

Appendix A: Implementation Plan Template (2.0)

The following information shall be uploaded to the CPUC-maintained website, the California Energy Data and Reporting System (CEDARS), in accordance with CPUC decisions and Staff guidance.

Program Overview

The Program Overview, which consists of the Program Budget and Savings Implementation Narrative sections, shall be completed consistently by all IOUs for statewide programs.

Program Budget and Savings

The CEDARS platform generates summary views of the following information, based on application tables that the PAs upload to CEDARS. The information is organized at the program level and, if applicable, sub-program level to enable multiple cross tabulations and outputs for stakeholders' review and consideration. Programs with subprograms will be displayed at subprogram level and will roll up to a program summary page.

1. Program and/or Sub-Program Name Codes & Standards State Building Codes Advocacy Subprogram, Codes & Standards State Appliance Standards Advocacy Subprogram, Codes & Standards National Codes & Standards Advocacy Subprogram
2. Program / Sub-Program ID number
Building Codes Advocacy Subprogram Program ID PGESWCS_BLDG
State Appliance Standards Advocacy Program ID PGESWCS_APP
National Codes & Standards Program ID PGESWCS_NATL
3. Program / Sub-program Budget Table
4. Program / Sub-program Gross Impacts Table
5. Program / Sub-Program Cost Effectiveness (TRC) 1.85
6. Program / Sub-Program Cost Effectiveness (PAC) 27
7. Type of Program / Sub-Program Implementer (PA-delivered, third party-delivered or Partnership)
Third Party Delivered.
8. Market Sector(s) Codes & Standards
9. Program / Sub-program Type (i.e., Non-resource, Resource) Resource
10. Market channel(s) Codes & Standards

Sub-Program Budget

Year	2020	2021	2022	2023	2024	2025
PG&E	\$ 5,998,680	\$ 5,998,680	\$ 5,998,680	\$ 5,998,680	\$ 5,998,680	\$ 5,998,680
SCE	\$ 4,220,123	\$ 4,220,123	\$ 4,220,123	\$ 4,220,123	\$ 4,220,123	\$ 4,220,123
SDG&E	\$ 1,836,438	\$ 1,836,438	\$ 1,836,438	\$ 1,836,438	\$ 1,836,438	\$ 1,836,438
SCG	\$ 1,099,759	\$ 1,099,759	\$ 1,099,759	\$ 1,099,759	\$ 1,099,759	\$ 1,099,759
Total	\$ 13,155,000	\$13,155,000	\$13,155,000	\$13,155,000	\$13,155,000	\$13,155,000

Advocacy Sub-Program Gross Impacts

Year		2020	2021	2022	2023	2024	2025
PG&E	GWhs	381	326	295	254	240	240
SCE	GWhs	393	337	304	262	247	247
SDG&E	GWhs	89	76	69	59	56	56
Year		2020	2021	2022	2023	2024	2025
PG&E	MWs	101	94	90	84	82	82
SCE	MWs	104	97	92	87	84	84
SDG&E	MWs	24	22	21	20	19	19
Year		2020	2021	2022	2023	2024	2025
PG&E	MMTherms	6	6	6	6	5	5
SCG	MMTherms	12.2	10.9	10.3	9.6	9.1	9.1
SDG&E	MMTherms	0.7	0.7	0.6	0.6	0.6	0.6
IOU Total	GWhs	863	739	668	575	543	543
	MWs	229	213	203	191	185	185
	MMTherms	18.9	17.6	16.9	16.2	14.7	14.7

Implementation Plan Narrative

1. Program Description

Codes and Standards (C&S) advocacy, which is comprised of the State Building Codes, State Appliance Standards and National Codes & Standards Advocacy subprograms, reduces building and appliance energy use and associated GHG emissions through the advancement of test procedures, building codes, and appliance standards. These subprograms compliment incentive programs and utility information offerings to customers. After incentive programs capture a percentage of the market, a transition to regulatory intervention is essential to maximize portfolio energy savings, minimize cost to rate payers, and encourage new technologies which benefit all California residents. For example, the transition from incentive programs to code commoditizes premium efficiency products and services and stimulates the release of new technologies and services by manufacturers and builders, thereby reducing the overall cost of energy efficiency to society.

The C&S program reduces energy use on behalf of ratepayers by influencing continuous updates in energy efficiency regulations, improving compliance with existing codes and standards, and working with local governments to develop ordinances that exceed statewide minimum requirements. The

C&S Advocacy Programs support activities which improve building and appliance efficiency regulations. The principal audiences for this work are:

1. The California Energy Commission (CEC) which conducts periodic rulemakings (on a three-year cycle for building regulations) to update building and appliance energy efficiency regulations;
2. The United States Department of Energy (DOE) in setting mandatory national energy policy that impacts California;
3. The United States Environmental Protection Agency (EPA) in setting voluntary national energy policy that impacts California; and
4. Other significant code-setting bodies that publish standards that are highly likely to be adopted by states or local jurisdictions and are expected to affect a significant portion of the built environment. (i.e. ASHRAE, ICC) in those regions.

In some cases, the C&S Advocacy program may also seek to influence the state legislature and other state agencies like the California Air Resources Board (CARB) to influence policy regarding buildings and appliances. C&S program leads may explore ways to influence the United States Congress outside the traditional means of negotiating through Federal partners such as American Council for an Energy Efficient Economy (ACEEE) or Appliance Standards Awareness Project (ASAP).

C&S Advocacy subprograms support California's rulemaking processes to update its Appliance Efficiency Regulations (otherwise known as Title 20) as well as its Building Energy Efficiency Standards (otherwise known as the Energy Code or Title 24, Part 6) by authoring Codes and Standards Enhancement (CASE) studies for promising design practices and technologies. Advocacy also includes affirmative expert testimony at public workshops and hearings, participation in stakeholder meetings, ongoing communications with industry, and a variety of other support activities.

Advocacy subprogram support directly or indirectly DOE and EPA proceedings as well as legislative negotiations leading to federal regulations that are passed through to California; Title 20 appliance efficiency regulations. In addition, C&S Advocacy monitors and/or participates in a wide range of activities or proceedings that have direct or indirect impacts on California regulations including, but not limited to American Society of Heating, Refrigerating, and Air-Conditioning Engineers (ASHRAE), International Energy Conservation Code (IECC), voluntary standards such as CALGreen building codes, and ratings organizations such as the Cool Roof Rating Council (CRRC), National Fenestration Rating Council (NFRC), and the United States Green Building Council (USGBC). Additionally, the program intervenes in ENERGY STAR[®] proceedings and other voluntary activities, as necessary, to shape future regulations or support coordination with voluntary programs.

2. Program Delivery and Customer Services

C&S deliverables and activities include, but are not limited to, comment letters and CASE studies and/or roadmap proposals, stakeholder engagement and coalition building, attendance and participation in public meetings, dissemination of compliance tools, coordination with other energy efficiency proponents (such as Natural Resources Defense Council and ASAP), data modeling, lab

testing¹, legal consulting, industry outreach, field metering, building energy modeling, and product testing.

Specific Title 24 program offerings include:

- Support for the implementation of recently adopted versions of the Energy Code, mainly by submitting suggested revisions to the Energy Commission for the compliance manuals, Alternative Compliance Manual, code language clean-up suggestions for the sections not included in CASE reports, forms, and technical support and data for improvements to the compliance software.
- Preparation of CASE Reports and other technical support documentation (i.e. comment letters, memorandum or research results reports) for the next code cycle in coordination with the Energy Commission, which includes:
 - Conducting building energy use research to advance state policy goals.
 - Supporting coordination of Statewide CASE Team stakeholder meetings, public facing website, and other public communication modalities.
 - Researching and advocating for methods to remove code compliance barriers to the increased use of renewable energy and energy storage in support of statewide Zero Net Energy (ZNE) and GHG emission reduction goals.
 - Supporting the continuous improvement of the compliance software used to comply with the Energy Code.
- Increasingly, Codes and Standards program personnel facilitate discussions between the Energy Commission and other lines of business within utilities regarding impacts of codes and standards on future gas and electric operations. Topics include impacts of PV on electric distribution systems, reductions in gas infrastructure costs from all-electric buildings, etc.

Specific Title 20 and Federal program offerings include:

- Participation in public rulemaking proceedings for both state and federal standards and test methods.
- Developing Title 20 CASE proposals and Federal comment letters based on) research and analysis in DOE standards proceedings and participate in direct negotiations with industry.
- Monitoring state and federal legislation and intervene, as appropriate.

The C&S advocacy programs will be administered by PG&E as the lead Program Administrator (PA) on behalf of Southern California Edison, San Diego Gas and Electric, and Southern California Gas. Based upon discussions with CPUC staff and other stakeholders PG&E expects the other IOUs (SCE and SDG&E) to participate in the advocacy subprograms under the following assumptions:

- PG&E will seek alignment on advocacy objectives by providing draft and final documents for review and comment by Southern California Edison and San Diego Gas and Electric codes and standards representatives prior to docketing with the Energy Commission, DOE, or EPA. Advocacy review documents will include Title 24 and Title 20 CASE reports, federal comment letters, and IOU comments to be docketed in response to industry feedback on C&S proposals.

¹ Lab testing will occur at the International Standards Organization (ISO) 17025 certified independent labs or at PG&E Applied Technology Services Lab as determined by the C&S Advocacy Implementors.

^{2,3} If PG&E agrees with proposed edits by SCE and SDGE, we will include them in the document to be docketed. If an agreement cannot be achieved, PG&E will finalize reply comments and offer to remove references such as logos to other IOUs.

- When requested by PG&E, SCE and SDGE will attend PG&E-scheduled meetings where non-lead IOU input from across service regions is necessary to support Energy Commission (Title 24 and Title 20) and Department of Energy rulemakings.
- SCE and SDGE will respond to technical data requests or requests for meetings sent by the implementers to the lead and non-lead IOUs, and support PG&E in responding to CPUC data requests by providing IOU-specific information available neither to PG&E nor implementors.

The Statewide coordination is structured to streamline the administration costs while maintaining the needed support for the Advocacy subprograms.

3. Program Design and Best Practices

As involuntary interventions, codes and standards are effective at breaking down market barriers such as split incentives between building owners and tenants that are difficult to overcome through incentive and information programs. Minimum code requirements direct consumers', builders' and renovation contractors' choices of materials and appliances to higher efficiency products and design practices, thereby reducing monthly energy bills to tenants. Regulations also improve equity in benefits from IOU customer investments in energy efficiency through rates. Through codes and standards, positive changes initiated through voluntary programs targeting early adopters are extended to all customers. Hard-to-reach groups that do not participate in voluntary offerings benefit through more ubiquitous codes and standards.

In the development of Federal, Title 20, and Title 24 standards, early and regular industry outreach is essential to ensure that proposed C&S changes are effective, easily implemented, and not unduly burdensome. Industry opposition is the most significant barrier the C&S program faces to proposal adoption. Several best practices have been developed to ensure that industry stakeholders are engaged with constructively. The C&S Advocacy team:

- Participates in working groups, committees, negotiations, and workshops where applicable to engage with industry outside of the formal rulemaking process,
- Conducts industry outreach through relevant professional societies or trade organizations to present ideas, hear feedback, and come to consensus on disagreements,
- Coordinates with advocates to align positions and collaborate on research, and
- Collects data through field studies, laboratory testing, customer surveys and any other qualitative or quantitative mechanism necessary to acquire high-quality and reliable data.

4. Innovation

Continuous improvement and innovation are key success factors to updating existing or proposing new State or Federal regulations. In recent years for example, program personnel have focused on improving outreach processes to solicit feedback from building industry representatives, engaging

² These documents will not be shared with SoCalGas.

³ PG&E will also seek alignment on Code Change Savings Reports prior to submitting to the Energy Division.

compliance improvement professionals in the writing of T24 manuals to improve their accessibility, enhancing data quality and analyses to increase technical rigor in C&S proposals, leveraging data from certified labs (ours and others) to develop data-driven working relationships with manufacturing industry representatives, and expanding our understanding federal preemption language to improve our responses to industry proposals based on federal legislation. Tactical innovations include, but are not limited to:

- Coordination and integration of codes and standards with other energy efficiency programs to maximize energy savings;
- Diverse outreach and coalition-building with industry stakeholders;
- Modeling of site-energy savings as well as greenhouse gas abatement potential for all proposals;
- Field studies and metering,
- Customer surveys, focus groups and other qualitative research methods,
- Web-scraping and other automated data gathering techniques to identify product information to illustrate market trends; and
- Laboratory testing.

The program has struggled in the past with creating strong industry relationships. As an example of marked improvement, through the Variable Refrigerant Flow (VRF) DOE ASRAC negotiation more stringent data collection and partnering with industry significantly improved the outcome. Without the rigorous lab testing and regular communication with both advocates and opposers, the positive result may not have been achieved. C&S Advocacy personnel will work to utilize more stringent data collection to improve industry relationships which are necessary especially during politically administrations to further improve building codes and appliance standards.

5. Metrics

The Title 20 and Federal Programs include the following key performance indicators (KPIs):

- Third Party Implementer will develop a minimum of three relationships with stakeholders for each major rulemaking identified by the PG&E Program Manager, and provide list of stakeholders and contact information for these three (or more) relationships. According to a PG&E conducted survey measuring relationship satisfaction with industry contacts, above 90 percent of stakeholder relationships identified by Third Party Implementer across all rulemakings must be rated as “professional and constructive.”
- Third Party Implementer must submit at least 90 percent or more of deliverables (such as comment outlines and CASE Reports) by the specified agency deadline.
- Third Party Implementer must submit invoices to the PG&E Program Manager within five percent of annual accrual estimates.

The State Building Codes Advocacy program was the first program to release RFPs to support the statewide model. The requirement to add consistent KPIs in an agreed upon format for all contracts that support the 2022 Energy Code rulemaking cycle did not yet exist. KPIs will be refined for all implementers who are selected to participate in the 2025 rulemaking cycle. Although each 2022 rulemaking cycle implementer contract has unique elements and deliverables, the following common KPIs can be found in all of them:

- Third Implementer Party implementer must meet all deliverable requirements listed in the contract unless indicated otherwise by the PG&E Project Manager.
- Third Party Implementer must submit monthly accruals and invoices by the contract specified date to the PG&E Project Manager, as well as respond to requests for quarterly forecasts. Invoices must fall within five percent of accrual estimates on an annual average basis.
- Third Party Implementers must meet the CEC's agreed upon CASE proposal submission deadlines for both draft and final reports.
- Third Party Implementers must prepare and present the CASE proposals to the public and respond to industry comments within a reasonable timeframe, as determined by the Coordination Implementer or the Project Manager. Analytics regarding stakeholder meeting attendance and industry participation will be collected by the Coordination Implementer.
- Maintain a list of all individuals contributing to the 2022 advocacy effort on behalf of PG&E, their roles and their contribution. Subject matter experts identified by the implementer may be evaluated by PG&E and/or Energy Commission staff at least once during the code cycle.
- Participate in the Real Time Documentation process that will inform the creation of all Code Change Savings Reports and serve as a record of stakeholder interactions.
- Participate in the online communication platform organized and maintained by the Coordination Implementer over the duration of the contract.

Additional KPIs may be added as contracts are negotiated, revised and as the goals of the program evolve to keep in line with shifting policy objectives.

6. For Programs claiming to-code savings:

Not applicable.

7. Pilots:

Not applicable.

8. Workforce Education and Training:

Not applicable.

9. Workforce Standards:7:

Not applicable.

10. Disadvantaged Worker Plan:8

Not applicable.

11. Additional information:

Not applicable.

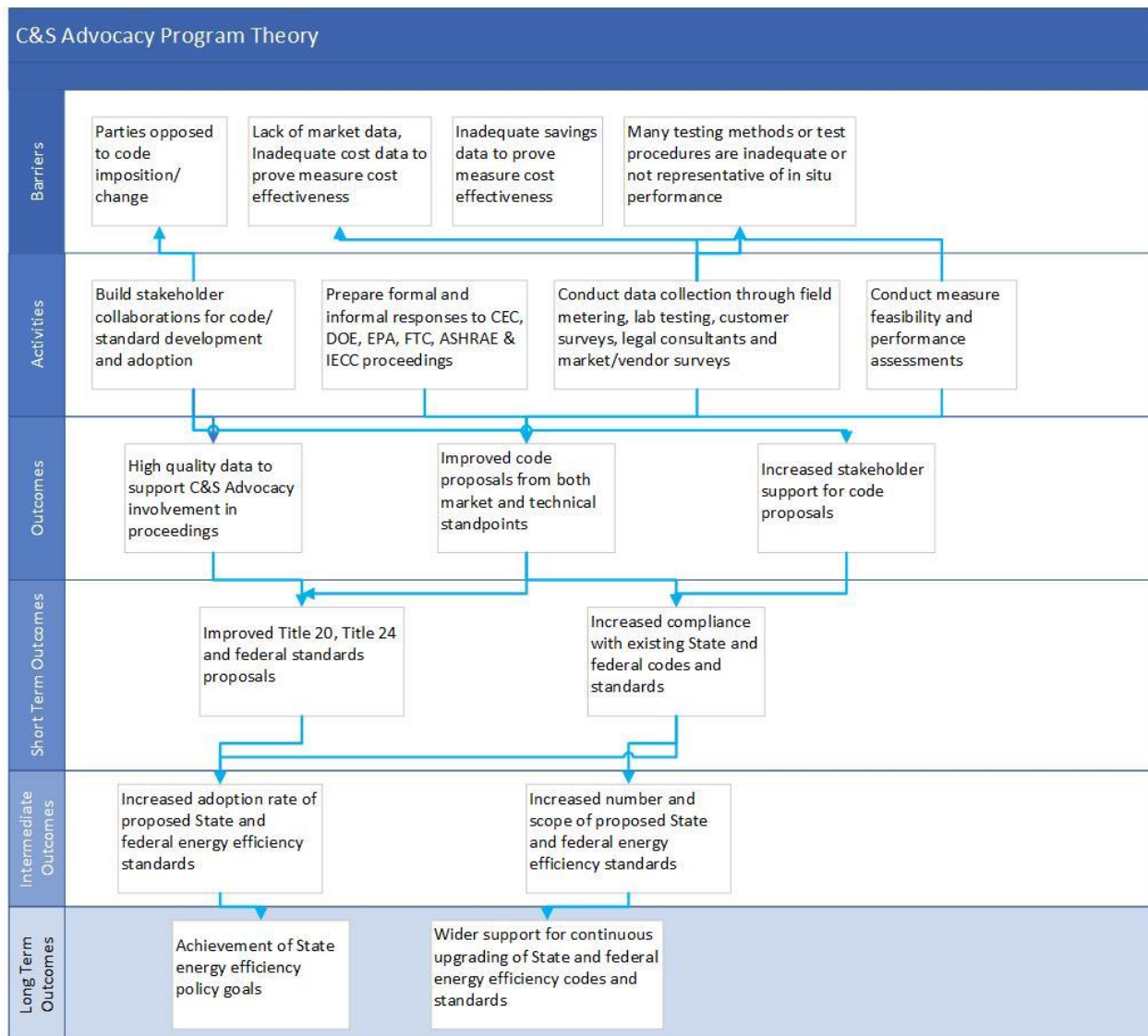
Supporting Documents

1. **Program Manuals and Program Rules (See below)**

Not applicable.

2. **Program Theory⁹ and Program Logic Model¹⁰:**

Codes and Standards: Standards Advocacy Logic Model



3. **Process Flow Chart:** Provide a program or, if applicable, a sub-program process flow chart that describes the administrative and procedural components of the sub-program. For example, the flow chart might describe a how a customer submits an application, how the PA screens the application, the application approval/disapproval process, verification of purchase or installation, incentive processing and payment, and any quality control activities.

Not applicable.

4. **Incentive Tables, Workpapers, Software Tools:** Provide a summary table of measures and incentive levels, along with links to the associated workpapers.

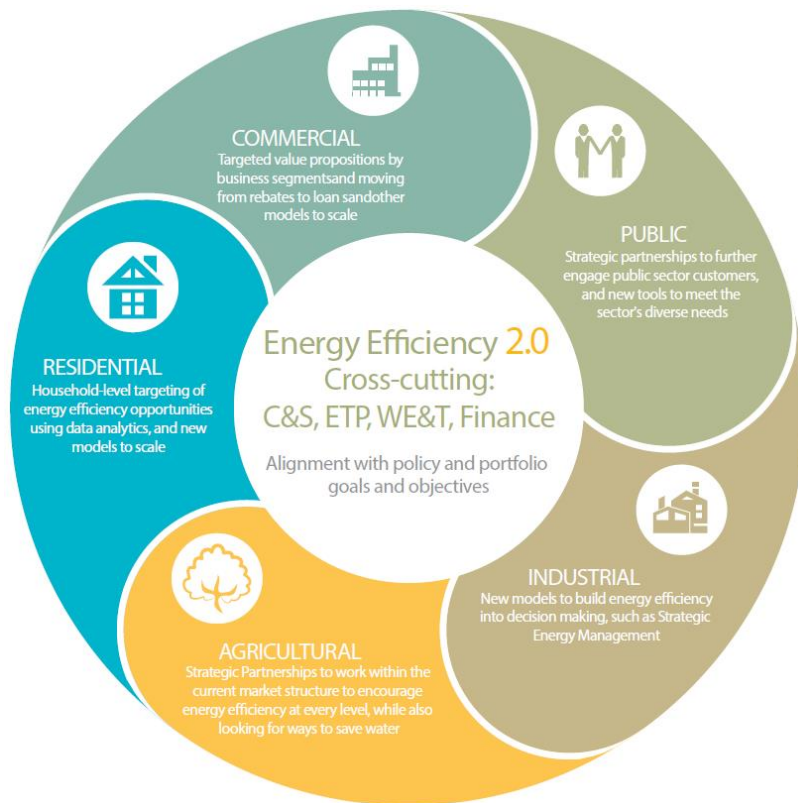
Not applicable.

5. **Quantitative Program Targets:** Provide estimated quantitative information on number of projects, companies, non-incentive customer services and/or incentives that program aims to deliver and/or complete annually. Provide references where available.

The C&S team will share quantitative information on the number of CASE studies and comment letters submitted in upcoming filings.

6. **Diagram of Program:** Provide a one-page diagram of the program including sub-programs. This should visually illustrate the program/sub-program linkages to areas such as:

- a. Statewide and individual IOU marketing and outreach
- b. Workforce Education & Training programs
- c. Emerging Technologies and Codes and Standards
- d. Integrated efforts across demand-side management programs



Programs	Residential Programs Single Family, Multi-Family	SMB Programs Regional Direct Install	Commercial Programs High Tech, Large Office, Retail, Healthcare, Hospitality	Industrial Programs Petroleum, Manufacturing	Agriculture Programs Food Processing, Dairies, Wineries, Crop Production, Greenhouses	Public Programs Local Partnerships, K-12, etc.	Statewide Programs	Codes & Standards	Workforce Education & Training	Emerging Technologies
Platforms ^a	Deemed									
	Custom (new construction, retrocommissioning, retrofit)									
	Meter-Based Savings (whole building, SEM, operational savings)									
	Behavior									
	Financing									
Enablers	Policy Regulatory changes	Analytics Customer targeting	Sales & Marketing Lead generation	M&V Real-time evaluation						

^a Platforms are how PG&E measures, pays for and claims energy savings.

7. Evaluation, Measurement & Verification (EM&V): Describe any process evaluation or other evaluation efforts that the program administrator (PA) or program implementor (PI) will undertake to identify the evaluation needs that the must be built into the program, clearly identifying who will be responsible for which evaluation activity. These might include:

- a. Data collection strategies embedded in the design of the program or intervention to ensure ease of reporting and near-term feedback, and
- b. Internal performance analysis during deployment
- c. Performance metrics
- d. All PAs should indicate what coordination support and funding, if any, they will provide to support program evaluation.

To help ensure quality assurance and effective evaluation, the IOUs will continue ongoing efforts to track and assess the effectiveness of the C&S Program in advocating for new codes.

The C&S Program will continue to support the impact evaluation efforts of the CPUC and its contractors by documenting code advocacy efforts. The IOUs coordinate with the CPUC and their impact evaluation contractors to ensure that sufficient data are being collected at the appropriate levels of detail to enable an estimation of energy savings related to codes and standards activities. This includes:

- Supporting the CPUC in their research effort to establish Title 20 and Title 24 baselines, and track changes in adoption and compliance over time.

- Providing appropriate program data, as well as encouraging the participation of vendors, contractors, building officials and others, as appropriate, in providing information for establishing baselines and changes in penetration over time.
- Provide proof of attribution to the CPUC through Code Change Savings Reports.

Additionally, formative research will be conducted to provide insight into emerging issues related to current and pending codes and standards. Specifically, research will be carried out to identify issues and trends appearing along the delivery chain for appliances as well as for building practices.

8. Normalized Metered Energy Consumption (NMEC): If NMEC is applicable please include a detailed Program-level M&V plan, as called for in the most recently updated NMEC Rulebook. The revised Rulebook includes requirements for Program-level M&V plans to be submitted as part of the Implementation Plan:

Not applicable for population or site level NMEC programs.

Program Manuals

All programs must have manuals uploaded in CEDARS to clarify the eligibility requirements and rules of the program for implementers and customers. Program rules must comply with CPUC policies and rules. Table templates are available at CEDARS. At minimum, manuals should include:

Not applicable.

For Programs That May Seek to Transition to the Market Transformation Framework per D.19-12-021

1. Present rationale for seeking to transition the program or program elements to the Market Transformation platform.

Not applicable.

2. Discuss the data collection and analysis activities that will ensure program (or program element) is prepared to transition to the Market Transformation platform. In particular, address how each element of the Market Transformation Agreement will be developed (see Appendix A of D.19-12-021), including but not limited to documentation of market barriers, development of baseline, schedule of milestones and metrics for tracking program progress and recognizing savings, etc.

Not applicable.