	NWS	Non-Residential	All	Food Sales	Refrigeration	ENERGY STAR Solid Door Freezer	13.5	16.5	17.3	1	17,695	1	1%	0%	25%	0%	0%	8%	3.949138068	Commercial Prescriptive & Custom
260	NWS	Non-Residential	All	Restaurant	Refrigeration	ENERGY STAR Solid Door Refrigerator	4.7	5.7	6.0	1	17,695	1	2%	0%	25%	0%	0%	8%	10.67480324	Commercial Prescriptive & Custom
261	NWS	Non-Residential	All	Restaurant	Refrigeration	ENERGY STAR Solid Door Refrigerator	5.8	7.0	7.4	1	17,695	1	2%	0%	25%	0%	0%	8%	10.67480324	Commercial Prescriptive & Custom
262	NWS	Non-Residential	All	Restaurant	Refrigeration	ENERGY STAR Solid Door Refrigerator	8.0	9.8	10.3	1	17,695	1	2%	0%	25%	0%	0%	8%	10.67480324	Commercial Prescriptive & Custom
263	NWS	Non-Residential	All	Restaurant	Refrigeration	ENERGY STAR Solid Door Refrigerator	6.8	8.3	8.7	1	17,695	1	2%	0%	25%	0%	0%	8%	10.67480324	Commercial Prescriptive & Custom
264	NWS	Non-Residential	All	Restaurant	Refrigeration	ENERGY STAR Solid Door Freezer	9.8	11.9	12.5	1	17,695	1	2%	0%	25%	0%	0%	8%	10.67480324	Commercial Prescriptive & Custom
265	NWS	Non-Residential	All	Restaurant	Refrigeration	ENERGY STAR Solid Door Freezer	15.1	18.4	19.3	1	17,695	1	2%	0%	25%	0%	0%	8%	10.67480324	Commercial Prescriptive & Custom
266	NWS	Non-Residential	All	Restaurant	Refrigeration	ENERGY STAR Solid Door Freezer	24.2	29.4	30.9	1	17,695	1	2%	0%	25%	0%	0%	8%	10.67480324	Commercial Prescriptive & Custom
267	NWS	Non-Residential	All	Restaurant	Refrigeration	ENERGY STAR Solid Door Freezer	13.5	16.5	17.3	1	17,695	1	2%	0%	25%	0%	0%	8%	10.67480324	Commercial Prescriptive & Custom
268	NWS	Non-Residential	All	Hospital	Refrigeration	Vending Machine Occupancy Controls	1.9	2.1	2.2	1	17,695	8	0%	0%	60%	0%	64%	100%	78.03348279	Commercial Prescriptive & Custom
269	NWS	Non-Residential	All	Hospital	Refrigeration	Vending Machine Occupancy Controls	1.3	1.5	1.5	1	17,695	8	0%	0%	20%	0%	64%	100%	26.01116503	Commercial Prescriptive & Custom
270	NWS	Non-Residential	All	Hospital	Refrigeration	Vending Machine Occupancy Controls	1.0	1.1	1.2	1	17,695	8	0%	0%	20%	0%	64%	100%	26.01116503	Commercial Prescriptive & Custom
271	NWS	Non-Residential	All	K12 Education	Refrigeration	Vending Machine Occupancy Controls	1.9	2.1	2.2	1	17,695	2	1%	0%	60%	0%	64%	100%	114.2786209	Commercial Prescriptive & Custom
272	NWS	Non-Residential	All	K12 Education	Refrigeration	Vending Machine Occupancy Controls	1.3	1.5	1.5	1	17,695	2	1%	0%	20%	0%	64%	100%	38.09287363	Commercial Prescriptive & Custom
273	NWS	Non-Residential	All	K12 Education	Refrigeration	Vending Machine Occupancy Controls	1.0	1.1	1.2	1	17,695	2	1%	0%	20%	0%	64%	100%	38.09287363	Commercial Prescriptive & Custom
274	NWS	Non-Residential	All	Education with Summer Sessions	Refrigeration	Vending Machine Occupancy Controls	1.9	2.1	2.2	1	17,695	4	0%	0%	60%	0%	64%	100%	19.87454276	Commercial Prescriptive & Custom
275	NWS	Non-Residential	All	Education with Summer Sessions	Refrigeration	Vending Machine Occupancy Controls	1.3	1.5	1.5	1	17,695	4	0%	0%	20%	0%	64%	100%	6.624847588	Commercial Prescriptive & Custom
276	NWS	Non-Residential	All	Education with Summer Sessions	Refrigeration	Vending Machine Occupancy Controls	1.0	1.1	1.2	1	17,695	4	0%	0%	20%	0%	64%	100%	6.624847588	Commercial Prescriptive & Custom
277	NWS	Non-Residential	All	Lodging	Refrigeration	Vending Machine Occupancy Controls	1.9	2.1	2.2	1	17,695	6	1%	0%	60%	0%	64%	100%	328.9946633	Commercial Prescriptive & Custom
278	NWS	Non-Residential	All	Lodging	Refrigeration	Vending Machine Occupancy Controls	1.3	1.5	1.5	1	17,695	6	1%	0%	20%	0%	64%	100%	109.6648878	Commercial Prescriptive & Custom
279	NWS	Non-Residential	All	Lodging	Refrigeration	Vending Machine Occupancy Controls	1.0	1.1	1.2	1	17,695	6	1%	0%	20%	0%	64%	100%	109.6648878	Commercial Prescriptive & Custom
280	NWS	Non-Residential	All	Food Sales	Refrigeration	Vending Machine Occupancy Controls	1.9	2.1	2.2	1	17,695	2	1%	0%	60%	0%	64%	100%	103.986447	Commercial Prescriptive & Custom
281	NWS	Non-Residential	All	Food Sales	Refrigeration	Vending Machine Occupancy Controls	1.3	1.5	1.5	1	17,695	2	1%	0%	20%	0%	64%	100%	34.66214899	Commercial Prescriptive & Custom
282	NWS	Non-Residential	All	Food Sales	Refrigeration	Vending Machine Occupancy Controls	1.0	1.1	1.2	1	17,695	2	1%	0%	20%	0%	64%	100%	34.66214899	Commercial Prescriptive & Custom
283	NWS	Non-Residential	All	Restaurant	Refrigeration	Vending Machine Occupancy Controls	1.9	2.1	2.2	1	17,695	1	2%	0%	80%	0%	64%	100%	187.3885461	Commercial Prescriptive & Custom
284	NWS	Non-Residential	All	Restaurant	Refrigeration	Vending Machine Occupancy Controls	1.3	1.5	1.5	1	17,695	1	2%	0%	20%	0%	64%	100%	46.84713651	Commercial Prescriptive & Custom
285	NWS	Non-Residential	All	Restaurant	Refrigeration	Vending Machine Occupancy Controls	1.0	1.1	1.2	1	17,695	1	2%	0%	0%	0%	64%	100%	0	*N/A
286	NWS	Non-Residential	All	Hospital	Refrigeration	Automatic Door Closer for Walk-in Coolers and Freezers	2.1	2.8	3.0	1	17,695	1	0%	0%	50%	0%	94%	100%	11.93871644	Commercial Prescriptive & Custom
287	NWS	Non-Residential	All	Hospital	Refrigeration	Automatic Door Closer for Walk-in Coolers and Freezers	5.2	6.7	7.1	1	17,695	1	0%	0%	50%	0%	94%	100%	11.93871644	Commercial Prescriptive & Custom
288	NWS	Non-Residential	All	K12 Education	Refrigeration	Automatic Door Closer for Walk-in Coolers and Freezers	2.1	2.8	3.0	1	17,695	1	1%	0%	50%	0%	94%	100%	69.93613518	Commercial Prescriptive & Custom
289	NWS	Non-Residential	All	K12 Education	Refrigeration	Automatic Door Closer for Walk-in Coolers and Freezers	5.2	6.7	7.1	1	17,695	1	1%	0%	50%	0%	94%	100%	69.93613518	Commercial Prescriptive & Custom
290	NWS	Non-Residential	All	Education with Summer Sessions	Refrigeration	Automatic Door Closer for Walk-in Coolers and Freezers	2.1	2.8	3.0	1	17,695	1	0%	0%	50%	0%	94%	100%	6.081403059	Commercial Prescriptive & Custom
291	NWS	Non-Residential	All	Education with Summer Sessions	Refrigeration	Automatic Door Closer for Walk-in Coolers and Freezers	5.2	6.7	7.1	1	17,695	1	0%	0%	50%	0%	94%	100%	6.081403059	Commercial Prescriptive & Custom
292	NWS	Non-Residential	All	Lodging	Refrigeration	Automatic Door Closer for Walk-in Coolers and Freezers	2.1	2.8	3.0	1	17,695	1	1%	0%	50%	0%	94%	100%	67.11262662	Commercial Prescriptive & Custom
293	NWS	Non-Residential	All	Lodging	Refrigeration	Automatic Door Closer for Walk-in Coolers and Freezers	5.2	6.7	7.1	1	17,695	1	1%	0%	50%	0%	94%	100%	67.11262662	Commercial Prescriptive & Custom
294	NWS	Non-Residential	All	Food Sales	Refrigeration	Automatic Door Closer for Walk-in Coolers and Freezers	2.1	2.8	3.0	1	17,695	5	1%	0%	50%	0%	94%	100%	318.1876958	Commercial Prescriptive & Custom
295	NWS	Non-Residential	All	Food Sales	Refrigeration	Automatic Door Closer for Walk-in Coolers and Freezers	5.2	6.7	7.1	1	17,695	5	1%	0%	50%	0%	94%	100%	318.1876958	Commercial Prescriptive & Custom
296	NWS	Non-Residential	All	Restaurant	Refrigeration	Automatic Door Closer for Walk-in Coolers and Freezers	2.1	2.8	3.0	1	17,695	1	2%	0%	50%	0%	94%	100%	172.0168294	Commercial Prescriptive & Custom
297	NWS	Non-Residential	All	Restaurant	Refrigeration	Automatic Door Closer for Walk-in Coolers and Freezers	5.2	6.7	7.1	1	17,695	1	2%	0%	50%	0%	94%	100%	172.0168294	Commercial Prescriptive & Custom
298	NWS	Non-Residential	All	Food Sales	Refrigeration	Door Heater Controls for Cooler or Freezer	3.8	4.2	4.4	1	17,695	15	1%	0%	17%	0%	33%	100%	111.7041911	Commercial Prescriptive & Custom
299	NWS	Non-Residential	All	Food Sales	Refrigeration	Door Heater Controls for Cooler or Freezer	1.6	1.8	1.9	1	17,695	15	1%	0%	17%	0%	33%	100%	111.7041911	Commercial Prescriptive & Custom
300	NWS	Non-Residential	All	Food Sales	Refrigeration	Door Heater Controls for Cooler or Freezer	1.6	1.8	1.9	1	17,695	15	1%	0%	17%	0%	33%	100%	111.7041911	Commercial Prescriptive & Custom

Commercial Measures

MEASURE DESCRIPTION						MEASURE SELECTION				APPLICABILITY							PROGRAM			
Measure ID	Weather Sensitive	Sector	Sub-Sector	Building Type	End Use	Measure Name	Measure TRC calculated for 2014	Measure TRC calculated for 2020	Measure TRC calculated for 2022	Passed Measure Screening? (1=Yes, 0=No)	Total Sub-Sector Units	Measure Units per Sub-Sector Unit	Applicability	Technical Feasibility	Distribution by size/model but not Efficiency Level	Distribution by Efficiency Level	Not Yet Adopted	Annual Replacement Eligibility	Total Applicable Measure Units	Program Name
301	NWS	Non-Residential	All	Food Sales	Refrigeration	Door Heater Controls for Cooler or Freezer	7.2	8.1	8.4	1	17,695	15	1%	0%	17%	0%	33%	100%	111.7041911	Commercial Prescriptive & Custom
302	NWS	Non-Residential	All	Food Sales	Refrigeration	Door Heater Controls for Cooler or Freezer	3.1	3.4	3.5	1	17,695	15	1%	0%	17%	0%	33%	100%	111.7041911	Commercial Prescriptive & Custom
303	NWS	Non-Residential	All	Food Sales	Refrigeration	Door Heater Controls for Cooler or Freezer	3.1	3.4	3.5	1	17,695	15	1%	0%	17%	0%	33%	100%	111.7041911	Commercial Prescriptive & Custom
304	NWS	Non-Residential	All	Restaurant	Refrigeration	Door Heater Controls for Cooler or Freezer	3.8	4.2	4.4	1	17,695	5	2%	0%	17%	0%	99%	100%	301.9444346	Commercial Prescriptive & Custom
305	NWS	Non-Residential	All	Restaurant	Refrigeration	Door Heater Controls for Cooler or Freezer	1.6	1.8	1.9	1	17,695	5	2%	0%	17%	0%	99%	100%	301.9444346	Commercial Prescriptive & Custom
306	NWS	Non-Residential	All	Restaurant	Refrigeration	Door Heater Controls for Cooler or Freezer	1.6	1.8	1.9	1	17,695	5	2%	0%	17%	0%	99%	100%	301.9444346	Commercial Prescriptive & Custom
307	NWS	Non-Residential	All	Restaurant	Refrigeration	Door Heater Controls for Cooler or Freezer	7.2	8.1	8.4	1	17,695	5	2%	0%	17%	0%	99%	100%	301.9444346	Commercial Prescriptive & Custom
308	NWS	Non-Residential	All	Restaurant	Refrigeration	Door Heater Controls for Cooler or Freezer	3.1	3.4	3.5	1	17,695	5	2%	0%	17%	0%	99%	100%	301.9444346	Commercial Prescriptive & Custom
309	NWS	Non-Residential	All	Restaurant	Refrigeration	Door Heater Controls for Cooler or Freezer	3.1	3.4	3.5	1	17,695	5	2%	0%	17%	0%	99%	100%	301.9444346	Commercial Prescriptive & Custom
310	NWS	Non-Residential	All	Hospital	Refrigeration	Evaporator Fan Control	1.1	1.3	1.4	1	17,695	13	0%	20%	0%	0%	99%	100%	67.84239123	Commercial Prescriptive & Custom
311	NWS	Non-Residential	All	K12 Education	Refrigeration	Evaporator Fan Control	1.1	1.3	1.4	1	17,695	7	1%	20%	0%	0%	99%	100%	198.7079041	Commercial Prescriptive & Custom
312	NWS	Non-Residential	All	Education with Summer Sessions	Refrigeration	Evaporator Fan Control	1.1	1.3	1.4	1	17,695	7	0%	20%	0%	0%	99%	100%	17.27894818	Commercial Prescriptive & Custom
313	NWS	Non-Residential	All	Lodging	Refrigeration	Evaporator Fan Control	1.1	1.3	1.4	1	17,695	7	1%	20%	0%	0%	99%	100%	190.6855353	Commercial Prescriptive & Custom
314	NWS	Non-Residential	All	Food Sales	Refrigeration	Evaporator Fan Control	1.1	1.3	1.4	1	17,695	51	1%	20%	0%	0%	99%	100%	1353.854796	Commercial Prescriptive & Custom
315	NWS	Non-Residential	All	Restaurant	Refrigeration	Evaporator Fan Control	1.1	1.3	1.4	1	17,695	7	2%	20%	0%	0%	99%	100%	488.7473914	Commercial Prescriptive & Custom
316	NWS	Non-Residential	All	Hospital	Refrigeration	Strip Curtain for Walk-in Coolers and Freezers	2.8	3.5	3.8	1	17,695	1	0%	0%	0%	0%	77%	100%	19.55917375	Commercial Prescriptive & Custom
317	NWS	Non-Residential	All	Hospital	Refrigeration	Strip Curtain for Walk-in Coolers and Freezers	0.4	0.5	0.5	0	0	0	0%	0%	0%	0%	0%	0%	0	*N/A
318	NWS	Non-Residential	All	K12 Education	Refrigeration	Strip Curtain for Walk-in Coolers and Freezers	2.8	3.5	3.8	1	17,695	1	1%	0%	0%	0%	77%	100%	114.5762215	Commercial Prescriptive & Custom
319	NWS	Non-Residential	All	K12 Education	Refrigeration	Strip Curtain for Walk-in Coolers and Freezers	0.4	0.5	0.5	0	0	0	0%	0%	0%	0%	0%	0%	0	*N/A
320	NWS	Non-Residential	All	Education with Summer Sessions	Refrigeration	Strip Curtain for Walk-in Coolers and Freezers	2.8	3.5	3.8	1	17,695	1	0%	0%	0%	0%	77%	100%	9.963149693	Commercial Prescriptive & Custom
321	NWS	Non-Residential	All	Education with Summer Sessions	Refrigeration	Strip Curtain for Walk-in Coolers and Freezers	0.4	0.5	0.5	0	0	0	0%	0%	0%	0%	0%	0%	0	*N/A
322	NWS	Non-Residential	All	Lodging	Refrigeration	Strip Curtain for Walk-in Coolers and Freezers	2.8	3.5	3.8	1	17,695	1	1%	0%	0%	0%	77%	100%	109.9504734	Commercial Prescriptive & Custom
323	NWS	Non-Residential	All	Lodging	Refrigeration	Strip Curtain for Walk-in Coolers and Freezers	0.4	0.5	0.5	0	0	0	0%	0%	0%	0%	0%	0%	0	*N/A
324	NWS	Non-Residential	All	Food Sales	Refrigeration	Strip Curtain for Walk-in Coolers and Freezers	2.8	3.5	3.8	1	17,695	5	1%	0%	0%	0%	62%	100%	419.7369064	Commercial Prescriptive & Custom
325	NWS	Non-Residential	All	Food Sales	Refrigeration	Strip Curtain for Walk-in Coolers and Freezers	0.4	0.5	0.5	0	0	0	0%	0%	0%	0%	0%	0%	0	*N/A
326	NWS	Non-Residential	All	Restaurant	Refrigeration	Strip Curtain for Walk-in Coolers and Freezers	2.8	3.5	3.8	1	17,695	1	2%	0%	0%	0%	77%	100%	281.8148056	Commercial Prescriptive & Custom
327	NWS	Non-Residential	All	Restaurant	Refrigeration	Strip Curtain for Walk-in Coolers and Freezers	0.4	0.5	0.5	0	0	0	0%	0%	0%	0%	0%	0%	0	*N/A
328	NWS	Non-Residential	All	Hospital	Food Services Equipment	ENERGY STAR Dishwasher	22.4	27.9	29.5	1	17,695	1	0%	0%	6%	0%	33%	10%	0.052390644	Commercial Prescriptive & Custom
329	NWS	Non-Residential	All	Hospital	Food Services Equipment	ENERGY STAR Dishwasher	*N/A	*N/A	*N/A	0	0	0	0%	0%	0%	0%	0%	0%	0	*N/A
330	NWS	Non-Residential	All	Hospital	Food Services Equipment	ENERGY STAR Dishwasher	*N/A	*N/A	*N/A	0	0	0	0%	0%	0%	0%	0%	0%	0	*N/A
331	NWS	Non-Residential	All	Hospital	Food Services Equipment	ENERGY STAR Dishwasher	15.6	18.1	18.7	1	17,695	1	0%	0%	6%	0%	33%	5%	0.026195322	Commercial Prescriptive & Custom
332	NWS	Non-Residential	All	Hospital	Food Services Equipment	ENERGY STAR Dishwasher	11.6	14.5	15.4	1	17,695	1	0%	0%	6%	0%	33%	10%	0.052390644	Commercial Prescriptive & Custom
333	NWS	Non-Residential	All	Hospital	Food Services Equipment	ENERGY STAR Dishwasher	9.8	11.8	12.3	1	17,695	1	0%	0%	6%	0%	33%	7%	0.034927096	Commercial Prescriptive & Custom
334	NWS	Non-Residential	All	Hospital	Food Services Equipment	ENERGY STAR Dishwasher	3.6	4.2	4.3	1	17,695	1	0%	0%	6%	0%	33%	5%	0.026195322	Commercial Prescriptive & Custom
335	NWS	Non-Residential	All	Hospital	Food Services Equipment	ENERGY STAR Dishwasher	22.8	26.4	27.3	1	17,695	1	0%	0%	6%	0%	33%	5%	0.026195322	Commercial Prescriptive & Custom
336	NWS	Non-Residential	All	Hospital	Food Services Equipment	ENERGY STAR Dishwasher	0.9	1.1	1.1	1	17,695	1	0%	0%	6%	0%	33%	10%	0.052390644	Commercial Prescriptive & Custom
337	NWS	Non-Residential	All	Hospital	Food Services Equipment	ENERGY STAR Dishwasher	22.4	27.9	29.5	1	17,695	1	0%	0%	6%	0%	33%	10%	0.052390644	Commercial Prescriptive & Custom
338	NWS	Non-Residential	All	Hospital	Food Services Equipment	ENERGY STAR Dishwasher	*N/A	*N/A	*N/A	0	0	0	0%	0%	0%	0%	0%	0%	0	*N/A
339	NWS	Non-Residential	All	Hospital	Food Services Equipment	ENERGY STAR Dishwasher	*N/A	*N/A	*N/A	0	0	0	0%	0%	0%	0%	0%	0%	0	*N/A
340	NWS	Non-Residential	All	Hospital	Food Services Equipment	ENERGY STAR Dishwasher	15.6	18.1	18.7	1	17,695	1	0%	0%	6%	0%	33%	5%	0.026195322	Commercial Prescriptive & Custom
341	NWS	Non-Residential	All	Hospital	Food Services Equipment	ENERGY STAR Dishwasher	10.2	12.6	13.3	1	17,695	1	0%	0%	6%	0%	33%	10%	0.052390644	Commercial Prescriptive & Custom
342	NWS	Non-Residential	All	Hospital	Food Services Equipment	ENERGY STAR Dishwasher	7.6	9.1	9.4	1	17,695	1	0%	0%	6%	0%	33%	7%	0.034927096	Commercial Prescriptive & Custom
343	NWS	Non-Residential	All	Hospital	Food Services Equipment	ENERGY STAR Dishwasher	3.0	3.4	3.5	1	17,695	1	0%	0%	6%	0%	33%	5%	0.026195322	Commercial Prescriptive & Custom
344	NWS	Non-Residential	All	Hospital	Food Services Equipment	ENERGY STAR Dishwasher	17.7	20.3	20.9	1	17,695	1	0%	0%	6%	0%	33%	5%	0.026195322	Commercial Prescriptive & Custom
345	NWS	Non-Residential	All	Hospital	Food Services Equipment	ENERGY STAR Dishwasher	0.7	0.8	0.8	0	0	0	0%	0%	0%	0%	0%	0%	0	*N/A
346	NWS	Non-Residential	All	K12 Education	Food Services Equipment	ENERGY STAR Dishwasher	22.4	27.9	29.5	1	17,695	1	1%	0%	6%	0%	33%	10%	0.036900593	Commercial Prescriptive & Custom
347	NWS	Non-Residential	All	K12 Education	Food Services Equipment	ENERGY STAR Dishwasher	*N/A	*N/A	*N/A	0	0	0	0%	0%	0%	0%	0%	0%	0	*N/A
348	NWS	Non-Residential	All	K12 Education	Food Services Equipment	ENERGY STAR Dishwasher	*N/A	*N/A	*N/A	0	0	0	0%	0%	0%	0%	0%	0%	0	*N/A
349	NWS	Non-Residential	All	K12 Education	Food Services Equipment	ENERGY STAR Dishwasher	15.6	18.1	18.7	1	17,695	1	1%	0%	6%	0%	33%	5%	0.153450297	Commercial Prescriptive & Custom
350	NWS	Non-Residential	All	K12 Education	Food Services Equipment	ENERGY STAR Dishwasher	11.6	14.5	15.4	1	17,695	1	1%	0%	6%	0%	33%	10%	0.036900593	Commercial Prescriptive & Custom
351	NWS	Non-Residential	All	K12 Education	Food Services Equipment	ENERGY STAR Dishwasher	9.8	11.8	12.3	1	17,695	1	1%	0%	6%	0%	33%	7%	0.204600395	Commercial Prescriptive & Custom
352	NWS	Non-Residential	All	K12 Education	Food Services Equipment	ENERGY STAR Dishwasher	3.6	4.2	4.3	1	17,695	1	1%	0%	6%	0%	33%	5%	0.153450297	Commercial Prescriptive & Custom
353	NWS	Non-Residential	All	K12 Education	Food Services Equipment	ENERGY STAR Dishwasher	22.8	26.4	27.3	1	17,695	1	1%	0%	6%	0%	33%	5%	0.153450297	Commercial Prescriptive & Custom
354	NWS	Non-Residential	All	K12 Education	Food Services Equipment	ENERGY STAR Dishwasher	0.9	1.1	1.1	1	17,695	1	1%	0%	6%	0%	33%	10%	0.036900593	Commercial Prescriptive & Custom
355	NWS	Non-Residential	All	K12 Education	Food Services Equipment	ENERGY STAR Dishwasher	22.4	27.9	29.5	1	17,695	1	1%	0%	6%	0%	33%	10%	0.036900593	Commercial Prescriptive & Custom
356	NWS	Non-Residential	All	K12 Education	Food Services Equipment	ENERGY STAR Dishwasher	*N/A	*N/A	*N/A	0	0	0	0%	0%	0%	0%	0%	0%	0	*N/A
357	NWS	Non-Residential	All	K12 Education	Food Services Equipment	ENERGY STAR Dishwasher	*N/A	*N/A	*N/A	0	0	0	0%	0%	0%	0%	0%	0%	0	*N/A
358	NWS	Non-Residential	All	K12 Education	Food Services Equipment	ENERGY STAR Dishwasher	15.6	18.1	18.7	1	17,695	1	1%	0%	6%	0%	33%	5%	0.153450297	Commercial Prescriptive & Custom
359	NWS	Non-Residential	All	K12 Education	Food Services Equipment	ENERGY STAR Dishwasher	10.2	12.6	13.3	1	17,695	1	1%	0%	6%	0%	33%	10%	0.036900593	Commercial Prescriptive & Custom
360	NWS	Non-Residential	All	K12 Education	Food Services Equipment	ENERGY STAR Dishwasher	7.6	9.1	9.4	1	17,695	1	1%	0%	6%	0%	33%	7%	0.204600395	Commercial Prescriptive & Custom

Commercial Measures

MEASURE DESCRIPTION						MEASURE SELECTION						APPLICABILITY						PROGRAM		
Measure ID	Weather Sensitive	Sector	Sub-Sector	Building Type	End Use	Measure Name	Measure TRC calculated for 2014	Measure TRC calculated for 2020	Measure TRC calculated for 2022	Passed Measure Screening? (1=Yes, 0=No)	Total Sub-Sector Units	Measure Units per Sub-Sector	Applicability	Technical Feasibility	Distribution by size/model but not Efficiency Level	Distribution by Efficiency Level	Not Yet Adopted	Annual Replacement Eligibility	Total Applicable Measure Units	Program Name
361	NWS	Non-Residential	All	K12 Education	Food Services Equipment	ENERGY STAR Dishwasher	3.0	3.4	3.5	1	17,695	1	1%	0%	6%	0%	33%	5%	0.153450297	Commercial Prescriptive & Custom
362	NWS	Non-Residential	All	K12 Education	Food Services Equipment	ENERGY STAR Dishwasher	17.7	20.3	20.9	1	17,695	1	1%	0%	6%	0%	33%	5%	0.153450297	Commercial Prescriptive & Custom
363	NWS	Non-Residential	All	K12 Education	Food Services Equipment	ENERGY STAR Dishwasher	0.7	0.8	0.8	0	0	0	0%	0%	0%	0%	0%	0%	0	*N/A
364	NWS	Non-Residential	All	Education with Summer Sessions	Food Services Equipment	ENERGY STAR Dishwasher	22.4	27.9	29.5	1	17,695	1	0%	0%	6%	0%	33%	10%	0.026687008	Commercial Prescriptive & Custom
365	NWS	Non-Residential	All	Education with Summer Sessions	Food Services Equipment	ENERGY STAR Dishwasher	*N/A	*N/A	*N/A	0	0	0	0%	0%	0%	0%	0%	0	*N/A	
366	NWS	Non-Residential	All	Education with Summer Sessions	Food Services Equipment	ENERGY STAR Dishwasher	*N/A	*N/A	*N/A	0	0	0	0%	0%	0%	0%	0%	0	*N/A	
367	NWS	Non-Residential	All	Education with Summer Sessions	Food Services Equipment	ENERGY STAR Dishwasher	15.6	18.1	18.7	1	17,695	1	0%	0%	6%	0%	33%	5%	0.013343504	Commercial Prescriptive & Custom
368	NWS	Non-Residential	All	Education with Summer Sessions	Food Services Equipment	ENERGY STAR Dishwasher	11.6	14.5	15.4	1	17,695	1	0%	0%	6%	0%	33%	10%	0.026687008	Commercial Prescriptive & Custom
369	NWS	Non-Residential	All	Education with Summer Sessions	Food Services Equipment	ENERGY STAR Dishwasher	9.8	11.8	12.3	1	17,695	1	0%	0%	6%	0%	33%	7%	0.017791339	Commercial Prescriptive & Custom
370	NWS	Non-Residential	All	Education with Summer Sessions	Food Services Equipment	ENERGY STAR Dishwasher	3.6	4.2	4.3	1	17,695	1	0%	0%	6%	0%	33%	5%	0.013343504	Commercial Prescriptive & Custom
371	NWS	Non-Residential	All	Education with Summer Sessions	Food Services Equipment	ENERGY STAR Dishwasher	22.8	28.4	27.3	1	17,695	1	0%	0%	6%	0%	33%	5%	0.013343504	Commercial Prescriptive & Custom
372	NWS	Non-Residential	All	Education with Summer Sessions	Food Services Equipment	ENERGY STAR Dishwasher	0.9	1.1	1.1	1	17,695	1	0%	0%	6%	0%	33%	10%	0.026687008	Commercial Prescriptive & Custom
373	NWS	Non-Residential	All	Education with Summer Sessions	Food Services Equipment	ENERGY STAR Dishwasher	22.4	27.9	29.5	1	17,695	1	0%	0%	6%	0%	33%	10%	0.026687008	Commercial Prescriptive & Custom
374	NWS	Non-Residential	All	Education with Summer Sessions	Food Services Equipment	ENERGY STAR Dishwasher	*N/A	*N/A	*N/A	0	0	0	0%	0%	0%	0%	0%	0	*N/A	
375	NWS	Non-Residential	All	Education with Summer Sessions	Food Services Equipment	ENERGY STAR Dishwasher	*N/A	*N/A	*N/A	0	0	0	0%	0%	0%	0%	0%	0	*N/A	
376	NWS	Non-Residential	All	Education with Summer Sessions	Food Services Equipment	ENERGY STAR Dishwasher	15.6	18.1	18.7	1	17,695	1	0%	0%	6%	0%	33%	5%	0.013343504	Commercial Prescriptive & Custom
377	NWS	Non-Residential	All	Education with Summer Sessions	Food Services Equipment	ENERGY STAR Dishwasher	10.2	12.6	13.3	1	17,695	1	0%	0%	6%	0%	33%	10%	0.026687008	Commercial Prescriptive & Custom
378	NWS	Non-Residential	All	Education with Summer Sessions	Food Services Equipment	ENERGY STAR Dishwasher	7.6	9.1	9.4	1	17,695	1	0%	0%	6%	0%	33%	7%	0.017791339	Commercial Prescriptive & Custom
379	NWS	Non-Residential	All	Education with Summer Sessions	Food Services Equipment	ENERGY STAR Dishwasher	3.0	3.4	3.5	1	17,695	1	0%	0%	6%	0%	33%	5%	0.013343504	Commercial Prescriptive & Custom
380	NWS	Non-Residential	All	Education with Summer Sessions	Food Services Equipment	ENERGY STAR Dishwasher	17.7	20.3	20.9	1	17,695	1	0%	0%	6%	0%	33%	5%	0.013343504	Commercial Prescriptive & Custom
381	NWS	Non-Residential	All	Education with Summer Sessions	Food Services Equipment	ENERGY STAR Dishwasher	0.7	0.8	0.8	0	0	0	0%	0%	0%	0%	0%	0	*N/A	
382	NWS	Non-Residential	All	Lodging	Food Services Equipment	ENERGY STAR Dishwasher	22.4	27.9	29.5	1	17,695	1	1%	0%	6%	0%	33%	10%	0.294510197	Commercial Prescriptive & Custom
383	NWS	Non-Residential	All	Lodging	Food Services Equipment	ENERGY STAR Dishwasher	*N/A	*N/A	*N/A	0	0	0	0%	0%	0%	0%	0%	0	*N/A	
384	NWS	Non-Residential	All	Lodging	Food Services Equipment	ENERGY STAR Dishwasher	*N/A	*N/A	*N/A	0	0	0	0%	0%	0%	0%	0%	0	*N/A	
385	NWS	Non-Residential	All	Lodging	Food Services Equipment	ENERGY STAR Dishwasher	15.6	18.1	18.7	1	17,695	1	1%	0%	6%	0%	33%	5%	0.147255098	Commercial Prescriptive & Custom
386	NWS	Non-Residential	All	Lodging	Food Services Equipment	ENERGY STAR Dishwasher	11.6	14.5	15.4	1	17,695	1	1%	0%	6%	0%	33%	10%	0.294510197	Commercial Prescriptive & Custom
387	NWS	Non-Residential	All	Lodging	Food Services Equipment	ENERGY STAR Dishwasher	9.8	11.8	12.3	1	17,695	1	1%	0%	6%	0%	33%	7%	0.196340131	Commercial Prescriptive & Custom
388	NWS	Non-Residential	All	Lodging	Food Services Equipment	ENERGY STAR Dishwasher	3.6	4.2	4.3	1	17,695	1	1%	0%	6%	0%	33%	5%	0.147255098	Commercial Prescriptive & Custom
389	NWS	Non-Residential	All	Lodging	Food Services Equipment	ENERGY STAR Dishwasher	22.8	28.4	27.3	1	17,695	1	1%	0%	6%	0%	33%	5%	0.147255098	Commercial Prescriptive & Custom
390	NWS	Non-Residential	All	Lodging	Food Services Equipment	ENERGY STAR Dishwasher	0.9	1.1	1.1	1	17,695	1	1%	0%	6%	0%	33%	10%	0.294510197	Commercial Prescriptive & Custom
391	NWS	Non-Residential	All	Lodging	Food Services Equipment	ENERGY STAR Dishwasher	22.4	27.9	29.5	1	17,695	1	1%	0%	6%	0%	33%	10%	0.294510197	Commercial Prescriptive & Custom
392	NWS	Non-Residential	All	Lodging	Food Services Equipment	ENERGY STAR Dishwasher	*N/A	*N/A	*N/A	0	0	0	0%	0%	0%	0%	0%	0	*N/A	
393	NWS	Non-Residential	All	Lodging	Food Services Equipment	ENERGY STAR Dishwasher	*N/A	*N/A	*N/A	0	0	0	0%	0%	0%	0%	0%	0	*N/A	
394	NWS	Non-Residential	All	Lodging	Food Services Equipment	ENERGY STAR Dishwasher	15.6	18.1	18.7	1	17,695	1	1%	0%	6%	0%	33%	5%	0.147255098	Commercial Prescriptive & Custom
395	NWS	Non-Residential	All	Lodging	Food Services Equipment	ENERGY STAR Dishwasher	10.2	12.6	13.3	1	17,695	1	1%	0%	6%	0%	33%	10%	0.294510197	Commercial Prescriptive & Custom
396	NWS	Non-Residential	All	Lodging	Food Services Equipment	ENERGY STAR Dishwasher	7.6	9.1	9.4	1	17,695	1	1%	0%	6%	0%	33%	7%	0.196340131	Commercial Prescriptive & Custom
397	NWS	Non-Residential	All	Lodging	Food Services Equipment	ENERGY STAR Dishwasher	3.0	3.4	3.5	1	17,695	1	1%	0%	6%	0%	33%	5%	0.147255098	Commercial Prescriptive & Custom
398	NWS	Non-Residential	All	Lodging	Food Services Equipment	ENERGY STAR Dishwasher	17.7	20.3	20.9	1	17,695	1	1%	0%	6%	0%	33%	5%	0.147255098	Commercial Prescriptive & Custom
399	NWS	Non-Residential	All	Lodging	Food Services Equipment	ENERGY STAR Dishwasher	0.7	0.8	0.8	0	0	0	0%	0%	0%	0%	0%	0	*N/A	
400	NWS	Non-Residential	All	Restaurant	Food Services Equipment	ENERGY STAR Dishwasher	22.4	27.9	29.5	1	17,695	1	2%	0%	6%	0%	33%	10%	0.754861086	Commercial Prescriptive & Custom
401	NWS	Non-Residential	All	Restaurant	Food Services Equipment	ENERGY STAR Dishwasher	*N/A	*N/A	*N/A	0	0	0	0%	0%	0%	0%	0%	0	*N/A	
402	NWS	Non-Residential	All	Restaurant	Food Services Equipment	ENERGY STAR Dishwasher	*N/A	*N/A	*N/A	0	0	0	0%	0%	0%	0%	0%	0	*N/A	
403	NWS	Non-Residential	All	Restaurant	Food Services Equipment	ENERGY STAR Dishwasher	15.6	18.1	18.7	1	17,695	1	2%	0%	6%	0%	33%	5%	0.377430543	Commercial Prescriptive & Custom
404	NWS	Non-Residential	All	Restaurant	Food Services Equipment	ENERGY STAR Dishwasher	11.6	14.5	15.4	1	17,695	1	2%	0%	6%	0%	33%	10%	0.754861086	Commercial Prescriptive & Custom
405	NWS	Non-Residential	All	Restaurant	Food Services Equipment	ENERGY STAR Dishwasher	9.8	11.8	12.3	1	17,695	1	2%	0%	6%	0%	33%	7%	0.503240724	Commercial Prescriptive & Custom
406	NWS	Non-Residential	All	Restaurant	Food Services Equipment	ENERGY STAR Dishwasher	3.6	4.2	4.3	1	17,695	1	2%	0%	6%	0%	33%	5%	0.377430543	Commercial Prescriptive & Custom
407	NWS	Non-Residential	All	Restaurant	Food Services Equipment	ENERGY STAR Dishwasher	22.8	28.4	27.3	1	17,695	1	2%	0%	6%	0%	33%	5%	0.377430543	Commercial Prescriptive & Custom
408	NWS	Non-Residential	All	Restaurant	Food Services Equipment	ENERGY STAR Dishwasher	0.9	1.1	1.1	1	17,695	1	2%	0%	6%	0%	33%	10%	0.754861086	Commercial Prescriptive & Custom
409	NWS	Non-Residential	All	Restaurant	Food Services Equipment	ENERGY STAR Dishwasher	22.4	27.9	29.5	1	17,695	1	2%	0%	6%	0%	33%	10%	0.754861086	Commercial Prescriptive & Custom
410	NWS	Non-Residential	All	Restaurant	Food Services Equipment	ENERGY STAR Dishwasher	*N/A	*N/A	*N/A	0	0	0	0%	0%	0%	0%	0%	0	*N/A	
411	NWS	Non-Residential	All	Restaurant	Food Services Equipment	ENERGY STAR Dishwasher	*N/A	*N/A	*N/A	0	0	0	0%	0%	0%	0%	0%	0	*N/A	
412	NWS	Non-Residential	All	Restaurant	Food Services Equipment	ENERGY STAR Dishwasher	15.6	18.1	18.7	1	17,695	1	2%	0%	6%	0%	33%	5%	0.377430543	Commercial Prescriptive & Custom
413	NWS	Non-Residential	All	Restaurant	Food Services Equipment	ENERGY STAR Dishwasher	10.2	12.6	13.3	1	17,695	1	2%	0%	6%	0%	33%	10%	0.754861086	Commercial Prescriptive & Custom
414	NWS	Non-Residential	All	Restaurant	Food Services Equipment	ENERGY STAR Dishwasher	7.6	9.1	9.4	1	17,695	1	2%	0%	6%	0%	33%	7%	0.503240724	Commercial Prescriptive & Custom
415	NWS	Non-Residential	All	Restaurant	Food Services Equipment	ENERGY STAR Dishwasher	3.0	3.4	3.5	1	17,695	1	2%	0%	6%	0%	33%	5%	0.377430543	Commercial Prescriptive & Custom
416	NWS	Non-Residential	All	Restaurant	Food Services Equipment	ENERGY STAR Dishwasher	17.7	20.3	20.9	1	17,695	1	2%	0%	6%	0%	33%	5%	0.377430543	Commercial Prescriptive & Custom
417	NWS	Non-Residential	All	Restaurant	Food Services Equipment	ENERGY STAR Dishwasher	0.7	0.8	0.8	0	0	0	0%	0%	0%	0%	0%	0	*N/A	
418	NWS	Non-Residential	All	Hospital	Food Services Equipment	ENERGY STAR Fryer	3.1	3.9	4.1	1	17,695	1	0%	0%	0%	0%	33%	8%	0.69854192	Commercial Prescriptive & Custom
419	NWS	Non-Residential	All	Hospital	Food Services Equipment	ENERGY STAR Fryer	*N/A	*N/A	*N/A	0	0	0	0%	0%	0%	0%	0%	0	*N/A	
420	NWS	Non-Residential	All	K12 Education	Food Services Equipment	ENERGY STAR Fryer	3.1	3.9	4.1	1	17,695	2	1%	0%	0%	0%	33%	8%	8.184015819	Commercial Prescriptive & Custom

Commercial Measures

MEASURE DESCRIPTION						MEASURE SELECTION				APPLICABILITY							PROGRAM			
Measure ID	Weather Sensitive	Sector	Sub-Sector	Building Type	End Use	Measure Name	Measure TRC calculated for 2014	Measure TRC calculated for 2020	Measure TRC calculated for 2022	Passed Measure Screening? (1=Yes, 0=No)	Total Sub-Sector Units	Measure Units per Sub-Sector Unit	Applicability	Technical Feasibility	Distribution by size/model but not Efficiency Level	Distribution by Efficiency Level	Not Yet Adopted	Annual Replacement Eligibility	Total Applicable Measure Units	Program Name
421	NWS	Non-Residential	All	K12 Education	Food Services Equipment	ENERGY STAR Fryer	*N/A	*N/A	*N/A	0	0	0	0%	0%	0%	0%	0%	0%	0	*N/A
422	NWS	Non-Residential	All	Education with Summer Sessions	Food Services Equipment	ENERGY STAR Fryer	3.1	3.9	4.1	1	17,695	2	0%	0%	0%	0%	33%	8%	0.711653549	Commercial Prescriptive & Custom
423	NWS	Non-Residential	All	Education with Summer Sessions	Food Services Equipment	ENERGY STAR Fryer	*N/A	*N/A	*N/A	0	0	0	0%	0%	0%	0%	0%	0	*N/A	
424	NWS	Non-Residential	All	Lodging	Food Services Equipment	ENERGY STAR Fryer	3.1	3.9	4.1	1	17,695	2	1%	0%	0%	0%	33%	8%	7.853605243	Commercial Prescriptive & Custom
425	NWS	Non-Residential	All	Lodging	Food Services Equipment	ENERGY STAR Fryer	*N/A	*N/A	*N/A	0	0	0	0%	0%	0%	0%	0%	0	*N/A	
426	NWS	Non-Residential	All	Restaurant	Food Services Equipment	ENERGY STAR Fryer	3.1	3.9	4.1	1	17,695	2	2%	0%	0%	0%	33%	8%	20.12962897	Commercial Prescriptive & Custom
427	NWS	Non-Residential	All	Restaurant	Food Services Equipment	ENERGY STAR Fryer	*N/A	*N/A	*N/A	0	0	0	0%	0%	0%	0%	0%	0	*N/A	
428	NWS	Non-Residential	All	Hospital	Food Services Equipment	ENERGY STAR Griddle	*N/A	*N/A	*N/A	0	0	0	0%	0%	0%	0%	0%	0	*N/A	
429	NWS	Non-Residential	All	K12 Education	Food Services Equipment	ENERGY STAR Griddle	*N/A	*N/A	*N/A	0	0	0	0%	0%	0%	0%	0%	0	*N/A	
430	NWS	Non-Residential	All	Education with Summer Sessions	Food Services Equipment	ENERGY STAR Griddle	*N/A	*N/A	*N/A	0	0	0	0%	0%	0%	0%	0%	0	*N/A	
431	NWS	Non-Residential	All	Lodging	Food Services Equipment	ENERGY STAR Griddle	*N/A	*N/A	*N/A	0	0	0	0%	0%	0%	0%	0%	0	*N/A	
432	NWS	Non-Residential	All	Restaurant	Food Services Equipment	ENERGY STAR Griddle	*N/A	*N/A	*N/A	0	0	0	0%	0%	0%	0%	0%	0	*N/A	
433	NWS	Non-Residential	All	Hospital	Food Services Equipment	ENERGY STAR Hot Food Holding Cabinets	*N/A	*N/A	*N/A	0	0	0	0%	0%	0%	0%	0%	0	*N/A	
434	NWS	Non-Residential	All	K12 Education	Food Services Equipment	ENERGY STAR Hot Food Holding Cabinets	*N/A	*N/A	*N/A	0	0	0	0%	0%	0%	0%	0%	0	*N/A	
435	NWS	Non-Residential	All	Education with Summer Sessions	Food Services Equipment	ENERGY STAR Hot Food Holding Cabinets	*N/A	*N/A	*N/A	0	0	0	0%	0%	0%	0%	0%	0	*N/A	
436	NWS	Non-Residential	All	Lodging	Food Services Equipment	ENERGY STAR Hot Food Holding Cabinets	*N/A	*N/A	*N/A	0	0	0	0%	0%	0%	0%	0%	0	*N/A	
437	NWS	Non-Residential	All	Restaurant	Food Services Equipment	ENERGY STAR Hot Food Holding Cabinets	*N/A	*N/A	*N/A	0	0	0	0%	0%	0%	0%	0%	0	*N/A	
438	NWS	Non-Residential	All	Hospital	Food Services Equipment	ENERGY STAR Electric Convection Ovens	*N/A	*N/A	*N/A	0	0	0	0%	0%	0%	0%	0%	0	*N/A	
439	NWS	Non-Residential	All	Hospital	Food Services Equipment	ENERGY STAR Electric Convection Ovens	*N/A	*N/A	*N/A	0	0	0	0%	0%	0%	0%	0%	0	*N/A	
440	NWS	Non-Residential	All	K12 Education	Food Services Equipment	ENERGY STAR Electric Convection Ovens	*N/A	*N/A	*N/A	0	0	0	0%	0%	0%	0%	0%	0	*N/A	
441	NWS	Non-Residential	All	K12 Education	Food Services Equipment	ENERGY STAR Electric Convection Ovens	*N/A	*N/A	*N/A	0	0	0	0%	0%	0%	0%	0%	0	*N/A	
442	NWS	Non-Residential	All	Education with Summer Sessions	Food Services Equipment	ENERGY STAR Electric Convection Ovens	*N/A	*N/A	*N/A	0	0	0	0%	0%	0%	0%	0%	0	*N/A	
443	NWS	Non-Residential	All	Education with Summer Sessions	Food Services Equipment	ENERGY STAR Electric Convection Ovens	*N/A	*N/A	*N/A	0	0	0	0%	0%	0%	0%	0%	0	*N/A	
444	NWS	Non-Residential	All	Lodging	Food Services Equipment	ENERGY STAR Electric Convection Ovens	*N/A	*N/A	*N/A	0	0	0	0%	0%	0%	0%	0%	0	*N/A	
445	NWS	Non-Residential	All	Lodging	Food Services Equipment	ENERGY STAR Electric Convection Ovens	*N/A	*N/A	*N/A	0	0	0	0%	0%	0%	0%	0%	0	*N/A	
446	NWS	Non-Residential	All	Restaurant	Food Services Equipment	ENERGY STAR Electric Convection Ovens	*N/A	*N/A	*N/A	0	0	0	0%	0%	0%	0%	0%	0	*N/A	
447	NWS	Non-Residential	All	Restaurant	Food Services Equipment	ENERGY STAR Electric Convection Ovens	*N/A	*N/A	*N/A	0	0	0	0%	0%	0%	0%	0%	0	*N/A	
448	NWS	Non-Residential	All	K12 Education	Food Services Equipment	ENERGY STAR Steam Cooker	1.5	2.0	2.1	1	17,695	1	1%	9%	0%	0%	8%	0	1.066402061	Commercial Prescriptive & Custom
449	NWS	Non-Residential	All	Education with Summer Sessions	Food Services Equipment	ENERGY STAR Steam Cooker	1.5	2.0	2.1	1	17,695	1	0%	9%	0%	0%	8%	0	0.092730614	Commercial Prescriptive & Custom
450	NWS	Non-Residential	All	Lodging	Food Services Equipment	ENERGY STAR Steam Cooker	1.5	2.0	2.1	1	17,695	1	1%	9%	0%	0%	8%	0	1.023348562	Commercial Prescriptive & Custom
451	NWS	Non-Residential	All	Restaurant	Food Services Equipment	ENERGY STAR Steam Cooker	1.5	2.0	2.1	1	17,695	1	2%	9%	0%	0%	8%	0	2.622951654	Commercial Prescriptive & Custom
452	NWS	Non-Residential	All	Hospital	Food Services Equipment	EPA WaterSense Pre-Rinse Spray Valve	*N/A	*N/A	*N/A	0	0	0	0%	0%	0%	0%	0%	0	*N/A	
453	NWS	Non-Residential	All	Education with Summer Sessions	Food Services Equipment	EPA WaterSense Pre-Rinse Spray Valve	*N/A	*N/A	*N/A	0	0	0	0%	0%	0%	0%	0%	0	*N/A	
454	NWS	Non-Residential	All	Lodging	Food Services Equipment	EPA WaterSense Pre-Rinse Spray Valve	*N/A	*N/A	*N/A	0	0	0	0%	0%	0%	0%	0%	0	*N/A	
455	NWS	Non-Residential	All	Restaurant	Food Services Equipment	EPA WaterSense Pre-Rinse Spray Valve	*N/A	*N/A	*N/A	0	0	0	0%	0%	0%	0%	0%	0	*N/A	
456	NWS	Non-Residential	All	Hospital	Service Hot Water	Electric Storage Water Heater	0.7	0.8	0.8	0	0	0	0%	0%	0%	0%	0%	0	*N/A	
457	NWS	Non-Residential	All	Hospital	Service Hot Water	Electric Storage Water Heater	1.3	1.5	1.6	0	0	0	0%	0%	0%	0%	0%	0	*N/A	
458	NWS	Non-Residential	All	K12 Education	Service Hot Water	Electric Storage Water Heater	0.0	0.0	0.0	0	0	0	0%	0%	0%	0%	0%	0	*N/A	
459	NWS	Non-Residential	All	K12 Education	Service Hot Water	Electric Storage Water Heater	0.0	0.0	0.0	0	0	0	0%	0%	0%	0%	0%	0	*N/A	
460	NWS	Non-Residential	All	K12 Education	Service Hot Water	Electric Storage Water Heater	0.0	0.0	0.0	0	0	0	0%	0%	0%	0%	0%	0	*N/A	
461	NWS	Non-Residential	All	Education with Summer Sessions	Service Hot Water	Electric Storage Water Heater	0.0	0.0	0.0	0	0	0	0%	0%	0%	0%	0%	0	*N/A	
462	NWS	Non-Residential	All	Education with Summer Sessions	Service Hot Water	Electric Storage Water Heater	0.0	0.0	0.0	0	0	0	0%	0%	0%	0%	0%	0	*N/A	
463	NWS	Non-Residential	All	Education with Summer Sessions	Service Hot Water	Electric Storage Water Heater	0.0	0.0	0.0	0	0	0	0%	0%	0%	0%	0%	0	*N/A	
464	NWS	Non-Residential	All	Lodging	Service Hot Water	Electric Storage Water Heater	0.1	0.1	0.1	0	0	0	0%	0%	0%	0%	0%	0	*N/A	
465	NWS	Non-Residential	All	Lodging	Service Hot Water	Electric Storage Water Heater	0.2	0.3	0.3	0	0	0	0%	0%	0%	0%	0%	0	*N/A	
466	NWS	Non-Residential	All	Lodging	Service Hot Water	Electric Storage Water Heater	0.2	0.2	0.2	0	0	0	0%	0%	0%	0%	0%	0	*N/A	
467	NWS	Non-Residential	All	Restaurant	Service Hot Water	Electric Storage Water Heater	1.4	1.7	1.8	1	17,695	1	2%	0%	33%	0%	7%	8.133183423	Commercial Prescriptive & Custom	
468	NWS	Non-Residential	All	Restaurant	Service Hot Water	Electric Storage Water Heater	2.8	3.3	3.4	1	17,695	1	2%	0%	33%	0%	7%	8.133183423	Commercial Prescriptive & Custom	
469	NWS	Non-Residential	All	Restaurant	Service Hot Water	Electric Storage Water Heater	2.0	2.4	2.5	1	17,695	1	2%	0%	33%	0%	7%	8.133183423	Commercial Prescriptive & Custom	
470	NWS	Non-Residential	All	Hospital	Service Hot Water	Heat Pump Storage Water Heater	7.5	8.7	9.1	0	0	0	0%	0%	0%	0%	0%	0	*N/A	
471	NWS	Non-Residential	All	K12 Education	Service Hot Water	Heat Pump Storage Water Heater	0.2	0.2	0.2	0	0	0	0%	0%	0%	0%	0%	0	*N/A	
472	NWS	Non-Residential	All	Education with Summer Sessions	Service Hot Water	Heat Pump Storage Water Heater	0.2	0.3	0.3	0	0	0	0%	0%	0%	0%	0%	0	*N/A	
473	NWS	Non-Residential	All	Lodging	Service Hot Water	Heat Pump Storage Water Heater	1.4	1.6	1.6	0	0	0	0%	0%	0%	0%	0%	0	*N/A	
474	NWS	Non-Residential	All	Restaurant	Service Hot Water	Heat Pump Storage Water Heater	15.7	18.7	19.5	0	0	0	0%	0%	0%	0%	0%	0	*N/A	
475	NWS	Non-Residential	All	Hospital	Service Hot Water	Low Flow Faucet Aerators - Electric DHW fuel	3.8	4.5	4.8	0	0	0	0%	0%	0%	0%	0%	0	*N/A	
476	NWS	Non-Residential	All	K12 Education	Service Hot Water	Low Flow Faucet Aerators - Electric DHW fuel	24.4	32.9	35.2	0	0	0	0%	0%	0%	0%	0%	0	*N/A	
477	NWS	Non-Residential	All	Education with Summer Sessions	Service Hot Water	Low Flow Faucet Aerators - Electric DHW fuel	30.6	39.8	42.4	0	0	0	0%	0%	0%	0%	0%	0	*N/A	
478	NWS	Non-Residential	All	Lodging	Service Hot Water	Low Flow Faucet Aerators - Electric DHW fuel	3.7	4.3	4.5	0	0	0	0%	0%	0%	0%	0%	0	*N/A	
479	NWS	Non-Residential	All	Restaurant	Service Hot Water	Low Flow Faucet Aerators - Electric DHW fuel	39.2	48.5	51.3	1	17,695	2	2%	63%	73%	0%	68%	100%	227.047777	Commercial Prescriptive & Custom

Commercial Measures

MEASURE DESCRIPTION						MEASURE SELECTION				APPLICABILITY							PROGRAM			
Measure ID	Weather Sensitive	Sector	Sub-Sector	Building Type	End Use	Measure Name	Measure TRC calculated for 2014	Measure TRC calculated for 2020	Measure TRC calculated for 2022	Passed Measure Screening? (1=Yes, 0=No)	Total Sub-Sector Units	Measure Units per Sub-Sector Unit	Applicability	Technical Feasibility	Distribution by size/model but not Efficiency Level	Distribution by Efficiency Level	Not Yet Adopted	Annual Replacement Eligibility	Total Applicable Measure Units	Program Name
481	NWS	Non-Residential	Small Commercial	All	Misc	Small Business Program Audit & Direct Install	0.0	0.0	0.0	1	12,887	0	100%	0%	0%	0%	0%	100%	12886.61868	Small Business Solutions
482	NWS	Non-Residential	Small Commercial	All	Lighting	Small Business Program Audit & Direct Install	5.5	7.0	8.0	0	0	0	0%	0%	0%	0%	0%	0%	0	*N/A
483	NWS	Non-Residential	Small Commercial	All	Lighting	Small Business Program Audit & Direct Install	6.2	7.9	8.4	1	12,887	0	100%	0%	0%	0%	0%	100%	12886.61868	Small Business Solutions
484	NWS	Non-Residential	Small Commercial	All	Service Hot Water	Small Business Program Audit & Direct Install	12.9	18.0	19.3	0	0	0	0%	0%	0%	0%	0%	0%	0	*N/A
485	NWS	Non-Residential	Small Commercial	All	Lighting	Small Business Program Lighting Upgrade Package	1.1	1.3	1.3	1	12,887	0	100%	0%	0%	0%	0%	100%	12886.61868	Small Business Solutions
486	NWS	Non-Residential	Small Commercial	All	Refrigeration	Small Business Program Refrigeration Upgrade Package	3.6	4.2	4.3	1	12,887	0	100%	0%	0%	0%	0%	100%	12886.61868	Small Business Solutions
488	NWS	Non-Residential	All	Data Center	HVAC	Air Flow Management	6.1	7.4	7.8	1	17,695	0	0%	0%	25%	0%	0%	100%	5.25	Data Center
489	NWS	Non-Residential	All	Data Center	HVAC	Air Flow Management	4.4	5.4	5.7	1	17,695	0	0%	0%	25%	0%	0%	100%	5.25	Data Center
490	NWS	Non-Residential	All	Data Center	HVAC	Air Flow Management	1.6	2.0	2.1	1	17,695	0	0%	0%	25%	0%	0%	100%	5.25	Data Center
491	NWS	Non-Residential	All	Data Center	HVAC	Air Flow Management	1.6	2.0	2.1	1	17,695	0	0%	0%	25%	0%	0%	100%	5.25	Data Center
492	NWS	Non-Residential	All	Data Center	Miscellaneous	Load Distribution	1.6	2.0	2.0	1	17,695	0	0%	0%	25%	0%	0%	100%	5.25	Data Center
493	NWS	Non-Residential	All	Data Center	Miscellaneous	Load Distribution	1.6	1.9	2.0	1	17,695	0	0%	0%	25%	0%	0%	100%	5.25	Data Center
494	NWS	Non-Residential	All	Data Center	Miscellaneous	Load Distribution	1.6	1.9	2.0	1	17,695	0	0%	0%	25%	0%	0%	100%	5.25	Data Center
495	NWS	Non-Residential	All	Data Center	Miscellaneous	Load Distribution	1.6	1.9	2.0	1	17,695	0	0%	0%	25%	0%	0%	100%	5.25	Data Center
496	NWS	Non-Residential	All	Data Center	HVAC	Waterside Economizer	0.4	0.4	0.5	0	0	0	0%	0%	0%	0%	0%	0	*N/A	
497	NWS	Non-Residential	All	Data Center	HVAC	Waterside Economizer	0.4	0.4	0.5	0	0	0	0%	0%	0%	0%	0%	0	*N/A	
498	NWS	Non-Residential	All	Data Center	HVAC	Air Flow Management	10.9	13.2	13.9	1	71	0	0%	0%	25%	0%	0%	100%	0.020982171	Data Center
499	NWS	Non-Residential	All	Data Center	HVAC	Air Flow Management	15.5	18.8	19.8	1	71	0	0%	0%	25%	0%	0%	100%	0.020982171	Data Center
500	NWS	Non-Residential	All	Data Center	HVAC	Air Flow Management	4.7	5.7	6.0	1	71	0	0%	0%	25%	0%	0%	100%	0.020982171	Data Center
501	NWS	Non-Residential	All	Data Center	HVAC	Air Flow Management	4.7	5.7	6.0	1	71	0	0%	0%	25%	0%	0%	100%	0.020982171	Data Center
502	NWS	Non-Residential	All	Data Center	Miscellaneous	Load Distribution	5.4	6.5	6.8	1	71	0	0%	0%	25%	0%	0%	100%	0.020982171	Data Center
503	NWS	Non-Residential	All	Data Center	Miscellaneous	Load Distribution	5.3	6.5	6.8	1	71	0	0%	0%	25%	0%	0%	100%	0.020982171	Data Center
504	NWS	Non-Residential	All	Data Center	Miscellaneous	Load Distribution	5.3	6.5	6.8	1	71	0	0%	0%	25%	0%	0%	100%	0.020982171	Data Center
505	NWS	Non-Residential	All	Data Center	Miscellaneous	Load Distribution	5.3	6.5	6.8	1	71	0	0%	0%	25%	0%	0%	100%	0.020982171	Data Center
506	NWS	Non-Residential	All	Data Center	HVAC	Waterside Economizer	1.0	1.1	1.1	1	71	0	0%	0%	50%	0%	0%	100%	0.041964342	Data Center
507	NWS	Non-Residential	All	Data Center	HVAC	Waterside Economizer	1.0	1.1	1.1	1	71	0	0%	0%	50%	0%	0%	100%	0.041964342	Data Center
509	WS	Non-Residential	Large Commercial	All	Misc	Commercial New Construction	2.2	2.6	2.7	1	19	1	100%	0%	0%	0%	0%	100%	19.31671772	Commercial New Construction
510	WS	Non-Residential	Large Commercial	All	Misc	Commercial New Construction	2.0	2.3	2.4	1	19	1	100%	0%	0%	0%	0%	100%	19.31671772	Commercial New Construction
511	WS	Non-Residential	Small Commercial	All	Misc	Commercial New Construction	2.3	2.6	2.7	1	52	1	100%	0%	0%	0%	0%	100%	51.50271225	Commercial New Construction
512	WS	Non-Residential	Small Commercial	All	Misc	Commercial New Construction	2.0	2.3	2.4	1	52	1	100%	0%	0%	0%	0%	100%	51.50271225	Commercial New Construction
514	WS	Non-Residential	Large Commercial	All	Misc	Retrocommissioning	2.8	3.1	3.3	1	4,833	1	100%	7%	0%	0%	0%	100%	314.646713	RetroCommissioning
515	WS	Non-Residential	Large Commercial	All	Misc	Retrocommissioning	4.8	5.4	5.6	1	4,833	1	100%	24%	0%	0%	0%	100%	1174.874393	RetroCommissioning
517	NWS	Non-Residential	All	All	Misc	Interruptible Rate	11515.8	25127.0	28083.4	0	0	0	0%	0%	0%	0%	0%	0	*N/A	
518	NWS	Non-Residential	All	All	Misc	Enabled Dynamic Pricing (Non-Res)	2.7	6.0	6.7	0	0	0	0%	0%	0%	0%	0%	0	*N/A	
519	NWS	Non-Residential	All	All	Misc	Non-Enabled Dynamic Pricing (Non-Res)	886.9	1935.1	2162.8	1	17,695	1	100%	0%	0%	0%	0%	100%	17694.5	Non-Residential Dynamic Pricing
521	WS	Non-Residential	Large Commercial	K12 Education	HVAC	Boiler Cut-Out Control	0.5	0.5	0.5	0	0	0	0%	0%	0%	0%	0%	0	*N/A	
522	WS	Non-Residential	Large Commercial	Lodging	HVAC	Boiler Cut-Out Control	2.2	2.4	2.4	0	0	0	0%	0%	0%	0%	0%	0	*N/A	
523	WS	Non-Residential	Large Commercial	Education with Summer Sessions	HVAC	Boiler Cut-Out Control	0.4	0.4	0.5	0	0	0	0%	0%	0%	0%	0%	0	*N/A	
524	WS	Non-Residential	Large Commercial	Hospital	HVAC	Boiler Cut-Out Control	6.9	7.6	7.7	0	0	0	0%	0%	0%	0%	0%	0	*N/A	
525	WS	Non-Residential	Large Commercial	General Large Commercial	HVAC	Boiler Cut-Out Control	0.3	0.4	0.4	0	0	0	0%	0%	0%	0%	0%	0	*N/A	
526	WS	Non-Residential	Large Commercial	K12 Education	HVAC	Boiler or Furnace Vent Damper	*N/A	*N/A	*N/A	0	0	0	0%	0%	0%	0%	0%	0	*N/A	
527	WS	Non-Residential	Large Commercial	Lodging	HVAC	Boiler or Furnace Vent Damper	*N/A	*N/A	*N/A	0	0	0	0%	0%	0%	0%	0%	0	*N/A	
528	WS	Non-Residential	Large Commercial	Education with Summer Sessions	HVAC	Boiler or Furnace Vent Damper	*N/A	*N/A	*N/A	0	0	0	0%	0%	0%	0%	0%	0	*N/A	
529	WS	Non-Residential	Large Commercial	Hospital	HVAC	Boiler or Furnace Vent Damper	*N/A	*N/A	*N/A	0	0	0	0%	0%	0%	0%	0%	0	*N/A	
530	WS	Non-Residential	Large Commercial	General Large Commercial	HVAC	Boiler or Furnace Vent Damper	*N/A	*N/A	*N/A	0	0	0	0%	0%	0%	0%	0%	0	*N/A	
531	WS	Non-Residential	Large Commercial	K12 Education	HVAC	Boiler Reset Control	0.4	0.5	0.5	0	0	0	0%	0%	0%	0%	0%	0	*N/A	
532	WS	Non-Residential	Large Commercial	Lodging	HVAC	Boiler Reset Control	1.9	2.1	2.2	0	0	0	0%	0%	0%	0%	0%	0	*N/A	
533	WS	Non-Residential	Large Commercial	Education with Summer Sessions	HVAC	Boiler Reset Control	0.4	0.4	0.4	0	0	0	0%	0%	0%	0%	0%	0	*N/A	
534	WS	Non-Residential	Large Commercial	Hospital	HVAC	Boiler Reset Control	6.1	6.8	6.9	0	0	0	0%	0%	0%	0%	0%	0	*N/A	
535	WS	Non-Residential	Large Commercial	General Large Commercial	HVAC	Boiler Reset Control	0.3	0.3	0.3	0	0	0	0%	0%	0%	0%	0%	0	*N/A	
536	WS	Non-Residential	Large Commercial	K12 Education	HVAC	Boiler Tune-Up	0.0	0.0	0.0	0	0	0	0%	0%	0%	0%	0%	0	*N/A	
537	WS	Non-Residential	Large Commercial	Lodging	HVAC	Boiler Tune-Up	0.1	0.2	0.2	0	0	0	0%	0%	0%	0%	0%	0	*N/A	
538	WS	Non-Residential	Large Commercial	Education with Summer Sessions	HVAC	Boiler Tune-Up	0.0	0.0	0.0	0	0	0	0%	0%	0%	0%	0%	0	*N/A	
539	WS	Non-Residential	Large Commercial	Hospital	HVAC	Boiler Tune-Up	0.1	0.2	0.2	0	0	0	0%	0%	0%	0%	0%	0	*N/A	
540	WS	Non-Residential	Large Commercial	General Large Commercial	HVAC	Boiler Tune-Up	0.1	0.1	0.1	0	0	0	0%	0%	0%	0%	0%	0	*N/A	

Commercial Measures

MEASURE DESCRIPTION						MEASURE SELECTION				APPLICABILITY								PROGRAM		
Measure ID	Weather Sensitive	Sector	Sub-Sector	Building Type	End Use	Measure Name	Measure TRC calculated for 2014	Measure TRC calculated for 2020	Measure TRC calculated for 2022	Passed Measure Screening? (1=Yes, 0=No)	Total Sub-Sector Units	Measure Units per Sub-Sector Unit	Applicability	Technical Feasibility	Distribution by size/model but not Efficiency Level	Distribution by Efficiency Level	Not Yet Adopted	Annual Replacement Eligibility	Total Applicable Measure Units	Program Name
541	WS	Non-Residential	Large Commercial	K12 Education	HVAC	Burner Replacement for Commercial Boilers	*N/A	*N/A	*N/A	0	0	0	0%	0%	0%	0%	0%	0%	0	*N/A
542	WS	Non-Residential	Large Commercial	Lodging	HVAC	Burner Replacement for Commercial Boilers	*N/A	*N/A	*N/A	0	0	0	0%	0%	0%	0%	0%	0%	0	*N/A
543	WS	Non-Residential	Large Commercial	Education with Summer Sessions	HVAC	Burner Replacement for Commercial Boilers	*N/A	*N/A	*N/A	0	0	0	0%	0%	0%	0%	0%	0%	0	*N/A
544	WS	Non-Residential	Large Commercial	Hospital	HVAC	Burner Replacement for Commercial Boilers	*N/A	*N/A	*N/A	0	0	0	0%	0%	0%	0%	0%	0%	0	*N/A
545	WS	Non-Residential	Large Commercial	General Large Commercial	HVAC	Burner Replacement for Commercial Boilers	*N/A	*N/A	*N/A	0	0	0	0%	0%	0%	0%	0%	0%	0	*N/A
546	WS	Non-Residential	Large Commercial	K12 Education	HVAC	Efficient Commercial Boilers	1.0	1.1	1.1	0	0	0	0%	0%	0%	0%	0%	0%	0	*N/A
547	WS	Non-Residential	Large Commercial	Lodging	HVAC	Efficient Commercial Boilers	4.4	4.9	5.0	0	0	0	0%	0%	0%	0%	0%	0%	0	*N/A
548	WS	Non-Residential	Large Commercial	Education with Summer Sessions	HVAC	Efficient Commercial Boilers	0.8	0.9	0.9	0	0	0	0%	0%	0%	0%	0%	0%	0	*N/A
549	WS	Non-Residential	Large Commercial	Hospital	HVAC	Efficient Commercial Boilers	14.0	15.4	15.8	0	0	0	0%	0%	0%	0%	0%	0%	0	*N/A
550	WS	Non-Residential	Large Commercial	General Large Commercial	HVAC	Efficient Commercial Boilers	0.7	0.7	0.8	0	0	0	0%	0%	0%	0%	0%	0%	0	*N/A
551	NWS	Non-Residential	Small Commercial	All	HVAC	Direct Vent Heaters (Small Commercial)	*N/A	*N/A	*N/A	0	0	0	0%	0%	0%	0%	0%	0%	0	*N/A
552	WS	Non-Residential	Small Commercial	All	HVAC	Gas Furnace (Small Commercial)	0.3	0.4	0.4	0	0	0	0%	0%	0%	0%	0%	0%	0	*N/A
553	WS	Non-Residential	Small Commercial	All	Water Heating	Efficient storage gas water heater	1.6	1.8	1.8	1	12,887	1	100%	63%	27%	0%	0%	7%	147,1986674	Commercial Prescriptive & Custom
554	WS	Non-Residential	Small Commercial	All	Water Heating	Efficient instantaneous gas water heater	0.3	0.3	0.3	0	0	0	0%	0%	0%	0%	0%	0%	0	*N/A
555	NWS	Non-Residential	Small Commercial	All	Water Heating	Faucet Aerator	15.4	17.8	18.5	1	12,887	1	100%	63%	27%	0%	68%	100%	1501.426407	Small Business Solutions
556	NWS	Non-Residential	Large Commercial	All	Water Heating	Faucet Aerator	11.6	13.3	13.8	0	0	0	0%	0%	0%	0%	0%	0%	0	*N/A
557	NWS	Non-Residential	Small Commercial	All	Water Heating	Gas WH pipe insulation (Small Commercial)	0.2	0.3	0.3	0	0	0	0%	0%	0%	0%	0%	0%	0	*N/A

Commercial Measures

MEASURE DESCRIPTION						MEASURE DOCUMENTATION					
Measure ID	Weather Sensitive	Sector	Sub-Sector	Building Type	End Use	Measure Name	Measure Cost Source	Measure Savings Source	Measure Lifetime Source	Measure Unit per SubSector Unit Source	Applicability
1	WS	Non-Residential	Small Commercial	All	HVAC	Unitary and Split System AC/HP Equipment	Mid-Atlantic TRM	ICF	AR TRM	AHRI	CBI
2	WS	Non-Residential	Small Commercial	All	HVAC	Unitary and Split System AC/HP Equipment	Mid-Atlantic TRM	ICF	AR TRM	AHRI	CBI
3	WS	Non-Residential	Small Commercial	All	HVAC	Unitary and Split System AC/HP Equipment	ICF	ICF	AR TRM	AHRI	CBI
4	WS	Non-Residential	Small Commercial	All	HVAC	Unitary and Split System AC/HP Equipment	ICF	ICF	AR TRM	AHRI	CBI
5	WS	Non-Residential	Small Commercial	All	HVAC	Unitary and Split System AC/HP Equipment	Mid-Atlantic TRM	ICF	AR TRM	AHRI	CBI
6	WS	Non-Residential	Small Commercial	All	HVAC	Unitary and Split System AC/HP Equipment	Mid-Atlantic TRM	ICF	AR TRM	AHRI	CBI
7	WS	Non-Residential	Small Commercial	All	HVAC	Unitary and Split System AC/HP Equipment	Mid-Atlantic TRM	ICF	AR TRM	ICF	CBI
8	WS	Non-Residential	Small Commercial	All	HVAC	Unitary and Split System AC/HP Equipment	Mid-Atlantic TRM	ICF	AR TRM	ICF	CBI
9	WS	Non-Residential	Small Commercial	All	HVAC	Unitary and Split System AC/HP Equipment	ICF	ICF	AR TRM	ICF	CBI
10	WS	Non-Residential	Small Commercial	All	HVAC	Unitary and Split System AC/HP Equipment	ICF	ICF	AR TRM	ICF	CBI
11	WS	Non-Residential	Small Commercial	All	HVAC	Unitary and Split System AC/HP Equipment	ICF	ICF	AR TRM	ICF	CBI
12	WS	Non-Residential	Small Commercial	All	HVAC	Unitary and Split System AC/HP Equipment	ICF	ICF	AR TRM	ICF	CBI
13	WS	Non-Residential	Large Commercial	K12 Education	HVAC	Unitary and Split System AC/HP Equipment	Mid-Atlantic TRM	ICF	AR TRM	ICF	CBI
14	WS	Non-Residential	Large Commercial	Education with Summer Sessions	HVAC	Unitary and Split System AC/HP Equipment	Mid-Atlantic TRM	ICF	AR TRM	ICF	CBI
15	WS	Non-Residential	Large Commercial	Lodging	HVAC	Unitary and Split System AC/HP Equipment	Mid-Atlantic TRM	ICF	AR TRM	ICF	CBI
16	WS	Non-Residential	Large Commercial	General Large Commercial	HVAC	Unitary and Split System AC/HP Equipment	Mid-Atlantic TRM	ICF	AR TRM	ICF	CBI
17	WS	Non-Residential	Large Commercial	K12 Education	HVAC	Unitary and Split System AC/HP Equipment	ICF	ICF	AR TRM	ICF	CBI
18	WS	Non-Residential	Large Commercial	Education with Summer Sessions	HVAC	Unitary and Split System AC/HP Equipment	ICF	ICF	AR TRM	ICF	CBI
19	WS	Non-Residential	Large Commercial	Lodging	HVAC	Unitary and Split System AC/HP Equipment	ICF	ICF	AR TRM	ICF	CBI
20	WS	Non-Residential	Large Commercial	General Large Commercial	HVAC	Unitary and Split System AC/HP Equipment	ICF	ICF	AR TRM	ICF	CBI
21	WS	Non-Residential	Large Commercial	K12 Education	HVAC	Unitary and Split System AC/HP Equipment	Mid-Atlantic TRM	ICF	AR TRM	ICF	CBI
22	WS	Non-Residential	Large Commercial	Education with Summer Sessions	HVAC	Unitary and Split System AC/HP Equipment	Mid-Atlantic TRM	ICF	AR TRM	ICF	CBI
23	WS	Non-Residential	Large Commercial	Lodging	HVAC	Unitary and Split System AC/HP Equipment	Mid-Atlantic TRM	ICF	AR TRM	ICF	CBI
24	WS	Non-Residential	Large Commercial	General Large Commercial	HVAC	Unitary and Split System AC/HP Equipment	Mid-Atlantic TRM	ICF	AR TRM	ICF	CBI
26	WS	Non-Residential	Small Commercial	All	HVAC	Unitary and Split System AC/HP Equipment	Mid-Atlantic TRM	ICF	AR TRM	ICF	CBI
27	WS	Non-Residential	Small Commercial	All	HVAC	Unitary and Split System AC/HP Equipment	Mid-Atlantic TRM	ICF	AR TRM	ICF	CBI
28	WS	Non-Residential	Small Commercial	All	HVAC	Unitary and Split System AC/HP Equipment	Mid-Atlantic TRM	ICF	AR TRM	ICF	CBI
29	WS	Non-Residential	Small Commercial	All	HVAC	Unitary and Split System AC/HP Equipment	Mid-Atlantic TRM	ICF	AR TRM	ICF	CBI
30	WS	Non-Residential	Small Commercial	All	HVAC	Unitary and Split System AC/HP Equipment	Mid-Atlantic TRM	ICF	AR TRM	ICF	CBI
31	WS	Non-Residential	Small Commercial	All	HVAC	Unitary and Split System AC/HP Equipment	Mid-Atlantic TRM	ICF	AR TRM	ICF	CBI
32	WS	Non-Residential	Large Commercial	K12 Education	HVAC	Unitary and Split System AC/HP Equipment	Mid-Atlantic TRM	ICF	AR TRM	ICF	CBI
33	WS	Non-Residential	Large Commercial	Education with Summer Sessions	HVAC	Unitary and Split System AC/HP Equipment	Mid-Atlantic TRM	ICF	AR TRM	ICF	CBI
34	WS	Non-Residential	Large Commercial	Lodging	HVAC	Unitary and Split System AC/HP Equipment	Mid-Atlantic TRM	ICF	AR TRM	ICF	CBI
35	WS	Non-Residential	Large Commercial	General Large Commercial	HVAC	Unitary and Split System AC/HP Equipment	Mid-Atlantic TRM	ICF	AR TRM	ICF	CBI
36	WS	Non-Residential	Large Commercial	K12 Education	HVAC	Unitary and Split System AC/HP Equipment	Mid-Atlantic TRM	ICF	AR TRM	ICF	CBI
37	WS	Non-Residential	Large Commercial	Education with Summer Sessions	HVAC	Unitary and Split System AC/HP Equipment	Mid-Atlantic TRM	ICF	AR TRM	ICF	CBI
38	WS	Non-Residential	Large Commercial	Lodging	HVAC	Unitary and Split System AC/HP Equipment	Mid-Atlantic TRM	ICF	AR TRM	ICF	CBI
39	WS	Non-Residential	Large Commercial	General Large Commercial	HVAC	Unitary and Split System AC/HP Equipment	Mid-Atlantic TRM	ICF	AR TRM	ICF	CBI
41	WS	Non-Residential	Small Commercial	Lodging	HVAC	PTAC	IL TRM	ICF	AR TRM	ICF	ICF
42	NWS	Non-Residential	Small Commercial	Lodging	HVAC	Occupancy-Based PTAC/PTHP Controls	IL TRM	OK TRM	OK TRM	ICF	ICF
44	WS	Non-Residential	Large Commercial	K12 Education	HVAC	Air or Water Cooled Chilling Equipment (Chillers)	ICF	ICF	AR TRM	ICF	ICF
45	WS	Non-Residential	Large Commercial	Education with Summer Sessions	HVAC	Air or Water Cooled Chilling Equipment (Chillers)	ICF	ICF	AR TRM	ICF	ICF
46	WS	Non-Residential	Large Commercial	Lodging	HVAC	Air or Water Cooled Chilling Equipment (Chillers)	ICF	ICF	AR TRM	ICF	ICF
47	WS	Non-Residential	Large Commercial	General Large Commercial	HVAC	Air or Water Cooled Chilling Equipment (Chillers)	ICF	ICF	AR TRM	ICF	ICF
48	WS	Non-Residential	Large Commercial	K12 Education	HVAC	Air or Water Cooled Chilling Equipment (Chillers)	ICF	ICF	AR TRM	ICF	ICF
49	WS	Non-Residential	Large Commercial	Education with Summer Sessions	HVAC	Air or Water Cooled Chilling Equipment (Chillers)	ICF	ICF	AR TRM	ICF	ICF
50	WS	Non-Residential	Large Commercial	Lodging	HVAC	Air or Water Cooled Chilling Equipment (Chillers)	ICF	ICF	AR TRM	ICF	ICF
51	WS	Non-Residential	Large Commercial	General Large Commercial	HVAC	Air or Water Cooled Chilling Equipment (Chillers)	ICF	ICF	AR TRM	ICF	ICF
52	WS	Non-Residential	Large Commercial	Hospital	HVAC	Air or Water Cooled Chilling Equipment (Chillers)	ICF	ICF	AR TRM	ICF	ICF
53	WS	Non-Residential	Large Commercial	K12 Education	HVAC	Air or Water Cooled Chilling Equipment (Chillers)	ICF	ICF	AR TRM	ICF	ICF
54	WS	Non-Residential	Large Commercial	Education with Summer Sessions	HVAC	Air or Water Cooled Chilling Equipment (Chillers)	ICF	ICF	AR TRM	ICF	ICF
55	WS	Non-Residential	Large Commercial	Lodging	HVAC	Air or Water Cooled Chilling Equipment (Chillers)	ICF	ICF	AR TRM	ICF	ICF
56	WS	Non-Residential	Large Commercial	General Large Commercial	HVAC	Air or Water Cooled Chilling Equipment (Chillers)	ICF	ICF	AR TRM	ICF	ICF
57	WS	Non-Residential	Large Commercial	Hospital	HVAC	Air or Water Cooled Chilling Equipment (Chillers)	ICF	ICF	AR TRM	ICF	ICF
58	WS	Non-Residential	Large Commercial	K12 Education	HVAC	Air or Water Cooled Chilling Equipment (Chillers)	ICF	ICF	AR TRM	ICF	ICF
59	WS	Non-Residential	Large Commercial	Education with Summer Sessions	HVAC	Air or Water Cooled Chilling Equipment (Chillers)	ICF	ICF	AR TRM	ICF	ICF
60	WS	Non-Residential	Large Commercial	Lodging	HVAC	Air or Water Cooled Chilling Equipment (Chillers)	ICF	ICF	AR TRM	ICF	ICF

ENO Docket No. UD-08-02
 Public Hearing 6:30 PM - 8:00 PM
 June 15, 2015
 Supplement 1

Commercial Measures

MEASURE DESCRIPTION						MEASURE DOCUMENTATION					
Measure ID	Weather Sensitive	Sector	Sub-Sector	Building Type	End Use	Measure Name	Measure Cost Source	Measure Savings Source	Measure Lifetime Source	Measure Unit per SubSector Unit Source	Applicability
61	WS	Non-Residential	Large Commercial	General Large Commercial	HVAC	Air or Water Cooled Chilling Equipment (Chillers)	ICF	ICF	AR TRM	ICF	ICF
62	WS	Non-Residential	Large Commercial	Hospital	HVAC	Air or Water Cooled Chilling Equipment (Chillers)	ICF	ICF	AR TRM	ICF	ICF
63	WS	Non-Residential	Large Commercial	Education with Summer Sessions	HVAC	Air or Water Cooled Chilling Equipment (Chillers)	ICF	ICF	AR TRM	ICF	ICF
64	WS	Non-Residential	Large Commercial	Lodging	HVAC	Air or Water Cooled Chilling Equipment (Chillers)	ICF	ICF	AR TRM	ICF	ICF
65	WS	Non-Residential	Large Commercial	General Large Commercial	HVAC	Air or Water Cooled Chilling Equipment (Chillers)	ICF	ICF	AR TRM	ICF	ICF
66	WS	Non-Residential	Large Commercial	Hospital	HVAC	Air or Water Cooled Chilling Equipment (Chillers)	ICF	ICF	AR TRM	ICF	ICF
67	WS	Non-Residential	Large Commercial	Education with Summer Sessions	HVAC	Air or Water Cooled Chilling Equipment (Chillers)	ICF	ICF	AR TRM	ICF	ICF
68	WS	Non-Residential	Large Commercial	Lodging	HVAC	Air or Water Cooled Chilling Equipment (Chillers)	ICF	ICF	AR TRM	ICF	ICF
69	WS	Non-Residential	Large Commercial	General Large Commercial	HVAC	Air or Water Cooled Chilling Equipment (Chillers)	ICF	ICF	AR TRM	ICF	ICF
71	NWS	Non-Residential	Large Commercial	Hospital	HVAC	Variable Speed Drives for HVAC	MidAtlantic TRM	MidAtlantic TRM	MidAtlantic TRM	ICF	ICF
72	NWS	Non-Residential	Large Commercial	Hospital	HVAC	Variable Speed Drives for HVAC	MidAtlantic TRM	MidAtlantic TRM	MidAtlantic TRM	ICF	ICF
73	NWS	Non-Residential	Large Commercial	Hospital	HVAC	Variable Speed Drives for HVAC	MidAtlantic TRM	MidAtlantic TRM	MidAtlantic TRM	ICF	ICF
74	NWS	Non-Residential	Large Commercial	Hospital	HVAC	Variable Speed Drives for HVAC	MidAtlantic TRM	MidAtlantic TRM	MidAtlantic TRM	ICF	ICF
75	NWS	Non-Residential	Large Commercial	K12 Education	HVAC	Variable Speed Drives for HVAC	MidAtlantic TRM	MidAtlantic TRM	MidAtlantic TRM	ICF	ICF
76	NWS	Non-Residential	Large Commercial	K12 Education	HVAC	Variable Speed Drives for HVAC	MidAtlantic TRM	MidAtlantic TRM	MidAtlantic TRM	ICF	ICF
77	NWS	Non-Residential	Large Commercial	K12 Education	HVAC	Variable Speed Drives for HVAC	MidAtlantic TRM	MidAtlantic TRM	MidAtlantic TRM	ICF	ICF
78	NWS	Non-Residential	Large Commercial	K12 Education	HVAC	Variable Speed Drives for HVAC	MidAtlantic TRM	MidAtlantic TRM	MidAtlantic TRM	ICF	ICF
79	NWS	Non-Residential	Large Commercial	Education with Summer Sessions	HVAC	Variable Speed Drives for HVAC	MidAtlantic TRM	MidAtlantic TRM	MidAtlantic TRM	ICF	ICF
80	NWS	Non-Residential	Large Commercial	Education with Summer Sessions	HVAC	Variable Speed Drives for HVAC	MidAtlantic TRM	MidAtlantic TRM	MidAtlantic TRM	ICF	ICF
81	NWS	Non-Residential	Large Commercial	Education with Summer Sessions	HVAC	Variable Speed Drives for HVAC	MidAtlantic TRM	MidAtlantic TRM	MidAtlantic TRM	ICF	ICF
82	NWS	Non-Residential	Large Commercial	Education with Summer Sessions	HVAC	Variable Speed Drives for HVAC	MidAtlantic TRM	MidAtlantic TRM	MidAtlantic TRM	ICF	ICF
83	NWS	Non-Residential	Large Commercial	Lodging	HVAC	Variable Speed Drives for HVAC	MidAtlantic TRM	MidAtlantic TRM	MidAtlantic TRM	ICF	ICF
84	NWS	Non-Residential	Large Commercial	Lodging	HVAC	Variable Speed Drives for HVAC	MidAtlantic TRM	MidAtlantic TRM	MidAtlantic TRM	ICF	ICF
85	NWS	Non-Residential	Large Commercial	Lodging	HVAC	Variable Speed Drives for HVAC	MidAtlantic TRM	MidAtlantic TRM	MidAtlantic TRM	ICF	ICF
86	NWS	Non-Residential	Large Commercial	Lodging	HVAC	Variable Speed Drives for HVAC	MidAtlantic TRM	MidAtlantic TRM	MidAtlantic TRM	ICF	ICF
87	NWS	Non-Residential	Large Commercial	General Large Commercial	HVAC	Variable Speed Drives for HVAC	MidAtlantic TRM	MidAtlantic TRM	MidAtlantic TRM	ICF	ICF
88	NWS	Non-Residential	Large Commercial	General Large Commercial	HVAC	Variable Speed Drives for HVAC	MidAtlantic TRM	MidAtlantic TRM	MidAtlantic TRM	ICF	ICF
89	NWS	Non-Residential	Large Commercial	General Large Commercial	HVAC	Variable Speed Drives for HVAC	MidAtlantic TRM	MidAtlantic TRM	MidAtlantic TRM	ICF	ICF
90	NWS	Non-Residential	Large Commercial	General Large Commercial	HVAC	Variable Speed Drives for HVAC	MidAtlantic TRM	MidAtlantic TRM	MidAtlantic TRM	ICF	ICF
92	NWS	Non-Residential	Small Commercial	All	HVAC	Dual Enthalpy Economizer	ICF	Honeywell	MidAtlantic TRM	ICF	ICF
93	NWS	Non-Residential	Large Commercial	All	HVAC	Dual Enthalpy Economizer	ICF	Honeywell	MidAtlantic TRM	ICF	ICF
95	NWS	Non-Residential	Small Commercial	All	HVAC	Demand Controlled Ventilation	ICF	Honeywell	ICF	ICF	ICF
96	NWS	Non-Residential	Large Commercial	All	HVAC	Demand Controlled Ventilation	ICF	Honeywell	ICF	ICF	ICF
98	WS	Non-Residential	Small Commercial	All	HVAC	Ground Source Heatpump	ICF	ICF	ICF	ICF	ICF
100	WS	Non-Residential	Small Commercial	All	HVAC	AC Tune-Up	ICF	ICF	ICF	ICF	ICF
102	NWS	Non-Residential	Small Commercial	All	HVAC	Electronically Commutated Motors for Refrigeration and HVAC Applications	ICF	ICF	ICF	ICF	ICF
103	NWS	Non-Residential	All	Hospital	Lighting	High Performance T8/T5 with Low-BF Ballast	IL TRM	ICF	AR & IL TRM	ICF	ICF
104	NWS	Non-Residential	All	Hospital	Lighting	High Performance T8/T5 with Low-BF Ballast	IL TRM	ICF	AR & IL TRM	ICF	ICF
105	NWS	Non-Residential	All	Hospital	Lighting	High Performance T8/T5 with Low-BF Ballast	IL TRM	ICF	AR & IL TRM	ICF	ICF
106	NWS	Non-Residential	All	Hospital	Lighting	High Performance T8/T5 with Low-BF Ballast	IL TRM	ICF	AR & IL TRM	ICF	ICF
107	NWS	Non-Residential	All	K12 Education	Lighting	High Performance T8/T5 with Low-BF Ballast	IL TRM	ICF	AR & IL TRM	ICF	ICF
108	NWS	Non-Residential	All	K12 Education	Lighting	High Performance T8/T5 with Low-BF Ballast	IL TRM	ICF	AR & IL TRM	ICF	ICF
109	NWS	Non-Residential	All	K12 Education	Lighting	High Performance T8/T5 with Low-BF Ballast	IL TRM	ICF	AR & IL TRM	ICF	ICF
110	NWS	Non-Residential	All	K12 Education	Lighting	High Performance T8/T5 with Low-BF Ballast	IL TRM	ICF	AR & IL TRM	ICF	ICF
111	NWS	Non-Residential	All	Education with Summer Sessions	Lighting	High Performance T8/T5 with Low-BF Ballast	IL TRM	ICF	AR & IL TRM	ICF	ICF
112	NWS	Non-Residential	All	Education with Summer Sessions	Lighting	High Performance T8/T5 with Low-BF Ballast	IL TRM	ICF	AR & IL TRM	ICF	ICF
113	NWS	Non-Residential	All	Education with Summer Sessions	Lighting	High Performance T8/T5 with Low-BF Ballast	IL TRM	ICF	AR & IL TRM	ICF	ICF
114	NWS	Non-Residential	All	Education with Summer Sessions	Lighting	High Performance T8/T5 with Low-BF Ballast	IL TRM	ICF	AR & IL TRM	ICF	ICF
115	NWS	Non-Residential	All	Lodging	Lighting	High Performance T8/T5 with Low-BF Ballast	IL TRM	ICF	AR & IL TRM	ICF	ICF
116	NWS	Non-Residential	All	Lodging	Lighting	High Performance T8/T5 with Low-BF Ballast	IL TRM	ICF	AR & IL TRM	ICF	ICF
117	NWS	Non-Residential	All	Lodging	Lighting	High Performance T8/T5 with Low-BF Ballast	IL TRM	ICF	AR & IL TRM	ICF	ICF
118	NWS	Non-Residential	All	Lodging	Lighting	High Performance T8/T5 with Low-BF Ballast	IL TRM	ICF	AR & IL TRM	ICF	ICF
119	NWS	Non-Residential	All	General Large Commercial	Lighting	High Performance T8/T5 with Low-BF Ballast	IL TRM	ICF	AR & IL TRM	ICF	ICF
120	NWS	Non-Residential	All	General Large Commercial	Lighting	High Performance T8/T5 with Low-BF Ballast	IL TRM	ICF	AR & IL TRM	ICF	ICF

Commercial Measures

MEASURE DESCRIPTION						MEASURE DOCUMENTATION					
Measure ID	Weather Sensitive	Sector	Sub-Sector	Building Type	End Use	Measure Name	Measure Cost Source	Measure Savings Source	Measure Lifetime Source	Measure Unit per SubSector Unit Source	Applicability
121	NWS	Non-Residential	All	General Large Commercial	Lighting	High Performance T8/T5 with Low-BF Ballast	IL TRM	ICF	AR & IL TRM	ICF	ICF
122	NWS	Non-Residential	All	General Large Commercial	Lighting	High Performance T8/T5 with Low-BF Ballast	AR & IL TRM	ICF	AR & IL TRM	ICF	ICF
123	NWS	Non-Residential	All	General Small Commercial	Lighting	High Performance T8/T5 with Low-BF Ballast	IL TRM	ICF	AR & IL TRM	ICF	ICF
124	NWS	Non-Residential	All	General Small Commercial	Lighting	High Performance T8/T5 with Low-BF Ballast	IL TRM	ICF	AR & IL TRM	ICF	ICF
125	NWS	Non-Residential	All	General Small Commercial	Lighting	High Performance T8/T5 with Low-BF Ballast	IL TRM	ICF	AR & IL TRM	ICF	ICF
126	NWS	Non-Residential	All	General Small Commercial	Lighting	High Performance T8/T5 with Low-BF Ballast	IL TRM	ICF	AR & IL TRM	ICF	ICF
127	NWS	Non-Residential	All	Hospital	Lighting	Reduced Wattage T8/T5 Lamps	IL TRM	ICF	AR & IL TRM	ICF	ICF
128	NWS	Non-Residential	All	K12 Education	Lighting	Reduced Wattage T8/T5 Lamps	IL TRM	ICF	AR & IL TRM	ICF	ICF
129	NWS	Non-Residential	All	Education with Summer Sessions	Lighting	Reduced Wattage T8/T5 Lamps	IL TRM	ICF	AR & IL TRM	ICF	ICF
130	NWS	Non-Residential	All	Lodging	Lighting	Reduced Wattage T8/T5 Lamps	IL TRM	ICF	AR & IL TRM	ICF	ICF
131	NWS	Non-Residential	All	General Large Commercial	Lighting	Reduced Wattage T8/T5 Lamps	AR & IL TRM	ICF	AR & IL TRM	ICF	ICF
132	NWS	Non-Residential	All	General Small Commercial	Lighting	Reduced Wattage T8/T5 Lamps	IL TRM	ICF	AR & IL TRM	ICF	ICF
133	NWS	Non-Residential	All	Hospital	Lighting	Reduced Wattage T8/T5 Lamps	IL TRM	ICF	AR & IL TRM	ICF	ICF
134	NWS	Non-Residential	All	K12 Education	Lighting	Reduced Wattage T8/T5 Lamps	IL TRM	ICF	AR & IL TRM	ICF	ICF
135	NWS	Non-Residential	All	Education with Summer Sessions	Lighting	Reduced Wattage T8/T5 Lamps	IL TRM	ICF	AR & IL TRM	ICF	ICF
136	NWS	Non-Residential	All	Lodging	Lighting	Reduced Wattage T8/T5 Lamps	IL TRM	ICF	AR & IL TRM	ICF	ICF
137	NWS	Non-Residential	All	General Large Commercial	Lighting	Reduced Wattage T8/T5 Lamps	IL TRM	ICF	AR & IL TRM	ICF	ICF
138	NWS	Non-Residential	All	General Small Commercial	Lighting	Reduced Wattage T8/T5 Lamps	IL TRM	ICF	AR & IL TRM	ICF	ICF
139	NWS	Non-Residential	All	Hospital	Lighting	Linear Florescent Fixture Upgrade	IL TRM	ICF	AR & IL TRM	ICF	ICF
140	NWS	Non-Residential	All	K12 Education	Lighting	Linear Florescent Fixture Upgrade	IL TRM	ICF	AR & IL TRM	ICF	ICF
141	NWS	Non-Residential	All	Education with Summer Sessions	Lighting	Linear Florescent Fixture Upgrade	IL TRM	ICF	AR & IL TRM	ICF	ICF
142	NWS	Non-Residential	All	Lodging	Lighting	Linear Florescent Fixture Upgrade	IL TRM	ICF	AR & IL TRM	ICF	ICF
143	NWS	Non-Residential	All	General Large Commercial	Lighting	Linear Florescent Fixture Upgrade	IL TRM	ICF	AR & IL TRM	ICF	ICF
144	NWS	Non-Residential	All	General Small Commercial	Lighting	Linear Florescent Fixture Upgrade	IL TRM	ICF	AR & IL TRM	ICF	ICF
145	NWS	Non-Residential	All	Hospital	Lighting	Linear Florescent Fixture Upgrade	IL TRM	ICF	AR & IL TRM	ICF	ICF
146	NWS	Non-Residential	All	K12 Education	Lighting	Linear Florescent Fixture Upgrade	IL TRM	ICF	AR & IL TRM	ICF	ICF
147	NWS	Non-Residential	All	Education with Summer Sessions	Lighting	Linear Florescent Fixture Upgrade	IL TRM	ICF	AR & IL TRM	ICF	ICF
148	NWS	Non-Residential	All	Lodging	Lighting	Linear Florescent Fixture Upgrade	IL TRM	ICF	AR & IL TRM	ICF	ICF
149	NWS	Non-Residential	All	General Large Commercial	Lighting	Linear Florescent Fixture Upgrade	IL TRM	ICF	AR & IL TRM	ICF	ICF
150	NWS	Non-Residential	All	General Small Commercial	Lighting	Linear Florescent Fixture Upgrade	IL TRM	ICF	AR & IL TRM	ICF	ICF
151	NWS	Non-Residential	All	Hospital	Lighting	Linear Florescent Fixture Upgrade	IL TRM	ICF	AR & IL TRM	ICF	ICF
152	NWS	Non-Residential	All	K12 Education	Lighting	Linear Florescent Fixture Upgrade	IL TRM	ICF	AR & IL TRM	ICF	ICF
153	NWS	Non-Residential	All	Education with Summer Sessions	Lighting	Linear Florescent Fixture Upgrade	IL TRM	ICF	AR & IL TRM	ICF	ICF
154	NWS	Non-Residential	All	Lodging	Lighting	Linear Florescent Fixture Upgrade	IL TRM	ICF	AR & IL TRM	ICF	ICF
155	NWS	Non-Residential	All	General Large Commercial	Lighting	Linear Florescent Fixture Upgrade	IL TRM	ICF	AR & IL TRM	ICF	ICF
156	NWS	Non-Residential	All	General Small Commercial	Lighting	Linear Florescent Fixture Upgrade	IL TRM	ICF	AR & IL TRM	ICF	ICF
157	NWS	Non-Residential	All	Hospital	Lighting	Linear Florescent Fixture Upgrade	IL TRM	ICF	AR & IL TRM	ICF	ICF
158	NWS	Non-Residential	All	K12 Education	Lighting	Linear Florescent Fixture Upgrade	IL TRM	ICF	AR & IL TRM	ICF	ICF
159	NWS	Non-Residential	All	Education with Summer Sessions	Lighting	Linear Florescent Fixture Upgrade	IL TRM	ICF	AR & IL TRM	ICF	ICF
160	NWS	Non-Residential	All	Lodging	Lighting	Linear Florescent Fixture Upgrade	IL TRM	ICF	AR & IL TRM	ICF	ICF
161	NWS	Non-Residential	All	General Large Commercial	Lighting	Linear Florescent Fixture Upgrade	IL TRM	ICF	AR & IL TRM	ICF	ICF
162	NWS	Non-Residential	All	General Small Commercial	Lighting	Linear Florescent Fixture Upgrade	IL TRM	ICF	AR & IL TRM	ICF	ICF
163	NWS	Non-Residential	All	Hospital	Lighting	Commercial Standard CFL	IL TRM	ICF	AR & IL TRM	ICF	ICF
164	NWS	Non-Residential	All	Hospital	Lighting	Commercial Standard CFL	IL TRM	ICF	AR & IL TRM	ICF	ICF
165	NWS	Non-Residential	All	K12 Education	Lighting	Commercial Standard CFL	IL TRM	ICF	AR & IL TRM	ICF	ICF
166	NWS	Non-Residential	All	K12 Education	Lighting	Commercial Standard CFL	IL TRM	ICF	AR & IL TRM	ICF	ICF
167	NWS	Non-Residential	All	Education with Summer Sessions	Lighting	Commercial Standard CFL	IL TRM	ICF	AR & IL TRM	ICF	ICF
168	NWS	Non-Residential	All	Education with Summer Sessions	Lighting	Commercial Standard CFL	IL TRM	ICF	AR & IL TRM	ICF	ICF
169	NWS	Non-Residential	All	Lodging	Lighting	Commercial Standard CFL	IL TRM	ICF	AR & IL TRM	ICF	ICF
170	NWS	Non-Residential	All	Lodging	Lighting	Commercial Standard CFL	IL TRM	ICF	AR & IL TRM	ICF	ICF
171	NWS	Non-Residential	All	General Large Commercial	Lighting	Commercial Standard CFL	AR & IL TRM	ICF	AR & IL TRM	ICF	ICF
172	NWS	Non-Residential	All	General Large Commercial	Lighting	Commercial Standard CFL	IL TRM	ICF	AR & IL TRM	ICF	ICF
173	NWS	Non-Residential	All	General Small Commercial	Lighting	Commercial Standard CFL	IL TRM	ICF	AR & IL TRM	ICF	ICF
174	NWS	Non-Residential	All	General Small Commercial	Lighting	Commercial Standard CFL	IL TRM	ICF	AR & IL TRM	ICF	ICF
175	NWS	Non-Residential	All	Hospital	Lighting	LED Bulbs	IL TRM	ICF	AR & IL TRM	ICF	ICF
176	NWS	Non-Residential	All	Hospital	Lighting	LED Bulbs	IL TRM	ICF	AR & IL TRM	ICF	ICF
177	NWS	Non-Residential	All	K12 Education	Lighting	LED Bulbs	IL TRM	ICF	AR & IL TRM	ICF	ICF
178	NWS	Non-Residential	All	K12 Education	Lighting	LED Bulbs	IL TRM	ICF	AR & IL TRM	ICF	ICF
179	NWS	Non-Residential	All	Education with Summer Sessions	Lighting	LED Bulbs	IL TRM	ICF	AR & IL TRM	ICF	ICF
180	NWS	Non-Residential	All	Education with Summer Sessions	Lighting	LED Bulbs	IL TRM	ICF	AR & IL TRM	ICF	ICF

ENO Docket No. UD-08-02
 Page 105 of 245
 Supplement 1

Commercial Measures

Measure ID	Weather Sensitive	MEASURE DESCRIPTION				MEASURE DOCUMENTATION					
		Sector	Sub-Sector	Building Type	End Use	Measure Name	Measure Cost Source	Measure Savings Source	Measure Lifetime Source	Measure Unit per SubSector Unit Source	Applicability
181	NWS	Non-Residential	All	Lodging	Lighting	LED Bulbs	IL TRM	ICF	AR & IL TRM	ICF	ICF
182	NWS	Non-Residential	All	Lodging	Lighting	LED Bulbs	AR & IL TRM	ICF	IL TRM	ICF	ICF
183	NWS	Non-Residential	All	General Large Commercial	Lighting	LED Bulbs	IL TRM	ICF	AR & IL TRM	ICF	ICF
184	NWS	Non-Residential	All	General Large Commercial	Lighting	LED Bulbs	IL TRM	ICF	AR & IL TRM	ICF	ICF
185	NWS	Non-Residential	All	General Small Commercial	Lighting	LED Bulbs	IL TRM	ICF	AR & IL TRM	ICF	ICF
186	NWS	Non-Residential	All	General Small Commercial	Lighting	LED Bulbs	IL TRM	ICF	AR & IL TRM	ICF	ICF
187	NWS	Non-Residential	Large Commercial	All	Lighting	Efficient High Bay Lighting	IL TRM	ICF	AR & IL TRM	ICF	ICF
188	NWS	Non-Residential	Small Commercial	All	Lighting	Efficient High Bay Lighting	IL TRM	ICF	AR & IL TRM	ICF	ICF
189	NWS	Non-Residential	Large Commercial	All	Lighting	Efficient High Bay Lighting	IL TRM	ICF	AR & IL TRM	ICF	ICF
190	NWS	Non-Residential	Small Commercial	All	Lighting	Efficient High Bay Lighting	IL TRM	ICF	AR & IL TRM	ICF	ICF
191	NWS	Non-Residential	Large Commercial	All	Lighting	Efficient High Bay Lighting	IL TRM	ICF	AR & IL TRM	ICF	ICF
192	NWS	Non-Residential	Small Commercial	All	Lighting	Efficient High Bay Lighting	IL TRM	ICF	AR & IL TRM	ICF	ICF
193	NWS	Non-Residential	Large Commercial	All	Lighting	Efficient High Bay Lighting	IL TRM	ICF	AR & IL TRM	ICF	ICF
194	NWS	Non-Residential	Small Commercial	All	Lighting	Efficient High Bay Lighting	IL TRM	ICF	AR & IL TRM	ICF	ICF
195	NWS	Non-Residential	Large Commercial	All	Lighting	Efficient High Bay Lighting	IL TRM	ICF	AR & IL TRM	ICF	ICF
196	NWS	Non-Residential	Small Commercial	All	Lighting	Efficient High Bay Lighting	IL TRM	ICF	AR & IL TRM	ICF	ICF
197	NWS	Non-Residential	Large Commercial	All	Lighting	Efficient High Bay Lighting	IL TRM	ICF	AR & IL TRM	ICF	ICF
198	NWS	Non-Residential	Small Commercial	All	Lighting	Efficient High Bay Lighting	IL TRM	ICF	AR & IL TRM	ICF	ICF
199	NWS	Non-Residential	Large Commercial	All	Lighting	Lighting Controls	IL TRM	ICF	AR & IL TRM	ICF	ICF
200	NWS	Non-Residential	Large Commercial	All	Lighting	Lighting Controls	IL TRM	ICF	AR & IL TRM	ICF	ICF
201	NWS	Non-Residential	Large Commercial	All	Lighting	Lighting Controls	IL TRM	ICF	AR & IL TRM	ICF	ICF
202	NWS	Non-Residential	Large Commercial	All	Lighting	Lighting Controls	IL TRM	ICF	AR & IL TRM	ICF	ICF
203	NWS	Non-Residential	Large Commercial	All	Lighting	Lighting Controls	IL TRM	ICF	AR & IL TRM	ICF	ICF
204	NWS	Non-Residential	Large Commercial	All	Lighting	Lighting Controls	IL TRM	ICF	AR & IL TRM	ICF	ICF
205	NWS	Non-Residential	Large Commercial	All	Lighting	Lighting Controls	IL TRM	ICF	AR & IL TRM	ICF	ICF
206	NWS	Non-Residential	Small Commercial	All	Lighting	Lighting Controls	IL TRM	ICF	AR & IL TRM	ICF	ICF
207	NWS	Non-Residential	Small Commercial	All	Lighting	Lighting Controls	IL TRM	ICF	AR & IL TRM	ICF	ICF
208	NWS	Non-Residential	Small Commercial	All	Lighting	Lighting Controls	IL TRM	ICF	AR & IL TRM	ICF	ICF
209	NWS	Non-Residential	Small Commercial	All	Lighting	Lighting Controls	IL TRM	ICF	AR & IL TRM	ICF	ICF
210	NWS	Non-Residential	Small Commercial	All	Lighting	Lighting Controls	IL TRM	ICF	AR & IL TRM	ICF	ICF
211	NWS	Non-Residential	Small Commercial	All	Lighting	Lighting Controls	IL TRM	ICF	AR & IL TRM	ICF	ICF
212	NWS	Non-Residential	Small Commercial	All	Lighting	Lighting Controls	IL TRM	ICF	AR & IL TRM	ICF	ICF
213	NWS	Non-Residential	Small Commercial	All	Lighting	LED Exit Signs	IL TRM	ICF	AR & IL TRM	ICF	ICF
214	NWS	Non-Residential	All	Hospital	Refrigeration	Electronically Commutated Motors (ECM) for Walk-in and Reach-in Coolers/Freezers	IL TRM	AR TRM v3.0	AR TRM v3.0	ICF	ICF
215	NWS	Non-Residential	All	K12 Education	Refrigeration	Electronically Commutated Motors (ECM) for Walk-in and Reach-in Coolers/Freezers	IL TRM	AR TRM v3.0	AR TRM v3.0	ICF	ICF
216	NWS	Non-Residential	All	Education with Summer Sessions	Refrigeration	Electronically Commutated Motors (ECM) for Walk-in and Reach-in Coolers/Freezers	IL TRM	AR TRM v3.0	AR TRM v3.0	ICF	ICF
217	NWS	Non-Residential	All	Lodging	Refrigeration	Electronically Commutated Motors (ECM) for Walk-in and Reach-in Coolers/Freezers	IL TRM	AR TRM v3.0	AR TRM v3.0	ICF	ICF
218	NWS	Non-Residential	All	Food Sales	Refrigeration	Electronically Commutated Motors (ECM) for Walk-in and Reach-in Coolers/Freezers	IL TRM	AR TRM v3.0	AR TRM v3.0	ICF	ICF
219	NWS	Non-Residential	All	Restaurant	Refrigeration	Electronically Commutated Motors (ECM) for Walk-in and Reach-in Coolers/Freezers	IL TRM	AR TRM v3.0	AR TRM v3.0	ICF	ICF
220	NWS	Non-Residential	All	Hospital	Refrigeration	ENERGY STAR Solid Door Refrigerator	IL TRM	AR TRM v3.0	AR TRM v3.0	ICF	ICF
221	NWS	Non-Residential	All	Hospital	Refrigeration	ENERGY STAR Solid Door Refrigerator	IL TRM	AR TRM v3.0	AR TRM v3.0	ICF	ICF
222	NWS	Non-Residential	All	Hospital	Refrigeration	ENERGY STAR Solid Door Refrigerator	IL TRM	AR TRM v3.0	AR TRM v3.0	ICF	ICF
223	NWS	Non-Residential	All	Hospital	Refrigeration	ENERGY STAR Solid Door Refrigerator	IL TRM	AR TRM v3.0	AR TRM v3.0	ICF	ICF
224	NWS	Non-Residential	All	Hospital	Refrigeration	ENERGY STAR Solid Door Freezer	IL TRM	AR TRM v3.0	AR TRM v3.0	ICF	ICF
225	NWS	Non-Residential	All	Hospital	Refrigeration	ENERGY STAR Solid Door Freezer	IL TRM	AR TRM v3.0	AR TRM v3.0	ICF	ICF
226	NWS	Non-Residential	All	Hospital	Refrigeration	ENERGY STAR Solid Door Freezer	IL TRM	AR TRM v3.0	AR TRM v3.0	ICF	ICF
227	NWS	Non-Residential	All	Hospital	Refrigeration	ENERGY STAR Solid Door Freezer	IL TRM	AR TRM v3.0	AR TRM v3.0	ICF	ICF
228	NWS	Non-Residential	All	K12 Education	Refrigeration	ENERGY STAR Solid Door Refrigerator	IL TRM	AR TRM v3.0	AR TRM v3.0	ICF	ICF
229	NWS	Non-Residential	All	K12 Education	Refrigeration	ENERGY STAR Solid Door Refrigerator	IL TRM	AR TRM v3.0	AR TRM v3.0	ICF	ICF
230	NWS	Non-Residential	All	K12 Education	Refrigeration	ENERGY STAR Solid Door Refrigerator	IL TRM	AR TRM v3.0	AR TRM v3.0	ICF	ICF
231	NWS	Non-Residential	All	K12 Education	Refrigeration	ENERGY STAR Solid Door Refrigerator	IL TRM	AR TRM v3.0	AR TRM v3.0	ICF	ICF
232	NWS	Non-Residential	All	K12 Education	Refrigeration	ENERGY STAR Solid Door Freezer	IL TRM	AR TRM v3.0	AR TRM v3.0	ICF	ICF
233	NWS	Non-Residential	All	K12 Education	Refrigeration	ENERGY STAR Solid Door Freezer	IL TRM	AR TRM v3.0	AR TRM v3.0	ICF	ICF
234	NWS	Non-Residential	All	K12 Education	Refrigeration	ENERGY STAR Solid Door Freezer	IL TRM	AR TRM v3.0	AR TRM v3.0	ICF	ICF
235	NWS	Non-Residential	All	K12 Education	Refrigeration	ENERGY STAR Solid Door Freezer	IL TRM	AR TRM v3.0	AR TRM v3.0	ICF	ICF
236	NWS	Non-Residential	All	Education with Summer Sessions	Refrigeration	ENERGY STAR Solid Door Refrigerator	IL TRM	AR TRM v3.0	AR TRM v3.0	ICF	ICF
237	NWS	Non-Residential	All	Education with Summer Sessions	Refrigeration	ENERGY STAR Solid Door Refrigerator	IL TRM	AR TRM v3.0	AR TRM v3.0	ICF	ICF
238	NWS	Non-Residential	All	Education with Summer Sessions	Refrigeration	ENERGY STAR Solid Door Refrigerator	IL TRM	AR TRM v3.0	AR TRM v3.0	ICF	ICF
239	NWS	Non-Residential	All	Education with Summer Sessions	Refrigeration	ENERGY STAR Solid Door Refrigerator	IL TRM	AR TRM v3.0	AR TRM v3.0	ICF	ICF
240	NWS	Non-Residential	All	Education with Summer Sessions	Refrigeration	ENERGY STAR Solid Door Freezer	IL TRM	AR TRM v3.0	AR TRM v3.0	ICF	ICF

ENO Docket No. UD-08-02
 Page 106 of 245
 Supplement 1

Commercial Measures

MEASURE DESCRIPTION							MEASURE DOCUMENTATION				
Measure ID	Weather Sensitive	Sector	Sub-Sector	Building Type	End Use	Measure Name	Measure Cost Source	Measure Savings Source	Measure Lifetime Source	Measure Unit per SubSector Unit Source	Applicability
481	NWS	Non-Residential	Small Commercial	All	Misc	Small Business Program Audit & Direct Install	ICF	ICF	ICF	ICF	ICF
482	NWS	Non-Residential	Small Commercial	All	Lighting	Small Business Program Audit & Direct Install	ICF	ICF	ICF	ICF	ICF
483	NWS	Non-Residential	Small Commercial	All	Lighting	Small Business Program Audit & Direct Install	ICF	ICF	ICF	ICF	ICF
484	NWS	Non-Residential	Small Commercial	All	Service Hot Water	Small Business Program Audit & Direct Install	ICF	ICF	ICF	ICF	ICF
485	NWS	Non-Residential	Small Commercial	All	Lighting	Small Business Program Lighting Upgrade Package	ICF	ICF	ICF	ICF	ICF
486	NWS	Non-Residential	Small Commercial	All	Refrigeration	Small Business Program Refrigeration Upgrade Package	ICF	ICF	ICF	ICF	ICF
488	NWS	Non-Residential	All	Data Center	HVAC	Air Flow Management	ICF	ICF	ICF	ICF	ICF
489	NWS	Non-Residential	All	Data Center	HVAC	Air Flow Management	ICF	ICF	ICF	ICF	ICF
490	NWS	Non-Residential	All	Data Center	HVAC	Air Flow Management	ICF	ICF	ICF	ICF	ICF
491	NWS	Non-Residential	All	Data Center	HVAC	Air Flow Management	ICF	ICF	ICF	ICF	ICF
492	NWS	Non-Residential	All	Data Center	Miscellaneous	Load Distribution	ICF	ICF	ICF	ICF	ICF
493	NWS	Non-Residential	All	Data Center	Miscellaneous	Load Distribution	ICF	ICF	ICF	ICF	ICF
494	NWS	Non-Residential	All	Data Center	Miscellaneous	Load Distribution	ICF	ICF	ICF	ICF	ICF
495	NWS	Non-Residential	All	Data Center	Miscellaneous	Load Distribution	ICF	ICF	ICF	ICF	ICF
496	NWS	Non-Residential	All	Data Center	HVAC	Waterside Economizer	ICF	ICF	ICF	ICF	ICF
497	NWS	Non-Residential	All	Data Center	HVAC	Waterside Economizer	ICF	ICF	ICF	ICF	ICF
498	NWS	Non-Residential	All	Data Center	HVAC	Air Flow Management	ICF	ICF	ICF	ICF	ICF
499	NWS	Non-Residential	All	Data Center	HVAC	Air Flow Management	ICF	ICF	ICF	ICF	ICF
500	NWS	Non-Residential	All	Data Center	HVAC	Air Flow Management	ICF	ICF	ICF	ICF	ICF
501	NWS	Non-Residential	All	Data Center	HVAC	Air Flow Management	ICF	ICF	ICF	ICF	ICF
502	NWS	Non-Residential	All	Data Center	Miscellaneous	Load Distribution	ICF	ICF	ICF	ICF	ICF
503	NWS	Non-Residential	All	Data Center	Miscellaneous	Load Distribution	ICF	ICF	ICF	ICF	ICF
504	NWS	Non-Residential	All	Data Center	Miscellaneous	Load Distribution	ICF	ICF	ICF	ICF	ICF
505	NWS	Non-Residential	All	Data Center	Miscellaneous	Load Distribution	ICF	ICF	ICF	ICF	ICF
506	NWS	Non-Residential	All	Data Center	HVAC	Waterside Economizer	ICF	ICF	ICF	ICF	ICF
507	NWS	Non-Residential	All	Data Center	HVAC	Waterside Economizer	ICF	ICF	ICF	ICF	ICF
509	WS	Non-Residential	Large Commercial	All	Misc	Commercial New Construction	ICF	ICF	ICF	ICF	ICF
510	WS	Non-Residential	Large Commercial	All	Misc	Commercial New Construction	ICF	ICF	ICF	ICF	ICF
511	WS	Non-Residential	Small Commercial	All	Misc	Commercial New Construction	ICF	ICF	ICF	ICF	ICF
512	WS	Non-Residential	Small Commercial	All	Misc	Commercial New Construction	ICF	ICF	ICF	ICF	ICF
514	WS	Non-Residential	Large Commercial	All	Misc	Retrocommissioning	ICF	ICF	ICF	ICF	ICF
515	WS	Non-Residential	Large Commercial	All	Misc	Retrocommissioning	ICF	ICF	ICF	ICF	ICF
517	NWS	Non-Residential	All	All	Misc	Interruptible Rate	ICF	ICF	ICF	ICF	ICF
518	NWS	Non-Residential	All	All	Misc	Enabled Dynamic Pricing (Non-Res)	ICF	ICF	ICF	ICF	ICF
519	NWS	Non-Residential	All	All	Misc	Non-Enabled Dynamic Pricing (Non-Res)	ICF	ICF	ICF	ICF	ICF
521	WS	Non-Residential	Large Commercial	K12 Education	HVAC	Boiler Cut-Out Control	ICF	AR TRM	AR TRM (via NYSERDA Natural Gas Database)	ICF	ICF
522	WS	Non-Residential	Large Commercial	Lodging	HVAC	Boiler Cut-Out Control	ICF	AR TRM	AR TRM (via NYSERDA Natural Gas Database)	ICF	ICF
523	WS	Non-Residential	Large Commercial	Education with Summer Sessions	HVAC	Boiler Cut-Out Control	ICF	AR TRM	AR TRM (via NYSERDA Natural Gas Database)	ICF	ICF
524	WS	Non-Residential	Large Commercial	Hospital	HVAC	Boiler Cut-Out Control	ICF	AR TRM	AR TRM (via NYSERDA Natural Gas Database)	ICF	ICF
525	WS	Non-Residential	Large Commercial	General Large Commercial	HVAC	Boiler Cut-Out Control	ICF	AR TRM	AR TRM (via NYSERDA Natural Gas Database)	ICF	ICF
526	WS	Non-Residential	Large Commercial	K12 Education	HVAC	Boiler or Furnace Vent Damper	ICF	ICF	AR TRM (via NYSERDA Natural Gas Database)	ICF	ICF
527	WS	Non-Residential	Large Commercial	Lodging	HVAC	Boiler or Furnace Vent Damper	ICF	ICF	AR TRM (via NYSERDA Natural Gas Database)	ICF	ICF
528	WS	Non-Residential	Large Commercial	Education with Summer Sessions	HVAC	Boiler or Furnace Vent Damper	ICF	ICF	AR TRM (via NYSERDA Natural Gas Database)	ICF	ICF
529	WS	Non-Residential	Large Commercial	Hospital	HVAC	Boiler or Furnace Vent Damper	ICF	ICF	AR TRM (via NYSERDA Natural Gas Database)	ICF	ICF
530	WS	Non-Residential	Large Commercial	General Large Commercial	HVAC	Boiler or Furnace Vent Damper	ICF	ICF	AR TRM (via NYSERDA Natural Gas Database)	ICF	ICF
531	WS	Non-Residential	Large Commercial	K12 Education	HVAC	Boiler Reset Control	ICF	ICF	AR TRM (via NYSERDA Natural Gas Database)	ICF	ICF
532	WS	Non-Residential	Large Commercial	Lodging	HVAC	Boiler Reset Control	ICF	ICF	AR TRM (via NYSERDA Natural Gas Database)	ICF	ICF
533	WS	Non-Residential	Large Commercial	Education with Summer Sessions	HVAC	Boiler Reset Control	ICF	ICF	AR TRM (via NYSERDA Natural Gas Database)	ICF	ICF
534	WS	Non-Residential	Large Commercial	Hospital	HVAC	Boiler Reset Control	ICF	ICF	AR TRM (via NYSERDA Natural Gas Database)	ICF	ICF
535	WS	Non-Residential	Large Commercial	General Large Commercial	HVAC	Boiler Reset Control	ICF	ICF	AR TRM (via NYSERDA Natural Gas Database)	ICF	ICF
536	WS	Non-Residential	Large Commercial	K12 Education	HVAC	Boiler Tune-Up	IL TRM	ICF	AR TRM (via NYSERDA Natural Gas Database)	ICF	ICF
537	WS	Non-Residential	Large Commercial	Lodging	HVAC	Boiler Tune-Up	IL TRM	ICF	AR TRM (via NYSERDA Natural Gas Database)	ICF	ICF
538	WS	Non-Residential	Large Commercial	Education with Summer Sessions	HVAC	Boiler Tune-Up	IL TRM	ICF	AR TRM (via NYSERDA Natural Gas Database)	ICF	ICF
539	WS	Non-Residential	Large Commercial	Hospital	HVAC	Boiler Tune-Up	IL TRM	ICF	AR TRM (via NYSERDA Natural Gas Database)	ICF	ICF
540	WS	Non-Residential	Large Commercial	General Large Commercial	HVAC	Boiler Tune-Up	IL TRM	ICF	AR TRM (via NYSERDA Natural Gas Database)	ICF	ICF

Commercial Measures

MEASURE DESCRIPTION						MEASURE DOCUMENTATION					
Measure ID	Weather Sensitive	Sector	Sub-Sector	Building Type	End Use	Measure Name	Measure Cost Source	Measure Savings Source	Measure Lifetime Source	Measure Unit per SubSector Unit Source	Applicability
541	WS	Non-Residential	Large Commercial	K12 Education	HVAC	Burner Replacement for Commercial Boilers	ICF	ICF	AR TRM (via NYSERDA Natural Gas Database)	ICF	ICF
542	WS	Non-Residential	Large Commercial	Lodging	HVAC	Burner Replacement for Commercial Boilers	ICF	ICF	AR TRM (via NYSERDA Natural Gas Database)	ICF	ICF
543	WS	Non-Residential	Large Commercial	Education with Summer Sessions	HVAC	Burner Replacement for Commercial Boilers	ICF	ICF	AR TRM (via NYSERDA Natural Gas Database)	ICF	ICF
544	WS	Non-Residential	Large Commercial	Hospital	HVAC	Burner Replacement for Commercial Boilers	ICF	ICF	AR TRM (via NYSERDA Natural Gas Database)	ICF	ICF
545	WS	Non-Residential	Large Commercial	General Large Commercial	HVAC	Burner Replacement for Commercial Boilers	ICF	ICF	AR TRM (via NYSERDA Natural Gas Database)	ICF	ICF
546	WS	Non-Residential	Large Commercial	K12 Education	HVAC	Efficient Commercial Boilers	IL TRM	ICF	AR TRM (via DEER 2008)	ICF	ICF
547	WS	Non-Residential	Large Commercial	Lodging	HVAC	Efficient Commercial Boilers	IL TRM	ICF	AR TRM (via DEER 2008)	ICF	ICF
548	WS	Non-Residential	Large Commercial	Education with Summer Sessions	HVAC	Efficient Commercial Boilers	IL TRM	ICF	AR TRM (via DEER 2008)	ICF	ICF
549	WS	Non-Residential	Large Commercial	Hospital	HVAC	Efficient Commercial Boilers	IL TRM	ICF	AR TRM (via DEER 2008)	ICF	ICF
550	WS	Non-Residential	Large Commercial	General Large Commercial	HVAC	Efficient Commercial Boilers	IL TRM	ICF	AR TRM (via DEER 2008)	ICF	ICF
551	NWS	Non-Residential	Small Commercial	All	HVAC	Direct Vent Heaters (Small Commercial)	ICF	ICF	AR TRM (via DEER 2008)	ICF	ICF
552	WS	Non-Residential	Small Commercial	All	HVAC	Gas Furnace (Small Commercial)	IL TRM	ICF	AR TRM (via DEER 2008)	ICF	ICF
553	WS	Non-Residential	Small Commercial	All	Water Heating	Efficient storage gas water heater	IL TRM	ICF	AR TRM (via DEER 2008)	ICF	ICF
554	WS	Non-Residential	Small Commercial	All	Water Heating	Efficient instantaneous gas water heater	IL TRM	ICF	AR TRM (via DEER 2008)	ICF	ICF
555	NWS	Non-Residential	Small Commercial	All	Water Heating	Faucet Aerator	IL TRM	ICF	AR TRM	ICF	ICF
556	NWS	Non-Residential	Large Commercial	All	Water Heating	Faucet Aerator	IL TRM	ICF	AR TRM	ICF	ICF
557	NWS	Non-Residential	Small Commercial	All	Water Heating	Gas WH pipe insulation (Small Commercial)	IL TRM (Res cost, per Colin suggestion)	ICF	AR TRM	ICF	ICF

Commercial Measures

Measure ID	Weather Sensitive	MEASURE DESCRIPTION					PROGRAM	PARTICIPATION LOW CASE					
		Sector	Sub-Sector	Building Type	End Use	Measure Name		Program Name	First Year of Participation (So Year)	First Year Participation Rate (So)	Year of Maximum Annual Participation (Smax)	Maximum Annual Participation Rate (Smax)	Final Year of Participation, Fo (-2034 if baseline shift)
1	WS	Non-Residential	Small Commercial	All	HVAC	Unitary and Split System AC/HP Equipment	Commercial Prescriptive & Custom	2016	1.939%	2015	1.938560%	2015	1.938560%
2	WS	Non-Residential	Small Commercial	All	HVAC	Unitary and Split System AC/HP Equipment	Commercial Prescriptive & Custom	2016	1.302%	2015	1.301759%	2015	1.301759%
3	WS	Non-Residential	Small Commercial	All	HVAC	Unitary and Split System AC/HP Equipment	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
4	WS	Non-Residential	Small Commercial	All	HVAC	Unitary and Split System AC/HP Equipment	Commercial Prescriptive & Custom	2016	2.613%	2015	2.612528%	2015	2.612528%
5	WS	Non-Residential	Small Commercial	All	HVAC	Unitary and Split System AC/HP Equipment	Commercial Prescriptive & Custom	2016	0.065%	2015	0.064750%	2015	0.064750%
6	WS	Non-Residential	Small Commercial	All	HVAC	Unitary and Split System AC/HP Equipment	Commercial Prescriptive & Custom	2016	0.973%	2015	0.972931%	2015	0.972931%
7	WS	Non-Residential	Small Commercial	All	HVAC	Unitary and Split System AC/HP Equipment	Commercial Prescriptive & Custom	2016	0.623%	2015	0.622544%	2015	0.622544%
8	WS	Non-Residential	Small Commercial	All	HVAC	Unitary and Split System AC/HP Equipment	Commercial Prescriptive & Custom	2016	2.848%	2015	2.847748%	2015	2.847748%
9	WS	Non-Residential	Small Commercial	All	HVAC	Unitary and Split System AC/HP Equipment	Commercial Prescriptive & Custom	2016	0.361%	2015	0.361223%	2015	0.361223%
10	WS	Non-Residential	Small Commercial	All	HVAC	Unitary and Split System AC/HP Equipment	Commercial Prescriptive & Custom	2016	2.613%	2015	2.612528%	2015	2.612528%
11	WS	Non-Residential	Small Commercial	All	HVAC	Unitary and Split System AC/HP Equipment	Commercial Prescriptive & Custom	2016	1.906%	2015	1.905791%	2015	1.905791%
12	WS	Non-Residential	Small Commercial	All	HVAC	Unitary and Split System AC/HP Equipment	Commercial Prescriptive & Custom	2016	2.837%	2015	2.837289%	2015	2.837289%
13	WS	Non-Residential	Large Commercial	K12 Education	HVAC	Unitary and Split System AC/HP Equipment	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
14	WS	Non-Residential	Large Commercial	Education with Summer Sessions	HVAC	Unitary and Split System AC/HP Equipment	Commercial Prescriptive & Custom	2016	1.550%	2015	1.549645%	2015	1.549645%
15	WS	Non-Residential	Large Commercial	Lodging	HVAC	Unitary and Split System AC/HP Equipment	Commercial Prescriptive & Custom	2016	3.553%	2015	3.553442%	2015	3.553442%
16	WS	Non-Residential	Large Commercial	General Large Commercial	HVAC	Unitary and Split System AC/HP Equipment	Commercial Prescriptive & Custom	2016	1.640%	2015	1.640433%	2015	1.640433%
17	WS	Non-Residential	Large Commercial	K12 Education	HVAC	Unitary and Split System AC/HP Equipment	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
18	WS	Non-Residential	Large Commercial	Education with Summer Sessions	HVAC	Unitary and Split System AC/HP Equipment	Commercial Prescriptive & Custom	2016	1.542%	2015	1.542274%	2015	1.542274%
19	WS	Non-Residential	Large Commercial	Lodging	HVAC	Unitary and Split System AC/HP Equipment	Commercial Prescriptive & Custom	2016	3.543%	2015	3.542524%	2015	3.542524%
20	WS	Non-Residential	Large Commercial	General Large Commercial	HVAC	Unitary and Split System AC/HP Equipment	Commercial Prescriptive & Custom	2016	1.631%	2015	1.630991%	2015	1.630991%
21	WS	Non-Residential	Large Commercial	K12 Education	HVAC	Unitary and Split System AC/HP Equipment	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
22	WS	Non-Residential	Large Commercial	Education with Summer Sessions	HVAC	Unitary and Split System AC/HP Equipment	Commercial Prescriptive & Custom	2016	1.183%	2015	1.183488%	2015	1.183488%
23	WS	Non-Residential	Large Commercial	Lodging	HVAC	Unitary and Split System AC/HP Equipment	Commercial Prescriptive & Custom	2016	2.991%	2015	2.991386%	2015	2.991386%
24	WS	Non-Residential	Large Commercial	General Large Commercial	HVAC	Unitary and Split System AC/HP Equipment	Commercial Prescriptive & Custom	2016	1.259%	2015	1.259152%	2015	1.259152%
26	WS	Non-Residential	Small Commercial	All	HVAC	Unitary and Split System AC/HP Equipment	Commercial Prescriptive & Custom	2015	0.000%	2034	4.978173%	2015	0.000000%
27	WS	Non-Residential	Small Commercial	All	HVAC	Unitary and Split System AC/HP Equipment	Commercial Prescriptive & Custom	2015	0.000%	2034	5.923090%	2015	0.000000%
28	WS	Non-Residential	Small Commercial	All	HVAC	Unitary and Split System AC/HP Equipment	Commercial Prescriptive & Custom	2015	0.000%	2034	4.978173%	2015	0.000000%
29	WS	Non-Residential	Small Commercial	All	HVAC	Unitary and Split System AC/HP Equipment	Commercial Prescriptive & Custom	2015	0.000%	2034	5.923090%	2015	0.000000%
30	WS	Non-Residential	Small Commercial	All	HVAC	Unitary and Split System AC/HP Equipment	Commercial Prescriptive & Custom	2015	0.000%	2034	3.643328%	2015	0.000000%
31	WS	Non-Residential	Small Commercial	All	HVAC	Unitary and Split System AC/HP Equipment	Commercial Prescriptive & Custom	2015	0.000%	2034	3.725977%	2015	0.000000%
32	WS	Non-Residential	Large Commercial	K12 Education	HVAC	Unitary and Split System AC/HP Equipment	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
33	WS	Non-Residential	Large Commercial	Education with Summer Sessions	HVAC	Unitary and Split System AC/HP Equipment	Commercial Prescriptive & Custom	2015	0.000%	2034	1.166935%	2015	0.000000%
34	WS	Non-Residential	Large Commercial	Lodging	HVAC	Unitary and Split System AC/HP Equipment	Commercial Prescriptive & Custom	2015	0.000%	2034	5.688521%	2015	0.000000%
35	WS	Non-Residential	Large Commercial	General Large Commercial	HVAC	Unitary and Split System AC/HP Equipment	Commercial Prescriptive & Custom	2015	0.000%	2034	1.299364%	2015	0.000000%
36	WS	Non-Residential	Large Commercial	K12 Education	HVAC	Unitary and Split System AC/HP Equipment	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
37	WS	Non-Residential	Large Commercial	Education with Summer Sessions	HVAC	Unitary and Split System AC/HP Equipment	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
38	WS	Non-Residential	Large Commercial	Lodging	HVAC	Unitary and Split System AC/HP Equipment	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
39	WS	Non-Residential	Large Commercial	General Large Commercial	HVAC	Unitary and Split System AC/HP Equipment	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
41	WS	Non-Residential	Small Commercial	Lodging	HVAC	PTAC	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
42	NWS	Non-Residential	Small Commercial	Lodging	HVAC	Occupancy-Based PTAC/PTHP Controls	Commercial Prescriptive & Custom	2015	0.002%	2034	0.010084%	2034	0.010084%
44	WS	Non-Residential	Large Commercial	K12 Education	HVAC	Air or Water Cooled Chilling Equipment (Chillers)	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
45	WS	Non-Residential	Large Commercial	Education with Summer Sessions	HVAC	Air or Water Cooled Chilling Equipment (Chillers)	Commercial Prescriptive & Custom	2015	0.091%	2034	0.546124%	2034	0.546124%
46	WS	Non-Residential	Large Commercial	Lodging	HVAC	Air or Water Cooled Chilling Equipment (Chillers)	Commercial Prescriptive & Custom	2015	0.584%	2034	3.503667%	2034	3.503667%
47	WS	Non-Residential	Large Commercial	General Large Commercial	HVAC	Air or Water Cooled Chilling Equipment (Chillers)	Commercial Prescriptive & Custom	2015	0.103%	2034	0.619150%	2034	0.619150%
48	WS	Non-Residential	Large Commercial	K12 Education	HVAC	Air or Water Cooled Chilling Equipment (Chillers)	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
49	WS	Non-Residential	Large Commercial	Education with Summer Sessions	HVAC	Air or Water Cooled Chilling Equipment (Chillers)	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
50	WS	Non-Residential	Large Commercial	Lodging	HVAC	Air or Water Cooled Chilling Equipment (Chillers)	Commercial Prescriptive & Custom	2015	1.489%	2034	8.931306%	2034	8.931306%
51	WS	Non-Residential	Large Commercial	General Large Commercial	HVAC	Air or Water Cooled Chilling Equipment (Chillers)	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
52	WS	Non-Residential	Large Commercial	Hospital	HVAC	Air or Water Cooled Chilling Equipment (Chillers)	Commercial Prescriptive & Custom	2015	1.056%	2034	6.333502%	2034	6.333502%
53	WS	Non-Residential	Large Commercial	K12 Education	HVAC	Air or Water Cooled Chilling Equipment (Chillers)	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
54	WS	Non-Residential	Large Commercial	Education with Summer Sessions	HVAC	Air or Water Cooled Chilling Equipment (Chillers)	Commercial Prescriptive & Custom	2015	0.119%	2034	0.711121%	2034	0.711121%
55	WS	Non-Residential	Large Commercial	Lodging	HVAC	Air or Water Cooled Chilling Equipment (Chillers)	Commercial Prescriptive & Custom	2015	0.691%	2034	4.145311%	2034	4.145311%
56	WS	Non-Residential	Large Commercial	General Large Commercial	HVAC	Air or Water Cooled Chilling Equipment (Chillers)	Commercial Prescriptive & Custom	2015	0.134%	2034	0.801011%	2034	0.801011%
57	WS	Non-Residential	Large Commercial	Hospital	HVAC	Air or Water Cooled Chilling Equipment (Chillers)	Commercial Prescriptive & Custom	2015	5.873%	2034	35.237454%	2034	35.237454%
58	WS	Non-Residential	Large Commercial	K12 Education	HVAC	Air or Water Cooled Chilling Equipment (Chillers)	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
59	WS	Non-Residential	Large Commercial	Education with Summer Sessions	HVAC	Air or Water Cooled Chilling Equipment (Chillers)	Commercial Prescriptive & Custom	2015	2.690%	2034	16.137115%	2034	16.137115%
60	WS	Non-Residential	Large Commercial	Lodging	HVAC	Air or Water Cooled Chilling Equipment (Chillers)	Commercial Prescriptive & Custom	2015	5.048%	2034	30.287208%	2034	30.287208%

Commercial Measures

Measure ID	Weather Sensitive	MEASURE DESCRIPTION					Measure Name	PROGRAM	PARTICIPATION LOW CASE				
		Sector	Sub-Sector	Building Type	End Use	Program Name			First Year of Participation (So Year)	First Year Participation Rate (So)	Year of Maximum Annual Participation (Smax)	Maximum Annual Participation Rate (Smax)	Final Year of Participation, Fo (-2034 if baseline shift)
61	WS	Non-Residential	Large Commercial	General Large Commercial	HVAC	Air or Water Cooled Chilling Equipment (Chillers)	Commercial Prescriptive & Custom	2015	2.806%	2034	16.837916%	2034	16.837916%
62	WS	Non-Residential	Large Commercial	Hospital	HVAC	Air or Water Cooled Chilling Equipment (Chillers)	Commercial Prescriptive & Custom	2015	2.200%	2034	13.197529%	2034	13.197529%
63	WS	Non-Residential	Large Commercial	Education with Summer Sessions	HVAC	Air or Water Cooled Chilling Equipment (Chillers)	Commercial Prescriptive & Custom	2015	0.451%	2034	2.703709%	2034	2.703709%
64	WS	Non-Residential	Large Commercial	Lodging	HVAC	Air or Water Cooled Chilling Equipment (Chillers)	Commercial Prescriptive & Custom	2015	1.618%	2034	9.705763%	2034	9.705763%
65	WS	Non-Residential	Large Commercial	General Large Commercial	HVAC	Air or Water Cooled Chilling Equipment (Chillers)	Commercial Prescriptive & Custom	2015	0.491%	2034	2.947398%	2034	2.947398%
66	WS	Non-Residential	Large Commercial	Hospital	HVAC	Air or Water Cooled Chilling Equipment (Chillers)	Commercial Prescriptive & Custom	2015	3.610%	2034	21.661247%	2034	21.661247%
67	WS	Non-Residential	Large Commercial	Education with Summer Sessions	HVAC	Air or Water Cooled Chilling Equipment (Chillers)	Commercial Prescriptive & Custom	2015	1.110%	2034	6.659056%	2034	6.659056%
68	WS	Non-Residential	Large Commercial	Lodging	HVAC	Air or Water Cooled Chilling Equipment (Chillers)	Commercial Prescriptive & Custom	2015	2.872%	2034	17.234018%	2034	17.234018%
69	WS	Non-Residential	Large Commercial	General Large Commercial	HVAC	Air or Water Cooled Chilling Equipment (Chillers)	Commercial Prescriptive & Custom	2015	1.183%	2034	7.100632%	2034	7.100632%
71	NWS	Non-Residential	Large Commercial	Hospital	HVAC	Variable Speed Drives for HVAC	Commercial Prescriptive & Custom	2015	0.013%	2034	0.074999%	2034	0.074999%
72	NWS	Non-Residential	Large Commercial	Hospital	HVAC	Variable Speed Drives for HVAC	Commercial Prescriptive & Custom	2015	0.009%	2034	0.051596%	2034	0.051596%
73	NWS	Non-Residential	Large Commercial	Hospital	HVAC	Variable Speed Drives for HVAC	Commercial Prescriptive & Custom	2015	0.012%	2034	0.069657%	2034	0.069657%
74	NWS	Non-Residential	Large Commercial	Hospital	HVAC	Variable Speed Drives for HVAC	Commercial Prescriptive & Custom	2015	0.013%	2034	0.074999%	2034	0.074999%
75	NWS	Non-Residential	Large Commercial	K12 Education	HVAC	Variable Speed Drives for HVAC	Commercial Prescriptive & Custom	2015	0.008%	2034	0.048478%	2034	0.048478%
76	NWS	Non-Residential	Large Commercial	K12 Education	HVAC	Variable Speed Drives for HVAC	Commercial Prescriptive & Custom	2015	0.003%	2034	0.020251%	2034	0.020251%
77	NWS	Non-Residential	Large Commercial	K12 Education	HVAC	Variable Speed Drives for HVAC	Commercial Prescriptive & Custom	2015	0.012%	2034	0.069657%	2034	0.069657%
78	NWS	Non-Residential	Large Commercial	K12 Education	HVAC	Variable Speed Drives for HVAC	Commercial Prescriptive & Custom	2015	0.010%	2034	0.060067%	2034	0.060067%
79	NWS	Non-Residential	Large Commercial	Education with Summer Sessions	HVAC	Variable Speed Drives for HVAC	Commercial Prescriptive & Custom	2015	0.009%	2034	0.053464%	2034	0.053464%
80	NWS	Non-Residential	Large Commercial	Education with Summer Sessions	HVAC	Variable Speed Drives for HVAC	Commercial Prescriptive & Custom	2015	0.004%	2034	0.023733%	2034	0.023733%
81	NWS	Non-Residential	Large Commercial	Education with Summer Sessions	HVAC	Variable Speed Drives for HVAC	Commercial Prescriptive & Custom	2015	0.012%	2034	0.069657%	2034	0.069657%
82	NWS	Non-Residential	Large Commercial	Education with Summer Sessions	HVAC	Variable Speed Drives for HVAC	Commercial Prescriptive & Custom	2015	0.011%	2034	0.064082%	2034	0.064082%
83	NWS	Non-Residential	Large Commercial	Lodging	HVAC	Variable Speed Drives for HVAC	Commercial Prescriptive & Custom	2015	0.010%	2034	0.058131%	2034	0.058131%
84	NWS	Non-Residential	Large Commercial	Lodging	HVAC	Variable Speed Drives for HVAC	Commercial Prescriptive & Custom	2015	0.005%	2034	0.027693%	2034	0.027693%
85	NWS	Non-Residential	Large Commercial	Lodging	HVAC	Variable Speed Drives for HVAC	Commercial Prescriptive & Custom	2015	0.012%	2034	0.069657%	2034	0.069657%
86	NWS	Non-Residential	Large Commercial	Lodging	HVAC	Variable Speed Drives for HVAC	Commercial Prescriptive & Custom	2015	0.011%	2034	0.067737%	2034	0.067737%
87	NWS	Non-Residential	Large Commercial	General Large Commercial	HVAC	Variable Speed Drives for HVAC	Commercial Prescriptive & Custom	2015	0.011%	2034	0.063147%	2034	0.063147%
88	NWS	Non-Residential	Large Commercial	General Large Commercial	HVAC	Variable Speed Drives for HVAC	Commercial Prescriptive & Custom	2015	0.005%	2034	0.032682%	2034	0.032682%
89	NWS	Non-Residential	Large Commercial	General Large Commercial	HVAC	Variable Speed Drives for HVAC	Commercial Prescriptive & Custom	2015	0.012%	2034	0.069657%	2034	0.069657%
90	NWS	Non-Residential	Large Commercial	General Large Commercial	HVAC	Variable Speed Drives for HVAC	Commercial Prescriptive & Custom	2015	0.012%	2034	0.071553%	2034	0.071553%
92	NWS	Non-Residential	Small Commercial	All	HVAC	Dual Enthalpy Economizer	Commercial Prescriptive & Custom	2015	0.007%	2034	0.044447%	2034	0.044447%
93	NWS	Non-Residential	Large Commercial	All	HVAC	Dual Enthalpy Economizer	Commercial Prescriptive & Custom	2015	0.008%	2034	0.045092%	2034	0.045092%
95	NWS	Non-Residential	Small Commercial	All	HVAC	Demand Controlled Ventilation	Commercial Prescriptive & Custom	2015	0.008%	2034	0.049581%	2034	0.049581%
96	NWS	Non-Residential	Large Commercial	All	HVAC	Demand Controlled Ventilation	Commercial Prescriptive & Custom	2015	0.004%	2034	0.021341%	2034	0.021341%
98	WS	Non-Residential	Small Commercial	All	HVAC	Ground Source Heatpump	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
100	WS	Non-Residential	Small Commercial	All	HVAC	AC Tune-Up	Small Business Solutions	2015	0.093%	2034	0.555942%	2034	0.555942%
102	NWS	Non-Residential	Small Commercial	All	HVAC	Electronically Commutated Motors for Refrigeration and HVAC Applications	Commercial Prescriptive & Custom	2015	0.011%	2034	0.063960%	2034	0.063960%
103	NWS	Non-Residential	All	Hospital	Lighting	High Performance T8/T5 with Low-BF Ballast	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
104	NWS	Non-Residential	All	Hospital	Lighting	High Performance T8/T5 with Low-BF Ballast	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
105	NWS	Non-Residential	All	Hospital	Lighting	High Performance T8/T5 with Low-BF Ballast	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
106	NWS	Non-Residential	All	Hospital	Lighting	High Performance T8/T5 with Low-BF Ballast	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
107	NWS	Non-Residential	All	K12 Education	Lighting	High Performance T8/T5 with Low-BF Ballast	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
108	NWS	Non-Residential	All	K12 Education	Lighting	High Performance T8/T5 with Low-BF Ballast	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
109	NWS	Non-Residential	All	K12 Education	Lighting	High Performance T8/T5 with Low-BF Ballast	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
110	NWS	Non-Residential	All	K12 Education	Lighting	High Performance T8/T5 with Low-BF Ballast	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
111	NWS	Non-Residential	All	Education with Summer Sessions	Lighting	High Performance T8/T5 with Low-BF Ballast	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
112	NWS	Non-Residential	All	Education with Summer Sessions	Lighting	High Performance T8/T5 with Low-BF Ballast	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
113	NWS	Non-Residential	All	Education with Summer Sessions	Lighting	High Performance T8/T5 with Low-BF Ballast	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
114	NWS	Non-Residential	All	Education with Summer Sessions	Lighting	High Performance T8/T5 with Low-BF Ballast	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
115	NWS	Non-Residential	All	Lodging	Lighting	High Performance T8/T5 with Low-BF Ballast	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
116	NWS	Non-Residential	All	Lodging	Lighting	High Performance T8/T5 with Low-BF Ballast	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
117	NWS	Non-Residential	All	Lodging	Lighting	High Performance T8/T5 with Low-BF Ballast	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
118	NWS	Non-Residential	All	Lodging	Lighting	High Performance T8/T5 with Low-BF Ballast	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
119	NWS	Non-Residential	All	General Large Commercial	Lighting	High Performance T8/T5 with Low-BF Ballast	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
120	NWS	Non-Residential	All	General Large Commercial	Lighting	High Performance T8/T5 with Low-BF Ballast	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A

Commercial Measures

Measure ID	Weather Sensitive	MEASURE DESCRIPTION					PROGRAM	PARTICIPATION LOW CASE					
		Sector	Sub-Sector	Building Type	End Use	Measure Name		Program Name	First Year of Participation (So Year)	First Year Participation Rate (So)	Year of Maximum Annual Participation (Smax)	Maximum Annual Participation Rate (Smax)	Final Year of Participation, Fo (<2034 if baseline shift)
121	NWS	Non-Residential	All	General Large Commercial	Lighting	High Performance T8/T5 with Low-BF Ballast	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
122	NWS	Non-Residential	All	General Large Commercial	Lighting	High Performance T8/T5 with Low-BF Ballast	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
123	NWS	Non-Residential	All	General Small Commercial	Lighting	High Performance T8/T5 with Low-BF Ballast	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
124	NWS	Non-Residential	All	General Small Commercial	Lighting	High Performance T8/T5 with Low-BF Ballast	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
125	NWS	Non-Residential	All	General Small Commercial	Lighting	High Performance T8/T5 with Low-BF Ballast	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
126	NWS	Non-Residential	All	General Small Commercial	Lighting	High Performance T8/T5 with Low-BF Ballast	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
127	NWS	Non-Residential	All	Hospital	Lighting	Reduced Wattage T8/T5 Lamps	Commercial Prescriptive & Custom	2015	0.667%	2034	3.999937%	2034	3.999937%
128	NWS	Non-Residential	All	K12 Education	Lighting	Reduced Wattage T8/T5 Lamps	Commercial Prescriptive & Custom	2015	0.595%	2034	3.567325%	2034	3.567325%
129	NWS	Non-Residential	All	Education with Summer Sessions	Lighting	Reduced Wattage T8/T5 Lamps	Commercial Prescriptive & Custom	2015	0.638%	2034	3.825633%	2034	3.825633%
130	NWS	Non-Residential	All	Lodging	Lighting	Reduced Wattage T8/T5 Lamps	Commercial Prescriptive & Custom	2015	0.667%	2034	3.999937%	2034	3.999937%
131	NWS	Non-Residential	All	General Large Commercial	Lighting	Reduced Wattage T8/T5 Lamps	Commercial Prescriptive & Custom	2015	0.644%	2034	3.865588%	2034	3.865588%
132	NWS	Non-Residential	All	General Small Commercial	Lighting	Reduced Wattage T8/T5 Lamps	Commercial Prescriptive & Custom	2015	0.659%	2034	3.955719%	2034	3.955719%
133	NWS	Non-Residential	All	Hospital	Lighting	Reduced Wattage T8/T5 Lamps	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
134	NWS	Non-Residential	All	K12 Education	Lighting	Reduced Wattage T8/T5 Lamps	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
135	NWS	Non-Residential	All	Education with Summer Sessions	Lighting	Reduced Wattage T8/T5 Lamps	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
136	NWS	Non-Residential	All	Lodging	Lighting	Reduced Wattage T8/T5 Lamps	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
137	NWS	Non-Residential	All	General Large Commercial	Lighting	Reduced Wattage T8/T5 Lamps	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
138	NWS	Non-Residential	All	General Small Commercial	Lighting	Reduced Wattage T8/T5 Lamps	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
139	NWS	Non-Residential	All	Hospital	Lighting	Linear Florescent Fixture Upgrade	Commercial Prescriptive & Custom	2015	0.334%	2034	2.001914%	2034	2.001914%
140	NWS	Non-Residential	All	K12 Education	Lighting	Linear Florescent Fixture Upgrade	Commercial Prescriptive & Custom	2015	0.102%	2034	0.612691%	2034	0.612691%
141	NWS	Non-Residential	All	Education with Summer Sessions	Lighting	Linear Florescent Fixture Upgrade	Commercial Prescriptive & Custom	2015	0.050%	2034	0.301845%	2034	0.301845%
142	NWS	Non-Residential	All	Lodging	Lighting	Linear Florescent Fixture Upgrade	Commercial Prescriptive & Custom	2015	0.388%	2034	2.328555%	2034	2.328555%
143	NWS	Non-Residential	All	General Large Commercial	Lighting	Linear Florescent Fixture Upgrade	Commercial Prescriptive & Custom	2015	0.184%	2034	1.105495%	2034	1.105495%
144	NWS	Non-Residential	All	General Small Commercial	Lighting	Linear Florescent Fixture Upgrade	Commercial Prescriptive & Custom	2015	0.218%	2034	1.309572%	2034	1.309572%
145	NWS	Non-Residential	All	Hospital	Lighting	Linear Florescent Fixture Upgrade	Commercial Prescriptive & Custom	2015	0.556%	2034	3.338004%	2034	3.338004%
146	NWS	Non-Residential	All	K12 Education	Lighting	Linear Florescent Fixture Upgrade	Commercial Prescriptive & Custom	2015	0.293%	2034	1.759531%	2034	1.759531%
147	NWS	Non-Residential	All	Education with Summer Sessions	Lighting	Linear Florescent Fixture Upgrade	Commercial Prescriptive & Custom	2015	0.387%	2034	2.323167%	2034	2.323167%
148	NWS	Non-Residential	All	Lodging	Lighting	Linear Florescent Fixture Upgrade	Commercial Prescriptive & Custom	2015	0.604%	2034	3.622319%	2034	3.622319%
149	NWS	Non-Residential	All	General Large Commercial	Lighting	Linear Florescent Fixture Upgrade	Commercial Prescriptive & Custom	2015	0.404%	2034	2.421121%	2034	2.421121%
150	NWS	Non-Residential	All	General Small Commercial	Lighting	Linear Florescent Fixture Upgrade	Commercial Prescriptive & Custom	2015	0.442%	2034	2.653419%	2034	2.653419%
151	NWS	Non-Residential	All	Hospital	Lighting	Linear Florescent Fixture Upgrade	Commercial Prescriptive & Custom	2015	0.165%	2034	0.989741%	2034	0.989741%
152	NWS	Non-Residential	All	K12 Education	Lighting	Linear Florescent Fixture Upgrade	Commercial Prescriptive & Custom	2015	0.024%	2034	0.143220%	2034	0.143220%
153	NWS	Non-Residential	All	Education with Summer Sessions	Lighting	Linear Florescent Fixture Upgrade	Commercial Prescriptive & Custom	2015	0.055%	2034	0.331384%	2034	0.331384%
154	NWS	Non-Residential	All	Lodging	Lighting	Linear Florescent Fixture Upgrade	Commercial Prescriptive & Custom	2015	0.211%	2034	1.266750%	2034	1.266750%
155	NWS	Non-Residential	All	General Large Commercial	Lighting	Linear Florescent Fixture Upgrade	Commercial Prescriptive & Custom	2015	0.063%	2034	0.375387%	2034	0.375387%
156	NWS	Non-Residential	All	General Small Commercial	Lighting	Linear Florescent Fixture Upgrade	Commercial Prescriptive & Custom	2015	0.082%	2034	0.494991%	2034	0.494991%
157	NWS	Non-Residential	All	Hospital	Lighting	Linear Florescent Fixture Upgrade	Commercial Prescriptive & Custom	2015	0.409%	2034	2.456190%	2034	2.456190%
158	NWS	Non-Residential	All	K12 Education	Lighting	Linear Florescent Fixture Upgrade	Commercial Prescriptive & Custom	2015	0.156%	2034	0.934337%	2034	0.934337%
159	NWS	Non-Residential	All	Education with Summer Sessions	Lighting	Linear Florescent Fixture Upgrade	Commercial Prescriptive & Custom	2015	0.237%	2034	1.421239%	2034	1.421239%
160	NWS	Non-Residential	All	Lodging	Lighting	Linear Florescent Fixture Upgrade	Commercial Prescriptive & Custom	2015	0.463%	2034	2.778732%	2034	2.778732%
161	NWS	Non-Residential	All	General Large Commercial	Lighting	Linear Florescent Fixture Upgrade	Commercial Prescriptive & Custom	2015	0.252%	2034	1.512658%	2034	1.512658%
162	NWS	Non-Residential	All	General Small Commercial	Lighting	Linear Florescent Fixture Upgrade	Commercial Prescriptive & Custom	2015	0.290%	2034	1.737001%	2034	1.737001%
163	NWS	Non-Residential	All	Hospital	Lighting	Commercial Standard CFL	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
164	NWS	Non-Residential	All	Hospital	Lighting	Commercial Standard CFL	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
165	NWS	Non-Residential	All	K12 Education	Lighting	Commercial Standard CFL	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
166	NWS	Non-Residential	All	K12 Education	Lighting	Commercial Standard CFL	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
167	NWS	Non-Residential	All	Education with Summer Sessions	Lighting	Commercial Standard CFL	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
168	NWS	Non-Residential	All	Education with Summer Sessions	Lighting	Commercial Standard CFL	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
169	NWS	Non-Residential	All	Lodging	Lighting	Commercial Standard CFL	Commercial Prescriptive & Custom	2015	0.500%	2034	2.999953%	2034	2.999953%
170	NWS	Non-Residential	All	Lodging	Lighting	Commercial Standard CFL	Commercial Prescriptive & Custom	2015	0.500%	2034	2.999953%	2034	2.999953%
171	NWS	Non-Residential	All	General Large Commercial	Lighting	Commercial Standard CFL	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
172	NWS	Non-Residential	All	General Large Commercial	Lighting	Commercial Standard CFL	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
173	NWS	Non-Residential	All	General Small Commercial	Lighting	Commercial Standard CFL	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
174	NWS	Non-Residential	All	General Small Commercial	Lighting	Commercial Standard CFL	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
175	NWS	Non-Residential	All	Hospital	Lighting	LED Bulbs	Commercial Prescriptive & Custom	2016	0.833%	2020	4.243150%	2020	4.243150%
176	NWS	Non-Residential	All	Hospital	Lighting	LED Bulbs	Commercial Prescriptive & Custom	2015	1.167%	2034	6.999890%	2034	6.999890%
177	NWS	Non-Residential	All	K12 Education	Lighting	LED Bulbs	Commercial Prescriptive & Custom	2016	0.743%	2020	3.781270%	2020	3.781270%
178	NWS	Non-Residential	All	K12 Education	Lighting	LED Bulbs	Commercial Prescriptive & Custom	2015	1.125%	2034	6.752857%	2034	6.752857%
179	NWS	Non-Residential	All	Education with Summer Sessions	Lighting	LED Bulbs	Commercial Prescriptive & Custom	2016	0.797%	2020	4.055779%	2020	4.055779%
180	NWS	Non-Residential	All	Education with Summer Sessions	Lighting	LED Bulbs	Commercial Prescriptive & Custom	2015	1.167%	2034	6.999890%	2034	6.999890%

Commercial Measures

Measure ID	Weather Sensitive	MEASURE DESCRIPTION					Measure Name	PROGRAM	PARTICIPATION LOW CASE				
		Sector	Sub-Sector	Building Type	End Use	Program Name			First Year of Participation (So Year)	First Year Participation Rate (So)	Year of Maximum Annual Participation (Smax)	Maximum Annual Participation Rate (Smax)	Final Year of Participation, Fo (<2034 if baseline shift)
181	NWS	Non-Residential	All	Lodging	Lighting	LED Bulbs	Commercial Prescriptive & Custom	2016	0.764%	2020	3.890645%	2020	3.890645%
182	NWS	Non-Residential	All	Lodging	Lighting	LED Bulbs	Commercial Prescriptive & Custom	2015	1.150%	2034	6.898218%	2034	6.898218%
183	NWS	Non-Residential	All	General Large Commercial	Lighting	LED Bulbs	Commercial Prescriptive & Custom	2016	0.805%	2020	4.098245%	2020	4.098245%
184	NWS	Non-Residential	All	General Large Commercial	Lighting	LED Bulbs	Commercial Prescriptive & Custom	2015	1.167%	2034	6.999890%	2034	6.999890%
185	NWS	Non-Residential	All	General Small Commercial	Lighting	LED Bulbs	Commercial Prescriptive & Custom	2016	0.824%	2020	4.194043%	2020	4.194043%
186	NWS	Non-Residential	All	General Small Commercial	Lighting	LED Bulbs	Commercial Prescriptive & Custom	2015	1.167%	2034	6.999890%	2034	6.999890%
187	NWS	Non-Residential	Large Commercial	All	Lighting	Efficient High Bay Lighting	Commercial Prescriptive & Custom	2015	0.030%	2034	0.177324%	2034	0.177324%
188	NWS	Non-Residential	Small Commercial	All	Lighting	Efficient High Bay Lighting	Commercial Prescriptive & Custom	2015	0.046%	2034	0.274922%	2034	0.274922%
189	NWS	Non-Residential	Large Commercial	All	Lighting	Efficient High Bay Lighting	Commercial Prescriptive & Custom	2015	0.055%	2034	0.330353%	2034	0.330353%
190	NWS	Non-Residential	Small Commercial	All	Lighting	Efficient High Bay Lighting	Commercial Prescriptive & Custom	2015	0.066%	2034	0.397946%	2034	0.397946%
191	NWS	Non-Residential	Large Commercial	All	Lighting	Efficient High Bay Lighting	Commercial Prescriptive & Custom	2015	0.066%	2034	0.398964%	2034	0.398964%
192	NWS	Non-Residential	Small Commercial	All	Lighting	Efficient High Bay Lighting	Commercial Prescriptive & Custom	2015	0.078%	2034	0.467740%	2034	0.467740%
193	NWS	Non-Residential	Large Commercial	All	Lighting	Efficient High Bay Lighting	Commercial Prescriptive & Custom	2015	0.098%	2034	0.590836%	2034	0.590836%
194	NWS	Non-Residential	Small Commercial	All	Lighting	Efficient High Bay Lighting	Commercial Prescriptive & Custom	2015	0.109%	2034	0.654691%	2034	0.654691%
195	NWS	Non-Residential	Large Commercial	All	Lighting	Efficient High Bay Lighting	Commercial Prescriptive & Custom	2015	0.059%	2034	0.355052%	2034	0.355052%
196	NWS	Non-Residential	Small Commercial	All	Lighting	Efficient High Bay Lighting	Commercial Prescriptive & Custom	2015	0.078%	2034	0.469668%	2034	0.469668%
197	NWS	Non-Residential	Large Commercial	All	Lighting	Efficient High Bay Lighting	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
198	NWS	Non-Residential	Small Commercial	All	Lighting	Efficient High Bay Lighting	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
199	NWS	Non-Residential	Large Commercial	All	Lighting	Lighting Controls	Commercial Prescriptive & Custom	2015	0.323%	2034	1.939755%	2034	1.939755%
200	NWS	Non-Residential	Large Commercial	All	Lighting	Lighting Controls	Commercial Prescriptive & Custom	2015	0.235%	2034	1.412679%	2034	1.412679%
201	NWS	Non-Residential	Large Commercial	All	Lighting	Lighting Controls	Commercial Prescriptive & Custom	2015	0.091%	2034	0.545674%	2034	0.545674%
202	NWS	Non-Residential	Large Commercial	All	Lighting	Lighting Controls	Commercial Prescriptive & Custom	2015	0.323%	2034	1.939755%	2034	1.939755%
203	NWS	Non-Residential	Large Commercial	All	Lighting	Lighting Controls	Commercial Prescriptive & Custom	2015	0.379%	2034	2.272996%	2034	2.272996%
204	NWS	Non-Residential	Large Commercial	All	Lighting	Lighting Controls	Commercial Prescriptive & Custom	2015	0.354%	2034	2.123688%	2034	2.123688%
205	NWS	Non-Residential	Large Commercial	All	Lighting	Lighting Controls	Commercial Prescriptive & Custom	2015	0.354%	2034	2.123688%	2034	2.123688%
206	NWS	Non-Residential	Small Commercial	All	Lighting	Lighting Controls	Commercial Prescriptive & Custom	2015	0.374%	2034	2.242429%	2034	2.242429%
207	NWS	Non-Residential	Small Commercial	All	Lighting	Lighting Controls	Commercial Prescriptive & Custom	2015	0.293%	2034	1.755905%	2034	1.755905%
208	NWS	Non-Residential	Small Commercial	All	Lighting	Lighting Controls	Commercial Prescriptive & Custom	2015	0.141%	2034	0.843041%	2034	0.843041%
209	NWS	Non-Residential	Small Commercial	All	Lighting	Lighting Controls	Commercial Prescriptive & Custom	2015	0.374%	2034	2.242429%	2034	2.242429%
210	NWS	Non-Residential	Small Commercial	All	Lighting	Lighting Controls	Commercial Prescriptive & Custom	2015	0.422%	2034	2.534121%	2034	2.534121%
211	NWS	Non-Residential	Small Commercial	All	Lighting	Lighting Controls	Commercial Prescriptive & Custom	2015	0.401%	2034	2.404731%	2034	2.404731%
212	NWS	Non-Residential	Small Commercial	All	Lighting	Lighting Controls	Commercial Prescriptive & Custom	2015	0.401%	2034	2.404731%	2034	2.404731%
213	NWS	Non-Residential	Small Commercial	All	Lighting	LED Exit Signs	Commercial Prescriptive & Custom	2015	0.223%	2034	1.339811%	2034	1.339811%
214	NWS	Non-Residential	All	Hospital	Refrigeration	Electronically Commutated Motors (ECM) for Walk-in and Reach-in Coolers/Freezers	Commercial Prescriptive & Custom	2015	0.447%	2034	2.681158%	2034	2.681158%
215	NWS	Non-Residential	All	K12 Education	Refrigeration	Electronically Commutated Motors (ECM) for Walk-in and Reach-in Coolers/Freezers	Commercial Prescriptive & Custom	2015	0.447%	2034	2.681158%	2034	2.681158%
216	NWS	Non-Residential	All	Education with Summer Sessions	Refrigeration	Electronically Commutated Motors (ECM) for Walk-in and Reach-in Coolers/Freezers	Commercial Prescriptive & Custom	2015	0.447%	2034	2.681158%	2034	2.681158%
217	NWS	Non-Residential	All	Lodging	Refrigeration	Electronically Commutated Motors (ECM) for Walk-in and Reach-in Coolers/Freezers	Commercial Prescriptive & Custom	2015	0.447%	2034	2.681158%	2034	2.681158%
218	NWS	Non-Residential	All	Food Sales	Refrigeration	Electronically Commutated Motors (ECM) for Walk-in and Reach-in Coolers/Freezers	Commercial Prescriptive & Custom	2015	0.440%	2034	2.641115%	2034	2.641115%
219	NWS	Non-Residential	All	Restaurant	Refrigeration	Electronically Commutated Motors (ECM) for Walk-in and Reach-in Coolers/Freezers	Commercial Prescriptive & Custom	2015	0.447%	2034	2.681158%	2034	2.681158%
220	NWS	Non-Residential	All	Hospital	Refrigeration	ENERGY STAR Solid Door Refrigerator	Commercial Prescriptive & Custom	2015	0.460%	2034	2.757303%	2034	2.757303%
221	NWS	Non-Residential	All	Hospital	Refrigeration	ENERGY STAR Solid Door Refrigerator	Commercial Prescriptive & Custom	2015	0.486%	2034	2.913193%	2034	2.913193%
222	NWS	Non-Residential	All	Hospital	Refrigeration	ENERGY STAR Solid Door Refrigerator	Commercial Prescriptive & Custom	2015	0.500%	2034	2.99953%	2034	2.99953%
223	NWS	Non-Residential	All	Hospital	Refrigeration	ENERGY STAR Solid Door Refrigerator	Commercial Prescriptive & Custom	2015	0.500%	2034	2.99953%	2034	2.99953%
224	NWS	Non-Residential	All	Hospital	Refrigeration	ENERGY STAR Solid Door Freezer	Commercial Prescriptive & Custom	2015	0.500%	2034	2.99953%	2034	2.99953%
225	NWS	Non-Residential	All	Hospital	Refrigeration	ENERGY STAR Solid Door Freezer	Commercial Prescriptive & Custom	2015	0.500%	2034	2.99953%	2034	2.99953%
226	NWS	Non-Residential	All	Hospital	Refrigeration	ENERGY STAR Solid Door Freezer	Commercial Prescriptive & Custom	2015	0.500%	2034	2.99953%	2034	2.99953%
227	NWS	Non-Residential	All	Hospital	Refrigeration	ENERGY STAR Solid Door Freezer	Commercial Prescriptive & Custom	2015	0.500%	2034	2.99953%	2034	2.99953%
228	NWS	Non-Residential	All	K12 Education	Refrigeration	ENERGY STAR Solid Door Refrigerator	Commercial Prescriptive & Custom	2015	0.460%	2034	2.757303%	2034	2.757303%
229	NWS	Non-Residential	All	K12 Education	Refrigeration	ENERGY STAR Solid Door Refrigerator	Commercial Prescriptive & Custom	2015	0.486%	2034	2.913193%	2034	2.913193%
230	NWS	Non-Residential	All	K12 Education	Refrigeration	ENERGY STAR Solid Door Refrigerator	Commercial Prescriptive & Custom	2015	0.500%	2034	2.99953%	2034	2.99953%
231	NWS	Non-Residential	All	K12 Education	Refrigeration	ENERGY STAR Solid Door Refrigerator	Commercial Prescriptive & Custom	2015	0.500%	2034	2.99953%	2034	2.99953%
232	NWS	Non-Residential	All	K12 Education	Refrigeration	ENERGY STAR Solid Door Freezer	Commercial Prescriptive & Custom	2015	0.500%	2034	2.99953%	2034	2.99953%
233	NWS	Non-Residential	All	K12 Education	Refrigeration	ENERGY STAR Solid Door Freezer	Commercial Prescriptive & Custom	2015	0.500%	2034	2.99953%	2034	2.99953%
234	NWS	Non-Residential	All	K12 Education	Refrigeration	ENERGY STAR Solid Door Freezer	Commercial Prescriptive & Custom	2015	0.500%	2034	2.99953%	2034	2.99953%
235	NWS	Non-Residential	All	K12 Education	Refrigeration	ENERGY STAR Solid Door Freezer	Commercial Prescriptive & Custom	2015	0.500%	2034	2.99953%	2034	2.99953%
236	NWS	Non-Residential	All	Education with Summer Sessions	Refrigeration	ENERGY STAR Solid Door Refrigerator	Commercial Prescriptive & Custom	2015	0.460%	2034	2.757303%	2034	2.757303%
237	NWS	Non-Residential	All	Education with Summer Sessions	Refrigeration	ENERGY STAR Solid Door Refrigerator	Commercial Prescriptive & Custom	2015	0.486%	2034	2.913193%	2034	2.913193%
238	NWS	Non-Residential	All	Education with Summer Sessions	Refrigeration	ENERGY STAR Solid Door Refrigerator	Commercial Prescriptive & Custom	2015	0.500%	2034	2.99953%	2034	2.99953%
239	NWS	Non-Residential	All	Education with Summer Sessions	Refrigeration	ENERGY STAR Solid Door Refrigerator	Commercial Prescriptive & Custom	2015	0.500%	2034	2.99953%	2034	2.99953%
240	NWS	Non-Residential	All	Education with Summer Sessions	Refrigeration	ENERGY STAR Solid Door Freezer	Commercial Prescriptive & Custom	2015	0.500%	2034	2.99953%	2034	2.99953%

Commercial Measures

Measure ID	Weather Sensitive	MEASURE DESCRIPTION					PROGRAM	PARTICIPATION LOW CASE					
		Sector	Sub-Sector	Building Type	End Use	Measure Name		Program Name	First Year of Participation (So Year)	First Year Participation Rate (So)	Year of Maximum Annual Participation (Smax)	Maximum Annual Participation Rate (Smax)	Final Year of Participation, Fo (-2034 if baseline shift)
301	NWS	Non-Residential	All	Food Sales	Refrigeration	Door Heater Controls for Cooler or Freezer	Commercial Prescriptive & Custom	2015	0.500%	2034	2.999953%	2034	2.999953%
302	NWS	Non-Residential	All	Food Sales	Refrigeration	Door Heater Controls for Cooler or Freezer	Commercial Prescriptive & Custom	2015	0.421%	2034	2.524187%	2034	2.524187%
303	NWS	Non-Residential	All	Food Sales	Refrigeration	Door Heater Controls for Cooler or Freezer	Commercial Prescriptive & Custom	2015	0.421%	2034	2.524187%	2034	2.524187%
304	NWS	Non-Residential	All	Restaurant	Refrigeration	Door Heater Controls for Cooler or Freezer	Commercial Prescriptive & Custom	2015	0.452%	2034	2.710460%	2034	2.710460%
305	NWS	Non-Residential	All	Restaurant	Refrigeration	Door Heater Controls for Cooler or Freezer	Commercial Prescriptive & Custom	2015	0.300%	2034	1.801892%	2034	1.801892%
306	NWS	Non-Residential	All	Restaurant	Refrigeration	Door Heater Controls for Cooler or Freezer	Commercial Prescriptive & Custom	2015	0.300%	2034	1.801892%	2034	1.801892%
307	NWS	Non-Residential	All	Restaurant	Refrigeration	Door Heater Controls for Cooler or Freezer	Commercial Prescriptive & Custom	2015	0.500%	2034	2.999953%	2034	2.999953%
308	NWS	Non-Residential	All	Restaurant	Refrigeration	Door Heater Controls for Cooler or Freezer	Commercial Prescriptive & Custom	2015	0.421%	2034	2.524187%	2034	2.524187%
309	NWS	Non-Residential	All	Restaurant	Refrigeration	Door Heater Controls for Cooler or Freezer	Commercial Prescriptive & Custom	2015	0.421%	2034	2.524187%	2034	2.524187%
310	NWS	Non-Residential	All	Hospital	Refrigeration	Evaporator Fan Control	Commercial Prescriptive & Custom	2015	0.129%	2034	0.773442%	2034	0.773442%
311	NWS	Non-Residential	All	K12 Education	Refrigeration	Evaporator Fan Control	Commercial Prescriptive & Custom	2015	0.129%	2034	0.773442%	2034	0.773442%
312	NWS	Non-Residential	All	Education with Summer Sessions	Refrigeration	Evaporator Fan Control	Commercial Prescriptive & Custom	2015	0.129%	2034	0.773442%	2034	0.773442%
313	NWS	Non-Residential	All	Lodging	Refrigeration	Evaporator Fan Control	Commercial Prescriptive & Custom	2015	0.129%	2034	0.773442%	2034	0.773442%
314	NWS	Non-Residential	All	Food Sales	Refrigeration	Evaporator Fan Control	Commercial Prescriptive & Custom	2015	0.129%	2034	0.773442%	2034	0.773442%
315	NWS	Non-Residential	All	Restaurant	Refrigeration	Evaporator Fan Control	Commercial Prescriptive & Custom	2015	0.129%	2034	0.773442%	2034	0.773442%
316	NWS	Non-Residential	All	Hospital	Refrigeration	Strip Curtain for Walk-in Coolers and Freezers	Commercial Prescriptive & Custom	2015	0.477%	2034	2.860956%	2034	2.860956%
317	NWS	Non-Residential	All	Hospital	Refrigeration	Strip Curtain for Walk-in Coolers and Freezers	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
318	NWS	Non-Residential	All	K12 Education	Refrigeration	Strip Curtain for Walk-in Coolers and Freezers	Commercial Prescriptive & Custom	2015	0.477%	2034	2.860956%	2034	2.860956%
319	NWS	Non-Residential	All	K12 Education	Refrigeration	Strip Curtain for Walk-in Coolers and Freezers	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
320	NWS	Non-Residential	All	Education with Summer Sessions	Refrigeration	Strip Curtain for Walk-in Coolers and Freezers	Commercial Prescriptive & Custom	2015	0.477%	2034	2.860956%	2034	2.860956%
321	NWS	Non-Residential	All	Education with Summer Sessions	Refrigeration	Strip Curtain for Walk-in Coolers and Freezers	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
322	NWS	Non-Residential	All	Lodging	Refrigeration	Strip Curtain for Walk-in Coolers and Freezers	Commercial Prescriptive & Custom	2015	0.477%	2034	2.860956%	2034	2.860956%
323	NWS	Non-Residential	All	Lodging	Refrigeration	Strip Curtain for Walk-in Coolers and Freezers	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
324	NWS	Non-Residential	All	Food Sales	Refrigeration	Strip Curtain for Walk-in Coolers and Freezers	Commercial Prescriptive & Custom	2015	0.477%	2034	2.860956%	2034	2.860956%
325	NWS	Non-Residential	All	Food Sales	Refrigeration	Strip Curtain for Walk-in Coolers and Freezers	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
326	NWS	Non-Residential	All	Restaurant	Refrigeration	Strip Curtain for Walk-in Coolers and Freezers	Commercial Prescriptive & Custom	2015	0.477%	2034	2.860956%	2034	2.860956%
327	NWS	Non-Residential	All	Restaurant	Refrigeration	Strip Curtain for Walk-in Coolers and Freezers	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
328	NWS	Non-Residential	All	Hospital	Food Services Equipment	ENERGY STAR Dishwasher	Commercial Prescriptive & Custom	2015	0.250%	2034	1.499976%	2034	1.499976%
329	NWS	Non-Residential	All	Hospital	Food Services Equipment	ENERGY STAR Dishwasher	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
330	NWS	Non-Residential	All	Hospital	Food Services Equipment	ENERGY STAR Dishwasher	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
331	NWS	Non-Residential	All	Hospital	Food Services Equipment	ENERGY STAR Dishwasher	Commercial Prescriptive & Custom	2015	0.250%	2034	1.499976%	2034	1.499976%
332	NWS	Non-Residential	All	Hospital	Food Services Equipment	ENERGY STAR Dishwasher	Commercial Prescriptive & Custom	2015	0.250%	2034	1.499976%	2034	1.499976%
333	NWS	Non-Residential	All	Hospital	Food Services Equipment	ENERGY STAR Dishwasher	Commercial Prescriptive & Custom	2015	0.250%	2034	1.499976%	2034	1.499976%
334	NWS	Non-Residential	All	Hospital	Food Services Equipment	ENERGY STAR Dishwasher	Commercial Prescriptive & Custom	2015	0.173%	2034	1.036270%	2034	1.036270%
335	NWS	Non-Residential	All	Hospital	Food Services Equipment	ENERGY STAR Dishwasher	Commercial Prescriptive & Custom	2015	0.250%	2034	1.499976%	2034	1.499976%
336	NWS	Non-Residential	All	Hospital	Food Services Equipment	ENERGY STAR Dishwasher	Commercial Prescriptive & Custom	2015	0.082%	2034	0.489423%	2034	0.489423%
337	NWS	Non-Residential	All	Hospital	Food Services Equipment	ENERGY STAR Dishwasher	Commercial Prescriptive & Custom	2015	0.250%	2034	1.499976%	2034	1.499976%
338	NWS	Non-Residential	All	Hospital	Food Services Equipment	ENERGY STAR Dishwasher	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
339	NWS	Non-Residential	All	Hospital	Food Services Equipment	ENERGY STAR Dishwasher	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
340	NWS	Non-Residential	All	Hospital	Food Services Equipment	ENERGY STAR Dishwasher	Commercial Prescriptive & Custom	2015	0.250%	2034	1.499976%	2034	1.499976%
341	NWS	Non-Residential	All	Hospital	Food Services Equipment	ENERGY STAR Dishwasher	Commercial Prescriptive & Custom	2015	0.250%	2034	1.499976%	2034	1.499976%
342	NWS	Non-Residential	All	Hospital	Food Services Equipment	ENERGY STAR Dishwasher	Commercial Prescriptive & Custom	2015	0.242%	2034	1.450710%	2034	1.450710%
343	NWS	Non-Residential	All	Hospital	Food Services Equipment	ENERGY STAR Dishwasher	Commercial Prescriptive & Custom	2015	0.147%	2034	0.880845%	2034	0.880845%
344	NWS	Non-Residential	All	Hospital	Food Services Equipment	ENERGY STAR Dishwasher	Commercial Prescriptive & Custom	2015	0.250%	2034	1.499976%	2034	1.499976%
345	NWS	Non-Residential	All	Hospital	Food Services Equipment	ENERGY STAR Dishwasher	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
346	NWS	Non-Residential	All	K12 Education	Food Services Equipment	ENERGY STAR Dishwasher	Commercial Prescriptive & Custom	2015	0.250%	2034	1.499976%	2034	1.499976%
347	NWS	Non-Residential	All	K12 Education	Food Services Equipment	ENERGY STAR Dishwasher	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
348	NWS	Non-Residential	All	K12 Education	Food Services Equipment	ENERGY STAR Dishwasher	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
349	NWS	Non-Residential	All	K12 Education	Food Services Equipment	ENERGY STAR Dishwasher	Commercial Prescriptive & Custom	2015	0.250%	2034	1.499976%	2034	1.499976%
350	NWS	Non-Residential	All	K12 Education	Food Services Equipment	ENERGY STAR Dishwasher	Commercial Prescriptive & Custom	2015	0.250%	2034	1.499976%	2034	1.499976%
351	NWS	Non-Residential	All	K12 Education	Food Services Equipment	ENERGY STAR Dishwasher	Commercial Prescriptive & Custom	2015	0.250%	2034	1.499976%	2034	1.499976%
352	NWS	Non-Residential	All	K12 Education	Food Services Equipment	ENERGY STAR Dishwasher	Commercial Prescriptive & Custom	2015	0.173%	2034	1.036270%	2034	1.036270%
353	NWS	Non-Residential	All	K12 Education	Food Services Equipment	ENERGY STAR Dishwasher	Commercial Prescriptive & Custom	2015	0.250%	2034	1.499976%	2034	1.499976%
354	NWS	Non-Residential	All	K12 Education	Food Services Equipment	ENERGY STAR Dishwasher	Commercial Prescriptive & Custom	2015	0.082%	2034	0.489423%	2034	0.489423%
355	NWS	Non-Residential	All	K12 Education	Food Services Equipment	ENERGY STAR Dishwasher	Commercial Prescriptive & Custom	2015	0.250%	2034	1.499976%	2034	1.499976%
356	NWS	Non-Residential	All	K12 Education	Food Services Equipment	ENERGY STAR Dishwasher	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
357	NWS	Non-Residential	All	K12 Education	Food Services Equipment	ENERGY STAR Dishwasher	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
358	NWS	Non-Residential	All	K12 Education	Food Services Equipment	ENERGY STAR Dishwasher	Commercial Prescriptive & Custom	2015	0.250%	2034	1.499976%	2034	1.499976%
359	NWS	Non-Residential	All	K12 Education	Food Services Equipment	ENERGY STAR Dishwasher	Commercial Prescriptive & Custom	2015	0.250%	2034	1.499976%	2034	1.499976%
360	NWS	Non-Residential	All	K12 Education	Food Services Equipment	ENERGY STAR Dishwasher	Commercial Prescriptive & Custom	2015	0.242%	2034	1.450710%	2034	1.450710%

Commercial Measures

Measure ID	Weather Sensitive	Sector	Sub-Sector	MEASURE DESCRIPTION			Measure Name	PROGRAM	PARTICIPATION LOW CASE					
				Building Type	End Use	Program Name			First Year of Participation (So Year)	First Year Participation Rate (So)	Year of Maximum Annual Participation (Smax)	Maximum Annual Participation Rate (Smax)	Final Year of Participation, Fo (<2034 if baseline shift)	Final Year Participation Rate (Fo)
421	NWS	Non-Residential	All	K12 Education	Food Services Equipment	ENERGY STAR Fryer	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
422	NWS	Non-Residential	All	Education with Summer Sessions	Food Services Equipment	ENERGY STAR Fryer	Commercial Prescriptive & Custom	2015	0.193%	2034	1.160630%	2034	1.160630%	
423	NWS	Non-Residential	All	Education with Summer Sessions	Food Services Equipment	ENERGY STAR Fryer	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
424	NWS	Non-Residential	All	Lodging	Food Services Equipment	ENERGY STAR Fryer	Commercial Prescriptive & Custom	2015	0.193%	2034	1.160630%	2034	1.160630%	
425	NWS	Non-Residential	All	Lodging	Food Services Equipment	ENERGY STAR Fryer	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
426	NWS	Non-Residential	All	Restaurant	Food Services Equipment	ENERGY STAR Fryer	Commercial Prescriptive & Custom	2015	0.193%	2034	1.160630%	2034	1.160630%	
427	NWS	Non-Residential	All	Restaurant	Food Services Equipment	ENERGY STAR Fryer	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
428	NWS	Non-Residential	All	Hospital	Food Services Equipment	ENERGY STAR Griddle	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
429	NWS	Non-Residential	All	K12 Education	Food Services Equipment	ENERGY STAR Griddle	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
430	NWS	Non-Residential	All	Education with Summer Sessions	Food Services Equipment	ENERGY STAR Griddle	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
431	NWS	Non-Residential	All	Lodging	Food Services Equipment	ENERGY STAR Griddle	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
432	NWS	Non-Residential	All	Restaurant	Food Services Equipment	ENERGY STAR Griddle	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
433	NWS	Non-Residential	All	Hospital	Food Services Equipment	ENERGY STAR Hot Food Holding Cabinets	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
434	NWS	Non-Residential	All	K12 Education	Food Services Equipment	ENERGY STAR Hot Food Holding Cabinets	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
435	NWS	Non-Residential	All	Education with Summer Sessions	Food Services Equipment	ENERGY STAR Hot Food Holding Cabinets	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
436	NWS	Non-Residential	All	Lodging	Food Services Equipment	ENERGY STAR Hot Food Holding Cabinets	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
437	NWS	Non-Residential	All	Restaurant	Food Services Equipment	ENERGY STAR Hot Food Holding Cabinets	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
438	NWS	Non-Residential	All	Hospital	Food Services Equipment	ENERGY STAR Electric Convection Ovens	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
439	NWS	Non-Residential	All	Hospital	Food Services Equipment	ENERGY STAR Electric Convection Ovens	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
440	NWS	Non-Residential	All	K12 Education	Food Services Equipment	ENERGY STAR Electric Convection Ovens	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
441	NWS	Non-Residential	All	K12 Education	Food Services Equipment	ENERGY STAR Electric Convection Ovens	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
442	NWS	Non-Residential	All	Education with Summer Sessions	Food Services Equipment	ENERGY STAR Electric Convection Ovens	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
443	NWS	Non-Residential	All	Education with Summer Sessions	Food Services Equipment	ENERGY STAR Electric Convection Ovens	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
444	NWS	Non-Residential	All	Lodging	Food Services Equipment	ENERGY STAR Electric Convection Ovens	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
445	NWS	Non-Residential	All	Lodging	Food Services Equipment	ENERGY STAR Electric Convection Ovens	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
446	NWS	Non-Residential	All	Restaurant	Food Services Equipment	ENERGY STAR Electric Convection Ovens	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
447	NWS	Non-Residential	All	Restaurant	Food Services Equipment	ENERGY STAR Electric Convection Ovens	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
448	NWS	Non-Residential	All	K12 Education	Food Services Equipment	ENERGY STAR Steam Cooker	Commercial Prescriptive & Custom	2015	0.319%	2034	1.275806%	2034	1.275806%	
449	NWS	Non-Residential	All	Education with Summer Sessions	Food Services Equipment	ENERGY STAR Steam Cooker	Commercial Prescriptive & Custom	2015	0.319%	2034	1.275806%	2034	1.275806%	
450	NWS	Non-Residential	All	Lodging	Food Services Equipment	ENERGY STAR Steam Cooker	Commercial Prescriptive & Custom	2015	0.319%	2034	1.275806%	2034	1.275806%	
451	NWS	Non-Residential	All	Restaurant	Food Services Equipment	ENERGY STAR Steam Cooker	Commercial Prescriptive & Custom	2015	0.319%	2034	1.275806%	2034	1.275806%	
452	NWS	Non-Residential	All	Hospital	Food Services Equipment	EPA WaterSense Pre-Rinse Spray Valve	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
453	NWS	Non-Residential	All	Education with Summer Sessions	Food Services Equipment	EPA WaterSense Pre-Rinse Spray Valve	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
454	NWS	Non-Residential	All	Lodging	Food Services Equipment	EPA WaterSense Pre-Rinse Spray Valve	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
455	NWS	Non-Residential	All	Restaurant	Food Services Equipment	EPA WaterSense Pre-Rinse Spray Valve	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
456	NWS	Non-Residential	All	Hospital	Service Hot Water	Electric Storage Water Heater	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
457	NWS	Non-Residential	All	Hospital	Service Hot Water	Electric Storage Water Heater	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
458	NWS	Non-Residential	All	K12 Education	Service Hot Water	Electric Storage Water Heater	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
459	NWS	Non-Residential	All	K12 Education	Service Hot Water	Electric Storage Water Heater	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
460	NWS	Non-Residential	All	K12 Education	Service Hot Water	Electric Storage Water Heater	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
461	NWS	Non-Residential	All	Education with Summer Sessions	Service Hot Water	Electric Storage Water Heater	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
462	NWS	Non-Residential	All	Education with Summer Sessions	Service Hot Water	Electric Storage Water Heater	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
463	NWS	Non-Residential	All	Education with Summer Sessions	Service Hot Water	Electric Storage Water Heater	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
464	NWS	Non-Residential	All	Lodging	Service Hot Water	Electric Storage Water Heater	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
465	NWS	Non-Residential	All	Lodging	Service Hot Water	Electric Storage Water Heater	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
466	NWS	Non-Residential	All	Lodging	Service Hot Water	Electric Storage Water Heater	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
467	NWS	Non-Residential	All	Restaurant	Service Hot Water	Electric Storage Water Heater	Commercial Prescriptive & Custom	2015	0.638%	2034	2.551612%	2034	2.551612%	
468	NWS	Non-Residential	All	Restaurant	Service Hot Water	Electric Storage Water Heater	Commercial Prescriptive & Custom	2015	0.708%	2034	2.830914%	2034	2.830914%	
469	NWS	Non-Residential	All	Restaurant	Service Hot Water	Electric Storage Water Heater	Commercial Prescriptive & Custom	2015	0.643%	2034	2.570979%	2034	2.570979%	
470	NWS	Non-Residential	All	Hospital	Service Hot Water	Heat Pump Storage Water Heater	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
471	NWS	Non-Residential	All	K12 Education	Service Hot Water	Heat Pump Storage Water Heater	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
472	NWS	Non-Residential	All	Education with Summer Sessions	Service Hot Water	Heat Pump Storage Water Heater	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
473	NWS	Non-Residential	All	Lodging	Service Hot Water	Heat Pump Storage Water Heater	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
474	NWS	Non-Residential	All	Restaurant	Service Hot Water	Heat Pump Storage Water Heater	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
475	NWS	Non-Residential	All	Hospital	Service Hot Water	Low Flow Faucet Aerators - Electric DHW fuel	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
476	NWS	Non-Residential	All	K12 Education	Service Hot Water	Low Flow Faucet Aerators - Electric DHW fuel	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
477	NWS	Non-Residential	All	Education with Summer Sessions	Service Hot Water	Low Flow Faucet Aerators - Electric DHW fuel	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
478	NWS	Non-Residential	All	Lodging	Service Hot Water	Low Flow Faucet Aerators - Electric DHW fuel	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
479	NWS	Non-Residential	All	Restaurant	Service Hot Water	Low Flow Faucet Aerators - Electric DHW fuel	Commercial Prescriptive & Custom	2015	0.750%	2034	3.000000%	2034	3.000000%	

Commercial Measures

Measure ID	Weather Sensitive	MEASURE DESCRIPTION					PROGRAM	PARTICIPATION LOW CASE					
		Sector	Sub-Sector	Building Type	End Use	Measure Name		Program Name	First Year of Participation (So Year)	First Year Participation Rate (So)	Year of Maximum Annual Participation (\$max)	Maximum Annual Participation Rate (\$max)	Final Year of Participation, Fo (<2034 if baseline shift)
481	NWS	Non-Residential	Small Commercial	All	Misc	Small Business Program Audit & Direct Install	Small Business Solutions	2016	0.000%	2015	0.000000%	2015	0.000000%
482	NWS	Non-Residential	Small Commercial	All	Lighting	Small Business Program Audit & Direct Install	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
483	NWS	Non-Residential	Small Commercial	All	Lighting	Small Business Program Audit & Direct Install	Small Business Solutions	2015	0.500%	2034	2.000000%	2034	2.000000%
484	NWS	Non-Residential	Small Commercial	All	Service Hot Water	Small Business Program Audit & Direct Install	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
485	NWS	Non-Residential	Small Commercial	All	Lighting	Small Business Program Lighting Upgrade Package	Small Business Solutions	2015	0.500%	2034	2.000000%	2034	2.000000%
486	NWS	Non-Residential	Small Commercial	All	Refrigeration	Small Business Program Refrigeration Upgrade Package	Small Business Solutions	2015	0.500%	2034	2.000000%	2034	2.000000%
488	NWS	Non-Residential	All	Data Center	HVAC	Air Flow Management	Data Center	2015	7.143%	2015	7.142857%	2034	7.142857%
489	NWS	Non-Residential	All	Data Center	HVAC	Air Flow Management	Data Center	2015	7.143%	2015	7.142857%	2034	7.142857%
490	NWS	Non-Residential	All	Data Center	HVAC	Air Flow Management	Data Center	2015	7.143%	2015	7.142857%	2034	7.142857%
491	NWS	Non-Residential	All	Data Center	HVAC	Air Flow Management	Data Center	2015	7.143%	2015	7.142857%	2034	7.142857%
492	NWS	Non-Residential	All	Data Center	Miscellaneous	Load Distribution	Data Center	2015	7.143%	2015	7.142857%	2034	7.142857%
493	NWS	Non-Residential	All	Data Center	Miscellaneous	Load Distribution	Data Center	2015	7.143%	2015	7.142857%	2034	7.142857%
494	NWS	Non-Residential	All	Data Center	Miscellaneous	Load Distribution	Data Center	2015	7.143%	2015	7.142857%	2034	7.142857%
495	NWS	Non-Residential	All	Data Center	Miscellaneous	Load Distribution	Data Center	2015	7.143%	2015	7.142857%	2034	7.142857%
496	NWS	Non-Residential	All	Data Center	HVAC	Waterside Economizer	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
497	NWS	Non-Residential	All	Data Center	HVAC	Waterside Economizer	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
498	NWS	Non-Residential	All	Data Center	HVAC	Air Flow Management	Data Center	2015	4.762%	2015	4.761905%	2034	4.761905%
499	NWS	Non-Residential	All	Data Center	HVAC	Air Flow Management	Data Center	2015	4.762%	2015	4.761905%	2034	4.761905%
500	NWS	Non-Residential	All	Data Center	HVAC	Air Flow Management	Data Center	2015	4.762%	2015	4.761905%	2034	4.761905%
501	NWS	Non-Residential	All	Data Center	HVAC	Air Flow Management	Data Center	2015	4.762%	2015	4.761905%	2034	4.761905%
502	NWS	Non-Residential	All	Data Center	Miscellaneous	Load Distribution	Data Center	2015	4.762%	2015	4.761905%	2034	4.761905%
503	NWS	Non-Residential	All	Data Center	Miscellaneous	Load Distribution	Data Center	2015	4.762%	2015	4.761905%	2034	4.761905%
504	NWS	Non-Residential	All	Data Center	Miscellaneous	Load Distribution	Data Center	2015	4.762%	2015	4.761905%	2034	4.761905%
505	NWS	Non-Residential	All	Data Center	Miscellaneous	Load Distribution	Data Center	2015	4.762%	2015	4.761905%	2034	4.761905%
506	NWS	Non-Residential	All	Data Center	HVAC	Waterside Economizer	Data Center	2015	4.762%	2015	4.761905%	2034	4.761905%
507	NWS	Non-Residential	All	Data Center	HVAC	Waterside Economizer	Data Center	2015	4.762%	2015	4.761905%	2034	4.761905%
509	WS	Non-Residential	Large Commercial	All	Misc	Commercial New Construction	Commercial New Construction	2016	10.000%	2017	20.000000%	2017	20.000000%
510	WS	Non-Residential	Large Commercial	All	Misc	Commercial New Construction	Commercial New Construction	2015	0.000%	2019	33.000000%	2015	0.000000%
511	WS	Non-Residential	Small Commercial	All	Misc	Commercial New Construction	Commercial New Construction	2016	10.000%	2017	20.000000%	2017	20.000000%
512	WS	Non-Residential	Small Commercial	All	Misc	Commercial New Construction	Commercial New Construction	2015	0.000%	2019	33.000000%	2015	0.000000%
514	WS	Non-Residential	Large Commercial	All	Misc	Retrocommissioning	RetroCommissioning	2015	0.500%	2018	2.500000%	2034	1.142032%
515	WS	Non-Residential	Large Commercial	All	Misc	Retrocommissioning	RetroCommissioning	2015	0.500%	2018	2.500000%	2034	1.142032%
517	NWS	Non-Residential	All	All	Misc	Interruptible Rate	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
518	NWS	Non-Residential	All	All	Misc	Enabled Dynamic Pricing (Non-Res)	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
519	NWS	Non-Residential	All	All	Misc	Non-Enabled Dynamic Pricing (Non-Res)	Non-Residential Dynamic Pricing	2015	0.622%	2034	0.724512%	2034	0.724512%
521	WS	Non-Residential	Large Commercial	K12 Education	HVAC	Boiler Cut-Out Control	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
522	WS	Non-Residential	Large Commercial	Lodging	HVAC	Boiler Cut-Out Control	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
523	WS	Non-Residential	Large Commercial	Education with Summer Sessions	HVAC	Boiler Cut-Out Control	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
524	WS	Non-Residential	Large Commercial	Hospital	HVAC	Boiler Cut-Out Control	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
525	WS	Non-Residential	Large Commercial	General Large Commercial	HVAC	Boiler Cut-Out Control	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
526	WS	Non-Residential	Large Commercial	K12 Education	HVAC	Boiler or Furnace Vent Damper	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
527	WS	Non-Residential	Large Commercial	Lodging	HVAC	Boiler or Furnace Vent Damper	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
528	WS	Non-Residential	Large Commercial	Education with Summer Sessions	HVAC	Boiler or Furnace Vent Damper	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
529	WS	Non-Residential	Large Commercial	Hospital	HVAC	Boiler or Furnace Vent Damper	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
530	WS	Non-Residential	Large Commercial	General Large Commercial	HVAC	Boiler or Furnace Vent Damper	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
531	WS	Non-Residential	Large Commercial	K12 Education	HVAC	Boiler Reset Control	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
532	WS	Non-Residential	Large Commercial	Lodging	HVAC	Boiler Reset Control	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
533	WS	Non-Residential	Large Commercial	Education with Summer Sessions	HVAC	Boiler Reset Control	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
534	WS	Non-Residential	Large Commercial	Hospital	HVAC	Boiler Reset Control	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
535	WS	Non-Residential	Large Commercial	General Large Commercial	HVAC	Boiler Reset Control	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
536	WS	Non-Residential	Large Commercial	K12 Education	HVAC	Boiler Tune-Up	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
537	WS	Non-Residential	Large Commercial	Lodging	HVAC	Boiler Tune-Up	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
538	WS	Non-Residential	Large Commercial	Education with Summer Sessions	HVAC	Boiler Tune-Up	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
539	WS	Non-Residential	Large Commercial	Hospital	HVAC	Boiler Tune-Up	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
540	WS	Non-Residential	Large Commercial	General Large Commercial	HVAC	Boiler Tune-Up	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A

Commercial Measures

Measure ID	Weather Sensitive	MEASURE DESCRIPTION					PROGRAM	PARTICIPATION LOW CASE					
		Sector	Sub-Sector	Building Type	End Use	Measure Name		Program Name	First Year of Participation (So Year)	First Year Participation Rate (So)	Year of Maximum Annual Participation (Smax)	Maximum Annual Participation Rate (Smax)	Final Year of Participation, Fo (-2034 if baseline shift)
541	WS	Non-Residential	Large Commercial	K12 Education	HVAC	Burner Replacement for Commercial Boilers	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
542	WS	Non-Residential	Large Commercial	Lodging	HVAC	Burner Replacement for Commercial Boilers	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
543	WS	Non-Residential	Large Commercial	Education with Summer Sessions	HVAC	Burner Replacement for Commercial Boilers	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
544	WS	Non-Residential	Large Commercial	Hospital	HVAC	Burner Replacement for Commercial Boilers	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
545	WS	Non-Residential	Large Commercial	General Large Commercial	HVAC	Burner Replacement for Commercial Boilers	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
546	WS	Non-Residential	Large Commercial	K12 Education	HVAC	Efficient Commercial Boilers	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
547	WS	Non-Residential	Large Commercial	Lodging	HVAC	Efficient Commercial Boilers	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
548	WS	Non-Residential	Large Commercial	Education with Summer Sessions	HVAC	Efficient Commercial Boilers	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
549	WS	Non-Residential	Large Commercial	Hospital	HVAC	Efficient Commercial Boilers	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
550	WS	Non-Residential	Large Commercial	General Large Commercial	HVAC	Efficient Commercial Boilers	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
551	NWS	Non-Residential	Small Commercial	All	HVAC	Direct Vent Heaters (Small Commercial)	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
552	WS	Non-Residential	Small Commercial	All	HVAC	Gas Furnace (Small Commercial)	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
553	WS	Non-Residential	Small Commercial	All	Water Heating	Efficient storage gas water heater	Commercial Prescriptive & Custom	2015	0.033%	2034	0.195309%	2034	0.195309%
554	WS	Non-Residential	Small Commercial	All	Water Heating	Efficient instantaneous gas water heater	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
555	NWS	Non-Residential	Small Commercial	All	Water Heating	Faucet Aerator	Small Business Solutions	2015	0.250%	2034	1.499976%	2034	1.499976%
556	NWS	Non-Residential	Large Commercial	All	Water Heating	Faucet Aerator	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
557	NWS	Non-Residential	Small Commercial	All	Water Heating	Gas WH pipe insulation (Small Commercial)	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A

Commercial Measures

Measure ID	Weather Sensitive	MEASURE DESCRIPTION					Measure Name	PROGRAM	PARTICIPATION HIGH CASE					
		Sector	Sub-Sector	Building Type	End Use	Program Name			First Year of Participation (So Year)	First Year Participation Rate (So)	Year of Maximum Annual Participation (Smax)	Maximum Annual Participation Rate (Smax)	Final Year of Participation, Fo (<2034 if baseline shift)	Final Year Participation Rate (Fo)
61	WS	Non-Residential	Large Commercial	General Large Commercial	HVAC	Air or Water Cooled Chilling Equipment (Chillers)	Commercial Prescriptive & Custom	2015	15.948%	2034	63.790290%	2034	63.790290%	
62	WS	Non-Residential	Large Commercial	Hospital	HVAC	Air or Water Cooled Chilling Equipment (Chillers)	Commercial Prescriptive & Custom	2015	15.948%	2034	63.790290%	2034	63.790290%	
63	WS	Non-Residential	Large Commercial	Education with Summer Sessions	HVAC	Air or Water Cooled Chilling Equipment (Chillers)	Commercial Prescriptive & Custom	2015	15.948%	2034	63.790290%	2034	63.790290%	
64	WS	Non-Residential	Large Commercial	Lodging	HVAC	Air or Water Cooled Chilling Equipment (Chillers)	Commercial Prescriptive & Custom	2015	15.948%	2034	63.790290%	2034	63.790290%	
65	WS	Non-Residential	Large Commercial	General Large Commercial	HVAC	Air or Water Cooled Chilling Equipment (Chillers)	Commercial Prescriptive & Custom	2015	15.948%	2034	63.790290%	2034	63.790290%	
66	WS	Non-Residential	Large Commercial	Hospital	HVAC	Air or Water Cooled Chilling Equipment (Chillers)	Commercial Prescriptive & Custom	2015	15.948%	2034	63.790290%	2034	63.790290%	
67	WS	Non-Residential	Large Commercial	Education with Summer Sessions	HVAC	Air or Water Cooled Chilling Equipment (Chillers)	Commercial Prescriptive & Custom	2015	15.948%	2034	63.790290%	2034	63.790290%	
68	WS	Non-Residential	Large Commercial	Lodging	HVAC	Air or Water Cooled Chilling Equipment (Chillers)	Commercial Prescriptive & Custom	2015	15.948%	2034	63.790290%	2034	63.790290%	
69	WS	Non-Residential	Large Commercial	General Large Commercial	HVAC	Air or Water Cooled Chilling Equipment (Chillers)	Commercial Prescriptive & Custom	2015	15.948%	2034	63.790290%	2034	63.790290%	
71	NWS	Non-Residential	Large Commercial	Hospital	HVAC	Variable Speed Drives for HVAC	Commercial Prescriptive & Custom	2015	0.019%	2034	0.075000%	2034	0.075000%	
72	NWS	Non-Residential	Large Commercial	Hospital	HVAC	Variable Speed Drives for HVAC	Commercial Prescriptive & Custom	2015	0.018%	2034	0.071083%	2034	0.071083%	
73	NWS	Non-Residential	Large Commercial	Hospital	HVAC	Variable Speed Drives for HVAC	Commercial Prescriptive & Custom	2015	0.019%	2034	0.075000%	2034	0.075000%	
74	NWS	Non-Residential	Large Commercial	Hospital	HVAC	Variable Speed Drives for HVAC	Commercial Prescriptive & Custom	2015	0.019%	2034	0.075000%	2034	0.075000%	
75	NWS	Non-Residential	Large Commercial	K12 Education	HVAC	Variable Speed Drives for HVAC	Commercial Prescriptive & Custom	2015	0.017%	2034	0.069160%	2034	0.069160%	
76	NWS	Non-Residential	Large Commercial	K12 Education	HVAC	Variable Speed Drives for HVAC	Commercial Prescriptive & Custom	2015	0.016%	2034	0.063790%	2034	0.063790%	
77	NWS	Non-Residential	Large Commercial	K12 Education	HVAC	Variable Speed Drives for HVAC	Commercial Prescriptive & Custom	2015	0.019%	2034	0.075000%	2034	0.075000%	
78	NWS	Non-Residential	Large Commercial	K12 Education	HVAC	Variable Speed Drives for HVAC	Commercial Prescriptive & Custom	2015	0.019%	2034	0.075000%	2034	0.075000%	
79	NWS	Non-Residential	Large Commercial	Education with Summer Sessions	HVAC	Variable Speed Drives for HVAC	Commercial Prescriptive & Custom	2015	0.018%	2034	0.072205%	2034	0.072205%	
80	NWS	Non-Residential	Large Commercial	Education with Summer Sessions	HVAC	Variable Speed Drives for HVAC	Commercial Prescriptive & Custom	2015	0.016%	2034	0.063790%	2034	0.063790%	
81	NWS	Non-Residential	Large Commercial	Education with Summer Sessions	HVAC	Variable Speed Drives for HVAC	Commercial Prescriptive & Custom	2015	0.019%	2034	0.075000%	2034	0.075000%	
82	NWS	Non-Residential	Large Commercial	Education with Summer Sessions	HVAC	Variable Speed Drives for HVAC	Commercial Prescriptive & Custom	2015	0.019%	2034	0.075000%	2034	0.075000%	
83	NWS	Non-Residential	Large Commercial	Lodging	HVAC	Variable Speed Drives for HVAC	Commercial Prescriptive & Custom	2015	0.019%	2034	0.074913%	2034	0.074913%	
84	NWS	Non-Residential	Large Commercial	Lodging	HVAC	Variable Speed Drives for HVAC	Commercial Prescriptive & Custom	2015	0.016%	2034	0.063790%	2034	0.063790%	
85	NWS	Non-Residential	Large Commercial	Lodging	HVAC	Variable Speed Drives for HVAC	Commercial Prescriptive & Custom	2015	0.019%	2034	0.075000%	2034	0.075000%	
86	NWS	Non-Residential	Large Commercial	Lodging	HVAC	Variable Speed Drives for HVAC	Commercial Prescriptive & Custom	2015	0.019%	2034	0.075000%	2034	0.075000%	
87	NWS	Non-Residential	Large Commercial	General Large Commercial	HVAC	Variable Speed Drives for HVAC	Commercial Prescriptive & Custom	2015	0.019%	2034	0.075000%	2034	0.075000%	
88	NWS	Non-Residential	Large Commercial	General Large Commercial	HVAC	Variable Speed Drives for HVAC	Commercial Prescriptive & Custom	2015	0.016%	2034	0.063790%	2034	0.063790%	
89	NWS	Non-Residential	Large Commercial	General Large Commercial	HVAC	Variable Speed Drives for HVAC	Commercial Prescriptive & Custom	2015	0.019%	2034	0.075000%	2034	0.075000%	
90	NWS	Non-Residential	Large Commercial	General Large Commercial	HVAC	Variable Speed Drives for HVAC	Commercial Prescriptive & Custom	2015	0.019%	2034	0.075000%	2034	0.075000%	
92	NWS	Non-Residential	Small Commercial	All	HVAC	Dual Enthalpy Economizer	Commercial Prescriptive & Custom	2015	0.017%	2034	0.066568%	2034	0.066568%	
93	NWS	Non-Residential	Large Commercial	All	HVAC	Dual Enthalpy Economizer	Commercial Prescriptive & Custom	2015	0.017%	2034	0.066992%	2034	0.066992%	
95	NWS	Non-Residential	Small Commercial	All	HVAC	Demand Controlled Ventilation	Commercial Prescriptive & Custom	2015	0.017%	2034	0.069849%	2034	0.069849%	
96	NWS	Non-Residential	Large Commercial	All	HVAC	Demand Controlled Ventilation	Commercial Prescriptive & Custom	2015	0.016%	2034	0.063790%	2034	0.063790%	
98	WS	Non-Residential	Small Commercial	All	HVAC	Ground Source Heatpump	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
100	WS	Non-Residential	Small Commercial	All	HVAC	AC Tune-Up	Small Business Solutions	2015	0.500%	2034	2.000000%	2034	2.000000%	
102	NWS	Non-Residential	Small Commercial	All	HVAC	Electronically Commutated Motors for Refrigeration and HVAC Applications	Commercial Prescriptive & Custom	2015	0.019%	2034	0.075000%	2034	0.075000%	
103	NWS	Non-Residential	All	Hospital	Lighting	High Performance T8/T5 with Low-BF Ballast	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
104	NWS	Non-Residential	All	Hospital	Lighting	High Performance T8/T5 with Low-BF Ballast	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
105	NWS	Non-Residential	All	Hospital	Lighting	High Performance T8/T5 with Low-BF Ballast	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
106	NWS	Non-Residential	All	Hospital	Lighting	High Performance T8/T5 with Low-BF Ballast	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
107	NWS	Non-Residential	All	K12 Education	Lighting	High Performance T8/T5 with Low-BF Ballast	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
108	NWS	Non-Residential	All	K12 Education	Lighting	High Performance T8/T5 with Low-BF Ballast	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
109	NWS	Non-Residential	All	K12 Education	Lighting	High Performance T8/T5 with Low-BF Ballast	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
110	NWS	Non-Residential	All	K12 Education	Lighting	High Performance T8/T5 with Low-BF Ballast	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
111	NWS	Non-Residential	All	Education with Summer Sessions	Lighting	High Performance T8/T5 with Low-BF Ballast	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
112	NWS	Non-Residential	All	Education with Summer Sessions	Lighting	High Performance T8/T5 with Low-BF Ballast	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
113	NWS	Non-Residential	All	Education with Summer Sessions	Lighting	High Performance T8/T5 with Low-BF Ballast	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
114	NWS	Non-Residential	All	Education with Summer Sessions	Lighting	High Performance T8/T5 with Low-BF Ballast	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
115	NWS	Non-Residential	All	Lodging	Lighting	High Performance T8/T5 with Low-BF Ballast	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
116	NWS	Non-Residential	All	Lodging	Lighting	High Performance T8/T5 with Low-BF Ballast	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
117	NWS	Non-Residential	All	Lodging	Lighting	High Performance T8/T5 with Low-BF Ballast	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
118	NWS	Non-Residential	All	Lodging	Lighting	High Performance T8/T5 with Low-BF Ballast	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
119	NWS	Non-Residential	All	General Large Commercial	Lighting	High Performance T8/T5 with Low-BF Ballast	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
120	NWS	Non-Residential	All	General Large Commercial	Lighting	High Performance T8/T5 with Low-BF Ballast	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	

Commercial Measures

Measure ID	Weather Sensitive	MEASURE DESCRIPTION				Measure Name	PROGRAM	PARTICIPATION HIGH CASE					
		Sector	Sub-Sector	Building Type	End Use			Program Name	First Year of Participation (So Year)	First Year Participation Rate (So)	Year of Maximum Annual Participation (Smax)	Maximum Annual Participation Rate (Smax)	Final Year of Participation, Fo (-2034 if baseline shift)
121	NWS	Non-Residential	All	General Large Commercial	Lighting	High Performance T8/T5 with Low-BF Ballast	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
122	NWS	Non-Residential	All	General Large Commercial	Lighting	High Performance T8/T5 with Low-BF Ballast	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
123	NWS	Non-Residential	All	General Small Commercial	Lighting	High Performance T8/T5 with Low-BF Ballast	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
124	NWS	Non-Residential	All	General Small Commercial	Lighting	High Performance T8/T5 with Low-BF Ballast	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
125	NWS	Non-Residential	All	General Small Commercial	Lighting	High Performance T8/T5 with Low-BF Ballast	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
126	NWS	Non-Residential	All	General Small Commercial	Lighting	High Performance T8/T5 with Low-BF Ballast	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
127	NWS	Non-Residential	All	Hospital	Lighting	Reduced Wattage T8/T5 Lamps	Commercial Prescriptive & Custom	2015	0.667%	2034	3.999937%	2034	3.999937%
128	NWS	Non-Residential	All	K12 Education	Lighting	Reduced Wattage T8/T5 Lamps	Commercial Prescriptive & Custom	2015	0.595%	2034	3.567325%	2034	3.567325%
129	NWS	Non-Residential	All	Education with Summer Sessions	Lighting	Reduced Wattage T8/T5 Lamps	Commercial Prescriptive & Custom	2015	0.638%	2034	3.825633%	2034	3.825633%
130	NWS	Non-Residential	All	Lodging	Lighting	Reduced Wattage T8/T5 Lamps	Commercial Prescriptive & Custom	2015	0.667%	2034	3.999937%	2034	3.999937%
131	NWS	Non-Residential	All	General Large Commercial	Lighting	Reduced Wattage T8/T5 Lamps	Commercial Prescriptive & Custom	2015	0.644%	2034	3.865588%	2034	3.865588%
132	NWS	Non-Residential	All	General Small Commercial	Lighting	Reduced Wattage T8/T5 Lamps	Commercial Prescriptive & Custom	2015	0.659%	2034	3.955719%	2034	3.955719%
133	NWS	Non-Residential	All	Hospital	Lighting	Reduced Wattage T8/T5 Lamps	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
134	NWS	Non-Residential	All	K12 Education	Lighting	Reduced Wattage T8/T5 Lamps	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
135	NWS	Non-Residential	All	Education with Summer Sessions	Lighting	Reduced Wattage T8/T5 Lamps	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
136	NWS	Non-Residential	All	Lodging	Lighting	Reduced Wattage T8/T5 Lamps	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
137	NWS	Non-Residential	All	General Large Commercial	Lighting	Reduced Wattage T8/T5 Lamps	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
138	NWS	Non-Residential	All	General Small Commercial	Lighting	Reduced Wattage T8/T5 Lamps	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
139	NWS	Non-Residential	All	Hospital	Lighting	Linear Florescent Fixture Upgrade	Commercial Prescriptive & Custom	2015	1.063%	2034	4.252686%	2034	4.252686%
140	NWS	Non-Residential	All	K12 Education	Lighting	Linear Florescent Fixture Upgrade	Commercial Prescriptive & Custom	2015	1.063%	2034	4.252686%	2034	4.252686%
141	NWS	Non-Residential	All	Education with Summer Sessions	Lighting	Linear Florescent Fixture Upgrade	Commercial Prescriptive & Custom	2015	1.063%	2034	4.252686%	2034	4.252686%
142	NWS	Non-Residential	All	Lodging	Lighting	Linear Florescent Fixture Upgrade	Commercial Prescriptive & Custom	2015	1.063%	2034	4.252686%	2034	4.252686%
143	NWS	Non-Residential	All	General Large Commercial	Lighting	Linear Florescent Fixture Upgrade	Commercial Prescriptive & Custom	2015	1.063%	2034	4.252686%	2034	4.252686%
144	NWS	Non-Residential	All	General Small Commercial	Lighting	Linear Florescent Fixture Upgrade	Commercial Prescriptive & Custom	2015	1.063%	2034	4.252686%	2034	4.252686%
145	NWS	Non-Residential	All	Hospital	Lighting	Linear Florescent Fixture Upgrade	Commercial Prescriptive & Custom	2015	1.169%	2034	4.676732%	2034	4.676732%
146	NWS	Non-Residential	All	K12 Education	Lighting	Linear Florescent Fixture Upgrade	Commercial Prescriptive & Custom	2015	1.063%	2034	4.252686%	2034	4.252686%
147	NWS	Non-Residential	All	Education with Summer Sessions	Lighting	Linear Florescent Fixture Upgrade	Commercial Prescriptive & Custom	2015	1.063%	2034	4.252686%	2034	4.252686%
148	NWS	Non-Residential	All	Lodging	Lighting	Linear Florescent Fixture Upgrade	Commercial Prescriptive & Custom	2015	1.212%	2034	4.847998%	2034	4.847998%
149	NWS	Non-Residential	All	General Large Commercial	Lighting	Linear Florescent Fixture Upgrade	Commercial Prescriptive & Custom	2015	1.063%	2034	4.252686%	2034	4.252686%
150	NWS	Non-Residential	All	General Small Commercial	Lighting	Linear Florescent Fixture Upgrade	Commercial Prescriptive & Custom	2015	1.063%	2034	4.252686%	2034	4.252686%
151	NWS	Non-Residential	All	Hospital	Lighting	Linear Florescent Fixture Upgrade	Commercial Prescriptive & Custom	2015	1.063%	2034	4.252686%	2034	4.252686%
152	NWS	Non-Residential	All	K12 Education	Lighting	Linear Florescent Fixture Upgrade	Commercial Prescriptive & Custom	2015	1.063%	2034	4.252686%	2034	4.252686%
153	NWS	Non-Residential	All	Education with Summer Sessions	Lighting	Linear Florescent Fixture Upgrade	Commercial Prescriptive & Custom	2015	1.063%	2034	4.252686%	2034	4.252686%
154	NWS	Non-Residential	All	Lodging	Lighting	Linear Florescent Fixture Upgrade	Commercial Prescriptive & Custom	2015	1.063%	2034	4.252686%	2034	4.252686%
155	NWS	Non-Residential	All	General Large Commercial	Lighting	Linear Florescent Fixture Upgrade	Commercial Prescriptive & Custom	2015	1.063%	2034	4.252686%	2034	4.252686%
156	NWS	Non-Residential	All	General Small Commercial	Lighting	Linear Florescent Fixture Upgrade	Commercial Prescriptive & Custom	2015	1.063%	2034	4.252686%	2034	4.252686%
157	NWS	Non-Residential	All	Hospital	Lighting	Linear Florescent Fixture Upgrade	Commercial Prescriptive & Custom	2015	1.063%	2034	4.252686%	2034	4.252686%
158	NWS	Non-Residential	All	K12 Education	Lighting	Linear Florescent Fixture Upgrade	Commercial Prescriptive & Custom	2015	1.063%	2034	4.252686%	2034	4.252686%
159	NWS	Non-Residential	All	Education with Summer Sessions	Lighting	Linear Florescent Fixture Upgrade	Commercial Prescriptive & Custom	2015	1.063%	2034	4.252686%	2034	4.252686%
160	NWS	Non-Residential	All	Lodging	Lighting	Linear Florescent Fixture Upgrade	Commercial Prescriptive & Custom	2015	1.079%	2034	4.314205%	2034	4.314205%
161	NWS	Non-Residential	All	General Large Commercial	Lighting	Linear Florescent Fixture Upgrade	Commercial Prescriptive & Custom	2015	1.063%	2034	4.252686%	2034	4.252686%
162	NWS	Non-Residential	All	General Small Commercial	Lighting	Linear Florescent Fixture Upgrade	Commercial Prescriptive & Custom	2015	1.063%	2034	4.252686%	2034	4.252686%
163	NWS	Non-Residential	All	Hospital	Lighting	Commercial Standard CFL	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
164	NWS	Non-Residential	All	Hospital	Lighting	Commercial Standard CFL	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
165	NWS	Non-Residential	All	K12 Education	Lighting	Commercial Standard CFL	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
166	NWS	Non-Residential	All	K12 Education	Lighting	Commercial Standard CFL	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
167	NWS	Non-Residential	All	Education with Summer Sessions	Lighting	Commercial Standard CFL	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
168	NWS	Non-Residential	All	Education with Summer Sessions	Lighting	Commercial Standard CFL	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
169	NWS	Non-Residential	All	Lodging	Lighting	Commercial Standard CFL	Commercial Prescriptive & Custom	2015	0.750%	2034	3.000000%	2034	3.000000%
170	NWS	Non-Residential	All	Lodging	Lighting	Commercial Standard CFL	Commercial Prescriptive & Custom	2015	0.750%	2034	3.000000%	2034	3.000000%
171	NWS	Non-Residential	All	General Large Commercial	Lighting	Commercial Standard CFL	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
172	NWS	Non-Residential	All	General Large Commercial	Lighting	Commercial Standard CFL	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
173	NWS	Non-Residential	All	General Small Commercial	Lighting	Commercial Standard CFL	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
174	NWS	Non-Residential	All	General Small Commercial	Lighting	Commercial Standard CFL	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
175	NWS	Non-Residential	All	Hospital	Lighting	LED Bulbs	Commercial Prescriptive & Custom	2016	2.500%	2020	4.966536%	2020	4.966536%
176	NWS	Non-Residential	All	Hospital	Lighting	LED Bulbs	Commercial Prescriptive & Custom	2015	1.750%	2034	7.000000%	2034	7.000000%
177	NWS	Non-Residential	All	K12 Education	Lighting	LED Bulbs	Commercial Prescriptive & Custom	2016	2.500%	2020	4.966536%	2020	4.966536%
178	NWS	Non-Residential	All	K12 Education	Lighting	LED Bulbs	Commercial Prescriptive & Custom	2015	1.750%	2034	7.000000%	2034	7.000000%
179	NWS	Non-Residential	All	Education with Summer Sessions	Lighting	LED Bulbs	Commercial Prescriptive & Custom	2016	2.500%	2020	4.966536%	2020	4.966536%
180	NWS	Non-Residential	All	Education with Summer Sessions	Lighting	LED Bulbs	Commercial Prescriptive & Custom	2015	1.750%	2034	7.000000%	2034	7.000000%

Commercial Measures

Measure ID	Weather Sensitive	MEASURE DESCRIPTION				Measure Name	PROGRAM	PARTICIPATION HIGH CASE					
		Sector	Sub-Sector	Building Type	End Use			Program Name	First Year of Participation (So Year)	First Year Participation Rate (So)	Year of Maximum Annual Participation (Smax)	Maximum Annual Participation Rate (Smax)	Final Year of Participation, Fo (-2034 if baseline shift)
181	NWS	Non-Residential	All	Lodging	Lighting	LED Bulbs	Commercial Prescriptive & Custom	2016	2.500%	2020	4.966536%	2020	4.966536%
182	NWS	Non-Residential	All	Lodging	Lighting	LED Bulbs	Commercial Prescriptive & Custom	2015	1.750%	2034	7.000000%	2034	7.000000%
183	NWS	Non-Residential	All	General Large Commercial	Lighting	LED Bulbs	Commercial Prescriptive & Custom	2016	2.500%	2020	4.966536%	2020	4.966536%
184	NWS	Non-Residential	All	General Large Commercial	Lighting	LED Bulbs	Commercial Prescriptive & Custom	2015	1.750%	2034	7.000000%	2034	7.000000%
185	NWS	Non-Residential	All	General Small Commercial	Lighting	LED Bulbs	Commercial Prescriptive & Custom	2016	2.500%	2020	4.966536%	2020	4.966536%
186	NWS	Non-Residential	All	General Small Commercial	Lighting	LED Bulbs	Commercial Prescriptive & Custom	2015	1.750%	2034	7.000000%	2034	7.000000%
187	NWS	Non-Residential	Large Commercial	All	Lighting	Efficient High Bay Lighting	Commercial Prescriptive & Custom	2015	0.211%	2034	0.842032%	2034	0.842032%
188	NWS	Non-Residential	Small Commercial	All	Lighting	Efficient High Bay Lighting	Commercial Prescriptive & Custom	2015	0.211%	2034	0.842032%	2034	0.842032%
189	NWS	Non-Residential	Large Commercial	All	Lighting	Efficient High Bay Lighting	Commercial Prescriptive & Custom	2015	0.211%	2034	0.842032%	2034	0.842032%
190	NWS	Non-Residential	Small Commercial	All	Lighting	Efficient High Bay Lighting	Commercial Prescriptive & Custom	2015	0.211%	2034	0.842032%	2034	0.842032%
191	NWS	Non-Residential	Large Commercial	All	Lighting	Efficient High Bay Lighting	Commercial Prescriptive & Custom	2015	0.211%	2034	0.842032%	2034	0.842032%
192	NWS	Non-Residential	Small Commercial	All	Lighting	Efficient High Bay Lighting	Commercial Prescriptive & Custom	2015	0.211%	2034	0.842032%	2034	0.842032%
193	NWS	Non-Residential	Large Commercial	All	Lighting	Efficient High Bay Lighting	Commercial Prescriptive & Custom	2015	0.220%	2034	0.881427%	2034	0.881427%
194	NWS	Non-Residential	Small Commercial	All	Lighting	Efficient High Bay Lighting	Commercial Prescriptive & Custom	2015	0.231%	2034	0.922140%	2034	0.922140%
195	NWS	Non-Residential	Large Commercial	All	Lighting	Efficient High Bay Lighting	Commercial Prescriptive & Custom	2015	0.211%	2034	0.842032%	2034	0.842032%
196	NWS	Non-Residential	Small Commercial	All	Lighting	Efficient High Bay Lighting	Commercial Prescriptive & Custom	2015	0.211%	2034	0.842032%	2034	0.842032%
197	NWS	Non-Residential	Large Commercial	All	Lighting	Efficient High Bay Lighting	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
198	NWS	Non-Residential	Small Commercial	All	Lighting	Efficient High Bay Lighting	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
199	NWS	Non-Residential	Large Commercial	All	Lighting	Lighting Controls	Commercial Prescriptive & Custom	2015	0.692%	2034	2.766824%	2034	2.766824%
200	NWS	Non-Residential	Large Commercial	All	Lighting	Lighting Controls	Commercial Prescriptive & Custom	2015	0.638%	2034	2.551612%	2034	2.551612%
201	NWS	Non-Residential	Large Commercial	All	Lighting	Lighting Controls	Commercial Prescriptive & Custom	2015	0.638%	2034	2.551612%	2034	2.551612%
202	NWS	Non-Residential	Large Commercial	All	Lighting	Lighting Controls	Commercial Prescriptive & Custom	2015	0.692%	2034	2.766824%	2034	2.766824%
203	NWS	Non-Residential	Large Commercial	All	Lighting	Lighting Controls	Commercial Prescriptive & Custom	2015	0.742%	2034	2.966718%	2034	2.966718%
204	NWS	Non-Residential	Large Commercial	All	Lighting	Lighting Controls	Commercial Prescriptive & Custom	2015	0.720%	2034	2.879339%	2034	2.879339%
205	NWS	Non-Residential	Large Commercial	All	Lighting	Lighting Controls	Commercial Prescriptive & Custom	2015	0.720%	2034	2.879339%	2034	2.879339%
206	NWS	Non-Residential	Small Commercial	All	Lighting	Lighting Controls	Commercial Prescriptive & Custom	2015	0.737%	2034	2.949098%	2034	2.949098%
207	NWS	Non-Residential	Small Commercial	All	Lighting	Lighting Controls	Commercial Prescriptive & Custom	2015	0.662%	2034	2.648216%	2034	2.648216%
208	NWS	Non-Residential	Small Commercial	All	Lighting	Lighting Controls	Commercial Prescriptive & Custom	2015	0.638%	2034	2.551612%	2034	2.551612%
209	NWS	Non-Residential	Small Commercial	All	Lighting	Lighting Controls	Commercial Prescriptive & Custom	2015	0.737%	2034	2.949098%	2034	2.949098%
210	NWS	Non-Residential	Small Commercial	All	Lighting	Lighting Controls	Commercial Prescriptive & Custom	2015	0.750%	2034	3.000000%	2034	3.000000%
211	NWS	Non-Residential	Small Commercial	All	Lighting	Lighting Controls	Commercial Prescriptive & Custom	2015	0.750%	2034	3.000000%	2034	3.000000%
212	NWS	Non-Residential	Small Commercial	All	Lighting	Lighting Controls	Commercial Prescriptive & Custom	2015	0.750%	2034	3.000000%	2034	3.000000%
213	NWS	Non-Residential	Small Commercial	All	Lighting	LED Exit Signs	Commercial Prescriptive & Custom	2015	0.638%	2034	2.551612%	2034	2.551612%
214	NWS	Non-Residential	All	Hospital	Refrigeration	Electronically Commutated Motors (ECM) for Walk-in and Reach-in Coolers/Freezers	Commercial Prescriptive & Custom	2015	0.750%	2034	3.000000%	2034	3.000000%
215	NWS	Non-Residential	All	K12 Education	Refrigeration	Electronically Commutated Motors (ECM) for Walk-in and Reach-in Coolers/Freezers	Commercial Prescriptive & Custom	2015	0.750%	2034	3.000000%	2034	3.000000%
216	NWS	Non-Residential	All	Education with Summer Sessions	Refrigeration	Electronically Commutated Motors (ECM) for Walk-in and Reach-in Coolers/Freezers	Commercial Prescriptive & Custom	2015	0.750%	2034	3.000000%	2034	3.000000%
217	NWS	Non-Residential	All	Lodging	Refrigeration	Electronically Commutated Motors (ECM) for Walk-in and Reach-in Coolers/Freezers	Commercial Prescriptive & Custom	2015	0.750%	2034	3.000000%	2034	3.000000%
218	NWS	Non-Residential	All	Food Sales	Refrigeration	Electronically Commutated Motors (ECM) for Walk-in and Reach-in Coolers/Freezers	Commercial Prescriptive & Custom	2015	0.750%	2034	3.000000%	2034	3.000000%
219	NWS	Non-Residential	All	Restaurant	Refrigeration	Electronically Commutated Motors (ECM) for Walk-in and Reach-in Coolers/Freezers	Commercial Prescriptive & Custom	2015	0.750%	2034	3.000000%	2034	3.000000%
220	NWS	Non-Residential	All	Hospital	Refrigeration	ENERGY STAR Solid Door Refrigerator	Commercial Prescriptive & Custom	2015	0.750%	2034	3.000000%	2034	3.000000%
221	NWS	Non-Residential	All	Hospital	Refrigeration	ENERGY STAR Solid Door Refrigerator	Commercial Prescriptive & Custom	2015	0.750%	2034	3.000000%	2034	3.000000%
222	NWS	Non-Residential	All	Hospital	Refrigeration	ENERGY STAR Solid Door Refrigerator	Commercial Prescriptive & Custom	2015	0.750%	2034	3.000000%	2034	3.000000%
223	NWS	Non-Residential	All	Hospital	Refrigeration	ENERGY STAR Solid Door Refrigerator	Commercial Prescriptive & Custom	2015	0.750%	2034	3.000000%	2034	3.000000%
224	NWS	Non-Residential	All	Hospital	Refrigeration	ENERGY STAR Solid Door Freezer	Commercial Prescriptive & Custom	2015	0.750%	2034	3.000000%	2034	3.000000%
225	NWS	Non-Residential	All	Hospital	Refrigeration	ENERGY STAR Solid Door Freezer	Commercial Prescriptive & Custom	2015	0.750%	2034	3.000000%	2034	3.000000%
226	NWS	Non-Residential	All	Hospital	Refrigeration	ENERGY STAR Solid Door Freezer	Commercial Prescriptive & Custom	2015	0.750%	2034	3.000000%	2034	3.000000%
227	NWS	Non-Residential	All	Hospital	Refrigeration	ENERGY STAR Solid Door Freezer	Commercial Prescriptive & Custom	2015	0.750%	2034	3.000000%	2034	3.000000%
228	NWS	Non-Residential	All	K12 Education	Refrigeration	ENERGY STAR Solid Door Refrigerator	Commercial Prescriptive & Custom	2015	0.750%	2034	3.000000%	2034	3.000000%
229	NWS	Non-Residential	All	K12 Education	Refrigeration	ENERGY STAR Solid Door Refrigerator	Commercial Prescriptive & Custom	2015	0.750%	2034	3.000000%	2034	3.000000%
230	NWS	Non-Residential	All	K12 Education	Refrigeration	ENERGY STAR Solid Door Refrigerator	Commercial Prescriptive & Custom	2015	0.750%	2034	3.000000%	2034	3.000000%
231	NWS	Non-Residential	All	K12 Education	Refrigeration	ENERGY STAR Solid Door Refrigerator	Commercial Prescriptive & Custom	2015	0.750%	2034	3.000000%	2034	3.000000%
232	NWS	Non-Residential	All	K12 Education	Refrigeration	ENERGY STAR Solid Door Freezer	Commercial Prescriptive & Custom	2015	0.750%	2034	3.000000%	2034	3.000000%
233	NWS	Non-Residential	All	K12 Education	Refrigeration	ENERGY STAR Solid Door Freezer	Commercial Prescriptive & Custom	2015	0.750%	2034	3.000000%	2034	3.000000%
234	NWS	Non-Residential	All	K12 Education	Refrigeration	ENERGY STAR Solid Door Freezer	Commercial Prescriptive & Custom	2015	0.750%	2034	3.000000%	2034	3.000000%
235	NWS	Non-Residential	All	K12 Education	Refrigeration	ENERGY STAR Solid Door Freezer	Commercial Prescriptive & Custom	2015	0.750%	2034	3.000000%	2034	3.000000%
236	NWS	Non-Residential	All	Education with Summer Sessions	Refrigeration	ENERGY STAR Solid Door Refrigerator	Commercial Prescriptive & Custom	2015	0.750%	2034	3.000000%	2034	3.000000%
237	NWS	Non-Residential	All	Education with Summer Sessions	Refrigeration	ENERGY STAR Solid Door Refrigerator	Commercial Prescriptive & Custom	2015	0.750%	2034	3.000000%	2034	3.000000%
238	NWS	Non-Residential	All	Education with Summer Sessions	Refrigeration	ENERGY STAR Solid Door Refrigerator	Commercial Prescriptive & Custom	2015	0.750%	2034	3.000000%	2034	3.000000%
239	NWS	Non-Residential	All	Education with Summer Sessions	Refrigeration	ENERGY STAR Solid Door Refrigerator	Commercial Prescriptive & Custom	2015	0.750%	2034	3.000000%	2034	3.000000%
240	NWS	Non-Residential	All	Education with Summer Sessions	Refrigeration	ENERGY STAR Solid Door Freezer	Commercial Prescriptive & Custom	2015	0.750%	2034	3.000000%	2034	3.000000%

Commercial Measures

Measure ID	Weather Sensitive	Sector	Sub-Sector	MEASURE DESCRIPTION			Measure Name	PROGRAM	PARTICIPATION HIGH CASE					
				Building Type	End Use	Program Name			First Year of Participation (So Year)	First Year Participation Rate (So)	Year of Maximum Annual Participation (Smax)	Maximum Annual Participation Rate (Smax)	Final Year of Participation, Fo (<2034 if baseline shift)	Final Year Participation Rate (Fo)
421	NWS	Non-Residential	All	K12 Education	Food Services Equipment	ENERGY STAR Fryer	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
422	NWS	Non-Residential	All	Education with Summer Sessions	Food Services Equipment	ENERGY STAR Fryer	Commercial Prescriptive & Custom	2015	0.374%	2034	1.497137%	2034	1.497137%	
423	NWS	Non-Residential	All	Education with Summer Sessions	Food Services Equipment	ENERGY STAR Fryer	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
424	NWS	Non-Residential	All	Lodging	Food Services Equipment	ENERGY STAR Fryer	Commercial Prescriptive & Custom	2015	0.374%	2034	1.497137%	2034	1.497137%	
425	NWS	Non-Residential	All	Lodging	Food Services Equipment	ENERGY STAR Fryer	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
426	NWS	Non-Residential	All	Restaurant	Food Services Equipment	ENERGY STAR Fryer	Commercial Prescriptive & Custom	2015	0.374%	2034	1.497137%	2034	1.497137%	
427	NWS	Non-Residential	All	Restaurant	Food Services Equipment	ENERGY STAR Fryer	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
428	NWS	Non-Residential	All	Hospital	Food Services Equipment	ENERGY STAR Griddle	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
429	NWS	Non-Residential	All	K12 Education	Food Services Equipment	ENERGY STAR Griddle	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
430	NWS	Non-Residential	All	Education with Summer Sessions	Food Services Equipment	ENERGY STAR Griddle	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
431	NWS	Non-Residential	All	Lodging	Food Services Equipment	ENERGY STAR Griddle	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
432	NWS	Non-Residential	All	Restaurant	Food Services Equipment	ENERGY STAR Griddle	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
433	NWS	Non-Residential	All	Hospital	Food Services Equipment	ENERGY STAR Hot Food Holding Cabinets	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
434	NWS	Non-Residential	All	K12 Education	Food Services Equipment	ENERGY STAR Hot Food Holding Cabinets	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
435	NWS	Non-Residential	All	Education with Summer Sessions	Food Services Equipment	ENERGY STAR Hot Food Holding Cabinets	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
436	NWS	Non-Residential	All	Lodging	Food Services Equipment	ENERGY STAR Hot Food Holding Cabinets	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
437	NWS	Non-Residential	All	Restaurant	Food Services Equipment	ENERGY STAR Hot Food Holding Cabinets	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
438	NWS	Non-Residential	All	Hospital	Food Services Equipment	ENERGY STAR Electric Convection Ovens	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
439	NWS	Non-Residential	All	Hospital	Food Services Equipment	ENERGY STAR Electric Convection Ovens	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
440	NWS	Non-Residential	All	K12 Education	Food Services Equipment	ENERGY STAR Electric Convection Ovens	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
441	NWS	Non-Residential	All	K12 Education	Food Services Equipment	ENERGY STAR Electric Convection Ovens	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
442	NWS	Non-Residential	All	Education with Summer Sessions	Food Services Equipment	ENERGY STAR Electric Convection Ovens	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
443	NWS	Non-Residential	All	Education with Summer Sessions	Food Services Equipment	ENERGY STAR Electric Convection Ovens	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
444	NWS	Non-Residential	All	Lodging	Food Services Equipment	ENERGY STAR Electric Convection Ovens	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
445	NWS	Non-Residential	All	Lodging	Food Services Equipment	ENERGY STAR Electric Convection Ovens	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
446	NWS	Non-Residential	All	Restaurant	Food Services Equipment	ENERGY STAR Electric Convection Ovens	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
447	NWS	Non-Residential	All	Restaurant	Food Services Equipment	ENERGY STAR Electric Convection Ovens	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
448	NWS	Non-Residential	All	K12 Education	Food Services Equipment	ENERGY STAR Steam Cooker	Commercial Prescriptive & Custom	2015	0.319%	2034	1.275806%	2034	1.275806%	
449	NWS	Non-Residential	All	Education with Summer Sessions	Food Services Equipment	ENERGY STAR Steam Cooker	Commercial Prescriptive & Custom	2015	0.319%	2034	1.275806%	2034	1.275806%	
450	NWS	Non-Residential	All	Lodging	Food Services Equipment	ENERGY STAR Steam Cooker	Commercial Prescriptive & Custom	2015	0.319%	2034	1.275806%	2034	1.275806%	
451	NWS	Non-Residential	All	Restaurant	Food Services Equipment	ENERGY STAR Steam Cooker	Commercial Prescriptive & Custom	2015	0.319%	2034	1.275806%	2034	1.275806%	
452	NWS	Non-Residential	All	Hospital	Food Services Equipment	EPA WaterSense Pre-Rinse Spray Valve	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
453	NWS	Non-Residential	All	Education with Summer Sessions	Food Services Equipment	EPA WaterSense Pre-Rinse Spray Valve	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
454	NWS	Non-Residential	All	Lodging	Food Services Equipment	EPA WaterSense Pre-Rinse Spray Valve	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
455	NWS	Non-Residential	All	Restaurant	Food Services Equipment	EPA WaterSense Pre-Rinse Spray Valve	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
456	NWS	Non-Residential	All	Hospital	Service Hot Water	Electric Storage Water Heater	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
457	NWS	Non-Residential	All	Hospital	Service Hot Water	Electric Storage Water Heater	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
458	NWS	Non-Residential	All	K12 Education	Service Hot Water	Electric Storage Water Heater	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
459	NWS	Non-Residential	All	K12 Education	Service Hot Water	Electric Storage Water Heater	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
460	NWS	Non-Residential	All	K12 Education	Service Hot Water	Electric Storage Water Heater	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
461	NWS	Non-Residential	All	Education with Summer Sessions	Service Hot Water	Electric Storage Water Heater	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
462	NWS	Non-Residential	All	Education with Summer Sessions	Service Hot Water	Electric Storage Water Heater	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
463	NWS	Non-Residential	All	Education with Summer Sessions	Service Hot Water	Electric Storage Water Heater	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
464	NWS	Non-Residential	All	Lodging	Service Hot Water	Electric Storage Water Heater	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
465	NWS	Non-Residential	All	Lodging	Service Hot Water	Electric Storage Water Heater	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
466	NWS	Non-Residential	All	Lodging	Service Hot Water	Electric Storage Water Heater	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
467	NWS	Non-Residential	All	Restaurant	Service Hot Water	Electric Storage Water Heater	Commercial Prescriptive & Custom	2015	0.638%	2034	2.551612%	2034	2.551612%	
468	NWS	Non-Residential	All	Restaurant	Service Hot Water	Electric Storage Water Heater	Commercial Prescriptive & Custom	2015	0.708%	2034	2.830914%	2034	2.830914%	
469	NWS	Non-Residential	All	Restaurant	Service Hot Water	Electric Storage Water Heater	Commercial Prescriptive & Custom	2015	0.643%	2034	2.570979%	2034	2.570979%	
470	NWS	Non-Residential	All	Hospital	Service Hot Water	Heat Pump Storage Water Heater	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
471	NWS	Non-Residential	All	K12 Education	Service Hot Water	Heat Pump Storage Water Heater	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
472	NWS	Non-Residential	All	Education with Summer Sessions	Service Hot Water	Heat Pump Storage Water Heater	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
473	NWS	Non-Residential	All	Lodging	Service Hot Water	Heat Pump Storage Water Heater	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
474	NWS	Non-Residential	All	Restaurant	Service Hot Water	Heat Pump Storage Water Heater	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
475	NWS	Non-Residential	All	Hospital	Service Hot Water	Low Flow Faucet Aerators - Electric DHW fuel	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
476	NWS	Non-Residential	All	K12 Education	Service Hot Water	Low Flow Faucet Aerators - Electric DHW fuel	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
477	NWS	Non-Residential	All	Education with Summer Sessions	Service Hot Water	Low Flow Faucet Aerators - Electric DHW fuel	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
478	NWS	Non-Residential	All	Lodging	Service Hot Water	Low Flow Faucet Aerators - Electric DHW fuel	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
479	NWS	Non-Residential	All	Restaurant	Service Hot Water	Low Flow Faucet Aerators - Electric DHW fuel	Commercial Prescriptive & Custom	2015	0.750%	2034	3.000000%	2034	3.000000%	

Commercial Measures

Measure ID	Weather Sensitive	MEASURE DESCRIPTION					PROGRAM	PARTICIPATION HIGH CASE					
		Sector	Sub-Sector	Building Type	End Use	Measure Name		Program Name	First Year of Participation (So Year)	First Year Participation Rate (So)	Year of Maximum Annual Participation (Smax)	Maximum Annual Participation Rate (Smax)	Final Year of Participation, Fo (<2034 if baseline shift)
481	NWS	Non-Residential	Small Commercial	All	Misc	Small Business Program Audit & Direct Install	Small Business Solutions	2016	0.000%	2015	0.000000%	2015	0.000000%
482	NWS	Non-Residential	Small Commercial	All	Lighting	Small Business Program Audit & Direct Install	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
483	NWS	Non-Residential	Small Commercial	All	Lighting	Small Business Program Audit & Direct Install	Small Business Solutions	2015	0.500%	2034	2.000000%	2034	2.000000%
484	NWS	Non-Residential	Small Commercial	All	Service Hot Water	Small Business Program Audit & Direct Install	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
485	NWS	Non-Residential	Small Commercial	All	Lighting	Small Business Program Lighting Upgrade Package	Small Business Solutions	2015	0.500%	2034	2.000000%	2034	2.000000%
486	NWS	Non-Residential	Small Commercial	All	Refrigeration	Small Business Program Refrigeration Upgrade Package	Small Business Solutions	2015	0.500%	2034	2.000000%	2034	2.000000%
488	NWS	Non-Residential	All	Data Center	HVAC	Air Flow Management	Data Center	2015	7.143%	2015	7.142857%	2034	7.142857%
489	NWS	Non-Residential	All	Data Center	HVAC	Air Flow Management	Data Center	2015	7.143%	2015	7.142857%	2034	7.142857%
490	NWS	Non-Residential	All	Data Center	HVAC	Air Flow Management	Data Center	2015	7.143%	2015	7.142857%	2034	7.142857%
491	NWS	Non-Residential	All	Data Center	HVAC	Air Flow Management	Data Center	2015	7.143%	2015	7.142857%	2034	7.142857%
492	NWS	Non-Residential	All	Data Center	Miscellaneous	Load Distribution	Data Center	2015	7.143%	2015	7.142857%	2034	7.142857%
493	NWS	Non-Residential	All	Data Center	Miscellaneous	Load Distribution	Data Center	2015	7.143%	2015	7.142857%	2034	7.142857%
494	NWS	Non-Residential	All	Data Center	Miscellaneous	Load Distribution	Data Center	2015	7.143%	2015	7.142857%	2034	7.142857%
495	NWS	Non-Residential	All	Data Center	Miscellaneous	Load Distribution	Data Center	2015	7.143%	2015	7.142857%	2034	7.142857%
496	NWS	Non-Residential	All	Data Center	HVAC	Waterside Economizer	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
497	NWS	Non-Residential	All	Data Center	HVAC	Waterside Economizer	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
498	NWS	Non-Residential	All	Data Center	HVAC	Air Flow Management	Data Center	2015	7.143%	2015	7.142857%	2034	7.142857%
499	NWS	Non-Residential	All	Data Center	HVAC	Air Flow Management	Data Center	2015	7.143%	2015	7.142857%	2034	7.142857%
500	NWS	Non-Residential	All	Data Center	HVAC	Air Flow Management	Data Center	2015	7.143%	2015	7.142857%	2034	7.142857%
501	NWS	Non-Residential	All	Data Center	HVAC	Air Flow Management	Data Center	2015	7.143%	2015	7.142857%	2034	7.142857%
502	NWS	Non-Residential	All	Data Center	Miscellaneous	Load Distribution	Data Center	2015	7.143%	2015	7.142857%	2034	7.142857%
503	NWS	Non-Residential	All	Data Center	Miscellaneous	Load Distribution	Data Center	2015	7.143%	2015	7.142857%	2034	7.142857%
504	NWS	Non-Residential	All	Data Center	Miscellaneous	Load Distribution	Data Center	2015	7.143%	2015	7.142857%	2034	7.142857%
505	NWS	Non-Residential	All	Data Center	Miscellaneous	Load Distribution	Data Center	2015	7.143%	2015	7.142857%	2034	7.142857%
506	NWS	Non-Residential	All	Data Center	HVAC	Waterside Economizer	Data Center	2015	7.143%	2015	7.142857%	2034	7.142857%
507	NWS	Non-Residential	All	Data Center	HVAC	Waterside Economizer	Data Center	2015	7.143%	2015	7.142857%	2034	7.142857%
509	WS	Non-Residential	Large Commercial	All	Misc	Commercial New Construction	Commercial New Construction	2016	25.000%	2017	75.000000%	2017	75.000000%
510	WS	Non-Residential	Large Commercial	All	Misc	Commercial New Construction	Commercial New Construction	2015	0.000%	2018	85.000000%	2015	0.000000%
511	WS	Non-Residential	Small Commercial	All	Misc	Commercial New Construction	Commercial New Construction	2016	25.000%	2017	75.000000%	2017	75.000000%
512	WS	Non-Residential	Small Commercial	All	Misc	Commercial New Construction	Commercial New Construction	2015	0.000%	2018	85.000000%	2015	0.000000%
514	WS	Non-Residential	Large Commercial	All	Misc	Retrocommissioning	RetroCommissioning	2015	1.500%	2018	7.500000%	2034	3.426096%
515	WS	Non-Residential	Large Commercial	All	Misc	Retrocommissioning	RetroCommissioning	2015	1.500%	2018	7.500000%	2034	3.426096%
517	NWS	Non-Residential	All	All	Misc	Interruptible Rate	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
518	NWS	Non-Residential	All	All	Misc	Enabled Dynamic Pricing (Non-Res)	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
519	NWS	Non-Residential	All	All	Misc	Non-Enabled Dynamic Pricing (Non-Res)	Non-Residential Dynamic Pricing	2015	1.243%	2034	1.449024%	2034	1.449024%
521	WS	Non-Residential	Large Commercial	K12 Education	HVAC	Boiler Cut-Out Control	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
522	WS	Non-Residential	Large Commercial	Lodging	HVAC	Boiler Cut-Out Control	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
523	WS	Non-Residential	Large Commercial	Education with Summer Sessions	HVAC	Boiler Cut-Out Control	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
524	WS	Non-Residential	Large Commercial	Hospital	HVAC	Boiler Cut-Out Control	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
525	WS	Non-Residential	Large Commercial	General Large Commercial	HVAC	Boiler Cut-Out Control	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
526	WS	Non-Residential	Large Commercial	K12 Education	HVAC	Boiler or Furnace Vent Damper	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
527	WS	Non-Residential	Large Commercial	Lodging	HVAC	Boiler or Furnace Vent Damper	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
528	WS	Non-Residential	Large Commercial	Education with Summer Sessions	HVAC	Boiler or Furnace Vent Damper	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
529	WS	Non-Residential	Large Commercial	Hospital	HVAC	Boiler or Furnace Vent Damper	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
530	WS	Non-Residential	Large Commercial	General Large Commercial	HVAC	Boiler or Furnace Vent Damper	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
531	WS	Non-Residential	Large Commercial	K12 Education	HVAC	Boiler Reset Control	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
532	WS	Non-Residential	Large Commercial	Lodging	HVAC	Boiler Reset Control	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
533	WS	Non-Residential	Large Commercial	Education with Summer Sessions	HVAC	Boiler Reset Control	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
534	WS	Non-Residential	Large Commercial	Hospital	HVAC	Boiler Reset Control	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
535	WS	Non-Residential	Large Commercial	General Large Commercial	HVAC	Boiler Reset Control	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
536	WS	Non-Residential	Large Commercial	K12 Education	HVAC	Boiler Tune-Up	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
537	WS	Non-Residential	Large Commercial	Lodging	HVAC	Boiler Tune-Up	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
538	WS	Non-Residential	Large Commercial	Education with Summer Sessions	HVAC	Boiler Tune-Up	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
539	WS	Non-Residential	Large Commercial	Hospital	HVAC	Boiler Tune-Up	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
540	WS	Non-Residential	Large Commercial	General Large Commercial	HVAC	Boiler Tune-Up	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A

Commercial Measures

Measure ID	Weather Sensitive	Sector	Sub-Sector	MEASURE DESCRIPTION			PROGRAM	PARTICIPATION HIGH CASE					
				Building Type	End Use	Measure Name		Program Name	First Year of Participation (So Year)	First Year Participation Rate (So)	Year of Maximum Annual Participation (Smax)	Maximum Annual Participation Rate (Smax)	Final Year of Participation, Fo (-2034 if baseline shift)
541	WS	Non-Residential	Large Commercial	K12 Education	HVAC	Burner Replacement for Commercial Boilers	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
542	WS	Non-Residential	Large Commercial	Lodging	HVAC	Burner Replacement for Commercial Boilers	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
543	WS	Non-Residential	Large Commercial	Education with Summer Sessions	HVAC	Burner Replacement for Commercial Boilers	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
544	WS	Non-Residential	Large Commercial	Hospital	HVAC	Burner Replacement for Commercial Boilers	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
545	WS	Non-Residential	Large Commercial	General Large Commercial	HVAC	Burner Replacement for Commercial Boilers	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
546	WS	Non-Residential	Large Commercial	K12 Education	HVAC	Efficient Commercial Boilers	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
547	WS	Non-Residential	Large Commercial	Lodging	HVAC	Efficient Commercial Boilers	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
548	WS	Non-Residential	Large Commercial	Education with Summer Sessions	HVAC	Efficient Commercial Boilers	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
549	WS	Non-Residential	Large Commercial	Hospital	HVAC	Efficient Commercial Boilers	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
550	WS	Non-Residential	Large Commercial	General Large Commercial	HVAC	Efficient Commercial Boilers	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
551	NWS	Non-Residential	Small Commercial	All	HVAC	Direct Vent Heaters (Small Commercial)	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
552	WS	Non-Residential	Small Commercial	All	HVAC	Gas Furnace (Small Commercial)	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
553	WS	Non-Residential	Small Commercial	All	Water Heating	Efficient storage gas water heater	Commercial Prescriptive & Custom	2015	0.638%	2034	2.551612%	2034	2.551612%
554	WS	Non-Residential	Small Commercial	All	Water Heating	Efficient instantaneous gas water heater	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
555	NWS	Non-Residential	Small Commercial	All	Water Heating	Faucet Aerator	Small Business Solutions	2015	0.500%	2034	2.000000%	2034	2.000000%
556	NWS	Non-Residential	Large Commercial	All	Water Heating	Faucet Aerator	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
557	NWS	Non-Residential	Small Commercial	All	Water Heating	Gas WH pipe insulation (Small Commercial)	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A

Commercial Measures

Measure ID	Weather Sensitive	MEASURE DESCRIPTION					Measure Name	PROGRAM	PARTICIPATION REFERENCE CASE					
		Sector	Sub-Sector	Building Type	End Use	Program Name			First Year of Participation (So Year)	First Year Participation Rate (So)	Year of Maximum Annual Participation (Smax)	Maximum Annual Participation Rate (Smax)	Final Year of Participation, Fo (<2034 if baseline shift)	Final Year Participation Rate (Fo)
1	WS	Non-Residential	Small Commercial	All	HVAC	Unitary and Split System AC/HP Equipment	Commercial Prescriptive & Custom	2016	4.625%	2015	4.625413%	2015	4.625413%	
2	WS	Non-Residential	Small Commercial	All	HVAC	Unitary and Split System AC/HP Equipment	Commercial Prescriptive & Custom	2016	3.547%	2015	3.546919%	2015	3.546919%	
3	WS	Non-Residential	Small Commercial	All	HVAC	Unitary and Split System AC/HP Equipment	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
4	WS	Non-Residential	Small Commercial	All	HVAC	Unitary and Split System AC/HP Equipment	Commercial Prescriptive & Custom	2016	5.643%	2015	5.643367%	2015	5.643367%	
5	WS	Non-Residential	Small Commercial	All	HVAC	Unitary and Split System AC/HP Equipment	Commercial Prescriptive & Custom	2016	0.480%	2015	0.479721%	2015	0.479721%	
6	WS	Non-Residential	Small Commercial	All	HVAC	Unitary and Split System AC/HP Equipment	Commercial Prescriptive & Custom	2016	2.921%	2015	2.921140%	2015	2.921140%	
7	WS	Non-Residential	Small Commercial	All	HVAC	Unitary and Split System AC/HP Equipment	Commercial Prescriptive & Custom	2016	2.169%	2015	2.169090%	2015	2.169090%	
8	WS	Non-Residential	Small Commercial	All	HVAC	Unitary and Split System AC/HP Equipment	Commercial Prescriptive & Custom	2016	5.977%	2015	5.977213%	2015	5.977213%	
9	WS	Non-Residential	Small Commercial	All	HVAC	Unitary and Split System AC/HP Equipment	Commercial Prescriptive & Custom	2016	1.509%	2015	1.508974%	2015	1.508974%	
10	WS	Non-Residential	Small Commercial	All	HVAC	Unitary and Split System AC/HP Equipment	Commercial Prescriptive & Custom	2016	5.643%	2015	5.643367%	2015	5.643367%	
11	WS	Non-Residential	Small Commercial	All	HVAC	Unitary and Split System AC/HP Equipment	Commercial Prescriptive & Custom	2016	4.573%	2015	4.573140%	2015	4.573140%	
12	WS	Non-Residential	Small Commercial	All	HVAC	Unitary and Split System AC/HP Equipment	Commercial Prescriptive & Custom	2016	5.963%	2015	5.962569%	2015	5.962569%	
13	WS	Non-Residential	Large Commercial	K12 Education	HVAC	Unitary and Split System AC/HP Equipment	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
14	WS	Non-Residential	Large Commercial	Education with Summer Sessions	HVAC	Unitary and Split System AC/HP Equipment	Commercial Prescriptive & Custom	2016	3.984%	2015	3.983998%	2015	3.983998%	
15	WS	Non-Residential	Large Commercial	Lodging	HVAC	Unitary and Split System AC/HP Equipment	Commercial Prescriptive & Custom	2016	6.928%	2015	6.927829%	2015	6.927829%	
16	WS	Non-Residential	Large Commercial	General Large Commercial	HVAC	Unitary and Split System AC/HP Equipment	Commercial Prescriptive & Custom	2016	4.138%	2015	4.138123%	2015	4.138123%	
17	WS	Non-Residential	Large Commercial	K12 Education	HVAC	Unitary and Split System AC/HP Equipment	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
18	WS	Non-Residential	Large Commercial	Education with Summer Sessions	HVAC	Unitary and Split System AC/HP Equipment	Commercial Prescriptive & Custom	2016	3.971%	2015	3.971356%	2015	3.971356%	
19	WS	Non-Residential	Large Commercial	Lodging	HVAC	Unitary and Split System AC/HP Equipment	Commercial Prescriptive & Custom	2016	6.914%	2015	6.913632%	2015	6.913632%	
20	WS	Non-Residential	Large Commercial	General Large Commercial	HVAC	Unitary and Split System AC/HP Equipment	Commercial Prescriptive & Custom	2016	4.122%	2015	4.122229%	2015	4.122229%	
21	WS	Non-Residential	Large Commercial	K12 Education	HVAC	Unitary and Split System AC/HP Equipment	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
22	WS	Non-Residential	Large Commercial	Education with Summer Sessions	HVAC	Unitary and Split System AC/HP Equipment	Commercial Prescriptive & Custom	2016	3.329%	2015	3.328692%	2015	3.328692%	
23	WS	Non-Residential	Large Commercial	Lodging	HVAC	Unitary and Split System AC/HP Equipment	Commercial Prescriptive & Custom	2016	6.177%	2015	6.176551%	2015	6.176551%	
24	WS	Non-Residential	Large Commercial	General Large Commercial	HVAC	Unitary and Split System AC/HP Equipment	Commercial Prescriptive & Custom	2016	3.469%	2015	3.469098%	2015	3.469098%	
26	WS	Non-Residential	Small Commercial	All	HVAC	Unitary and Split System AC/HP Equipment	Commercial Prescriptive & Custom	2015	0.000%	2034	13.134604%	2015	0.000000%	
27	WS	Non-Residential	Small Commercial	All	HVAC	Unitary and Split System AC/HP Equipment	Commercial Prescriptive & Custom	2015	0.000%	2034	14.748094%	2015	0.000000%	
28	WS	Non-Residential	Small Commercial	All	HVAC	Unitary and Split System AC/HP Equipment	Commercial Prescriptive & Custom	2015	0.000%	2034	13.134604%	2015	0.000000%	
29	WS	Non-Residential	Small Commercial	All	HVAC	Unitary and Split System AC/HP Equipment	Commercial Prescriptive & Custom	2015	0.000%	2034	14.748094%	2015	0.000000%	
30	WS	Non-Residential	Small Commercial	All	HVAC	Unitary and Split System AC/HP Equipment	Commercial Prescriptive & Custom	2015	0.000%	2034	10.666841%	2015	0.000000%	
31	WS	Non-Residential	Small Commercial	All	HVAC	Unitary and Split System AC/HP Equipment	Commercial Prescriptive & Custom	2015	0.000%	2034	10.827556%	2015	0.000000%	
32	WS	Non-Residential	Large Commercial	K12 Education	HVAC	Unitary and Split System AC/HP Equipment	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
33	WS	Non-Residential	Large Commercial	Education with Summer Sessions	HVAC	Unitary and Split System AC/HP Equipment	Commercial Prescriptive & Custom	2015	0.000%	2034	4.993458%	2015	0.000000%	
34	WS	Non-Residential	Large Commercial	Lodging	HVAC	Unitary and Split System AC/HP Equipment	Commercial Prescriptive & Custom	2015	0.000%	2034	14.356103%	2015	0.000000%	
35	WS	Non-Residential	Large Commercial	General Large Commercial	HVAC	Unitary and Split System AC/HP Equipment	Commercial Prescriptive & Custom	2015	0.000%	2034	5.364438%	2015	0.000000%	
36	WS	Non-Residential	Large Commercial	K12 Education	HVAC	Unitary and Split System AC/HP Equipment	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
37	WS	Non-Residential	Large Commercial	Education with Summer Sessions	HVAC	Unitary and Split System AC/HP Equipment	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
38	WS	Non-Residential	Large Commercial	Lodging	HVAC	Unitary and Split System AC/HP Equipment	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
39	WS	Non-Residential	Large Commercial	General Large Commercial	HVAC	Unitary and Split System AC/HP Equipment	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
41	WS	Non-Residential	Small Commercial	Lodging	HVAC	PTAC	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
42	NWS	Non-Residential	Small Commercial	Lodging	HVAC	Occupancy-Based PTAC/PTHP Controls	Commercial Prescriptive & Custom	2015	0.004%	2034	0.021028%	2034	0.021028%	
44	WS	Non-Residential	Large Commercial	K12 Education	HVAC	Air or Water Cooled Chilling Equipment (Chillers)	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
45	WS	Non-Residential	Large Commercial	Education with Summer Sessions	HVAC	Air or Water Cooled Chilling Equipment (Chillers)	Commercial Prescriptive & Custom	2015	0.602%	2034	3.009984%	2034	3.009984%	
46	WS	Non-Residential	Large Commercial	Lodging	HVAC	Air or Water Cooled Chilling Equipment (Chillers)	Commercial Prescriptive & Custom	2015	2.078%	2034	10.392472%	2034	10.392472%	
47	WS	Non-Residential	Large Commercial	General Large Commercial	HVAC	Air or Water Cooled Chilling Equipment (Chillers)	Commercial Prescriptive & Custom	2015	0.655%	2034	3.272660%	2034	3.272660%	
48	WS	Non-Residential	Large Commercial	K12 Education	HVAC	Air or Water Cooled Chilling Equipment (Chillers)	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
49	WS	Non-Residential	Large Commercial	Education with Summer Sessions	HVAC	Air or Water Cooled Chilling Equipment (Chillers)	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
50	WS	Non-Residential	Large Commercial	Lodging	HVAC	Air or Water Cooled Chilling Equipment (Chillers)	Commercial Prescriptive & Custom	2015	3.879%	2034	19.393088%	2034	19.393088%	
51	WS	Non-Residential	Large Commercial	General Large Commercial	HVAC	Air or Water Cooled Chilling Equipment (Chillers)	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
52	WS	Non-Residential	Large Commercial	Hospital	HVAC	Air or Water Cooled Chilling Equipment (Chillers)	Commercial Prescriptive & Custom	2015	3.084%	2034	15.421723%	2034	15.421723%	
53	WS	Non-Residential	Large Commercial	K12 Education	HVAC	Air or Water Cooled Chilling Equipment (Chillers)	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
54	WS	Non-Residential	Large Commercial	Education with Summer Sessions	HVAC	Air or Water Cooled Chilling Equipment (Chillers)	Commercial Prescriptive & Custom	2015	0.718%	2034	3.589215%	2034	3.589215%	
55	WS	Non-Residential	Large Commercial	Lodging	HVAC	Air or Water Cooled Chilling Equipment (Chillers)	Commercial Prescriptive & Custom	2015	2.325%	2034	11.625413%	2034	11.625413%	
56	WS	Non-Residential	Large Commercial	General Large Commercial	HVAC	Air or Water Cooled Chilling Equipment (Chillers)	Commercial Prescriptive & Custom	2015	0.777%	2034	3.885642%	2034	3.885642%	
57	WS	Non-Residential	Large Commercial	Hospital	HVAC	Air or Water Cooled Chilling Equipment (Chillers)	Commercial Prescriptive & Custom	2015	9.684%	2034	48.421695%	2034	48.421695%	
58	WS	Non-Residential	Large Commercial	K12 Education	HVAC	Air or Water Cooled Chilling Equipment (Chillers)	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
59	WS	Non-Residential	Large Commercial	Education with Summer Sessions	HVAC	Air or Water Cooled Chilling Equipment (Chillers)	Commercial Prescriptive & Custom	2015	5.754%	2034	28.768744%	2034	28.768744%	
60	WS	Non-Residential	Large Commercial	Lodging	HVAC	Air or Water Cooled Chilling Equipment (Chillers)	Commercial Prescriptive & Custom	2015	8.755%	2034	43.773351%	2034	43.773351%	

Commercial Measures

Measure ID	Weather Sensitive	MEASURE DESCRIPTION				End Use	Measure Name	PROGRAM	PARTICIPATION REFERENCE CASE				
		Sector	Sub-Sector	Building Type	Program Name				First Year of Participation (So Year)	First Year Participation Rate (So)	Year of Maximum Annual Participation (Smax)	Maximum Annual Participation Rate (Smax)	Final Year of Participation, Fo (<2034 if baseline shift)
61	WS	Non-Residential	Large Commercial	General Large Commercial	HVAC	Air or Water Cooled Chilling Equipment (Chillers)	Commercial Prescriptive & Custom	2015	5.919%	2034	29.595740%	2034	29.595740%
62	WS	Non-Residential	Large Commercial	Hospital	HVAC	Air or Water Cooled Chilling Equipment (Chillers)	Commercial Prescriptive & Custom	2015	5.032%	2034	25.159309%	2034	25.159309%
63	WS	Non-Residential	Large Commercial	Education with Summer Sessions	HVAC	Air or Water Cooled Chilling Equipment (Chillers)	Commercial Prescriptive & Custom	2015	1.749%	2034	8.743332%	2034	8.743332%
64	WS	Non-Residential	Large Commercial	Lodging	HVAC	Air or Water Cooled Chilling Equipment (Chillers)	Commercial Prescriptive & Custom	2015	4.100%	2034	20.498564%	2034	20.498564%
65	WS	Non-Residential	Large Commercial	General Large Commercial	HVAC	Air or Water Cooled Chilling Equipment (Chillers)	Commercial Prescriptive & Custom	2015	1.852%	2034	9.261106%	2034	9.261106%
66	WS	Non-Residential	Large Commercial	Hospital	HVAC	Air or Water Cooled Chilling Equipment (Chillers)	Commercial Prescriptive & Custom	2015	7.001%	2034	35.007353%	2034	35.007353%
67	WS	Non-Residential	Large Commercial	Education with Summer Sessions	HVAC	Air or Water Cooled Chilling Equipment (Chillers)	Commercial Prescriptive & Custom	2015	3.189%	2034	15.945768%	2034	15.945768%
68	WS	Non-Residential	Large Commercial	Lodging	HVAC	Air or Water Cooled Chilling Equipment (Chillers)	Commercial Prescriptive & Custom	2015	6.012%	2034	30.058087%	2034	30.058087%
69	WS	Non-Residential	Large Commercial	General Large Commercial	HVAC	Air or Water Cooled Chilling Equipment (Chillers)	Commercial Prescriptive & Custom	2015	3.329%	2034	16.643130%	2034	16.643130%
71	NWS	Non-Residential	Large Commercial	Hospital	HVAC	Variable Speed Drives for HVAC	Commercial Prescriptive & Custom	2015	0.015%	2034	0.075000%	2034	0.075000%
72	NWS	Non-Residential	Large Commercial	Hospital	HVAC	Variable Speed Drives for HVAC	Commercial Prescriptive & Custom	2015	0.012%	2034	0.062437%	2034	0.062437%
73	NWS	Non-Residential	Large Commercial	Hospital	HVAC	Variable Speed Drives for HVAC	Commercial Prescriptive & Custom	2015	0.015%	2034	0.075000%	2034	0.075000%
74	NWS	Non-Residential	Large Commercial	Hospital	HVAC	Variable Speed Drives for HVAC	Commercial Prescriptive & Custom	2015	0.015%	2034	0.075000%	2034	0.075000%
75	NWS	Non-Residential	Large Commercial	K12 Education	HVAC	Variable Speed Drives for HVAC	Commercial Prescriptive & Custom	2015	0.012%	2034	0.059896%	2034	0.059896%
76	NWS	Non-Residential	Large Commercial	K12 Education	HVAC	Variable Speed Drives for HVAC	Commercial Prescriptive & Custom	2015	0.007%	2034	0.033471%	2034	0.033471%
77	NWS	Non-Residential	Large Commercial	K12 Education	HVAC	Variable Speed Drives for HVAC	Commercial Prescriptive & Custom	2015	0.015%	2034	0.075000%	2034	0.075000%
78	NWS	Non-Residential	Large Commercial	K12 Education	HVAC	Variable Speed Drives for HVAC	Commercial Prescriptive & Custom	2015	0.014%	2034	0.069097%	2034	0.069097%
79	NWS	Non-Residential	Large Commercial	Education with Summer Sessions	HVAC	Variable Speed Drives for HVAC	Commercial Prescriptive & Custom	2015	0.013%	2034	0.063936%	2034	0.063936%
80	NWS	Non-Residential	Large Commercial	Education with Summer Sessions	HVAC	Variable Speed Drives for HVAC	Commercial Prescriptive & Custom	2015	0.007%	2034	0.037206%	2034	0.037206%
81	NWS	Non-Residential	Large Commercial	Education with Summer Sessions	HVAC	Variable Speed Drives for HVAC	Commercial Prescriptive & Custom	2015	0.015%	2034	0.075000%	2034	0.075000%
82	NWS	Non-Residential	Large Commercial	Education with Summer Sessions	HVAC	Variable Speed Drives for HVAC	Commercial Prescriptive & Custom	2015	0.014%	2034	0.072143%	2034	0.072143%
83	NWS	Non-Residential	Large Commercial	Lodging	HVAC	Variable Speed Drives for HVAC	Commercial Prescriptive & Custom	2015	0.014%	2034	0.067604%	2034	0.067604%
84	NWS	Non-Residential	Large Commercial	Lodging	HVAC	Variable Speed Drives for HVAC	Commercial Prescriptive & Custom	2015	0.008%	2034	0.041237%	2034	0.041237%
85	NWS	Non-Residential	Large Commercial	Lodging	HVAC	Variable Speed Drives for HVAC	Commercial Prescriptive & Custom	2015	0.015%	2034	0.075000%	2034	0.075000%
86	NWS	Non-Residential	Large Commercial	Lodging	HVAC	Variable Speed Drives for HVAC	Commercial Prescriptive & Custom	2015	0.015%	2034	0.074861%	2034	0.074861%
87	NWS	Non-Residential	Large Commercial	General Large Commercial	HVAC	Variable Speed Drives for HVAC	Commercial Prescriptive & Custom	2015	0.014%	2034	0.071440%	2034	0.071440%
88	NWS	Non-Residential	Large Commercial	General Large Commercial	HVAC	Variable Speed Drives for HVAC	Commercial Prescriptive & Custom	2015	0.009%	2034	0.046052%	2034	0.046052%
89	NWS	Non-Residential	Large Commercial	General Large Commercial	HVAC	Variable Speed Drives for HVAC	Commercial Prescriptive & Custom	2015	0.015%	2034	0.075000%	2034	0.075000%
90	NWS	Non-Residential	Large Commercial	General Large Commercial	HVAC	Variable Speed Drives for HVAC	Commercial Prescriptive & Custom	2015	0.015%	2034	0.075000%	2034	0.075000%
92	NWS	Non-Residential	Small Commercial	All	HVAC	Dual Enthalpy Economizer	Commercial Prescriptive & Custom	2015	0.011%	2034	0.056528%	2034	0.056528%
93	NWS	Non-Residential	Large Commercial	All	HVAC	Dual Enthalpy Economizer	Commercial Prescriptive & Custom	2015	0.011%	2034	0.057074%	2034	0.057074%
95	NWS	Non-Residential	Small Commercial	All	HVAC	Demand Controlled Ventilation	Commercial Prescriptive & Custom	2015	0.012%	2034	0.060802%	2034	0.060802%
96	NWS	Non-Residential	Large Commercial	All	HVAC	Demand Controlled Ventilation	Commercial Prescriptive & Custom	2015	0.007%	2034	0.034662%	2034	0.034662%
98	WS	Non-Residential	Small Commercial	All	HVAC	Ground Source Heatpump	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
100	WS	Non-Residential	Small Commercial	All	HVAC	AC Tune-Up	Small Business Solutions	2015	0.393%	2034	1.963591%	2034	1.963591%
102	NWS	Non-Residential	Small Commercial	All	HVAC	Electronically Commutated Motors for Refrigeration and HVAC Applications	Commercial Prescriptive & Custom	2015	0.014%	2034	0.072051%	2034	0.072051%
103	NWS	Non-Residential	All	Hospital	Lighting	High Performance T8/T5 with Low-BF Ballast	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
104	NWS	Non-Residential	All	Hospital	Lighting	High Performance T8/T5 with Low-BF Ballast	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
105	NWS	Non-Residential	All	Hospital	Lighting	High Performance T8/T5 with Low-BF Ballast	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
106	NWS	Non-Residential	All	Hospital	Lighting	High Performance T8/T5 with Low-BF Ballast	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
107	NWS	Non-Residential	All	K12 Education	Lighting	High Performance T8/T5 with Low-BF Ballast	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
108	NWS	Non-Residential	All	K12 Education	Lighting	High Performance T8/T5 with Low-BF Ballast	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
109	NWS	Non-Residential	All	K12 Education	Lighting	High Performance T8/T5 with Low-BF Ballast	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
110	NWS	Non-Residential	All	K12 Education	Lighting	High Performance T8/T5 with Low-BF Ballast	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
111	NWS	Non-Residential	All	Education with Summer Sessions	Lighting	High Performance T8/T5 with Low-BF Ballast	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
112	NWS	Non-Residential	All	Education with Summer Sessions	Lighting	High Performance T8/T5 with Low-BF Ballast	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
113	NWS	Non-Residential	All	Education with Summer Sessions	Lighting	High Performance T8/T5 with Low-BF Ballast	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
114	NWS	Non-Residential	All	Education with Summer Sessions	Lighting	High Performance T8/T5 with Low-BF Ballast	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
115	NWS	Non-Residential	All	Lodging	Lighting	High Performance T8/T5 with Low-BF Ballast	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
116	NWS	Non-Residential	All	Lodging	Lighting	High Performance T8/T5 with Low-BF Ballast	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
117	NWS	Non-Residential	All	Lodging	Lighting	High Performance T8/T5 with Low-BF Ballast	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
118	NWS	Non-Residential	All	Lodging	Lighting	High Performance T8/T5 with Low-BF Ballast	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
119	NWS	Non-Residential	All	General Large Commercial	Lighting	High Performance T8/T5 with Low-BF Ballast	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
120	NWS	Non-Residential	All	General Large Commercial	Lighting	High Performance T8/T5 with Low-BF Ballast	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A

Commercial Measures

Measure ID	Weather Sensitive	MEASURE DESCRIPTION					Measure Name	PROGRAM	PARTICIPATION REFERENCE CASE					
		Sector	Sub-Sector	Building Type	End Use	Program Name			First Year of Participation (So Year)	First Year Participation Rate (So)	Year of Maximum Annual Participation (Smax)	Maximum Annual Participation Rate (Smax)	Final Year of Participation, Fo (<2034 if baseline shift)	Final Year Participation Rate (Fo)
121	NWS	Non-Residential	All	General Large Commercial	Lighting	High Performance T8/T5 with Low-BF Ballast	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
122	NWS	Non-Residential	All	General Large Commercial	Lighting	High Performance T8/T5 with Low-BF Ballast	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
123	NWS	Non-Residential	All	General Small Commercial	Lighting	High Performance T8/T5 with Low-BF Ballast	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
124	NWS	Non-Residential	All	General Small Commercial	Lighting	High Performance T8/T5 with Low-BF Ballast	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
125	NWS	Non-Residential	All	General Small Commercial	Lighting	High Performance T8/T5 with Low-BF Ballast	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
126	NWS	Non-Residential	All	General Small Commercial	Lighting	High Performance T8/T5 with Low-BF Ballast	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
127	NWS	Non-Residential	All	Hospital	Lighting	Reduced Wattage T8/T5 Lamps	Commercial Prescriptive & Custom	2015	0.800%	2034	3.999990%	2034	3.999990%	
128	NWS	Non-Residential	All	K12 Education	Lighting	Reduced Wattage T8/T5 Lamps	Commercial Prescriptive & Custom	2015	0.792%	2034	3.959117%	2034	3.959117%	
129	NWS	Non-Residential	All	Education with Summer Sessions	Lighting	Reduced Wattage T8/T5 Lamps	Commercial Prescriptive & Custom	2015	0.800%	2034	3.999990%	2034	3.999990%	
130	NWS	Non-Residential	All	Lodging	Lighting	Reduced Wattage T8/T5 Lamps	Commercial Prescriptive & Custom	2015	0.800%	2034	3.999990%	2034	3.999990%	
131	NWS	Non-Residential	All	General Large Commercial	Lighting	Reduced Wattage T8/T5 Lamps	Commercial Prescriptive & Custom	2015	0.800%	2034	3.999990%	2034	3.999990%	
132	NWS	Non-Residential	All	General Small Commercial	Lighting	Reduced Wattage T8/T5 Lamps	Commercial Prescriptive & Custom	2015	0.800%	2034	3.999990%	2034	3.999990%	
133	NWS	Non-Residential	All	Hospital	Lighting	Reduced Wattage T8/T5 Lamps	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
134	NWS	Non-Residential	All	K12 Education	Lighting	Reduced Wattage T8/T5 Lamps	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
135	NWS	Non-Residential	All	Education with Summer Sessions	Lighting	Reduced Wattage T8/T5 Lamps	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
136	NWS	Non-Residential	All	Lodging	Lighting	Reduced Wattage T8/T5 Lamps	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
137	NWS	Non-Residential	All	General Large Commercial	Lighting	Reduced Wattage T8/T5 Lamps	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
138	NWS	Non-Residential	All	General Small Commercial	Lighting	Reduced Wattage T8/T5 Lamps	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
139	NWS	Non-Residential	All	Hospital	Lighting	Linear Florescent Fixture Upgrade	Commercial Prescriptive & Custom	2015	0.580%	2034	2.901595%	2034	2.901595%	
140	NWS	Non-Residential	All	K12 Education	Lighting	Linear Florescent Fixture Upgrade	Commercial Prescriptive & Custom	2015	0.264%	2034	1.317754%	2034	1.317754%	
141	NWS	Non-Residential	All	Education with Summer Sessions	Lighting	Linear Florescent Fixture Upgrade	Commercial Prescriptive & Custom	2015	0.164%	2034	0.821982%	2034	0.821982%	
142	NWS	Non-Residential	All	Lodging	Lighting	Linear Florescent Fixture Upgrade	Commercial Prescriptive & Custom	2015	0.642%	2034	3.209206%	2034	3.209206%	
143	NWS	Non-Residential	All	General Large Commercial	Lighting	Linear Florescent Fixture Upgrade	Commercial Prescriptive & Custom	2015	0.391%	2034	1.953040%	2034	1.953040%	
144	NWS	Non-Residential	All	General Small Commercial	Lighting	Linear Florescent Fixture Upgrade	Commercial Prescriptive & Custom	2015	0.437%	2034	2.186551%	2034	2.186551%	
145	NWS	Non-Residential	All	Hospital	Lighting	Linear Florescent Fixture Upgrade	Commercial Prescriptive & Custom	2015	0.816%	2034	4.080041%	2034	4.080041%	
146	NWS	Non-Residential	All	K12 Education	Lighting	Linear Florescent Fixture Upgrade	Commercial Prescriptive & Custom	2015	0.532%	2034	2.662387%	2034	2.662387%	
147	NWS	Non-Residential	All	Education with Summer Sessions	Lighting	Linear Florescent Fixture Upgrade	Commercial Prescriptive & Custom	2015	0.641%	2034	3.204253%	2034	3.204253%	
148	NWS	Non-Residential	All	Lodging	Lighting	Linear Florescent Fixture Upgrade	Commercial Prescriptive & Custom	2015	0.862%	2034	4.308549%	2034	4.308549%	
149	NWS	Non-Residential	All	General Large Commercial	Lighting	Linear Florescent Fixture Upgrade	Commercial Prescriptive & Custom	2015	0.659%	2034	3.293702%	2034	3.293702%	
150	NWS	Non-Residential	All	General Small Commercial	Lighting	Linear Florescent Fixture Upgrade	Commercial Prescriptive & Custom	2015	0.700%	2034	3.501148%	2034	3.501148%	
151	NWS	Non-Residential	All	Hospital	Lighting	Linear Florescent Fixture Upgrade	Commercial Prescriptive & Custom	2015	0.363%	2034	1.814210%	2034	1.814210%	
152	NWS	Non-Residential	All	K12 Education	Lighting	Linear Florescent Fixture Upgrade	Commercial Prescriptive & Custom	2015	0.100%	2034	0.500046%	2034	0.500046%	
153	NWS	Non-Residential	All	Education with Summer Sessions	Lighting	Linear Florescent Fixture Upgrade	Commercial Prescriptive & Custom	2015	0.175%	2034	0.874771%	2034	0.874771%	
154	NWS	Non-Residential	All	Lodging	Lighting	Linear Florescent Fixture Upgrade	Commercial Prescriptive & Custom	2015	0.428%	2034	2.138621%	2034	2.138621%	
155	NWS	Non-Residential	All	General Large Commercial	Lighting	Linear Florescent Fixture Upgrade	Commercial Prescriptive & Custom	2015	0.190%	2034	0.950588%	2034	0.950588%	
156	NWS	Non-Residential	All	General Small Commercial	Lighting	Linear Florescent Fixture Upgrade	Commercial Prescriptive & Custom	2015	0.229%	2034	1.143067%	2034	1.143067%	
157	NWS	Non-Residential	All	Hospital	Lighting	Linear Florescent Fixture Upgrade	Commercial Prescriptive & Custom	2015	0.665%	2034	3.325430%	2034	3.325430%	
158	NWS	Non-Residential	All	K12 Education	Lighting	Linear Florescent Fixture Upgrade	Commercial Prescriptive & Custom	2015	0.349%	2034	1.745858%	2034	1.745858%	
159	NWS	Non-Residential	All	Education with Summer Sessions	Lighting	Linear Florescent Fixture Upgrade	Commercial Prescriptive & Custom	2015	0.462%	2034	2.309146%	2034	2.309146%	
160	NWS	Non-Residential	All	Lodging	Lighting	Linear Florescent Fixture Upgrade	Commercial Prescriptive & Custom	2015	0.722%	2034	3.610530%	2034	3.610530%	
161	NWS	Non-Residential	All	General Large Commercial	Lighting	Linear Florescent Fixture Upgrade	Commercial Prescriptive & Custom	2015	0.481%	2034	2.407135%	2034	2.407135%	
162	NWS	Non-Residential	All	General Small Commercial	Lighting	Linear Florescent Fixture Upgrade	Commercial Prescriptive & Custom	2015	0.528%	2034	2.639611%	2034	2.639611%	
163	NWS	Non-Residential	All	Hospital	Lighting	Commercial Standard CFL	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
164	NWS	Non-Residential	All	Hospital	Lighting	Commercial Standard CFL	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
165	NWS	Non-Residential	All	K12 Education	Lighting	Commercial Standard CFL	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
166	NWS	Non-Residential	All	K12 Education	Lighting	Commercial Standard CFL	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
167	NWS	Non-Residential	All	Education with Summer Sessions	Lighting	Commercial Standard CFL	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
168	NWS	Non-Residential	All	Education with Summer Sessions	Lighting	Commercial Standard CFL	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
169	NWS	Non-Residential	All	Lodging	Lighting	Commercial Standard CFL	Commercial Prescriptive & Custom	2015	0.600%	2034	2.999992%	2034	2.999992%	
170	NWS	Non-Residential	All	Lodging	Lighting	Commercial Standard CFL	Commercial Prescriptive & Custom	2015	0.600%	2034	2.999992%	2034	2.999992%	
171	NWS	Non-Residential	All	General Large Commercial	Lighting	Commercial Standard CFL	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
172	NWS	Non-Residential	All	General Large Commercial	Lighting	Commercial Standard CFL	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
173	NWS	Non-Residential	All	General Small Commercial	Lighting	Commercial Standard CFL	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
174	NWS	Non-Residential	All	General Small Commercial	Lighting	Commercial Standard CFL	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
175	NWS	Non-Residential	All	Hospital	Lighting	LED Bulbs	Commercial Prescriptive & Custom	2016	2.500%	2020	4.966536%	2020	4.966536%	
176	NWS	Non-Residential	All	Hospital	Lighting	LED Bulbs	Commercial Prescriptive & Custom	2015	1.400%	2034	6.999982%	2034	6.999982%	
177	NWS	Non-Residential	All	K12 Education	Lighting	LED Bulbs	Commercial Prescriptive & Custom	2016	2.228%	2020	4.425913%	2020	4.425913%	
178	NWS	Non-Residential	All	K12 Education	Lighting	LED Bulbs	Commercial Prescriptive & Custom	2015	1.400%	2034	6.999982%	2034	6.999982%	
179	NWS	Non-Residential	All	Education with Summer Sessions	Lighting	LED Bulbs	Commercial Prescriptive & Custom	2016	2.390%	2020	4.747222%	2020	4.747222%	
180	NWS	Non-Residential	All	Education with Summer Sessions	Lighting	LED Bulbs	Commercial Prescriptive & Custom	2015	1.400%	2034	6.999982%	2034	6.999982%	

Commercial Measures

Measure ID	Weather Sensitive	MEASURE DESCRIPTION					Measure Name	PROGRAM	PARTICIPATION REFERENCE CASE				
		Sector	Sub-Sector	Building Type	End Use	Program Name			First Year of Participation (So Year)	First Year Participation Rate (So)	Year of Maximum Annual Participation (Smax)	Maximum Annual Participation Rate (Smax)	Final Year of Participation, Fo (<2034 if baseline shift)
181	NWS	Non-Residential	All	Lodging	Lighting	LED Bulbs	Commercial Prescriptive & Custom	2016	2.292%	2020	4.553935%	2020	4.553935%
182	NWS	Non-Residential	All	Lodging	Lighting	LED Bulbs	Commercial Prescriptive & Custom	2015	1.400%	2034	6.999982%	2034	6.999982%
183	NWS	Non-Residential	All	General Large Commercial	Lighting	LED Bulbs	Commercial Prescriptive & Custom	2016	2.415%	2020	4.796927%	2020	4.796927%
184	NWS	Non-Residential	All	General Large Commercial	Lighting	LED Bulbs	Commercial Prescriptive & Custom	2015	1.400%	2034	6.999982%	2034	6.999982%
185	NWS	Non-Residential	All	General Small Commercial	Lighting	LED Bulbs	Commercial Prescriptive & Custom	2016	2.471%	2020	4.909057%	2020	4.909057%
186	NWS	Non-Residential	All	General Small Commercial	Lighting	LED Bulbs	Commercial Prescriptive & Custom	2015	1.400%	2034	6.999982%	2034	6.999982%
187	NWS	Non-Residential	Large Commercial	All	Lighting	Efficient High Bay Lighting	Commercial Prescriptive & Custom	2015	0.067%	2034	0.336052%	2034	0.336052%
188	NWS	Non-Residential	Small Commercial	All	Lighting	Efficient High Bay Lighting	Commercial Prescriptive & Custom	2015	0.090%	2034	0.450161%	2034	0.450161%
189	NWS	Non-Residential	Large Commercial	All	Lighting	Efficient High Bay Lighting	Commercial Prescriptive & Custom	2015	0.102%	2034	0.508800%	2034	0.508800%
190	NWS	Non-Residential	Small Commercial	All	Lighting	Efficient High Bay Lighting	Commercial Prescriptive & Custom	2015	0.115%	2034	0.576029%	2034	0.576029%
191	NWS	Non-Residential	Large Commercial	All	Lighting	Efficient High Bay Lighting	Commercial Prescriptive & Custom	2015	0.115%	2034	0.577011%	2034	0.577011%
192	NWS	Non-Residential	Small Commercial	All	Lighting	Efficient High Bay Lighting	Commercial Prescriptive & Custom	2015	0.128%	2034	0.641551%	2034	0.641551%
193	NWS	Non-Residential	Large Commercial	All	Lighting	Efficient High Bay Lighting	Commercial Prescriptive & Custom	2015	0.150%	2034	0.749675%	2034	0.749675%
194	NWS	Non-Residential	Small Commercial	All	Lighting	Efficient High Bay Lighting	Commercial Prescriptive & Custom	2015	0.161%	2034	0.802760%	2034	0.802760%
195	NWS	Non-Residential	Large Commercial	All	Lighting	Efficient High Bay Lighting	Commercial Prescriptive & Custom	2015	0.107%	2034	0.533855%	2034	0.533855%
196	NWS	Non-Residential	Small Commercial	All	Lighting	Efficient High Bay Lighting	Commercial Prescriptive & Custom	2015	0.129%	2034	0.643313%	2034	0.643313%
197	NWS	Non-Residential	Large Commercial	All	Lighting	Efficient High Bay Lighting	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
198	NWS	Non-Residential	Small Commercial	All	Lighting	Efficient High Bay Lighting	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
199	NWS	Non-Residential	Large Commercial	All	Lighting	Lighting Controls	Commercial Prescriptive & Custom	2015	0.479%	2034	2.396376%	2034	2.396376%
200	NWS	Non-Residential	Large Commercial	All	Lighting	Lighting Controls	Commercial Prescriptive & Custom	2015	0.388%	2034	1.939781%	2034	1.939781%
201	NWS	Non-Residential	Large Commercial	All	Lighting	Lighting Controls	Commercial Prescriptive & Custom	2015	0.206%	2034	1.028835%	2034	1.028835%
202	NWS	Non-Residential	Large Commercial	All	Lighting	Lighting Controls	Commercial Prescriptive & Custom	2015	0.479%	2034	2.396376%	2034	2.396376%
203	NWS	Non-Residential	Large Commercial	All	Lighting	Lighting Controls	Commercial Prescriptive & Custom	2015	0.533%	2034	2.663521%	2034	2.663521%
204	NWS	Non-Residential	Large Commercial	All	Lighting	Lighting Controls	Commercial Prescriptive & Custom	2015	0.509%	2034	2.545565%	2034	2.545565%
205	NWS	Non-Residential	Large Commercial	All	Lighting	Lighting Controls	Commercial Prescriptive & Custom	2015	0.509%	2034	2.545565%	2034	2.545565%
206	NWS	Non-Residential	Small Commercial	All	Lighting	Lighting Controls	Commercial Prescriptive & Custom	2015	0.528%	2034	2.639588%	2034	2.639588%
207	NWS	Non-Residential	Small Commercial	All	Lighting	Lighting Controls	Commercial Prescriptive & Custom	2015	0.448%	2034	2.242458%	2034	2.242458%
208	NWS	Non-Residential	Small Commercial	All	Lighting	Lighting Controls	Commercial Prescriptive & Custom	2015	0.275%	2034	1.374958%	2034	1.374958%
209	NWS	Non-Residential	Small Commercial	All	Lighting	Lighting Controls	Commercial Prescriptive & Custom	2015	0.528%	2034	2.639588%	2034	2.639588%
210	NWS	Non-Residential	Small Commercial	All	Lighting	Lighting Controls	Commercial Prescriptive & Custom	2015	0.573%	2034	2.863795%	2034	2.863795%
211	NWS	Non-Residential	Small Commercial	All	Lighting	Lighting Controls	Commercial Prescriptive & Custom	2015	0.533%	2034	2.765464%	2034	2.765464%
212	NWS	Non-Residential	Small Commercial	All	Lighting	Lighting Controls	Commercial Prescriptive & Custom	2015	0.553%	2034	2.765464%	2034	2.765464%
213	NWS	Non-Residential	Small Commercial	All	Lighting	LED Exit Signs	Commercial Prescriptive & Custom	2015	0.374%	2034	1.872490%	2034	1.872490%
214	NWS	Non-Residential	All	Hospital	Refrigeration	Electronically Commutated Motors (ECM) for Walk-in and Reach-in Coolers/Freezers	Commercial Prescriptive & Custom	2015	0.595%	2034	2.973527%	2034	2.973527%
215	NWS	Non-Residential	All	K12 Education	Refrigeration	Electronically Commutated Motors (ECM) for Walk-in and Reach-in Coolers/Freezers	Commercial Prescriptive & Custom	2015	0.595%	2034	2.973527%	2034	2.973527%
216	NWS	Non-Residential	All	Education with Summer Sessions	Refrigeration	Electronically Commutated Motors (ECM) for Walk-in and Reach-in Coolers/Freezers	Commercial Prescriptive & Custom	2015	0.595%	2034	2.973527%	2034	2.973527%
217	NWS	Non-Residential	All	Lodging	Refrigeration	Electronically Commutated Motors (ECM) for Walk-in and Reach-in Coolers/Freezers	Commercial Prescriptive & Custom	2015	0.595%	2034	2.973527%	2034	2.973527%
218	NWS	Non-Residential	All	Food Sales	Refrigeration	Electronically Commutated Motors (ECM) for Walk-in and Reach-in Coolers/Freezers	Commercial Prescriptive & Custom	2015	0.589%	2034	2.943847%	2034	2.943847%
219	NWS	Non-Residential	All	Restaurant	Refrigeration	Electronically Commutated Motors (ECM) for Walk-in and Reach-in Coolers/Freezers	Commercial Prescriptive & Custom	2015	0.595%	2034	2.973527%	2034	2.973527%
220	NWS	Non-Residential	All	Hospital	Refrigeration	ENERGY STAR Solid Door Refrigerator	Commercial Prescriptive & Custom	2015	0.600%	2034	2.999992%	2034	2.999992%
221	NWS	Non-Residential	All	Hospital	Refrigeration	ENERGY STAR Solid Door Refrigerator	Commercial Prescriptive & Custom	2015	0.600%	2034	2.999992%	2034	2.999992%
222	NWS	Non-Residential	All	Hospital	Refrigeration	ENERGY STAR Solid Door Refrigerator	Commercial Prescriptive & Custom	2015	0.600%	2034	2.999992%	2034	2.999992%
223	NWS	Non-Residential	All	Hospital	Refrigeration	ENERGY STAR Solid Door Refrigerator	Commercial Prescriptive & Custom	2015	0.600%	2034	2.999992%	2034	2.999992%
224	NWS	Non-Residential	All	Hospital	Refrigeration	ENERGY STAR Solid Door Freezer	Commercial Prescriptive & Custom	2015	0.600%	2034	2.999992%	2034	2.999992%
225	NWS	Non-Residential	All	Hospital	Refrigeration	ENERGY STAR Solid Door Freezer	Commercial Prescriptive & Custom	2015	0.600%	2034	2.999992%	2034	2.999992%
226	NWS	Non-Residential	All	Hospital	Refrigeration	ENERGY STAR Solid Door Freezer	Commercial Prescriptive & Custom	2015	0.600%	2034	2.999992%	2034	2.999992%
227	NWS	Non-Residential	All	Hospital	Refrigeration	ENERGY STAR Solid Door Freezer	Commercial Prescriptive & Custom	2015	0.600%	2034	2.999992%	2034	2.999992%
228	NWS	Non-Residential	All	K12 Education	Refrigeration	ENERGY STAR Solid Door Refrigerator	Commercial Prescriptive & Custom	2015	0.600%	2034	2.999992%	2034	2.999992%
229	NWS	Non-Residential	All	K12 Education	Refrigeration	ENERGY STAR Solid Door Refrigerator	Commercial Prescriptive & Custom	2015	0.600%	2034	2.999992%	2034	2.999992%
230	NWS	Non-Residential	All	K12 Education	Refrigeration	ENERGY STAR Solid Door Refrigerator	Commercial Prescriptive & Custom	2015	0.600%	2034	2.999992%	2034	2.999992%
231	NWS	Non-Residential	All	K12 Education	Refrigeration	ENERGY STAR Solid Door Refrigerator	Commercial Prescriptive & Custom	2015	0.600%	2034	2.999992%	2034	2.999992%
232	NWS	Non-Residential	All	K12 Education	Refrigeration	ENERGY STAR Solid Door Freezer	Commercial Prescriptive & Custom	2015	0.600%	2034	2.999992%	2034	2.999992%
233	NWS	Non-Residential	All	K12 Education	Refrigeration	ENERGY STAR Solid Door Freezer	Commercial Prescriptive & Custom	2015	0.600%	2034	2.999992%	2034	2.999992%
234	NWS	Non-Residential	All	K12 Education	Refrigeration	ENERGY STAR Solid Door Freezer	Commercial Prescriptive & Custom	2015	0.600%	2034	2.999992%	2034	2.999992%
235	NWS	Non-Residential	All	K12 Education	Refrigeration	ENERGY STAR Solid Door Freezer	Commercial Prescriptive & Custom	2015	0.600%	2034	2.999992%	2034	2.999992%
236	NWS	Non-Residential	All	Education with Summer Sessions	Refrigeration	ENERGY STAR Solid Door Refrigerator	Commercial Prescriptive & Custom	2015	0.600%	2034	2.999992%	2034	2.999992%
237	NWS	Non-Residential	All	Education with Summer Sessions	Refrigeration	ENERGY STAR Solid Door Refrigerator	Commercial Prescriptive & Custom	2015	0.600%	2034	2.999992%	2034	2.999992%
238	NWS	Non-Residential	All	Education with Summer Sessions	Refrigeration	ENERGY STAR Solid Door Refrigerator	Commercial Prescriptive & Custom	2015	0.600%	2034	2.999992%	2034	2.999992%
239	NWS	Non-Residential	All	Education with Summer Sessions	Refrigeration	ENERGY STAR Solid Door Refrigerator	Commercial Prescriptive & Custom	2015	0.600%	2034	2.999992%	2034	2.999992%
240	NWS	Non-Residential	All	Education with Summer Sessions	Refrigeration	ENERGY STAR Solid Door Freezer	Commercial Prescriptive & Custom	2015	0.600%	2034	2.999992%	2034	2.999992%

Commercial Measures

Measure ID	Weather Sensitive	MEASURE DESCRIPTION				Measure Name	PROGRAM	PARTICIPATION REFERENCE CASE					
		Sector	Sub-Sector	Building Type	End Use			Program Name	First Year of Participation (So Year)	First Year Participation Rate (So)	Year of Maximum Annual Participation (Smax)	Maximum Annual Participation Rate (Smax)	Final Year of Participation, Fo (<2034 if baseline shift)
301	NWS	Non-Residential	All	Food Sales	Refrigeration	Door Heater Controls for Cooler or Freezer	Commercial Prescriptive & Custom	2015	0.600%	2034	2.999992%	2034	2.999992%
302	NWS	Non-Residential	All	Food Sales	Refrigeration	Door Heater Controls for Cooler or Freezer	Commercial Prescriptive & Custom	2015	0.571%	2034	2.856306%	2034	2.856306%
303	NWS	Non-Residential	All	Food Sales	Refrigeration	Door Heater Controls for Cooler or Freezer	Commercial Prescriptive & Custom	2015	0.571%	2034	2.856306%	2034	2.856306%
304	NWS	Non-Residential	All	Restaurant	Refrigeration	Door Heater Controls for Cooler or Freezer	Commercial Prescriptive & Custom	2015	0.599%	2034	2.995152%	2034	2.995152%
305	NWS	Non-Residential	All	Restaurant	Refrigeration	Door Heater Controls for Cooler or Freezer	Commercial Prescriptive & Custom	2015	0.456%	2034	2.281442%	2034	2.281442%
306	NWS	Non-Residential	All	Restaurant	Refrigeration	Door Heater Controls for Cooler or Freezer	Commercial Prescriptive & Custom	2015	0.456%	2034	2.281442%	2034	2.281442%
307	NWS	Non-Residential	All	Restaurant	Refrigeration	Door Heater Controls for Cooler or Freezer	Commercial Prescriptive & Custom	2015	0.600%	2034	2.999992%	2034	2.999992%
308	NWS	Non-Residential	All	Restaurant	Refrigeration	Door Heater Controls for Cooler or Freezer	Commercial Prescriptive & Custom	2015	0.571%	2034	2.856306%	2034	2.856306%
309	NWS	Non-Residential	All	Restaurant	Refrigeration	Door Heater Controls for Cooler or Freezer	Commercial Prescriptive & Custom	2015	0.571%	2034	2.856306%	2034	2.856306%
310	NWS	Non-Residential	All	Hospital	Refrigeration	Evaporator Fan Control	Commercial Prescriptive & Custom	2015	0.260%	2034	1.298201%	2034	1.298201%
311	NWS	Non-Residential	All	K12 Education	Refrigeration	Evaporator Fan Control	Commercial Prescriptive & Custom	2015	0.260%	2034	1.298201%	2034	1.298201%
312	NWS	Non-Residential	All	Education with Summer Sessions	Refrigeration	Evaporator Fan Control	Commercial Prescriptive & Custom	2015	0.260%	2034	1.298201%	2034	1.298201%
313	NWS	Non-Residential	All	Lodging	Refrigeration	Evaporator Fan Control	Commercial Prescriptive & Custom	2015	0.260%	2034	1.298201%	2034	1.298201%
314	NWS	Non-Residential	All	Food Sales	Refrigeration	Evaporator Fan Control	Commercial Prescriptive & Custom	2015	0.260%	2034	1.298201%	2034	1.298201%
315	NWS	Non-Residential	All	Restaurant	Refrigeration	Evaporator Fan Control	Commercial Prescriptive & Custom	2015	0.260%	2034	1.298201%	2034	1.298201%
316	NWS	Non-Residential	All	Hospital	Refrigeration	Strip Curtain for Walk-in Coolers and Freezers	Commercial Prescriptive & Custom	2015	0.600%	2034	2.999992%	2034	2.999992%
317	NWS	Non-Residential	All	Hospital	Refrigeration	Strip Curtain for Walk-in Coolers and Freezers	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
318	NWS	Non-Residential	All	K12 Education	Refrigeration	Strip Curtain for Walk-in Coolers and Freezers	Commercial Prescriptive & Custom	2015	0.600%	2034	2.999992%	2034	2.999992%
319	NWS	Non-Residential	All	K12 Education	Refrigeration	Strip Curtain for Walk-in Coolers and Freezers	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
320	NWS	Non-Residential	All	Education with Summer Sessions	Refrigeration	Strip Curtain for Walk-in Coolers and Freezers	Commercial Prescriptive & Custom	2015	0.600%	2034	2.999992%	2034	2.999992%
321	NWS	Non-Residential	All	Education with Summer Sessions	Refrigeration	Strip Curtain for Walk-in Coolers and Freezers	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
322	NWS	Non-Residential	All	Lodging	Refrigeration	Strip Curtain for Walk-in Coolers and Freezers	Commercial Prescriptive & Custom	2015	0.600%	2034	2.999992%	2034	2.999992%
323	NWS	Non-Residential	All	Lodging	Refrigeration	Strip Curtain for Walk-in Coolers and Freezers	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
324	NWS	Non-Residential	All	Food Sales	Refrigeration	Strip Curtain for Walk-in Coolers and Freezers	Commercial Prescriptive & Custom	2015	0.600%	2034	2.999992%	2034	2.999992%
325	NWS	Non-Residential	All	Food Sales	Refrigeration	Strip Curtain for Walk-in Coolers and Freezers	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
326	NWS	Non-Residential	All	Restaurant	Refrigeration	Strip Curtain for Walk-in Coolers and Freezers	Commercial Prescriptive & Custom	2015	0.600%	2034	2.999992%	2034	2.999992%
327	NWS	Non-Residential	All	Restaurant	Refrigeration	Strip Curtain for Walk-in Coolers and Freezers	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
328	NWS	Non-Residential	All	Hospital	Food Services Equipment	ENERGY STAR Dishwasher	Commercial Prescriptive & Custom	2015	0.300%	2034	1.499996%	2034	1.499996%
329	NWS	Non-Residential	All	Hospital	Food Services Equipment	ENERGY STAR Dishwasher	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
330	NWS	Non-Residential	All	Hospital	Food Services Equipment	ENERGY STAR Dishwasher	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
331	NWS	Non-Residential	All	Hospital	Food Services Equipment	ENERGY STAR Dishwasher	Commercial Prescriptive & Custom	2015	0.300%	2034	1.499996%	2034	1.499996%
332	NWS	Non-Residential	All	Hospital	Food Services Equipment	ENERGY STAR Dishwasher	Commercial Prescriptive & Custom	2015	0.300%	2034	1.499996%	2034	1.499996%
333	NWS	Non-Residential	All	Hospital	Food Services Equipment	ENERGY STAR Dishwasher	Commercial Prescriptive & Custom	2015	0.300%	2034	1.499996%	2034	1.499996%
334	NWS	Non-Residential	All	Hospital	Food Services Equipment	ENERGY STAR Dishwasher	Commercial Prescriptive & Custom	2015	0.250%	2034	1.252263%	2034	1.252263%
335	NWS	Non-Residential	All	Hospital	Food Services Equipment	ENERGY STAR Dishwasher	Commercial Prescriptive & Custom	2015	0.300%	2034	1.499996%	2034	1.499996%
336	NWS	Non-Residential	All	Hospital	Food Services Equipment	ENERGY STAR Dishwasher	Commercial Prescriptive & Custom	2015	0.152%	2034	0.759457%	2034	0.759457%
337	NWS	Non-Residential	All	Hospital	Food Services Equipment	ENERGY STAR Dishwasher	Commercial Prescriptive & Custom	2015	0.300%	2034	1.499996%	2034	1.499996%
338	NWS	Non-Residential	All	Hospital	Food Services Equipment	ENERGY STAR Dishwasher	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
339	NWS	Non-Residential	All	Hospital	Food Services Equipment	ENERGY STAR Dishwasher	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
340	NWS	Non-Residential	All	Hospital	Food Services Equipment	ENERGY STAR Dishwasher	Commercial Prescriptive & Custom	2015	0.300%	2034	1.499996%	2034	1.499996%
341	NWS	Non-Residential	All	Hospital	Food Services Equipment	ENERGY STAR Dishwasher	Commercial Prescriptive & Custom	2015	0.300%	2034	1.499996%	2034	1.499996%
342	NWS	Non-Residential	All	Hospital	Food Services Equipment	ENERGY STAR Dishwasher	Commercial Prescriptive & Custom	2015	0.300%	2034	1.499996%	2034	1.499996%
343	NWS	Non-Residential	All	Hospital	Food Services Equipment	ENERGY STAR Dishwasher	Commercial Prescriptive & Custom	2015	0.225%	2034	1.123691%	2034	1.123691%
344	NWS	Non-Residential	All	Hospital	Food Services Equipment	ENERGY STAR Dishwasher	Commercial Prescriptive & Custom	2015	0.300%	2034	1.499996%	2034	1.499996%
345	NWS	Non-Residential	All	Hospital	Food Services Equipment	ENERGY STAR Dishwasher	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
346	NWS	Non-Residential	All	K12 Education	Food Services Equipment	ENERGY STAR Dishwasher	Commercial Prescriptive & Custom	2015	0.300%	2034	1.499996%	2034	1.499996%
347	NWS	Non-Residential	All	K12 Education	Food Services Equipment	ENERGY STAR Dishwasher	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
348	NWS	Non-Residential	All	K12 Education	Food Services Equipment	ENERGY STAR Dishwasher	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
349	NWS	Non-Residential	All	K12 Education	Food Services Equipment	ENERGY STAR Dishwasher	Commercial Prescriptive & Custom	2015	0.300%	2034	1.499996%	2034	1.499996%
350	NWS	Non-Residential	All	K12 Education	Food Services Equipment	ENERGY STAR Dishwasher	Commercial Prescriptive & Custom	2015	0.300%	2034	1.499996%	2034	1.499996%
351	NWS	Non-Residential	All	K12 Education	Food Services Equipment	ENERGY STAR Dishwasher	Commercial Prescriptive & Custom	2015	0.300%	2034	1.499996%	2034	1.499996%
352	NWS	Non-Residential	All	K12 Education	Food Services Equipment	ENERGY STAR Dishwasher	Commercial Prescriptive & Custom	2015	0.250%	2034	1.252263%	2034	1.252263%
353	NWS	Non-Residential	All	K12 Education	Food Services Equipment	ENERGY STAR Dishwasher	Commercial Prescriptive & Custom	2015	0.300%	2034	1.499996%	2034	1.499996%
354	NWS	Non-Residential	All	K12 Education	Food Services Equipment	ENERGY STAR Dishwasher	Commercial Prescriptive & Custom	2015	0.152%	2034	0.759457%	2034	0.759457%
355	NWS	Non-Residential	All	K12 Education	Food Services Equipment	ENERGY STAR Dishwasher	Commercial Prescriptive & Custom	2015	0.300%	2034	1.499996%	2034	1.499996%
356	NWS	Non-Residential	All	K12 Education	Food Services Equipment	ENERGY STAR Dishwasher	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
357	NWS	Non-Residential	All	K12 Education	Food Services Equipment	ENERGY STAR Dishwasher	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
358	NWS	Non-Residential	All	K12 Education	Food Services Equipment	ENERGY STAR Dishwasher	Commercial Prescriptive & Custom	2015	0.300%	2034	1.499996%	2034	1.499996%
359	NWS	Non-Residential	All	K12 Education	Food Services Equipment	ENERGY STAR Dishwasher	Commercial Prescriptive & Custom	2015	0.300%	2034	1.499996%	2034	1.499996%
360	NWS	Non-Residential	All	K12 Education	Food Services Equipment	ENERGY STAR Dishwasher	Commercial Prescriptive & Custom	2015	0.300%	2034	1.499996%	2034	1.499996%

Commercial Measures

Measure ID	Weather Sensitive	Sector	Sub-Sector	MEASURE DESCRIPTION		Measure Name	PROGRAM	PARTICIPATION REFERENCE CASE					
				Building Type	End Use			Program Name	First Year of Participation (So Year)	First Year Participation Rate (So)	Year of Maximum Annual Participation (Smax)	Maximum Annual Participation Rate (Smax)	Final Year of Participation, Fo (<2034 if baseline shift)
421	NWS	Non-Residential	All	K12 Education	Food Services Equipment	ENERGY STAR Fryer	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
422	NWS	Non-Residential	All	Education with Summer Sessions	Food Services Equipment	ENERGY STAR Fryer	Commercial Prescriptive & Custom	2015	0.270%	2034	1.350547%	2034	1.350547%
423	NWS	Non-Residential	All	Education with Summer Sessions	Food Services Equipment	ENERGY STAR Fryer	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
424	NWS	Non-Residential	All	Lodging	Food Services Equipment	ENERGY STAR Fryer	Commercial Prescriptive & Custom	2015	0.270%	2034	1.350547%	2034	1.350547%
425	NWS	Non-Residential	All	Lodging	Food Services Equipment	ENERGY STAR Fryer	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
426	NWS	Non-Residential	All	Restaurant	Food Services Equipment	ENERGY STAR Fryer	Commercial Prescriptive & Custom	2015	0.270%	2034	1.350547%	2034	1.350547%
427	NWS	Non-Residential	All	Restaurant	Food Services Equipment	ENERGY STAR Fryer	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
428	NWS	Non-Residential	All	Hospital	Food Services Equipment	ENERGY STAR Griddle	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
429	NWS	Non-Residential	All	K12 Education	Food Services Equipment	ENERGY STAR Griddle	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
430	NWS	Non-Residential	All	Education with Summer Sessions	Food Services Equipment	ENERGY STAR Griddle	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
431	NWS	Non-Residential	All	Lodging	Food Services Equipment	ENERGY STAR Griddle	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
432	NWS	Non-Residential	All	Restaurant	Food Services Equipment	ENERGY STAR Griddle	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
433	NWS	Non-Residential	All	Hospital	Food Services Equipment	ENERGY STAR Hot Food Holding Cabinets	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
434	NWS	Non-Residential	All	K12 Education	Food Services Equipment	ENERGY STAR Hot Food Holding Cabinets	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
435	NWS	Non-Residential	All	Education with Summer Sessions	Food Services Equipment	ENERGY STAR Hot Food Holding Cabinets	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
436	NWS	Non-Residential	All	Lodging	Food Services Equipment	ENERGY STAR Hot Food Holding Cabinets	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
437	NWS	Non-Residential	All	Restaurant	Food Services Equipment	ENERGY STAR Hot Food Holding Cabinets	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
438	NWS	Non-Residential	All	Hospital	Food Services Equipment	ENERGY STAR Electric Convection Ovens	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
439	NWS	Non-Residential	All	Hospital	Food Services Equipment	ENERGY STAR Electric Convection Ovens	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
440	NWS	Non-Residential	All	K12 Education	Food Services Equipment	ENERGY STAR Electric Convection Ovens	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
441	NWS	Non-Residential	All	K12 Education	Food Services Equipment	ENERGY STAR Electric Convection Ovens	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
442	NWS	Non-Residential	All	Education with Summer Sessions	Food Services Equipment	ENERGY STAR Electric Convection Ovens	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
443	NWS	Non-Residential	All	Education with Summer Sessions	Food Services Equipment	ENERGY STAR Electric Convection Ovens	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
444	NWS	Non-Residential	All	Lodging	Food Services Equipment	ENERGY STAR Electric Convection Ovens	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
445	NWS	Non-Residential	All	Lodging	Food Services Equipment	ENERGY STAR Electric Convection Ovens	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
446	NWS	Non-Residential	All	Restaurant	Food Services Equipment	ENERGY STAR Electric Convection Ovens	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
447	NWS	Non-Residential	All	Restaurant	Food Services Equipment	ENERGY STAR Electric Convection Ovens	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
448	NWS	Non-Residential	All	K12 Education	Food Services Equipment	ENERGY STAR Steam Cooker	Commercial Prescriptive & Custom	2015	0.197%	2034	0.984181%	2034	0.984181%
449	NWS	Non-Residential	All	Education with Summer Sessions	Food Services Equipment	ENERGY STAR Steam Cooker	Commercial Prescriptive & Custom	2015	0.197%	2034	0.984181%	2034	0.984181%
450	NWS	Non-Residential	All	Lodging	Food Services Equipment	ENERGY STAR Steam Cooker	Commercial Prescriptive & Custom	2015	0.197%	2034	0.984181%	2034	0.984181%
451	NWS	Non-Residential	All	Restaurant	Food Services Equipment	ENERGY STAR Steam Cooker	Commercial Prescriptive & Custom	2015	0.197%	2034	0.984181%	2034	0.984181%
452	NWS	Non-Residential	All	Hospital	Food Services Equipment	EPA WaterSense Pre-Rinse Spray Valve	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
453	NWS	Non-Residential	All	Education with Summer Sessions	Food Services Equipment	EPA WaterSense Pre-Rinse Spray Valve	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
454	NWS	Non-Residential	All	Lodging	Food Services Equipment	EPA WaterSense Pre-Rinse Spray Valve	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
455	NWS	Non-Residential	All	Restaurant	Food Services Equipment	EPA WaterSense Pre-Rinse Spray Valve	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
456	NWS	Non-Residential	All	Hospital	Service Hot Water	Electric Storage Water Heater	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
457	NWS	Non-Residential	All	Hospital	Service Hot Water	Electric Storage Water Heater	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
458	NWS	Non-Residential	All	K12 Education	Service Hot Water	Electric Storage Water Heater	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
459	NWS	Non-Residential	All	K12 Education	Service Hot Water	Electric Storage Water Heater	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
460	NWS	Non-Residential	All	K12 Education	Service Hot Water	Electric Storage Water Heater	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
461	NWS	Non-Residential	All	Education with Summer Sessions	Service Hot Water	Electric Storage Water Heater	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
462	NWS	Non-Residential	All	Education with Summer Sessions	Service Hot Water	Electric Storage Water Heater	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
463	NWS	Non-Residential	All	Education with Summer Sessions	Service Hot Water	Electric Storage Water Heater	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
464	NWS	Non-Residential	All	Lodging	Service Hot Water	Electric Storage Water Heater	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
465	NWS	Non-Residential	All	Lodging	Service Hot Water	Electric Storage Water Heater	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
466	NWS	Non-Residential	All	Lodging	Service Hot Water	Electric Storage Water Heater	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
467	NWS	Non-Residential	All	Restaurant	Service Hot Water	Electric Storage Water Heater	Commercial Prescriptive & Custom	2015	0.344%	2034	1.718572%	2034	1.718572%
468	NWS	Non-Residential	All	Restaurant	Service Hot Water	Electric Storage Water Heater	Commercial Prescriptive & Custom	2015	0.496%	2034	2.480980%	2034	2.480980%
469	NWS	Non-Residential	All	Restaurant	Service Hot Water	Electric Storage Water Heater	Commercial Prescriptive & Custom	2015	0.429%	2034	2.144111%	2034	2.144111%
470	NWS	Non-Residential	All	Hospital	Service Hot Water	Heat Pump Storage Water Heater	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
471	NWS	Non-Residential	All	K12 Education	Service Hot Water	Heat Pump Storage Water Heater	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
472	NWS	Non-Residential	All	Education with Summer Sessions	Service Hot Water	Heat Pump Storage Water Heater	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
473	NWS	Non-Residential	All	Lodging	Service Hot Water	Heat Pump Storage Water Heater	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
474	NWS	Non-Residential	All	Restaurant	Service Hot Water	Heat Pump Storage Water Heater	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
475	NWS	Non-Residential	All	Hospital	Service Hot Water	Low Flow Faucet Aerators - Electric DHW fuel	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
476	NWS	Non-Residential	All	K12 Education	Service Hot Water	Low Flow Faucet Aerators - Electric DHW fuel	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
477	NWS	Non-Residential	All	Education with Summer Sessions	Service Hot Water	Low Flow Faucet Aerators - Electric DHW fuel	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
478	NWS	Non-Residential	All	Lodging	Service Hot Water	Low Flow Faucet Aerators - Electric DHW fuel	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
479	NWS	Non-Residential	All	Restaurant	Service Hot Water	Low Flow Faucet Aerators - Electric DHW fuel	Commercial Prescriptive & Custom	2015	0.600%	2034	2.99992%	2034	2.99992%

Commercial Measures

Measure ID	Weather Sensitive	MEASURE DESCRIPTION				PROGRAM	PARTICIPATION REFERENCE CASE						
		Sector	Sub-Sector	Building Type	End Use		Measure Name	Program Name	First Year of Participation (So Year)	First Year Participation Rate (So)	Year of Maximum Annual Participation (Smax)	Maximum Annual Participation Rate (Smax)	Final Year of Participation, Fo (-2034 if baseline shift)
481	NWS	Non-Residential	Small Commercial	All	Misc	Small Business Program Audit & Direct Install	Small Business Solutions	2016	0.000%	2015	0.000000%	2015	0.000000%
482	NWS	Non-Residential	Small Commercial	All	Lighting	Small Business Program Audit & Direct Install	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
483	NWS	Non-Residential	Small Commercial	All	Lighting	Small Business Program Audit & Direct Install	Small Business Solutions	2015	0.400%	2034	1.999995%	2034	1.999995%
484	NWS	Non-Residential	Small Commercial	All	Service Hot Water	Small Business Program Audit & Direct Install	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
485	NWS	Non-Residential	Small Commercial	All	Lighting	Small Business Program Lighting Upgrade Package	Small Business Solutions	2015	0.396%	2034	1.979112%	2034	1.979112%
486	NWS	Non-Residential	Small Commercial	All	Refrigeration	Small Business Program Refrigeration Upgrade Package	Small Business Solutions	2015	0.400%	2034	1.999995%	2034	1.999995%
488	NWS	Non-Residential	All	Data Center	HVAC	Air Flow Management	Data Center	2015	4.762%	2015	4.761905%	2034	4.761905%
489	NWS	Non-Residential	All	Data Center	HVAC	Air Flow Management	Data Center	2015	4.762%	2015	4.761905%	2034	4.761905%
490	NWS	Non-Residential	All	Data Center	HVAC	Air Flow Management	Data Center	2015	4.762%	2015	4.761905%	2034	4.761905%
491	NWS	Non-Residential	All	Data Center	HVAC	Air Flow Management	Data Center	2015	4.762%	2015	4.761905%	2034	4.761905%
492	NWS	Non-Residential	All	Data Center	Miscellaneous	Load Distribution	Data Center	2015	4.762%	2015	4.761905%	2034	4.761905%
493	NWS	Non-Residential	All	Data Center	Miscellaneous	Load Distribution	Data Center	2015	4.762%	2015	4.761905%	2034	4.761905%
494	NWS	Non-Residential	All	Data Center	Miscellaneous	Load Distribution	Data Center	2015	4.762%	2015	4.761905%	2034	4.761905%
495	NWS	Non-Residential	All	Data Center	Miscellaneous	Load Distribution	Data Center	2015	4.762%	2015	4.761905%	2034	4.761905%
496	NWS	Non-Residential	All	Data Center	HVAC	Waterside Economizer	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
497	NWS	Non-Residential	All	Data Center	HVAC	Waterside Economizer	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
498	NWS	Non-Residential	All	Data Center	HVAC	Air Flow Management	Data Center	2015	4.762%	2015	4.761905%	2034	4.761905%
499	NWS	Non-Residential	All	Data Center	HVAC	Air Flow Management	Data Center	2015	4.762%	2015	4.761905%	2034	4.761905%
500	NWS	Non-Residential	All	Data Center	HVAC	Air Flow Management	Data Center	2015	4.762%	2015	4.761905%	2034	4.761905%
501	NWS	Non-Residential	All	Data Center	HVAC	Air Flow Management	Data Center	2015	4.762%	2015	4.761905%	2034	4.761905%
502	NWS	Non-Residential	All	Data Center	Miscellaneous	Load Distribution	Data Center	2015	4.762%	2015	4.761905%	2034	4.761905%
503	NWS	Non-Residential	All	Data Center	Miscellaneous	Load Distribution	Data Center	2015	4.762%	2015	4.761905%	2034	4.761905%
504	NWS	Non-Residential	All	Data Center	Miscellaneous	Load Distribution	Data Center	2015	4.762%	2015	4.761905%	2034	4.761905%
505	NWS	Non-Residential	All	Data Center	Miscellaneous	Load Distribution	Data Center	2015	4.762%	2015	4.761905%	2034	4.761905%
506	NWS	Non-Residential	All	Data Center	HVAC	Waterside Economizer	Data Center	2015	4.762%	2015	4.761905%	2034	4.761905%
507	NWS	Non-Residential	All	Data Center	HVAC	Waterside Economizer	Data Center	2015	4.762%	2015	4.761905%	2034	4.761905%
509	WS	Non-Residential	Large Commercial	All	Misc	Commercial New Construction	Commercial New Construction	2016	10.000%	2017	20.000000%	2017	20.000000%
510	WS	Non-Residential	Large Commercial	All	Misc	Commercial New Construction	Commercial New Construction	2015	0.000%	2020	75.000000%	2015	0.000000%
511	WS	Non-Residential	Small Commercial	All	Misc	Commercial New Construction	Commercial New Construction	2016	10.000%	2017	20.000000%	2017	20.000000%
512	WS	Non-Residential	Small Commercial	All	Misc	Commercial New Construction	Commercial New Construction	2015	0.000%	2020	75.000000%	2015	0.000000%
514	WS	Non-Residential	Large Commercial	All	Misc	Retrocommissioning	RetroCommissioning	2015	1.000%	2018	5.000000%	2034	2.284064%
515	WS	Non-Residential	Large Commercial	All	Misc	Retrocommissioning	RetroCommissioning	2015	1.000%	2018	5.000000%	2034	2.284064%
517	NWS	Non-Residential	All	All	Misc	Interruptible Rate	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
518	NWS	Non-Residential	All	All	Misc	Enabled Dynamic Pricing (Non-Res)	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
519	NWS	Non-Residential	All	All	Misc	Non-Enabled Dynamic Pricing (Non-Res)	Non-Residential Dynamic Pricing	2015	1.243%	2034	1.449024%	2034	1.449024%
521	WS	Non-Residential	Large Commercial	K12 Education	HVAC	Boiler Cut-Out Control	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
522	WS	Non-Residential	Large Commercial	Lodging	HVAC	Boiler Cut-Out Control	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
523	WS	Non-Residential	Large Commercial	Education with Summer Sessions	HVAC	Boiler Cut-Out Control	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
524	WS	Non-Residential	Large Commercial	Hospital	HVAC	Boiler Cut-Out Control	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
525	WS	Non-Residential	Large Commercial	General Large Commercial	HVAC	Boiler Cut-Out Control	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
526	WS	Non-Residential	Large Commercial	K12 Education	HVAC	Boiler or Furnace Vent Damper	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
527	WS	Non-Residential	Large Commercial	Lodging	HVAC	Boiler or Furnace Vent Damper	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
528	WS	Non-Residential	Large Commercial	Education with Summer Sessions	HVAC	Boiler or Furnace Vent Damper	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
529	WS	Non-Residential	Large Commercial	Hospital	HVAC	Boiler or Furnace Vent Damper	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
530	WS	Non-Residential	Large Commercial	General Large Commercial	HVAC	Boiler or Furnace Vent Damper	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
531	WS	Non-Residential	Large Commercial	K12 Education	HVAC	Boiler Reset Control	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
532	WS	Non-Residential	Large Commercial	Lodging	HVAC	Boiler Reset Control	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
533	WS	Non-Residential	Large Commercial	Education with Summer Sessions	HVAC	Boiler Reset Control	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
534	WS	Non-Residential	Large Commercial	Hospital	HVAC	Boiler Reset Control	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
535	WS	Non-Residential	Large Commercial	General Large Commercial	HVAC	Boiler Reset Control	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
536	WS	Non-Residential	Large Commercial	K12 Education	HVAC	Boiler Tune-Up	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
537	WS	Non-Residential	Large Commercial	Lodging	HVAC	Boiler Tune-Up	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
538	WS	Non-Residential	Large Commercial	Education with Summer Sessions	HVAC	Boiler Tune-Up	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
539	WS	Non-Residential	Large Commercial	Hospital	HVAC	Boiler Tune-Up	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
540	WS	Non-Residential	Large Commercial	General Large Commercial	HVAC	Boiler Tune-Up	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A

Commercial Measures

Measure ID	Weather Sensitive	MEASURE DESCRIPTION				End Use	Measure Name	PROGRAM	PARTICIPATION REFERENCE CASE					
		Sector	Sub-Sector	Building Type	Program Name				First Year of Participation (So Year)	First Year Participation Rate (So)	Year of Maximum Annual Participation (Smax)	Maximum Annual Participation Rate (Smax)	Final Year of Participation, Fo (<2034 if baseline shift)	Final Year Participation Rate (Fo)
541	WS	Non-Residential	Large Commercial	K12 Education	HVAC	Burner Replacement for Commercial Boilers	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
542	WS	Non-Residential	Large Commercial	Lodging	HVAC	Burner Replacement for Commercial Boilers	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
543	WS	Non-Residential	Large Commercial	Education with Summer Sessions	HVAC	Burner Replacement for Commercial Boilers	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
544	WS	Non-Residential	Large Commercial	Hospital	HVAC	Burner Replacement for Commercial Boilers	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
545	WS	Non-Residential	Large Commercial	General Large Commercial	HVAC	Burner Replacement for Commercial Boilers	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
546	WS	Non-Residential	Large Commercial	K12 Education	HVAC	Efficient Commercial Boilers	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
547	WS	Non-Residential	Large Commercial	Lodging	HVAC	Efficient Commercial Boilers	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
548	WS	Non-Residential	Large Commercial	Education with Summer Sessions	HVAC	Efficient Commercial Boilers	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
549	WS	Non-Residential	Large Commercial	Hospital	HVAC	Efficient Commercial Boilers	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
550	WS	Non-Residential	Large Commercial	General Large Commercial	HVAC	Efficient Commercial Boilers	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
551	NWS	Non-Residential	Small Commercial	All	HVAC	Direct Vent Heaters (Small Commercial)	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
552	WS	Non-Residential	Small Commercial	All	HVAC	Gas Furnace (Small Commercial)	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A
553	WS	Non-Residential	Small Commercial	All	Water Heating	Efficient storage gas water heater	Commercial Prescriptive & Custom	2015	0.104%	2034	0.518647%	2034	0.518647%	
554	WS	Non-Residential	Small Commercial	All	Water Heating	Efficient instantaneous gas water heater	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
555	NWS	Non-Residential	Small Commercial	All	Water Heating	Faucet Aerator	Small Business Solutions	2015	0.400%	2034	1.999995%	2034	1.999995%	
556	NWS	Non-Residential	Large Commercial	All	Water Heating	Faucet Aerator	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	
557	NWS	Non-Residential	Small Commercial	All	Water Heating	Gas WH pipe insulation (Small Commercial)	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	*N/A	

Appendix B: Net-to-Gross Ratios

The table below shows program net-to-gross (NTG) assumptions used in each scenario. The reference case ratios were developed using averages from the sources noted below and based upon ICF expert judgment (e.g., a 0.80 default where data was insufficient for the low and high cases).

Sector	Program	NTG Low Case	NTG Refer- ence Case	NTG High Case
Residential	Residential Lighting & Appliances	0.58	0.65	0.71
Residential	Residential Home Audit & Retrofit	0.75	0.83	0.92
Residential	ENERGY STAR Air Conditioning	0.72	0.80	0.88
Residential	Home Energy Use Benchmarking	1.00	1.00	1.00
Residential	Low-Income Weatherization	1.00	1.00	1.00
Residential	Efficient New Homes	0.81	0.90	0.99
Residential	Multifamily	0.86	0.95	1.00
Residential	Water Heating	0.75	0.83	0.92
Residential	Pool Pump	0.75	0.83	0.92
Residential	Solar Hot Water	0.80	0.80	0.80
Residential	Direct Load Control	1.00	1.00	1.00
Residential	Dynamic Pricing	1.00	1.00	1.00
Commercial	Commercial Prescriptive & Custom	0.68	0.76	0.84
Commercial	Small Business Solutions	0.86	0.95	0.95
Commercial	Non-Residential Dynamic Pricing	1.00	1.00	1.00
Commercial	RetroCommissioning	0.83	0.92	0.95
Commercial	Commercial New Construction	0.68	0.76	0.84
Commercial	Data Center	0.72	0.80	0.88
Industrial	Machine Drive	0.60	0.80	0.80
Industrial	Process Heating	0.60	0.80	0.80
Industrial	Process Cooling and Refrigeration	0.60	0.80	0.80
Industrial	Facility HVAC (Electric)	0.60	0.80	0.80
Industrial	Facility Lighting	0.60	0.80	0.80
Industrial	Other Process/Non-Process Use	0.60	0.80	0.80
Industrial	Boilers	0.60	0.80	0.80
Industrial	HVAC (Gas)	0.60	0.80	0.80
Industrial	All End Uses	0.60	0.80	0.80

Sources:

Fagan J. (Itron); Messenger, M. (Itron); Rufo, M. (Itron); Lai, P. (CPUC). A Meta-Analysis of Net to Gross Estimates in California. April 2009.

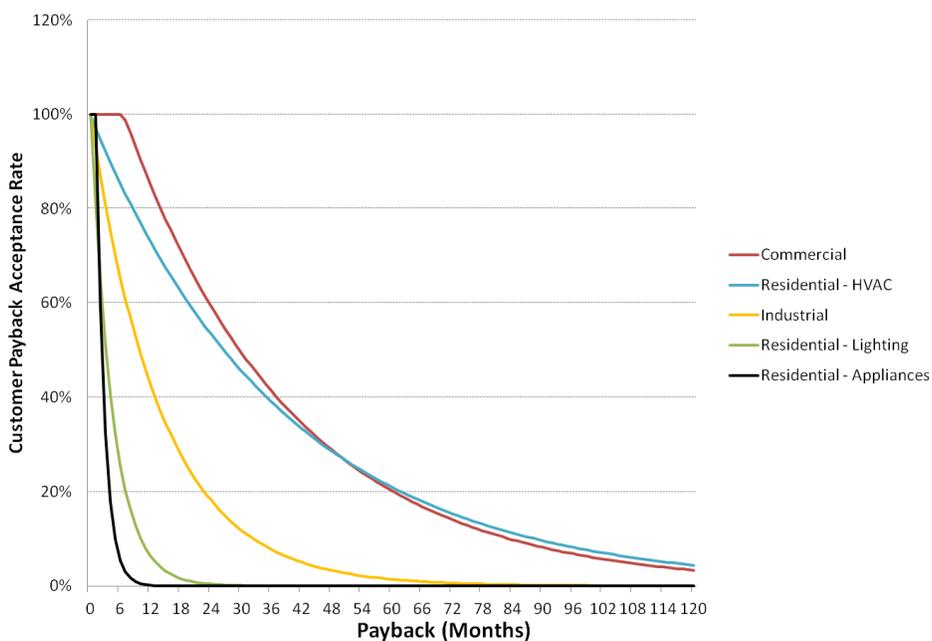
Illinois Stakeholder Advisory Group (ilsag.org). ComEd NTG Recommendations, PY7. February 2014.

Northeast Energy Efficiency Partnerships (NEEP). Regional Energy Efficiency Database (REED). Data acquired by ICF in March 2014.

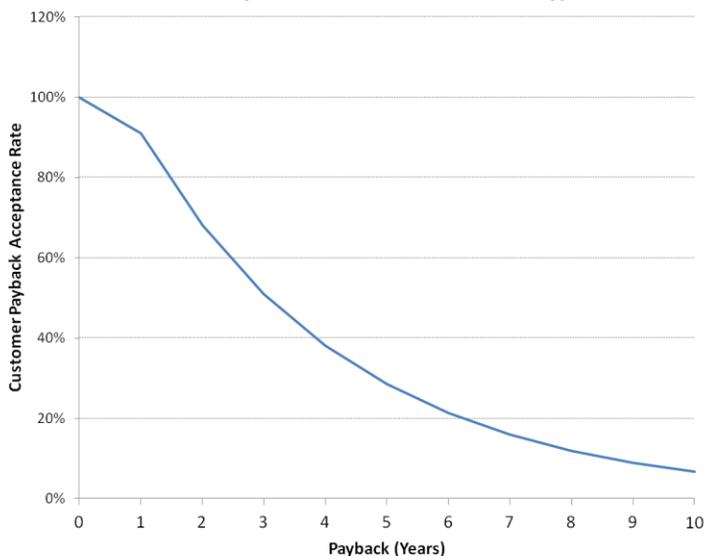
Long-Term Demand Side Management Potential in the Entergy New Orleans Service Area, Final Report, June 2015

Appendix C: Payback Acceptance Curves and Participation Approaches Utilized

Payback Curves¹



Residential Payback Curve – Other Measure Types



¹ To collect the data used to develop the payback curves in the first graph, customers were asked about payback acceptance in months. To collect the data used to develop the "Residential Payback Curve - Other," the survey asked customers about payback acceptance in years.

Long-Term Demand Side Management Potential in the Entergy New Orleans Service Area, Final Report,
June 2015

Payback Acceptance Data Sources:

1. Commercial. ICF survey of 231 non-residential customers on decision making criteria for selecting efficient units. Conducted in 2013 for a confidential utility.
2. Residential HVAC. ICF survey of 300 residential customers on decision making criteria for selecting efficient HVAC units. Conducted in 2013 for a confidential utility.
3. Industrial. U.S. Department of Energy, Industrial Assessment Center (IAC) data on industrial efficient measure implementation in Louisiana. Data accessed in 2014.
4. Residential Lighting. ICF survey of 300 residential customers on decision making criteria for selecting efficient lighting. Conducted in 2013 for a confidential utility.
5. Residential Appliance. ICF survey of 300 residential customers on decision making criteria for selecting efficient appliances. Conducted in 2013 for a confidential utility.
6. Residential - Other Measure Types. Based upon national survey of residential customers by the Shelton Group (2006).

Notes:

- The above payback acceptance curves plot months or years of simple payback against customer stated payback acceptance rates, with the exception of the industrial curve where actual payback from implemented efficiency measures was utilized to develop the curve. As stated in the body of this report, payback acceptance curves were not used in forecasting participation for all measures - they were used only for measures where payback is a valid proxy for financial acceptance.
- The table below shows which Participation Approach (see Approach section of main report for descriptions of Approach A and Approach B) was used by measure group by program, and the payback curve used, where applicable.

Long-Term Demand Side Management Potential in the Entergy New Orleans Service Area, Final Report,
June 2015

Sector	Program Name	Measure Group	Used Payback Curves in Forecasting Participation?	Participation Approach	Payback Acceptance Curve Applied
Residential	Residential Lighting & Appliances	Standard CFL	Yes	A	Residential - Lighting
Residential	Residential Lighting & Appliances	Standard LED	Yes	A	Residential - Lighting
Residential	Residential Lighting & Appliances	Specialty LED	Yes	A	Residential - Lighting
Residential	Residential Lighting & Appliances	Window AC	Yes	A	Residential - Appliances
Residential	Residential Lighting & Appliances	Electronics	Yes	A	Residential - Appliances
Residential	Residential Lighting & Appliances	ENERGY STAR Dehumidifier	Yes	A	Residential - Appliances
Residential	Residential Home Audit & Retrofit	Audit Only	No	B	Not Applicable
Residential	Residential Home Audit & Retrofit	Direct Install	No	B	Not Applicable
Residential	Residential Home Audit & Retrofit	Envelope Upgrades	No	B	Not Applicable
Residential	Residential Home Audit & Retrofit	Misc Upgrades	No	B	Not Applicable
Residential	ENERGY STAR Air Conditioning	Heatpump	Yes	A	Residential - HVAC
Residential	ENERGY STAR Air Conditioning	SEER 13 Baseline	Yes	A	Residential - HVAC
Residential	ENERGY STAR Air Conditioning	SEER 14 Baseline	Yes	A	Residential - HVAC
Residential	ENERGY STAR Air Conditioning	SEER 13 Baseline - Minisplits	Yes	A	Residential - HVAC
Residential	ENERGY STAR Air Conditioning	SEER 14 Baseline - Minisplits	Yes	A	Residential - HVAC
Residential	ENERGY STAR Air Conditioning	Heatpump - Minisplits	Yes	A	Residential - HVAC
Residential	ENERGY STAR Air Conditioning	AC Tune-up	Yes	A	Residential - HVAC
Residential	Home Energy Use Benchmarking		No	B	Not Applicable
Residential	Low-Income Weatherization		No	B	Not Applicable
Residential	Efficient New Homes	Lighting	No	B	Not Applicable
Residential	Efficient New Homes	Non-Lighting 2015	No	B	Not Applicable
Residential	Efficient New Homes	Non-Lighting 2016 and beyond	No	B	Not Applicable
Residential	Multifamily	Audit Only	No	B	Not Applicable
Residential	Multifamily	Direct Install	No	B	Not Applicable
Residential	Multifamily	Common Area	No	B	Not Applicable
Residential	Water Heating	Efficient water heating	Yes	A	Residential - Other Measure Types
Residential	Pool Pump	Efficient Pool Pump	Yes	A	Residential - Other Measure Types
Residential	Direct Load Control		No	B	Not Applicable
Residential	Dynamic Pricing	Non-Enabled Dynamic Pricing	No	B	Not Applicable
Residential	Solar Hot Water	Solar Hot Water Heater (LA Tax Credit inc. through 2017)	No	B	Not Applicable
Residential	Solar Hot Water	Solar Hot Water (post LA Tax credit version, 2018-2034)	No	B	Not Applicable
Commercial	Commercial Prescriptive & Custom	Unitary HVAC 2015	Yes	A	Commercial
Commercial	Commercial Prescriptive & Custom	Unitary HVAC 2016 and beyond	Yes	A	Commercial
Commercial	Commercial Prescriptive & Custom	Chillers	Yes	A	Commercial
Commercial	Commercial Prescriptive & Custom	VFD	Yes	A	Commercial
Commercial	Commercial Prescriptive & Custom	Other HVAC	Yes	A	Commercial
Commercial	Commercial Prescriptive & Custom	Reduced Wattage T8/T5 Lamps	Yes	A	Commercial
Commercial	Commercial Prescriptive & Custom	Linear Florescent Fixture Upgrade	Yes	A	Commercial
Commercial	Commercial Prescriptive & Custom	Commercial Standard CFL	Yes	A	Commercial
Commercial	Commercial Prescriptive & Custom	A-Line LED Bulbs	Yes	A	Commercial
Commercial	Commercial Prescriptive & Custom	Reflector LED Bulbs	Yes	A	Commercial
Commercial	Commercial Prescriptive & Custom	Efficient High Bay Lighting	Yes	A	Commercial
Commercial	Commercial Prescriptive & Custom	Lighting Controls	Yes	A	Commercial
Commercial	Commercial Prescriptive & Custom	LED Exit Signs	Yes	A	Commercial
Commercial	Commercial Prescriptive & Custom	Refrigeration	Yes	A	Commercial
Commercial	Commercial Prescriptive & Custom	Water Heating	Yes	A	Commercial
Commercial	Commercial Prescriptive & Custom	Food Service	Yes	A	Commercial
Commercial	Small Business Solutions	AC Tune-up	Yes	A	Commercial
Commercial	Small Business Solutions	Lighting Direct Install	Yes	A	Commercial
Commercial	Small Business Solutions	Refrigeration Direct Install	Yes	A	Commercial
Commercial	Small Business Solutions	Plumbing Fixture Direct Install	Yes	A	Commercial
Commercial	Small Business Solutions	Other	Yes	A	Commercial
Commercial	Non-Residential Dynamic Pricing	Non-Enabled Dynamic Pricing	No	B	Not Applicable
Commercial	RetroCommissioning	RCx of 100,000+ sqft Commercial Buildings	No	B	Not Applicable
Commercial	RetroCommissioning	RCx of Mid-size Commercial Buildings	No	B	Not Applicable
Commercial	Commercial New Construction	ASHRAE90.1-2010 Baseline	No	B	Not Applicable
Commercial	Commercial New Construction	ASHRAE90.1-2013 Baseline	No	B	Not Applicable
Commercial	Data Center		No	B	Not Applicable
Industrial	Machine Drive		Yes	A	Industrial
Industrial	Process Heating		Yes	A	Industrial
Industrial	Process Cooling and Refrigeration		Yes	A	Industrial
Industrial	Facility HVAC (Electric)		Yes	A	Industrial
Industrial	Facility Lighting		Yes	A	Industrial
Industrial	Other Process/Non-Process Use		Yes	A	Industrial
Industrial	Boilers		Yes	A	Industrial
Industrial	HVAC (Gas)		Yes	A	Industrial
Industrial	All End Uses		Yes	A	Industrial

Appendix D: Program Level Savings, Costs and Cost-Effectiveness

Cumulative MWh Savings Forecast, ENO

Program Name	Sector	Reference Case				Low Case				High Case			
		Year 5	Year 10	Year 15	Year 20	Year 5	Year 10	Year 15	Year 20	Year 5	Year 10	Year 15	Year 20
		2019	2024	2029	2034	2019	2024	2029	2034	2019	2024	2029	2034
Residential Lighting & Appliances	Residential	35,459	43,647	38,440	39,395	20,367	28,173	23,773	24,386	60,310	62,718	55,266	56,340
Residential Home Audit & Retrofit	Residential	2,164	5,564	8,478	11,134	1,243	3,437	5,151	6,610	6,160	17,023	27,067	36,487
ENERGY STAR Air Conditioning	Residential	7,408	18,818	27,343	29,953	5,200	14,914	22,904	26,016	9,663	23,226	33,034	35,683
Home Energy Use Benchmarking	Residential	2,200	2,250	2,301	2,353	1,100	1,125	1,150	1,176	4,401	4,500	4,602	4,706
Low-Income Weatherization	Residential	1,385	2,802	3,976	4,065	1,385	2,802	3,976	4,065	1,385	2,802	3,976	4,065
Efficient New Homes	Residential	556	1,002	1,152	1,453	239	440	512	654	672	1,213	1,394	1,758
Multifamily	Residential	2,725	2,556	667	682	2,319	2,364	739	614	2,869	2,691	702	718
Water Heating	Residential	1,052	2,691	4,145	4,404	395	1,141	1,847	2,053	1,612	3,907	5,856	6,154
Pool Pump	Residential	1,326	3,391	4,190	4,298	524	1,513	2,033	2,113	1,676	4,061	4,835	4,954
Direct Load Control	Residential	0	0	0	0	0	0	0	0	0	0	0	0
Dynamic Pricing	Residential	0	0	0	0	0	0	0	0	0	0	0	0
Solar Hot Water	Residential	18	30	41	53	18	30	41	53	36	59	83	107
Commercial Prescriptive & Custom	Commercial	48,828	130,994	178,705	188,648	28,475	83,899	119,879	128,909	100,609	243,648	319,241	339,420
Small Business Solutions	Commercial	3,952	10,904	17,663	20,737	1,085	3,298	5,503	6,622	4,971	12,098	18,861	21,101
Non-Residential Dynamic Pricing	Commercial	0	0	0	0	0	0	0	0	0	0	0	0
RetroCommissioning	Commercial	12,006	12,322	8,017	8,017	5,403	5,545	3,608	3,608	18,596	19,086	12,418	12,418
Commercial New Construction	Commercial	2,292	9,118	15,944	20,478	1,784	4,487	7,190	8,109	6,803	15,312	23,822	25,529
Data Center	Commercial	5,093	10,186	12,224	12,224	4,584	9,168	11,001	11,001	8,404	16,808	20,169	20,169
Machine Drive	Industrial	809	1,936	2,913	3,161	607	1,452	2,185	2,371	827	1,952	2,926	3,160
Process Heating	Industrial	756	2,029	2,955	3,498	567	1,522	2,217	2,623	862	2,124	3,023	3,513
Process Cooling and Refrigeration	Industrial	603	1,725	2,539	2,708	413	1,173	1,716	1,815	739	1,935	2,750	2,836
Facility HVAC	Industrial	2,771	7,373	10,163	10,465	1,779	4,760	6,466	6,682	3,201	8,126	11,070	11,236
Facility Lighting	Industrial	2,467	6,663	9,236	9,305	1,555	4,349	6,095	6,246	2,738	7,062	9,533	9,413
Other Process/Non-Process Use	Industrial	129	458	747	976	97	343	560	732	156	496	777	999
Total DSM Portfolio		134,000	276,461	351,840	378,007	79,139	175,935	228,547	246,459	236,690	450,846	561,405	600,766

Long-Term Demand Side Management Potential in the Entergy Louisiana and Entergy New Orleans Service Area, Final Report, June 2015

Cumulative MW Savings Forecast, ENO

Program Name	Sector	Reference Case				Low Case				High Case			
		Year 5	Year 10	Year 15	Year 20	Year 5	Year 10	Year 15	Year 20	Year 5	Year 10	Year 15	Year 20
		2019	2024	2029	2034	2019	2024	2029	2034	2019	2024	2029	2034
Residential Lighting & Appliances	Residential	7.6	9.4	8.2	8.4	4.4	6.0	5.0	5.1	13.1	13.7	12.1	12.3
Residential Home Audit & Retrofit	Residential	0.7	1.7	2.7	3.5	0.4	1.0	1.5	2.0	2.0	5.5	8.8	11.9
ENERGY STAR Air Conditioning	Residential	2.1	5.4	7.7	8.4	1.5	4.3	6.5	7.3	2.8	6.7	9.3	9.9
Home Energy Use Benchmarking	Residential	0.5	0.5	0.5	0.5	0.3	0.3	0.3	0.3	1.0	1.0	1.1	1.1
Low-Income Weatherization	Residential	0.4	0.8	1.1	1.1	0.4	0.8	1.1	1.1	0.4	0.8	1.1	1.1
Efficient New Homes	Residential	0.1	0.2	0.3	0.4	0.0	0.1	0.1	0.2	0.1	0.3	0.4	0.5
Multifamily	Residential	0.2	0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.2	0.1	0.0	0.0
Water Heating	Residential	0.1	0.2	0.4	0.4	0.0	0.1	0.2	0.2	0.1	0.3	0.5	0.5
Pool Pump	Residential	0.3	0.7	0.9	0.9	0.1	0.3	0.4	0.5	0.4	0.9	1.1	1.1
Direct Load Control	Residential	18.7	23.8	24.3	24.9	9.3	11.9	12.2	12.4	18.7	23.8	24.3	24.9
Dynamic Pricing	Residential	1.5	3.8	4.5	4.7	0.8	1.9	2.3	2.3	1.5	3.8	4.5	4.7
Solar Hot Water	Residential	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Commercial Prescriptive & Custom	Commercial	11.5	30.8	41.3	42.7	6.7	19.6	27.6	29.1	24.7	59.9	77.9	82.3
Small Business Solutions	Commercial	0.9	2.3	3.3	3.8	0.2	0.7	1.0	1.2	1.1	2.5	3.5	3.9
Non-Residential Dynamic Pricing	Commercial	2.1	4.4	4.5	4.7	1.1	2.2	2.3	2.3	2.1	4.4	4.5	4.7
RetroCommissioning	Commercial	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.3	0.3	0.2	0.2
Commercial New Construction	Commercial	0.2	0.9	1.6	2.1	0.2	0.5	0.7	0.8	0.7	1.5	2.4	2.6
Data Center	Commercial	0.6	1.2	1.4	1.4	0.5	1.0	1.3	1.3	1.0	1.9	2.3	2.3
Machine Drive	Industrial	0.1	0.2	0.3	0.4	0.1	0.2	0.2	0.3	0.1	0.2	0.3	0.4
Process Heating	Industrial	0.1	0.2	0.3	0.4	0.1	0.2	0.3	0.3	0.1	0.2	0.3	0.4
Process Cooling and Refrigeration	Industrial	0.1	0.2	0.3	0.3	0.0	0.1	0.2	0.2	0.1	0.2	0.3	0.3
Facility HVAC	Industrial	0.3	0.8	1.2	1.2	0.2	0.5	0.7	0.8	0.4	0.9	1.3	1.3
Facility Lighting	Industrial	0.3	0.8	1.1	1.1	0.2	0.5	0.7	0.8	0.3	0.9	1.2	1.2
Other Process/Non-Process Use	Industrial	0.0	0.1	0.1	0.1	0.0	0.0	0.1	0.1	0.0	0.1	0.1	0.1
Total DSM Portfolio		48.6	88.8	106.4	111.6	26.7	52.4	64.8	68.6	71.3	129.9	157.6	167.6

Long-Term Demand Side Management Potential in the Entergy Louisiana and Entergy New Orleans Service Area, Final Report, June 2015

Cumulative Gas Savings Forecast, ENO, 1000s Therms

Program Name	Sector	Reference Case				Low Case				High Case			
		Year 5	Year 10	Year 15	Year 20	Year 5	Year 10	Year 15	Year 20	Year 5	Year 10	Year 15	Year 20
		2019	2024	2029	2034	2019	2024	2029	2034	2019	2024	2029	2034
Residential Lighting & Appliances	Residential	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Residential Home Audit & Retrofit	Residential	66.9	173.5	258.1	327.4	43.1	120.5	177.0	215.5	175.3	485.8	762.8	1006.9
ENERGY STAR Air Conditioning	Residential	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Home Energy Use Benchmarking	Residential	17.2	17.6	18.0	18.4	8.6	8.8	9.0	9.2	34.4	35.2	36.0	36.8
Low-Income Weatherization	Residential	17.7	35.9	50.9	52.0	17.7	35.9	50.9	52.0	17.7	35.9	50.9	52.0
Efficient New Homes	Residential	1.7	1.7	1.7	1.7	0.8	0.8	0.8	0.8	2.1	2.1	2.1	2.1
Multifamily	Residential	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Water Heating	Residential	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pool Pump	Residential	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Direct Load Control	Residential	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Dynamic Pricing	Residential	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Solar Hot Water	Residential	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Commercial Prescriptive & Custom	Commercial	0.1	0.3	0.5	0.7	0.0	0.1	0.2	0.3	0.7	1.7	2.8	3.2
Small Business Solutions	Commercial	9.3	26.6	35.1	35.7	5.3	16.6	23.3	24.1	11.6	29.4	35.6	35.7
Non-Residential Dynamic Pricing	Commercial	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
RetroCommissioning	Commercial	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Commercial New Construction	Commercial	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Data Center	Commercial	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Machine Drive	Industrial	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Process Heating	Industrial	28.4	70.2	107.9	136.5	27.7	68.1	104.3	131.7	31.8	78.4	121.0	152.5
Process Cooling and Refrigeration	Industrial	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Facility HVAC (Electric)	Industrial	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Facility Lighting	Industrial	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other Process/Non-Process Use	Industrial	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Boilers	Industrial	4.7	11.8	17.1	20.5	4.2	9.9	13.5	15.7	8.7	20.6	28.8	32.8
HVAC (Gas)	Industrial	0.7	1.8	2.5	2.8	0.7	1.8	2.3	2.4	1.2	3.1	4.3	4.7
All End Uses	Industrial	11.1	30.4	40.4	38.5	2.4	6.9	9.8	10.3	3.0	8.7	12.5	13.4
Total DSM Portfolio		157.9	369.9	532.3	634.2	110.5	269.3	391.1	462.0	286.5	700.8	1056.7	1340.0

Long-Term Demand Side Management Potential in the Entergy Louisiana and Entergy New Orleans Service Area, Final Report, June 2015

Annual Program Cost Forecast (2014 \$Millions), ENO

Program Name	Sector	Reference Case				Low Case				High Case			
		Year 5	Year 10	Year 15	Year 20	Year 5	Year 10	Year 15	Year 20	Year 5	Year 10	Year 15	Year 20
		2019	2024	2029	2034	2019	2024	2029	2034	2019	2024	2029	2034
Residential Lighting & Appliances	Residential	\$1.85	\$0.62	\$0.35	\$0.39	\$1.00	\$0.42	\$0.29	\$0.33	\$5.91	\$1.53	\$1.41	\$1.59
Residential Home Audit & Retrofit	Residential	\$0.81	\$0.91	\$1.03	\$1.16	\$0.46	\$0.52	\$0.59	\$0.67	\$3.57	\$4.04	\$4.56	\$5.14
ENERGY STAR Air Conditioning	Residential	\$0.78	\$0.93	\$1.06	\$1.19	\$0.49	\$0.66	\$0.75	\$0.85	\$1.89	\$2.21	\$2.50	\$2.82
Home Energy Use Benchmarking	Residential	\$0.12	\$0.13	\$0.15	\$0.17	\$0.06	\$0.07	\$0.07	\$0.08	\$0.28	\$0.31	\$0.35	\$0.40
Low-Income Weatherization	Residential	\$0.44	\$0.50	\$0.57	\$0.64	\$0.44	\$0.50	\$0.57	\$0.64	\$0.44	\$0.50	\$0.57	\$0.64
Efficient New Homes	Residential	\$0.07	\$0.08	\$0.09	\$0.10	\$0.02	\$0.02	\$0.03	\$0.03	\$0.13	\$0.15	\$0.17	\$0.19
Multifamily	Residential	\$0.02	\$0.02	\$0.02	\$0.02	\$0.02	\$0.02	\$0.03	\$0.03	\$0.02	\$0.02	\$0.02	\$0.03
Water Heating	Residential	\$0.14	\$0.16	\$0.18	\$0.21	\$0.04	\$0.05	\$0.06	\$0.07	\$0.30	\$0.35	\$0.40	\$0.45
Pool Pump	Residential	\$0.16	\$0.19	\$0.22	\$0.25	\$0.05	\$0.07	\$0.08	\$0.09	\$0.22	\$0.26	\$0.30	\$0.34
Direct Load Control	Residential	\$0.65	\$0.74	\$0.83	\$0.94	\$0.31	\$0.35	\$0.40	\$0.45	\$0.65	\$0.74	\$0.83	\$0.94
Dynamic Pricing	Residential	\$0.25	\$0.25	\$0.25	\$0.25	\$0.20	\$0.20	\$0.20	\$0.20	\$0.25	\$0.25	\$0.25	\$0.25
Solar Hot Water	Residential	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.01	\$0.02	\$0.02	\$0.02
Commercial Prescriptive & Custom	Commercial	\$5.61	\$7.35	\$8.16	\$9.01	\$3.07	\$4.23	\$4.71	\$5.20	\$17.24	\$19.87	\$21.95	\$24.24
Small Business Solutions	Commercial	\$0.87	\$1.15	\$1.28	\$1.41	\$0.17	\$0.24	\$0.27	\$0.30	\$0.99	\$1.17	\$1.29	\$1.42
Non-Residential Dynamic Pricing	Commercial	\$0.25	\$0.25	\$0.25	\$0.25	\$0.25	\$0.25	\$0.25	\$0.25	\$0.25	\$0.25	\$0.25	\$0.25
RetroCommissioning	Commercial	\$0.61	\$0.31	\$0.34	\$0.37	\$0.39	\$0.13	\$0.13	\$0.14	\$0.85	\$0.43	\$0.47	\$0.52
Commercial New Construction	Commercial	\$0.19	\$0.32	\$0.35	\$0.39	\$0.11	\$0.10	\$0.11	\$0.12	\$0.67	\$0.79	\$0.87	\$0.96
Data Center	Commercial	\$0.32	\$0.35	\$0.39	\$0.43	\$0.16	\$0.34	\$0.35	\$0.36	\$0.62	\$0.68	\$0.74	\$0.81
Machine Drive	Industrial	\$0.07	\$0.08	\$0.08	\$0.08	\$0.04	\$0.04	\$0.04	\$0.04	\$0.08	\$0.10	\$0.10	\$0.10
Process Heating	Industrial	\$0.10	\$0.13	\$0.12	\$0.11	\$0.05	\$0.07	\$0.06	\$0.06	\$0.15	\$0.17	\$0.16	\$0.16
Process Cooling and Refrigeration	Industrial	\$0.06	\$0.08	\$0.07	\$0.07	\$0.03	\$0.04	\$0.04	\$0.03	\$0.09	\$0.10	\$0.09	\$0.09
Facility HVAC (Electric)	Industrial	\$0.23	\$0.26	\$0.25	\$0.23	\$0.10	\$0.12	\$0.12	\$0.11	\$0.32	\$0.35	\$0.32	\$0.30
Facility Lighting	Industrial	\$0.20	\$0.23	\$0.20	\$0.18	\$0.09	\$0.11	\$0.10	\$0.09	\$0.27	\$0.29	\$0.25	\$0.23
Other Process/Non-Process Use	Industrial	\$0.01	\$0.02	\$0.02	\$0.01	\$0.01	\$0.01	\$0.01	\$0.01	\$0.02	\$0.02	\$0.02	\$0.02
Boilers	Industrial	\$0.00	\$0.01	\$0.01	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.01	\$0.01	\$0.01	\$0.01
HVAC (Gas)	Industrial	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
All End Uses	Industrial	\$0.01	\$0.01	\$0.01	\$0.01	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.01	\$0.01	\$0.01
Total DSM Portfolio		\$13.80	\$15.06	\$16.24	\$17.86	\$7.56	\$8.59	\$9.25	\$10.14	\$35.24	\$34.57	\$37.89	\$41.89

DSM Benefit-Cost Ratios - ENO

Program Name	Sector	Reference Case				Low Case				High Case			
		TRC	PAC	RIM	PCT	TRC	PAC	RIM	PCT	TRC	PAC	RIM	PCT
Residential Lighting & Appliances	Residential	2.1	3.4	0.6	5.8	2.0	3.8	0.6	5.8	1.5	1.6	0.5	5.9
Residential Home Audit & Retrofit	Residential	0.9	1.2	0.5	2.2	0.7	1.3	0.5	1.7	0.9	0.9	0.4	3.0
ENERGY STAR Air Conditioning	Residential	1.3	2.7	0.6	2.3	1.2	3.4	0.6	2.2	1.1	1.4	0.5	2.6
Home Energy Use Benchmarking	Residential	1.7	1.7	0.5	3.7	1.6	1.6	0.5	3.7	1.4	1.4	0.4	3.7
Low-Income Weatherization	Residential	0.7	0.7	0.4	2.8	0.7	0.7	0.4	2.8	0.7	0.7	0.4	2.8
Efficient New Homes	Residential	0.8	1.6	0.5	1.8	0.9	2.3	0.6	1.7	0.7	1.0	0.4	2.0
Multifamily	Residential	1.6	1.8	0.4	5.6	1.2	1.4	0.4	5.6	1.5	1.8	0.4	5.6
Water Heating	Residential	1.3	1.7	0.4	3.8	1.3	2.4	0.5	3.4	1.1	1.1	0.4	4.0
Pool Pump	Residential	1.4	1.8	0.5	3.3	1.3	2.5	0.6	2.9	1.3	1.5	0.5	3.3
Direct Load Control	Residential	4.1	4.1	3.8	1.0	4.3	4.3	4.0	1.0	4.1	4.1	3.8	1.0
Dynamic Pricing	Residential	1.9	1.9	1.8	0.0	1.2	1.2	1.1	0.0	1.9	1.9	1.8	0.0
Solar Hot Water	Residential	0.5	1.3	0.4	1.2	0.5	1.3	0.4	1.2	0.4	0.4	0.2	1.9
Commercial Prescriptive & Custom	Commercial	1.5	2.1	0.6	3.4	1.5	2.4	0.6	3.7	1.3	1.5	0.5	2.9
Small Business Solutions	Commercial	1.2	1.3	0.5	3.3	1.3	2.0	0.5	3.2	1.3	1.3	0.5	3.4
Non-Residential Dynamic Pricing	Commercial	2.0	2.0	1.8	0.0	1.0	1.0	0.9	0.0	2.0	2.0	1.8	0.0
RetroCommissioning	Commercial	1.3	1.6	0.4	7.8	1.1	1.3	0.4	7.6	1.6	1.8	0.4	8.0
Commercial New Construction	Commercial	2.0	4.1	0.6	4.2	2.0	4.6	0.6	4.1	1.7	2.1	0.5	4.6
Data Center	Commercial	1.6	2.3	0.5	4.8	1.6	2.8	0.5	4.6	1.6	2.0	0.5	5.0
Machine Drive	Industrial	3.9	2.7	0.7	83.1	4.8	3.8	0.7	79.3	3.2	2.2	0.6	85.1
Process Heating	Industrial	0.0	3.0	0.7	0.0	0.0	4.2	0.8	0.0	0.0	2.4	0.7	0.0
Process Cooling and Refrigeration	Industrial	3.0	2.5	0.7	20.1	3.6	3.4	0.7	22.3	2.5	2.0	0.6	19.2
Facility HVAC (Electric)	Industrial	2.9	2.9	0.7	11.3	3.5	4.0	0.7	12.4	2.5	2.3	0.7	10.7
Facility Lighting	Industrial	3.5	3.0	0.7	19.0	4.3	4.3	0.8	20.4	2.9	2.4	0.7	18.7
Other Process/Non-Process Use	Industrial	5.9	4.2	0.8	92.7	7.2	5.9	0.8	90.0	4.8	3.3	0.7	94.1
Boilers	Industrial	2.3	2.1	1.0	6.8	3.8	3.8	1.2	7.9	1.6	1.4	0.8	6.0
HVAC (Gas)	Industrial	2.6	2.0	1.0	10.7	5.0	3.9	1.2	21.0	1.8	1.4	0.8	8.3
All End Uses	Industrial	2.2	1.8	0.9	8.9	3.9	3.5	1.2	10.0	1.6	1.2	0.7	9.7
Total DSM Portfolio		1.5	2.1	0.6	3.3	1.5	2.3	0.6	3.3	1.3	1.5	0.5	3.1

Appendix E: Benchmarking Data

This Appendix shows data used for benchmarking incremental electric savings impacts. The table includes data from programs in the South. It includes the program administrator, the program year, the state in which the administrator operates, and the total reported incremental (annual) program savings for that year as a % of electric sales. The data is sorted from highest savings % to lowest.

	Program Administrator	Year	State	Incremental Savings as % of Sales
1	Tennessee Valley Authority - MS	2011	MS	1.26%
2	Austin Energy	2011	TX	0.91%
3	Austin Energy	2012	TX	0.80%
4	Tennessee Valley Authority - MS	2012	MS	0.76%
5	Gulf Power Co.	2012	FL	0.76%
6	Austin Energy	2010	TX	0.74%
7	Duke Energy Carolinas	2010	NC	0.68%
8	Duke Energy - SC	2010	SC	0.66%
9	JEA	2012	FL	0.66%
10	Duke Energy Carolinas	2011	NC	0.63%
11	Duke Energy - SC	2011	SC	0.63%
12	South Carolina Electric & Gas	2012	SC	0.57%
13	JEA	2011	FL	0.57%
14	CPS Energy	2012	TX	0.55%
15	Duke Energy - SC	2012	SC	0.52%
16	Duke Energy Carolinas	2012	NC	0.51%
17	Progress Energy Carolinas	2012	NC	0.44%
18	City of Tallahassee	2010	FL	0.44%
19	AEP - Southwestern Electric Power Co.	2012	AR	0.44%
20	AEP - PSO - OK	2012	OK	0.42%
21	City of Tallahassee	2011	FL	0.40%
22	South Carolina Electric & Gas	2011	SC	0.40%
23	Gulf Power Co.	2011	FL	0.38%
24	Oklahoma Gas & Electric - AR	2011	AR	0.38%
25	El Paso Electric - TX	2011	TX	0.36%
26	Oklahoma Gas & Electric - OK	2010	OK	0.35%
27	Progress Energy Carolinas	2011	NC	0.35%
28	El Paso Electric - TX	2012	TX	0.35%
29	El Paso Electric - TX	2010	TX	0.34%
30	CPS Energy	2011	TX	0.34%

Long-Term Demand Side Management Potential in the Entergy New Orleans Service Area, Final Report,
June 2014

	Program Administrator	Year	State	Incremental Savings as % of Sales
31	Tampa Electric	2012	FL	0.31%
32	AEP - PSO - OK	2011	OK	0.31%
33	Progress Energy Florida	2012	FL	0.30%
34	Progress Energy Florida	2010	FL	0.30%
35	Oklahoma Gas & Electric - AR	2012	AR	0.30%
36	Xcel Energy - Texas	2011	TX	0.30%
37	Progress Energy Florida	2011	FL	0.30%
38	CPS Energy	2010	TX	0.29%
39	Progress Energy Carolinas - SC	2011	SC	0.29%
40	Progress Energy Carolinas - SC	2012	SC	0.28%
41	Tampa Electric	2011	FL	0.28%
42	Progress Energy Carolinas	2010	NC	0.28%
43	City of Tallahassee	2012	FL	0.28%
44	Georgia Power Co.	2012	GA	0.28%
45	AEP - Southwestern Electric Power Co.	2011	AR	0.26%
46	AEP - Southwestern Electric Power Co.	2010	AR	0.26%
47	Oklahoma Gas & Electric - OK	2011	OK	0.26%
48	Xcel Energy - Texas	2012	TX	0.25%
49	Xcel Energy - Texas	2010	TX	0.25%
50	Tennessee Valley Authority - MS	2010	MS	0.25%
51	Oklahoma Gas & Electric - AR	2010	AR	0.24%
52	Florida Power & Light	2011	FL	0.23%
53	JEA	2010	FL	0.21%
54	Progress Energy Carolinas - SC	2010	SC	0.21%
55	Entergy Texas	2012	TX	0.21%
56	Oklahoma Gas & Electric - OK	2012	OK	0.21%
57	AEP - PSO - OK	2010	OK	0.20%
58	Entergy Arkansas	2010	AR	0.20%
59	Entergy Arkansas	2011	AR	0.19%
60	Florida Power & Light	2012	FL	0.19%
61	Florida Power & Light	2010	FL	0.18%
62	Entergy Texas	2010	TX	0.18%
63	Tampa Electric	2010	FL	0.17%
64	Georgia Power Co.	2011	GA	0.16%
65	Mississippi Power Company	2010	MS	0.16%
66	Mississippi Power Company	2011	MS	0.15%
67	Santee Cooper	2011	SC	0.15%
68	Dominion	2011	VA	0.14%
69	Entergy Texas	2011	TX	0.13%

Long-Term Demand Side Management Potential in the Entergy New Orleans Service Area, Final Report,
June 2014

	Program Administrator	Year	State	Incremental Savings as % of Sales
70	Entergy Arkansas	2012	AR	0.12%
71	Santee Cooper	2010	SC	0.12%
72	Santee Cooper	2012	SC	0.12%
73	Gulf Power Co.	2010	FL	0.07%
74	Georgia Power Co.	2010	GA	0.04%
75	Dominion	2012	VA	0.03%
76	Alabama Power Company	2012	AL	0.03%

Source: U.S. EIA Form 861 data for 2010, 2011, and 2012

Appendix F: Avoided Costs and Retail Rates

Cost type	Sector	Unit	Base	Year 5	Year 10	Year 15	Year 20
			Year (2014)	(2019)	(2024)	(2029)	(2034)
Avoided	All	kWh	\$0.04	\$0.05	\$0.06	\$0.07	\$0.08
Avoided	All	kW	\$24	\$45	\$154	\$171	\$189
Avoided	All	therm	\$0.42	\$0.50	\$0.62	\$0.75	\$0.84
Retail	Residential	kWh	\$0.11	\$0.12	\$0.13	\$0.14	\$0.16
Retail	Small Commercial	kWh	\$0.10	\$0.12	\$0.13	\$0.14	\$0.16
Retail	Large Commercial	kWh	\$0.09	\$0.10	\$0.11	\$0.12	\$0.13
Retail	Industrial	kWh	\$0.07	\$0.08	\$0.09	\$0.10	\$0.11
Retail	Residential	therm	\$0.40	\$0.44	\$0.49	\$0.54	\$0.60
Retail	Small Commercial	therm	\$0.30	\$0.33	\$0.37	\$0.40	\$0.45
Retail	Large Commercial	therm	\$0.30	\$0.33	\$0.37	\$0.40	\$0.45
Retail	Industrial	therm	\$0.30	\$0.33	\$0.37	\$0.40	\$0.45

Discount rate: 7.1%

Notes: Avoided costs reflect average values.
Retail rates reflect average rates paid in 2013 and include kW charges.

Sources: Entergy SPO
Entergy New Orleans

SPO PLANNING ANALYSIS

GENERATION TECHNOLOGY ASSESSMENT

Technology Cost & Performance

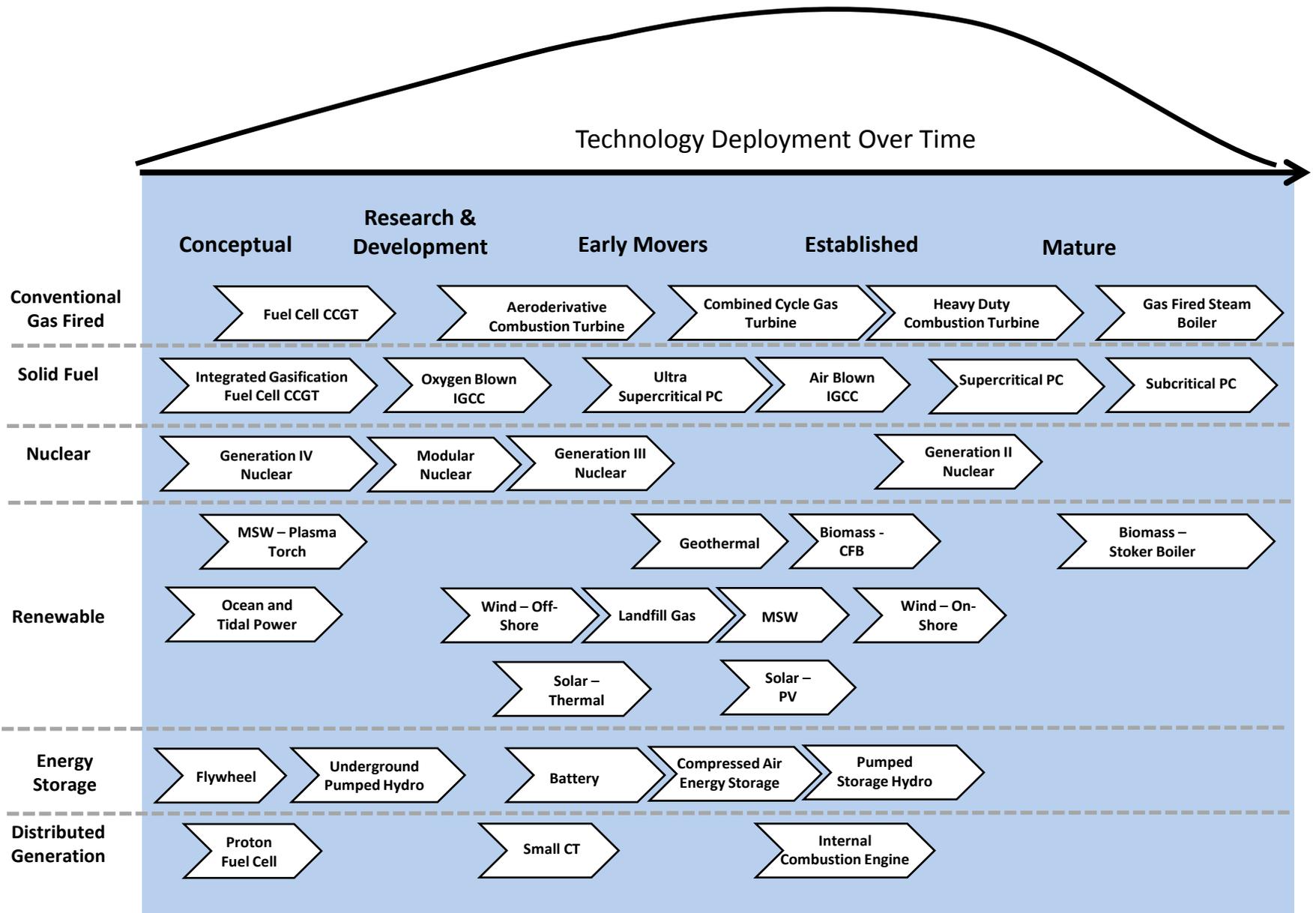
OCTOBER 2014



TECHNOLOGY ASSESSMENT PROCESS & OVERVIEW

- An understanding of generation technology cost and performance is a necessary input to planning and decision support activities. SPO Planning Analysis monitors and assesses generation alternatives on an on-going basis. This analysis uses a **generic long-term capital structure** of 11.0% ROE and 7.0% long-term debt and assumes 50% equity and 50% debt.
- The process has **two main steps**. First a screening level analysis is performed and then a detailed analysis is performed.
- The 2014 Generation Technology Assessment began by surveying available central state electricity generation technologies, generally those that are two megawatts or greater. The objective is to identify a reasonably wide a range of generation technologies. The initial list was subject to a screening analysis to identify generation technologies that are technologically mature and could reasonably be expected to be operational in or around the Entergy regulated service territory.
- The Entergy Operating Companies prefer technologies that are **proven on a commercial scale**. Some technologies identified in this document lack the commercial track record to demonstrate their technical and operational feasibility. A cautious approach to technology development and deployment is therefore reasonable and appropriate in order to maintain System reliability and to protect Operating Company customers from undue risks. The Entergy Operating Companies generally do not plan to be the “first movers” for emerging, unproven technologies.
- SPO Planning Analysis through this Technology Screen has selected certain traditional and renewable generation technology alternatives which may reasonably be expected to meet primary objectives of cost, risk mitigation, and reliability. For each selected technology Planning Analysis developed the necessary cost and performance parameter inputs into the detailed modeling used to develop the reference technologies comprising the IRP Portfolio.
- SPO Planning Analysis will monitor the technologies eliminated as a result of the initial screen and incorporate changes into future technology assessments and IRPs.

A VARIETY OF SUPPLY SIDE RESOURCES ALTERNATIVES ARE AVAILABLE



TECHNOLOGIES SCREENED

- Pulverized Coal
 - Subcritical Pulverized Coal
 - Supercritical Pulverized Coal
 - Ultra Supercritical Pulverized Coal
- Fluidized Bed
 - Atmospheric Fluidized Bed
 - Pressurized Fluidized Bed
- Integrated Gasification (“IGCC”)
 - Oxygen-Blown IGCC
 - Air-Blown IGCC
 - Integrated Gasification Fuel Cell Combined Cycle
- Combustion Turbine / Combined Cycle / Other Natural Gas
 - Combustion Turbine
 - Combined Cycle
 - Large & Small Scale Aeroderivative
 - Steam Boiler
- Fuel Cells
 - Molten Carbonate
 - Solid Oxide
 - Phosphoric Acid
 - Proton Exchange Membrane
 - Fuel Cell Combined Cycle
- Nuclear
 - Advanced Boiling Water Reactor
 - Generation IV
 - Modular Reactors
- Energy Storage
 - Pumped Hydro
 - Underground Pumped Hydro
 - Battery
 - Flywheel
 - Compressed Air Energy Storage
- Renewable Technologies
 - Biomass
 - Solar Photovoltaic (Fixed Tile and Tracking)
 - Solar Thermal
 - Wind Power
 - Municipal Solid Waste
 - Landfill Gas
 - Geothermal
 - Ocean & Tidal

TECHNOLOGIES SELECTED FOR DETAILED ANALYSIS

The following technologies are being carried forward for development of detailed planning assumptions

- Pulverized Coal
 - Supercritical Pulverized Coal with carbon capture and storage*
- Natural Gas Fired
 - Combustion Turbine (“CT”)
 - Combined Cycle Gas Turbine (“CCGT”)
 - Large Scale Aeroderivative CT
 - Small Scale Aeroderivative CT
 - Internal Combustion Engine
- Nuclear
 - Advanced Boiling Water Reactor
- Renewable Technologies
 - Biomass
 - Wind Power
 - Solar PV (Fixed Tilt and Tracking)
- Battery Storage

**Proposed EPA regulations on CO₂ have basically eliminated all new coal plants without carbon capture.*

TECHNOLOGY ASSUMPTIONS FOR COMBINED CYCLE APPLICATION

Cost & Performance Appropriate For Technology Deployment in MISO South		2x1 F Frame CCGT	2x1F Frame w/ Supplemental Capacity	2x1 G Frame CCGT	2x1G Frame w/ Supplemental Capacity
Net Max Capacity (Summer)	(MW)	587	764	746	932
Installed Cost, 2014 (Summer)	(\$/kW) ¹	\$1,300	\$1,045	\$1,190	\$985
Full Load Heat Rate (Summer)	(Btu/kWh)	6,750	7,180	6,620	7,030
Net Max Capacity (ISO)	(MW)	624	800	769	980
Installed Cost, 2014 (ISO)	(\$/kW) ¹	\$1,220	\$1,000	\$1,155	\$940
Full Load Heat Rate (ISO)	(Btu/kWh)	6,600	7,035	6,550	7,030
Typical Capacity Factor	(%)	65%-85%	65%-85%	65%-85%	65%-85%
Fixed O&M (Summer)	(\$/kW-yr)	\$25.90	\$20.10	\$24.00	\$19.90
Variable O&M (Summer)	(\$/MWh)	\$1.50	\$1.15	\$1.50	\$1.15
Inlet Air Conditioning Assumption		Evaporative Coolers			
NOx Control Technology		SCR	SCR	SCR	SCR
NOx emissions, post control	(lbs/MMBtu)	0.01	0.01	0.01	0.01

- Levelized 30 year gas price (reference case, real terms) is \$4.94/mmbtu
- Supplemental capacity (duct firing) is valued at \$250/kW

TECHNOLOGY ASSUMPTIONS FOR PEAKING APPLICATIONS

Cost & Performance Appropriate For Technology Deployment in MISO South		F Frame CT	F Frame CT w/ SCR	E Frame CT	Large Aeroderivative CT	Internal Combustion
Net Max Capacity (Summer)	(MW)	194	194	76	102	18.8
Installed Cost, 2014	(\$/kW) ¹	\$820	\$915	\$1,035	\$1,275	\$1,360
Full Load Heat Rate – Summer	(Btu/kWh)	10,200	10,400	13,200	9,125	8,440
Net Max Capacity (ISO)	(MW)	217	217	83	104	18.8
Installed Cost, 2014 (ISO)	(\$/kW) ¹	\$735	\$820	\$950	\$1,250	\$1,360
Full Load Heat Rate (ISO)	(Btu/kWh)	9,931	10,130	11,800	8,960	8,325
Typical Capacity Factor	(%)	0%-10%	0%-40%	0%-5%	0%-40%	0%-40%
Fixed O&M	(\$/kW-yr)	\$11.80	\$12.80	\$8.35	\$13.20	\$29.30
Variable O&M	(\$/MWh)	\$0.50	\$1.00	\$0.50	\$1.00	\$2.25
Inlet Air Conditioning Assumption		-	-	-	Inlet Chillers	-
NOx Control Technology		Dry Low NOx burners	SCR	Dry Low NOx burners	SCR	SCR
NOx emissions, post control	(lbs/MMBtu)	0.03	0.01	0.03	0.01	0.01

• Levelized 30 year gas price (reference case, real terms) is \$4.94/mmbtu

TECHNOLOGY ASSUMPTIONS FOR SOLID FUEL & RENEWABLE APPLICATIONS

		PC With 90% CCS	Biomass	Nuclear	Wind	Solar PV (fixed tilt)	Solar PV (tracking)	Battery Storage (Lead Acid Batteries)
Net Max Capacity	(MW)	800	100	1,310	200	100	100	50
Installed Cost, 2014	(\$/kW) ¹	\$4,900	\$4,760	\$8,000	\$2,050	\$2,600	\$2,900	\$2,400
Full Load Heat Rate – Summer	(Btu/kWh)	13,200	12,900	10,200	-	-	-	-
Levelized Fuel Cost	(\$/mmbtu)	\$3.12	\$3.04	\$0.90	-	-	-	-
Typical Capacity Factor	(%)	85%	85%	90%	34%	18%	21%	20%
Fixed O&M	(\$/kW-yr)	\$140.00	\$104.60	\$115.60	\$22.10	\$19.00	\$23.00	\$0.00
Charging Cost	(\$/MWh)	n/a	n/a	n/a	n/a	n/a	n/a	\$25.00
Expected Useful Life		40	30	40	20	25	25	20

- Capacity for these technologies is not significantly affected by ambient air temperature
- All O&M is considered fixed.

LIFECYCLE RESOURCE COST, LEVELIZED NOMINAL \$/MWH FOR 2015 RESOURCES

Based on Generic Cost of Capital ⁴		No CO ₂			With CO ₂		
Technology	Capacity Factor	Reference Fuel	High Fuel	Low Fuel	Reference Fuel	High Fuel	Low Fuel
F Frame CT	10%	\$198	\$224	\$179	\$204	\$230	\$184
F Frame CT w/ SCR	20%	\$141	\$167	\$121	\$146	\$173	\$126
E Frame CT	10%	\$240	\$274	\$215	\$247	\$281	\$222
Large Aeroderivative CT	40%	\$108	\$131	\$91	\$113	\$136	\$95
Small Aeroderivative CT	40%	\$125	\$150	\$106	\$130	\$156	\$112
Internal Combustion	40%	\$115	\$137	\$99	\$120	\$141	\$104
2x1 F Frame CCGT	65%	\$79	\$97	\$67	\$83	\$100	\$70
2x1 F Frame CCGT w/ Supplemental	65%	\$75	\$93	\$61	\$78	\$97	\$65
2x1 G Frame CCGT	65%	\$76	\$93	\$63	\$79	\$96	\$67
2x1 G Frame CCGT with Supplemental	65%	\$72	\$90	\$59	\$76	\$94	\$63
1x1 F Frame CCGT	65%	\$82	\$100	\$69	\$86	\$104	\$73
PC With CCS	85%	\$163	\$230	\$94	\$165	\$232	\$96
Biomass	85%	\$175	\$321	\$142	\$175	\$321	\$142
Nuclear	90%	\$157	\$169	\$157	\$157	\$169	\$157
Wind (No Subsidy) ¹	34%	\$115	\$115	\$115	\$115	\$115	\$115
Wind (Ten Yr. \$22/MWh PTC) ¹	34%	\$102	\$102	\$102	\$102	\$102	\$102
Solar PV with 30% ITC (fixed tilt) ²	18%	\$190	\$190	\$190	\$190	\$190	\$190
Solar PV with 30% ITC (tracking) ²	21%	\$179	\$179	\$179	\$179	\$179	\$179
Battery Storage ³	20%	\$217	\$217	\$217	\$217	\$217	\$217

1. Includes capacity match-up cost \$47.88/MWh due to wind's 14.1% capacity value in MISO
2. Includes capacity match-up cost of \$23.57/MWh assuming a 25.0% capacity value in MISO
3. Includes cost of \$25/MWh required to charge batteries.

4. Includes capacity Levelized Nominal Lifecycle Cost of Resources Deployed in 2015, \$/MWh
5. CO₂ Beginning 2023 \$7.54/U.S. Ton Nominal \$, Reaches \$66.44/ton in 2043

ADDITIONAL SUPPLY CONSIDERATIONS

Schedule and location can influence which technology is preferred for a given application

Technology	Time to Market	Environmental	Gas Supply	Flexibility
CCGT	●	●	●	●
Frame CT w/ SCR	●	●	●	●
Small Aeroderivative	●	●	○	●
Large Aeroderivative	●	●	○	●
Internal Combustion Engine	●	●	●	●
Nuclear	○	●	/	○
Coal	●	○	/	●
Wind	●	●	/	○
Solar	●	●	/	○
Biomass	●	●	/	●
Considerations included in category	<ul style="list-style-type: none"> • Permitting Requirements • Lead time of major components • Engineering Required • Installation Time 	<ul style="list-style-type: none"> • Impact of Non-Attainment Zone • NOx Emissions • SOx Emissions • COx Emissions • Residual Fuel 	<ul style="list-style-type: none"> • Gas Pressure Required 	<ul style="list-style-type: none"> • Ramp Rate • Turndown Ratio • Start Time • Performance at Part Load

●
Relatively best



○
Relatively worst

Considerations are scored relative to each other

CAPITAL COST PROJECTIONS

Capital Cost Installed (Nominal)	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
F Frame CT	\$820	\$838	\$860	\$885	\$918	\$951	\$982	\$1,001	\$1,027	\$1,040	\$1,056	\$1,077
F Frame CT with SCR	\$915	\$935	\$960	\$988	\$1,024	\$1,061	\$1,095	\$1,117	\$1,146	\$1,160	\$1,179	\$1,202
E Frame CT	\$1,035	\$1,058	\$1,086	\$1,118	\$1,158	\$1,200	\$1,239	\$1,264	\$1,296	\$1,312	\$1,333	\$1,360
Small Aeroderivative	\$1,550	\$1,585	\$1,626	\$1,674	\$1,735	\$1,797	\$1,856	\$1,893	\$1,941	\$1,966	\$1,997	\$2,036
Large Aeroderivative	\$1,275	\$1,303	\$1,337	\$1,377	\$1,427	\$1,478	\$1,526	\$1,557	\$1,597	\$1,617	\$1,642	\$1,675
Internal Combustion	\$1,360	\$1,390	\$1,400	\$1,425	\$1,476	\$1,537	\$1,580	\$1,624	\$1,670	\$1,710	\$1,751	\$1,786
2x1 F Frame CCGT	\$1,300	\$1,329	\$1,347	\$1,379	\$1,432	\$1,492	\$1,538	\$1,577	\$1,616	\$1,639	\$1,751	\$1,786
2x1 F Frame CCGT w/ supplemental	\$1,045	\$1,068	\$1,083	\$1,108	\$1,151	\$1,199	\$1,237	\$1,268	\$1,299	\$1,317	\$1,669	\$1,702
2x1 G Frame CCGT	\$1,190	\$1,217	\$1,233	\$1,262	\$1,311	\$1,366	\$1,408	\$1,443	\$1,479	\$1,500	\$1,342	\$1,368
2x1 G Frame CCGT w/ supplemental	\$985	\$1,007	\$1,020	\$1,045	\$1,085	\$1,131	\$1,166	\$1,195	\$1,224	\$1,242	\$1,528	\$1,558
1x1 F Frame CCGT	\$1,350	\$1,380	\$1,398	\$1,432	\$1,487	\$1,549	\$1,597	\$1,638	\$1,678	\$1,702	\$1,733	\$1,768
PC With CCS	\$4,905	\$5,015	\$5,043	\$5,130	\$5,308	\$5,524	\$5,673	\$5,836	\$6,009	\$6,176	\$6,335	\$6,462
Biomass	\$4,760	\$4,867	\$4,894	\$4,978	\$5,152	\$5,361	\$5,505	\$5,664	\$5,831	\$5,993	\$6,148	\$6,271
Nuclear	\$8,000	\$8,179	\$8,391	\$8,638	\$8,953	\$9,276	\$9,578	\$9,769	\$10,020	\$10,145	\$10,305	\$10,511
Wind (no subsidy) ¹	\$2,050	\$2,075	\$2,087	\$2,061	\$2,131	\$2,203	\$2,279	\$2,334	\$2,408	\$2,472	\$2,537	\$2,588
Solar PV (fixed tilt) ²	\$2,600	\$2,361	\$2,178	\$2,050	\$1,976	\$1,914	\$1,861	\$1,819	\$1,785	\$1,760	\$1,738	\$1,723
Solar PV (tracking) ²	\$2,900	\$2,633	\$2,429	\$2,286	\$2,204	\$2,135	\$2,076	\$2,029	\$1,991	\$1,963	\$1,939	\$1,922
Battery Storage	\$2,400	\$2,453	\$2,471	\$2,515	\$2,605	\$2,712	\$2,789	\$2,865	\$2,946	\$3,017	\$3,090	\$3,151

1. Does not include any Production Tax Credits
2. Includes Investment Tax Credit of 30%



2015 ENO IRP
MACRO INPUTS WORKPAPERS
October 3, 2014

Produced by: Planning Analysis Department of
System Planning & Operations
Entergy Services, Inc.

**Use "Select All Sheets" to group sheets and print entire workbook. Ungroup sheets to print individual tabs.
If all sheets are selected in this workbook is 478 pages.**

2015 ENO IRP
Table of Contents

Click on tab name to go to desired spreadsheet

<u>Section</u>	<u>Tab #</u>	<u>Tab Name</u>	<u>Page # If Printed*</u>
Introduction			
	Title Page	Title Page.....	1
	Table of Contents	Table of Contents.....	2
 Fuel Inputs			
	1-1	Annual Henry Hub Natural Gas Price Forecast.....	4
	1-2	Monthly Henry Hub Natural Gas Price Forecast.....	6
	1-31	Reference Case Coal Price Forecast Entergy Units (Annual Prices)	17
	1-32	High Case Coal Price Forecast Entergy Units (Annual Prices)	21
	1-33	Low Case Coal Price Forecast Entergy Units (Annual Prices)	25
	1-41	Reference Case Coal Price Forecast Entergy Units (Monthly Prices)	29
	1-42	High Case Coal Price Forecast Entergy Units (Monthly Prices)	38
	1-43	Low Case Coal Price Forecast Entergy Units (Monthly Prices)	47
	1-5	Crude Oil Price Forecast.....	56
	1-6	Nuclear Fuel Price Forecast (Entergy Units).....	58
 Load Forecast			
	2-11	Industrial Renaissance - Annual Energy and Peaks By Customer Class for ENO.....	60
	2-12	Industrial Renaissance - Annual Energy, Peaks and Firm Peaks (Entergy System Agreement OPCOs).....	63
	2-13	Industrial Renaissance - Annual Energy and Peaks (MISO South LSEs).....	68
	2-14	Industrial Renaissance - Annual Energy and Peaks (Total Footprint Modeled).....	73
	2-21	Business Boom - Annual Energy and Peaks By Customer Class for ENO.....	75
	2-22	Business Boom - Annual Energy, Peaks and Firm Peaks (Entergy System Agreement OPCOs).....	78
	2-23	Business Boom - Annual Energy and Peaks (MISO South LSEs).....	83
	2-24	Business Boom - Annual Energy and Peaks (Total Footprint Modeled).....	88
	2-31	Generation Shift - Annual Energy and Peaks By Customer Class for ENO.....	90
	2-32	Generation Shift - Annual Energy, Peaks and Firm Peaks (Entergy System Agreement OPCOs).....	93
	2-33	Generation Shift - Annual Energy and Peaks (MISO South LSEs).....	98
	2-34	Generation Shift - Annual Energy and Peaks (Total Footprint Modeled).....	103
	2-41	Distributed Disruption - Annual Energy and Peaks By Customer Class for ENO.....	105
	2-42	Distributed Disruption - Annual Energy, Peaks and Firm Peaks (Entergy System Agreement OPCOs).....	108
	2-43	Distributed Disruption - Annual Energy and Peaks (MISO South LSEs).....	113
	2-44	Distributed Disruption - Annual Energy and Peaks (Total Footprint Modeled).....	118
	2-51	ENO Load Forecast Comparison of Scenarios.....	120
	2-52	MISO South & MISO North Load Forecast Comparison of Scenarios.....	124
	2-53	Total MISO, Non MISO & Total Modeled Footprint Load Forecast Comparison of Scenarios.....	127

Click on tab name to go to desired spreadsheet

Section	Tab #	Tab Name	Page # If Printed*
Emissions Prices			
	3-1	<u>Non CO2 Emissions Price Forecast.....</u>	130
	3-2	<u>Carbon Price Forecast.....</u>	135
Inflation			
	4-1	<u>Inflation Forecast (Reference Case).....</u>	137
	4-2	<u>Inflation Forecast (High Case).....</u>	139
	4-3	<u>Inflation Forecast (Low Case).....</u>	141
Capacity Prices			
	5-1	<u>Capacity Price Forecast.....</u>	143
Unit Deactivations			
	6-1	<u>Unit Deactivation Schedule Assumptions.....</u>	145
Discount Rates			
	7-1	<u>ENO Financing Assumptions.....</u>	147
Supply Resource Information (Including Merchants and Qualifying Facilities)			
	8-1	<u>Supply Resource List Introduction.....</u>	148
	8-2	<u>Supply Resource List MISO North.....</u>	149
	8-3	<u>Supply Resource List MISO South.....</u>	329
	8-4	<u>Supply Resource List SERC Southeast and SERC TVA.....</u>	343
	8-5	<u>Supply Resource List SPP.....</u>	412
DSM Potential Study Inputs (Not Already Provided Above)			
	9-1	<u>Avoided Cost Assumptions for DSM Potential Study.....</u>	471
	9-2	<u>ENO Avoided Energy Cost By Season & Time Block.....</u>	472
	9-3	<u>Avoided Capacity Cost ENO.....</u>	478

*If "All Sheets" in workbook are grouped together.

Total Printed Pages

2015 ENO IRP

Annual Henry Hub Natural Gas Price Forecast (Nominal and 2014 Real Prices)

2015 ENO IRP

Monthly Henry Hub Natural Gas Price Forecast (Nominal and 2014 Real Prices)

Monthly Henry Hub Natural Gas Price Forecast (Nominal and 2014 Real Prices)

Monthly Henry Hub Natural Gas Price Forecast (Nominal and 2014 Real Prices)

Monthly Henry Hub Natural Gas Price Forecast (Nominal and 2014 Real Prices)

Monthly Henry Hub Natural Gas Price Forecast (Nominal and 2014 Real Prices)

2015 ENO IRP

Reference Case Coal Price Forecast Entergy Units (Annual Prices)

2015 ENO IRP

High Case Coal Price Forecast Entergy Units (Annual Prices)

2015 ENO IRP

Low Case Coal Price Forecast Entergy Units (Annual Prices)

2015 ENO IRP

Reference Case Coal Price Forecast Energy Units (Monthly Prices)

2015 ENO IRP

Reference Case Coal Price Forecast Energy Units (Monthly Prices)

2015 ENO IRP

Reference Case Coal Price Forecast Energy Units (Monthly Prices)

2015 ENO IRP

Reference Case Coal Price Forecast Energy Units (Monthly Prices)

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Reference Case Coal Price Forecast Energy Units (Monthly Prices)

2015 ENO IRP

High Case Coal Price Forecast Entergy Units (Monthly Prices)

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2015 ENO IRP

Low Case Coal Price Forecast Energy Units (Monthly Prices)

2015 ENO IRP

Low Case Coal Price Forecast Energy Units (Monthly Prices)

2015 ENO IRP

Annual Crude Oil Price Forecast (Nominal and 2013 Real Prices)

Annual Nuclear Fuel Prices For Entergy Units (Nominal and 2013 Real Prices)

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ENO Annual Energy and Total Peaks (Industrial Renaissance)

2015 ENO IRP

Annual Energy, Total Peaks, Firm Peaks (Industrial Renaissance): Entergy OPCOs

[Click here to go to Table of Contents](#)

Industrial Renaissance Total Energy Forecast (GWHs)						
Year	ENOI	EGSL	ELL	ETI	EMI	System
2015	5,406	24,134	35,432	18,946	14,984	97,709
2016	5,535	25,331	36,445	20,497	-	87,808
2017	5,540	27,551	37,670	21,485	-	92,245
2018	5,590	31,262	38,299	21,878	-	91,929
2019	5,643	33,005	39,176	-	-	77,824
2020	5,695	-	-	-	-	-
2021	5,739	-	-	-	-	-
2022	5,792	-	-	-	-	-
2023	5,848	-	-	-	-	-
2024	5,913	-	-	-	-	-
2025	5,968	-	-	-	-	-
2026	6,026	-	-	-	-	-
2027	6,085	-	-	-	-	-
2028	6,149	-	-	-	-	-
2029	6,201	-	-	-	-	-
2030	6,258	-	-	-	-	-
2031	6,318	-	-	-	-	-
2032	6,382	-	-	-	-	-
2033	6,438	-	-	-	-	-
2034	6,497	-	-	-	-	-
2015-2025						
CAGR	1.0%	-	-	-	-	-
2025-2034						
CAGR	0.9%	-	-	-	-	-
2015-2034						
CAGR	0.9%	-	-	-	-	-

Notes and Assumptions:

- Forecast prepared July 2014
- For the purposes of this chart only, EAI is assumed to have exited the system 1/1/14, EMI will exit 12/1/2015, ETI will exit 10/1/2018, and ELL&EGSL will exit 02/14/19
- Operating Company peaks are not coincident with System or Utility. Peaks are not coincident with MISO peaks.

2015 ENO IRP

Annual Energy, Total Peaks, Firm Peaks (Industrial Renaissance): Entergy OPCOs

[Click here to go to Table of Contents](#)

Industrial Renaissance Total Peak Load Forecast (MWs)						
Year	ENOI	EGSL	ELL	ETI	EMI	System
2015	1,029	3,985	5,884	3,569	3,569	17,552
2016	1,050	4,108	5,973	3,736	-	14,658
2017	1,049	4,358	6,137	3,871	-	15,211
2018	1,059	4,694	6,202	3,922	-	15,672
2019	1,064	4,851	6,321	-	-	12,142
2020	1,070	-	-	-	-	-
2021	1,075	-	-	-	-	-
2022	1,081	-	-	-	-	-
2023	1,088	-	-	-	-	-
2024	1,096	-	-	-	-	-
2025	1,105	-	-	-	-	-
2026	1,112	-	-	-	-	-
2027	1,120	-	-	-	-	-
2028	1,128	-	-	-	-	-
2029	1,136	-	-	-	-	-
2030	1,143	-	-	-	-	-
2031	1,152	-	-	-	-	-
2032	1,160	-	-	-	-	-
2033	1,168	-	-	-	-	-
2034	1,176	-	-	-	-	-
2015-2025						
CAGR	0.7%	-	-	-	-	-
2025-2034						
CAGR	0.6%	-	-	-	-	-
2015-2034						
CAGR	0.7%	-	-	-	-	-

Notes and Assumptions:

- Forecast prepared July 2014
- For the purposes of this chart only, EAI is assumed to have exited the system 1/1/14, EMI will exit 12/1/2015, ETI will exit 10/1/2018, and ELL&EGSL will exit 02/14/19
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2015 ENO IRP

Annual Energy, Total Peaks, Firm Peaks (Industrial Renaissance): Entergy OPCOs

[Click here to go to Table of Contents](#)

Industrial Renaissance Firm Peak Load Forecast (MWs)						
Year	ENOI	EGSL	ELL	ETI	EMI	System
2015	1,029	3,985	5,884	3,569	3,306	17,552
2016	1,050	4,108	5,973	3,736	-	14,658
2017	1,049	4,358	6,137	3,871	-	15,211
2018	1,059	4,694	6,202	3,922	-	15,672
2019	1,064	4,851	6,321	-	-	12,142
2020	1,070	-	-	-	-	-
2021	1,075	-	-	-	-	-
2022	1,081	-	-	-	-	-
2023	1,088	-	-	-	-	-
2024	1,096	-	-	-	-	-
2025	1,105	-	-	-	-	-
2026	1,112	-	-	-	-	-
2027	1,120	-	-	-	-	-
2028	1,128	-	-	-	-	-
2029	1,136	-	-	-	-	-
2030	1,143	-	-	-	-	-
2031	1,152	-	-	-	-	-
2032	1,160	-	-	-	-	-
2033	1,168	-	-	-	-	-
2034	1,176	-	-	-	-	-
2015-2025						
CAGR	0.7%	-	-	-	-	-
2025-2034						
CAGR	0.6%	-	-	-	-	-
2015-2034						
CAGR	0.7%	-	-	-	-	-

Notes and Assumptions:

- Forecast prepared July 2014
- For the purposes of this chart only, EAI is assumed to have exited the system 1/1/14, EMI will exit 12/1/2015, ETI will exit 10/1/2018, and ELL&EGSL will exit 02/14/19
- Operating Company peaks are not coincident with System or Utility. Peaks are not coincident with MISO peaks.

2015 ENO IRP

Annual Energy and Total Peaks (Industrial Renaissance): Non Entergy MISO South LSEs

2015 ENO IRP

Annual Energy and Total Peaks (Industrial Renaissance): Total Footprint Modeled



2015 ENO IRP

EGSL & ELL Annual Energy and Total Peaks (Business Boom)

—

2015 ENO IRP

Annual Energy, Total Peaks, Firm Peaks (Business Boom): Entergy OPCOs

[Click here to go to Table of Contents](#)

Business Boom Total Energy Forecast (GWHs)						
Year	ENOI	EGSL	ELL	ETI	EMI	System
2015	5,568	24,162	35,488	19,196	14,998	99,413
2016	5,745	25,613	36,850	21,098	-	89,305
2017	5,764	27,924	38,301	22,194	-	94,183
2018	5,820	32,688	39,089	22,678	-	100,275
2019	5,875	34,919	40,130	-	-	80,924
2020	5,929	-	-	-	-	-
2021	5,975	-	-	-	-	-
2022	6,030	-	-	-	-	-
2023	6,089	-	-	-	-	-
2024	6,155	-	-	-	-	-
2025	6,213	-	-	-	-	-
2026	6,273	-	-	-	-	-
2027	6,334	-	-	-	-	-
2028	6,400	-	-	-	-	-
2029	6,454	-	-	-	-	-
2030	6,514	-	-	-	-	-
2031	6,575	-	-	-	-	-
2032	6,642	-	-	-	-	-
2033	6,701	-	-	-	-	-
2034	6,762	-	-	-	-	-
2015-2025						
CAGR	1.1%	-	-	-	-	-
2025-2034						
CAGR	0.9%	-	-	-	-	-
2015-2034						
CAGR	1.0%	-	-	-	-	-

Notes and Assumptions:

- Forecast prepared August 2014
- For the purposes of this chart only, EAI is assumed to have exited the system 1/1/14, EMI will exit 12/1/2015, ETI will exit 10/1/2018, and ELL&EGSL will exit 02/14/19

2015 ENO IRP

Annual Energy, Total Peaks, Firm Peaks (Business Boom): Entergy OPCOs

[Click here to go to Table of Contents](#)

Business Boom Total Peak Load Forecast (MWs)						
Year	ENOI	EGSL	ELL	ETI	EMI	System
2015	1,052	3,991	5,891	3,617	3,308	17,603
2016	1,078	4,144	6,016	3,803	-	14,785
2017	1,079	4,417	6,208	3,962	-	15,412
2018	1,089	4,855	6,282	4,033	-	15,980
2019	1,095	5,046	6,434	-	-	12,317
2020	1,101	-	-	-	-	-
2021	1,107	-	-	-	-	-
2022	1,113	-	-	-	-	-
2023	1,120	-	-	-	-	-
2024	1,128	-	-	-	-	-
2025	1,137	-	-	-	-	-
2026	1,145	-	-	-	-	-
2027	1,153	-	-	-	-	-
2028	1,161	-	-	-	-	-
2029	1,170	-	-	-	-	-
2030	1,178	-	-	-	-	-
2031	1,187	-	-	-	-	-
2032	1,195	-	-	-	-	-
2033	1,203	-	-	-	-	-
2034	1,212	-	-	-	-	-
2015-2025						
CAGR	0.8%	-	-	-	-	-
2025-2034						
CAGR	0.6%	-	-	-	-	-
2015-2034						
CAGR	0.7%	-	-	-	-	-

Notes and Assumptions:

- Operating Company peaks are not coincident with System or Utility. Peaks are not coincident with MISO peaks.
- Forecast prepared August 2014
- For the purposes of this chart only, EAI is assumed to have exited the system 1/1/14, EMI will exit 12/1/2015, ETI will exit 10/1/2018, and ELL&EGSL will exit 02/14/19

2015 ENO IRP

Annual Energy, Total Peaks, Firm Peaks (Business Boom): Entergy OPCOs

[Click here to go to Table of Contents](#)

Business Boom Firm Peak Load Forecast (MWs)						
Year	ENOI	EGSL	ELL	ETI	EMI	System
2015	1,028	3,959	5,723	3,559	3,280	17,293
2016	1,055	4,112	5,847	3,743	-	14,497
2017	1,056	4,384	6,035	3,900	-	15,117
2018	1,065	4,821	6,102	3,970	-	15,677
2019	1,071	5,012	6,250	-	-	12,070
2020	1,077	-	-	-	-	-
2021	1,083	-	-	-	-	-
2022	1,089	-	-	-	-	-
2023	1,096	-	-	-	-	-
2024	1,104	-	-	-	-	-
2025	1,113	-	-	-	-	-
2026	1,121	-	-	-	-	-
2027	1,129	-	-	-	-	-
2028	1,137	-	-	-	-	-
2029	1,145	-	-	-	-	-
2030	1,153	-	-	-	-	-
2031	1,162	-	-	-	-	-
2032	1,170	-	-	-	-	-
2033	1,179	-	-	-	-	-
2034	1,188	-	-	-	-	-
2015-2025						
CAGR	0.8%	-	-	-	-	-
2025-2034						
CAGR	0.7%	-	-	-	-	-
2015-2034						
CAGR	0.7%	-	-	-	-	-

Notes and Assumptions:

- Operating Company peaks are not coincident with System or Utility. Peaks are not coincident with MISO peaks.
- Forecast prepared August 2014

2015 ENO IRP

Annual Energy and Total Peaks (Business Boom): MISO South LSEs



2015 ENO IRP

Annual Energy and Total Peaks (Business Boom): Total Footprint Modeled



2015 ENO IRP

ENO Annual Energy and Total Peaks (Generation Shift)

—

2015 ENO IRP

Annual Energy, Total Peaks, Firm Peaks (Generation Shift): Entergy OPCOs

[Click here to go to Table of Contents](#)

Generation Shift Total Energy Forecast (GWHs)						
Year	ENOI	EGSL	ELL	ETI	EMI	System
2015	5,375	23,843	35,255	18,698	14,879	98,051
2016	5,450	24,740	36,017	19,123	-	85,330
2017	5,493	26,162	36,948	19,271	-	87,875
2018	5,521	27,528	37,424	19,465	-	89,937
2019	5,544	29,480	37,922	-	-	72,946
2020	5,567	-	-	-	-	-
2021	5,598	-	-	-	-	-
2022	5,651	-	-	-	-	-
2023	5,708	-	-	-	-	-
2024	5,772	-	-	-	-	-
2025	5,827	-	-	-	-	-
2026	5,885	-	-	-	-	-
2027	5,945	-	-	-	-	-
2028	6,008	-	-	-	-	-
2029	6,060	-	-	-	-	-
2030	6,117	-	-	-	-	-
2031	6,177	-	-	-	-	-
2032	6,241	-	-	-	-	-
2033	6,297	-	-	-	-	-
2034	6,356	-	-	-	-	-
2015-2025 CAGR	0.8%	-	-	-	-	-
2025-2034 CAGR	0.9%	-	-	-	-	-
2015-2034 CAGR	0.8%	-	-	-	-	-

Notes and Assumptions:

- Forecast prepared August 2014
- For the purposes of this chart only, EAI is assumed to have exited the system 1/1/14, EMI will exit 12/1/2015, ETI will exit 10/1/2018, and ELL&EGSL will exit 02/14/19

2015 ENO IRP

Annual Energy, Total Peaks, Firm Peaks (Generation Shift): Entergy OPCOs

[Click here to go to Table of Contents](#)

Generation Shift Total Peak Load Forecast (MWs)						
Year	ENOI	EGSL	ELL	ETI	EMI	System
2015	1,027	3,919	5,866	3,505	3,256	17,312
2016	1,041	3,980	5,938	3,565	-	14,265
2017	1,048	4,081	6,068	3,580	-	14,522
2018	1,058	4,189	6,111	3,590	-	14,644
2019	1,062	4,368	6,181	-	-	11,325
2020	1,067	-	-	-	-	-
2021	1,072	-	-	-	-	-
2022	1,078	-	-	-	-	-
2023	1,085	-	-	-	-	-
2024	1,093	-	-	-	-	-
2025	1,104	-	-	-	-	-
2026	1,109	-	-	-	-	-
2027	1,117	-	-	-	-	-
2028	1,125	-	-	-	-	-
2029	1,134	-	-	-	-	-
2030	1,141	-	-	-	-	-
2031	1,151	-	-	-	-	-
2032	1,156	-	-	-	-	-
2033	1,165	-	-	-	-	-
2034	1,173	-	-	-	-	-
2014-2024 CAGR	0.7%	-	-	-	-	-
2024-2034 CAGR	0.6%	-	-	-	-	-
2014-2034 CAGR	0.7%	-	-	-	-	-

Notes and Assumptions:

- Operating Company peaks are not coincident with System or Utility. Peaks are not coincident with MISO peaks.
- Forecast prepared August 2014
- For the purposes of this chart only, EAI is assumed to have exited the system 1/1/14, EMI will exit 12/1/2015, ETI will exit 10/1/2018, and ELL&EGSL will exit 02/14/19

2015 ENO IRP

Annual Energy, Total Peaks, Firm Peaks (Generation Shift): Entergy OPCOs

[Click here to go to Table of Contents](#)

Generation Shift Firm Peak Load Forecast (MWs)						
Year	ENOI	EGSL	ELL	ETI	EMI	System
2015	1,003	3,888	5,699	3,447	3,228	17,001
2016	1,017	3,948	5,769	3,505	-	13,978
2017	1,025	4,048	5,894	3,518	-	14,212
2018	1,034	4,156	5,931	3,526	-	14,320
2019	1,038	4,334	5,997	-	-	11,054
2020	1,043	-	-	-	-	-
2021	1,048	-	-	-	-	-
2022	1,054	-	-	-	-	-
2023	1,061	-	-	-	-	-
2024	1,069	-	-	-	-	-
2025	1,080	-	-	-	-	-
2026	1,085	-	-	-	-	-
2027	1,093	-	-	-	-	-
2028	1,101	-	-	-	-	-
2029	1,109	-	-	-	-	-
2030	1,116	-	-	-	-	-
2031	1,127	-	-	-	-	-
2032	1,132	-	-	-	-	-
2033	1,141	-	-	-	-	-
2034	1,149	-	-	-	-	-
2015-2025 CAGR	0.7%	-	-	-	-	-
2025-2034 CAGR	0.6%	-	-	-	-	-
2015-2034 CAGR	0.7%	-	-	-	-	-

Notes and Assumptions:

- Operating Company peaks are not coincident with System or Utility. Peaks are not coincident with MISO peaks.
- Forecast prepared August 2014

2015 ENO IRP

Annual Energy and Total Peaks (Generation Shift): MISO South LSEs

2015 ENO IRP

Annual Energy and Total Peaks (Generation Shift): Total Footprint Modeled



2015 ENO IRP

ENO Annual Energy and Total Peaks (Distributed Disruption)

—

2015 ENO IRP

Annual Energy, Total Peaks, Firm Peaks (Distributed Disruption): Entergy OPCOs

[Click here to go to Table of Contents](#)

Distributed Disruption Total Energy Forecast (GWHs)						
Year	ENOI	EGSL	ELL	ETI	EMI	System
2015	5,383	24,064	35,314	18,908	14,970	98,639
2016	5,516	25,206	36,249	20,429	-	87,400
2017	5,528	27,368	37,396	21,388	-	91,679
2018	5,577	31,019	37,938	21,751	-	74,534
2019	5,622	32,702	38,722	-	-	77,046
2020	5,660	-	-	-	-	-
2021	5,680	-	-	-	-	-
2022	5,707	-	-	-	-	-
2023	5,739	-	-	-	-	-
2024	5,777	-	-	-	-	-
2025	5,796	-	-	-	-	-
2026	5,810	-	-	-	-	-
2027	5,823	-	-	-	-	-
2028	5,840	-	-	-	-	-
2029	5,844	-	-	-	-	-
2030	5,842	-	-	-	-	-
2031	5,828	-	-	-	-	-
2032	5,816	-	-	-	-	-
2033	5,798	-	-	-	-	-
2034	5,779	-	-	-	-	-
2015-2025						
CAGR	0.7%	-	-	-	-	-
2025-2034						
CAGR	0.0%	-	-	-	-	-
2015-2034						
CAGR	0.4%	-	-	-	-	-

Notes and Assumptions:

- Forecast prepared August 2014
- For the purposes of this chart only, EAI is assumed to have exited the system 1/1/14, EMI will exit 12/1/2015, ETI will exit 10/1/2018 and ELL&EGSL will exit 02/14/19

2015 ENO IRP

Annual Energy, Total Peaks, Firm Peaks (Distributed Disruption): Entergy OPCOs

[Click here to go to Table of Contents](#)

Distributed Disruption Total Peak Load Forecast (MWs)						
Year	ENOI	EGSL	ELL	ETI	EMI	System
2015	1,029	3,975	5,862	3,565	3,304	17,500
2016	1,049	4,089	5,940	3,727	-	14,596
2017	1,048	4,333	6,097	3,859	-	15,135
2018	1,057	4,663	6,140	3,906	-	15,544
2019	1,063	4,803	6,244	-	-	12,020
2020	1,068	-	-	-	-	-
2021	1,072	-	-	-	-	-
2022	1,076	-	-	-	-	-
2023	1,083	-	-	-	-	-
2024	1,089	-	-	-	-	-
2025	1,099	-	-	-	-	-
2026	1,103	-	-	-	-	-
2027	1,108	-	-	-	-	-
2028	1,115	-	-	-	-	-
2029	1,123	-	-	-	-	-
2030	1,127	-	-	-	-	-
2031	1,141	-	-	-	-	-
2032	1,138	-	-	-	-	-
2033	1,144	-	-	-	-	-
2034	1,151	-	-	-	-	-
2015-2025						
CAGR	0.7%	-	-	-	-	-
2025-2034						
CAGR	0.5%	-	-	-	-	-
2015-2034						
CAGR	0.6%	-	-	-	-	-

Notes and Assumptions:

- Operating Company peaks are not coincident with System or Utility. Peaks are not coincident with MISO peaks.
- Forecast prepared August 2014
- For the purposes of this chart only, EAI is assumed to have exited the system 1/1/14, EMI will exit 12/1/2015, ETI will exit 10/1/2018 and ELL&EGSL will exit 02/14/19

2015 ENO IRP

Annual Energy, Total Peaks, Firm Peaks (Distributed Disruption): Entergy OPCOs

[Click here to go to Table of Contents](#)

Distributed Disruption Firm Peak Load Forecast (MWs)						
Year	ENOI	EGSL	ELL	ETI	EMI	System
2015	1,005	3,944	5,695	3,506	3,276	17,152
2016	1,025	4,057	5,771	3,667	-	14,311
2017	1,025	4,300	5,923	3,797	-	14,843
2018	1,034	4,630	5,963	3,842	-	15,236
2019	1,039	4,769	6,063	-	-	11,778
2020	1,044	-	-	-	-	-
2021	1,048	-	-	-	-	-
2022	1,053	-	-	-	-	-
2023	1,059	-	-	-	-	-
2024	1,065	-	-	-	-	-
2025	1,075	-	-	-	-	-
2026	1,079	-	-	-	-	-
2027	1,084	-	-	-	-	-
2028	1,091	-	-	-	-	-
2029	1,099	-	-	-	-	-
2030	1,103	-	-	-	-	-
2031	1,116	-	-	-	-	-
2032	1,113	-	-	-	-	-
2033	1,120	-	-	-	-	-
2034	1,127	-	-	-	-	-
2015-2025 CAGR	0.7%	-	-	-	-	-
2025-2034 CAGR	0.5%	-	-	-	-	-
2015-2034 CAGR	0.6%	-	-	-	-	-

Notes and Assumptions:

- Operating Company peaks are not coincident with System or Utility. Peaks are not coincident with MISO peaks.
- Forecast prepared August 2014

2015 ENO IRP

Annual Energy and Total Peaks (Distributed Disruption): Non Entergy MISO South LSEs

2015 ENO IRP

Annual Energy and Total Peaks (Distributed Disruption): Total Footprint Modeled



2015 ENO IRP

ENO Load Forecast Comparison of Scenarios

[Click here to go to Table of Contents](#)

ENO Year	Total Energy Forecast (GWHs)				Total Peak Load Forecast (MW)				Total Firm Peak Load Forecast (MW)			
	Industrial Renaissance	Business Boom	Generation Shift	Distributed Disruption	Industrial Renaissance	Business Boom	Generation Shift	Distributed Disruption	Industrial Renaissance	Business Boom	Generation Shift	Distributed Disruption
2015	5,406	5,568	5,375	5,383	1,029	1,052	1,027	1,029	1,006	1,028	1,003	1,005
2016	5,535	5,745	5,450	5,516	1,050	1,078	1,041	1,049	1,026	1,055	1,017	1,025
2017	5,540	5,764	5,493	5,528	1,049	1,079	1,048	1,048	1,026	1,056	1,025	1,025
2018	5,590	5,820	5,521	5,577	1,059	1,089	1,058	1,057	1,035	1,065	1,034	1,034
2019	5,643	5,875	5,544	5,622	1,064	1,095	1,062	1,063	1,040	1,071	1,038	1,039
2020	5,695	5,929	5,567	5,660	1,070	1,101	1,067	1,068	1,046	1,077	1,043	1,044
2021	5,739	5,975	5,598	5,680	1,075	1,107	1,072	1,072	1,051	1,083	1,048	1,048
2022	5,792	6,030	5,651	5,707	1,081	1,113	1,078	1,076	1,057	1,089	1,054	1,053
2023	5,848	6,089	5,708	5,739	1,088	1,120	1,085	1,083	1,064	1,096	1,061	1,059
2024	5,913	6,155	5,772	5,777	1,096	1,128	1,093	1,089	1,072	1,104	1,069	1,065
2025	5,968	6,213	5,827	5,796	1,105	1,137	1,104	1,099	1,081	1,113	1,080	1,075
2026	6,026	6,273	5,885	5,810	1,112	1,145	1,109	1,103	1,088	1,121	1,085	1,079
2027	6,085	6,334	5,945	5,823	1,120	1,153	1,117	1,108	1,096	1,129	1,093	1,084
2028	6,149	6,400	6,008	5,840	1,128	1,161	1,125	1,115	1,104	1,137	1,101	1,091
2029	6,201	6,454	6,060	5,844	1,136	1,170	1,134	1,123	1,112	1,145	1,109	1,099
2030	6,258	6,514	6,117	5,842	1,143	1,178	1,141	1,127	1,119	1,153	1,116	1,103
2031	6,318	6,575	6,177	5,828	1,152	1,187	1,151	1,141	1,128	1,162	1,127	1,116
2032	6,382	6,642	6,241	5,816	1,160	1,195	1,156	1,138	1,136	1,170	1,132	1,113
2033	6,438	6,701	6,297	5,798	1,168	1,203	1,165	1,144	1,144	1,179	1,141	1,120
2034	6,497	6,762	6,356	5,779	1,176	1,212	1,173	1,151	1,152	1,188	1,149	1,127
2015-2025 CAGR	1.0%	1.1%	0.8%	0.7%	0.7%	0.8%	0.7%	0.7%	0.7%	0.8%	0.7%	0.7%
2025-2034 CAGR	0.9%	0.9%	0.9%	0.0%	0.6%	0.6%	0.6%	0.5%	0.6%	0.7%	0.6%	0.5%
2015-2034 CAGR	0.9%	1.0%	0.8%	0.4%	0.7%	0.7%	0.7%	0.6%	0.7%	0.7%	0.7%	0.6%

Notes and Assumptions:

•Operating Company peaks are not coincident with System, Utility total or MISO Peak

MISO South & MISO North Load Forecast Comparison of Scenarios

2015 ENO IRP

Total MISO, Non MISO & Total Modeled Footprint Load Forecast Comparison of Scenarios

2015 ENO IRP

Non CO2 Emissions Price Forecast (Reference Case)

2015 ENO IRP

CO2 Emissions Price Forecast (Reference Case)

2015 ENO IRP

Inflation Forecast (Reference Case)

Forecast Prepared June 6, 2013

[Click here to go to Table of Contents](#)

SPO GDP POV			SPO CPI POV			SPO PPI POV		
		2013\$ Conversion Factor			2013\$ Conversion Factor			2013\$ Conversion Factor
2011	2.13%	0.965	-	3.14%	0.963	-	8.82%	0.977
2012	1.81%	0.982	-	2.08%	0.983	-	0.56%	0.983
2013	1.81%	1.000	-	1.69%	1.000	-	1.76%	1.000
2014	2.09%	1.021	-	1.91%	1.019	-	2.07%	1.021
2015	2.10%	1.042	-	2.00%	1.039	-	1.86%	1.040
2016	2.00%	1.063	-	2.00%	1.060	-	1.75%	1.058
2017	2.00%	1.084	-	2.00%	1.081	-	1.75%	1.076
2018	2.00%	1.106	-	2.00%	1.103	-	1.75%	1.095
2019	2.00%	1.128	-	2.00%	1.125	-	1.75%	1.114
2020	2.00%	1.151	-	2.00%	1.148	-	1.75%	1.134
2021	2.00%	1.174	-	2.00%	1.171	-	1.75%	1.154
2022	2.00%	1.197	-	2.00%	1.194	-	1.75%	1.174
2023	2.00%	1.221	-	2.00%	1.218	-	1.75%	1.194
2024	2.00%	1.246	-	2.00%	1.242	-	1.75%	1.215
2025	2.00%	1.271	-	2.00%	1.267	-	1.75%	1.237
2026	2.00%	1.296	-	2.00%	1.292	-	1.75%	1.258
2027	2.00%	1.322	-	2.00%	1.318	-	1.75%	1.280
2028	2.00%	1.348	-	2.00%	1.345	-	1.75%	1.303
2029	2.00%	1.375	-	2.00%	1.372	-	1.75%	1.325
2030	2.00%	1.403	-	2.00%	1.399	-	1.75%	1.349
2031	2.00%	1.431	-	2.00%	1.427	-	1.75%	1.372
2032	2.00%	1.460	-	2.00%	1.456	-	1.75%	1.396
2033	2.00%	1.489	-	2.00%	1.485	-	1.75%	1.421
2034	2.00%	1.519	-	2.00%	1.514	-	1.75%	1.445
2035	2.00%	1.549	-	2.00%	1.545	-	1.75%	1.471
2036	2.00%	1.580	-	2.00%	1.576	-	1.75%	1.497
2037	2.00%	1.611	-	2.00%	1.607	-	1.75%	1.523
2038	2.00%	1.644	-	2.00%	1.639	-	1.75%	1.549
2039	2.00%	1.677	-	2.00%	1.672	-	1.75%	1.576
2040	2.00%	1.710	-	2.00%	1.705	-	1.75%	1.604
2041	2.00%	1.744	-	2.00%	1.740	-	1.75%	1.632
2042	2.00%	1.779	-	2.00%	1.774	-	1.75%	1.661
2043	2.00%	1.815	-	2.00%	1.810	-	1.75%	1.690

2015 ENO IRP

Inflation Forecast (Reference Case)

Forecast Prepared June 6, 2013

[Click here to go to Table of Contents](#)

SPO GDP POV			SPO CPI POV			SPO PPI POV		
2013\$ Conversion Factor			2013\$ Conversion Factor			2013\$ Conversion Factor		
2044	2.00%	1.851	-	2.00%	1.846	-	1.75%	1.719
2045	2.00%	1.888	-	2.00%	1.883	-	1.75%	1.749

Additional Calculations to Support Real Levelized Price Determination Elsewhere In This Workbook

ENO WACC #REF!

Conversions For Levelized Real

# of Years	Factor	
1	#REF!	2014
2	#REF!	2015
3	#REF!	2016
4	#REF!	2017
5	#REF!	2018
6	#REF!	2019
7	#REF!	2020
8	#REF!	2021
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30	#REF!	2043
31	#REF!	2044

2015 ENO IRP

Inflation Forecast (Reference Case)

Forecast Prepared June 6, 2013

[Click here to go to Table of Contents](#)

SPO GDP POV		SPO CPI POV		SPO PPI POV	
2013\$ Conversion Factor		2013\$ Conversion Factor		2013\$ Conversion Factor	
32	#REF!				2045

2015 ENO IRP Inflation Forecast (High Case)

Forecast Prepared February 17, 2014

[Click here to go to Table of Contents](#)

	SPO GDP POV		SPO CPI POV		SPO PPI POV	
		2013\$ Conversion Factor		2013\$ Conversion Factor		2013\$ Conversion Factor
2011	2.13%	0.965	3.14%	0.963	8.82%	0.977
2012	1.81%	0.982	2.08%	0.983	0.56%	0.983
2013	1.81%	1.000	1.69%	1.000	1.76%	1.000
2014	4.18%	1.042	3.82%	1.038	4.13%	1.041
2015	4.21%	1.086	4.00%	1.080	3.71%	1.080
2016	4.00%	1.129	4.00%	1.123	3.50%	1.118
2017	4.00%	1.174	4.00%	1.168	3.50%	1.157
2018	4.00%	1.221	4.00%	1.215	3.50%	1.197
2019	4.00%	1.270	4.00%	1.263	3.50%	1.239
2020	4.00%	1.321	4.00%	1.314	3.50%	1.283
2021	4.00%	1.374	4.00%	1.366	3.50%	1.328
2022	4.00%	1.429	4.00%	1.421	3.50%	1.374
2023	4.00%	1.486	4.00%	1.478	3.50%	1.422
2024	4.00%	1.545	4.00%	1.537	3.50%	1.472
2025	4.00%	1.607	4.00%	1.598	3.50%	1.523
2026	4.00%	1.671	4.00%	1.662	3.50%	1.577
2027	4.00%	1.738	4.00%	1.729	3.50%	1.632
2028	4.00%	1.808	4.00%	1.798	3.50%	1.689
2029	4.00%	1.880	4.00%	1.870	3.50%	1.748
2030	4.00%	1.955	4.00%	1.945	3.50%	1.809
2031	4.00%	2.033	4.00%	2.022	3.50%	1.873
2032	4.00%	2.115	4.00%	2.103	3.50%	1.938
2033	4.00%	2.199	4.00%	2.187	3.50%	2.006
2034	4.00%	2.287	4.00%	2.275	3.50%	2.076
2035	4.00%	2.379	4.00%	2.366	3.50%	2.149
2036	4.00%	2.474	4.00%	2.460	3.50%	2.224
2037	4.00%	2.573	4.00%	2.559	3.50%	2.302
2038	4.00%	2.676	4.00%	2.661	3.50%	2.382
2039	4.00%	2.783	4.00%	2.768	3.50%	2.466
2040	4.00%	2.894	4.00%	2.878	3.50%	2.552
2041	4.00%	3.010	4.00%	2.994	3.50%	2.642
2042	4.00%	3.130	4.00%	3.113	3.50%	2.734
2043	4.00%	3.255	4.00%	3.238	3.50%	2.830

2015 ENO IRP Inflation Forecast (High Case)

Forecast Prepared February 17, 2014

[Click here to go to Table of Contents](#)

SPO GDP POV			SPO CPI POV			SPO PPI POV		
2013\$ Conversion Factor			2013\$ Conversion Factor			2013\$ Conversion Factor		
2044	4.00%	3.386	4.00%	3.367	3.50%	2.929		
2045	4.00%	3.521	4.00%	3.502	3.50%	3.031		

Additional Calculations to Support Real Levelized Price Determination Elsewhere In This Workbook

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Conversions For Levelized Real

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30	#REF!	2043
31	#REF!	2044

2015 ENO IRP Inflation Forecast (High Case)

Forecast Prepared February 17, 2014

[Click here to go to Table of Contents](#)

SPO GDP POV	SPO CPI POV	SPO PPI POV
2013\$ Conversion Factor	2013\$ Conversion Factor	2013\$ Conversion Factor
32 #REF! 2045		

2015 ENO IRP Inflation Forecast (Low Case)

Forecast Prepared February 17, 2014

[Click here to go to Table of Contents](#)

	SPO GDP POV		SPO CPI POV		SPO PPI POV	
		2013\$ Conversion Factor		2013\$ Conversion Factor		2013\$ Conversion Factor
2011	0.00%	Define Price Path Power	400.00%	-	0.00%	93.409
2012	0.00%	-	0.00%	-	0.00%	95.277
2013	0.00%	-	0.00%	1.000	0.00%	97.183
2014	1.04%	1.010	0.96%	1.010	1.03%	1.010
2015	1.05%	1.021	1.00%	1.020	0.93%	1.020
2016	1.00%	1.031	1.00%	1.030	0.88%	1.029
2017	1.00%	1.042	1.00%	1.040	0.88%	1.038
2018	1.00%	1.052	1.00%	1.051	0.88%	1.047
2019	1.00%	1.063	1.00%	1.061	0.88%	1.056
2020	1.00%	1.073	1.00%	1.072	0.88%	1.065
2021	1.00%	1.084	1.00%	1.082	0.88%	1.074
2022	1.00%	1.095	1.00%	1.093	0.88%	1.084
2023	1.00%	1.106	1.00%	1.104	0.88%	1.093
2024	1.00%	1.117	1.00%	1.115	0.88%	1.103
2025	1.00%	1.128	1.00%	1.126	0.88%	1.113
2026	1.00%	1.139	1.00%	1.138	0.88%	1.122
2027	1.00%	1.151	1.00%	1.149	0.88%	1.132
2028	1.00%	1.162	1.00%	1.160	0.88%	1.142
2029	1.00%	1.174	1.00%	1.172	0.88%	1.152
2030	1.00%	1.185	1.00%	1.184	0.88%	1.162
2031	1.00%	1.197	1.00%	1.196	0.88%	1.172
2032	1.00%	1.209	1.00%	1.208	0.88%	1.182
2033	1.00%	1.221	1.00%	1.220	0.88%	1.193
2034	1.00%	1.234	1.00%	1.232	0.88%	1.203
2035	1.00%	1.246	1.00%	1.244	0.88%	1.214
2036	1.00%	1.258	1.00%	1.257	0.88%	1.224
2037	1.00%	1.271	1.00%	1.269	0.88%	1.235
2038	1.00%	1.284	1.00%	1.282	0.88%	1.246
2039	1.00%	1.296	1.00%	1.295	0.88%	1.257
2040	1.00%	1.309	1.00%	1.308	0.88%	1.268
2041	1.00%	1.323	1.00%	1.321	0.88%	1.279
2042	1.00%	1.336	1.00%	1.334	0.88%	1.290
2043	1.00%	1.349	1.00%	1.347	0.88%	1.301

2015 ENO IRP Inflation Forecast (Low Case)

Forecast Prepared February 17, 2014

[Click here to go to Table of Contents](#)

SPO GDP POV			SPO CPI POV			SPO PPI POV		
2013\$ Conversion Factor			2013\$ Conversion Factor			2013\$ Conversion Factor		
2044	1.00%	1.363	1.00%	1.361	0.88%	1.313		
2045	1.00%	1.376	1.00%	1.374	0.88%	1.324		

Additional Calculations to Support Real Levelized Price Determination Elsewhere In This Workbook

ENO WACC #REF!

Conversions For Levelized Real

# of Years	Factor	Year
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3	#REF!	2016
4	#REF!	2017
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30	#REF!	2043
31	#REF!	2044

2015 ENO IRP
Inflation Forecast (Low Case)

Forecast Prepared February 17, 2014

[Click here to go to Table of Contents](#)

SPO GDP POV	SPO CPI POV	SPO PPI POV
2013\$ Conversion Factor	2013\$ Conversion Factor	2013\$ Conversion Factor
32 #REF! 2045		

2015 ENO IRP
Capacity Price Forecast

2015 ENO IRP
Supply Resource Deactivation Date Assumptions

2015 ENO IRP
ENO Financing Assumptions

2015 ENO IRP Supply Resource List Introduction

2015 ENO IRP

Supply Resource List MISO North

2015 ENO IRP

Supply Resource List MISO South

2015 ENO IRP

Supply Resource List MISO South

2015 ENO IRP

Supply Resource List MISO South

2015 ENO IRP

Supply Resource List SERC Southeast & SERC TVA

2015 ENO IRP

Supply Resource List SERC Southeast & SERC TVA

2015 ENO IRP

Supply Resource List SERC Southeast & SERC TVA

2015 ENO IRP

Supply Resource List SPP

2015 ENO IRP

Supply Resource List SPP

2015 ENO IRP

Supply Resource List SPP

2015 ENO IRP

[Click Here to Return to Table of Contents](#)

ENO Avoided Energy Cost By Season & Time Block

27-Mar-14

2014 Business Plan (Feb. 2014 Update AURORA
Nodal Case) 2029-2034 Constant Heat Rate

[Click Here to Return to Table of Contents](#)

Avoided Capacity Cost
ENO

[Click Here to Return to Table of Contents](#)

Avoided Capacity Cost
ENO

Avoided Capacity Cost
ENO

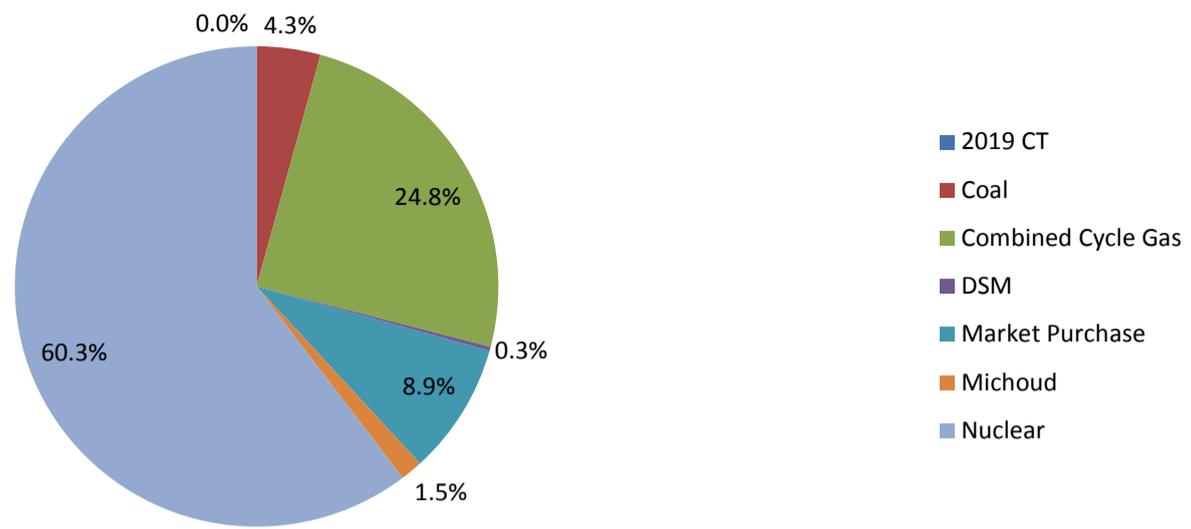
[Click Here to Return to Table of Contents](#)

Avoided Capacity Cost
ENO

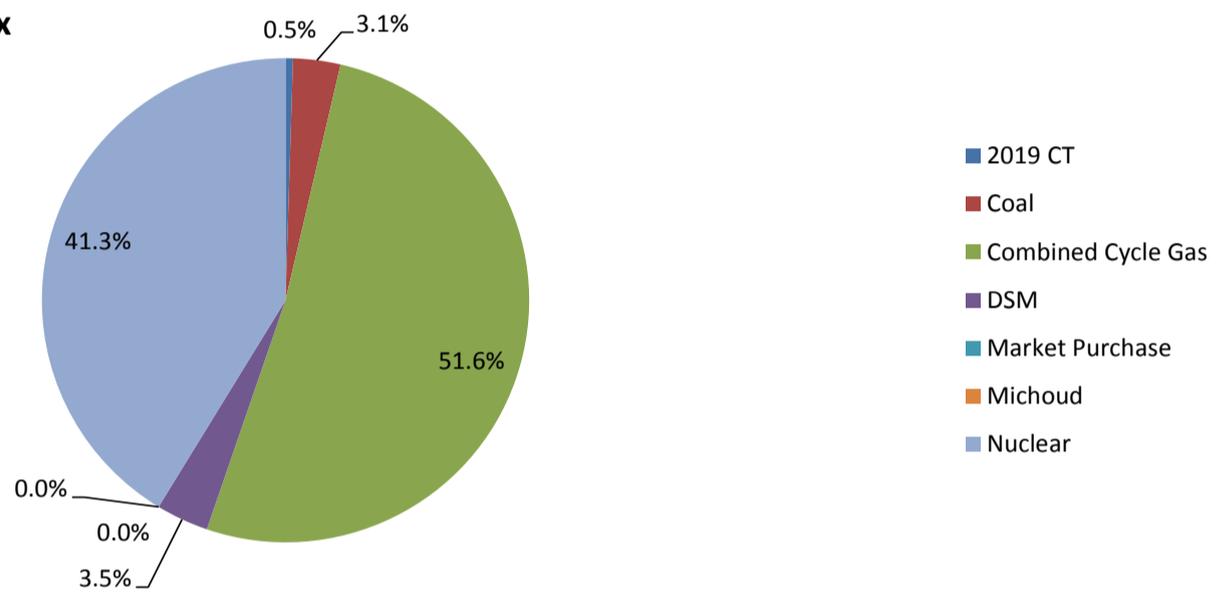
2015 ENO IRP
ENO Energy Supply by Resource Type
Preferred Resource Plan
June 1, 2015

Produced by: Planning Analysis Department of
System Planning & Operations
Entergy Services, Inc.

2015 ENO Energy Mix



2034 ENO Energy Mix



ENOI Annual Owned Generation by Source (MWh) - CT Portfolio/Industrial Renaissance

Resource	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
2020 Amite South CCGT	0	0	0	0	0	941,995	1,578,194	1,597,924	1,568,505	1,593,743	1,598,813	1,646,191	1,677,364	1,722,175	1,716,795	1,713,763	1,709,289	1,712,252	1,706,369	1,704,747
ANO1	181,761	182,414	195,233	181,790	181,761	195,772	181,818	181,761	195,233	182,319	181,761	195,233	181,818	182,300	195,233	181,847	181,761	195,772	181,809	173,529
ANO2	214,402	230,805	214,320	214,434	230,171	214,954	214,410	230,171	214,320	215,077	230,171	214,320	214,410	230,805	214,320	214,385	230,171	214,954	214,361	230,171
ENOI 2019 CT	0	0	0	0	24,733	15,937	10,833	4,791	1,697	5,210	1,711	10,121	5,133	14,048	17,583	13,771	21,253	28,160	20,867	37,831
Grand Gulf #1	2,106,956	1,966,932	2,106,956	1,961,097	2,106,956	1,966,932	2,106,956	1,961,097	2,106,956	1,966,932	2,106,956	1,984,435	2,106,956	1,943,594	2,106,956	1,961,097	2,106,956	1,966,932	2,106,956	1,937,760
Independence #1	53,482	54,258	49,745	54,862	53,556	55,628	58,672	58,713	51,864	58,933	55,487	58,761	58,761	52,041	58,675	55,487	58,761	58,890	51,868	58,761
Michoud #2	80,918	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Michoud #3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ninemile Point #6 2x1	700,048	859,167	857,066	857,695	853,678	856,191	846,054	838,300	826,556	829,287	828,733	833,886	835,267	838,027	838,384	836,100	835,727	838,224	834,631	833,587
Riverbend #1	757,682	815,729	757,682	813,497	757,682	815,729	757,682	813,497	757,682	815,729	757,682	813,497	757,682	815,729	757,682	813,497	757,682	815,729	757,682	813,497
Union Power Partners LP #2	323,922	432,823	369,456	369,238	294,760	306,790	300,378	326,574	321,799	347,710	367,764	418,732	472,866	531,156	591,593	631,711	668,449	701,833	703,504	704,801
Union Power Partners LP #4	316,269	407,145	335,669	323,953	276,961	286,560	271,741	287,881	287,852	326,779	354,312	386,438	445,159	519,709	570,186	621,755	655,013	693,409	701,577	701,309
White Bluff #1	86,588	65,041	66,534	71,087	86,672	88,999	79,887	84,159	88,167	85,760	88,647	81,191	85,158	88,662	85,055	88,509	81,252	85,267	88,161	84,775
White Bluff #2	90,090	78,487	74,343	75,069	97,690	93,684	95,810	91,842	92,515	97,062	91,908	96,014	91,797	92,307	96,174	91,774	95,736	92,127	91,957	96,280
Total Generation	4,912,117	5,092,801	5,027,003	4,922,722	4,964,619	5,839,171	6,502,436	6,476,709	6,513,146	6,524,541	6,663,946	6,738,819	6,932,371	7,030,554	7,248,635	7,223,697	7,402,049	7,403,549	7,459,742	7,377,048
Market Purchase	479,585	410,131	459,634	588,862	571,369	0														
Total Load (Energy)	5,406,117	5,534,936	5,539,660	5,589,789	5,642,518	5,694,813	5,739,292	5,791,522	5,848,402	5,912,608	5,968,008	6,026,161	6,085,405	6,149,243	6,200,650	6,258,299	6,317,525	6,381,705	6,438,134	6,496,816
DSM	14,415	32,004	53,023	78,205	106,530	136,570	161,051	175,471	188,386	201,420	212,553	223,143	231,694	241,485	248,994	255,158	259,670	263,274	265,008	266,388
Total Load (Energy Net DSM)	5,391,702	5,502,932	5,486,637	5,511,584	5,535,988	5,558,243	5,578,241	5,616,051	5,660,016	5,711,188	5,755,455	5,803,018	5,853,711	5,907,758	5,951,656	6,003,141	6,057,855	6,118,431	6,173,126	6,230,428

Resource Type	% of Energy Mix		MWh	
	2015	2034	2015	2034
2019 CT	0.0%	0.5%	0	37,831
Coal	4.3%	3.1%	230,160	239,816
Combined Cycle Gas	24.8%	51.6%	1,340,239	3,944,444
DSM	0.3%	3.5%	14,415	266,388
Market Purchase	8.9%	0.0%	479,585	0
Michoud	1.5%	0.0%	80,918	0
Nuclear	60.3%	41.3%	3,260,801	3,154,957
Total	100%	100%	5,406,117	7,643,436