

**GOVERNMENT OF PUERTO RICO
PUBLIC SERVICE REGULATORY BOARD
PUERTO RICO ENERGY BUREAU**

IN RE: ENERGY EFFICIENCY AND DEMAND
RESPONSE TRANSITION PERIOD PLAN

CASE NO: NEPR-MI-2022-0001

SUBJECT: Savings Contributions and
Potential Study Comments.

RESOLUTION AND ORDER

I. Introduction

In this Resolution and Order, the Energy Bureau of the Public Service Regulatory Board of Puerto Rico (“Energy Bureau”) establishes the expected savings from contributing entities to meet Puerto Rico’s energy efficiency (“EE”) goal, as required by Section 3.01(E) of Regulation 9367¹ (“EE Regulation”). In addition, the Energy Bureau provides an opportunity for stakeholders to provide supplemental comments on the recently completed Market Baseline and Potential Study.

Section 3.02 of the EE Regulation requires that the Energy Bureau contract with expert consultants to conduct a Market Baseline Study and a Potential Study (“the Studies”). The Energy Bureau hired Optimal Energy, Inc., to conduct the Studies.²

On September 12, 2025, the Energy Bureau issued a Resolution and Order to schedule a Technical Workshop on September 25, 2025, to discuss the Studies, and allowing stakeholders to submit written comments on the Studies by October 10, 2025.

The Energy Bureau posted the Studies on the Energy Bureau’s website on September 24, 2025, and the lead author of the Studies presented the results at the Technical Workshop held by the Energy Bureau on September 25, 2025.

On October 7, 2025, LUMA Energy, LLC and LUMA Energy ServCo, LLC (jointly referred to as “LUMA”) submitted a motion requesting the Energy Bureau change the timeframe to submit written comments to November 7, 2025. LUMA also requested an opportunity for stakeholders to present questions and receive feedback from the study consultants to better understand the study, support their written comments, and further instruct the development of LUMA’s FY2027 and FY2028 EE targets.

On October 10, 2025, LUMA filed a motion to reiterate the requests from its October 7 Motion, while clarifying that it had accessed appendices for the studies. No other stakeholders filed comments by the deadline.

On November 7, 2025, LUMA filed “LUMA’s Comments to Market Baseline and Potential Study.” This filing included comments, recommendations, and questions regarding the Studies.

II. Summary of the Studies

A. Market Baseline Study

The Market Baseline Study should assess the market for energy efficiency technologies or services, including assessing utilization of current programs and in the absence of programs.³ Part of the initial Market Baseline Study is to collect data to estimate the contributions of different types of efficiency resources toward the statutory energy efficiency goal, including utility-run programs and activity by non-utility Contributing

¹ Regulation for Energy Efficiency, Regulation 9367, Energy Bureau, March 25, 2022.

² Optimal Energy has since been acquired by NV5 Global, Inc.

³ EE Regulation, Section 1.09 (29).

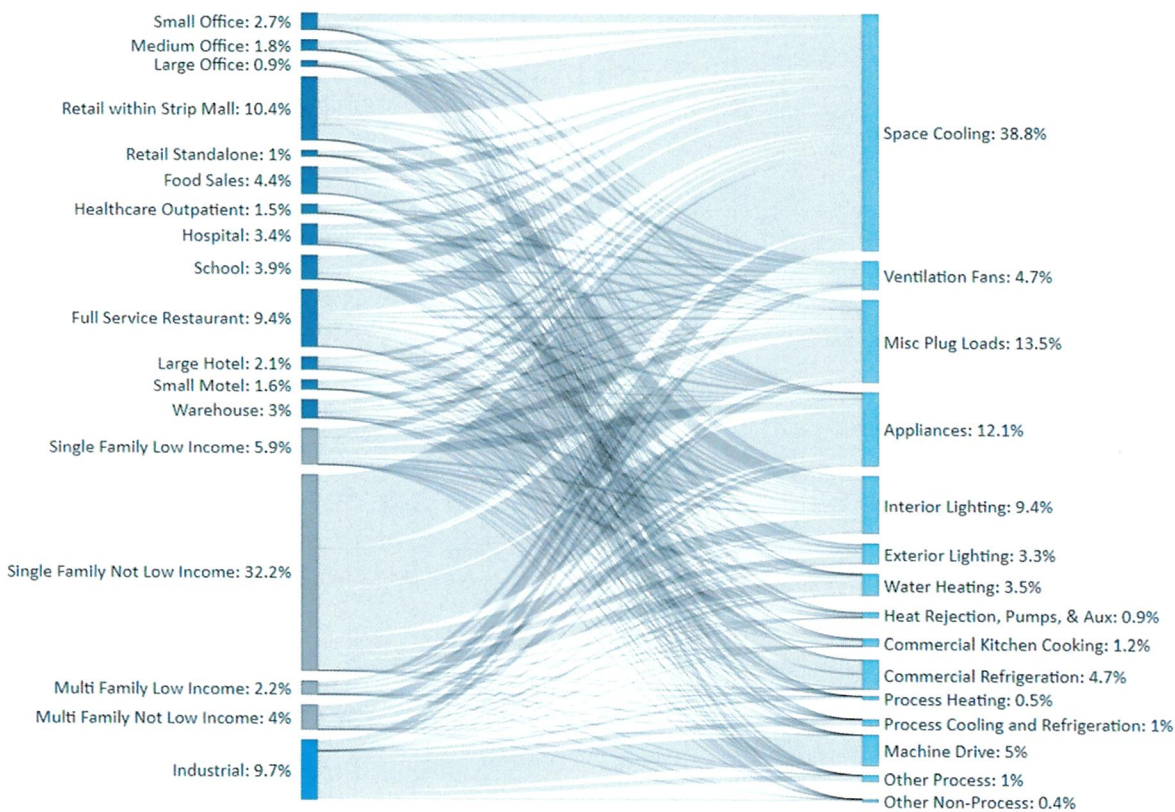


Entities.⁴ Contributing Entities add to efficiency resources through implementation of energy efficiency in governmental buildings, improvements to building energy codes, savings from appliance efficiency standards, implementation of governmental energy efficiency programs in non-governmental buildings, and other activities.

The Market Baseline Study provides two closely related types of valuable information about electricity use in Puerto Rico. First, it provides an estimate of the breakdown of electricity use among end uses. Second, it quantifies the distribution of equipment efficiency for each end use (such as the portion that is Energy Star rated). These are both essential pieces of information for understanding where efficiency potential may be found and which programmatic interventions can achieve that potential.

Figure 1, reproduced from the Market Baseline Study, shows the study’s breakdown of electricity consumption among end uses and across the residential, commercial, and industrial sectors.

Figure 1. Commercial, residential, and industrial sector building electricity consumption by segment and end-use (Figure 23 from the Market Baseline Study)



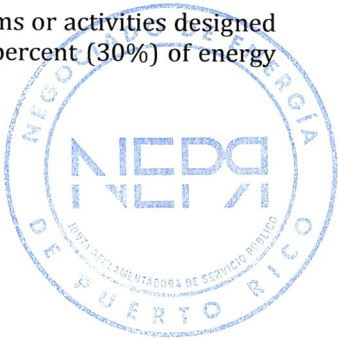
B. Potential Study

The Potential Study should quantify “the amount of the energy efficiency or demand response potential that exists, is cost-effective, and could be realized through implementation of energy efficiency programs and policies in Puerto Rico, including by customer class or sector, and [identify] opportunities from energy and demand savings.”⁵ Section 3.02(B) of the EE Regulation requires the first Potential Study to include past and future energy savings resulting from utility and non-utility Contributing Entities and quantify the cost-effective potential for EE in Puerto Rico.

The Potential Study provides two essential types of information for EE planning in Puerto Rico. The first is an estimate of the past and future impact of non-utility Contributing Entities

⁴ The EE Regulation defines a Contributing Entity as “an entity that conducts programs or activities designed to produce energy efficiency savings that contribute to Puerto Rico’s goal of thirty percent (30%) of energy efficiency by 2040.” EE Regulation, Section 1.09 (5).

⁵ EE Regulation, Section 1.09 (38).



on electric sales through increased efficiency. The second is the economic, maximum achievable, and program achievable potential for utility EE programs.

III. Non-Utility Contributing Entities Potential

The Potential Study estimates Puerto Rico’s electric energy efficiency savings from non-utility programs and policies, including federal appliance standards, building codes, and non-utility programs such as low-income weatherization.⁶ The Potential Study estimates that by 2040, cumulative annual savings resulting from these non-utility programs and policies will total 1,709 GWh or 10.6 percent of 2019 sales.⁷ Table 1 summarizes the cumulative 2040 annual savings for each non-utility policy or program, in GWh and as a percent of 2019 sales. The greatest portion of savings come from appliance standards. Building codes provide a smaller, although sizable, portion of savings, while non-utility programs contribute a small amount of savings.

These policies and programs also produce significant near-term savings. By the end of the first EE Plan period (i.e., the end of FY2028), savings are expected to be about 721 GWh, or 4.5 percent of 2019 sales.

Table 1. Savings from Non-Utility Contributing Entities

Program or Policy	Cumulative 2040 Annual Savings (GWh)	Percent of 2019 Sales
Appliance standards	1,408	8.8%
Building codes	295	1.8%
Programs in non-governmental buildings	6	0.04%
Total	1,709	10.6%

C. Energy Bureau’s Findings

Section 3.02(D) of the EE Regulation requires the Energy Bureau to estimate the EE savings achieved during the Transition Period resulting from Contributing Entities other than utility EE programs, before the end of the Transition Period Plan. Section 3.02(E) of the EE Regulation also requires the Energy Bureau to use the results of the studies to estimate annual savings from non-utility Contributing Entities for each year through 2040.

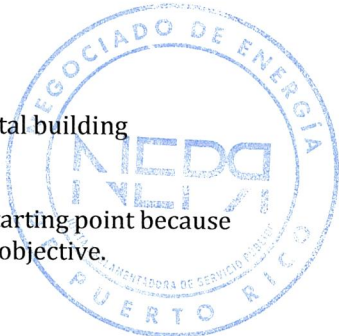
Making these estimates now is appropriate given that the Market Baseline and Potential Studies are complete, the Transition Period ends June 30, 2026, and LUMA is developing its 2026-2028 EE Plan to be filed in early 2026.

LUMA’s October 7 Motion raised one point of concern regarding contributing entities, namely that the study “does not separately analyze government buildings, instead assuming that commercial energy savings apply uniformly. This does not seem to align with the EE Regulation and might overlook existing programs, and the critical role [of] the contributing entities responsible for contributing to reaching the energy efficiency mandates.”⁸ The Potential Study states that the authors sought information about actions in governmental buildings to comply with efficiency mandates and were unable to find evidence of action in this area. When quantifying potential, it is reasonable to assume that governmental buildings are similar to commercial buildings and would face similar barriers to efficiency measure

⁶ The Potential Study authors also sought information regarding savings from governmental building efficiency mandates but were unable to find documentation of savings to include.

⁷ The Potential Study quantifies the savings impact of these actions referenced to a 2019 starting point because it corresponds to the passage of Act 17-2019, which established the 30 percent efficiency objective.

⁸ October 7 Motion at ¶ 20, on pages 7-8.



adoption. We will address any proposal by LUMA to address governmental buildings in the appropriate venue.

No other parties submitted comments or raised any timely concerns about the Potential Study.

The Energy Bureau reviewed the Potential Study and determined that the methods and savings estimates are sound. Therefore, the Energy Bureau **ADOPTS** the savings estimates obtained through non-utility Contributing Entities in the Potential Study, for Section 3.02(D) and the non-utility portions of Section 3.02(E) of the EE Regulation, as summarized in Table 2.

Table 2. Non-Utility Contributing Entities Savings Estimates Adopted by the Energy Bureau

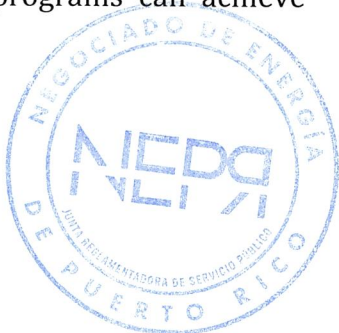
Year	GWh	Percent of 2019 Sales
2025	540	3.4%
2026	625	3.9%
2027	670	4.2%
2028	721	4.5%
2029	782	4.9%
2030	855	5.3%
2031	951	5.9%
2032	1,038	6.5%
2033	1,125	7.0%
2034	1,212	7.5%
2035	1,300	8.1%
2036	1,389	8.7%
2037	1,473	9.2%
2038	1,554	9.7%
2039	1,633	10.2%
2040	1,709	10.6%

IV. Utility Program Potential

The Potential Study estimates three levels of EE potential for utility-run EE programs: economic potential, maximum achievable potential, and program achievable potential.

- Economic potential is the potential for savings from measures that are cost-effective and technically feasible according to the Puerto Rico Test, which accounts for the benefits from avoiding energy, capacity, and greenhouse gas emissions.
- Maximum achievable potential limits the potential to what can be achieved by aggressive programs, including incentives that cover 100 percent of the incremental cost for all measures.
- Program achievable potential further limits the potential to what is achievable using best practice program design. This includes incentives that cover half of the incremental cost of measures on average, with the exception of low-income programs, which are assumed to continue to cover 100 percent of incremental cost.

The Potential Study authors examined the savings potential of over 150 measures across three market types (new construction, market opportunity, and retrofit/early replacement) and 18 building types, yielding nearly 1,200 permutations of unique measures. As summarized in Table 3, the Potential Study finds that the maximum achievable potential is about 3.5 percent of 2019 sales by the end of FY2028 and 15.8 percent of 2019 sales by the end of FY2040. Implementation of industry best-practice utility programs can achieve



cumulative annual savings of about 2.7 percent of 2019 sales by the end of FY2028, and 11.1 percent of 2019 sales by the end of FY2040.

Table 3. Savings Potential from Utility EE Programs

Maximum Achievable Potential	Cumulative Annual Savings by FY2028	Cumulative Annual Savings by FY2040
Electricity Savings (GWh)	564	2,537
Electricity Savings (% of 2019 Sales)	2.7%	15.8%
Demand Savings (MW)	98	489

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Program Achievable Potential	Cumulative Annual Savings by FY2028	Cumulative Annual Savings by FY2040
Electricity Savings (GWh)	428	1,794
Electricity Savings (% of 2019 Sales)	2.7%	11.2%
Demand Savings (MW)	72	346

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The Potential Study reports the results of the Puerto Rico cost-effectiveness test for the economic, maximum achievable, and program achievable estimates. The study assessed cost-effectiveness for each three-year EE program period between 2026 and 2040. The modeled EE measures are highly cost-effective, with benefit-cost ratios for the program achievable and maximum achievable scenarios exceeding 2.0 for all three-year program periods and averaging 2.2 across the five three-year program periods assessed in the Potential Study. Every dollar invested in utility-run energy efficiency programs in Puerto Rico creates two or more dollars in benefits. As shown in Table 4, between 2026-2040, the program achievable scenario costs about \$1.1 billion, producing \$2.6 billion in benefits, for net benefits of \$1.5 billion, in present value terms. Similarly, for the maximum achievable scenario, costs are \$1.9 billion, while benefits are \$3.7 billion, for net benefits of \$1.8 billion.

Table 4. Potential Study EE Cost Effectiveness Results, Present Value 2026 Dollars (\$ Billion)

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Scenario	Benefits	Costs	Net Benefits	Benefit-Cost Ratio
Economic	\$5.326	\$2.232	\$3.094	2.4
Max Achievable	\$3.688	\$1.874	\$1.814	2.0
Program Achievable	\$2.617	\$1.138	\$1.479	2.3

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V. Energy Bureau’s Findings

Section 3.02(E) requires the Energy Bureau to estimate the annual savings to be achieved from LUMA’s EE programs through 2040. Making this estimate requires information from LUMA’s 2026-2028 EE Plan, to be filed in 2026, because that plan will include information about the pace at which EE programs can be ramped up during fiscal years 2027 and 2028. The Energy Bureau therefore **DETERMINES** it is premature to set these savings estimates. Instead, the Energy Bureau will address these estimates in 2026 as part of its consideration of LUMA’s 2026-2028 EE Plan.



VI. Supplemental Stakeholder Comments

The deadline to provide comments on the studies was Friday, October 10, 2025. LUMA filed a motion requesting additional process on Tuesday, October 7, 2025, nearly two weeks after the workshop at which the studies were presented, and just four days before the comment deadline. None of the issues that LUMA identified in its motion changed substantially between the workshop and October 7, 2025. LUMA's choice to make this filing late in the comment period impeded the ability of the Energy Bureau to respond before October 10, 2025. The Energy Bureau did not waive or modify the comment deadline, so the original deadline of October 10, 2025, remained in force. No stakeholders made timely and substantive filings of comments on the studies.

 LUMA's November 7 comment filing is welcome, yet not timely. In that filing, LUMA made numerous potentially valuable suggestions regarding the scope and approach for future studies and asked methodological questions regarding the Studies. The Energy Bureau is unable to provide LUMA and other stakeholders with the opportunity to further question or seek clarifications regarding the Studies from the Studies' author. The Energy Bureau or its consultants may be able to answer some questions if asked by stakeholders regarding the studies. The Energy Bureau or its consultants will endeavor to provide LUMA with answers to those questions from its November 7 comments for which answers are readily available.

 With respect to process, LUMA's November 7 filing asks how stakeholders review will be incorporated into the final version of the Studies. To reiterate and clarify, the Studies are complete and final. The Energy Bureau **URGES** LUMA to use the insights gained through the Studies in developing its Three-Year Plan and associated program plans and analyses. The Studies are valuable as inputs into LUMA's planning process.

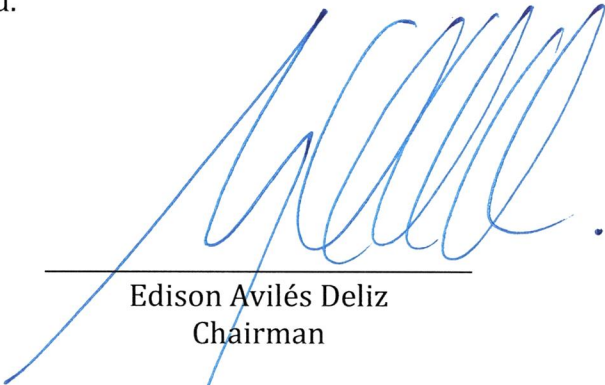
 While the deadline to comment on the studies has passed, the Energy Bureau understands that some stakeholders may have acted under the belief that the Energy Bureau would extend the comment deadline or provide opportunity for questions addressed to NV5 and thus did not file comments. The Energy Bureau therefore welcomes supplemental stakeholder comments or questions regarding the Studies, submitted **on or before December 10, 2025**. The comments shall include in their title: "Public Comments on the Energy Efficiency Market Baseline Study and Potential Study – Case No.: NEPR-MI-2022-0001".

 Comments shall be addressed to the attention of Edison Avilés Deliz, Chairman, and shall be filed by: (i) electronic mail at: comentarios@jrsp.pr.gov; (ii) through the Energy Bureau's electronic filing platform at: <https://radicacion.energia.pr.gov/>; (iii) by postal mail addressed to the Puerto Rico Energy Bureau's Clerk's Office at World Plaza Building, 268 Muñoz Rivera Ave., Plaza Level Suite 202, San Juan, PR 00918; or (iv) in person at the Energy Bureau's Clerk's Office, at World Plaza Building, 268 Muñoz Rivera Ave., Plaza Level Suite 202, San Juan, PR.⁹

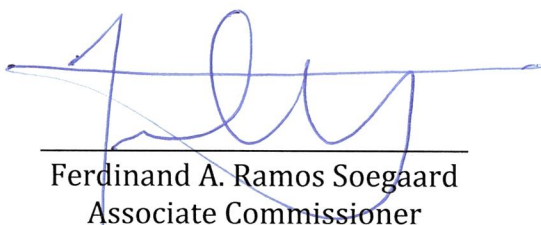


⁹ The hours of operation of the Clerk's office are Monday through Friday from 7:30 a.m. to 4:30 p.m., excluding holidays.

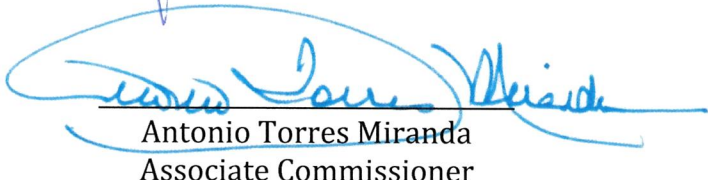
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Antonio Torres Miranda
Associate Commissioner

CERTIFICATION

I certify that the majority of the members of the Puerto Rico Energy Bureau agreed on November 25, 2025. Also certify that on November 25, 2025. I have proceeded with the filing of this Resolution and was notified by email to: RegulatoryPREBorders@lumapr.com; katuska.bolanos-lugo@us.dlapiper.com; margarita.mercado@us.dlapiper.com; laura.rozas@us.dlapiper.com; nzayas@gmlex.net; mvalle@gmlex.net; rcruzfranqui@gmlex.net, hriviera@jrsp.pr.gov; javrua@sesapr.org; mrios@arroyorioslaw.com; jordgraham@tesla.com; forest@cleanenergy.org; customerservice@sunnova.com; pjcleanenergy@gmail.com; agraitfe@agraitlawpr.com, info@sesapr.org; cfl@mcvpr.com; mqs@mcvpr.com.

I sign this in San Juan, Puerto Rico, today November 25, 2025.




Sonia Seda Gaztambide
Clerk