



SOLAR ON MULTIFAMILY AFFORDABLE HOUSING (SOMAH) EVALUATION

Final Phase I Research Plan



Submitted to:
California Public Utilities Commission
Energy Division

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FINAL PHASE I RESEARCH PLAN

Itron, Inc. (Itron) and Illume Advising (Illume) have been contracted by San Diego Gas and Electric (SDG&E) on behalf of the California Public Utilities Commission (CPUC) to evaluate the process and load impacts of the Solar on Multifamily Affordable Housing (SOMAH) program, as directed by CPUC Decision (D.) 17-12-022.¹ This document summarizes the research questions and the evaluation team’s proposed approach to answering these questions. It will be updated after Phase I has been completed and more is known about the available data and feasibility of approaches to be employed in Phase II.

I. BACKGROUND

California State Assembly Bill (AB) 693 directed the CPUC to institute a new program intended to make qualifying solar energy systems more accessible to low-income and disadvantaged communities (DACs).² The goal of this new program is to install solar energy systems that have a generating capacity equivalent to at least 300 MW (CEC-AC) on qualified multifamily affordable housing properties through December 31, 2030.³ In accordance with AB 693, the CPUC issued D. 17-12-022 on December 14, 2017, creating the SOMAH program and establishing program goals and eligibility requirements.

The SOMAH program is one of a handful of programs in California offering incentives for installation of solar PV to directly benefit low-income customers and DACs:

- In D. 07-11-045, the CPUC adopted the Single-family Affordable Solar Homes (SASH) program for qualifying low-income single-family homeowners, and in D. 08-10-036, the CPUC adopted the Multifamily Affordable Solar Homes (MASH) program to provide incentives for solar installations on multifamily affordable housing.
- D. 06-11-024 created a separate component of the California Solar Initiative (CSI) specifically for residential new construction (now known as the New Solar Homes Partnership or NSHP) to be overseen by the California Energy Commission (CEC).

The SOMAH program is not simply a continuation of California’s legacy programs incentivizing access to solar PV for low-income qualifying customers. The SOMAH program is jointly administered statewide by a single program administrator (PA) team made up of the Association for Energy Affordability (AEA), Center for Sustainable Energy®(CSE), GRID Alternatives, and the California Housing Partnership Corporation (CHPC). The program has distinct rules and eligibility requirements, including a focus on

¹ <http://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M201/K940/201940057.pdf>

² https://leginfo.legislature.ca.gov/faces/billTextClient.xhtml?bill_id=201520160AB693

³ This program is funded by Pacific Gas and Electric Company (PG&E), SDG&E, Southern California Edison Company (SCE), Liberty Utilities Company, and PacifiCorp, collectively the investor-owned utilities or IOUs.



servicing properties in DACs. In compliance with the terms of AB 693, the SOMAH program will provide significant subsidies for the installation of solar PV systems on qualifying multifamily affordable housing properties (i.e., multifamily housing financed with low-income housing tax credits, tax-exempt mortgage revenue bonds, general obligation bonds, or local, state, or federal loans or grants). The SOMAH program serves utility and community choice aggregator customers in the territories of Pacific Gas and Electric Company (PG&E), Southern California Edison Company (SCE), SDG&E, Liberty Utilities Company, and PacifiCorp. To be qualified for SOMAH, properties must also be occupied by households with incomes at or below 60% of the area median income or be in a DAC, as identified by the Office of Environmental Health Hazard Assessment (OEHHA) on behalf of the California Environmental Protection Agency (CalEPA).

Within the first day of accepting applications (July 1, 2019), SOMAH was nearly fully subscribed. As of February 24, 2020, the program has received nearly 300 applications (excluding those that have been canceled), representing over 77 MW of solar generating capacity⁴ and \$172 million in reserved funding. Currently, funding is available for SCE, PacifiCorp, and Liberty Utilities Company, and they are actively accepting applications. At the time of writing, PG&E funds for Year 2 of the SOMAH program have been approved but have yet to be released; however, applications are still being accepted for PG&E's waitlist. SDG&E Year 2 funding has been released but the program's waitlist remains closed due to the large number of applications previously on the waitlist.

II. STUDY OBJECTIVES AND KEY RESEARCH QUESTIONS

This study represents the SOMAH program's first impact and process evaluation study—critical for setting up the program for successful evaluations immediately and in the future. The deliverables for this project include a set of comprehensive program metrics, a program logic model, validation of the program's data collection activities, answers to key program reporting requirements, an evaluation of the program's processes, and recommendations for program improvement. The evaluation will answer the following researchable questions:

- What is the underlying program theory? Is the program operating in a manner to support this model?
- What metrics are needed to determine the program's impact?
- Is the program collecting the appropriate data in the correct formats to support the measurement of performance during the program's implementation?

⁴ 77.7 MW CEC PTC rating and 86.5 MW nameplate rating.



- Is the SOMAH program evaluable based on the California Energy Efficiency Evaluation Protocols^{5,6} and best practice evaluation methods for solar evaluations? If not, what program design and data collection activities need to be put in place to ensure that it is?
- Are the program actors aligned for success? Are there barriers in the implementation and administration of the program that may impact its success? If so, how might they be addressed?
- How many SOMAH projects were installed within the first year and what are the characteristics of these projects? What is the typical project timeframe from application submittal to approved interconnection and delivery of tenant bill benefit?
- What are the total program and project costs during SOMAH's first year of operation?
- What are the SOMAH program's total energy (MW and MWh), greenhouse gas (GHG), and economic (bill savings) impacts during the first year of the program?

III. SUMMARY OF APPROACH

The evaluation approach was determined based on a review of the research activities being conducted by the SOMAH PA team, the data that are readily available for this study, and the current state of the program.

As is best practice for first-year programs, the primary focus of the process evaluation is to ensure that the program design is effectively documented and the program theory detailed, and that the program's organizational structure, processes and data collection activities are aligned to measurably meet SOMAH's goals. The goals of the SOMAH program are rather diffuse and include not only the stated goals from the decision that created the SOMAH program, but also the program implementation and evaluation goals. The work conducted for this evaluation will review and categorize the multitude of goals to ensure their clarity and alignment with program metrics. In addition, the first-year evaluation will include an evaluability assessment, namely determining if the SOMAH PAs' activities are evaluable and the underlying data collection and monitoring activities are set up to provide sufficient support for formal, third-party evaluations.

The evaluation approach recommended at this time will continue to consist of two phases. The first phase (Phase I) will focus on foundational process evaluation activities, which will allow the evaluation team to quickly gain a better understanding of how the program is working and identify areas in need of improvement.

⁵ California Public Utilities Commission, (2006). *California Energy Efficiency Evaluation Protocols: Technical, Methodological, and Reporting Requirements for Evaluation Professionals*. TecMarket Works.

⁶ While SOMAH is not an energy efficiency (EE) program, the RFP for this study required the process evaluation for this study to follow the process evaluation guidelines as outlined in the EE Protocols.



Phase I will include the following activities:

- Development of a Program Theory and Logic Model (PTLM) and a process flow analysis.⁷ These activities will help to document the “cradle-to-grave” operation of the SOMAH program.
- Establish program metrics that will be used to assess the performance of the SOMAH program.
- Establish and document data collection protocols that will enable Phase II and future measurement and verification (M&V) activities.

Critically, Phase I of this study will be completed in time to inform the CPUC’s July 30, 2020 report to the California Legislature regarding the CPUC’s assessment of the SOMAH program. At the end of Phase I, the research activities proposed for Phase II of this evaluation will be reassessed and further detailed based on the Phase I learnings. This will also result in an update to this research plan that will be circulated for review and further comment. The program goals (both legislated and programmatic) and the metrics used to measure the program against these goals will be documented as part of the Phase I effort. The revised research plan will provide details on the planned research methodologies that are rooted in data determined to be available for the evaluation during Phase I.

Phase II of the evaluation will include a comprehensive program measurement and verification (M&V) study designed to meet the requirements outlined in Appendix B of D.17-12-022. Phase II will include the following activities:

- Development of a first-year program assessment, defined by metrics such as the number and characteristics of SOMAH first-year projects, first-year program and project costs/spending, and a comparison of first-year program goals and accomplishments.
- Evaluability consulting to review PAs’ methods of assessing customer and tenant satisfaction.
- Measurement and verification of SOMAH’s first-year gross impacts, including:
 - Electrical load impacts (MW and MWh).
 - Economic impacts, including bill savings for program participants and reductions to utility CARE⁸ budgets resulting from SOMAH projects.
 - Program GHG reduction impacts.

⁷ The development of the SOMAH Program process flow charts will begin during Phase I; however, due to the collaborative iterations needed to finalize these flow charts, they will not be finalized until Phase II of the study. They will be provided within a standalone Process Flow Chart memo.

⁸ California Alternate Rates for Energy (CARE). The CARE program, established in 1989 by the California legislature, offers income-qualified residential customers a discount (typically around 20%) on their electric and gas bills. CARE is funded through a surcharge on non-CARE customers’ monthly bills. The SOMAH program requires at least 51% of the energy produced by the PV system to be allocated to the tenants and the tenants must also receive 100% of the economic benefit of the solar credits. Reductions in tenant bills through SOMAH projects will reduce the CARE subsidies paid to these tenants.



While the program is currently oversubscribed, it is still not clear how quickly these first-year projects will become interconnected and operational. The Phase II approach described below may vary depending on data availability and the number of projects that have been installed and interconnected.

a. Phase I Activities

The primary objective of the evaluation team’s Phase I activities is to understand program design and processes and to review data to inform the evaluation’s Phase II work. The table below details the Phase I objectives and is followed by a detailed description of each task.

TABLE 1: PHASE I EVALUATION OBJECTIVES BY TASK

Evaluation Objective	Program Staff & Stakeholder Interviews	Document Program Design & Process Flow	Develop Program Theory & Logic Model	Review, Develop, & Document Program Metrics	Data Collection Protocol Review & Documentation
Document the program’s:					
<i>Goals, desired outcomes, and its theory of change</i>	X		X		
<i>Design, core activities, and its outputs</i>	X	X	X		
<i>Primary actors and organizations responsible for its implementation and oversight, and their respective responsibilities</i>	X	X	X		
Establish the program’s:					
<i>Performance metrics</i>	X		X	X	
<i>Spending⁹ against core activities of the program</i>	X	X			
Ensure the program is evaluable by:					
<i>Mapping metrics to program performance tracking activities</i>	X		X	X	
<i>Reviewing tracking databases</i>					X

⁹ The scope of this evaluation does not include an in-depth review of SOMAH program implementation costs. Pursuant to D.19-03-015, this activity will be carried out as part of another contract.



Program Staff and Stakeholder Interviews

As a first step in the SOMAH evaluation, the evaluation team will conduct a series of interviews with program staff and stakeholders. Each interview will establish:

- (1) The role(s) of the interviewee(s) and their respective organizations,
- (2) The entities they work most closely with to fulfill their responsibilities,
- (3) The specific activities and output they are responsible for completing
- (4) The intended outcomes of these activities and how these outcomes move the program toward its goals, and
- (5) Any data or program tracking activities they have in place to track activities, outputs, and outcomes.

For the purposes of this work, the evaluation team will interview representatives across multiple organizations in the quantities outlined in Table 2.

TABLE 2: NUMBER OF INTERVIEWS BY INTERVIEWEE

Interviewee	Minimum Number of Discrete Interviews
California Public Utilities Commission (CPUC) Lead Analyst	1
Center for Sustainable Energy (CSE) Program Lead(s)	1
GRID Alternatives Program Lead(s)	1
Center for Sustainable Energy (CSE) Research Team	1
California Housing Partnership Corporation (CHPC) Program Lead(s)	1
Association for Energy Affordability (AEA) Program Lead(s)	1
IOU Staff (SDG&E, SCE, PG&E, Liberty, and PacifiCorp)	5
Minimum Number of Interviews to be Completed	11

Document Program Design & Process Flow

Document Program Design

A critical step in a first-year evaluation is documenting the program design. Drawing on SOMAH PA documents and PA interviews, the evaluation team will develop a narrative summary of the program, as well as an organizational chart that illustrates how the SOMAH PAs report into one another, the IOUs, and the CPUC.

Develop Program Process Flow Charts

Following the interviews with the SOMAH program team, the evaluation team will develop a strawman program process flow chart to be discussed and refined in collaboration with the CPUC, the IOUs, and the SOMAH PAs. The goal of this initial process flow chart is to document the “cradle-to-grave” operations



and administration of the SOMAH program, including administrative costs and work assignments for major deliverables of the program. The development of these process flow charts will begin during Phase I of the study; however, the finalized flow charts are not anticipated to be complete until mid-Phase II due to the iterative collaboration with the program team that is necessary to finalize them. They will be provided as a standalone deliverable during Phase II of the study.

The review will include areas of work such as outreach, technical assistance, incentives, and inspection, as well as trainings and job development activities. If needed, the evaluation will break out select processes (such as trainings) into separate charts for ease of review and legibility.

Estimate Program Spending by Activity

To the extent feasible, process flow charts will be designed to examine budget allocation by activity (and spend in future years).

Develop Program Theory and Logic Model (PTLM)

PTLM Objectives

Logic models are a helpful tool for PAs to document and guide program delivery and design decisions. Logic models identify the desired program goals and tie them to specific program activities, outputs, and outcomes. They will also document the answers to the following questions:

- What are the goals of the program? What is California trying to achieve by offering the program?
- What is the SOMAH PA doing to meet those goals?
- Who is the SOMAH program audience? Who are the program actors?
- How can the SOMAH program successes be measured?
- What long-term effects, outcomes, or impacts does California hope to see as a result of the program?

The process of developing a logic model is especially useful in identifying any gaps between program activities and the desired goals or outcomes of the program, which in turn helps to support in the evaluability assessment.

Establish Program Activities and Outputs by Actor

The evaluation team will use the initial process flow charts to create a higher-level set of SOMAH program activities and outputs by program actor across major work streams. For the purposes of the PTLM, the evaluation will focus entirely on those activities that are market-facing and intended to drive adoption of solar for multifamily affordable housing, such as marketing, outreach, training, installation, etc.



Hypothesize Outcomes Associated with Program Outputs

Once the evaluation team has identified the outputs with the activities of each actor, the team will detail the program's theorized outcomes associated with those outputs. The outcomes of the program should align with the program's goals, as documented in the PTLM development process described above.

Draft and Final PTLM Diagram

Before developing a final PTLM, the evaluation team will develop an initial diagram that will be used to discuss and review the evaluation team's understanding of the program with the SOMAH PAs. The evaluation team will conduct this review through discussions and with feedback received to develop the final PTLM.

Review, Develop, & Document Program Metrics

Drawing on the finalized PTLM, the evaluation team will develop both metrics and key performance indicators for the SOMAH program.

Metrics and Key Performance Indicators

Metrics measure the tactical activities of the SOMAH program, quantitatively capturing the **outputs** of the program. Metrics include things such as number of trainings held, number of solar PV panels installed, etc. Metrics should be measurable against a baseline.

Key performance indicators (KPIs) assess the success of the SOMAH program theory or strategy. In this way, KPIs are associated with the hypothesized **outcomes** of the program. Outcomes include things such as benefits received by tenants, GHG reductions, and other expected program effects and impacts.

The evaluation team will establish both metrics and KPIs to support the ongoing evaluation of the SOMAH program that can be both tracked over time and effectively and reliably measured and/or estimated. In all cases, the evaluation team will work with the CPUC and stakeholders to review, refine, and document these efforts for ongoing evaluations.

Determine Metric and KPI Priorities

Working with the CPUC, the SOMAH PAs, and stakeholders, the evaluation team will identify and establish metrics and KPIs that are most critical to achieving the SOMAH program goals. Once the evaluation team identifies and prioritizes these metrics and KPIs, the evaluation will focus on conducting third-party evaluability assessments of the SOMAH PAs' data tracking and data collection initiatives. These assessments will ensure the measurability of the program's metrics and KPIs by the SOMAH PAs and third-party evaluation activities.



Data Collection Protocol Review and Documentation

During Phase I, the evaluation team will focus on reviewing current SOMAH PA data collection practices, providing recommendations for potential changes to data collection protocols, and developing a preliminary approach for quantifying the energy, environmental (GHG), and economic impacts of the SOMAH program. Initial data collection reviews will include assessments on the availability and completeness of the following data elements:

- PV system characteristics such as system size, tilt, azimuth, derate factors, etc.
- PV generation data
- Tenant billing data, load data, virtual net energy metering (VNEM) shares, and current and previous rate/tariff information
- SOMAH participant cross-program participation data (i.e., participation in other IOU EE programs) – this will also include a review of the data provided by the SOMAH PAs to the IOUs to help them promote IOU EE programs to SOMAH participants
- Tenant occupancy data that may impact resulting program energy impacts and bill savings

b. Phase II Activities

Phase II activities are planned for the second half of 2020 with the expectation that program will have issued incentives to a first wave of projects and tenants will have begun to realize program benefits.

Evaluability Assessments

In Phase II of this work, the evaluation team will conduct in-depth evaluability assessments of select program activities to ensure that the program's activities can be tracked, the metrics can be measured, and the KPIs can be assessed. This evaluability review will address a number of questions, including:

- Can planned outputs/metrics and KPIs be measured using the SOMAH PAs' existing data tracking and collection activities? If so, what are the units of measurement for relevant activities (participants, jobs completed, kW, bill savings, etc.)? If not, how might they be improved to ensure measurability?
- Are program systems set up to accurately track the information needed to measure these? If not, what additional data need to be gathered?
- If the outputs/metrics can be measured, what is the threshold or definition of success?
- Can these outputs/metrics be measured within the scope of a third-party evaluation? If not, are there alternative ways they could be measured or tracked?



- What is the projected timeframe to meet these outputs/metrics? How does that fit within the context of the SOMAH PAs’ goals and the objectives of a third-party evaluation?

If any challenges or issues in the measurement of program outputs or metrics are identified, the evaluation team will identify and document remedies.

To complete this evaluability assessment, Phase II will focus on those activities that have the greatest impact on the SOMAH program’s long-term success. These areas of focus will be determined using the insights gathered from the PTLM development process and the metrics and KPIs established.

A number of activities feed into an evaluability assessment. For the purposes of this evaluation plan, the evaluation team anticipates conducting the evaluability tasks laid out in Table 3 below.

TABLE 3: PHASE II EVALUABILITY TASKS

Evaluation Task	Budgeted Quantity	Research Questions
Review of program databases and/or tracking systems	Up to 3	<ul style="list-style-type: none"> • Are the program databases and tracking systems specifying, collecting, and tracking the appropriate data to measure the program’s success?
Review of program design(s)	Up to 2	<ul style="list-style-type: none"> • Have the SOMAH program designs been designed to establish quantifiable impacts against their goals? • How might the design be improved to both meeting the objectives of the program and delivering measurable results?
Review of data collection instruments (e.g., surveys and interview guides)	Up to 3	<ul style="list-style-type: none"> • Are survey and interview data collection instruments designed to collect the data needed to feed into the program metrics? • Are the sampling frames and sizes designed to support statistically significant and measurable effects?
Third-party analysis and/or verification of PA-collected data	Up to 2	<ul style="list-style-type: none"> • Can the data analyses be verified through third-party replication? • Are there areas where different analytical approaches might be used to either extract greater insight from the data collected or to increase the reliability and confidence in the results?

The evaluation team will work closely with the CPUC and the SOMAH PAs to ensure that the databases, instruments, and any analyses conducted are focused on those activities that are most critical to the program’s achievement of its metrics and, accordingly, the measurement of SOMAH’s success.

Impact Measurement and Verification (M&V)

Phase II impact M&V activities will consist of a comprehensive analysis of SOMAH project gross impacts consistent with best practices in solar PV program evaluation and the methodology developed during the Phase I documentation review. Relevant metrics will include but are not limited to:



- Characteristics of program participants including customer location, utility, Track A¹⁰ versus Track B,¹¹ census tract, CalEnviroScreen Score, and other building and ownership characteristics
- Program spending assessment, including total incentives paid and total amount of developer match funding
- Comparison of SOMAH program accomplishment to goals such as total MW installed
- Tenant bill impacts calculated in kWh savings and dollar savings based on each tenant's tariff
- Total electrical load impacts of SOMAH PV systems measured as electrical generation during the CAISO top load hours and each utility's top load hours
- GHG emission reductions measured in carbon dioxide (CO₂) reductions resulting from on-site PV generation
- Impact of the SOMAH program's tenant bill discounts on the CARE budget

IV. PROJECT TIMELINE

The first phase of the SOMAH evaluation study will be completed and delivered to the CPUC Energy Division (ED) no later than June 30, 2020 to inform the July 30, 2020 report to the California legislature. The interim milestones leading up to the conclusion of the study are provided below by project Phase.

Phase I Milestones

- End of February 2020: Draft research plan released
- First week of March 2020: Public workshop on draft research plan
- Mid-March 2020: Informal comments due on draft research plan
- End of April 2020: CPUC ED and Itron respond to comments on draft research plan and research plan is finalized¹²
- End of May 2020: Draft Phase I report and public webinar
- End of June 2020: Final Phase I report and public webinar

¹⁰ Track A is intended for property owners who would like to receive technical assistance services from the SOMAH PAs to help assess the solar potential at their property.

¹¹ Track B is intended for property owners who do not require technical assistance to submit a project reservation and have identified an eligible contractor for their project.

¹² The research plan will be finalized for Phase I activities; however, additional details regarding methodologies and data sources for Phase II activities will be included in a revised research plan that will be submitted in late July.



Phase II Milestones

- End of July 2020: SOMAH research plan revised based on Phase I findings
- July 2020: Process flow charts finalized
- End of January 2021: Draft Phase II report and public webinar
- End of March 2021: Final Phase II report and public webinar

APPENDIX A PHASE I FINAL RESEARCH PLAN COMMENTS

The SOMAH Draft Research Plan was released by Energy Division on March 9, 2020. A public webinar on the Draft Research Plan was held on March 23, 2020. Energy Division requested informal comments on the Draft Research Plan by March 26, 2020. Informal comments were received from PG&E, SCE, and SDG&E. The comments received and the responses to the comments are included in a table on the following pages. These comments serve as a companion to the Final Research Plan, which was updated to incorporate all changes deemed necessary to the Draft Research Plan.



TABLE A-1: PHASE I FINAL RESEARCH PLAN COMMENTS

Comment #	Commenter	Page # or Overarching for general comments	Comment/feedback/change requested	Evaluator's Response
1	SCE	5	Table 1 seems to ignore “program implementation” costs (not related to “activities and outputs”). Such program implementation costs include websites, contract negotiation, IT development, billing scripts, software licenses, data transfer protocols, etc.	The scope of this evaluation does not include a deep dive into SOMAH program implementation costs. Per the CPUC, an RFP for audit services is being released shortly to contract with a third party to do an in-depth review and assessment of the IOU program implementation costs. We have added a footnote to Table 1 to clarify this point.
2	SCE	5	Interviews should also include the “program implementation” discussion (as pointed above)	The first round of interviews with PA and IOU staff have been conducted and did include discussions on program implementation activities but primarily from a process perspective as opposed to cost of implementation perspective. In some of these interviews the issue of program implementation costs was brought up by the interviewee. We brought this to the attention of CPUC staff who confirmed our understanding that this is out of scope for this evaluation and will be addressed as part of a separate RFP for auditing services.
3	SCE	6	Table 2 should be the MINIMUM interviews needed. Each IOU has a different organizational structure and it may require multiple interviews to understand all stakeholders/participants in the process	"Minimum" was added to the table. The evaluation team has conducted a first round of these interviews and is assessing the need for additional interviews on a case by case basis.
4	SCE	6	“Developing Program Process Flow Charts” seems to suggest that a single flow chart can describe the roles and responsibilities of 5 different IOUs which has different organizational structures and functions. These Flow Charts need to be done a level high enough to describe the process but it should not be prescriptive in nature	ILLUME will draft up to three flow charts documenting the core processes across all SOMAH and IOU actors. The flow charts will be at a high enough level to encompass the actions of multiple program contributors.



Comment #	Commenter	Page # or Overarching for general comments	Comment/feedback/change requested	Evaluator's Response
5	SCE	6	Estimate Program Spending by Activity. As noted earlier, some system and implementation costs are not incurred "by activity". New billing systems costs need to be part of the analysis, for example.	As stated above, IOU program implementation costs such as the development of new billing systems will be assessed as part of a separate audit contract. As part of the examination of program spending for this evaluation, if costs are identified that span multiple activities it will be noted and an allocation across the multiple activities will be attempted based on feedback from PA and IOU staff whenever possible.
6	SCE	8	Metrics and Key Performance Indicators. The report needs to make sure the costs of implementing new data feeds/reports are included as part of the recommendation. The IOUs IT departments are stretched thin with current operating needs; any additional data collection and reporting could require the IOUs to incur significant costs to implement.	See response to Comment #1 above
7	PG&E	3	Why EE Protocols, when this is not an EE program? Are there other protocols that may be relevant?	We reference the EE protocols as that was a requirement of the evaluation included in the RFP for this study "prospective bidders must also be fully cognizant of the Process Evaluation Protocol in the California Energy Efficiency Evaluation Protocols (Protocols) and the proposal(s) must follow the Protocols' guidelines." The evaluation team has conducted numerous solar and DER evaluations and while no DER specific protocol currently exists we will follow best practices for solar and DER evaluations.



Comment #	Commenter	Page # or Overarching for general comments	Comment/feedback/change requested	Evaluator's Response
8	PG&E	9	Evaluability Assessment in Phase II seems to belong under Phase I. What exactly needs to be included for the Phase I report to CPUC by July 30?	<p>The evaluability assessment will begin in Phase I, however many of the activities included within it will not be completed in time to be reported on for the Phase I report and so were included as Phase II tasks. For instance, the review of program databases and tracking systems will begin in Phase I, however it is very likely that many of the fields within these databases won't be populated in time for the Phase I report due to the timing of when the first SOMAH projects will be installed and interconnected. The Phase I report will include, at a minimum, the following items:</p> <ol style="list-style-type: none"> 1 - Progress and Activities to date - a summary of progress made against program goals, 2 - SOMAH Program Theory and Logic Model - the PTLM will include program activities, outputs, and short and long term goals 3 - Program metrics - recommended program metrics to ensure evaluability
9	PG&E	10	Review of Data Collection Instruments - are these instruments that were developed in Phase I? or referring to instruments used by the PAs?	This is referring to the instruments developed and used by the PAs.
10	PG&E	11	Are impacts to CARE program solely the VNEM bill credits that tenants receive? Will these take into account the change in energy usage (and thus bills) that may result from this?	The primary impact to the CARE program will result from the reduced energy bills resulting from the VNEM bill credits. The evaluation will not quantify any potential changes in tenant usage that may arise from the installation of solar at their complex.



Comment #	Commenter	Page # or Overarching for general comments	Comment/feedback/change requested	Evaluator's Response
11	SDG&E	8	Under "Data Collection Protocol Review and Documentation", initial data collection should expand to include; (1) cross participation with any other EE Program, which could interact with performance, (2) tenant occupancy levels, to account for consistency in tenant billing data, (3) Did the PA provide the IOUs with all data that could help market other IOU EE programs.	The research plan has been updated to reflect these additional data elements.
12	SDG&E	11	Under "Impact Measurement and Verification (M&V)", the comment from #11 also applies here for Phase II when verifying the tenant's bill impacts as it relates to kWh savings and dollar savings. There needs to be added verbiage to include NMEC and EE/LI savings and how SOMAH will collaborate with IOUs on qualified and unqualified customers to ensure claims and/or reporting is accurately captured.	While there may be some interactive effects associated with other energy efficiency programs, we will focus our impact evaluation activities on bill savings associated with VNEM credits and energy impacts resulting from solar PV generation. The tenant level AMI data will not be effected by the solar installation (i.e. no dip will be seen during the middle of the day when the solar is generating energy) as it is metered separately and subtracted from the tenants bill using a VNEM credit.
13	SDG&E	4	On page 4, footnote 6, the CARE discount is incorrectly shown as 20%. It should be 30% .	As part of this evaluation the CARE discount will be further researched, however the verbiage in the research plan was updated to reflect a 30% discount on electric bills and a 20% discount on gas bills.



Comment #	Commenter	Page # or Overarching for general comments	Comment/feedback/change requested	Evaluator's Response
14	SDG&E	Overarching	<p>The research plan is extremely high level with many details not provided. For example, what methodology will Itron use to determine energy impact, bill savings and GHG reduction? What goals are going to be captured and measured? It states that it will research to see that goals are met but there is no indication that Itron has captured all the goals from the legislation and the CPUC proceeding. This research plan falls short in providing a clear description of what will be done.</p>	<p>It is important to remember this is the first year of the SOMAH program and thus at the time the research plan was written there were still many unknowns about SOMAH program operations and the data available to evaluators. As a result, this evaluation was scoped using a 2 Phase approach and includes an "evaluability assessment" and a research plan update based on Phase I evaluation findings. It is slated to be resubmitted to this group at end of July (this was noted on page 13 of the draft research plan, but we have also clarified this earlier in the plan so the point is not missed). The specific methodologies employed in Phase II of the study are intentionally omitted from this document as they are dependent upon Phase I findings (primarily with respect to data availability) and how many projects are installed and interconnected by the fall of 2020.</p> <p>With respect to what program goals are going to be captured and measured, we tried to make this clear to the reader on page 3 of the research plan "The goals of the SOMAH program are rather diffuse and include not only the stated goals from the decision that created the SOMAH program, but also those program implementation and evaluation goals. The work conducted [during Phase 1 of] this evaluation will review and categorize the multitude of goals to ensure their clarity and alignment with program metrics. In addition, the first-year evaluation will include an evaluability assessment, namely determining if the SOMAH PAs' activities are evaluable and the underlying data collection and monitoring activities are set up to provide sufficient support for formal, third-party evaluations." The goals (both legislative and programmatic) and the related metrics will be documented in the PTLM as well as in the revised research plan.</p>



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15	SDG&E	2, 8	For the questions on program objectives that are bulleted starting on page 2, the plan should include all the answers to those questions so that its possible to see if the approaches to be employed are the right ones. Instead the plan says the evaluation will include those answers instead of providing them now. That is backwards and deficient. For example, we need to see the metrics that will be used, not just that metrics will be decided and then the program will be evaluated according to those metrics as described on page 8.	Following on the response to the comment above, while we understand the desire for more details at this time but reiterate this is precisely why this first year evaluation has been split into two phases. At the time this research plan was created many of these questions were unanswerable due to the newness of the program and lack of program data. One of the goals of Phase I of the evaluation is to assess the program and define the metrics. The overall goal of the evaluation is to answer the researchable questions that are bulleted starting on page 2 and thus we cannot provide answers to them until the research has been conducted. Additional details will be provided in the revised research plan which will be distributed in late July detailing the proposed methods used to get answers to these questions during Phase 2 of the evaluation.
16	SDG&E	11	On the proposed schedule, getting back comments on the plan in mid-March, when the plan needs a lot of work, and then having the first draft of the report in May seems impossible and unreasonable.	Thank you for your feedback. This plan was developed in consultation with the CPUC and as stated above the additional detail you requested will be provided in the updated research plan provided in July.



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17	SDG&E	4	D17-12-022 section 3.3.3 "EE services and coordination with other clean energy programs" is not specifically captured in this evaluation plan. It was discussed in early workshops that the progress should be to measure participation in IOU EE programs stemming from SOMAH referrals since the IOU programs are the entities funded for those EE programs (and SOMAH PA is not funded to market IOU EE). Also, we note that Page 4 Phase II mentions a study designed to meet the requirements of Appendix B D-17-12-022, however the underlying bulleted actions do not address several aspects of the appendix including EE measures effectiveness.	Estimating EE program savings and EE measure effectiveness is out of scope for this evaluation and will presumably be done as part of an evaluation of the EE programs directly, however as part of the process evaluation of the SOMAH program the evaluation team will review the IOU referral process and ensure it is working in an effective manner. The evaluation team will also review ESA program tracking data in order to quantify the percentage of SOMAH participants that participated in ESA after the SOMAH program referral took place.
18	SDG&E	Overarching	The draft evaluation plan indicates that 3 interviews would be conducted to capture the IOUs' feedback. SDG&E notes that there are 5 participating IOUs (not 3). So a minimum of 5 would be necessary, and probably more to interview different IOU staff at the same IOU.	Table was corrected to reflect 5 IOUs and as noted in response to comment #3 above "Minimum" was added to the table in the event the more than one interview with an PA or IOU was needed to interview all of the necessary staff at each of these entities