

Regional Energy Efficiency Database (REED) Supporting Information



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About NEEP

NEEP was founded in 1996 as a nonprofit whose mission is to serve the Northeast and Mid-Atlantic to accelerate regional collaboration to promote advanced energy efficiency and related solutions in homes, buildings, industry, and communities. Our vision is that the region's homes, buildings, and communities will be transformed into efficient, affordable, low-carbon, and resilient places to live, work, and play.

Disclaimer: NEEP verified the data used in this document to the best of our ability. This paper reflects the opinion and judgments of the NEEP staff and does not necessarily reflect those of NEEP board members, NEEP sponsors, or project participants and funders.

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Executive Summary

Since 2011, the Regional Energy Efficiency Database (REED) has been making ratepayer-funded energy efficiency program data readily available from the following Northeast and Mid-Atlantic states and jurisdictions: Connecticut, Delaware, District of Columbia, Massachusetts, Maryland, Maine, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, and Vermont. This year's REED Workbook and report cover data up to program year 2021 in all of the above states and jurisdictions, with some 2022 data in select states.

REED is a publicly available resource that allows interested parties to access program data and compare the performance of energy efficiency programs in the region that are designed to save electricity and gas, reduce emissions, and deliver additional benefits. REED metrics include annual and lifetime energy and electricity demand savings, expenditures, cost of saved energy, avoided air pollutant and greenhouse gas emissions, and job impacts.

Consistent access to this type of data helps states gauge progress towards state and regional energy and demand goals, air quality and greenhouse gas compliance plans, and economic development strategies. REED also allows users to benchmark or compare reported data across states to help identify where program performance may differ from state to state and to help identify program best practices.

This report complements data collected for REED and helps ensure informational transparency. Although some of the energy efficiency program metrics are consistent across the states and the District of Columbia, some reporting varies across the region for energy efficiency program impacts, EM&V practices, and approval processes. It is important to consider variations in state practices in the following areas when interpreting REED data:

- Reporting and approval processes
- Tracked versus evaluated savings
- Gross savings adjustments
- Net savings adjustments
- Evaluation, measurement, and verification (EM&V) protocols used

This report highlights some of these differences across states to ensure that REED data are not misconstrued or misrepresented. The report begins with general supporting information that provides detailed information on the metrics that REED collects, along with a number of additional resources. Following the general supporting information, the report provides an overview of relevant state program administrators and reporting practices for each REED state and the District of Columbia.

General Supporting Information

This supporting information provides transparency for REED's energy efficiency program data and should be used to help interpret the data. Please see each state's State Documents and Key Information section below for additional background on energy efficiency programs, including energy savings adjustments, state review practices, EM&V protocols, and links to supporting documentation.

REED Background and Scope

REED was developed by the Regional Evaluation Measurement & Verification (EM&V) Forum (which has been discontinued) and is based on the forum's <u>Common Statewide Energy Efficiency Reporting Guidelines</u>, which were adopted in 2010. REED focuses on electric and gas energy efficiency savings, impacts, and program expenditures in the Northeast and Mid-Atlantic region, funded by gas and electric service ratepayers. Most of the jurisdictions participating in REED were also members of the Regional EM&V Forum, a group that NEEP led from 2008 to 2016. The purpose of the guidelines, and of REED, is to provide a common "currency" of reported energy efficiency data to support multiple state and regional energy and environmental policies and objectives.

REED provides annual energy efficiency program results at the state, sector, administrator, and program levels. It is important to note that energy efficiency program definitions and criteria for including programs in a state's portfolio may vary from state to state, and currently REED includes programs that fall into each state's definition of an energy efficiency program. Below are examples of how several states—two within the REED region, and one outside the REED region—define energy efficiency programs in state statutes. These states illustrate the range of approaches states take to define the scope of energy efficiency programs and/or specific measures and the level of specificity in statute. Some states, such as Massachusetts, explicitly call out the types of programs that can be included (e.g., gas programs), while others, such as Maine, are less specific and include a list of qualifying program criteria:

- Massachusetts: Energy efficiency is a mandate of the Green Communities Act, signed into law in 2008. According to the act, "The department shall require a mandatory charge of 2.5 mills per kilowatt-hour for all consumers, except those served by a municipal lighting plant, to fund energy efficiency programs including, but not limited to, demand side management programs. The programs shall be administered by the electric distribution companies and by municipal aggregators with energy plans certified by the department....The department may approve and fund gas energy efficiency programs proposed by gas distribution companies including, but not limited to, demand side management programs. Energy efficiency activities eligible for funding under this section shall include combined heat and power and geothermal heating and cooling projects."
- Minnesota: "Energy efficiency' means measures or programs, including energy conservation measures or programs, that target consumer behavior, equipment, processes, or devices designed to produce either an absolute decrease in consumption of electric energy or natural gas or a decrease in consumption of electric energy or natural gas on a per unit of production basis without a reduction in the quality or level of service provided to the energy consumer." See: 2014 <u>Minnesota Statutes,</u> <u>216B.241 Energy Conservation Improvement.</u>

Maine: "Conservation programs' means programs developed by the Trust pursuant to 35-A M.R.S.A. §
10110 and this Chapter designed to reduce inefficient electricity use....The Trust shall consider, without
limitation, conservation programs that: (a) Increase consumer awareness of cost-effective options for
conserving energy; (b) Create more favorable market conditions for the increased use of energy efficient
products and services; and (c) Promote sustainable economic development and reduced environmental
damage. (d) Reduce the price of electricity over time for all consumers by achieving reductions in
demand for electricity during peak use periods; and (e) Reduce total energy costs for electricity
consumers in the State by increasing the efficiency with which electricity is consumed." See: Efficiency
Maine Trust Agency Rules, Chapter 3 - INDEPENDENT AGENCIES - REGULATORY (efficiencymaine.com).

Avoided Air Emissions

REED calculates avoided carbon dioxide (CO_2) , nitrogen oxides (NOx), and sulfur dioxide (SO2) emissions based upon annual emission factors for each state from the <u>EIA State Electricity Profiles</u>. Avoided emissions are calculated for electric programs only. The values for each state can be seen in Table 1.

NEEP chose this methodology for calculating avoided air emissions through a stakeholder-driven process with members of the Regional EM&V Forum when REED was being developed. After extensive discussion, REED subcommittee participants (who were tasked with selecting a methodology for calculating avoided air emissions) concluded that using average annual emissions factors for each of the subregions would be a reasonable and straightforward methodological approach. Subcommittee participants discussed the possibility of using marginal emissions factors to calculate avoided air emissions in the future for greater accuracy and consistency. NEEP may shift to use marginal emissions factors to calculate REED's avoided air emissions data in future years, but more research, input, and guidance from air regulator stakeholders is needed.

Previously, REED used emissions factor estimates at the ISO level (for the ISO-NE, NYISO, and PJM regions). This year's report has shifted to using state-level values (for avoided emissions during program years (PY) 2021 and 2022) for greater accuracy.

Transmission and Distribution Loss Factors

REED's generator-level savings are calculated by adding the savings attributable to avoided line losses to the meter-level savings reported by program administrators. We calculated these additional savings by using a state-level <u>transmission and distribution (T&D)</u> loss factor for energy in each REED state using data from the <u>EIA State</u> <u>Electricity Profiles</u>. For program years prior to 2021, REED uses T&D loss factor estimates at the ISO level (for the ISO-NE, NYISO, and PJM regions). This year's report has shifted to using state-level values (for transmission and distribution losses during program years 2021 and 2022) for greater accuracy. The values for each state can be seen in Table 1.

	2022			2021				
	T&D losses (%)	SO ₂ (lbs/ MWh)	NOx (lbs/ MWh)	CO ₂ (lbs/ MWh)	T&D losses (%)	SO ₂ (lbs/ MWh)	NOx (lbs/ MWh)	CO ₂ (lbs/ MWh)
Connecticut	3.55%	0.1	0.3	550	3.02%	<u>0</u>	0.3	546
Delaware	5.14%	0.2	0.7	1112	4.46%	0.3	0.8	1259
Maine	4.84%	0.9	0.8	481	4.44%	1	1	461
Maryland	5.14%	0.2	0.3	666	4.46%	0.3	0.3	693
Massachusetts	5.14%	0.2	0.8	952	4.46%	0.2	0.8	947
New Hampshire	3.13%	0.1	0.2	298	2.99%	0.1	0.2	289
New Jersey	5.14%	0	0.3	537	4.46%	0	0.3	530
New York	5.09%	0.1	0.5	541	4.41%	0.1	0.5	499
Pennsylvania	3.36%	0.4	0.4	713	2.86%	0.4	0.4	729
Rhode Island	5.14%	0	0.5	830	3.81%	0	0.5	840
Vermont	1.86%	0	1	13	1.59%	0	1.2	11
Washington, D.C.	5.14%	0	5.7	874	4.46%	0	5.6	1170

Table 1. State T&D losses (%) and emission factors (lbs/MWh) in 2021 and 2022

The ISO-level emission factors used in REED for program years 2011-2020 (prior to the use of the state-level factors) are available in <u>this document</u>.

*Please note that not all data for 2022 is available. Available data has been provided.

Combined-Heat-and-Power (CHP) Programs

<u>Combined-heat-and-power</u> (CHP) is "an integrated set of technologies for the simultaneous, on-site production of electricity and heat." Some states in the REED region have energy conservation programs focused on CHP projects. These CHP-focused programs are included in REED if the programs are 1) ratepayer-funded, 2) defined as an energy efficiency program within a state, and 3) reported by the state contacts to REED. REED collaborates with ISO-NE to collect electric efficiency data in New England, and ISO-NE directed state reporting contacts not to include CHP projects in their data collection form. Therefore, before 2014, CHP programs were not reported to REED for the New England states, but they could have been reported for New York, Maryland, Delaware, Pennsylvania, and the District of Columbia. In 2014, CHP project savings and expenditures were added back into the ISO-NE data for Massachusetts and Rhode Island.

Cost of Saved Energy

Cost of saved energy calculations are provided in NEEP's <u>Energy Efficiency Snapshot</u> and are based on the American Council for an Energy-Efficient Economy (ACEEE)'s recommended approach in its 2009 <u>Saving Energy</u> <u>Cost-Effectively</u> report for the program administrator cost test, which is also referred to as the utility cost test. Participant costs are not included in this test.

Cost of saved energy is calculated using the following equations (note: dollar figures from past years are to be adjusted using the below discount factors when using these formulas):

Lifetime Cost of Electric Energy Savings		Total Program Expenses (\$)
		Lifetime Net kilowatt hour (kWh) Savings
Lifetime Cost of Natural Gas Energy Savings	=	Total Program Expenses (\$)
		Lifetime Net Therm Savings
Levelized Cost of Electricity Energy Savings	=	Total Program Costs (\$) × Capital Recovery Factor (CRF)
		Incremental Annual Net kilowatt hour (kWh) Savings)
Levelized Cost of Natural Gas Eneray Savina	s =	Total Program Costs × CRF
	-	Incremental Annual Net Therm Saving
Where $CRF = A \times (I + A)^B$ A = real discount rate A = real discount rate B = estimated measure life	fe	

- For program years 2011-2016, a real discount rate of 2.46 percent is used, which was agreed upon by all jurisdictions that report data to REED. (Source: 2011 Avoided Energy Supply Costs in New England study.)
- For program years 2017-2019, a real discount rate of 1.34 percent is used. (Source: <u>2018 Avoided Energy</u> <u>Supply Components in New England</u> study.)
- For program years 2020-2023, a real discount rate of 0.81 percent is used. (Source: <u>2021 Avoided Energy</u> <u>Supply Components in New England</u> study.)
- Starting in program year 2024, a real discount rate of 1.74 percent will be used. (Source: <u>2024 Avoided</u> <u>Energy Supply Components in New England</u> study.)
- REED uses a consistent discount rate across the states for comparison purposes, however in practice, states use different discount rates for their cost effectiveness assessments.

Demand Response

Demand response programs compensate participants for reducing their electricity usage during periods of high electricity demand to reduce the strain on the electric grid. REED includes data on *hybrid programs that have both an energy efficiency element and a demand response element (such as smart thermostat programs or*

behavior-based programs, etc.). We plan to continue this approach as these pilots and programs become more prominent across the region. REED also includes data on dynamic pricing programs. REED does not include data on demand response programs that are bid into wholesale capacity markets (which include ISO-NE, NYISO, and PJM in the REED region) even if those programs are administered by a utility or funded with ratepayer money.

Please see the links below for information about demand response programs that are bid into wholesale capacity markets within the REED region:

Independent System Operator New England (ISO-NE) Resources:

- Demand Threshold <u>Price Details</u>: Users can download a detailed report on demand response threshold prices including the reference month supply curve data as market-level price/quantity pairs, as well as other adjustments.
- Demand Threshold <u>Price Summary</u>: Users can download a summary report that includes the monthly demand response threshold price, fuel index, and other related information.

New York Independent System Operator (NYISO) Resources:

• <u>Document Library</u>: This library includes NYISO regulatory resources, manuals, technical bulletins and guides, and podcasts.

PJM Interconnection Resources:

- Demand Response Operations Markets Activity Reports: <u>2013</u>; <u>2014</u>; <u>2015</u>; <u>2016</u>; <u>2017</u>; <u>2018</u>; <u>2019</u>; <u>2020</u>; <u>2021</u>, <u>2022</u>.
- Additional PJM demand response <u>information</u>: "Demand Response is a voluntary PJM program that compensates end-use (retail) customers for reducing their electricity use (load), when requested by PJM, during periods of high power prices or when the reliability of the grid is threatened. These customers receive payments from PJM members called Curtailment Service Providers."

Demand Savings

REED allows for reporting of both summer and winter net and gross peak demand savings. Not all states report all parameters.

- New England: All states' peak demand reporting is consistent with <u>ISO-NE's definition</u> of summer and winter peak demand, which is the highest amount of electricity used during a single hour during either the summer or winter months.
- New York: Program administrators report only summer peak demand reductions per the NYISO. From the Peak Demand Definition section (page 8) in the 10/15/10 Technical Manual: "According to the NYISO, system peaks generally occur during the hour ending at 5:00 p.m. on the hottest non-holiday weekday. The peak day can occur in June, July, or August–depending on the weather. Program administrators should calculate coincident peak demand savings based on the hottest summer non-holiday weekday during the hour ending at 5:00 p.m."
- Mid-Atlantic: All jurisdictions that report to REED use reporting definitions that are consistent with

<u>PJM's definition</u> of peak demand (defined as "an end-use customer's contribution to the zone's weather normalized summer peak load, as determined by the zone's Electric Distribution Company"), but only certain states report peak demand savings.

- **Delaware** does not report winter peak demand savings.
- Before 2013, the *District of Columbia (D.C.)* did not report winter peak demand savings. D.C. typically reports winter peak demand savings for some of its programs.
- Maryland does not report winter peak demand savings. REED includes Maryland's 2011 and 2012 demand response programs because the EmPOWER Maryland surcharge covers both energy efficiency and demand response programs. However, REED does not include demand response programs for subsequent years.
- *Pennsylvania* does not report winter peak demand savings.

Peak to Energy Savings Ratio

The peak to energy savings ratio is calculated as:

$$Peak to Energy Savings Ratio \quad \left(\frac{MW}{GWh}\right) = \frac{Net Summer Demand Savings}{Net er level (MW)} \times \frac{1000 MWh}{1 GWh}$$

$$Electric Meter level (MWh)$$

Distributed Generation

Distributed generation programs are included in REED if those programs are 1) ratepayer-funded, 2) defined as an energy efficiency program within a state, and 3) reported by the state contacts to REED. REED collaborates with ISO-NE to collect electric-efficiency data in New England, and ISO-NE directs states not to include distributed generation projects in their data collection form. Therefore, distributed generation programs are not reported to REED for the New England states. REED may include distributed generation programs for New York, Maryland, Delaware, Pennsylvania, and the District of Columbia.

Expenditures and Savings Details

REED was initially developed using the following expenditure categories for each program: Customer Rebates or Incentives, Administration, Marketing, Performance Incentives, Research and Evaluation, and Other. Because some states do not track expenditures according to the REED expenditure categories or allocate expenditures differently across programs (in particular for Administration and Marketing expenditures), or both, the REED Workbook includes only a total expenditure amount for each program. Some states report energy efficiency programs with expenditures and no savings. Such programs show up in REED with expenditure values, but blank cells in the savings columns.

Some states report negative program expenditures or savings due to unique state accounting practices. Below are some examples as to why. NEEP plans to continue researching these instances further.

- Washington, D.C.'s <u>solar hot water heat program</u> has negative electric expenditures because the program is funded through the gas efficiency budget. However, there is an electrical expense because the installation includes an electric pumping fee. Because of this, the fee is negative under electric spending but is offset by gas expenditures for the same program.
- New York has a number of programs with reported negative expenditure values. NEEP has reached out to NYSERDA for clarification on these negative values; we believe this may be due to the presence of cost-sharing agreements, but we are waiting for confirmation from NYSERDA.

Interactive Effects

Some REED program data includes negative gas or electric energy savings due to interactive effects, which occur when a savings in one area is offset by an increase in another. An example of interactive effects can be seen in lighting programs: high efficiency lighting generates less heat than conventional lighting, which can increase heating requirements and decrease cooling requirements. This can produce negative gas energy efficiency savings. With respect to REED, NYSERDA's PY 2016 Assisted Home Performance with Energy Star program generated negative electric savings data. Some program administrators consider these interactive effects, which account for negative energy efficiency savings.

Programs in REED that report negative electric energy efficiency savings will also have negative avoided air emissions in the REED Workbook, since avoided air emissions are calculated based on electric energy savings.

Job Impacts

REED aims to include estimated annual job creation impacts of energy efficiency programs. Before 2020, REED only provided energy efficiency jobs data reported by states and based on state-specific studies. Beginning in 2020, NEEP conducted broader research on the status of energy efficiency jobs throughout the REED region to provide a more comprehensive overview of energy efficiency workforce development. Summary information is included in Tables 2a and 2b below for each state. In 2020, the energy efficiency industry saw a national average of <u>13.5 percent loss in jobs due to the COVID-19 pandemic</u>. Still, the energy efficiency sector employed more workers than any other energy sector in the NEEP region except for West Virginia, in which the energy efficiency sector was the third largest energy sector.

For more information about energy efficiency jobs across the country, see E4TheFuture's <u>Energy Efficiency Jobs</u> <u>in America 2021</u> report. Newer versions of this report are available, but we refer to the 2021 version to stay consistent with the program year 2021 energy efficiency program data. For more information about workforce policies across the region, see <u>NEEP's Regional Roundup</u>.

Tables 2a and 2b. Energy efficiency Jobs by State

STATE	TOTAL EE JOBS IN 2021	REED Region EE Job Growth in 2021			
Connecticut	34,106	(June 2020 to June 2021)			
District of Columbia	11,501	Commention			
Delaware	10,733	Connecticut	10.8%		
Maine	8,328	District of Columbia	7.1%		
Maryland	66,167	Maine	9.2%		
Massachusetts	79,173	Maryland	7.8%		
New Hampshire	11,096	Massachusetts	6.6%		
New Jersey	34,585	New Hampshire	1.5%		
New York	123,921	New York	9.5%		
Pennsylvania	67,782	Pennsylvania	10.578	20.0%	
Rhode Island	10,863	Rhode Island	8.1%		
Vermont	10,139	Vermont	8.6%		

Below is a state-by-state breakdown:

- <u>Connecticut</u> reported 34,106 energy efficiency jobs in 2021. Construction firms were the majority
 of energy efficiency firms in Connecticut, and HVAC workers made up the majority—more than 50
 percent—of energy efficiency workers.
 - o For more information, see the following resource: 2021 Connecticut Clean Energy Industry Report
- The <u>District of Columbia (D.C.</u>) reported 11,501 energy efficiency jobs in 2021. Professional services firms and firms offering "Other" services, such as finance/accounting and R&D, made up the majority of energy efficiency firms, and the HVAC sector employed the most energy efficiency workers in D.C.
 - o For more information, see the following resource: DC Sustainable Energy Utility 2021 Annual Report
- <u>Delaware</u> reported 10,733 energy efficiency jobs in 2021. Construction firms represented the clear majority of energy efficiency firms in the state, making up nearly 80 percent of the landscape, and HVAC jobs represented the clear majority of energy efficiency jobs, representing more than 60 percent of total energy efficiency jobs.
- <u>Maine</u> reported 8,328 energy efficiency jobs in 2021. Construction firms made up the majority of energy efficiency employers in Maine, comprising over 70 percent of firms. HVAC workers were the most common energy efficiency employees in the state, representing almost 60 percent of total energy efficiency workers.
 - For more information, see the following resource: Maine Clean Energy Workforce Data

- <u>Maryland</u> reported 66,167 energy efficiency jobs in 2021. Most of the state's energy efficiency firms were construction firms (nearly 75 percent), and most of the energy efficiency jobs were HVAC-related jobs (nearly 65 percent).
 - For more information, see the following resources: <u>2021 Maryland Clean Energy Center Annual</u> <u>Report</u> and <u>2021 EARN Maryland Annual Report</u>
- <u>Massachusetts</u> reported 79,173 energy efficiency jobs in 2021. Construction firms made up the majority of energy efficiency firms (over 40 percent), followed by firms that provided Professional Services and Other energy efficiency-related work. The majority of Massachusetts energy efficiency workers were HVAC workers (nearly 50 percent).
 - For more information, see the following resource: <u>2021 Massachusetts Clean Energy Industry</u> <u>Report</u>
- <u>New Hampshire</u> reported 11,096 energy efficiency jobs in 2021. Construction firms made up the majority of energy efficiency firms in the state at 60 percent, and the HVAC sector provided the majority of energy efficiency jobs at over 60 percent.
- <u>New Jersey</u> employed 34,585 energy efficiency workers in 2021. Construction firms made up the majority of energy efficiency firms in New Jersey at nearly 60 percent, while HVAC employers provided the greatest number of jobs in New Jersey, employing over 50 percent of the state's energy efficiency workers.
 - For more information, see the following resource: Green Jobs for a Sustainable Future: Leveraging Our Strengths to Grow an Inclusive Green Economy
- <u>New York</u> reported a total of 123,921 energy efficiency jobs in 2021. The largest sector (almost 50 percent) of energy efficiency firms in New York provided Professional Services and Other (not Construction or Manufacturing & Trade) work related to energy efficiency. The HVAC sector employed the most workers—more than 55 percent of the state's energy efficiency workers.
 - For more information, see the following resource: <u>New York Clean Energy Industry Report 2021</u> (automatic download)
 - <u>Pennsylvania</u> reported a total of 67,782 energy efficiency jobs in 2021. In the landscape of energy efficiency firms, construction firms made up the majority (almost 55 percent), and HVAC workers made up the majority of the workforce at just over 50 percent.
 - For more information, see the following resources: <u>2021 Pennsylvania Energy Employment Report</u> and 2021 Pennsylvania Clean Energy Employment Report
 - Rhode Island reported a total of 10,863 energy efficiency jobs in 2021. Construction firms made up the clear majority of energy efficiency firms, at nearly 60 percent of the sector landscape, and the HVAC sector supplied the most energy efficiency jobs, followed closely by the ENERGY STAR Appliances & Efficient Lighting sector (approximately 32 percent and 28 percent respectively).
 - For more information, see the following resource: <u>2021 Rhode Island Energy Efficiency and</u> <u>Resource Management Council Annual Report</u>



- <u>Vermont</u> reported a total of 10,139 energy efficiency jobs in 2021. Construction firms comprised the largest portion (over 40 percent of energy efficiency firms, and HVAC professionals made up the majority (just over 50 percent) of energy efficiency professionals.
 - For more information, see the following resources: <u>VT Department of Public Service Clean Energy</u> <u>Development Fund Annual Report to the Legislature FY 2021</u> and <u>2021 Vermont Clean Energy</u> <u>Industry Report</u>

Program Type Limitations

REED's program type categories do not fit neatly for all programs because some programs cut across categories. In most cases, state reporting contacts have selected the program type category that most closely fits each program. In cases when the state reporting contact has not provided direction on the appropriate program type category, NEEP staff has made this determination to the best of their ability.



STATE DOCUMENTS AND KEY INFORMATION

CONNECTICUT—State Documents and Key Information

Connecticut's utilities implement energy efficiency programs in three-year cycles. The state is currently implementing the <u>2022-2024 Conservation and Load Management Plan</u>. While each utility offers its own programs, the same portfolio of programs is available statewide through the <u>EnergizeCT Platform</u>.

This section provides key information about Connecticut's energy efficiency savings calculations and reporting practices, along with links to key state documents including plans, reports, and other relevant resources. The information is collected through REED's annual state data collection process or obtained from state resources.

Program Administrators and Reporting

- **Program Administrators:** EnergizeCT is the central platform through which all utilities in the state implement their programs. Participating utilities include Connecticut Light & Power d/b/a Eversource CT Electric, Connecticut Gas, Southern Connecticut Gas, United Illuminating, and Yankee Gas d/b/a Eversource CT Gas.
- **Program Year:** Calendar year (January 1 to December 31).
- **Funding:** EnergizeCT is <u>funded</u> through a surcharge on utility customer bills, the Connecticut Green Bank, and the State of Connecticut.
- Energy Efficiency Resource Standard for 2021 onward: "...to reduce energy consumption by 1.6 million MMBtu, or the equivalent megawatts of electricity, as defined in subdivision (4) of section 22a-197, annually each year for calendar years commencing on and after January 1, 2020, up to and including calendar year 2025."

Key Plans, Reports, and Savings Assumptions Resources

- Connecticut Energy Efficiency Program Legislation:
 - An Act Concerning...Connecticut's Comprehensive Energy Strategy and Various Revisions to the Energy Statutes
 - o An Act Concerning Energy Independence
 - o An Act Concerning Connecticut's Energy Future
 - o An Act Concerning Electric Restructuring
- Connecticut Program Savings Documents (Technical Reference Manuals): <u>2011</u>; <u>2012</u>; <u>2013</u>; <u>2014</u>; <u>2015</u>; <u>2016</u>; <u>2017</u>; <u>2018</u>; <u>2019</u>; <u>2020</u>; <u>2021</u>; <u>2022</u>
- Connecticut 2019-2021 Conservation and Load Management Plan; 2021 update
 - o 2022-2024 Conservation and Load Management Plan
- Connecticut Energy Efficiency Board Annual Legislative Reports

- Connecticut Energy Efficiency Board Document Library
- Connecticut Energy Efficiency Board Evaluation Reports
- Connecticut Energy Efficiency Board Statewide Energy Efficiency Dashboard

Evaluation Process

The <u>Connecticut Energy Efficiency Board (EEB)</u> includes an <u>Evaluation Committee</u> consisting of nonutility EEB members who work directly with an EEB Evaluation Consultant team to oversee energy efficiency program evaluation planning and completion. This role includes evaluation planning, study development, contractor selection, project initiation, project management and completion, and completion of evaluation reports. Energy efficiency program administrators (Connecticut Light & Power and United Illuminating) assist the Evaluation Committee and evaluation consulting team but do not hold a primary role in evaluation. The Connecticut Department of Energy and Environmental Protection has overall oversight authority of evaluation. See the EEB's 2022-2024 Evaluation Plan for current and future evaluation projects.

DISTRICT OF COLUMBIA—State Documents and Key Information

In 2008, the District of Columbia enacted the Clean and Affordable Energy Act, which created the Sustainable Energy Trust Fund and authorized the creation of the <u>District of Columbia Sustainable Energy Utility (DCSEU)</u>. It also designated the DCSEU to be the one-stop resource for energy efficiency and renewable-energy services for D.C. residents and businesses. In 2011, the <u>Department of Energy and Environment (DOEE)</u> selected Vermont Energy Investment Corporation (VEIC) to be the lead implementer for the DCSEU. The DCSEU is currently implementing the <u>2022-2026 Plan</u>.

DCSEU reports energy efficiency program expenditures as total expenditures on all programs, not separated by fuel type. In the REED Workbook, the expenditures have been separated into fuel categories based on the proportion of savings achieved by each program (in electric or gas).

This section provides key information about the District of Columbia's energy efficiency savings calculations and reporting practices, along with links to key state documents including plans, reports, and other relevant resources. The information is collected through REED's annual state data collection process or obtained from state resources.

Program Administrator and Reporting

- Program Administrator: District of Columbia Sustainable Energy Utility (DCSEU).
- **Funding:** Programs are funded through the Sustainable Energy Trust Fund, which is financed by a surcharge on all electric and gas utility ratepayers in D.C.
- **Program Year:** D.C.'s energy efficiency programs are conducted on a fiscal year basis: October 1 to September 30.

- Energy Efficiency Resource Standard for 2021: D.C. does not have a typical energy efficiency resource standard. The DCSEU can earn performance incentives for hitting certain electric and gas targets. For <u>fiscal year 2021</u>, DCSEU achieved 104,211 MWh of electrical savings and 1,622,150 therms of gas savings.
 - For the <u>2022-2026 term</u>, the DCSEU has established energy efficiency targets on a total energy consumed basis, combining gas and electric goals. These targets start at 1,136,789 source MMBtus in Year 1 (PY 2022) and increase to 6,820,733 MMBtus in Year 5 (PY 2026).

Key Plans, Reports, and Savings Assumptions Resources

- District of Columbia Technical Reference Manuals: 2011; 2013; 2014; 2015; 2017; 2018; 2019; 2020 (in use through program year 2022)
- District of Columbia Evaluation, Measurement and Verification Reports
- District of Columbia Program Administrator Annual Reports
- District of Columbia FY2021 Performance Benchmarks Report
- District of Columbia Benchmark Assessment of FY2020 Infographic
- District of Columbia Impact Evaluation Report of 2020

Evaluation Process

A separate third-party contractor is retained to conduct program evaluations. The DCSEU must release quarterly reports that detail how it implements energy efficient policies and programs. At the end of each contract year, the Washington, D.C., Department of Energy and the Environment must commission an independent evaluation of the DCSEU's performance.

The DCSEU must release quarterly reports that detail how it implements energy efficient policies and programs. At the end of each contract year, DOEE must commission an independent evaluation of the DCSEU's performance.

For more information about DCSEU programs, including contractor resources, visit the <u>DCSEU website</u>.

DELAWARE—State Documents and Key Information

Delaware's energy efficiency programs are a collaboration between the electric utilities, gas utilities, and the <u>Delaware Sustainable Energy Utility (DESEU)</u>, the state's energy efficiency utility. Delaware's program plans and data have proven difficult to find. One of the data sources used in past REED reports, the Department of Natural Resources and Environmental Control (DNREC) <u>Energy Efficiency Evaluation Report</u>, has not been published since 2020. Programs are implemented in three-year cycles by both Energize Delaware and the utilities. Delaware's most recently updated plan is the <u>2020-2022 Plan</u>.

This section provides key information about Delaware's energy efficiency savings calculations and reporting practices, along with links to key state documents including plans, reports, and other relevant resources. The information is collected through REED's annual state data collection process or obtained from state resources.

Program Administrators and Reporting

- **Program Administrators:** Delaware Division of Energy and Climate, Delaware Sustainable Energy Utility (DESEU) (d/b/a Energize Delaware). REED does not include program year 2019 data for Delaware.
- **Funding:** Energize Delaware is partially self-funded, raising money through bond issuances. Energize Delaware also receives revenue from the Regional Greenhouse Gas Initiative (RGGI).
- **Program Year:** Calendar year (January 1 to December 31).
- Energy Efficiency Resource Standard for 2020-2022: Delaware does not have a mandatory EERS, but the Delaware Energy Efficiency Advisory Council (EEAC) has set cumulative savings goals of 0.7 percent of annual retail electricity sales relative to 2019 baseline and 0.2 percent of annual retail gas sales relative to 2019 baseline.

Key Plans, Reports, and Savings Assumptions Resources

- Delaware Energy efficiency Program Legislation:
 - Mandate for <u>all cost-effective energy efficiency</u>
- Delaware Program Savings Documents (Technical Reference Manuals): <u>2011</u>; <u>2013</u>; <u>2014</u>; <u>2015</u>; <u>2016</u> plus the <u>Delaware TRM (2016)</u>; <u>2017</u>; <u>2018</u>; <u>2019</u>; <u>2020</u>
- Delaware <u>Strategic Plan</u>
- Delaware <u>Annual Reports</u>
- Delaware Utility Program Administrator Energy Efficiency Program Plan submissions:
 - o Docket 23-0772, Delmarva Power
 - o Docket 23-1175, Chesapeake Utilities
- Delaware Executive Director Reports & Monthly Program Activity Reports
- Delaware Energy Efficiency Market Potential Studies:
 - o Delaware Energy Efficiency Market Potential Study Update (2019)
 - o Original Study of Potential for Energy Savings in Delaware (2014)

Evaluation Process

Senate Bill 150 with House Amendment 2 (passed on July 1, 2014) directs Delaware utilities to provide costeffective energy efficiency programs. The <u>Delaware Energy Efficiency Advisory Council</u> (EEAC) was created in 2014 to assist with the development of Delaware's energy efficiency programs. The Delaware DNREC Division of Climate, Coastal, & Energy has statutory oversight and is responsible for establishing and overseeing EM&V regulations for the energy efficiency programs. For more information, see the <u>DNREC EM&V website</u>.

In 2015, Delaware finalized regulations governing <u>Evaluation, Measurement, and Verification Procedures and</u> <u>Standards</u>.

For more information about Delaware Sustainable Energy Utility/Energize Delaware programs, visit the <u>Delaware</u> <u>Sustainable Energy Utility/Energize Delaware</u> website.

MAINE—State Documents and Key Information

Maine's energy efficiency portfolio is implemented statewide by <u>the Efficiency Maine Trust</u>, the state's energy efficiency utility. Programs are implemented in a three-year cycle. Efficiency Maine is currently operating the <u>2023-2025 Triennial Plan V</u>, and the next cycle, the <u>2026-2028 Triennial Plan VI</u>, is currently in development.

In 2019, Maine <u>passed legislation</u> establishing a heat pump installation target of 100,000 cold climate heat pumps installed by 2025. Maine's newest climate plan expands this target to 240,000 heat pumps installed by 2030. Efficiency Maine Trust is tasked with helping Maine achieve these targets. As a result, Efficiency Maine Trust's energy efficiency plans include <u>targets and benchmarks</u> to accelerate heat pump adoption in the state.

This section provides key information about Maine's energy efficiency savings calculations and reporting practices, along with links to key state documents including plans, reports, and other relevant resources. The information is collected through REED's annual state data collection process or obtained from state resources.

Program Administrator and Reporting

- Program Administrator: Efficiency Maine Trust.
- **Funding:** Efficiency Maine is <u>funded</u> by a surcharge on utility customer bills, revenues from the Regional Greenhouse Gas Initiative (RGGI), and other grants, voluntary payments, and other miscellaneous sources.
- **Program Year:** Maine's programs are conducted on a fiscal year basis: July 1 to June 30.
- Energy Efficiency Resource Standard for 2020-2022: Electric is 2.3 percent, and gas is 0.1 percent. Maine also has a <u>legislative goal</u> to reduce liquid fossil fuels usage by at least 30 percent by 2030 from 2012 levels, as well as weatherizing 100 percent of residences and 50 percent of businesses by 2030.

Key Plans, Reports, and Savings Assumptions Resources

- Maine Energy efficiency Program Legislation:
 - o Mandate for all cost-effective energy efficiency
 - o <u>Legislation mandating heat pump installation goals and extending the heat pump installation goals</u>
- Maine Program Savings Documents (Technical Reference Manuals): <u>Commercial/Industrial and</u> <u>Multifamily</u> and <u>Retail/Residential</u>
- Efficiency Maine Energy Efficiency Program Plans
- Efficiency Maine Report on Budget Transparency, FY2023
- Efficiency Maine Trust's <u>Reports</u>, including Program Evaluation Reports and Annual Reports

Evaluation Process

From the <u>Efficiency Maine Trust's 2022 Annual Report</u>: "The Trust's evaluation, measurement, and verification (EM&V) activities provide research and data-driven analysis to inform program design and delivery strategies,

verify program results, and facilitate continuous program and organizational improvement. The Trust carries out these activities using a combination of in-house initiatives and subcontracted, independent third-party reviews performed by firms that specialize in the evaluation of energy efficiency programs."

In fiscal year 2022, the Trust finalized a number of studies to better understand the potential for cost-effective energy savings and the market channels for energy efficiency measures under Triennial Plan V. In addition, it sets a number of plans for fiscal year 2023.

For more information about the Efficiency Maine Trust's programs, see the <u>Efficiency Maine Trust</u> website.

MARYLAND—State Documents and Key Information

Maryland's gas and electric utilities implement energy efficiency programs in three-year cycles as part of the state's <u>EmPOWER Program</u>. While the programs are under a statewide plan, each utility offers their own portfolios, which vary from territory to territory. The programs are currently operating under the <u>2021-2023</u> cycle. The <u>2024-2026 plan cycle</u> is currently in development.

This section provides key information about Maryland's energy efficiency savings calculations and reporting practices, along with links to key state documents including plans, reports, and other relevant resources. The information is collected through REED's annual state data collection process or obtained from state resources.

Program Administrators and Reporting

- **Program Administrators**: Baltimore Gas & Electric, Delmarva Power & Light, Potomac Edison, Potomac Electric Power Company, Southern Maryland Electric Cooperative, and Washington Gas.
- Funding: Utility customer bill surcharge.
- **Program Year**: Calendar year (January 1 to December 31).
- Energy Efficiency Resource Standard for 2021 and 2022: Electric: 2.0 percent annual retail sales.

Key Plans, Reports, and Savings Assumptions Resources

- Maryland Energy efficiency Program Legislation:
 - o <u>Climate Solutions Now Act</u>
 - \circ Mandate to include greenhouse gas reduction targets in energy efficiency planning
 - o Establishment of an energy efficiency resource standard
 - o Energy Performance Targets and Low-Income Housing
- Maryland Program Savings Document (Technical Reference Manual): <u>2011</u>; <u>2013</u>; <u>2014</u>; <u>2015</u>; <u>2017</u>; <u>2018</u>; <u>2019</u>; <u>2020 (in use through program year 2021)</u>
- Maryland 2021-2023 EmPower Maryland Plan
- Maryland EmPOWER Maryland Energy Efficiency Act Annual Reports
- Maryland EmPOWER Planning History, including 2012 Natural Gas Energy Efficiency Potential in Maryland study

Evaluation Process

In Maryland, the EmPOWER Maryland utilities provide programs and retain an independent contractor to conduct evaluations. The <u>Maryland Energy Administration (MEA)</u> is responsible for hiring the third-party contractor to develop and implement EM&V plans and to provide evaluation management. Program administrators report semiannually to the <u>Maryland Public Service Commission (MD PSC)</u>. The MD PSC retains an independent third-party evaluator (Navigant/Cadmus) who reviews and approves the EmPOWER Maryland programs under the <u>2008 EmPOWER Maryland Act.</u> Order Number 82869 establishes the commission-led Evaluator Model for the evaluation, measurement, and verification process of the EmPOWER Maryland energy efficiency programs. Commission-approved demand response programs are also included in this EM&V process.

For more information about EmPOWER Maryland programs, see links and resources on MEA's <u>EmPOWER</u> <u>Maryland</u> website.

MASSACHUSETTS—State Documents and Key Information

Massachusetts' gas and electric utilities implement energy efficiency programs in three-year cycles. The 2022-2024 Three Year Plan was approved by the Department of Public Utilities in January 2022, and <u>the 2025-2027</u> plan is currently in development. The prior 2019-2021 Three Year Plan can be found <u>here</u>. While each utility offers its own programs, the same portfolio of programs is available statewide through the <u>Mass Save</u> platform.

In 2021, Massachusetts passed <u>S.9: An Act Creating a Next-Generation Roadmap for Massachusetts Climate</u> <u>Policy</u>. S.9 modifies the mandate for the Department of Public Utilities (DPU), requiring it to balance priorities for system safety, system security, reliability, affordability, and "equity and reductions in greenhouse gas emissions to meet statewide greenhouse gas emission limits and sub-limits." It also requires each three-year Mass Save plan to report on actual emissions reductions achieved and to include an explicit value for greenhouse gas reductions when calculating the cost-effectiveness of its various programs.

This section provides key information about Massachusetts' energy efficiency savings calculations and reporting practices, along with links to key state documents including plans, reports, and other relevant resources. The information is collected through REED's annual state data collection process or obtained from state resources.

Program Administrators and Reporting

- **Program Administrators:** The program is implemented statewide as Mass Save. The utilities that participate are Berkshire Gas, Cape Light Compact, Eversource, Liberty Utilities, National Grid, and Unitil.
- Funding: Utility customer bill surcharge.
- **Program Year**: Calendar year (January 1 to December 31).
- Energy Efficiency Resource Standard: Electric: 2.70 percent annual retail sales for 2019-2021. Gas: 1.25 percent annual retail sales for 2019-2021 (based on forecasted retail sales). Additionally, from 2022

onward, Mass Save PAs have greenhouse gas (GHG) emissions reduction targets: for the <u>2022-2024</u> program cycle, the electric sector must reduce emissions by 504,000 metric tons of CO_{2e} , and the gas sector must reduce emissions by 341,000 metric tons of CO2e.

Key Plans, Reports, and Savings Assumptions Resources

- Massachusetts Energy Efficiency Program Legislation:
 - o Mandate for all cost-effective energy efficiency
 - Mandate for electric-sector modernization plans, the phase-out of fossil fuel incentives, and other decarbonization initiatives
 - o Mandate for inclusion of GHG emissions in energy efficiency planning
 - o Global Warming Solutions Act
- Massachusetts Program Savings Documents (Technical Reference Manuals): <u>2011 (direct link is broken on EEAC website)</u>; <u>2012</u>; <u>2013-2015</u>; <u>2016-2018 (direct link is broken on EEAC website)</u>; <u>2019</u>; <u>eTRM (2020 and beyond)</u>
- Massachusetts Energy Efficiency Three-Year Plans
- Massachusetts Evaluation, Measurement and Verification Studies
- Massachusetts Energy Efficiency Program Results and Reporting

Evaluation Process

The <u>Massachusetts Department of Public Utilities (MA DPU</u>) requires all program administrators to include evaluation plans as part of their three-year energy efficiency plans. The evaluation plans identify the activities each utility must take to ensure that programs are monitored and evaluated, and that savings and costs are measured and verified. All evaluations are statewide, typically administered by individual program administrators, planned in collaboration with the Massachusetts Energy Efficiency Advisory Council (MA EEAC) and performed by standing contractors.

Evaluation activities are overseen by a designated evaluation consultant who reports to the MA EEAC and the Massachusetts Department of Energy Resources (MA DOER). The EM&V Management Committee provides a forum for statewide evaluation issues, and it provides guidance, planning, and direction to each evaluation research area.

For more information, see evaluation plans and reports as well as <u>updates</u> on the <u>MA EEAC Evaluation</u> website, including the <u>2019-2021 Massachusetts Statewide Energy Efficiency Strategic Evaluation Plan</u> and the <u>2022-2024</u> <u>Massachusetts Statewide Energy Efficiency Strategic Evaluation Plan</u>.

NEW HAMPSHIRE—State Documents and Key Information

New Hampshire's gas and electric utilities implement energy efficiency programs in three-year cycles. The utilities are currently implementing the <u>2022-2023 Statewide Energy Efficiency Plan</u>. Previously, NHSaves had been implementing an extension of the 2018-2020 EERS plan. The electric utilities offer the same portfolio statewide through the <u>NHSaves</u> platform, but each gas utility offers their own energy efficiency programs.

This section provides key information about New Hampshire's energy efficiency savings calculations and reporting practices, along with links to key state documents including plans, reports, and other relevant resources. The information is collected through REED's annual state data collection process or obtained from state resources.

Program Administrators and Reporting

- **Program Administrators:** Statewide energy efficiency programs are implemented through NHSaves. The utilities included in the program are Liberty Utilities, Unitil, New Hampshire Electric Co-op, and Eversource New Hampshire. The program years 2018, 2019, 2020, and 2021 do not include data from Unitil gas programs.
- Funding: Utility customer bill surcharge.
- **Program Year**: Calendar year (January 1 to December 31).
- <u>Energy Efficiency Resource Standard</u> for 2021-2023: Electric: 4.5 percent cumulative annual savings as a percentage of 2019 sales. Gas: 2.8 percent cumulative annual savings as a percentage of 2019 sales.

Key Plans, Reports, and Savings Assumptions Resources

- New Hampshire Energy Efficiency Program Legislation:
 - o Chapter 374-F Electric Utility Restructuring
 - <u>New Hampshire Public Utilities Commission Order Approving Gas and Electric Utilities Energy</u> <u>Efficiency Resource Standard</u>
 - o HB 549: Re-establishing triennial energy efficiency programs
- New Hampshire Program Savings Documents (Technical Reference Manuals): <u>2022</u> (New Hampshire's first TRM)
- New Hampshire <u>Core Energy Efficiency Program Plans</u>
- New Hampshire Monitoring and Evaluation Studies
- New Hampshire Program Administrator Annual Reports
- New Hampshire Energy Optimization Through Fuel Switching Study

Evaluation Process

The <u>New Hampshire Public Utilities Commission</u> (NH PUC) oversees evaluation activities. The NH PUC seeks input and advice from the New Hampshire program administrators about monitoring and evaluation and helps

coordinate their implementation efforts for core programs. Program administrators can comment on preliminary study findings and results before publication and can participate in regional monitoring and evaluation studies as well as studies conducted by multi-jurisdictional utilities on a case-by-case basis. The NH PUC invites interested parties to attend and provide input at evaluation presentations, and it pursues all available means to protect confidential customer information given that monitoring and evaluation studies frequently require access to such information.

NEW JERSEY—State Documents and Key Information

New Jersey's programs are implemented statewide through its energy efficiency office. In 2018, New Jersey passed the <u>Clean Energy Act</u>, which expands the state's renewable and energy efficiency programs to include utilities as program administrators as well. In mid-2021, <u>New Jersey shifted its energy efficiency program</u> <u>offerings</u> so that the gas and electric utilities and the <u>New Jersey Clean Energy Program (NJCEP)</u> offer a coordinated suite of energy efficiency programs across the state. The CEP administers new construction programs, and the utilities offer all other programs. The portfolio has a three-year cycle, and the state is currently implementing the <u>2021-2024 cycle</u>. REED includes data from program years 2018-2021, but only state program data for program year 2021 (prior to the program shift).

This section provides key information about New Jersey's energy efficiency savings calculations and reporting practices, along with links to key state documents including plans, reports, and other relevant resources. The information is collected through REED's annual state data collection process or obtained from state resources.

Program Administrators and Reporting

- **Program Administrators:** New Jersey Clean Energy Programs (NJCEP), Atlantic City Electric Company (ACE), Elizabethtown Gas Company, Jersey Central Power & Light Company (JCP&L), New Jersey Natural Gas Company (NJNG), Public Service Electric and Gas Company (PSE&G), Rockland Electric Company (RECO), and South Jersey Gas Company (SJG).
- **Funding:** State-funded (for NJCEP programs) and utility customer bill surcharge.
- **Program Year:** New Jersey's program year runs from July 1 to June 30.
- <u>Energy Efficiency Resource Standard</u> for 2021: Electric: 2 percent of the average annual electricity usage in the prior three years; gas: 0.75 percent of the average annual gas usage in the prior three years. The Board of Public Utilities (BPU) conducts <u>Comprehensive Resource Assessments</u> that include a potential study to guide program design and objectives.

Key Plans, Reports, and Savings Assumptions Resources

- New Jersey Energy Efficiency Program Legislation:
 - o <u>Establishing energy efficiency program funding</u>
 - o NJ Clean Energy Act

- New Jersey Protocols to Measure Resource Savings (TRMs): <u>2007</u>; <u>2009</u>; <u>2010</u>; <u>2011</u>; <u>2012</u>; <u>2014</u>; <u>2015</u>; <u>2016</u>; <u>2017</u>; <u>2019</u>; <u>2020</u>; <u>2021</u>
- New Jersey <u>Energy Efficiency Program Plans</u> (from NJCEP, click "TRC Compliance Filing" or "Program Administrator (TRC) Filing," depending on the year)
- New Jersey <u>Utility PA Energy Efficiency Program Plans</u>
- New Jersey Energy Master Plan
- New Jersey Program Evaluations, Market Analysis and TRMs
- New Jersey Program Administrator Financial and Energy Savings Reports
- New Jersey <u>Market Analysis and Baseline Studies</u>

Evaluation Process

New Jersey Clean Energy Program evaluations are publicly available on its <u>Program Evaluations, Market Analysis</u> and <u>TRMs</u> website. This includes annual cost-benefit analyses of the suite of Clean Energy Programs offerings, program-specific impact and process evaluations, and the protocols used to measure resource savings. In <u>New</u> <u>Jersey's Triennium 2 Evaluation Framework</u>, the New Jersey BPU describes the statewide evaluator (SWE) team that manages the EM&V process and develops the details of the EM&V framework. With oversight from BPU staff, the SWE develops work plans, the statewide evaluation studies list, and study guidelines, and it works on additional elements that will ensure successful evaluations of New Jersey's energy efficiency programs. There will also be utility independent evaluators that conduct impact and process evaluations of utility energy efficiency programs.

NEW YORK—State Documents and Key Information

New York offers energy efficiency programs through its utilities and the <u>New York State Energy Research and</u> <u>Development Authority (NYSERDA)</u>. New York's Energy Efficiency and Building Electrification Portfolios run in five-year cycles. The state is currently implementing the <u>2021-2025 Portfolio</u>.

This page provides key information about New York's energy efficiency savings calculations and reporting practices, along with links to key state documents including plans, reports, and other relevant resources. The information is collected through REED's annual state data collection process or obtained from state resources. NYSERDA reports energy efficiency program expenditures as total expenditures on all programs, not separated by fuel type. In the REED Workbook, the expenditures have been separated into fuel categories based on the proportion of savings achieved by each program (in electric, gas, or other fuels).

Program Administrators and Reporting

Program Administrators: Central Hudson Gas & Electric, Con Edison, Keyspan Long Island (d/b/a National Grid), Keyspan East (d/b/a National Grid), Long Island Power Authority, National Fuel, Niagara Mohawk (d/b/a National Grid), New York State Electric and Gas, NYSERDA, Rochester Gas & Electric, and Orange & Rockland Utilities.

- Funding: NYSERDA Clean Energy Fund (CEF), utility customer bill surcharge.
- **Program Year**: Calendar year (January 1 to December 31).
- Energy Efficiency Resource Standard for 2021: New York has a statewide target of 185 TBtu of end-use savings across all fuels, with a sub-target for 3 percent annual electric savings and 1.3 percent of gas sales from 2020 to 2025.

Key Plans, Reports, and Savings Assumptions Resources

- New York Energy Efficiency Program Legislation:
 - o <u>Climate Leadership and Community Protection Act</u>
- New Efficiency: New York report
- New York Technical Resource Manual (TRM)
- New York Energy Efficiency Portfolio Standard and Program Plans
- New York Program Evaluation Reports
- New York Program Administrator Annual Reports
- New York Potential Studies:
 - <u>Building Stock and Potential Studies</u>
 - o Energy Efficiency and Renewable Energy Potential Studies
- New York provides for public access of its energy efficiency program data through <u>Open NY</u> and the <u>New</u> <u>York State Clean Energy Dashboard</u>.

Evaluation Process

In New York, the <u>Department of Public Service</u> (NY DPS) approves energy efficiency programs and budgets, which are administered by the utilities and the New York State Energy and Research Development Authority (NYSERDA). In 2008, the NY DPS established an Energy Efficiency Portfolio Standard (EEPS) to reduce electricity usage (See <u>DPS EEPS Evaluation webpage</u>). In 2014, the NY DPS merged the Evaluation Advisory Group and the Implementation Advisory Group into the E2 Working Group, and it launched its Revised Energy Vision (REV), which entailed developing a new infrastructure for New York to meet its goals via its Clean Energy Fund with a focus on building a green economy. The CEF works with REV to make sure the market is ready to provide the services REV offers. NYPA and PSEG-Long Island participate in E2 Working Group evaluation efforts, but the New York Public Service Commission does not regulate them. In 2018, NYSERDA released <u>New Efficiency: New York</u>, the most aggressive energy efficiency strategy in New York's history. It established a fuel neutral goal of 185 TBtu reductions by 2025 and more comprehensive efficiency measures.

PENNSYLVANIA—State Documents and Key Information

Pennsylvania's electric utilities implement energy efficiency programs in five-year cycles under the state's <u>Act 129 Energy</u> <u>Efficiency and Conservation Program</u>. While the programs are under a statewide plan, each utility offers its own portfolio, which can vary between service territories. The programs are currently in Phase IV, which runs from 2021-2026.

This page provides key information about Pennsylvania's energy efficiency savings calculations and reporting practices, along with links to key state documents including plans, reports, and other relevant resources. REED includes data from program years 2020 and 2021. The information is collected from publicly available state resources.

Program Administrators and Reporting

- **Program Administrators:** Duquesne Light Company, Metropolitan Edison Company, Pennsylvania Electric Company, Pennsylvania Power Company, West Penn Power Company, PECO Energy Company, PPL Electric Utilities.
- Funding: Utility customer bill surcharge.
- **Program Year:** Calendar year (January 1 to December 31).
- Energy Efficiency Resource Standard for 2021: Electric savings goals of an average of 3.1 percent from all utilities earned during the 2021-2026 cycle. See the <u>Phase IV Implementation Order</u> for further details.
- Demand savings range from 2.2 percent to 3.8 percent across utilities, averaging 3.3 percent for 2021-2026.

Key Plans, Reports, and Savings Assumptions Resources

- Pennsylvania Energy Efficiency Program Legislation:
 - o Flagship energy efficiency law, Act 129
- Plan establishing energy efficiency resource standard
- Pennsylvania Technical Reference Manual
- Pennsylvania Energy Efficiency and Conservation Program Plans
- Pennsylvania Evaluator Reports:
 - o Act 129 Statewide Evaluator Reports
 - o Program Administrator Annual Reports
- Pennsylvania Energy Efficiency Potential Study for Pennsylvania

Evaluation Process

Pennsylvania has a <u>Statewide Evaluator (SWE), as called for by Act 129</u>, which established energy efficiency and conservation programs in the state of Pennsylvania. The SWE "monitors and verifies data collection, quality assurance and the results of each electric distribution company's (EDC) Energy Efficiency and Conservation Plan (EE&C Plan) and the EE&C program as a whole." The Pennsylvania Public Utilities Commission <u>maintains a website</u> with the SWE's Act 129 reports, including statewide baseline studies, potential studies, and other supporting reports.

RHODE ISLAND—State Documents and Key Information

Rhode Island's gas and electric utility, RI Energy, implements energy efficiency programs in three-year cycles with oversight from the <u>Energy Efficiency and Resource Management Council</u>. RI Energy is currently implementing the <u>2021-2023 Energy Efficiency Program</u>, and the state is <u>seeking applications from potential program</u> <u>administrators</u> to operate electric and gas energy efficiency programs in future years.

This page provides key information about Rhode Island's energy efficiency savings calculations and reporting practices, along with links to key state documents including plans, reports, and other relevant resources. The information is collected through REED's annual state data collection process or obtained from state resources.

Program Administrators and Reporting

- **Program Administrators:** The Narragansett Electric Company (until PY 2022) and Rhode Island Energy (from PY 2022 onward).
- Funding: Utility customer bill surcharge.
- **Program Year:** Calendar year (January 1 to December 31).
- Energy Efficiency Resource Standard for 2021: Electric: 2.7 percent of annual sales; gas: 1.8 percent of annual sales. For 2022: Electric: 2.8 percent of annual sales; gas: 1.8 percent of annual sales.

Key Plans, Reports, and Savings Assumptions Resources

- Rhode Island Energy Efficiency Program Legislation:
 - Mandate for all cost-effective energy efficiency
 - o Act on Climate
 - o <u>Renewable Energy Standard</u>
- Rhode Island <u>Program Savings Targets</u>
- Rhode Island Technical Reference Manuals: 2012; 2013; 2014; 2015; 2016; 2019; 2020; 2022
- Rhode Island <u>Energy Efficiency Program Plans</u>
- Rhode Island <u>Annual Program Reports</u>
- Rhode Island Opportunity Report Phase I; Phase II; Gas and Unregulated Fuels
- Rhode Island Energy Efficiency Market Potential Study

Evaluation Process

The Rhode Island <u>Public Utilities Commission</u> (RI PUC) reviews and approves the design and implementation of the utilities' energy efficiency programs on an annual basis. The annual energy efficiency program plans must include a detailed Measurement and Verification Plan. Studies are proposed in the Energy Efficiency Program Plan. The <u>utilities</u> are also required to file reports about their programs and evaluation results with the <u>RI Energy</u> <u>Efficiency and Resource Management Council</u> (RI EERMC) and the RI PUC.

VERMONT—State Documents and Key Information

A majority of Vermont's energy efficiency portfolio is implemented statewide by Efficiency Vermont. Burlington Electric Department and Vermont Gas Systems also offer programs for their areas of the state. The state is currently implementing the <u>2021-2023 Triennial Plan</u>. The <u>2024-2026 Triennial Plan</u> is pending PUC approval.

This page provides key information about Vermont's energy efficiency savings calculations and reporting practices, along with links to key state documents including plans, reports, and other relevant resources. The information is collected through REED's annual state data collection process or obtained from state resources.

Vermont does not separate out small and large commercial and industrial (C&I) programs currently in its reporting, therefore all C&I program savings are reported under the small C&I program type.

Program Administrators and Reporting

- **Program Administrators:** Primary: Efficiency Vermont (EVT). Secondary: Burlington Electric Department (BED) and Vermont Gas Systems (VGS).
- Funding: Vermont's electric programs are funded through its Energy Efficiency Charge (EEC), which is a surcharge on customer bills. Efficiency programs for unregulated deliverable fuels (heating oil, propane, and kerosene) are funded with ISO-New England Forward Capacity Market (FCM) revenues and Regional Greenhouse Gas Initiative (RGGI) auction revenues. Gas efficiency programs are funded through customer rates that include a predetermined level of efficiency program activity.
- **Program Year:** Calendar year (January 1 to December 31).
- Energy Efficiency Resource Standard for 2021 and 2022: Since Vermont's main energy efficiency program implementer, Efficiency Vermont, is a nonutility energy efficiency implementer, goals are not given in percentages of sales, but rather as plain MWh reduction targets. Efficiency Vermont's annual incremental net MWh savings target for the 2021-2023 term is 263,900 MWh per year.

Key Plans, Reports, and Savings Assumptions Resources

- Vermont Energy Efficiency Program Legislation:
 - o Mandate for all cost-effective energy efficiency
 - o Energy Efficiency Modernization Act
 - o Emissions reduction goals
 - o <u>Renewable Energy Standard</u>
- Vermont Energy Efficiency Program Plans and Annual Reports:
 - o Efficiency Vermont
 - o Vermont Gas Systems
 - o Burlington Electric Department
- Vermont Energy Efficiency Utility Performance Evaluation
- Vermont Potential Studies:



- o 2019 Energy Efficiency Potential Study
- o 2017 Energy Efficiency Potential Study
- Energy Efficiency Potential Studies prior to 2017: see the Vermont Public Service Board's Efficiency website

Evaluation Process

Vermont's statewide energy efficiency programs are currently delivered through an energy efficiency utility, <u>Efficiency Vermont</u>. The exception is in the city of Burlington, where the municipality (Burlington Electric Department) delivers these services. Both entities are referred to as Energy Efficiency Utilities (EEUs). The <u>Vermont Department of Public Service</u> (VT DPS) provides formal independent evaluation of energy efficiency programs approved by the PUC for EEU implementation. The VT DPS's evaluation activities include an annual verification of the EEUs' energy and capacity savings and total resource benefit claims. For information on its process and reports, see the VT DPS <u>Energy Efficiency Utility Verification and Evaluation</u> webpage.