

Pacific Gas and Electric developed Responses to Recommendations (RTR) contained in the evaluation studies of the 2013-2015 Energy Efficiency Program Cycle and beyond. This Appendix contains the Responses to Recommendations in the report:

***RTR for the Site-Level Normalized Metered Energy Consumption (NMEC) Impact and Net-to-Gross Evaluation, Program Years 2020-2022*** (DNV, Calmac ID # CPU0377.01)

The RTR reports demonstrate PG&E's plans and activities to incorporate EM&V evaluation recommendations into programs to improve performance and operations, where applicable. PG&E's approach is consistent with the CPUC Decision (D.) 07-09-043<sup>1</sup> and the Energy Division-Investor Owned Utility Energy Efficiency Evaluation, Measurement and Verification (EM&V) Plan<sup>2</sup> for 2013 and beyond.

Individual RTR reports consist of a spreadsheet for each evaluation study. Recommendations were copied verbatim from each evaluation's "Recommendations" section.<sup>3</sup> In cases where reports do not contain a section for recommendations, the PG&E attempted to identify recommendations contained within the evaluation. Responses to the recommendations were made on a statewide basis when possible, and when that was not appropriate (e.g., due to utility-specific recommendations), the PG&E's responded individually and clearly indicated the authorship of the response.

The Joint IOUs are proud of this opportunity to publicly demonstrate how programs are taking advantage of evaluation recommendations, while providing transparency to stakeholders on the "positive feedback loop" between program design, implementation, and evaluation. This feedback loop can also provide guidance to the evaluation community on the types and structure of recommendations that are most relevant and helpful to program managers. PG&E believes this feedback will help improve both programs and future evaluation reports.

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<sup>1</sup> Attachment 7, page 4, "Within 60 days of public release, program administrators will respond in writing to the final report findings and recommendations indicating what action, if any, will be taken as a result of study findings as they relate to potential changes to the programs. Energy Division can choose to extend the 60 day limit if the administrator presents a compelling case that more time is needed and the delay will not cause any problems in the implementation schedule, and may shorten the time on a case-by-case basis if necessary to avoid delays in the schedule."

<sup>2</sup> Page 336, "Within 60 days of public release of a final report, the program administrators will respond in writing to the final report findings and recommendations indicating what action, if any, will be taken as a result of study findings. The IOU responses will be posted on the public document website." The Plan is available at <http://www.energydataweb.com/cpuc>.

<sup>3</sup> Recommendations may have also been made to the CPUC, the CEC, and evaluators. Responses to these recommendations will be made by Energy Division at a later time and posted separately.

**Response to Recommendations (RTR) in Impact, Process, and Market Assessment Studies**

**Study Title:** *Site-Level Normalized Metered Energy Consumption (NMEC) Impact and Net-to-Gross Evaluation, Program Years 2020-2022*  
**Program(s):** Site-Level NMEC  
**Author:** DNV  
**Calmac ID:** CPU0377.01  
**ED WO:**  
**Link to Report:** [Site-level NMEC Evaluation Final Report PY2020-2022.pdf \(calmac.org\)](#)

MANAGEMENT APPROVAL AFTER REVIEWING ALL IOU RESPONSES		
Name		Date
PG&E	Paolo Pecora, Manager	10/1/2024

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				If incorrect, please indicate and redirect in notes.	Choose: Accepted, Rejected, or Other	Examples: Describe specific program change, give reason for rejection, or indicate that it's under further review.
<b>Gross and net savings findings and recommendations</b>						
1	46	<p><b>Site-level NMEC gross realization rates compared positively to other programs in CIAC.</b></p> <p>Overall, both the site-level NMEC GRR and the DRR were significantly higher than what is typically seen for similar customers in other CIAC programs. For electric savings (kWh), site-level NMEC achieve a GRR of 71.5% that would have risen to 81.8% (DRR) if the savings claims had been made correctly by the PAs. Similarly, the program achieved lifecycle kWh savings GRR and DRR of 67.1% and 87.1%. The PY2020-2021 CIAC programs electric first-year GRR was 59%, while the lifecycle GRR was 48%.74 Gas and kW results follow a similar pattern.</p> <p><b>The net-to-gross interviews found substantial program influence on project scope and timing, but these factors account for only part of the current NTGR methodology.</b></p> <p><b>NTGR methodology:</b> The current methodology may not be well suited for measuring NMEC program influence. The well-established NTG methodology that has been used for many years for custom evaluations includes three equally weighted program attribution indicators. Two are based on rating program and non-program influences while only the third focuses on project scope and time. However, project timing and project scope are expected to be particularly important to NMEC program influence because of the objective of unlocking the stranded savings in buildings that are otherwise able to maintain and repair below-code systems. Aligning the methodology with this intent would offer a better representation of the programs' net impact.</p> <p><b>Project scope:</b> Respondents indicated that without the programs, they would likely have implemented a more limited project scope. When asked to rate the likelihood of completing the exact same project without the program on a ten-</p>	<p>The CPUC should revisit the current NTGR methodology instrument and assess if the instrument and algorithm is in line with the actual NMEC program design and delivery. Opportunities for improvement include more timely NTG surveys, new questions to determine whether projects address stranded potential and to consider re-weighting current NTG algorithms to give more weight to project timing and scope.</p>	All	Accepted	<p>PG&amp;E agrees that the CPUC should revisit the current NTGR methodology instrument and assess if the instrument and algorithm are in line with the actual NMEC program design and delivery. We would like to offer help and cooperation in reevaluating the NTGR methodology to customize it to SLNMEC. We recommend factoring in the SLNMEC project timing and the risk associated with the meter-based nature of the projects when evaluating the program influence. By taking part in an EE project with no guaranteed incentive amount even after the installation of the measures as proposed, the customers are willing to take the risk that they would not have taken if the program did not have substantial technical influence. PG&amp;E also encourages CPUC to consider the same reevaluation of NTGR methodology for population NMEC programs.</p>

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		<p>point scale, 53% of respondents gave a rating of 3 or less, indicating that it was unlikely that they would have completed the same scope without the program. For example, one respondent said, “We wouldn’t have known about [the measures]. Their analysis helped us see what the change would be and without someone showing us that change we wouldn’t have done it.”</p> <p><b>Project timing:</b> Additionally, respondents indicated that without the program they would have implemented their projects multiple years later than they actually did or never have implemented them at all. When asked how much later they would have implemented their projects without the program, 33% of respondents, representing 23% of sites, said they would have never implemented the project (see Table 5-1). Another 40% of respondents, representing 64% of sites, said they would have implemented their projects two or three years later than they did. Only 20% of respondents, representing 11% of sites said they would have done that project at the same time or earlier.</p>				
<b>Documentation findings and recommendations</b>						
2	47	<p><b>Incorrectly entered savings claims in the tracking database system were the largest source of savings discrepancies.</b></p> <p>The NMEC savings claim process is more complicated than the typical custom claim process to accommodate the final savings estimate calculated after performance period over a year after implementation. Engineering-based, forecasted savings are claimed the year the project is implemented. A year later, after the performance period, the meter-based normalized savings for the project are calculated. A true-up claim that represents the difference between the two values is entered into tracking the following year. The two claims should sum to the final meter-based savings estimate. The novel claims process for NMEC led to some reporting inaccuracies.</p> <p><b>Double claimed projects:</b> Thirteen projects, three of which were sampled in the impact evaluation, effectively double claimed savings by reporting savings incorrectly. The initial claim used the engineering-based forecasted savings (the correct approach), and the true-up claim used the full meter-based normalized savings (incorrect approach). Summing the two lines should adjust the initial claim to the final meter-based result. With two full savings claims entered, rather than a delta, summing substantially over-claimed final savings.</p> <p><b>Double true-up:</b> One project was trued-up twice, resulting in over-adjusting the initial claimed savings. In this case, the post-performance true-up was applied correctly after the performance period, but then repeated a second time the following year. This also resulted in too large of a savings claim.</p> <p><b>Projects claimed but not installed:</b> Two gas projects included in the evaluation were claimed but the PA reported that they</p>	<p>2A. Existing NMEC reporting guidance is clear that initial claims should be made in the year of installation and trued-up the following year with a positive or negative value that, when summed with the initial claim, equals the final weather-normalized estimate of savings. All claims should follow this structure.</p> <p>2B. The PAs should develop data accuracy checks that assure total final claimed savings (the sum of preliminary and trued-up claims) are consistent with final weather-normalized savings estimates.</p> <p>2C. All NMEC projects must be trued up during the first quarter of the second year after installation. PAs should re-view all initial site-level NMEC claims to ensure they are trued-up on schedule.</p>	All	Partially Accepted	<p>2A. PG&amp;E agrees with reporting guidance of reporting initial claims in the same year of installation and trued-up in the following year after installation. PG&amp;E has made efforts to complete initial estimates by instituting end-of-year project deadlines in order to comply with reporting guidance.</p> <p>2B. Data accuracy checks: PG&amp;E agrees that data accuracy between the total final claimed savings and final weather normalized savings estimates are necessary to ensure accurate reporting.</p> <p>2C. Projects that are installed toward the end of a calendar year may result in true-up claims being reported in the first quarter of the year following M&amp;V due to time it takes for a Project Developer to complete M&amp;V analysis and for the PA to complete the technical review. Occassionally, projects may not always be trued-up during the first quarter of the second year after installation due to delays in receiving and reviewing project M&amp;V and close-out documents.</p>

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		<p>were never installed or trued-up. These projects have been zeroed out through the evaluation.</p> <p><b>Inaccurate savings claimed:</b> One steam project claimed therms savings in the tracking database that were more than double the savings reported in the project documentation. The reason for the over-claimed savings is unknown. This resulted in a large savings correction.</p>				
3	48	<p><b>Project documentation was varied and inconsistent, which made it difficult to identify the final project characteristics and results as well as the reasoning behind key project decisions.</b></p> <p>There was substantial variation in the type and thoroughness of the project documentation provided. Some projects had relatively clear documentation that explained what had been planned for the project, what was done for the project, and why anything changed. Other documentation was very difficult to follow and did not provide any reasoning for why substantial changes were made during implementation or the performance period modeling. This lack of clear documentation required additional data requests, increased review time during the evaluation, and increased the likelihood of misunderstanding the reasoning behind some project decisions.</p> <p>Most projects reviewed during the evaluation had insufficient documentation to explain why measure-level Measure application types (MATs)76 and effective useful life (EUL), were selected. Unlike an NMEC project’s savings, which are meter-based, the measures’ EUL, which indicates how long the first-year savings will persist, must be based on measure life studies and other documentation as with non-meter-based custom projects. As a result, the EUL needs to be carefully reviewed by evaluators as the resulting lifetime savings are important for cost-effectiveness and total system benefit calculations. The lack of clear MAT and EUL documentation for many projects made this essential part of the evaluation more inefficient, time-consuming and, potentially, inaccurate.</p>	<p>3A. The PAs should provide an explanation of why each measure-level MAT was assigned. At a minimum, the explanation should specify the type of equipment in-volved, such as lighting, heating, ventilation, air conditioning, refrigeration, or water heating and whether the measure involves installing equipment in a new building or new area of an existing building or in an existing building. The explanation should also indicate if the measure involves: a) replacing existing equipment with new energy efficient equipment, or b) adding new equipment to existing equipment, or c) repairing or re-furbishing existing equipment, or d) changing settings in an existing control system. This clear explanation will help the evaluation team establish the appropriate MAT for each measure.</p> <p>3B. Measure-life documentation should include a description of the measure, EUL of the measure and it’s re-spective DEER EUL ID to explain why particular measure lives are assigned from DEER.</p>	All	Accepted	<p>3A. MATs and associated EULs are checked by PG&amp;E's technical review team The Technical Review uses an itemized checklist to ensure that MAT is correct and the associated EUL has a source reference. PG&amp;E notes that checks should be added to ensure that the weighted EUL in the project documentation needs to match the reported weighted EUL. PG&amp;E's practice had been to designate measures that replace existing equipment with new energy efficient equipment as AR as it has no bearing on the EUL within the current NMEC 2.0 ruleset. Based on CPUC feedback via ex-ante CPR dispositions to provide additional POE as described in E-5115 for project influence and in preparation for changes to the NMEC rulebook, PG&amp;E has requested project developers to include documentation to support AR, otherwise use NR for equipment replacement measures.</p> <p>3B. PG&amp;E will continue to make every effort to document measure life accurately per the NMEC Rulebook 2.0.</p>
4	48	<p><b>Regression-based modeling is the core of NMEC methods, and projects do not consistently provide transparent, well-documented models following standard practices.</b></p> <p>We identified multiple types of issues with the way regression models were specified or structured. These included using novel and inappropriate variable combinations, using different model specifications for the baseline and performance models, models not well aligned with the onsite project activities, and unexplained changes in model structure. This is not unexpected for a programmatic approach still under development. However, for NMEC to evolve into a program approach that requires a light-touch evaluation, a greater level of consistency is required.</p> <p>In addition, the pandemic put stress on basic site-level NMEC methods. Site-level NMEC methods measure change in consumption between two periods and define the difference as</p>	<p>4A. Continued communication between the CPUC and PAs will guide the basic expectations for acceptable modeling practices and essential documentation to reduce uncertainty and project delays. This may be accomplished through rulebook updates, separate NMEC PFS/M&amp;V template development, NMEC PCG discussions, and additional guidance documentation.</p> <p>4B. Wherever possible, PAs should follow standard model structures (e.g. linear changepoint models or LBNL Time of week and temperature models) and provide engineering-based explanations for deviations to simplify the re-view process.</p> <p>4C. The PAs should ensure that baseline model specification is set before project installation and applied consistently in the post period to comply with the NMEC Rulebook.</p>	All	Accepted	<p>4A. PG&amp;E agrees that continued communication is key to ensure reduce uncertainty and project delays and we look forward to continuing our participation in statewide efforts such as the NMEC PCG and CalTF Site-level Working Group. PG&amp;E encourages the CPUC to consider feedback from all stakeholders on these crucial NMEC issues.</p> <p>4B. PG&amp;E agrees and will continue to follow standard model structures and provide engineering-based explanations for deviations to simplify the review process.</p> <p>4C. PG&amp;E will continue to ensure that baseline model specification is set before project installation and applied consistently in the post period whenever possible but notes that there are occasionally valid reasons to update a baseline model such as installation delays exceeding 18 months, or changes in occupancy requiring an additional independent variable. We will make all efforts to document any necessary baseline changes appropriately if and when they occur.</p>

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		savings. COVID had substantial, variable impacts on energy consumption that were difficult to separate from program-motivated changes. Many of the COVID-related challenges may become moot under typical conditions. For example, occupancy measures used to address COVID-related interruptions were novel additions to models and may prove unnecessary in the future when occupancy changes are limited.				
5	49	<p><b>The maintenance plans provided varied substantially in terms of detail and completeness.</b></p> <p>Behavioral, Retro-commissioning, and Operational (BRO) measures were noted as important options for NMEC projects in early policy guidance. To extend the measure life of BRO measures to three years, the NMEC Rulebook states that “participant or project owners must commit to a repair and maintenance plan for a minimum of three years via a signed customer agreement under which the repair and maintenance activities will continue.” Eight of the projects reviewed as part of the impact evaluation included BRO80 measures. The Rulebook states that maintenance plans should include “continuous feedback,” “Detailed documentation,” “a detailed data tracking plan,” and should include training.<sup>81</sup> However, the maintenance plans developed for the evaluated NMEC projects varied widely in their adherence to these guidelines. The two refrigerated warehouse projects did include detailed plans with clear data tracking plans but did not provide evidence that the plans were being followed. The large tech projects only provided an email from the customer stating, “we plan to have this program extended long term – there is no end [in] sight so keeping up with a 3+ year program is exactly what we want to do.” Without the actual maintenance plan, we had no inkling whether the maintenance and repair measures were maintained and providing savings.</p>	<p>5A. PAs should provide maintenance plans that meet NMEC Rulebook requirements so that the BRO EUL can remain at three years.</p> <p>5B. The CPUC should consider amending BRO EUL rules so that BRO measures without maintenance plans receive a one-year EUL, capped at verified savings of the 12-month performance period.</p> <p>5C. Energy Division should facilitate the development of a maintenance plan template that is in-line with BRO measure program maintenance plan requirements.</p>	All	Accepted	<p>5A. PG&amp;E agrees with and will continue to comply with recommendations to provide maintenance plans to allow BRO EULs to remain at three years. PG&amp;E also agrees that it is reasonable to reduce EULs to one year if no maintenance plan is provided.</p> <p>5B. PG&amp;E has made great efforts to develop and expand on Site-level maintenance plans and has made significant progress in this effort.</p> <p>5C. PG&amp;E looks forward to contributing to any stakeholder effort to facilitate the development of a maintenance plan template.</p>
6	50	<p><b>PAs did not address multiple key issues identified through Energy Division’s Project Review process.</b></p> <p>Site-specific NMEC projects go through a Project Review that is similar to the custom Project Review (CPR) process. However, a stark difference between CPR and NMEC Project Reviews is that the NMEC Project Review is advisory only, and not binding. The PA may choose to continue with project implementation regardless of the recommendations made following the NMEC Project Review process. The NMEC Project Review “does not restrict or delay project development or constitute an approval of related energy savings claims.”<sup>82</sup> Although the NMEC Project Reviews are advisory, the NMEC Rulebook<sup>83</sup> states that these reviews should “be referenced during EM&amp;V84 activities to assess how Commission feedback was incorporated.”</p> <p>Four out of the 20 projects included in the impact evaluation had been selected for Project Review prior to project installation. Of the four projects, two did not address key issues</p>	<p>6A. The PAs should address issues identified through the NMEC Project Review process and should document the reasons for making changes within the final savings report to improve project quality.</p> <p>6B. CPUC should consider making NMEC Project Reviews more than advisory so that issues are more likely to be addressed during the project implementation which will help PAs achieve more accurate savings claims.</p>	All	Partially accepted	<p>6A. PG&amp;E agrees that PAs should address issues identified through the NMEC Project Review process and should document the reasons for making changes within the final savings report to improve project quality. PG&amp;E will continue to diligently incorporate disposition and early opinion recommendations when appropriate and supported by existing regulations and/or NMEC rules.</p> <p>6B. PG&amp;E disagrees with the recommendation to make NMEC Project Reviews “more than advisory,” the meaning of which is not clearly defined in the evaluation report. DNV notes in comments in the final report (pp. F-10) that “more than advisory does not intend to halt project implementation, but rather to ensure that the disposition recommendations are addressed as much as possible without withholding the project.” However, PG&amp;E’s experience with disposition recommendations in SLNMEC indicates that dispositions being “more than advisory” would significantly impact project timing and throughput. PG&amp;E received numerous dispositions during PY 2020-22 that stated that NMEC projects must adhere to certain requirements without citing applicable rules and regulations (e.g. projects must achieve Industry Standard Practice rather than Title 24 Code in contradiction to AB802 and the NMEC Rulebook 2.0, a stance that the CPR team later retracted). Following those erroneous dispositions would have significantly delayed or terminated projects despite them following existing NMEC requirements.</p> <p>While we have seen improvement in recent months in the overall NMEC expertise of SLNMEC reviewers, there is still an overarching trend within the CPR process of changes in policy interpretations results in PG&amp;E and CPR team not sharing a common understanding of policies and rules that have had</p>

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		<p>identified during the Project Review. Additionally, one project did not follow the requested Early Opinion.85 Issues that were not addressed despite being highlighted in Project Review recommendations include an overlooked cogeneration system and mis-specified EULs. The lack of attention to these highlighted issues led to artificially increased and extended claimed savings. The overlooked cogeneration system reduced savings by 13% at what was the largest kWh saving project in the evaluation sample. The project for which an Early Opinion was requested installed a gas line in order to switch from electric to gas heating. The final savings ignored the increased gas use (from zero) and did not follow the Early Opinion guidance. With the inclusion of the gas consumption, expected savings did not occur and the project increased the overall consumption of energy at the site.</p>				<p>significant negative impacts on Custom projects with compulsory dispositions, and spurred a major effort by CPUC and CalTF to address and improve the Custom Project Review Process. PG&amp;E does not see a benefit in putting relatively nascent NMEC programs, that are already higher risk to implementers, through a process that is already not functioning adequately for stakeholders. Furthermore, the draft NMEC Rulebook 2.1 adds ISP and NR requirements, two issues that have historically been subject to Reviewer discretion and seen many changes in interpretation over the years with negative effects on Custom project volumes and timelines. It stands to reason that adding a high level of uncertainty and reviewer discretion to SLNMEC would further exacerbate delays and disagreements within the CPR process to the detriment of projects, as we have seen happen in Custom.</p> <p>Finally, a change to “more than advisory” would also be counter to the recommendations of surveyed program participants to streamline programs and reducing administrative burden, and would likely negatively impact high customer satisfaction rate amongst SLNMEC program participants.</p>
<b>Process findings and recommendations</b>						
7	51	<p><b>Participants indicated high levels of satisfaction with the program, driven by the programs’ technical support and incentives.</b></p> <p>When asked to rate program satisfaction on a scale of zero to 10, where zero is completely dissatisfied and 10 is completely satisfied, respondents gave an average rating of 8.1 which indicates a high level of satisfaction.</p> <p><b>Eighty percent of respondents, representing 94% of sites, were “promoters,” providing a rating of 8 or above.</b> In an open-ended question about the strengths of the program, respondents indicated that their satisfaction was driven by the technical support and incentives provided by the program. Three respondents elaborated on the value of technical support provided by the program, indicating that the embedded engineering and technical support and the data shared were particularly helpful.</p> <p><b>Only one respondent was a detractor, providing a rating of 3 or less.</b> This respondent indicated their dissatisfaction was driven by the administrative burden required for participation, inconsistent messaging about what qualifies for participation, and long delays throughout the project. At the time of the interview, they had not yet received their incentives, saying, “we’re waiting years to get the incentive.” This participant started their project before 2022.</p> <p><b>While nearly half of respondents had no suggestions for program improvements, those that did most frequently recommended streamlining the program and reducing administrative burden.</b></p> <p>Twenty percent of respondents, representing 34% of sites, suggested shortening the delays for CPR review approval (Table 5-3). One said, “when projects go in for submission there are long delays between when we submit to when its approved and therefore, we can’t implement it...Savings are sitting on the table while we’re waiting.” Twenty percent of respondents, representing 8% of sites, also suggested reducing</p>	<p>Improve alignment between program implementers, PA staff, and evaluators on program evaluation and qualification requirements. Increasing clarity on data requirements among all parties and streamlining the process of data sharing across parties can reduce duplicative work and confusion. Follow-on work led by ED can facilitate this process.</p>	All	Accepted	<p>PG&amp;E agrees and recognizes that challenges with data sharing and the impact on program evaluability has been noted in multiple evaluations for both site and population NMEC programs. We intend to support any follow-on efforts by CPUC to facilitate increased clarity on data requirements among all parties and streamlining the process of data sharing across parties.</p>

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		the admin burden. One said, “[Reduce] admin burden, paper-work, or duplication of effort. [We have] too many people doing the same thing, sending the same data to multiple people and repeated requests for information from the program.” Request for information could come from either implementer or PA and could reflect information needs of implementer, PA, project reviewers or evaluators.				
<b>Overarching NMEC findings and recommendations</b>						
8	52	<p><b>Site-level NMEC shows possibility to address “stranded potential” savings but is also being applied in a much wider range of projects.</b></p> <p>Our evaluation included multiple projects that may have addressed “stranded” savings, which is described in the March 2016 AB802 Technical Analysis<sup>86</sup> as follows.</p> <p>“Stranded potential exists because a subset of customers maintains certain types of equipment well beyond the equipment’s expected useful life. Long lived measures exist for two reasons:</p> <ol style="list-style-type: none"> <li>1. The equipment is repairable and customers have been repairing the equipment rather than replacing the equipment when it fails (examples include boilers and chillers). ...</li> <li>2. There is no catastrophic system failure that triggers the customer to repair or replace the entire system (examples include insulation and commercial lighting fixtures)”</li> </ol> <p>Stranded savings have the potential to offer dramatic savings where out-of-date or poorly commissioned systems that fit the above criteria would legitimately take advantage of NMEC’s existing conditions baseline. In contrast, there are other NMEC projects that appear to have chosen NMEC as a path to claim greater savings than would be available via alternative paths.</p> <p>During interviews with participating customers, multiple respondents indicated that they considered both Custom and NMEC offerings when making decisions on how to implement projects and chose the offering that made the most sense for them. They said that Custom offerings were typically chosen when the project scope included discrete measures with developed evaluation methods, and NMEC was chosen when the project contained a more holistic approach that covered multiple building systems, or where the project included behavioral, retro-commissioning and/or operational measures (“BROs”). This comparison indicates a consideration, and ultimate choice, of the NMEC approach for reasons that may not embrace the full purpose of measuring savings from the existing conditions baseline to access stranded potential.</p>	<p>Consider, as part of future studies,</p> <p>8A. Assessing the volume of stranded savings potential. The 2019 Energy Efficiency Potential and Goals Study by Navigant/Guidehouse identified below code energy efficiency potential as reflecting “additional claimable impacts allowed after the passing of AB802” and should represent the target population for NMEC pro-grams.</p> <p>8B. An exploration of PA and implementer efforts to identify and target “stranded potential” buildings for NMEC projects.</p>	All	Accepted	PG&E agrees that stranded savings potential should be addressed in future studies.
9	53	<b>NMEC intends to move savings risk away from the rate-payer to the PAs, implementers, and participants. While the PAs and implementers who engage in NMEC are aware of the risks, the PAs must manage the additional risk with participants carefully.</b>	To protect participants, the implementer should ensure that equipment is operational and meets the functional needs of the building and that the 12 months of pre-installation data is an actual representation of baseline energy usage with functional equipment. A simple functional check by the implementer on the existing equipment during the investigation	All	Accepted	While PG&E agrees that projects should ideally occur in buildings in which equipment is operational and meets the functional needs of the building, and that there are situations in which functional testing is appropriate to ensure these conditions, required and extensive functional testing of all equipment would not be simple or inexpensive to implement and would be a significant change to how site inspections and prescreens are performed. PG&E recommends discussing this recommendation in ei-

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		<p>Site-level NMEC calculates savings from an existing conditions baseline. Upgraded systems need to be functional in the baseline for improvements in the performance period to appear as savings. Program implementers that fail to perform basic functional testing on systems to be upgraded may implement projects that will not provide the participant the expected reward under an NMEC approach. For example, one evaluated project had a 77% reduction from engineering-based forecasted savings to meter-based realized savings. The engineering-based forecasted savings made assumptions about how the old equipment had been functioning which were not supported by the meter-based model. The old equipment had been functioning at a small fraction of its capacity, which immediately became clear based on the deficiency report provided after the participant interview, showing that one of the two compressors was down. The new system is efficient but uses more energy than the existing system at partial capacity which was likely not meeting the functional needs of the space. The participant had not been made aware of the existing system's limitations nor its implications on the building's potential energy savings. The PAs and implementers are in a position to manage their own added risk under NMEC, but the participant may not be.</p>	<p>phase could eliminate this risk without adding additional burden on the participants.</p>			<p>ther NMEC PCG or Site-Level CaITF working group to explore how best to accommodate this recommendation to ensure the customer is protected without adding significant burdens to project qualification and development. Due to the performance-based nature of NMEC programs, it is not in the best interest of the PA, Implementer or customer involved in an SLNMEC project to implement measures that increase energy use. Therefore, performing functional testing and otherwise ensuring that existing equipment is meeting the functional needs of the building is in the best interest of all stakeholders and therefore probably does not need to be a requirement for all projects since implementers will utilize functional testing when it is reasonable to do so.</p>