COMMONWEALTH OF PUERTO RICO
PUBLIC SERVICE REGULATORY BOARD
PUERTO RICO ENERGY BUREAU

IN RE:	**CASE NO.:** NEPR-MI-2022-0001
ENERGY EFFICIENCY AND DEMAND RESPONSE TRANSITION PERIOD PLAN	**SUBJECT:** LUMA's Comments to Market Baseline and Potential Study

LUMA'S COMMENTS TO MARKET BASELINE AND POTENTIAL STUDY

TO THE HONORABLE PUERTO RICO ENERGY BUREAU:

COME now **LUMA Energy, LLC** and **LUMA Energy ServCo, LLC**, (jointly referred to as "LUMA"), and respectfully state and request the following:

1. On September 12, 2025, the Energy Bureau issued a Resolution and Order scheduling a Technical Workshop for September 24, 2025, regarding the market baseline and potential study required under the Regulation for Energy Efficiency, Regulation 9637. The Energy Bureau also indicated that this study would be released in advance of the Technical Workshop. In addition, the Energy Bureau granted stakeholders until October 10, 2025, to submit written comments to the Energy Bureau on the Market Baseline and Potential Study.

2. On September 23, 2025, the Energy Bureau sent stakeholders a Puerto Rico Energy Efficiency Market Baseline and Potential Study dated September 24, 2025, prepared by NV5 (the "Market Baseline and Potential Study" or "Study").

3. On September 24, 2025, the Energy Bureau conducted the Technical Workshop regarding the Study, in which the Energy Bureau's consultants involved in the preparation of the Study gave a presentation and provided participants an opportunity to ask questions. LUMA, the Independent Consumer Protection Office ("OIPC" by its acronym in Spanish) and other

stakeholders participated. During the Technical Workshop, the OIPC mentioned that it had not received copy of the Market Baseline and Potential Study and asked for the opportunity to submit questions to the study consultants and receive responses prior to the deadline to submit comments, as they had not been able to review the studies prior to the Technical Workshop. LUMA echoed the OIPC's position on having the opportunity to submit questions to the study consultants and receive responses while having the opportunity to engage in a comprehensive review of the Study.

4. On October 7, 2025, LUMA filed an *Informative Motion and Requests Relating to Timeframe to Submit Comments to Recently Issued Market Baseline and Potential Study and Timeframe Related to Draft Three-Year Plan* ("October 7th Motion"). In it, LUMA indicated that the short period of time provided for review of the Study prior to the Technical Workshop limited the stakeholders' ability to ask substantive questions to and obtain actionable feedback from the Study consultants- an important step to better position stakeholders to prepare and submit written comments. *See* October 7th Motion, p. 8. Therefore, LUMA requested that the Energy Bureau provide until November 7, 2024 for this interactive process to occur and that the timeline to submit written comments be adjusted to account for this question-and-answer process. *See id*., pp. 8-9. LUMA also noted that it was awaiting receipt from the Study consultants of the appendices to the Study as these appendices could not be opened in the format provided, a request that was made during the Technical Workshop. *See id*., p. 7.

5. On October 10, 2025, LUMA filed an *Informative Motion Reaffirming LUMA's Requests in its October 7th Motion* "October 10th Motion") in which LUMA re-iterated its requests in the October 7th Motion and informed that LUMA had received all requested appendices of the Market Baseline and Potential Study on October 8, 2025, and that was actively evaluating the Study in conjunction with these appendices.

6. In accordance with its October 7th and October 10th Motions, LUMA is hereby submitting its comments on the Market Baseline and Potential Study. *See Exhibit 1*. The comments in *Exhibit 1* highlight key issues in the Study and provide recommendations to the Energy Bureau to address these issues to better inform regulatory target setting and EE program planning.

7. *Exhibit 1* also includes a list of questions regarding the Study that may reveal additional specific elements of the plan useful for program design and planning, as well as spur additional LUMA comments and recommendations that could be useful inputs for future iterations of this study.

8. Additionally, LUMA reiterates its requests in its October 7th and October 10th Motions for the Energy Bureau to establish an interactive process between the Study consultants and stakeholders that ensures stakeholder questions are addressed on the record.

9. LUMA looks forward to continued discussions and engagement with the Energy Bureau, its consultants, and stakeholders regarding the Study and the potential pathways for incorporating its findings in future planning processes.

WHEREFORE, LUMA respectfully requests that the Energy Bureau **take notice** of the aforementioned; **accept** LUMA's comments to the Market Baseline and Potential Study in *Exhibit 1* herein; and establish an interactive process for LUMA and other stakeholders to discuss their questions and comments about the Study, including LUMA's questions in *Exhibit 1*.

RESPECTFULLY SUBMITTED.

In San Juan, Puerto Rico, this 7th day of November, 2025.

We hereby certify that we filed this Motion using the electronic filing system of this Energy Bureau and that we will send an electronic copy of this Motion to the Independent Office for Consumer Protection at nzayas@gmlex.net; mvalle@gmlex.net; rcruzfranqui@gmlex.net; hrivera@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.

DLA Piper (Puerto Rico) LLC
500 Calle de la Tanca, Suite 401
San Juan, PR 00901-1969
Tel. 787-945-9147 / 9109
Fax 939-697-6141 / 6190

/s/ Laura T. Rozas
Laura T. Rozas
RUA Núm. 10,398
laura.rozas@us.dlapiper.com

Exhibit 1

LUMA Comments:

Puerto Rico Energy Efficiency Market Baseline and Potential Study

November 7, 2025

NEPR-MI-2022-0001

Contents

List of Acronyms

Acronym	Definition
AMI	Advanced Metering Infrastructure
CBECs	Commercial Building Energy Consumption Survey
DR	Demand Response
EE	Energy Efficiency
EECBGP	Energy Efficiency Community Block Grant Program
HER	Home Energy Reports
IECC	International Energy Conservation Code
MECS	Manufacturing Energy Consumption Survey
PNNL	Pacific Northwest National Laboratory
PREB	Puerto Rico Energy Bureau
PREPA	Puerto Rico Electric Power Authority
RECS	Residential Energy Consumption Survey
SEP	State Energy Program
TRMs	Technical Reference Manuals
TYP	Three Year Plan
WAP	Weatherization Assistance Program

LUMA Comments: Puerto Rico Energy Efficiency Market Baseline and Potential Study

1. Introduction

LUMA thanks the Puerto Rico Energy Bureau (PREB) and its consultant on the completion of the Market Baseline and Potential Study (the "Study"), and credits the PREB for undertaking this important work in support of advancing Puerto Rico's energy efficiency planning.

LUMA is currently reviewing the Study and considering its impact while in the process of updating its Three-Year Plan (TYP). This work entails reflecting on insights and findings from the Study, particularly those related to potential energy efficiency (EE) measures and estimated impacts.

The purpose of LUMA's comments to the Study is to highlight key issues found and provide recommendations to the Energy Bureau on how to address them to better inform regulatory goals and EE program planning.

Following the comments section, LUMA has included a list of questions for which it welcomes insight and the opportunity for further discussion with the PREB consultants.

LUMA looks forward to continued discussions and engagement with the Energy Bureau, its consultants, and stakeholders regarding the Study and the potential pathways for incorporating its findings in future planning processes.

2. Market Baseline Results

Relevant Section

Executive Summary (p. i–x); Section 3 – Market Baseline Results (p. 23–42)

Comments and Rationale

As acknowledged by the Study, lack of availability of primary data has resulted in important limitations for developing truly local baseline energy use and load profiles for key customers segments.

The residential sample size is relatively small. It appears there may have been a statistically significant sample for non-low-income single family homes, but that could not be confirmed with the information provided in the Study. Sampling seems limited for key segments such as low-income and multifamily households. Moreover, the commercial sector sample focused on a limited number of building types, but the Study was not clear on whether the sample sizes for these building types were statistically significant. Thus, LUMA requests that Energy Bureau's consultants provide the statistical significance and confidence interval of the samples by building type, and by geography for residential sector.

The Study applies well-established modeling techniques and leverages secondary datasets that are widely used in market baseline studies across North America – specifically the Residential Energy Consumption Survey (RECS), Manufacturing Energy Consumption Survey (MECS) and Commercial Building Energy Consumption Survey (CBECs) – to calibrate and fill gaps in primary data. However, there are two key concerns with the use of this secondary data in Puerto Rico.

First and foremost, the overall value of these datasets for Puerto Rico's baseline analysis is limited since those datasets incorporate sampling from all fifty-states but exclude territories such as Puerto Rico. Second, dominant use of secondary data is more appropriate for jurisdictions with weaker or limited EE regulations. In those jurisdictions, costs of primary data capture outweigh the benefits and use of that data. However, that is not the case in Puerto Rico as Puerto Rico benefits from the existence of robust EE regulations and is already executing on pilots driven by this framework. Moreover, the lack of strong localized primary data also represents a barrier to robust energy efficiency planning. Unfortunately, with the dependence on secondary data, the current Study falls short of achieving that objective.

Recommendations

LUMA has the following recommendations to strengthen market baseline analysis in Puerto Rico in the future:

- Increase funding for future iterations of the Study as needed to ensure the level of primary data collection required to produce robust localized results to properly support targeting setting for Puerto Rico's robust EE regulations and end-use characterizations that will be used to inform savings measure characterizations for estimating potential, Technical Reference Manuals (TRMs) and program design.

- Work with the U.S. Department of Energy to incorporate Puerto Rico sampling for RECS, MECS and CBECS in the future. These studies are revised every four years. The CBECS sampling is scheduled to begin in 2025 so there is a window of opportunity in the next few months to engage.
- Create a collaborative process to engage a larger number of key stakeholders like LUMA, DDEC, trade allies, and others early and throughout in the study process to help support local data and information collection and guide development of study assumptions.

3. Government Buildings

Relevant Section:

Section 4.1.1 (pp. 43–44); Section 7.0 (p. 86)

Comment and Rationale

The Study outlines the separate legislative requirements governing energy efficiency in public buildings, and the role of the Energy Bureau in setting targets for energy efficiency in public buildings. The Regulation for Energy Efficiency also outlines that energy efficiency in government buildings is one of the five contributing entities, separate from Puerto Rico Electric Power Authority (PREPA)-run or PREPA-facilitated energy efficiency programs, responsible for contributing to the legislative target of reducing energy consumption by 30% by 2040.

LUMA recognizes the challenges posed by limited data on compliance and performance in this sector. This includes the difficulties faced in obtaining the reports required under Act 57-2014, Chapter IV(g) – Compliance Oversight, which are intended to document progress toward energy reduction requirements for government entities. The absence of these reports contributes to uncertainty in estimating energy efficiency potential and highlights the need for improved transparency and accountability mechanisms.

Likewise, it is important to recognize the underlying policy rationale behind legislative initiatives that promote energy efficiency in public buildings—both in Puerto Rico and in many other jurisdictions. These initiatives exist precisely because additional drivers such as dedicated funding, monitoring, and enforcement are required to motivate government building investments in EE.

LUMA remains committed to providing support where appropriate; however, the responsibility for implementing energy efficiency measures in government buildings lies with the public building owners.

Recommendations

LUMA has the following recommendations with respect to EE savings potential in government buildings:

- The Study should be revised to include a separate analysis on energy efficiency in government buildings consistent with legislation, regulation and the treatment of other contributing entities in the Study. The results of this analysis should inform EE regulatory goals for government buildings.

4. Building Energy Codes

Relevant Section:

Section 4.1.2 – Building Energy Codes (p. 44–48)

Comment and Rationale

The Study assumes immediate adoption of International Energy Conservation Code (IECC) 2024 by July 2025, followed by triennial updates. However, the current code cycle (lasting 3 years) only began in late 2024, thus, new codes may not be officially adopted until the start of 2028 (at the earliest). The result is that energy savings from code adoption could be overestimated if IECC 2024 is in fact adopted in this next code cycle, and it offers energy savings opportunities above those of the 2018 Puerto Rico Energy Conservation Code.

Furthermore, the Study noted the challenge in accessing local compliance data. This highlights a gap that has impacts on the accuracy and completeness of the study's findings. Notably, the Study uses Pacific Northwest National Laboratory (PNNL) default values for code compliance – assuming code compliance in Puerto Rico is 80% based on significant recent FEMA-funded investments in supporting code compliance. However, the assumption was not calibrated based on the progress and results of those investments. Thus, the assumption does not reflect local data.

Recommendations

LUMA has the following recommendations to ensure more robust EE savings potential estimates from building energy codes in the future:

- Replace IECC 2024 with 2018 Puerto Rico Energy Conservation Code as a basis for estimating energy savings potential through 2028.
- Include an investigation of code compliance —within the scope of the next iteration of the potential study— to ensure the level of primary data collection and analysis required to produce robust, localized results.
- Evaluate current code development documentation, conduct interviews to see whether useful data and analysis were developed to estimate local code impact, including the impact of local amendments to the IECC code. This data and analysis may also provide valuable input for future market baseline energy modeling.

5. Appliance Standards

Relevant Section:

Section 4.1.3 – Appliance Standards (p. 49–52); Section 7 (p. 86)

Comment and Rationale

The Study shows how important minimum appliance and equipment energy performance standards are for achieving energy efficiency goals in Puerto Rico and LUMA agrees with the author's recommendations that a localized tracking mechanism would support the monitoring of sales and saturation of compliant products. Beyond supporting refined compliance assumptions for future iterations of the market potential study, this tracking mechanism could produce data and insights that would be incredibly helpful for program initiative planning.

LUMA understands that no framework for enforcing or monitoring compliance with energy efficient appliance standards is in place today. As a result, achievable energy efficiency from standards, in the near term, is limited.

Likewise, LUMA believes the Study missed a critical opportunity to highlight the significant longer-term contribution that energy efficiency standards could make toward long-term energy goals. This could provide an analytical foundation for the Energy Bureau and other local authorities to more fully explore the development and implementation of commonwealth standards.

LUMA also notes that new Federal Appliance Standards beyond 2030 may contribute additional savings towards the target. This suggests that the contributions from appliance standards may be higher than projected in the Study.

Recommendations

LUMA has the following recommendations to strengthen appliance standards analysis for future iterations of the Study:

- To improve study compliance assumptions and overall outcomes, work with authorities such as the U.S. Department of Energy, U.S. Customs, the Puerto Rico Department of Consumer Affairs, and other relevant local agencies to establish a localized appliance and equipment tracking mechanism to monitor sales, imports, and market saturation of products that meet minimum energy performance standards.
- Develop an analysis of the achievable economic potential from appliance and equipment energy efficiency standards using specifications for product categories from jurisdictions with state-level standards as key inputs.

6. Energy Efficiency in Non-Governmental Buildings Supported with Federal or Commonwealth Funding

Relevant Section

Section 4.0 (pp. 43–44); Section 4.1 (pp. 44–45) — Energy Efficiency in Non-Governmental Buildings Supported with Federal or Commonwealth Funding

Comment and Rationale

The Study highlights the sparsity of publicly available data regarding federally funded programs including the State Energy Program (SEP), the Energy Efficiency Community Block Grant Program (EECBG), and the Weatherization Assistance Program (WAP). However, increased efforts to secure data from relevant authorities would provide a wealth of data that supports not only analysis of energy efficiency potential but improved market baseline, particularly for low-income single family and multifamily residential segments. For instance, the local WAP has conducted thousands of audits for low-income single-family homes that would provide a robust sample of primary data to support market baseline. The audit recommendations and implemented measures can support market potential analysis.

Recommendations

LUMA has the following recommendations to strengthen analysis of these contributing entities for future iterations of the study:

- Increase engagement, as needed, to work with relevant federal agencies and local authorities to improve data collection required to produce robust localized results.
- Engage contributing entities as early as possible and more deeply in the study development process to ensure the results fully reflect the insights and data available from the contributing entities.

7. Low-Income Potential

Relevant Section

Executive Summary (p. i–x); Section 3 – Market Baseline Results (p. 23–42)

Comments and Rationale

Given that Low Income residential customers are projected to account for only about 5% of total energy savings in FY28 under the Program scenario, and their incentives are double those of non-Low-Income customers, LUMA believes that Low Income spending would not exceed 10-15% of the total budget in

any scenario. However, per the EE Regulation LUMA must spend 25% of annual EE budget on low-income programs.

Recommendation

LUMA recommends a discussion with the Study consultants to confirm Low Income residential potential and estimated spending, followed by a decision by the Energy Bureau to confirm or revise the requirement in EE Regulations to allocate 25% of the EE budget to low-income residential energy efficiency potential.

8. Top Residential Measures

Relevant Section

Section 5.2.5 – Potential Analysis (p. 78 -79)

Comments and Rationale

The Study provides an examination of large variety of energy-savings measures. Many of these measures are currently offered through LUMA programs or have been considered by LUMA for the first TYP plan.

For example, the study highlights the potential savings from Home Energy Reports (HERs). LUMA intends to pilot HERS during the first TYP period to align with the island-wide rollout of Advanced Metering Infrastructure (AMI). While LUMA recognizes the important role of behavioral energy efficiency measures in achieving energy savings, the savings that such measures will provide in Puerto Rico is uncertain. As such, LUMA has serious concerns about the significant level of HER savings attributed to the first TYP period in the Study. As HERs are a new measure in Puerto Rico, their success will depend on local adaptation of behavioral science approaches, message design, and best practices, as well as robust messaging testing to evaluate their effectiveness. Until HERS savings potential can be accurately determined through actual implementation, LUMA believes that HERS savings potential outlined in the Study – particularly in the near term – is overestimated. The first TYP will focus on piloting HERS and generating local data and insights to inform more accurate longer-term estimation of HERS savings potential and support broader-based implementation in the second TYP period.

The Study also highlights additional top residential measures for consideration in LUMA programs such as smart thermostats and windows. For these measures, LUMA will need to first engage key trade allies such as manufacturers and installers to assess current market uptake and identify the key market barriers that LUMA program design would need to address. For instance, LUMA would need to evaluate the incremental value of smart thermostat measure in the near-term in a market that is dominated by mini-split ductless ACs, all of which come with a proprietary remote thermostat. These thermostats offer very different functionality than the smart thermostats targeted by many EE programs on the mainland. Additionally, air conditioners usage in Puerto Rico is very different from the mainland, which would further reduce the savings from smart thermostats.

LUMA is particularly concerned about the cost-effectiveness of window replacement measures. Any measures that affect air flow and ventilation can pose serious safety and health risks in homes with structural or code compliance issues. To mitigate these risks, confirmation of code compliance and structural, ventilation, and moisture assessments may need to be conducted and addressed before or during installation. Installation quality must be ensured, and post-installation air quality monitoring may also be required, all of which could significantly impact measure cost-effectiveness.

Together, HERs, smart thermostats, and windows account for approximately 79% of residential programmatic potential and 39% of total programmatic potential energy savings in FY2028 according to the Study results. Given the critical need for further evaluation and research to properly assess the local market feasibility and potential savings impact of these measures during the first TYP period, LUMA believes the Study's near-term programmatic potential is overly ambitious and unlikely to be achievable.

Recommendations

LUMA has the following recommendations for these measures to more accurately inform potential:

- Eliminate or significantly reduce energy savings potential from HERs, Smart Thermostats and Windows from near-term potential estimates.
- For future iterations, engage with an expanded list of stakeholders early in the study development process to inform measure selection.
- For future iterations, increase funding as needed to ensure the level of primary data collection required to produce robust localized results to inform baseline end-use characterizations and measure characterizations for estimating potential, TRMs and program design. The funding can be used for expanded sampling, market validation studies or field validation pilots.

9. Top Commercial Measure: Occupancy and Advanced Controls

Relevant Section

Section 3.2.2.3 Lighting (p. 24-27); Section 5.2.5 – Top Saving Measures (p. 80 - 81)

Comments and Rationale

The measure characterization used to estimate potential for occupancy sensors and advanced controls do not seem to take into account market baseline end use characterization results for lighting end-use in the commercial sectors. This inconsistency skews savings potential from lighting controls.

As acknowledged by the Study and discussed above, the lack of availability of primary data has resulted in important limitations for developing robust end use characterization for commercial lighting. However, the study should be consistent in application of baseline results to inform estimate of potential.

Appendix E assumes savings of 27.5% for occupancy controls and 38% for advanced controls. While this results in an estimated 12% impact on overall commercial savings, the actual potential would be much lower if in fact baseline results showing high penetration of efficient lighting technologies are accurate.

Recommendations

LUMA has the following recommendations for commercial lighting to more accurately inform potential:

- Revise measure characterization for lighting controls using the results of the market baseline study.
- For future iterations, increase funding as needed to ensure the level of primary data collection required to produce robust localized results to inform baseline end-use characterizations and measure characterizations for estimating potential, TRMs and program design. The funding can be used for expanded sampling, market validation studies or field validation pilots.

10. Overarching Comments and Recommendations

LUMA's comments throughout this document highlight key opportunities and recommendations for the Energy Bureau to improve primary data collection in both the near and longer term, ensuring that future iterations of the Market Baseline and Potential Study provide a stronger foundation for regulatory goals and better information for EE program planning.

As discussed, the programmatic energy savings potential identified in the Study is largely driven by measures such as HERs and windows, which are either unproven in the Puerto Rico market or do not adequately reflect local conditions that may reduce their feasibility and cost-effectiveness. This leads LUMA to conclude that the programmatic potential provided in the Study is overly ambitious and unlikely to be achievable. Additionally, and in the context of near-term effects, LUMA believes that the most important consideration for establishing programmatic targets is the practical ability of LUMA programs to scale. The Study authors echo this challenge in Section 6. Despite the limitations for target setting, the Study provides many useful findings and insights that LUMA is actively considering for the next draft of the TYP plan.

Moreover, because LUMA's first TYP runs through June 2028, the next TYP planning cycle should allow sufficient time for stakeholder feedback on the next TYP draft plan. Given this timing, the next iteration of the Market Baseline and Potential Study should be completed and available, ideally, at least 6 months before the next TYP is filed.

Recommendations:

- Ensure future Market Baseline and Potential Studies are completed early enough to inform the TYP and the TYP target-setting process. LUMA recommends the next study be finalized in a way that results are available six months before the beginning of the next TYP planning cycle.

- Allocate additional resources to enhance local data collection and analysis in future iterations of the Study to ensure the study provides a strong empirical foundation for target setting and program planning.
- Prioritize early and ongoing stakeholder engagement—beginning at the scoping stage and continues throughout assumption development and analysis—to build transparency, strengthen technical rigor, and increase early stakeholder buy-in.

Questions for Study Consultants

While these questions and their answers are not expected to resolve LUMA's main concerns regarding near-term potential and limited local data, they may reveal additional specific elements of the plan useful for program design and planning, as well as spur additional LUMA comments and recommendations that could be useful inputs for future iterations of this study.

General

- How will stakeholder review be incorporated into the final version of the Study?

Baseline Study Methods

- Was household size used in scaling residential results? If not, what was the rationale?
- Why was distributed generation (via net MWh calculation) accounted for in the industrial sector but not for residential and commercial sectors?
- What specific measures were taken to address potential non-response bias due to low completion rates in both the low-income and commercial surveys? How was the impact of self-report bias and small sample size in the residential sector mitigated? What is the estimated uncertainty in the data due to these factors?
- What were the criteria for selecting market actors for interviews, and how were the limited interviews factored into the baseline results for commercial sector?
- What validation steps were performed to ensure the accuracy of the scaling?
- What avoided costs were used for water savings?
- In Appendix B.2, why is modeled lighting energy use (kWh/ft²) for commercial/industrial aligns with non-LED assumptions, despite the market baseline results showing 70% LED penetration in commercial interiors?

Baseline Study Results

- What are the confidence intervals for residential model results by building type?
- What is the statistical significance of residential sampling by strata and geography?
- What is the statistical significance of commercial sampling by sampled building type?
- Can you provide the baseline results by building type similar to Appendix F for Potential Results?
- Can you provide the residential baseline results for average household energy use by the 4 building types and by geography?

- Can you provide the underlying data for the residential and commercial Sankey diagrams in a matrix format (segment on one axis and end-use on the other, with cells representing % of total sectoral load)?
- Can you please provide residential and commercial end-use load profiles as well as the peak demand impact data by end use?
- What is the actual baseline efficiency of mini splits, considering Appendix E.3 cites SEER2 14.3 while Appendix B.1 uses SEER 18, and 58% of homes already have units averaging SEER 19.5? Given this, what is the realistic future potential for savings and cost-effectiveness of mini splits as a measure in program design?

Codes, Standards, and Weatherization Assistance Program (WAP)

- How many homes are in the WAP results? Can you confirm the average per-household energy use assumption used in the Potential analysis?
- Were additional compliance scenarios considered or analyzed for code compliance and appliance standards?

Program Potential

- What are the $/kwh assumptions used for estimating program budgets and what is the basis for these assumptions?
- Was the potential for WAP programs subtracted from program potential?
- Can you share the complete list of assumptions and adjustment factors for each of the scenarios – economic, max, program achievable? For instance, in the description of economic potential, it is states that workforce issues (i.e. limited numbers of trained program contractors) were considered.
- Is the HERs measure assuming AMI-enablement? Are there variances in savings potential for HERS based on monthly meter reads using generic behavioral sciences and nudges vs. HERs leveraging AMI data with specific and tailored recommendations?
- Can you provide details on the methods, assumptions and results of the scenario analysis conducted on measure penetration rates and resource constraints for the retrofit market?
- Were insights from market baseline end-use characterizations used to modify TRM measure characterizations? If so, which ones? If not, why not?
- Please provide a list of all the measures that failed to meet the PR Test and their characteristics.