

Southern California Edison



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Implementation Plan

AB793 Pay for Performance Program

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¹ Guidance from D.15-10-028, Appendix 4

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CAEECC Review Draft

1. Program Information

a. Program Identification

Program Name	AB793 Pay for Performance
Program ID#	SCE-13-TP-024

b. Program Implementer

Program Implementor	Yes	No
SCE Only		
SCE – Statewide Lead		
Other PA – Statewide Lead		
Third Party	x	
Other		

c. SCE Business Plan Sector

SCE Business Plan Sector	Yes
Residential	x
Commercial	
Industrial	
Agricultural	
Public	
Codes & Standards	
Workforce Education & Training	
Finance	
Other	

d. Program Type

Program Type	Yes	No
Resource	x	
Non-Resource		x

e. Intervention Strategies

Primary Intervention Strategy	Yes	No
Upstream		x
Midstream		x
Downstream	x	
Direct Install		x

f. Projected Program Budget

Latest available program budget data is on CEDARS. (<https://cedars.sound-data.com/filings/list/>)

g. Savings Impact

Latest available program savings data is on CEDARS. (<https://cedars.sound-data.com/filings/list/>)

h. Program Effectiveness

Latest available program effectiveness data is on CEDARS. (<https://cedars.sound-data.com/filings/list/>)

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2. Implementation Plan Narrative

a. Program Description

Describe the program, its rationale, and objectives.

Southern California Edison Company (“SCE”) designs, administers, and implements a large portfolio of customer Energy Efficiency (EE) programs. SCE is launching a new Residential Customer Pay-for-Performance (P4P) Program (HomeIntel or Program) that will be designed, implemented and administered by Home Energy Analytics (HEA or Program Implementer).

In 2017, the California Public Utilities Commission (CPUC) issued Resolution E-4820, in the proceeding addressing Assembly Bill 793 (AB 793) which, among other things, directs SCE to implement new P4P programs targeting both Residential and Small Medium Business (SMB) customers. In 2017, SCE issued a Request For Offer (RFO) resulting in contract negotiations and award to HEA for the design, implementation and administration of the AB793 Pay for Performance Program. SCE’s Demonstrations and Pilots project management group (Project Team) has the responsibility for launching the new P4P programs, SCE’s Residential EE program management team will coordinate with HEA for ongoing operations during the contract term, and SCE’s Evaluation, Measurement and Verification (EM&V) team will assume the lead role for approving any related EE savings claims. The Program will provide services to assist residential customers to quickly and accurately understand their home’s energy usage and implement a cost-effective path to savings.

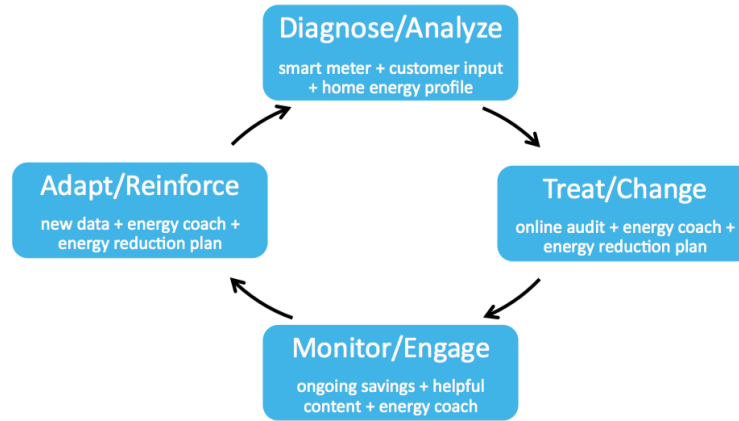
The goals of the Program are:

- Establish a scalable P4P Program model for residential EE to dramatically increase customer participation and measurable energy savings; and
- Effectively leverage a set of meter-based energy savings calculation methods to measure NMEC savings across a pool of participating customers.

The Program Implementer will work directly with SCE customers (“Participants”) to achieve these savings and assure their persistence. The Program Implementer’s Work will be dependent on certain tasks to be performed by SCE to support the Program. The Program Implementer’s obligations are subject to SCE’s performance of any tasks necessary for Program Implementer to perform the Work.

There are two (2) main components of the Program Implementer service to Participants:

1. Smart Audit – a web app that connects to hourly smart meter data, uses algorithms to break down total usage into actionable categories, and provides custom recommendations and monthly feedback on savings’ progress.
 - May include natural gas analysis through an existing integration with Southern California Gas Company’s hourly gas data.
2. Energy Coaches – Program Implementer’s support team to help Participants problem solve and implement home energy savings projects.



The Program is premised on three (3) points: every home has a unique energy profile, and therefore creating a custom and prioritized savings plan is key; there is an unmet need to tackle low cost, high return on investment (ROI) Behavioral, Retro-Commissioning, and Operational (BRO) measures; and a success of the Program is in solving the scale challenges associated with customer acquisition and service.

The Smart Audit creates a customer’s unique energy profile by breaking hourly consumption data down into the following five load categories:

1. Always On;
2. Recurring;
3. Variable;
4. Heating; and
5. Cooling.

The Program will break down energy use to identify opportunities for savings. Program Implementer will use each energy profile to help the Participant prioritize its savings’ opportunities. The Smart Audit highlights the highest priority load first and sorts recommendations by savings potential. The Advisor helps the customer focus on the changes that will move the needle most, provide quick wins, or both. This results in a different combination of potential actions for every customer, so customization is key.

The Program Implementer’s customer acquisition strategy targets residential customers with high electric base load, reaching them through free community outreach and direct online, mail and referral marketing. The most attractive Participants are those that have high energy bills and are interested in trying to reduce their energy consumption, but that don’t know how to approach the problem or aren’t focusing on the most effective measures to reduce usage. To identify these customers, Program Implementer will target particular neighborhoods and/or communities as approved by SCE, aided when possible by data from SCE, as set forth later in this document.

The Program payments will be made as a combination of Milestone payments and Pay-for-Performance payments. Program Implementer will meet energy savings goals each Program year, as set forth in the Statement of Work (SOW). To the extent that a Participant drops out of the Program or expected savings do not materialize, Program Implementer will have a Metered Reserve pool that can be used to replace energy savings by a Participant, subject to SCE’s approval. Payment terms are set forth in in the Purchase Order.

b. Program Delivery and Customer Services²

Describe how the energy efficiency (EE) program will deliver savings (upstream, downstream, direct install, etc.), how it will reach customers, and the services and it will provide. Describe all service and tools that are provided.

The AB793 Pay for Performance downstream program will:

- Promote Program and target SCE customers (“Participants”) through outreach activities in the community and partnering with city government.
- Provide ongoing savings analysis and monthly reports to Participants and Prospects (those in the Metered Reserve pool).
- Monitor actual changes in energy consumption for all Participants.
- Engage with Participants after Measure completion and revise action plans as needed to achieve savings.

The Program implementer:

- Must achieve the energy savings set forth in the Milestone section of the SOW, and as further detailed in Table 1 (Milestones) of the SOW.
- Will monitor aggregate energy use via CalTRACK on a regular basis (at least monthly).
- Will maintain sufficient Metered Reserves to replace lost savings as necessary over the Persistence of Savings time period.
- Determine that if energy savings has fallen below the required savings goals set forth in section Energy Savings Requirements of the SOW, Program Implementer is required to utilize Metered Reserves to replace such lost savings.
 - Augmentation lost savings by converting Metered Reserves to Participants where energy savings fall below required amounts.
- Shall report the following relevant project data for each Participant to SCE. All data must be provided in a CalTRACK csv file format (which SCE will provide) via a secure method.
 - Program Implementer ID
 - Project ID
 - SCE Customer Service Account ID Number (SAID)
 - Customer name, address and zip code
 - Initial Intervention Start Date (for HEA, this is the Smart Audit activation date)
 - Initial Intervention End Date (for HEA, this is usually the Smart Audit completion date)

² IP Guidance from D.15-10-028: “Describe how the energy efficiency program will deliver savings (upstream, downstream, direct install, etc.); how it will reach customers and the services that the program will provide. Describe all services and tools that are provided”

c. Program Design and Best Practices

Describe how the program overcomes the market barriers in the relevant market sector/end use. Describe why the program approach constitutes "best practices" or reflects "lessons learned." Provide references where available.

In line with the intent of AB793, the Pay for Performance program focuses the implementer's data analysis and energy consulting on opportunities that target behavioral changes. The primary market barrier is lack of information/awareness. Most residents are not aware that plug loads, and base loads in particular, constitute such a large portion of their energy consumption. HomeIntel targets homes with high plug load use to help residents reduce their energy consumption through no and low-cost actions. No EE program focuses specifically on reducing residential plug loads. This is a large and growing portion of the residential energy consumption.

HomeIntel consists of Smart Audit, an online energy analysis application and Energy Coaches. Smart Audit educates residents by using their home's energy profile based on their AMI data. Smart Audit prioritizes a list of energy saving measures based on the potential cost saving. Residents can choose to implement the recommendations on their own, or follow up with their energy coach by either email or phone, and even house visits for particularly complex homes. Smart Audit tracks changes in energy use and reports them to the resident so they constantly receive feedback and educational information. They can always check in with their Energy Coach.

d. Evaluation, Measurement, and Verification (EM&V):

Describe any process evaluation or other evaluation efforts that the PA will undertake. Identify the evaluation needs that the PA must build into the program. These might include:

- *Data collection strategies embedded in the design of the program or intervention to ensure ease of reporting and near term feedback*
- *Internal performance analysis during deployment*

i. Measurement of Savings

SCE and Program Implementer will use the open source CalTRACK system to determine energy savings of the Measures and overall project.

ii. Annual True-Up

An annual true-up shall be performed in accordance with the EM&V Plan (Appendix C) and will follow IMPV protocols and any other federal, state, or local regulations. SCE may employ a third party to perform the Verification of savings as part of the Annual true-up.

If, during annual true-up, measured aggregate savings falls below the level expected (Persistence of Savings) for all active Participants in the aggregate after accounting for any Metered Reserves used by HEA to replace savings losses, for any Program year, SCE may request repayment by HEA of the portion of Paid Savings that did not persist (in kWhs), at a rate of one fifth (1/5th) of the current price per kWh. SCE may offset future payments due to HEA for repayment and/or, at SCE's request, HEA will refund the amount due to SCE within 30 days of receiving an invoice from SCE.

iii. Energy Savings Calculation Dispute Resolution

- Both parties agree that the accuracy of CalTRACK system is of paramount importance to the long term success of the Program, providing that the methods for calculating NMEC across program participants is reviewed and agreed upon by both parties.
 - SCE or Program Implementer may at any time chose to review the methods and/or code in CalTRACK to ensure ongoing accuracy and consistency (SCE may employ a third party to perform this review).
- If HEA’s Smart Audit energy analysis results differ from CalTRACK, and HEA believes its internal results are more accurate than CalTRACK results, the following dispute resolution process will be utilized:
 1. Program Implementer will document the cause of the differing results.
 2. Program Implementer will identify Participant data that demonstrates the discrepancy in results, and when possible, Program Implementer will also demonstrate the same discrepancy using either a submetered data set or other means.
 3. Program Implementer will provide an algorithmic or building science-based justification for the requested change.
 4. Within 30 days, SCE will either implement the requested change in CalTRACK or provide a written response to Program Implementer with a data-based justification.
 5. SCE reserves the right to request elaboration or employment of another justification if there is any remaining dispute or disagreement to be solved.

If changes to CalTRACK are implemented using this dispute resolution process:

1. Aggregate energy savings will be recalculated.
2. Program Implementer will be paid for any increased savings.
3. SCE will have the right to offset any overpayments against future payments for any decrease in savings.

iv. Replacing Savings from Excluded Participants

To allow Program Implementer the opportunity to avoid payment reduction when Participants are excluded, and/or actual savings do not materialize as expected, Program Implementer may replace the Paid Savings attributed to those Participants with savings from Metered Reserves. The Enrollment Date for each of these new Participants from the Metered Reserve list will be provided by Program Implementer to SCE for review and approval. If a Metered Reserves customer replaces an existing Participant for which the 25% up-front payment was paid, there will not be a second Milestone Payment for the new Participant from the Meter Reserve pool. For avoidance of doubt, no Milestone Payments for will be made for Metered Reserves or Participants that enter the Program through the Metered Reserve pool to replace Participants for which a Milestone Payment has already been made.

e. Program Performance Metrics³

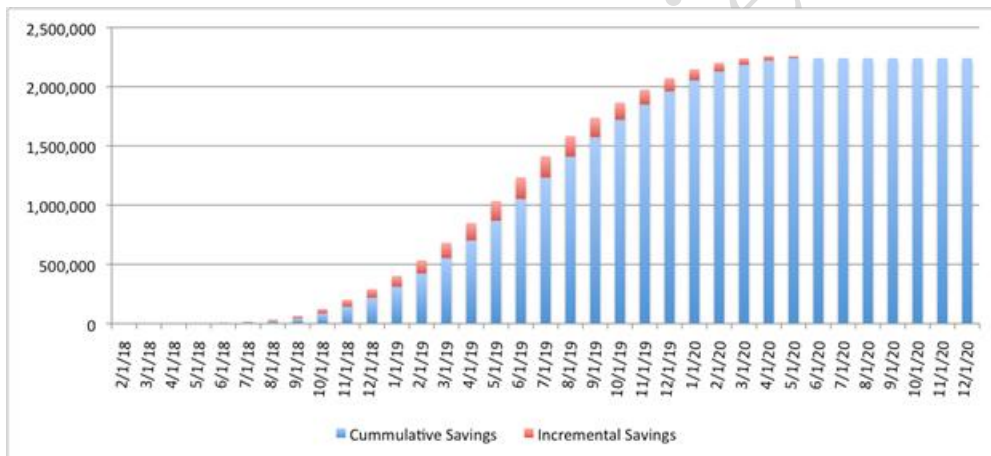
Describe the program performance metrics.

³ IP Guidance from D.15-10-028: “PAs will still need to set more granular metrics than just sector-level metrics, but they will do so in implementation plans, not business plans. It is in the implementation plans that we want to see at least one metric for each program/strategy/sub-sector/intervention strategy; more than one where appropriate.”; “Implementation plans will contain metrics, as already discussed. PAs are free to start with a clean slate in developing metrics and associated reporting requirements, but for all programs will continue to provide monthly cost reports, and for resource programs will provide monthly savings data as well.”

The program performance metrics are:

TRC Ratio	PAC Ratio	Electric Benefits	TRC Cost	PAC Cost
0.86	0.90	468,632	546,977	521,196

- SCE provided Program Implementer with a total of 20,000 high energy usage customers from Visalia/Kings/Tulare counties.
- Program outreach activities will begin with letter and phone calls to approximately 100 customers.
- Program Implementer may enroll any number of qualified Participants, beginning after the Notice to Proceed is issued, but no later than eighteen months from the start of the Program (i.e., during the Enrollment Period).
- SCE will pay Program Implementer for incremental realized verified savings, but there will be no payments for persistence of energy savings beyond the Analyzed Year. This is depicted in the chart below:



- (The program has not started as of September 1. The program implementer wanted to have SoCalGas on board so they could market as a combined electric/gas program. The program implementer is planning to begin outreach activities in September 2018.
- Energy savings as verified by CalTRACK
 - (CalTRACK is a set of methods for calculating site-based, weather-normalized, metered energy savings from an existing conditions baseline and applied to single family residential retrofits (or behavioral actions taken) using data from utility meters. CalTRACK also supports Pay-for-Performance programs by tracking metered savings using calculations that are transparent and replicable). HEA has previous experience in measuring savings capability and defining methods for validating third party tools that utilize smart meter data and savings calculations. This experience has allowed HEA to use the CalTRACK system. It is an open source system, available for all parties to download and install, providing full transparency into the calculation methods used for normalized metered energy consumption.
- AB793 Pay for Performance is the first residential P4P energy savings program run by SCE.

f. Quantitative Program Targets

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

First year (2019) estimated savings:

1 st Year Gross kWh	1 st Year Gross kW	1 st Year Net kWh	1 st Year Net kW
1,740,000	-	1,827,000	-

Home Energy Analytics has committed to providing 2.4 GWh of savings as stated in the contract over three years.

Table of Program Targets

Target Incremental Savings from Baseline	Price paid to HEA per kWh	Payment to HEA at 100% of Savings
2.24 GWH	\$0.40	\$900,000

Savings are expected to produce a Total Resource Cost (TRC) of 1.1 as noted in the Program proposal submitted by HEA. SCE reserves the option to re-visit the TRC calculation using the Cost Effectiveness Tool (CET) with the Program Implmenter to ensure savings targets are being met at the required TRC threshold.

Timing of savings:

	2017	2018	2019	2020	2021
Total Budget	\$0	\$32,950	\$790,154	\$65,908	n/a
Gross Savings – kWh	0	220,000	1,740,000	300,000	0
Gross Savings: – kW	0	0	0	0	0
Participating Sites	--	Estimated 100	1,200	600	

Pay-for- Performance Payment Deliverables

- Invoices will be submitted, and payments will be made, in accordance to the SCE’s Terms & Conditions agreed to and executed by both Parties, except as otherwise set forth herein. SCE will pay Program Implementer on a quarterly basis for the first six months from NTP and then monthly

thereafter, based on actual aggregated savings, as demonstrated in the invoices submitted by Program Implementer to SCE and approved by SCE, in accordance with SCE's Terms and Conditions.

- Milestone Payments will be paid with the regular invoicing schedule and terms. Milestone Payments will be calculated based on 25% of expected savings for all newly enrolled Participants, based on their baseline electric use. Expected savings will equal 8% of electric use of enrolled Participants during the Baseline Year. Adjustments may be made based on actual conditions and may vary by Participant.
- Payable Energy Savings amounts will be calculated based on measured incremental savings across all Participants at the rates defined above, net of Milestone Payments already received by Program Implementer.
- Payments shall be made in accordance with proposed payment structure and will be validated regularly using AMI data.
- Quarterly payments will continue for six months from Program launch. Beginning six months from the Notice to Proceed, SCE will make monthly payments to Program Implementer until either
 1. The targets defined above have been met; or
 2. 13 months after the end of the Enrollment Period. There will be no payments for Persistence of Savings beyond the Analyzed Year.

g. Pilots

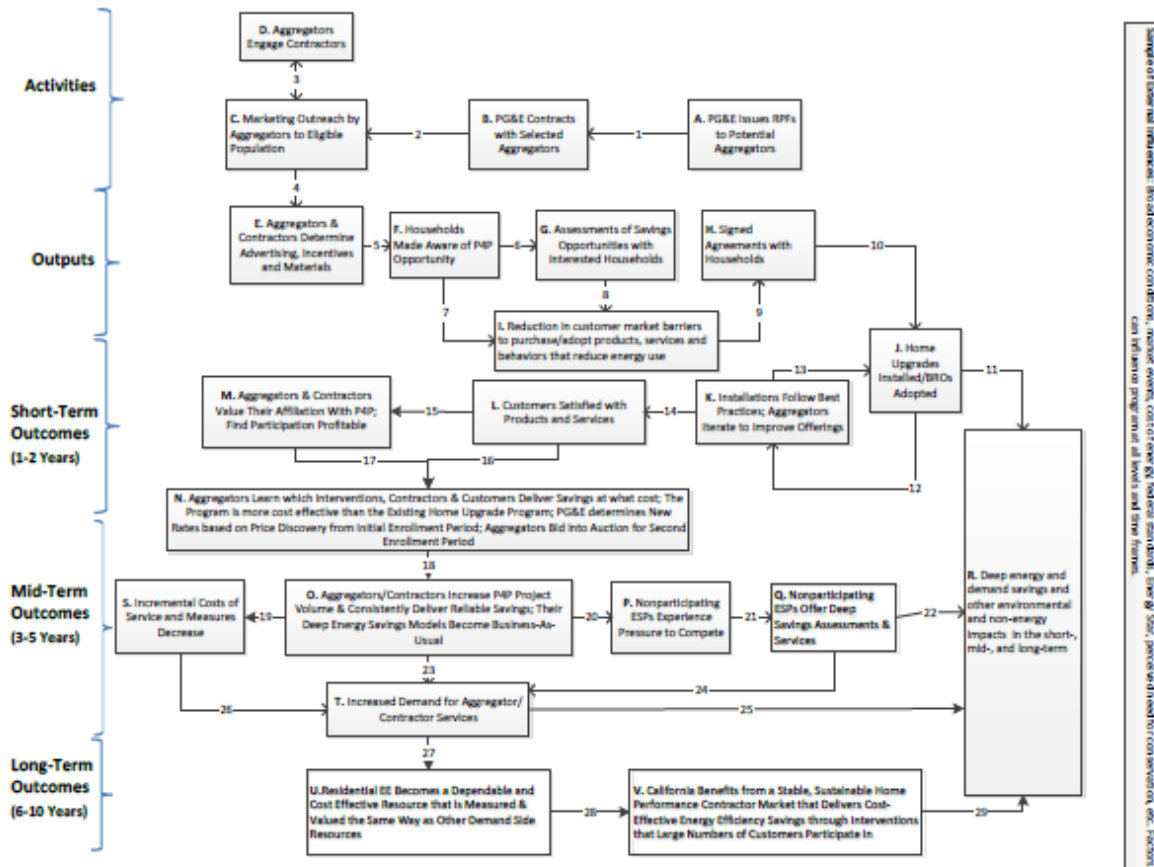
Please describe any pilot projects that are part of this program, and explain the innovative characteristics to these pilots. The inclusion of this description should not replace the Ideation Process requirements currently agreed upon by the California Public Utilities Commission (CPUC or "Commission") staff and Investor Owned Utilities (IOUs). The Ideation Process is still undergoing refinements and will be further discussed as part of Phase III of this proceeding.

No pilot projects are part of this program.

h. Program Logic Model

Model should visually explain underlying theory supporting the sub-program intervention approach, referring as needed to the relevant literature (for example: past evaluations, best practices documents, journal articles, books, etc.).

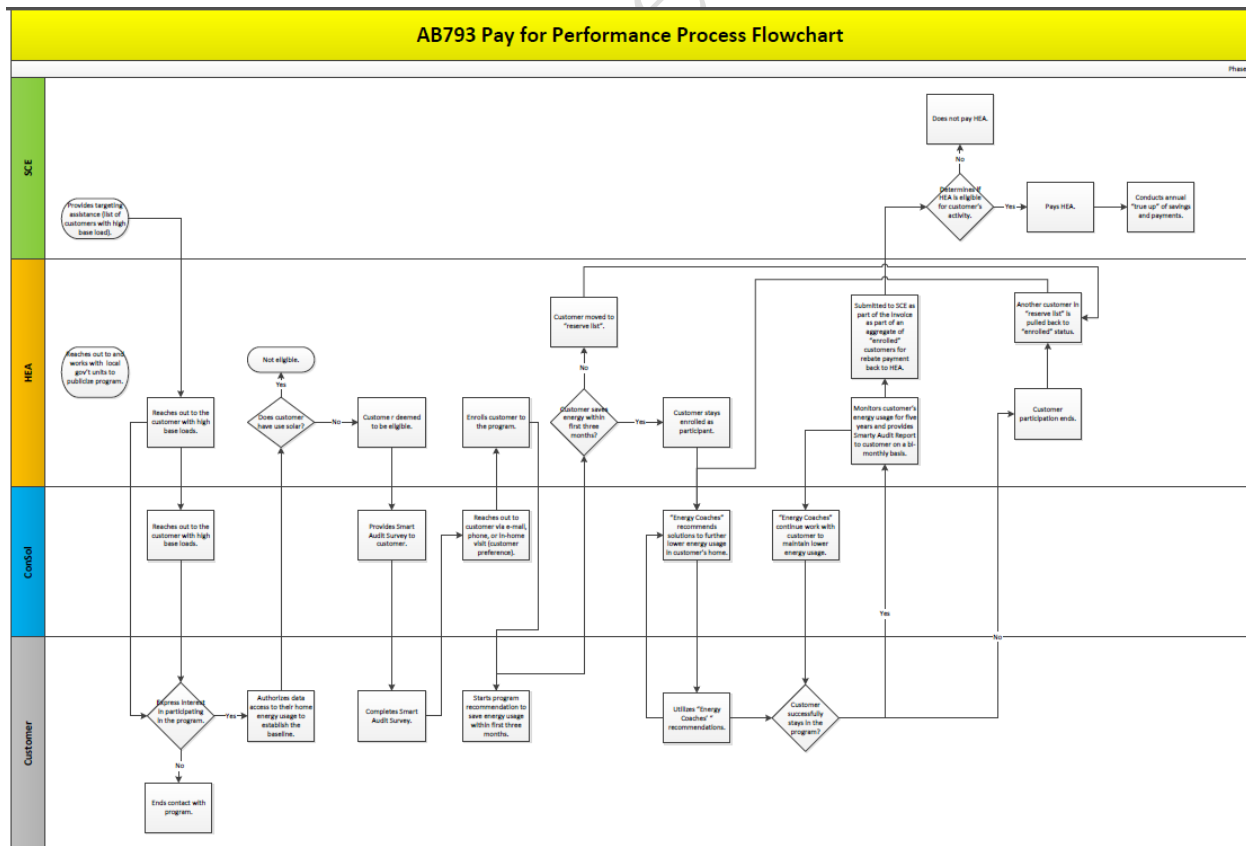
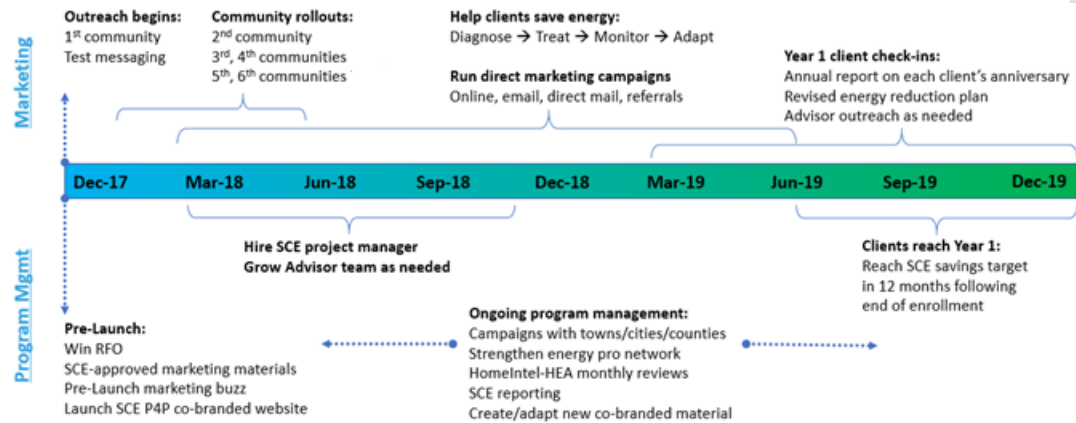
Figure 1: P4P Logic Model



i. Process Flow Chart

Provide a sub-program process flow chart that describes the administrative and procedural components of the sub-program. For example, the flow chart might describe:

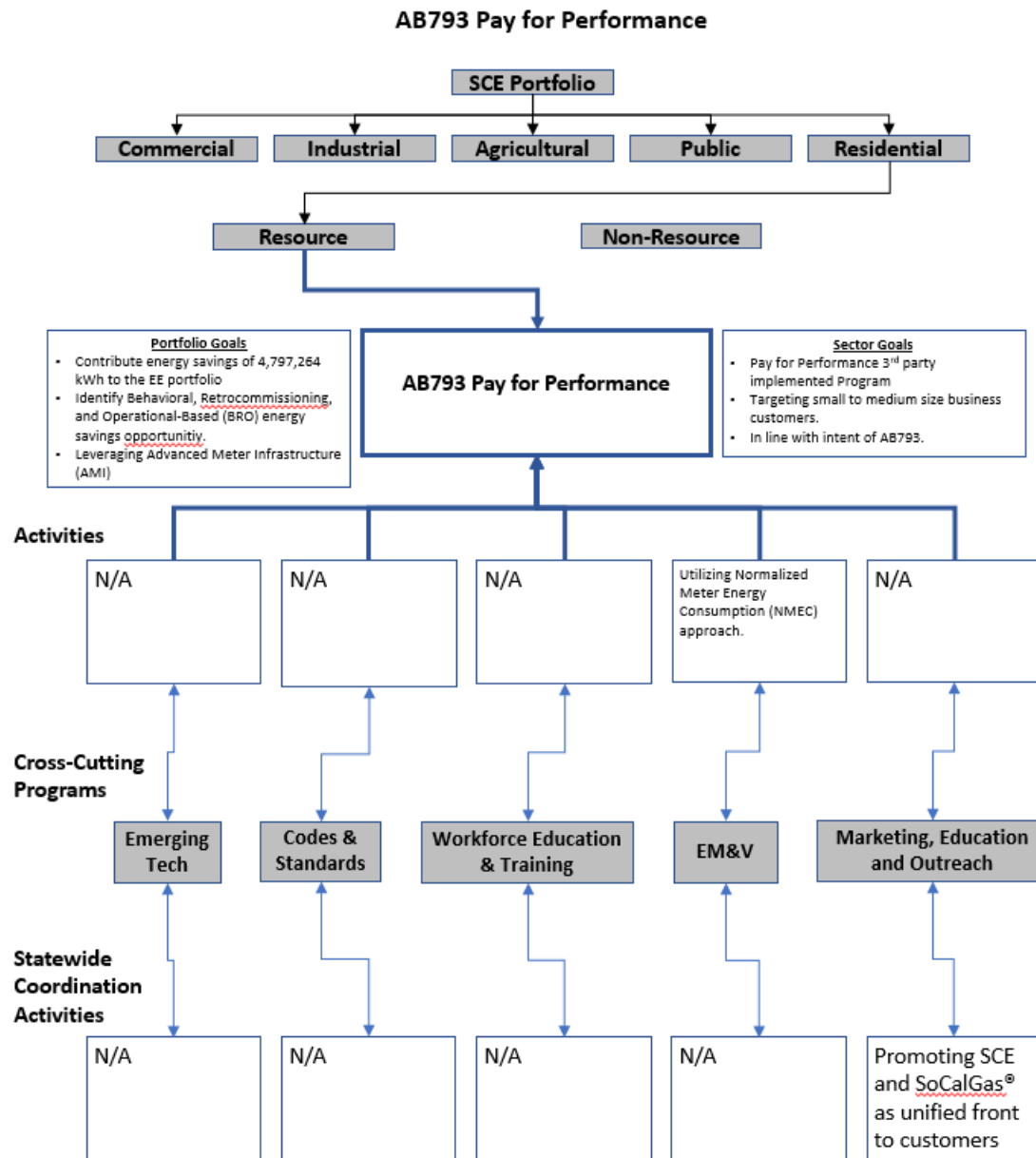
- A customer’s submittal of an application
- The screening of the application,
- The approval and/or disapproval of an application,
- Verification of purchase or installation,
- The processing of incentive payments, and
- Any quality control activities.



j. Diagram of Program

Please provide a one page diagram of the program including subprograms. This should visually illustrate the program/sub-program linkages to areas such as:

- Statewide and individual IOU marketing and outreach
- Workforce, Education and Training (WE&T) programs
- Emerging Technologies (ET) and Codes and Standards (C&S)
- Coordinated approaches across IOUs
- Integrated efforts across Demand Side Management (DSM) programs



k. Additional information

Include additional information as required by Commission decision or ruling. As applicable, indicate decision or ruling with page numbers.

California Assembly Bill 793 (AB793), and the associated California Public Utilities Commission's (CPUC or Commission) Resolution E-4820, mandates all IOUs to develop and implement incentive programs targeting residential and Small and Medium Business (SMB) customers who acquire Energy Management Technologies (EMTs). Pursuant to Resolution E-4820, program offerings should include a mechanism to incentivize residential and SMB customers to acquire EMT's to meet Energy Efficiency (EE) savings goals under a pay for performance model.

l. For Market Transformation Programs Only⁴**i. Quantitative Baseline and Market Transformation Information**

Provide quantitative information describing the current EE program baseline information (and/or other relevant baseline information) for the market segment and major sub-segments, as available.

ii. Market Transformation Strategy

Provide a market characterization and assessment of the relationships and/or dynamics among market actors, including identification of the key barriers and opportunities to advance DSM technologies and strategies. Describe the proposed intervention(s) and its/their intended results, and specify which barriers the intervention is intended to address.

⁴ Ex) Codes & Standards program, Emerging Technologies program, Workforce Education & Training program, etc.

3. Appendix: Supporting Information and Documents

a. Program Manuals and Program Rules

All programs must have manuals to clarify for implementers and customers the eligibility requirements and rules of the program. At minimum, manuals should include:

b. Incentive Tables, Workpapers, Software Tools

Provide a summary table of measures and incentive levels, along with links to the associated workpapers.