

2027-29 Evaluation, Measurement, and Verification Planning Framework and Plan

1. INTRODUCTION

Evaluation, Measurement, and Verification (EM&V) is an integral and required part of Rhode Island Energy's energy efficiency program planning process. EM&V provides independent verification of impacts to ensure that savings and benefits claimed by Rhode Island Energy through its energy efficiency programs are accurate and credible. EM&V also provides insight into market characteristics and guidance on energy efficiency program design to improve the delivery of cost-effective programs.

This section provides the framework Rhode Island Energy intends to use for EM&V planning for the 2027-29 term. Because it covers the three-year term, it is different from prior annual evaluation plans. It begins with guiding principles Rhode Island has adopted as the foundation of its Evaluation Plan. It provides themes and priorities Rhode Island Energy has identified for the coming term, consistent with those principles. Together, the principles and themes provide the foundation for Rhode Island Energy's framework for 2027-29. This plan includes a preliminary list of studies or study area needs, identified by Rhode Island Energy, which meet its criteria. This list of studies is not complete or final; it is intended to illustrate current thinking for the evaluation plan. The document concludes with details on historic studies that Rhode Island Energy analyzed to determine its needs as well as summaries of evaluation studies completed since the last Plan filing.¹

Rhode Island Energy's EM&V Plan continues to focus on evaluating Rhode Island projects, markets, and energy efficiency programs while leveraging as many resources as possible from evaluation studies in other jurisdictions to maximize value for ratepayers while minimizing costs. These studies are commissioned by Rhode Island Energy. They are conducted by independent evaluation firms, whose goal is to produce an accurate, complete, and transparent review of Rhode Island's energy efficiency programs and markets. The types of evaluations may include (but are not limited to) the following:

- **Impact Evaluations:** Comparisons of claimed savings against actual realized savings using methods such as literature review, billing analyses, engineering methods and onsite data logging as a means of verification. Other quantitative parameters, which are inputs into savings or benefits calculations, such as net-to-gross, non-energy impacts, and load shapes, are also included in the impact evaluation category, and will be periodically refreshed.
- **Process Evaluations:** Broad examinations of existing practices, such as program delivery methods, for the purpose of gathering information to draw conclusions about effectiveness of existing processes, highlight best practices, and offer suggestions for future improvements.
- **Market Assessment Studies:** Broad studies aimed at assessing changes in market conditions, such as evolving adoption rates of current energy efficiency technologies.

¹ The summaries will be included in the second draft of the Plan.

The study methodologies and savings assumptions from evaluation studies are documented in the Rhode Island Technical Reference Manual (TRM). The TRM is reviewed and updated annually to reflect changes in technology, baselines, and evaluation results.

The entire evaluation process is managed by Rhode Island Energy in consultation with the Rhode Island Energy Efficiency Resource Management Council (EERMC) and the Office of Energy Resources (OER). The EERMC and OER follow each study closely and are involved in planning, study workplan development, and review of interim work products, study results, and study reports.

Rhode Island Energy intends for this EM&V framework and the studies that are conducted to provide confidence among all stakeholders (including ratepayers, regulators, and others) that programs are effective and EM&V activities are independent and objective.

2. GUIDING PRINCIPLES

In developing ideas for the 2027-29 Evaluation Plan, Rhode Island Energy has considered and uses the following guiding principles.

- **Rhode Island Energy will create an evaluation plan that identifies general areas of focus for the three-year period with detailed study recommendations for the first year.** Rhode Island Energy believes this framework is appropriate in that it is easier to identify near-term needs, and more difficult to predict specific evaluation needs two or three years in advance. Adhering to the general areas of focus, combined with EERMC Evaluation oversight, will give confidence about Rhode Island Energy's ability to choose studies that will provide the most value over the three-year period. This is the model that is used in Massachusetts.
- **As it identifies and develops study ideas, Rhode Island Energy will prioritize them and develop explanations for those priorities.** Prioritization is necessary because Rhode Island Energy does not expect to be able to fund all worthy evaluation studies; therefore, this will facilitate selection and execution of the highest value studies.
- **Rhode Island Energy is open to the use and application of innovative evaluation techniques or tools, and leveraging them to the greatest extent feasible, particularly in the interest of leveraging the most effective use of the evaluation budget, but it will not plan a study simply for the sake of using these techniques.** Innovative methods could include real-time (embedded) evaluation, artificial intelligence for automation and validation of study components, virtual tools, or use of advanced metering functionality data, to give a few examples.
- **Identification of studies independent of evaluation contractors.** At the time of the development of this Plan, Rhode Island Energy expects to be in active negotiation with one or more firm(s) to be its evaluation contractor(s) for the 2027-29 period. It expects that any firm(s) it selects will be able to perform the specified studies; in other words, capabilities of the contractors will not bear on the selection of studies to be planned.

3. EVALUATION AREAS OF FOCUS FOR THE THREE-YEAR PLAN

Rhode Island Energy notes several dynamics that will shape evaluation activities in 2027-2029. Legislative changes, affordability concerns, decarbonization objectives, workforce constraints, maturation of markets, and budgetary decisions will shape the policy direction in unknown ways over the three-year period. Having a three-year evaluation framework should give Rhode Island Energy the ability to respond as needed to the policy dynamics in the selection of particular studies to commission. In that context, Rhode Island Energy expects the following areas of focus related to the various study categories to also shape the selection of studies to be performed over the three-year period:

- Impact evaluation studies will be the primary focus of evaluation efforts. Since impact evaluations review the savings performance of installed projects relative to planning, periodic updates are necessary.
 - The cadence of savings impact evaluations will be influenced by the size (magnitude of savings) of the program, the recency of the last evaluation, the observed variation of realization rates over recent studies, ISO-NE evaluation requirements, and the funding for evaluation in any given year.
 - Other quantitative parameters are frequently reviewed and will be periodically refreshed.
- Process evaluations are typically conducted on an as needed basis rather than following a specific cadence. They may be of particular value for new or evolving programs; process evaluations may provide insights to help improve underperforming programs.
- Market or exploratory research will be conducted as needed and will respond to strategy or implementation requests. Evaluation of market transformation initiatives will be supported, if a market transformation initiative (MTI) emerges, and Rhode Island Energy will continue to leverage industry standard practice research. Pilot evaluations will be conducted, as necessary.
- Other evaluation-related activities are also supported by the evaluation budget:
 - An avoided cost refresh is expected to be largely conducted in 2029.
 - Review and coordination of evaluation studies with other jurisdictions. Annually, Rhode Island Energy will scan completed studies from Massachusetts, identify ones that might be applicable, and develop recommendations for adoption to discuss with the EERMC's Consulting Team. Where possible, Rhode Island Energy will seek to participate and co-fund relevant studies with other jurisdictions.
 - Documentation of compliance of EM&V activities with ISO-New England's Forward Capacity Market requirements.
 - Ongoing internal TRM review/refresh activities.
 - Analysis of historic participation, programmatic, or market segment characteristics to support program design and targeting.

4. EVALUATION PLANNING AND EXECUTION OVER THE THREE-YEAR TERM

Under annual energy efficiency plans, proposed studies for the plan year were included in the Plan filing and targeted for completion by mid-August, if possible, to inform the development of the next Annual Plan. Similar to prior years' annual plans, Rhode Island Energy has identified studies that it plans to commission in 2027. Unlike in prior years, a three-year plan allows flexibility in scheduling evaluations as well as in applying their results. As a result, we have identified potential areas of study for 2028 and

2029 but have not identified specific evaluations to conduct. As studies are completed, Rhode Island Energy will work with its evaluation contractors and the EERMC Consulting Team to identify new studies to be launched, subject to the criteria and constraints described previously.

Rhode Island Energy anticipates using the following procedures to apply study results:

- Final study reports will be posted on the EERMC website.
- Lessons learned will be digested and shared with implementation personnel during scheduled meetings as soon as possible. In this way, implementation personnel will have the ability to modify programs, if necessary, for the duration of the term. With a three-year term, the motivation to wait a few months to apply results to the next Annual Plan is removed. This will provide a stronger linkage between evaluation and planning and execution.
- Rhode Island Energy will track the implementation of recommendations developed from evaluation studies after studies are completed and recommendations are shared.
- Adjustments will be made to the tracking system's record of savings for the following program year. This is consistent with current practice of making prospective changes to savings assumptions. These changes will be logged in a set of revisions to the Technical Reference Manual. However, annual illustrative targets will not be changed.
- End-of-term results will be reported using updated savings assumptions for both planned and actual savings, as detailed in the proposed revisions to the Least Cost Procurement Standards submitted in Docket 26-15-EE Section 3.4.E(b)(2): "When comparing planned performance to actual performance, the distribution company shall use the most up-to-date ... approved claimable savings estimates."
- In addition, all studies completed before the next planning cycle will inform program design changes for the next three-year period.

5. LIST OF POTENTIAL EVALUATION STUDIES

Table 1 below provides a list of specific studies that are being considered for the upcoming three-year term, consistent with the identified themes. The first table contains a tentative list of 2027 evaluation studies for this first draft of the three-year plan. The second table contains a list of potential research areas that will be monitored during the three-year term and considered for studies in 2028 or 2029.

Table 1. Potential Evaluation Studies, 2027

2027 Studies	Rationale/Expected Use
<i>C&I Net-to-Gross Study</i>	Assess the effectiveness and net impact of C&I programs; last studied for PY 2022.
<i>C&I Prescriptive Gas Impact Evaluation</i>	Update C&I Gas Program impacts; scope and depth of study would depend on amount of savings.
<i>Impact Evaluation of C&I Custom Electric Installations</i>	Update realization rates for C&I custom projects; realization rates have demonstrated volatility over past recent studies.
<i>Impact Evaluation of C&I Custom Gas Installations</i>	Update realization rates for C&I custom projects; realization rates have demonstrated volatility over past recent studies.
<i>C&I Load Shapes Review & Update</i>	Update and consolidate sources for C&I savings load shapes where possible. Leverage studies from other jurisdictions, where available and applicable.

2027 Studies	Rationale/Expected Use
<i>EnergyWise Single Family Impact & Process Evaluation</i>	Assess the effectiveness and net impact of EnergyWise programs; last fully studied for PY 2019 with focused update conducted of PY2021.
<i>Residential HVAC Impact Evaluation</i>	Update savings assumptions for Residential HVAC measures, excluding heat pumps for HVAC but potentially including heat pump water heaters; scope and depth of study would depend on amount of savings.
<i>Market Characterization & Research for the Multifamily & Income Eligible Markets</i>	Support program implementation efforts by conducting market scoping, database construction, potential and saturation analysis for multifamily and income-eligible segments to address recurring uncertainty around achievable savings.
<i>Implementation Benchmarking</i>	For heat pumps and other selected measures, understand what is working for other program administrators and how it can be applied to Rhode Island Energy's programs.
<i>Moderate Income Market Assessment</i>	Conduct a detailed assessment of the moderate-income population to support a moderate-income incentive and/or program offering. Include an assessment of rate assignment and investigate challenges with the delivery of efficiency programs and services to subsegments such as renters and immigrants.
<i>Residential Mechanical Systems Study - Revised Modeling with AMI Data</i>	Use AMI interval data to increase the accuracy of the model that predicts inefficient heating system customers.
<i>Equity Analysis and Outreach Evaluation</i>	Align equity-focused customer experience with equity goals through customer interviews, focus groups, and/or analysis; was planned for late 2026, but was deferred because of funding limitations.

C&I Net to Gross Study

Use customer and other market actor surveys and interviews to estimate free ridership and spillover values in order to calculate net-to-gross (NTG) factors for Rhode Island Energy's C&I Programs.

C&I Prescriptive Gas Impact Evaluation

This study will verify the savings achieved by prescriptive gas measures and update measure savings parameters and/or realization rates to ensure the accuracy of tracked savings.

Impact Evaluation of C&I Custom Electric Installations

The objective of this impact evaluation is to provide verification of electric energy savings estimates for a sample of non-lighting custom electric projects through site-specific inspection, metering, and analysis. The results of this study will be used to determine the realization rates for custom electric energy

efficiency offerings based on installations from 2025 and 2026. This study will begin in summer 2027 and will continue into 2028. These results will be combined with the PY2024 analysis that will be completed in August of 2026.

Impact Evaluation of C&I Custom Gas Installations

The objective of this impact evaluation is to provide verification of natural gas energy savings estimates for a sample of custom gas projects through site-specific inspection, metering, and analysis. The results of this study will be used to determine the realization rates for custom gas energy efficiency offerings based on installations from Q2 and Q3 of 2025 and all of 2026. This study will begin in summer 2027 and will continue into 2028. These results will be combined with the PY2024/PY2025 Q1/Q2 analysis that will be completed in August of 2026.

Energy Wise Single-Family Impact & Process Evaluation

This study will evaluate the savings achieved by the electric and gas Energy Wise Single Family Programs to update measure savings parameters and/or realization rates. It will also evaluate the effectiveness of program implementation in order to recommend program improvements.

Residential HVAC Impact Evaluation

This study will update savings assumptions for Residential HVAC measures (excluding heat pumps); measures to be studied will be determined based on their contribution to program savings.

Market Characterization & Research for the Multifamily & Income Eligible Markets

This study will characterize the multifamily and income-eligible markets through primary and secondary research in order to assist the program in documenting achievable savings.

Implementation Benchmarking

This study will research best practices used by other program administrators for heat pumps and other selected measures for their applicability to Rhode Island Energy's programs.

Moderate Income Market Assessment

This study will conduct research to support the implementation of a moderate-income program, with an emphasis on hard-to-reach markets such as renters and immigrants.

C&I Load Shapes Review & Update

Research the availability of revised load shapes and their applicability to Rhode Island Energy's C&I Programs.

Residential Mechanical Systems Study - Revised Modeling with AMI Data

Update the model that predicts homes heated with inefficient electric heat using Advance Metering Infrastructure (AMI) interval data; interval data is expected to increase the accuracy of the model which currently uses monthly billing data.

Equity Analysis and Outreach Evaluation

Rhode Island Energy has established metrics centered on equity. As data on these metrics is collected and analyzed, Rhode Island Energy anticipates that it may be desirable to conduct customer and/or other market actor interviews or focus groups to facilitate an adjustment of strategies.

Table 2. Potential Evaluation Study Areas of Focus, 2028-29

Area	Rationale/Expected Use
<i>Residential New Construction Impact and Process</i>	Assess the effectiveness and net impact of Residential New Construction Programs; Last studied for homes built between 2019-2022.
<i>Residential Multi-Family Participation Study</i>	Assess drivers for participation and non-participation; last conducted in 2022.
<i>Market segment research, for MTI</i>	Establish a roadmap (baseline and progress) for market transformation initiatives (MTI), should one be launched during the term; could include research on applicability of other state/regional MTIs, such as NEEA extended motor initiative, to Rhode Island.
<i>Code Compliance Impact Evaluation</i>	Used to update savings related to Rhode Island Energy's code compliance training efforts; was deferred from 2026 due to data limitations and could be conducted after data becomes available.
<i>NEI Reviews</i>	Update assumptions used for non-energy impacts (NEI) based on a review of recent research from other states.
<i>C&I Lighting Impact</i>	Assess the effectiveness and net impacts of C&I lighting offerings after launch of modified program offerings.
<i>C&I-Specific Initiative Process Evaluation</i>	Assess the effectiveness of specific initiatives in the C&I Programs, such as the Grocer, Industrial, and/or Schools initiatives.
<i>Workforce Capacity Analysis</i>	Assess workforce and contractor capacity for equity and weatherization delivery, including trade-specific bottlenecks, if any, and implications for program performance.
<i>C&I Small Business Impact & Process</i>	Assess the effectiveness and net impact of C&I Small Business Electric and Gas Programs; last studied for PY 2016 and of increased importance as the program moves away from reliance on lighting measures.
<i>Residential Behavior Impact & Process Evaluation</i>	Assess the effectiveness and net impact of the Residential Behavior Program; last studied for PY 2016 and, while results have been stable, would be relevant for re-study after program pause in 2027.

5.1 Historic Evaluation Studies

This section contains a list of all historic studies still being used by Rhode Island Energy as the basis of claimed savings in the 2026 Program Plan and in the Technical Reference Manual. An at-a-glance summary in [Table](#) shows the studies by program where rows designate the Program and any relevant program area and column headers designate the type of study. The entry in the cell indicates the year in which the study was published (not the program year studied) and gives the cross reference to the more detailed [Table 4Table](#) , which contains summaries of the relevant studies². These studies are available through the EERMC, the PUC, and Rhode Island Energy. Table 3 indicates in bold font areas intended for study in 2027.

This table demonstrates how Rhode Island Energy has effectively been deploying its evaluation budget to, for the most part, keep savings assumptions current and address other areas of need. It supports the identification of potential areas of study for 2027-29 included in Tables 1 and 2, above, to continue to keep savings assumptions up-to-date and address other programmatic areas of need.

² Note that Rhode Island Energy is considering renumbering the studies in both tables to facilitate easy updating as new studies are completed.

Table 3. Historic Evaluation Studies

	(a) Sector/Program	(b) Impact	(b) NEI	(b) Other Quantitative	(c) Market	(d) Process	(e) Policy
1	Residential				2022 (48, 49)	2025 (67)	
2	EnergyWise Multifamily			2018 (load shapes, 17)		2020 (22)	
3	Custom	2025 (70)	2018 (18)	2021 (NTG, 43)			
4	Prescriptive	2025 (69)	2018 (18)		2025 (69)		
5	EnergyWise Single Family	2020 (21); 2027		2021 (HVAC NTG, 43)		2020 (21); 2027	
6	Weatherization	2023 (54)					
7	Home Energy Reports	2020 (24)				2017 (10)	
8	Residential Consumer Products		2011 (2)	2023 (load shapes, 52)	2025 (68)		
9	Appliance Recycling	2026 (76)					
10	Non-Recycling and Refrigeration	2025 (68)		2021 (NTG, 39)			
11	Residential HVAC		2011 (2)	2023 (load shapes, 52); 2018 (load shapes, 17); 2021 (NTG, 43)			
12	Heat Pumps	2025 (75)	2023 (51)		2024 (60,61,62); 2027		
13	Saturation				2026 (77)		
14	WiFi Thermostats	2021 (42); 2018 (12)					
15	Residential New Construction	2023 (50)	2021 (38)				
18	Code Compliance	2017 (8)					
19	Income Eligible					2025	
20	Income Eligible Multifamily		2021 (37)		2027	2020 (23)	
21	Custom	2025 (70)					
22	Prescriptive	2025 (69)					
23	Income Eligible Single Family	2025 (71)			2026 (78); 2027		
24	Commercial & Industrial			2024 (NTG, 65)			
25	Large C&I New Construction		2016 (7)			2025 (72)	
26	Code Compliance	2017 (8)					2026 (85)
27	Baseline/ISP	Many (33, 46, 47, 55, 56, 73)					
28	Large C&I Retrofit		2012 (3)	2024 (NTG, 65)			
29	Commissioning					2026 (82,84); 2027	2025
30	Large C&I Custom		2012 (3)	2024 (NTG, 65)			
31	C&I Custom Electric	2026 (81); 2027				2025 (74)	
	C&I Custom Gas	2026 (80); 2027				2025 (74)	
33	C&I Custom CDA	2018 (14)					
34	Prescriptive Gas	Many (4, 9, 11, 33, 46, 55, 56); 2027					
35	Large C&I Prescriptive		2012 (3)	2018 (load shapes, 15)			
36	C&I Lighting Controls				2024 (66)		

	(a) Sector/Program	(b) Impact	(b) NEI	(b) Other Quantitative	(c) Market	(d) Process	(e) Policy
37	C&I Lighting	2022 (44); 2021 (28, 31)			2024 (66)		2026 (83)
38	C&I Non-Lighting	2026 (79)					
39	C&I Other	2021 (28, 29, 32, 33)					
40	Small Business Direct Install			2024 (NTG, 65)		2023 (57)	
41	Electric	2020 (25)					
42	Gas	2019 (20)					
43	C&I Multifamily						
44	Custom	2025 (70)	2018 (18)				
45	Prescriptive	2025 (69)	2018 (18)		2025 (69)		
48	Cross Cutting / Other						
49	Avoided Cost	2026–27					2024 (64)
50	Economic Impacts						
51	Measure Life	2024 (59)					
52	Non-Participant				2022 (48)		
53	Piggybacking					2020 (27)	
54	Workforce Analysis				2023 (58)		
55	Pilots	2024 (63)					
56	TRM Review	2022 (45); 2021 (36)					

Table 4. Completed Evaluation Studies Applicable in 2027-29

#	(a) Study	(b) Impact Descriptions	(c) Sector	(d) Year
1	KEMA, Inc., C&I Unitary HVAC Loadshape Project Final Report, Prepared for the Regional Evaluation, Measurement, and Verification Forum, June 2011 (Leveraged study from MA)	This study produced updated diversity and equivalent full load hours for unitary HVAC measures using end use metering. This source is being used as the coincidence factor source for prescriptive commercial heat pump and ac measures	C&I	2011
2	NMR/TetraTech, MA Special and Cross Sectors Studies Area, Residential and Low-Income NEI Evaluation, August 2011 (Leveraged study from MA)	This study quantified NEIs that apply to residential and low-income programs.	Res	2011
3	TetraTech, Final Report – Commercial and Industrial Non-Energy Impacts Study, (prepared for Massachusetts Program Administrators), June 29, 2012 (Leveraged study from MA)	This report provides a comprehensive set of statistically reliable non-energy impact (NEI) estimates across the range of C&I prescriptive and custom retrofit programs offered by the MA electric and gas Program Administrators (PAs). The analytical methods used allow this report's findings to be applicable to RI.	C&I	2012
4	DNV GL, 2014, Impact Evaluation of National Grid Rhode Island C&I Prescriptive Gas Pre-Rinse Spray Valve Measure	The evaluation examined the gas and water savings associated with the installation of reduced-flow pre-rinse spray valves. The results are based on site measurements from MA and RI facilities. The final gross gas and water savings are 11.4 MMBtu and 6,410 gallons per spray valve respectively.	C&I	2014
5	DNV-GL, Impact Evaluation of 2014 RI Prescriptive Compressed Air Installations. Final Report, July 2016	This study yielded an energy realization rate for prescriptive compressed air compressors, dryers, and EE accessories.	C&I	2016

#	(a)	(b)	(c)	(d)
	Study	Impact Descriptions	Sector	Year
6	DNV-GL, Impact Evaluation of 2012 National Grid-Rhode Island Prescriptive Chiller Program Final Report, July 2016	This study yielded an energy realization rate for prescriptive chillers.	C&I	2016
7	DNV GL, Stage 2 Results—Commercial and Industrial New Construction Non-Energy Impacts Study—Final Report, prepared for the Massachusetts Program Administrators, March 2016 (Leveraged study from MA)	The purpose of this study was to quantify the dollar value of participant NEIs for C&I NC projects completed in 2013, and to estimate gross NEIs per unit of energy savings resulting from NC electric and gas measures separately.	C&I	2016
8	NMR, 2017 Rhode Island Code Compliance Enhancement Initiative Attribution and Savings Study	The study found residential and commercial attribution factors of 23% and 46%, respectively, which were used along with study results on average savings as well as construction activity projections to calculate the CCEI's projected savings	C&I	2017
9	DNV-GL, MA45 Prescriptive Programmable Thermostats, March 2017 (Leveraged study from MA)	This study updated programmable thermostat deemed gas savings for C&I programs.	C&I	2017
10	Illume, Rhode Island Home Energy Report Program Impact and Process Evaluation, 2017	The study found that the program is working effectively. The study recommended continued segmentation and message testing to further enhance program impact.	Res	2017
11	Energy & Resource Solutions, Two-Tier Steam Trap Savings Study, April 2018. (Leveraged study from MA)	This MA study recommends a two-tier approach for prescriptive steam traps.	C&I	2018
12	Navigant, Wi-Fi Thermostat Impact Evaluation Secondary Research Study. September 2018. (Leveraged study from MA)	This study recommended annual savings values for Wi-Fi thermostats differentiated by heating source. Rhode Island adopted these results to update savings assumptions for Wi-Fi thermostats in HVAC and residential retrofit programs. This study is being used for residential HVAC thermostats.	Res	2018
13	DNV GL, Impact Evaluation of PY 2015 Rhode Island Commercial and Industrial Upstream Lighting Initiative. September 2018.	The study updated impact factors for the Upstream Lighting initiative. This study is being used as the realization rates and gas savings factor source for midstream lighting. The RI study leveraged the MA study of the same initiative.	C&I	2018
14	DNV GL, Rhode Island Commercial & Industrial Impact Evaluation of 2013-2015 Custom Comprehensive Design Approach. October 2018.	The study updated the realization rate for the CDA initiative. The RI study leveraged the MA study of the same initiative.	C&I	2018
15	DNV GL, Prescriptive C&I Loadshapes of Savings. March 2018. (Leveraged study from MA)	This MA study pooled known sources of 8,760 savings loadshapes in an interactive tool to estimate general prescriptive measure loadshapes over customizable time periods.	C&I	2018
16	NMR, Rhode Island Residential Appliance Saturation Survey. October 2018	This study developed an inventory of residential end-uses, including appliances, consumer electronics, heating and cooling equipment, thermostats, water heating, and building characteristics. Findings from this study will be used to inform program planning and support future potential studies in Rhode Island.	Res	2018
17	Navigant, MA Residential Electric Loadshape and Baseline Study (Heating and Cooling Season report). July 2018. (Leveraged study from MA)	This study collected saturation, penetration, and usage behavior data for all major electric and gas appliances in Massachusetts. This study is being used as the source for multifamily coincidence factors and some residential HVAC coincidence factors	Res	2018
18	NMR/DNV GL, TXC29 Market-Rate Rental Property NEI Study (Phase 1), March 2018 (Leveraged study from MA)	This study identified and analyzed NEIs associated with market-rate multifamily properties.	Res	2018

#	(a) Study	(b) Impact Descriptions	(c) Sector	(d) Year
19	NMR, RLPNC 17-3 Advanced Power Strip Metering Study (Revised). March 2019. (Leveraged study from MA)	This study yielded recommended gross electric savings and realization rates from advanced power strips offered through the Home Energy Services and upstream programs. Rhode Island adopted the result from this study to inform savings for Tier 1 and Tier 2 advanced power strips offered through its Retail Products program. This is being used for all smart strip measure savings and realization rates.	Res	2019
20	DNV GL, Impact Evaluation of PY2016 RI C&I Small Business Initiative: Phase I. June 2019.	The study updated impact factors for the Small Business initiative. The RI study leveraged the MA study of the same initiative.	C&I	2019
21	Cadeo, Impact and Process Evaluation of EnergyWise Single Family Program, September 2020.	This study updated gross savings, in-service rates, and net-to-gross ratios for the EnergyWise Single Family program.	Res	2020
22	Cadeo, Impact and Process Evaluation of EnergyWise Multi Family Program, September 2020.	This study updated gross savings, realization rates, in-service rates, and net-to-gross ratios for the EnergyWise Multi Family program.	Res	2020
23	Cadeo, Impact and Process Evaluation of Income Eligible Multi Family Program, September 2020.	This study updated gross savings, realization rates and in-service rates for the Income-Eligible Multi Family program.	Res	2020
24	Cadeo, Impact Evaluation of Home Energy Reports Program 2017-2019, September 2020.	This study updated realization rates for the Home Energy Reports program.	Res	2020
25	DNV GL, Impact Evaluation of 2017 Small Business Electric Installations, March 2020.	The study updated electric non-lighting impact factors for the Small Business initiative. RI leveraged the MA study of this initiative.	C&I	2020
26	DNV GL, C&I Measure Life Study, March 2020. (Leveraged Study from MA)	This study informed Effective Useful Lives and Remaining Useful Lives for key C&I energy efficiency measures, updating the commercial boiler EUL. RI leveraged the MA study of this initiative.	C&I	2020
27	DNV, Rhode Island Piggybacking Diagnostic Study, January 2020	The study developed guidance on when it is appropriate to “piggyback” on MA studies.	Cross-Cutting	2020
28	DNV, Impact Evaluation of PY2019 Upstream Lighting Program, July 2021	This study updated prospective realization rates and impact factors for the C&I Upstream lighting program.	C&I	2021
29	DNV, Franchise Controls Deemed Savings Study, March 2021 (Leveraged study from MA)	This study recommended a deemed savings value of 5,344 kWh for a building automation system (BAS) measure that controls small individual food service appliances.	C&I	2021
30	DNV, O&M and Non-O&M NEI Study (MA20X10-B-CIOMNEI), October 2021 (Leveraged study from MA)	This study developed O&M and non-O&M non-energy impacts (NEIs) across all C&I measures and programs.	C&I	2021
31	DNV, Upstream Lighting NTG, June 2021	This study updated NTG values for upstream lighting technologies and adjusted the values down significantly due to heavy free ridership.	C&I	2021
32	DNV, Ground Source Heat Pump eTRM Measure Review, March 2021 (Leveraged study from MA)	This study recommended that GSHPs be broken out from ASHPs into their own category offering to allow the program to attribute savings, baselines, and lifetimes in a more defensible way. It also recommended the GSHP lifetime be updated to 25 years. Used as a source for GSHP measure life.	C&I	2021
33	DNV, Energy Management System ISP Study, 2021 (Leveraged study from MA)	This study identified industry standard practices for energy management systems, with a particular focus on criteria for determining when an existing system should be considered failed.	C&I	2021
34	NMR Group, Inc., Rhode Island Appliance Recycling, November 2021	This study updated the gross kWh savings, realization rates and NTG factors for refrigerator and freezer recycling measures.	Res	2021

#	(a)	(b)	(c)	(d)
	Study	Impact Descriptions	Sector	Year
35	Guidehouse, RCD Virtual Assessment Study, March 2021 (Leveraged study from MA)	This study found that in-service rates are lower for self-installed measures. Rhode Island leveraged results from this study to update the in-service rates for instant savings measures in the EnergyWise Single Family program.	Res	2021
36	Guidehouse, Comprehensive TRM Review, April 2021 (Leveraged study from MA)	This study updated savings assumptions and effective useful lives (EUL) of several residential measures in MA. Rhode Island adopted the results from this study to update savings and EUL assumptions for several measures in the residential programs. (Leveraged study from MA)	Res	2021
37	NMR, Low Income Multifamily Health NEI (TXC 50), July 2021 (Leveraged study from MA)	This study produced NEI values associated with energy efficiency programs in Income Eligible, Multifamily buildings. A total of 4 health and safety NEIs were monetized as part of this study.	Res	2021
38	NMR, Residential New Construction Quick Hit NEI Study (MA20X14-RNCNEI), September 2021 (Leveraged study from MA)	The study produced updated NEI values for heating related measures offered through the Residential New Construction program.	Res	2021
39	NMR, Residential Downstream/Upstream Products Net-to-Gross Study, June 2021 (Leveraged study from MA)	This study yielded prospective net-to-gross ratios and retrospective and prospective in-service rates for products supported by the Residential Retail or Residential Coordinated Delivery Initiatives. Rhode Island adopted the results from this study to update 2022 planning assumptions for ENERGY STAR Products program.	Res	2021
40	NMR, Low-rise Residential New Construction Net-to-Gross Study, July 2021 (Leveraged study from MA)	This study yielded prospective and retrospective net-to-gross ratios for measures supported by the Low Rise Residential New Construction offering. Rhode Island adopted the results from this study to update 2022 planning assumptions.	Res	2021
41	NMR, Renovations and Additions Net-to-Gross Study, July 2021 (Leveraged study from MA)	This study yielded prospective and retrospective net-to-gross ratios for measures supported by the Renovations and Additions Residential New Construction offering. Rhode Island adopted the results from this study to update 2022 planning assumptions.	Res	2021
42	Guidehouse, Impact Analysis of Residential Wi-Fi Thermostats, September 2021 (Leveraged study from MA)	This study updated savings assumptions for programmable and Wi-Fi thermostats delivered through retail and direct install channels. Rhode Island adopted the draft results from this study to update savings for programmable and Wi-Fi thermostat measures in the residential HVAC and retrofit programs.	Res	2021
43	Net-to-Gross Research of RCD and Select Products Measures (MA20R28) (Leveraged study from MA)	For RI, the study applied new NTG results for the residential gas and electric HVAC programs. This study is being used for the NTG of custom multifamily measures, HVAC measures in EWSF, and residential HVAC measures	Res	2021
44	DNV, C&I Lighting Market Characterization and Adjusted Measure Life Study, August 2022	The study calculated adjusted measure lives for non-residential custom and prescriptive lighting measures for RI.	C&I	2022
45	Cadeo, Non-Residential Technical Reference Manual Review, October 2022 (Leveraged study from MA)	The study performed a comprehensive review of the non-residential prescriptive measures in the MA TRM and recommended updates for key parameters.	C&I	2022
46	Steam Traps and Boiler Efficiency Research Phase II, November 2022 (Leveraged study from MA)	The study conducted research of steam trap projects practices and boiler plant efficiency measurements to improve project accuracy.	C&I	2022
47	DNV, Rhode Island Cannabis Industry Standard Practice, August 2022	The study identified industry standard practices for the medical market cannabis industry with a focus on	Cross-Cutting	2022

#	(a)	(b)	(c)	(d)
	Study	Impact Descriptions	Sector	Year
		horticultural lighting, lighting controls, cultivation area HVAC, HVAC controls, and dehumidification.		
48	Cadeo, Nonparticipant Market Barriers Study, June 2022	The study characterized the customer groups not participating in Rhode Island Energy's energy efficiency programs, determined barriers to participation, and identified opportunities to engage nonparticipants.	Cross-Cutting	2022
49	Cadeo, Participation and Multifamily Census Study, June 2022	The study identified trends and drivers in participation and the likelihood of nonparticipants opting into a residential program in the future. The study also developed an algorithm to identify multifamily buildings suitable for RIE's multifamily programs.	Cross-Cutting	2022
50	Cadeo & NMR, Residential New Construction and Code Compliance Study, May 2023	The study updated the User Design Reference Home baseline measure level efficiencies, observed how building practices have changed over time, and identified the level of code compliance.	Res	2023
51	NMR Group, Residential Heat Pump NEIs Study, July 2023 (Leveraged study from MA)	The study updated NEIs for heat pump related measures.	Res	2023
52	Guidehouse, MA Residential Building Use and Equipment Characterization – Phase 7, December 2023 (Leveraged study from MA)	The study collected saturation, characterization, and usage behavior data for major appliances, HVAC equipment, and electronics in MA homes. The study updated residential load shapes based on the findings.	Res	2023
53	Cadeo, Comprehensive Measure Life Review, August 2023	The study reviewed prescriptive measure life assumptions and ensured they aligned with recent research, Rhode Island evaluation studies, and industry best practices. The study also recommended measure life updates when appropriate.	Cross-Cutting	2023
54	Cadeo, EnergyWise Single Family Weatherization Impact Evaluation, August 2023	The study updated the gross energy savings for EWSF's weatherization measures, for both primary and secondary heating and cooling. The evaluation accounted for energy savings associated with natural gas, electricity and/or delivered fuels (oil, propane, and wood).	Res	2023
55	DNV, ISP Recommendations: Ultra Low Temperature Freezers, September 2023 (Leveraged from MA)	The study investigated industry standard practice for ultra-low temperature freezers and updated the baseline from the results.	C&I	2023
56	DNV, Rhode Island Commercial Food Service Equipment ISP, August 2023	The study characterized industry standard practice in RI for commercial kitchen equipment by incorporating the 2023 appliance standards and prevalence of used equipment in the marketplace.	C&I	2023
57	Cadeo, Small Business Program Process Evaluation, August 2023	The study assessed program activities and identified opportunities for program enhancement for the small business program.	C&I	2023
58	BW Research Partnership, Rhode Island Energy Workforce Development, August 2023	The study quantified the current energy efficiency workforce in RI, identified needs and opportunities for the future, highlighted workforce development gaps and potential solutions, and identified potential roles for RI Energy in supporting energy efficiency workforce development in RI.	Cross-Cutting	2023
59	Cadeo, Comprehensive Measure Life Review II, September 2024	The study reviewed prescriptive measure life assumptions and ensured they aligned with recent research, Rhode Island evaluation studies, and industry best practices. The study also recommended measure life updates when appropriate.	Cross-Cutting	2024
60	Illume, Electric Resistance Heat Characterization Study, December 2024	The study identified the needs of homeowners and landlords with electric resistance heat and ways to overcome barriers heat pump adoption.	Res	2024

#	(a)	(b)	(c)	(d)
	Study	Impact Descriptions	Sector	Year
61	Guidehouse, Incremental Cost Research Memo- Massachusetts Heat Pump, August 2024 (Leveraged study from MA)	The study aimed to estimate the incremental cost of installing a heat pump.	Res	2024
62	NMR, Residential Heat Pump Invoice Cost Study (Leveraged study from MA)	The study analyzed heat pump data to estimate the costs of various types of heat pump.	Res	2024
63	DNV, Rhode Island Swarm Thermostats – Technology Evaluation Pilot, March 2024	The evaluation calculated the impacts of installing the Swarm Logic control technology at four sites equipped with HVAC units controlled by Wi-Fi thermostats.	C&I	2024
64	Synapse Energy Economics, Avoided Energy Supply Components in New England 2024 Report, February 2024	The study developed new estimates of avoided costs associated with energy efficiency measures for program administrators throughout New England States.	Cross-Cutting	2024
65	Tetra Tech, 2022 Commercial and Industrial Programs Free-Ridership and Spillover Study, January 2024	The study updated free-ridership and spillover rates for the C&I program.	C&I	2024
66	DNV, LightingPLUS Market Characterization. A joint Program Administrator Study, December 2024	The study aimed to assess the remaining energy savings potential in the commercial and industrial lighting market and evaluate six emerging “NextGen” lighting technologies.	C&I	2024
67	Resource Innovation (Cadeo) and Illume, Weatherization Motivations: Moderate Income, January 2025	The objective of this study was to understand the motivations, barriers, and willingness to pay for weatherization.	Res	2025
68	Resource Innovation (Cadeo), Residential Products Impact Evaluation, August 2025	The objective of this study was to quantify the gross savings and NTG of select measures.	Res	2025
69	Resource Innovation (Cadeo), Multifamily Impact Evaluation, August 2025	The objective of this study was to evaluate the gross savings and NTG of a range of measures from the Multifamily program.	Cross-Cutting	2025
70	Resource Innovation (Cadeo) Multifamily Custom Programs Impact Evaluation, March 2025	The objective of this study was to assess and review the electric and gas energy savings multifamily programs. Study recommended adjusted realization rate.	Cross-Cutting	2025
71	Cadeo, Income Eligible Single Family Impact Evaluation, January 2025	Updated and reviewed the gross per-unit energy savings for all measures in Rhode Island Energy’s Income Eligible Single Family (IESF) Program using data from 2021–2023.	IE	2025
72	Resource Innovation (Cadeo) and NMR Group, C&I New Construction Program Process Evaluation, January 2025	This study evaluated RIE’s C&I New Construction Program to assess its design, operations, and customer experience.	C&I	2025
73	DNV, Rhode Island Non-Residential New Construction Industry Standard Practice Study, March 2025	This study aimed to assess standard building practices and energy code compliance for selected measures in buildings permitted under IECC 2015. Study updated adjusted ISP factor.	C&I	2025
74	Cadeo, Large C&I Retrofit Program (Custom Pathway) Process Evaluation, May 2025	The evaluation aimed to assess program performance, identify improvement opportunities, and support future program planning.	C&I	2025
75	Guidehouse, Massachusetts and Connecticut 2024 Heat Pump Study, August 2024/ 2025 Heat Pump Study Review and Application to Rhode Island Memo, September 2025. (Leveraged study from MA)	The study aimed to quantify residential heat pump usage, peak demand, and performance through EE programs. Guidehouse adopted the Heat Pump Study and applied baseline adjustments to the various heat pump measures to align with the baseline used in Rhode Island.	Res	2025
76	Appliance Recycling Impact Evaluation	Updated gross and net savings values for appliance recycling measures and established revised realization rates, NTG ratios, and measure lives for refrigerators, freezers, and room air conditioners	Res	2026
77	Residential Mechanical Systems Survey	Assessed residential equipment saturation, fuel use, and electrification readiness to support future residential program planning and market potential assessments	Res	2026

#	(a)	(b)	(c)	(d)
	Study	Impact Descriptions	Sector	Year
78	Language Access Study for the Income Eligible Single Family Program	Evaluated language access barriers and identified opportunities to improve customer engagement, participation, and service delivery for non-English-speaking program participants.	IE	2026
79	Large C&I Prescriptive Electric Non-Lighting Impact Evaluation	Updated realization rates for prescriptive electric non-lighting measures and identified improvements to TRM application and savings calculations to support future claimed savings.	C&I	2026
80	Impact Evaluation of Custom Gas Installations	Updated custom gas realization rates and lifetime realization rates using PY2022–PY2024 evaluation results to support future custom gas savings claims and planning assumptions.	C&I	2026
81	CustElecPY24 Impact Evaluation of Custom Electric Installations	Updated custom electric realization rates using PY2022–PY2024 evaluation results and identified operational, methodological, and baseline factors affecting realized savings.	C&I	2026
82	Equipment and Systems Performance Optimization (ESPO) Initiative Process Evaluation	Evaluated ESPO program design, implementation, and participation and provided recommendations for restructuring the initiative into a more comprehensive EBCx framework.	C&I	2026
83	C&I Lighting Source Review	Assessed the validity of evaluation studies and market research used to support ISO-NE FCM lighting claims and identified necessary source updates and documentation improvements.	C&I	2026
84	Prescriptive Refrigeration Coil Cleaning Methodology Memo	Developed deemed energy and demand savings factors for refrigeration condenser coil cleaning and supported transition to a prescriptive savings methodology.	C&I	2026
85	Code Compliance Savings Attribution Scope Discovery Findings and Recommendations	Evaluated approaches for attributing code compliance support savings and identified future data collection, tracking, and evaluation needs for CSTS and New Construction initiatives.	Cross-Cutting	2026

6. STUDY SUMMARIES

6.1 Rhode Island-Specific studies

RI-X-26-E -Appliance Recycling Impact Evaluation

Type of Study: Impact Evaluation

Conducted by: Resource Innovation

Date Evaluation Conducted: August 2026

Evaluation Objective and High-Level Findings:

This evaluation was conducted following Rhode Island Energy's transition from ARCA to ECO+ as the Appliance Recycling Program (ARP) implementation contractor in October 2024. The study sought to update gross and net energy savings values for recycled refrigerators, freezers, and room air conditioners (RACs), while also assessing program delivery and participant experience. The evaluation found that the program exceeded planned participation levels in 2025, achieved high participant satisfaction (95% satisfied), and generated higher gross energy savings than the prior evaluation due primarily to differences in reported appliance age and size. The study concluded that program operations under ECO+ are stable and effective but identified opportunities to improve appliance data collection, cross-program coordination, and marketing practices. Below is a table with quantitative results:

	(a)	(b)	(c)	(d)
	Program Type and Delivery	Refrigerators	Freezers	RACs
1	Gross Annual Energy Savings (kWh/year)	1,129	925	321
2	Gross Realization Rate	87%	86%	N/A
3	Net-to-Gross Ratio	47%	54%	48%
4	Summer kW	0.18	0.14	0.34
5	Measure Life	4	4	4

Programs to which the Results of the Study Apply: Residential Retails Products Program and Small Business Services Program

Evaluation Recommendations included in the Study: The study recommended improving appliance data collection and tracking, enhancing coordination between the Appliance Recycling Program and EnergyWise, formalizing program performance metrics, strengthening marketing strategies, and updating certain TRM assumptions, including freezer measure life and the treatment of room air conditioner recycling.

Explain Whether or Not Rhode Island Energy (RI Energy) Decided to Adopt Recommendations from the Study: RI Energy will adopt the recommendations form the study

Savings Impact: The evaluation resulted in increased savings estimates for recycled refrigerators and freezers compared to the previous evaluation.

RI-R-26-E- Residential Mechanical Systems Survey 2026

Type of Study: Market Study

Conducted by: NMR Group, Inc. and Resource Innovations

Date Evaluation Conducted: August 2026

Evaluation Objective and High-Level Findings:

The study inventoried the types, fuels, and efficiencies of residential mechanical equipment in Rhode Island, assessed electrification readiness, and compared results with the 2018 Residential Appliance Saturation Study. It found increased heat pump, heat pump water heater, cooling equipment, solar, and electric vehicle adoption, while identifying substantial opportunities to replace electric resistance heating and inefficient equipment.

Programs to which the Results of the Study Apply: All Residential Programs

Evaluation Recommendations included in the Study: The study recommended targeting heat pump and heat pump water heater opportunities, addressing participation barriers for low-income households, renters, and multifamily properties, promoting efficient cooling and solar installations, and revisiting electric-heating customer modeling when sufficient AMI data becomes available.

Explain Whether or Not Rhode Island Energy (RI Energy) Decided to Adopt Recommendations from the Study: RI Energy will adopt the recommendations from the study

Savings Impact: No savings impact

RI-R-26-E- Language Access Study for the Income Eligible Single Family Program

Type of Study: Process Evaluation

Conducted by: E Source and Resource Innovations

Date Evaluation Conducted: August 2026

Evaluation Objective and High-Level Findings:

The study examined how language access challenges affect participation in Rhode Island Energy's Income Eligible Single Family (IESF) Program for customers who speak a language other than English. The study found that language support varies across program partners, relies heavily on bilingual staff and informal translation practices, and can create inconsistent customer experiences throughout enrollment, assessment, installation, and project closeout. Opportunities were identified to improve translation, interpretation, tracking of language preferences, customer communications, and community outreach

Programs to which the Results of the Study Apply: Income Eligible Single Family

Evaluation Recommendations included in the Study: The study recommended improving language access through standardized translation and interpretation services, better tracking of language preferences, enhanced multilingual outreach, and stronger community partnerships.

Explain Whether or Not Rhode Island Energy (RI Energy) Decided to Adopt Recommendations from the Study: RI Energy will adopt the recommendations from the study

Savings Impact: No savings impact

RI-C-26-E- Large C&I Prescriptive Electric Non-Lighting Impact Evaluation

Type of Study: Impact Evaluation

Conducted by: DNV

Date Evaluation Conducted: August 2026

Evaluation Objective and High-Level Findings:

The study evaluated gross electric energy and summer and winter on-peak demand savings for PY2024 C&I Prescriptive Electric Non-Lighting measures. The study estimated overall retrospective and prospective energy realization rates of 82.0% and 92.7%, respectively, and found that approximately 68% of evaluated sites did not fully follow TRM guidance when calculating tracking savings

Programs to which the Results of the Study Apply: Commercial Programs

Evaluation Recommendations included in the Study: The study recommended improving data collection, consistently applying TRM methodologies, and updating TRM realization rates based on evaluation findings.

Explain Whether or Not Rhode Island Energy (RI Energy) Decided to Adopt Recommendations from the Study: RI Energy will adopt the recommendations from the study

Savings Impact: The claimable savings for C&I prescriptive electric non-lighting savings will decrease as the realization rate decreased for all measures.

RI-C-26--G – Impact Evaluation of Custom Gas Installations

Type of Study: Impact

Evaluation Conducted by: DNV

Date Evaluation Conducted: August 2026

Evaluation Objective and High-Level Findings:

The objective of this impact evaluation was to provide verification and re-estimation of natural gas savings for a sample of PY2024 custom gas projects through site-specific inspections, monitoring, and analysis. The site-specific results were aggregated to determine realization rates for Rhode Island Energy's Custom Gas Program. Beginning with PY2024, Rhode Island Energy transitioned to an 18-month evaluation cycle, and the study combined PY2024 results with PY2022 and PY2023 findings to calculate updated three-year rolling realization rates. The evaluation found a PY2024 realization rate of 123.4% and a three-year rolling realization rate of 97.8% for annual savings

Table 7. Custom Gas Non-Steam Trap Results

(a)	(b)	(c)	(d)	(e)
Parameter	PY2022	PY2023	PY2024	PYs 2022+2023+2024
1 Tracking savings (therms)	1,056,259	419,065	720,768	2,196,092
2 Non-operational sample size	5	7	7	19
3 Realization Rate (RR)	103.3%	40.2%	123.4%	97.8%
4 Relative precision at 80% CI (%)	±14.0%	±52.7%	±18.2%	±15.6%

Programs to which the Results of the Study Apply:

The results of the study are applicable to the custom gas measures in the C&I Programs.

Evaluation Recommendations included in the Study:

The study recommends the following:

- Adopt the three-year rolling realization rate of 97.8% and lifetime realization rate of 95.9% for planning and reporting purposes.
- Improve retention of project documentation supporting custom project savings estimates.
- Improve traceability and validation of key operating assumptions used in custom analyses.
- Strengthen documentation and review requirements for controls-based and retro-commissioning projects.
- Require trend data where available to support custom project savings estimates and future evaluations.

Explain Whether or Not Rhode Island Energy (RI Energy) Decided to Adopt Recommendations from the Study:

RI Energy is adopting the recommendations from the study

Savings Impact:

The claimable savings for Large C&I custom gas projects will increase as the realization rate increased from the previous year.

RI-26-C-E – Impact Evaluation of Custom Electric Installations

Type of Study: Impact Evaluation

Evaluation Conducted by: DNV

Date Evaluation Conducted: August 2026

Evaluation Objective and High-Level Findings:

The objective of this impact evaluation was to verify and re-estimate energy and demand savings for a sample of PY2024 custom electric projects through site-specific verification, monitoring, and analysis. The results were combined with PY2022 and PY2023 evaluations to develop three-year rolling realization rates for custom electric projects. The evaluation found a PY2024 non-lighting energy realization rate of 85.5% and a three-year rolling realization rate of 82.4%. The program remained generally stable, although differences between tracked and evaluated savings were primarily driven by operational, methodological, and baseline discrepancies

Table 8. Custom Electric Installation Results

	(a)	(b)	(c)	(d)	(e)
	Parameter	PY2022	PY2023	PY2024	PYs 2022+2023+2024
1	Tracking savings (kWh)	11,841,265	6,091,338	6,001,800	23,934,403
2	Non-operational sample size	9	10	10	29

3	Realization Rate (RR)	77.2%	89.6%	85.5%	82.4%
4	Relative precision @ 90% CI (%)	±14.1%	±9.2%	±16.9%	±8.5%

Programs to which the Results of the Study Apply:

The results of the study are applicable to the custom electric measures in the C&I Programs.

Evaluation Recommendations included in the Study:

The study recommended adopting the updated realization rates, improving documentation of savings assumptions and baselines, strengthening project documentation and tracking practices, and developing more consistent methodologies for custom project savings calculations.

Explain Whether or Not Rhode Island Energy (RI Energy) Decided to Adopt Recommendations from the Study:

RI Energy is adopting the updated realization rates and other recommendations to improve custom project savings estimation, documentation, and tracking practices

Savings Impact:

The evaluation recommends updating the three-year rolling realization rate for custom non-lighting electric projects from 85.5% to 82.4%, resulting in a decrease in claimable savings for future custom electric project savings claims. Summer and winter peak demand realization rates were updated to 76.6% and 76.7%, respectively

RI-26-C-E – Equipment and Systems Performance Optimization (ESPO) Initiative Process Evaluation

Type of Study: Process Evaluation

Conducted by: NMR Group and Resource Innovations

Date Evaluation Conducted: June 2026

Evaluation Objective and High-Level Findings:

The study evaluated the design, implementation, and customer experience of Rhode Island Energy's ESPO Initiative and identified opportunities to increase participation and better align the program with EBCx best practices. The evaluation found that participation is driven primarily by SEMP and sector-specific initiatives, the program lacks centralized management and a qualified service provider network for key pathways, and the Building Analytics Program (BAP) has shown strong early success an expansion potential.

Programs to which the Results of the Study Apply: Large C&I Programs

Evaluation Recommendations included in the Study:

The study recommended establishing dedicated program management, incorporating EBCx best practices, consolidating and simplifying ESPO pathways, expanding the BAP offering to additional customer segments, and improving customer-facing marketing and program materials

Explain Whether or Not Rhode Island Energy (RI Energy) Decided to Adopt Recommendations from the Study:

RI Energy is adopting the study recommendations to strengthen program delivery, improve customer participation, and support the transition to a more cohesive EBCx framework.

Savings Impact: No savings impact

RI-26-C-E – C&I Lighting Source Review

Type of Study: Source Review

Conducted by: Resource Innovations

Date Evaluation Conducted: April 2026

Evaluation Objective and High-Level Findings:

The study reviewed seven existing evaluation and market study sources used by Rhode Island Energy to substantiate C&I lighting demand reduction claims submitted to ISO-NE's Forward Capacity Market (FCM). The review found that only one source was justified for use beyond 2026, one source remained appropriate through 2026 only, and five sources were outdated or no longer aligned with current lighting technologies, program designs, and market conditions.

Programs to which the Results of the Study Apply:

Large Commercial Retrofit , and Small Business Direct Install

Evaluation Recommendations included in the Study:

The study recommended continuing to use the most defensible existing sources, replacing outdated lighting controls references with a newer Massachusetts controls study, determining the future role of prescriptive lighting programs, and improving documentation linking FCM claims to supporting sources.

Explain Whether or Not Rhode Island Energy (RI Energy) Decided to Adopt Recommendations from the Study:

RI Energy is adopting recommendations to strengthen support for ISO-NE FCM claims, improve source documentation, and guide future evaluation and program planning decisions related to C&I lighting.

Savings Impact:

No savings impact

RI-26-C-E – Prescriptive Refrigeration Coil Cleaning Methodology Memo

Type of Study: Technical Research

Conducted by: Demand Management Institute (DMI)

Date Evaluation Conducted: November 2025

Evaluation Objective and High-Level Findings:

The study reviewed current research on refrigeration condenser coil cleaning and developed a deemed savings methodology for use in Rhode Island Energy's prescriptive programs. The review concluded that coil cleaning generally improves refrigeration system efficiency and should continue to be offered as an energy efficiency measure, despite evidence that savings may vary across applications. The study recommended replacing the existing custom express tool with a simplified deemed savings approach.

Programs to which the Results of the Study Apply: Large C&I

Evaluation Recommendations included in the Study: The study recommended continuing to offer refrigeration condenser coil cleaning as an energy efficiency measure and adopting deemed savings values in place of the existing custom calculation tool to simplify implementation and reduce engineering effort.

Explain Whether or Not Rhode Island Energy (RI Energy) Decided to Adopt Recommendations from the Study:

RI Energy is adopting the recommendations and incorporating refrigeration coil cleaning into the ESPO Low-Cost Tuning offering using the proposed deemed savings methodology.

Savings Impact:

The study established deemed energy and demand savings factors for low-temperature and medium-temperature refrigeration coil cleaning measures.

RI-26-X-E – Code Compliance Savings Attribution Scope Discovery Findings and Recommendations

Type of Study: Research Memo

Conducted by: E Source

Date Evaluation Conducted: July 2026

Evaluation Objective and High-Level Findings:

The study evaluated whether Rhode Island Energy could update the 2017 Code Compliance Enhancement Initiative (CCEI) Attribution and Savings Study for the 2027–2029 cycle. The research concluded that a direct update to the 2017 methodology is not feasible due to outdated baseline compliance studies, insufficient participant impact data, significant code and market changes, and evolving industry approaches to code compliance savings attribution.

Programs to which the Results of the Study Apply:

Rhode Island Energy’s Code and Standards Technical Support (CSTS) Initiative, Residential New Construction Program, and Large Commercial & Industrial New Construction Program

Evaluation Recommendations included in the Study:

The study recommended strengthening participant and training impact data collection, implementing pre- and post-training assessments, conducting follow-up surveys, and coordinating code compliance savings attribution with Residential and Non-Residential New Construction program evaluation efforts.

Explain Whether or Not Rhode Island Energy (RI Energy) Decided to Adopt Recommendations from the Study:

RI Energy is adopting the recommendations to improve future code compliance savings attribution, enhance participant impact tracking, and better align CSTS activities with new construction program evaluation efforts.

Savings Impact:

No savings impact.

6.2 Massachusetts Study Summaries

MA25R03-E-HPWHI - Heat Pump Water Heater Impact Study

Type of Study: Impact Evaluation

Conducted by: Guidehouse

Date Evaluation Conducted: March 2026

Evaluation Objective and High-Level Findings:

The study evaluated heat pump water heater (HPWH) impacts in Massachusetts using participant surveys, metering analysis, and engineering review to update savings assumptions and improve understanding of customer experience. The study found that HPWHs operate primarily in heat pump mode but experience an average 20% efficiency reduction relative to rated UEF due to electric resistance operation. Customer satisfaction was high (83% reporting no concerns), and HPWHs were found to reduce dehumidifier use in some homes.

Programs to which the Results of the Study Apply: Residential HVAC

Evaluation Recommendations included in the Study:

The study recommended updating TRM savings assumptions using a mode-adjusted UEF of 0.81, providing stronger customer and contractor education on HPWH operating modes and temperature settings, encouraging proper tank sizing and mixing valve installation, applying dehumidification secondary impacts, and continuing to track baseline tank size and fuel type.

Explain Whether or Not Rhode Island Energy (RI Energy) Decided to Adopt Recommendations from the Study: RI Energy is adopting the recommendations applicable to Rhode Island programs and TRM assumptions.

Savings Impact: Overall increase in savings