

PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

ENERGY DIVISION

RESOLUTION E-4820

April 6, 2017

R E S O L U T I O N

Resolution E-4820. Request for Approval of Pacific Gas and Electric, San Diego Gas & Electric, Southern California Edison and Southern California Gas' Assembly Bill 793 (AB 793) Advice Letters (ALs).

PROPOSED OUTCOME:

- Approves with modifications Pacific Gas and Electric (PG&E), San Diego Gas & Electric (SDG&E), Southern California Edison (SCE) and Southern California Gas Company's (SoCalGas) proposed AB 793 ALs and requires each of the IOUs' to file Tier 2 ALs to demonstrate compliance with the Commission directed modifications within 45 days of the approval of this Resolution.

SAFETY CONSIDERATIONS:

- Energy management technologies (EMTs) incentivized by the AB 793 legislation can have several impacts on safety, including:
 - The devices may be able to allow customers to detect gas leaks or other harmful appliance malfunctions by monitoring their energy use remotely.
 - The customer may also be able to detect remotely whether an appliance is operating when it should not be and turn it off or control that device's operations.
 - EMTs are often packaged with other devices that monitor security and/or indoor air quality.

ESTIMATED COST:

- Actual costs will be determined upon approval of the IOUs' AB 793 Compliance Filings.

PG&E AL 3744-G-A/4886-E-A, PG&E AL 3744-G-B/4886-E-B, PG&E AL 3746-G-A/4890-E-A, SCE AL 3446-E-A, SCE AL 3446-E-B, SCE AL 3449-E-A, SDG&E AL 2937-E-A/2500-G-A, SDG&E AL 2937-E-B/2500-G-B, SDG&E AL 3449-E-A, SoCalGas AL 5003-G-A, SoCalGas AL 5003-G-B and SoCalGas AL 5012-G-A/NS2

On August 1, 2016, PG&E filed Advice Letter (AL) 3744-G/4886-E, SDG&E filed AL 2937-E/2500-G, SCE filed AL 3446-E and SoCalGas filed AL 5003-G proposing implementation plans to satisfy the requirements of AB 793.

By supplemental Advice Letters: PG&E filed 3744-G-A/4886-E-A on August 8, 2016; SDG&E filed 2937-E-A/2500-G-A on August 5, 2016; SCE filed 3446-E-A filed on August 9, 2016; and SoCalGas filed 5003-G-A and 5012-G, which also included PG&E AL 3746-G/4890-E, SDG&E AL 2505-G/2941-E and SCE AL 3449-E on August 11, 2016. The following partial supplemental ALs were filed on September 20, 2016: PG&E 3744-G-B/4886-E-B, SDG&E 2937-E-B/2500-G-B, SoCalGas 5003-G-B and SoCalGas supplemental AL 5012-G-A, which included PG&E AL 3746-G-A/4890-E-A, SDG&E AL 2505-G-A/2941-E-A and SCE AL 3449-E-A, which are the joint IOU marketing plan. SCE 3446-E-B was filed on September 27, 2016.

SUMMARY

Assembly Bill (AB) 793 (Stats. 2015) directed the investor-owned electric and natural gas utilities (IOUs) to develop a program in their demand side management portfolios to provide incentives to residential and small and medium business (SMB) customers to acquire energy management technologies (EMTs)¹ by January 1, 2017. AB 793 also required the IOUs to develop a plan by September 30, 2016, to educate residential and SMB customers about incented EMT offerings available to them.

We envision this legislation and subsequent programs as an important mandate to expand the IOUs' EE portfolios to offer rebated EMTs that are attainable by

¹ For the purposes of AB 793, "energy management technology" may include products, services, or software that allow customers to better understand and manage electricity or natural gas use in the their homes or places of business.

PG&E AL 3744-G-A/4886-E-A, PG&E AL 3744-G-B/4886-E-B, PG&E AL 3746-G-A/4890-E-A, SCE AL 3446-E-A, SCE AL 3446-E-B, SCE AL 3449-E-A, SDG&E AL 2937-E-A/2500-G-A, SDG&E AL 2937-E-B/2500-G-B, SDG&E AL 3449-E-A, SoCalGas AL 5003-G-A, SoCalGas AL 5003-G-B and SoCalGas AL 5012-G-A/NS2

most residential and SMB customers, save energy, educate customers on how to reduce their energy consumption and generally have a quick payback period for the customer's investment. Additionally, we encourage the IOUs to strive to make the AB 793 programs vendor neutral, and also technology neutral for the directed pay-for-performance programs. While we understand that this may be challenging in the initial phased roll out of programs, we expect the IOUs to transition towards this as soon as possible and also move towards increased competitive solicitations by 3rd Parties as directed in D.16-08-019.

On August 1, 2016 PG&E filed advice letter (AL) 3744-G/4886-E, SDG&E filed AL 2937-E/2500-G, SCE filed AL 3446-E and SoCalGas filed AL 5003-G proposing implementation plans to satisfy the requirements of AB 793. The IOUs filed five supplemental ALs: PG&E 3744-G-A/4886-E-A, filed on August 8, 2016; SDG&E 2937-E-A/2500-G-A, filed August 5, 2016; SCE 3446-E-A on August 9, 2016. On August 11, 2016 SoCalGas filed AL 5003-G-A and AL 5012-G, which included PG&E AL 3746-G/4890-E, SDG&E AL 2505-G/2941-E and SCE AL 3449-E on August 11, 2016. The SoCalGas AL 5012-G included the statewide marketing plan and local marketing plan for SoCalGas and PG&E AL 3746-G/4890-E, SDG&E AL 2505-G/2941-E and SCE AL 3449-E included the utility's local marketing plans.

The following partial supplemental ALs were filed on September 20, 2016: PG&E 3744-G-B/4886-E-B, SDG&E 2937-E-B/2500-G-B, SoCalGas 5003-G-B and SoCalGas supplemental AL 5012-G-A, which included PG&E AL 3746-G-A/4890-E-A, SDG&E AL 2505-G-A/2941-E-A and SCE AL 3449-E-A. SCE 3446-E-B was filed on September 27, 2016.

This Resolution approves with modifications the following AB 793 ALs: PG&E AL 3746-G-A/4886-E-A; SCE AL 3446-E-A; SDG&E AL 2937-E-A/2500-G-A and SoCalGas AL 5003-GA and partial supplemental SoCalGas AL 5003-G-B. In addition the marketing AB 793 ALs are also approved with modification, including: PG&E 3746-G-A/4890-E-A and partial supplemental PG&E AL 3746-G-B/4886-E-B; SCE AL 3449-E-A and partial supplemental SCE AL 3446-E-B; SDG&E AL 2505-G-A/2941-E-A and partial supplemental SDG&E AL

PG&E AL 3744-G-A/4886-E-A, PG&E AL 3744-G-B/4886-E-B, PG&E AL 3746-G-A/4890-E-A, SCE AL 3446-E-A, SCE AL 3446-E-B, SCE AL 3449-E-A, SDG&E AL 2937-E-A/2500-G-A, SDG&E AL 2937-E-B/2500-G-B, SDG&E AL 3449-E-A, SoCalGas AL 5003-G-A, SoCalGas AL 5003-G-B and SoCalGas AL 5012-G-A/NS2

2937-E-B/2500-G-B and SoCalGas 5012-G-A and partial supplemental SoCalGas AL 5003-G-B. All the approved ALs require each of the IOUs to file Tier 2 ALs to demonstrate compliance with the Commission directed modifications within 45 days of the approval of this Resolution.

BACKGROUND

AB 793 was signed into law by Governor Brown on October 8, 2015, adding Section 717 to the Public Utilities Code (P.U. Code). The statute require the Commission to order electric and gas corporations to develop a program no later than January 1, 2017, to provide incentives to residential or SMB customers to acquire EMTs, and to develop a plan to educate these customers about the incentive program by September 30, 2016. Section 717 states:

“(a) The Commission shall require an electrical or gas corporation to do all of the following pursuant to AB 793:

- (1) Develop a program no later than January 1, 2017, within the electrical or gas corporation’s demand-side management programs authorized by the commission, to provide incentives to a residential or small or medium business customer to acquire energy management technology for use in the customer’s home or place of business. The electrical or gas corporation may allow third parties or local governments to apply for incentives on behalf of customers. The electrical or gas corporation shall work with third parties, local governments, and other interested parties in developing the program. The electrical or gas corporation shall establish incentive amounts based on savings estimation and baseline policies adopted by the commission.*
- (2) Develop a plan by September 30, 2016, to educate residential customers and small and medium business customers about the incentive program developed pursuant to paragraph (1). The commission may require that the plan be integrated into,*

PG&E AL 3744-G-A/4886-E-A, PG&E AL 3744-G-B/4886-E-B, PG&E AL 3746-G-A/4890-E-A, SCE AL 3446-E-A, SCE AL 3446-E-B, SCE AL 3449-E-A, SDG&E AL 2937-E-A/2500-G-A, SDG&E AL 2937-E-B/2500-G-B, SDG&E AL 3449-E-A, SoCalGas AL 5003-G-A, SoCalGas AL 5003-G-B and SoCalGas AL 5012-G-A/NS2

or coordinated with, any education campaign required by the commission.

(3) Annually report to the commission on actual customer savings resulting from the incentive program established pursuant to this section. The commission shall evaluate all electrical or gas corporation energy savings claims achieved pursuant to the incentive program in a manner consistent with Commission-adopted evaluation protocols and determine if the program shall continue or be modified.

(b) For purposes of this section, ‘energy management technology’ may include a product, service, or software that allows a customer to better understand and manage electricity or gas use in the customer’s home or place of business.

(c) Nothing in this section shall be construed to amend or limit the ability of a community choice aggregator to apply to administer energy efficiency or conservation program or a demand-side management program as set forth in Section 381.1.”

AB 793 also amends Section 2790 of the P.U. Code, expanding the definition of weatherization services for low-income customers to include EMTs.²

A Joint Ruling from the assigned Administrative Law Judges (ALJs) filed on June 10, 2016³ to the energy efficiency (EE) proceeding Rulemaking (R).13-11-005

² The Joint Ruling acknowledges that AB 793 also adds Public Utilities Code Section 2790, which addresses requirements for weatherization services to low-income consumers. However, the Ruling states that these weatherization-related requirements are being addressed separately in Application (A.) 14-11-007, which was addressed by D. 16-11-022.

³ Joint Ruling available at: <http://docs.cpuc.ca.gov/RulingSearchForm.aspx> (see Ruling filed by ALJ HYMES/CPUCon 6/10/2016 Conf#98775).

PG&E AL 3744-G-A/4886-E-A, PG&E AL 3744-G-B/4886-E-B, PG&E AL 3746-G-A/4890-E-A, SCE AL 3446-E-A, SCE AL 3446-E-B, SCE AL 3449-E-A, SDG&E AL 2937-E-A/2500-G-A, SDG&E AL 2937-E-B/2500-G-B, SDG&E AL 3449-E-A, SoCalGas AL 5003-G-A, SoCalGas AL 5003-G-B and SoCalGas AL 5012-G-A/NS2

and demand response (DR) proceeding R.13-09-011 required PG&E, SDG&E, SCE and SoCalGas to each file Tier 2 ALs on August 1, 2016, that include proposals to comply with AB 793 that are comprehensive, innovative, and scalable, and that are responsive to the needs of the marketplace. The Joint Ruling identified specific items that should be proposed in each of the IOUs' proposals:

- “1. Strategies for increasing participation and deployment of current demand-side programs and offerings that meet the Legislation’s definition of an energy management technology;*
- 2. A list of all energy management technology programs and offerings that are currently not in the IOU portfolios, but will be rebated and available on January 1, 2017;*
- 3. A comprehensive list of all energy management technology programs and offerings that meet the objectives of Section 717, but that the IOUs will not plan to launch until after January 1, 2017. For these programs and offerings, the IOUs shall provide timelines for launch and necessary actions to offer the product(s);*
- 4. Information on all energy management technology products that are currently part of the IOU programs or will be part of the programs on January 1, 2017, with associated rebates, budgets, projected uptake, and target market for all programs and offerings;*
- 5. A proposal for a process for reporting and tracking of Section 717 program accomplishments and savings to the Commission;*
- 6. A list of any and all proposals to implement Section 717 which may be executed in cooperation with all regional energy networks, community choice aggregators, and/or publicly-owned utilities; and*
- 7. A robust two-year marketing plan for energy management technologies that includes the following:*

PG&E AL 3744-G-A/4886-E-A, PG&E AL 3744-G-B/4886-E-B, PG&E AL 3746-G-A/4890-E-A, SCE AL 3446-E-A, SCE AL 3446-E-B, SCE AL 3449-E-A, SDG&E AL 2937-E-A/2500-G-A, SDG&E AL 2937-E-B/2500-G-B, SDG&E AL 3449-E-A, SoCalGas AL 5003-G-A, SoCalGas AL 5003-G-B and SoCalGas AL 5012-G-A/NS2

- *Strategies to be employed*
- *Metrics and targets*
- *Partnerships*

All of the IOUs timely filed their initial AB 793 ALs, on August 1, 2016, as directed in the Joint Ruling. The IOUs AB 793 filings included:

- Existing products or programs that could be considered EMT offerings
- Proposed EMT offerings for launch by January 1, 2017
- EMT offerings in development for after January 1, 2017
- Joint IOU Marketing Plan and PG&E's Local Market Facilitation Plan
- Evaluation Measurement and Verifications Plans

IOU Proposals in Supplemental AB 793 ALs

PG&E's AB 793 Offerings

PG&E's AB 793 ALs 3744-G/4886-E and supplementals 3744-G-A/4886-E-A and 3744-G-B/4886-E-B include new residential and SMB offerings and software as a service their proposed initial roll out late 2016 / early 2017. For the residential sector PG&E proposes offering a \$50 rebate to assist customers in acquiring eligible smart thermostats. PG&E also plans to offer the WeatherBug smart thermostat assessment, which is a free service that adjusts thermostat set points using local weather data to optimize customers' energy use. PG&E also plans to offer a randomized control design for Nest smart thermostat customers called the Nest Seasonal Saver, which gradually makes automated adjustments to the thermostat set points and run times to optimize customers' energy use. Then the random control design compares energy consumption to a sample of Nest customers who don't have the algorithm to judge if additional savings can be achieved.

In addition, PG&E's proposal includes offering automated DR (ADR) to the residential sector, which provides incentives and technical assistance for customers to acquire EMTs and enable them to perform DR. Customers who sign up to participate in ADR will receive automated event signals from PG&E

PG&E AL 3744-G-A/4886-E-A, PG&E AL 3744-G-B/4886-E-B, PG&E AL 3746-G-A/4890-E-A, SCE AL 3446-E-A, SCE AL 3446-E-B, SCE AL 3449-E-A, SDG&E AL 2937-E-A/2500-G-A, SDG&E AL 2937-E-B/2500-G-B, SDG&E AL 3449-E-A, SoCalGas AL 5003-G-A, SoCalGas AL 5003-G-B and SoCalGas AL 5012-G-A/NS2

that will initiate pre-programmed DR strategies. PG&E's final proposed program offering for the residential sector is the Time of Use (TOU) smart phone app technology, which will assess customer acceptance of a multi-functional smart phone app that will convey a variety of useful information to TOU participants. This information may include pricing information, TOU-specific performance feedback, and energy-saving tips informed by user-specific end use load disaggregation features to encourage energy savings or load shifting.

For the SMB sector, PG&E plans to offer bill forecasts, which is a tool that provides a forecast of a customer's bill as early as seven days into the billing cycle, a comparison with the same month's bill from the previous year, and detailed information about what is driving the changes in a customer's bill. Finally, PG&E plans to offer energy alerts, which allow SMB customers to set a monthly bill alert amount and get notified when their bill is projected to exceed that amount. Energy Alerts can be sent after the first week of a billing cycle when a customer's energy use is projected to exceed the amount they have specified. Energy Alerts can be delivered via email, text or automated phone message based on the customer's preference. These alerts help customers reduce their energy bills by setting goals and avoid high bills through early notification.

SCE's AB 793 Offerings

SCE's AB 793 ALs 3446-E and supplementals 3446-E-A and 3446-E-B propose three programs that SCE claimed would be available beginning January 1, 2017. First, SCE proposes a \$50 incentive for the purchase of a qualifying smart thermostat. They also propose offering Tier II Advanced Power Strips, which can detect when an appliance has gone from operational to idle mode and can then disable the outlet and cut the device's power supply to save on idle loads, to residential and small/medium business customers. Finally, SCE will initiate a behavior points and rewards program in which customers will earn points for taking SCE selected actions such as completing an audit or enrolling in EE programs. The selected customer can exchange earned points for gift cards.

In addition, SCE proposes to launch the following programs throughout 2017. SCE proposes a smart plug program to introduce new power strips, outlets and

PG&E AL 3744-G-A/4886-E-A, PG&E AL 3744-G-B/4886-E-B, PG&E AL 3746-G-A/4890-E-A, SCE AL 3446-E-A, SCE AL 3446-E-B, SCE AL 3449-E-A, SDG&E AL 2937-E-A/2500-G-A, SDG&E AL 2937-E-B/2500-G-B, SDG&E AL 3449-E-A, SoCalGas AL 5003-G-A, SoCalGas AL 5003-G-B and SoCalGas AL 5012-G-A/NS2

switches in 2017. SCE also proposes smart or connected lighting, which use sensors, microprocessors and controllable switches or relays that offer automated control functionality (such as scheduling, occupancy control, and daylight harvesting) into traditional lighting solutions. SCE plans to launch smart or connected appliances, which have the capability to receive, interpret and act on a signal received from a utility, third party energy service provider or home energy management device, and automatically adjust their operations depending on both the signal's contents and settings from the customer preference. SCE's final proposed offering is a suite of connected whole home bundles, which includes a combination of software, hardware, and embedded cloud systems to create a turnkey smart home solution that manages interactions between existing smart hardware and allows customers to manage the actions of connected devices.

SoCalGas' AB 793 Offerings

SoCalGas' AB 793 AL 5003-G and supplementals 5003-G-A and 5003-G-B propose an integrated multi-measure program that requires the home owner to incorporate at a minimum three different smart EMTs that encourage electric, gas as well as water savings. In addition, customers will need to download a mobile/web application that will allow them to track and monitor their energy consumption. Finally, SoCalGas proposes a commercial lodging program that will encourage and assist medium commercial hotel owners to incorporate EMTs while also improving their overall building performance with existing measures and optimizing their energy usage. This program's incentives will be based on a metered approach to calculating savings or a co-payment equal to a percentage of the investment in energy management system purchased.

SDG&E's AB 793 Offerings

SDG&E AB 793 AL 2937-E/2500-G and supplementals 2937-E-A/2500-G-A and 2937-E-B/2500-G-B plans on initially offering a smart thermostat rebate of \$50 on qualifying smart thermostats. SDG&E also proposes a rebate for customers who own a smart thermostat who enroll in TOU rates. Finally, SDG&E is reviewing its Innovative Designs for Energy Efficiency Activities (IDEEA) 365 proposals

PG&E AL 3744-G-A/4886-E-A, PG&E AL 3744-G-B/4886-E-B, PG&E AL 3746-G-A/4890-E-A, SCE AL 3446-E-A, SCE AL 3446-E-B, SCE AL 3449-E-A, SDG&E AL 2937-E-A/2500-G-A, SDG&E AL 2937-E-B/2500-G-B, SDG&E AL 3449-E-A, SoCalGas AL 5003-G-A, SoCalGas AL 5003-G-B and SoCalGas AL 5012-G-A/NS2

that can provide EMT that will meet the AB 793 requirements for residential customers.

Additionally, SDG&E proposes to a phased launch of their small commercial energy management program, which would provide participants an incentive payment to help offset the cost of acquiring either software or a cloud based application that captures all their energy usage and matches the usage with the effect of a TOU rate so that the customer can get a better understanding of the cost of running the energy portion of their business. SDG&E also proposes offering a number of other products, such as smart thermostats, rebates for integrating lighting technology with Wi-Fi connectivity and smart HVAC zoning systems, which provide room by room temperature controls.

AB 793 Joint and Local Marketing Plans

On August 11, 2016 SoCalGas filed AL 5012-G and on September 20, 2016 SoCalGas filed supplemental AL 5012-G-A. The supplemental AL also included PG&E AL 3746-G-A/4890-E-A, SDG&E AL 2505-G-A/2941-E-A and SCE AL 3449-E-A, which are the IOUs' joint and local AB 793 marketing plans. In addition, PG&E 3744-G-B/4886-E-B, SDG&E 2937-E-B/2500-G-B, and SoCalGas 5003-G-B were filed as partial supplemental ALs on September 20, 2016. Those included the utilities' local marketing plans. On September 27, 2016, SCE filed partial supplemental 3446-E-B, which included its local marketing plan.

The joint marketing plans contained detailed assumptions about the direction in which the marketplace for EMTs is headed in the state and current market barriers for EMTs that the joint plan seeks to overcome. In addition, the plans put forward a statewide approach to marketing EMTs that includes specific approaches, goals, objectives and how best to target the residential, low income and SMB customer market segments. The plans suggest approaches to integrate with the statewide marketing effort under Energy Upgrade California, coordination with residential rate reform, and metrics and performance indicators on how the IOUs could evaluate the statewide efforts' success in encouraging the adoption of EMTs. Finally, each of the IOUs also included local marketing and outreach plans to be used in its unique service territory. These

PG&E AL 3744-G-A/4886-E-A, PG&E AL 3744-G-B/4886-E-B, PG&E AL 3746-G-A/4890-E-A, SCE AL 3446-E-A, SCE AL 3446-E-B, SCE AL 3449-E-A, SDG&E AL 2937-E-A/2500-G-A, SDG&E AL 2937-E-B/2500-G-B, SDG&E AL 3449-E-A, SoCalGas AL 5003-G-A, SoCalGas AL 5003-G-B and SoCalGas AL 5012-G-A/NS2

localized plans take into consideration differing geographic considerations, customer market segments and makeup, the local media landscape, climate differences and current EMT penetration.

NOTICE

Notices of AB 793 ALs were made by publication in the Commission's Daily Calendar. The IOUs state that a copy of the AB 793 ALs were mailed and distributed in accordance with Section 4 of General Order 96-B.

PROTESTS

Mission:data timely filed a protest to all of the AB 793 ALs on August 29, 2016. On September 6, 2016, PG&E, SCE, SoCalGas, and SDG&E all timely filed replies to the Mission:data protest.

Mission:data's Protest

Mission:data protested all of the IOUs' AB 793 ALs stating the "basis and subject matter for the protest is the same for each of the IOUs' AB 793 ALs."⁴

Mission:data believes the AB 793 ALs: 1) do not adequately consider or promote offerings that empower consumers with their own usage data made available by Advanced Metering Infrastructure (AMI); 2) fail to adequately collaborate with third parties or animate the market for data driven technologies; 3) continue to rely on workpapers for savings estimates rather than embracing the use of metered savings and pay-for-performance models; and 4) the marketing metrics should emphasize energy savings achievements and EMT adoption.⁵

⁴ Mission:data Protest to AB 793 ALs, p. 1.

⁵ Ibid.

PG&E AL 3744-G-A/4886-E-A, PG&E AL 3744-G-B/4886-E-B, PG&E AL 3746-G-A/4890-E-A, SCE AL 3446-E-A, SCE AL 3446-E-B, SCE AL 3449-E-A, SDG&E AL 2937-E-A/2500-G-A, SDG&E AL 2937-E-B/2500-G-B, SDG&E AL 3449-E-A, SoCalGas AL 5003-G-A, SoCalGas AL 5003-G-B and SoCalGas AL 5012-G-A/NS2

1. Mission:data notes that on June 24, 2016, Energy Division hosted a workshop in which third parties presented a wide array of currently-available technologies that met the intent of AB 793. Products included disaggregation software that leverages the Home Area Network⁶ (HAN) interface and Green Button Connect,⁷ DR providers and energy management products – a number of which have been offered successfully by other local governments and utilities.⁸ Despite the workshop, Mission:data believes the AB 793 ALs did not include the required list of “all EMT programs and offerings that meet the objectives of Section 717 of AB 793” or necessary information, such as timelines for deployment, incentive levels or any detail on how to scale the programs.⁹ Additionally, Mission:data claims that the original intent of the bill was to incent HAN devices, which weren’t included in any of AB 793 ALs, and that the AB 793 ALs also overlooked Green Button Connect enabled software and services provided by third parties.¹⁰

Mission:data requests that the AB 793 ALs both incent and market a significant variety of third party offerings using HAN and Green Button Connect data for residential and SMB markets.¹¹

⁶ HAN devices allow homeowners to see how much energy their home or building is using in near real-time. This information can be used to identify high energy use appliances

⁷ Green Button was a White House initiative to provide utility customers with easy and secure access to their energy usage information in a customer-friendly format. Customers are able to securely download their own detailed energy usage with a simple click of the "Green Button" on electric utilities' websites.

⁸ Mission:data Protest to AB 793 ALs, p. 5.

⁹ Ibid.

¹⁰ Mission:data Protest to AB 793 ALs, p. 6.

¹¹ Mission:data Protest to AB 793 ALs p. 8.

PG&E AL 3744-G-A/4886-E-A, PG&E AL 3744-G-B/4886-E-B, PG&E AL 3746-G-A/4890-E-A, SCE AL 3446-E-A, SCE AL 3446-E-B, SCE AL 3449-E-A, SDG&E AL 2937-E-A/2500-G-A, SDG&E AL 2937-E-B/2500-G-B, SDG&E AL 3449-E-A, SoCalGas AL 5003-G-A, SoCalGas AL 5003-G-B and SoCalGas AL 5012-G-A/NS2

2. Second, Mission:data points out that the AB 793 legislation directs the IOUs to work with third parties and other stakeholders in developing their product and marketing implementation plans.¹² However, Mission:data believes that with the exception of PG&E that outreach by IOUs to third parties and other stakeholders was minimal. They believe that the IOUs plans overlooked opportunities to creatively expand use of EMTs.¹³

Mission:data requests that the IOUs are directed to consult with third parties, with the objective of ensuring that incentive programs give consumers a robust array of third party energy management software and hardware offerings and have a focus on enabling and growing the existing market for EMTs. An additional suggestion Mission:data offers is for the IOUs to support online marketplaces where consumers can choose from an array of products, software and services – not unlike the Apple or Google Play app stores that list products with consumer reviews and enable consumer choice.¹⁴

3. The third rationale for Mission:data’s protest is their concern that the current AB 793 ALs rely too heavily on workpapers as the basis for claiming savings and establishing incentives. They add that the development of workpapers is costly, time consuming, difficult to get approved and not necessarily well-suited for AMI-enabled software solutions that are updated frequently.¹⁵ Mission:data requests that flexibility should be provided for new products that offer promise so that the AB 793 ALs include a robust array of offerings capable of leveraging

¹² AB 793, Section 717 (a) (1) Available at:

http://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=201520160AB793

¹³ Mission:data Protest to AB 793 ALs, p. 6.

¹⁴ Ibid.

¹⁵ Mission:data Protest to AB 793 ALs p. 6.

PG&E AL 3744-G-A/4886-E-A, PG&E AL 3744-G-B/4886-E-B, PG&E AL 3746-G-A/4890-E-A, SCE AL 3446-E-A, SCE AL 3446-E-B, SCE AL 3449-E-A, SDG&E AL 2937-E-A/2500-G-A, SDG&E AL 2937-E-B/2500-G-B, SDG&E AL 3449-E-A, SoCalGas AL 5003-G-A, SoCalGas AL 5003-G-B and SoCalGas AL 5012-G-A/NS2

AMI.¹⁶ They add that the Commission has “encouraged Pay-for-Performance contracts where savings are measured at the meter and risk can be shared by the customer, implementer and IOUs and not solely rely on ratepayer funding.”¹⁷ This model, they add, mitigates the risk of the up-front incentive exceeding the value of the actual savings, which they contend the AB 793 ALs does not substantially embrace.¹⁸

4. Finally, while Mission:data supports many of the metrics for success included in the AB 793 ALs marketing plan, they believe that two key metrics should be added: 1) measuring resulting energy savings; and 2) measuring actual consumer adoption and use of technologies.¹⁹

IOU Replies to the Mission:data Protest

PG&E, SCE, SoCalGas and SDG&E all filed replies to the Mission:data protest. Each of the IOUs responded to the four reasons mentioned by Mission:data in their protest.

1. The first grounds for the protest raised by Mission:data is that “the plans do not adequately consider or promote offerings that empower consumers with their own usage data made available by AMI.”²⁰

All of the IOUs disagree with Mission:data’s claim and believe they leverage AMI through offerings in their AB 793 ALs and current EE and DR portfolios. PG&E claims they are currently leveraging California’s

¹⁶ Mission:data Protest to AB 793 ALs p. 9.

¹⁷ Mission:data Protest to AB 793 ALs pp. 6-7.

¹⁸ Mission:data Protest to AB 793 ALs p. 7.

¹⁹ Mission:data Protest to AB 793 ALs p. 7.

²⁰ Mission:data Protest of IOUs p. 5.

PG&E AL 3744-G-A/4886-E-A, PG&E AL 3744-G-B/4886-E-B, PG&E AL 3746-G-A/4890-E-A, SCE AL 3446-E-A, SCE AL 3446-E-B, SCE AL 3449-E-A, SDG&E AL 2937-E-A/2500-G-A, SDG&E AL 2937-E-B/2500-G-B, SDG&E AL 3449-E-A, SoCalGas AL 5003-G-A, SoCalGas AL 5003-G-B and SoCalGas AL 5012-G-A/NS2

AMI capabilities in a number of ways to help customers understand and manage their energy use, and they claim this will become more prevalent in coming years (see PG&E's examples in footnote).²¹ PG&E agrees with Mission:data on HAN devices and claims they support HAN devices at a mass market scale, but note that HAN devices have low adoption rates.²²

SCE also claims the Mission:data assertion overlooks some of their offerings that leverage AMI data. They claim that their Peak Time Rebate - Enabling Technology - Direct Load Control program or PTR-ET-DLC program offers incentives for saving energy based on actual metered usage from the customer's smart meter.²³ In addition, several of the tools that SCE identified in their AB 793 ALs also help customers better understand their energy usage and rely on data from the customer's smart meter.²⁴ SoCalGas replied that they currently offer real time energy consumption information to SoCalGas customers through their online energy management tools that show hourly gas usage through AMI, and provide bill analytics to help customers understand changes in their energy usage.²⁵ They add that they are also currently evaluating Green Button

²¹ PG&E's cites their residential programs that utilize AMI data as: Energy Alerts, Bill Forecast Alerts, and Behavioral Demand Response offerings. Customers can also directly access their real time data directly from their SmartMeter through the Stream My Data platform and/or receive data and information from third party vendors through the Share My Data platform. Stream My Data and Share My Data also allow PG&E customers to share their energy usage information to third parties.

²² Ibid.

²³ SCE Reply to Mission:data Protest p. 1.

²⁴ SCE Reply to Mission:data Protest p. 2.

²⁵ SoCalGas Reply to Mission:data Protest p. 2.

PG&E AL 3744-G-A/4886-E-A, PG&E AL 3744-G-B/4886-E-B, PG&E AL 3746-G-A/4890-E-A, SCE AL 3446-E-A, SCE AL 3446-E-B, SCE AL 3449-E-A, SDG&E AL 2937-E-A/2500-G-A, SDG&E AL 2937-E-B/2500-G-B, SDG&E AL 3449-E-A, SoCalGas AL 5003-G-A, SoCalGas AL 5003-G-B and SoCalGas AL 5012-G-A/NS2

Connect my data.²⁶ SDG&E states they currently utilize AMI data for behavioral home energy reports.²⁷

2. Mission:data also claims the AB 793 ALs “fail to adequately collaborate with third parties or animate the market for data driven technologies,”²⁸ as the legislation required. Again, all the IOUs disagree with the Mission:data protest. PG&E notes that there are many venues for third party vendors to collaborate with the IOUs, including Innovative Design for Energy Efficiency Approaches (IDEEA) 365 solicitation, and/or other EE solicitations in 2017 and beyond.²⁹ In addition, they also cite the Emerging Technologies (ET) Technology Resource Innovation Program (TRIP) solicitation and the Emerging Technologies Coordinating Council (ETCC).³⁰ They add that all of the IOUs also presented their draft AB 793 plan at the July 13, 2016 California Energy Efficiency Coordination Council (CAEECC) meeting and suggest that Mission:data participate in CAEECC to learn about future portfolios and how the IOUs are broadening EMT offering and pay for performance as part of their Business Plan process.³¹

SCE also believes that they have closely collaborated with third parties in an attempt to stimulate the EMT market. SCE states that they expanded their PTR-ET-DLC program by collaborating with SoCalGas, numerous

²⁶ Ibid.

²⁷ SDG&E Reply to Mission:data Protest p. 2.

²⁸ Mission:data Protest to AB 793 ALs, p. 1.

²⁹ PG&E Reply to Mission:data Protest p. 3.

³⁰ Ibid.

³¹ Ibid.

PG&E AL 3744-G-A/4886-E-A, PG&E AL 3744-G-B/4886-E-B, PG&E AL 3746-G-A/4890-E-A, SCE AL 3446-E-A, SCE AL 3446-E-B, SCE AL 3449-E-A, SDG&E AL 2937-E-A/2500-G-A, SDG&E AL 2937-E-B/2500-G-B, SDG&E AL 3449-E-A, SoCalGas AL 5003-G-A, SoCalGas AL 5003-G-B and SoCalGas AL 5012-G-A/NS2

third-party smart thermostat providers, and major retailers to provide incentives to customers who install a qualifying smart thermostat and register in the PTR-ET-DLC program.³² SCE also claims to have engaged in discussions with some of the third parties who attended the June 24, 2016, Energy Division led AB 793 workshop.³³ SoCalGas asserts that they will continue to consult with third party vendors and other stakeholders during the development of the AB 793 Scope of Work prior to the issuance of RFPs. SoCalGas also states that they will be partnering with local agencies and other energy utilities to implement a comprehensive program and hopes to further leverage the vendor relationships that municipal and other utilities have developed.³⁴ SDG&E claims third parties are free to market their own products and services that meet SDG&E's program requirements directly to customers.³⁵

3. Mission:data argues that the AB 793 ALs continue to rely on workpapers for savings estimates rather than embracing use of metered savings and Pay-for-Performance models. In response, SoCalGas notes that their AB 793 AL proposes a Commercial EMT Lodging (CEMTL) program that utilizes a hybrid incentive structure, which includes a post measurement incentive of \$1.50/therm after 12 months of normalized metered energy savings, capped at a maximum of 50% of the incremental project cost.³⁶ SoCalGas adds that they will continue to emphasize Pay-for-Performance

³² SCE Reply to Mission:data Protest p. 2.

³³ Ibid.

³⁴ SoCalGas Reply to Mission:data Protest p. 2.

³⁵ SDG&E Reply to Mission:data Protest p. 3.

³⁶ SoCalGas Reply to Mission:data Protest pp. 3-4.

PG&E AL 3744-G-A/4886-E-A, PG&E AL 3744-G-B/4886-E-B, PG&E AL 3746-G-A/4890-E-A, SCE AL 3446-E-A, SCE AL 3446-E-B, SCE AL 3449-E-A, SDG&E AL 2937-E-A/2500-G-A, SDG&E AL 2937-E-B/2500-G-B, SDG&E AL 3449-E-A, SoCalGas AL 5003-G-A, SoCalGas AL 5003-G-B and SoCalGas AL 5012-G-A/NS2

approaches in their solicitation process for selecting third party vendors for the implementation of EE programs.³⁷

While PG&E, SCE and SDG&E all state that where opportunities exist and it makes sense, they will rely on metered energy savings and Pay-for-Performance models.³⁸ However, where savings can be reliably calculated for technologies the IOUs agree that a deemed methodology for setting rebates and establishing claimable savings levels may be preferable and has been the foundation for EE programs.³⁹

4. Mission:data's final grounds for protest is that the "Marketing plans metrics should target actual energy savings and EMT adoption." All of the IOUs replied that they are already in the process of upgrading their key metrics and performance indicators through supplemental ALs that they did eventually submit on September 16, 2016.

SoCalGas and SDG&E disagree with Mission:data that ME&O success metrics should be strictly tied to either energy savings or EMT adoption. They believe doing so fails to consider other key factors, such as program offerings/makeup, customer experience and unique customer situations and needs.⁴⁰ SDG&E and SoCalGas claim the Mission:data proposed

³⁷ SoCalGas Reply to Mission:data Protest p. 4.

³⁸ PG&E Reply to Mission:data Protest p. 9; SCE Reply to Mission:data Protest p. 4; and SDG&E Reply to Mission:data Protest p. 3.

³⁹ PG&E Reply to Mission:data Protest p. 9; SCE Reply to Mission:data Protest p. 4; and SDG&E Reply to Mission:data Protest p. 3.

⁴⁰ SoCalGas Reply to Mission:data Protest p. 5, SDG&E Reply to Mission:data Protest p. 3.

PG&E AL 3744-G-A/4886-E-A, PG&E AL 3744-G-B/4886-E-B, PG&E AL 3746-G-A/4890-E-A, SCE AL 3446-E-A, SCE AL 3446-E-B, SCE AL 3449-E-A, SDG&E AL 2937-E-A/2500-G-A, SDG&E AL 2937-E-B/2500-G-B, SDG&E AL 3449-E-A, SoCalGas AL 5003-G-A, SoCalGas AL 5003-G-B and SoCalGas AL 5012-G-A/NS2

metrics risk oversimplifying the challenge of effectively promoting AB 793 incentive offerings by judging success exclusively on energy savings and technology adoption from the beginning. In their supplemental advice letter filings, SDG&E and SoCalGas claim they will propose metrics that more accurately gauge the success of AB 793 ME&O efforts and will offer constructive insight into possible improvements and modifications.⁴¹

DISCUSSION

In reviewing the AB 793 ALs for reasonableness, the Commission considered the protest from Mission:data, the replies to the protest from the IOUs, and Commission staff's analysis of whether the AB 793 ALs met the intent of the AB 793 legislation. The discussion will be organized around the Mission:data protest.

1. The AB 793 ALs should consider or promote more offerings that empower consumers with their own usage data made available by AMI

The Commission agrees with Mission:data that a major objective of the AB 793 legislation is to encourage the IOUs to include in their portfolios additional EMTs that utilize AMI data to allow customers to better understand and manage their energy usage. The Commission believes the IOUs AB 793 ALs and their responses to the protest point primarily to a few current and potential programs, and fails to promote more cutting edge EMTs.

In their reply comments the IOUs have the following concerns with the draft Resolution's direction to offer a rebated HAN program. First, PG&E suggests that because of the direction in D.16-18-019 to increase third party participation in the IOUs portfolio delivery, that instead of a prescriptive process, the IOUs

⁴¹ SoCalGas Reply to Mission:data Protest p. 5, SDG&E Reply to Mission:data Protest p. 3.

PG&E AL 3744-G-A/4886-E-A, PG&E AL 3744-G-B/4886-E-B, PG&E AL 3746-G-A/4890-E-A, SCE AL 3446-E-A, SCE AL 3446-E-B, SCE AL 3449-E-A, SDG&E AL 2937-E-A/2500-G-A, SDG&E AL 2937-E-B/2500-G-B, SDG&E AL 3449-E-A, SoCalGas AL 5003-G-A, SoCalGas AL 5003-G-B and SoCalGas AL 5012-G-A/NS2

should have a competitive solicitation for products that provide similar capabilities as HAN devices and align with the timing of the BP process.⁴²

SCE wants to be able offer additional available devices to satisfy the draft Resolutions' direction to create a program so that it doesn't exclusively require HAN devices, but allows any device that can utilize AMI data through other medians, such as the internet and Green Button Connect. SCE suggests that Green Button Connect meets the AB 793 definition of an EMT, which allows customers to better understand and reduce their energy consumption.⁴³

SDG&E has no problem with the draft Resolutions' direction to incent HAN devices, which they claim could be accomplished as part of the Plug Load and Appliances program.⁴⁴ On the other hand, SoCalGas claims there are currently no commercially available gateway devices on the market available to consumers to enable networking In-Home Display devices with the proprietary communications protocol used by SoCalGas' advanced meter modules.⁴⁵

PG&E, SCE and SDG&E shall offer residential customers rebates for devices that utilize AMI data through a HAN device or other additional medians such as the internet or Green Button Connect by the 4th Quarter of 2017. Incentives should include a product rebate at the time-of-sale, but may also include a Pay-for-Performance component, conforming to the HOPPS framework, including Section 3.4.3.3. In determining Customer Incentive Design, before launching these devices PG&E, SCE and SDG&E shall seek out extensive stakeholder feedback from one or more of the California energy efficiency stakeholder groups, including the CTF, the CEECC or the ETCC.

⁴² PG&E Reply to draft Resolution p. 2.

⁴³ SCE Reply to draft Resolution p. 4-5.

⁴⁴ SDG&E Reply to draft Resolution p. 3.

⁴⁵ SoCalGas Reply to draft Resolution p. 3.

PG&E AL 3744-G-A/4886-E-A, PG&E AL 3744-G-B/4886-E-B, PG&E AL 3746-G-A/4890-E-A, SCE AL 3446-E-A, SCE AL 3446-E-B, SCE AL 3449-E-A, SDG&E AL 2937-E-A/2500-G-A, SDG&E AL 2937-E-B/2500-G-B, SDG&E AL 3449-E-A, SoCalGas AL 5003-G-A, SoCalGas AL 5003-G-B and SoCalGas AL 5012-G-A/NS2

We agree with SoCalGas that the HAN and other devices that utilize AMI data may not be useful to gas-only utilities and thus don't require SoCalGas launch a rebate for these devices. However, we encourage SoCalGas to continue to work with relevant stakeholders on possible solutions that would provide similar benefits for customers to better understand gas consumption in real time, as the HAN and other devices are able to do for electric consumption.

2. The AB 793 ALs should promote collaboration with third parties to animate the market for data driven technologies

The Commission finds Mission:data's second grounds for protest troubling given the legislative requirement in AB 793 for the IOUs to collaborate with third parties. Energy Division held a workshop on June 24, 2016 at the Commission with the intent of fostering relationships with the IOUs' and third parties in the development of product offerings for the IOUs' AB 793 filings.

We agree with PG&E that there are a number of venues for third parties to participate to influence the IOUs' current and future EMT offerings including IDEEA 365 solicitations, TRIP, ETCC and CAEECC. But we are concerned that Mission:data and many of the third parties have limited resources to track and participate in all of these forums. At this time, we do not think that it would be an appropriate or efficient use of ratepayer funds to create a working group or forum for third parties interested in getting involved in AB 793, or to rely on ED or the IOUs to help the third parties navigate these organizations or the regulatory process. That said, we encourage stakeholder participation in the existing convening groups working on energy efficiency (CAEECC, CalTF, etc), but will also consider a workshop if ED staff has concerns with IOUs' stakeholder engagement on implementing the AB 793 requirement to collaborate with third parties, or may invite outside participants to the IOU and ED AB 793 check-ins for specific topics.

We agree with Mission:data that the IOUs should provide greater support to their online marketplaces where consumers can become aware of EMT offerings available to them, including updates of the marketplace to contain all measures

PG&E AL 3744-G-A/4886-E-A, PG&E AL 3744-G-B/4886-E-B, PG&E AL 3746-G-A/4890-E-A, SCE AL 3446-E-A, SCE AL 3446-E-B, SCE AL 3449-E-A, SDG&E AL 2937-E-A/2500-G-A, SDG&E AL 2937-E-B/2500-G-B, SDG&E AL 3449-E-A, SoCalGas AL 5003-G-A, SoCalGas AL 5003-G-B and SoCalGas AL 5012-G-A/NS2

relevant to AB 793. Additionally, SCE and SoCalGas shall create energy technology marketplace that include EE, DR, and AB 793 related technologies. All websites shall be updated or created by the 4th Quarter of 2017.

We see EMT and EE technologies as having two non-mutually-exclusive components that shall be included in the IOU energy technology marketplaces. The first component is comprised of technologies that make use of data from California's AMI, such as:

- Utility technologies, usually in the form of back-office software; that uses interval meter data for a variety of new customer offerings, including time-of-use and dynamic pricing options, rate calculators, and pay for performance programs, to name a few;
- Green Button Connect technologies, many of which are in the form of smart-phone apps, websites or computer software, provide access to interval meter data with some delay, normally 24 hours; and
- HAN-connected technologies or other in-home hardware devices, which offer access to real-time AMI data.

A second set of devices that the IOUs should strive to eventually include as part of a broader energy technology marketplace are programs and products that allow customers to manage energy consumption through off-site remote control and/or the automation of load shifting and energy efficiency, to optimize customer bill savings and grid reliability. Such technologies might allow customers to program their preferences for automated avoidance of peak TOU rates through scheduling, or high-price events through ADR connectivity. These EMTs might also allow off-site remote control by the customer, and/or the utility for load control programs, or allow connectivity to other local devices for optimization of energy use. Some examples to consider for the energy technology websites include:

PG&E AL 3744-G-A/4886-E-A, PG&E AL 3744-G-B/4886-E-B, PG&E AL 3746-G-A/4890-E-A, SCE AL 3446-E-A, SCE AL 3446-E-B, SCE AL 3449-E-A, SDG&E AL 2937-E-A/2500-G-A, SDG&E AL 2937-E-B/2500-G-B, SDG&E AL 3449-E-A, SoCalGas AL 5003-G-A, SoCalGas AL 5003-G-B and SoCalGas AL 5012-G-A/NS2

- Water heaters and refrigerators with TOU peak avoidance;
- Pool and spa smart controls including TOU peak avoidance;
- Smart appliances (laundry, dishwashers, cooking);
- Electric space heaters (with smart controls);
- Energy storage (electrical, thermal, etc.) with smart controls;
- Timers and power strips that automate/schedule plug loads;
- Smart thermostats with ADR, efficiency optimization or remote control;
and
- Electric Vehicles (on-board smart charging);

Finally, by the 4th Quarter of 2017, the IOUs shall propose to ED reporting requirements, targets and metrics for various EMT-related activities such as the number of customers in their service territory who visit energy technology marketplaces, customer uptake from marketplaces, number of rebates provided, and level of engagement with Green Button Connect My Data.

3. The AB 793 ALs continue to rely on workpapers for savings estimation rather than embracing use of metered savings and Pay-for-Performance models

Where sufficient data exist that deemed savings can be estimated with a reasonable degree of accuracy, we believe savings claims should be based on approved workpapers. But it appears that the IOUs and Mission:data agree that some products might not be ideal for the workpaper process and may make more sense to rely on a pay-for-performance model based on metered energy savings.

The Commission agrees with Mission:data that the current AB 793 ALs offerings rely too heavily on the workpaper process and many EMTs are not well suited for deemed savings based on workpapers. Thus, we direct the IOUs to include the following pay-for-performance programs in their AB 793 Compliance ALs:

PG&E AL 3744-G-A/4886-E-A, PG&E AL 3744-G-B/4886-E-B, PG&E AL 3746-G-A/4890-E-A, SCE AL 3446-E-A, SCE AL 3446-E-B, SCE AL 3449-E-A, SDG&E AL 2937-E-A/2500-G-A, SDG&E AL 2937-E-B/2500-G-B, SDG&E AL 3449-E-A, SoCalGas AL 5003-G-A, SoCalGas AL 5003-G-B and SoCalGas AL 5012-G-A/NS2

1. SCE, SDG&E and SoCal Gas⁴⁶ are required to launch residential pay-for-performance programs by the 4th Quarter of 2017. These pay-for-performance programs should conform to the guidelines in the high opportunity programs and projects (HOPPS) Ruling, including Section 3.4.3.3. on Customer Incentive Design. All pay-for-performance programs must explicitly welcome participation by EMT vendors and products including energy management software-as-a-service. The pay-for-performance programs should also not rely exclusively on whole building retrofit activities, as the intent of AB 793 is not to stimulate EE whole building retrofit activities.
2. SCE and SDG&E⁴⁷ shall launch SMB pay-for-performance programs by the 4th Quarter of 2017. These pay-for-performance programs should conform to the guidelines in the HOPPS Ruling, including Section 3.4.3.3. Customer Incentive Design. All SMB pay-for-performance programs must explicitly welcome participation by EMT vendors and products, including energy management software-as-a-service. The pay-for-performance programs should not rely exclusively on whole building retrofit activities, as the intent of AB 793 is not to stimulate whole building EE retrofit activities.

On January 17, 2017, the IOUs submitted their EE Business Plans for 2018 and the new ten year rolling portfolio cycle without direction on what type of AB 793 offering would be directed in this Resolution, such as requiring all the IOUs to

⁴⁶ PG&E isn't required to create residential pay-for-performance programs as they have a residential program already.

⁴⁷ PG&E and SoCalGas aren't required to create as they both propose launching a commercial pay-for-performance program in their AB 793 ALs.

PG&E AL 3744-G-A/4886-E-A, PG&E AL 3744-G-B/4886-E-B, PG&E AL 3746-G-A/4890-E-A, SCE AL 3446-E-A, SCE AL 3446-E-B, SCE AL 3449-E-A, SDG&E AL 2937-E-A/2500-G-A, SDG&E AL 2937-E-B/2500-G-B, SDG&E AL 3449-E-A, SoCalGas AL 5003-G-A, SoCalGas AL 5003-G-B and SoCalGas AL 5012-G-A/NS2

launch Pay-for-Performance programs in 2017. However, despite the disconnect in timing with the Business Plan approval process and this Resolution, we expect that the IOUs will integrate the Pay-for-Performance programs and all other AB 793 EE related offerings in this Resolution into their EE portfolios and be able to allocate sufficient funding sources to AB 793 offerings.

Additionally, Mission:data points out, developing workpapers is costly and entails a lengthy review process.⁴⁸ The Commission is concerned that a significant portion of the IOUs' AB 793 product offerings will be delayed if they are available only after the approval of cost-effective workpapers.

Thus the IOUs shall propose in their AB 793 filings, when technologically appropriate, to utilize normalized metered energy consumption or randomized control trials or other experimental designs, instead of relying on the workpaper process. This is especially true for energy software as a service and other EMT offerings, which aren't particularly well suited for the workpaper process and deemed savings. As metered data becomes increasingly available over time, it will make it possible for utilities and others to analyze actual energy and bill savings rather than making estimates. The use of normalized metered energy data is also consistent with the intent of other recent California energy efficiency legislation. In cases where it's not possible to rely on metered data for savings attribution the utilities, after consultation with Energy Division, may determine to proceed with the workpaper review and approval process for an AB 793 offering. The IOUs may also rely on approved workpapers for AB 793 offerings for which deemed savings may be accurately predicted across climate zones and building stocks. These decisions on whether to utilize workpapers, normalized metered energy consumption or experimental designs to calculate savings should be vetted by the key California technical EE working groups, including the CalTF, CAEECC and or/the ETCC for input.

⁴⁸ Mission:data Protest to AB 793 ALs p. 5.

PG&E AL 3744-G-A/4886-E-A, PG&E AL 3744-G-B/4886-E-B, PG&E AL 3746-G-A/4890-E-A, SCE AL 3446-E-A, SCE AL 3446-E-B, SCE AL 3449-E-A, SDG&E AL 2937-E-A/2500-G-A, SDG&E AL 2937-E-B/2500-G-B, SDG&E AL 3449-E-A, SoCalGas AL 5003-G-A, SoCalGas AL 5003-G-B and SoCalGas AL 5012-G-A/NS2

4. The AB 793 ALs marketing plans metrics

Mission: data supports many of the metrics for success included in the marketing plan but believes that two key metrics should be added: 1) measuring resulting energy savings, and 2) measuring actual consumer adoption and use of technologies.

The IOUs replied that they are already in the process of upgrading their key marketing metrics and performance indicators as a result of supplemental marketing ALs that they submitted on September 16, 2016.

On September 16, 2016 the IOUs refiled their joint AB 793 marketing plan and individual local marketing plans as supplementals PG&E 3744-G-B/4886-B, SCE AL 3446-E-B, SDG&E 2937-E-B/2500-G-B, SoCalGas 5003-G-B and SoCalGas supplemental AL 5012-A (the statewide marketing plan). No protests or comments were submitted disapproving of any of the refiled AB 793 marketing plans. The Commission staff reviewed the AB 793 marketing plans and believes they provided sufficient detail, appropriate metrics upon which the success of the marketing plans could be evaluated and a reasonable initial marketing roll out plan and roadmap going forward. However, the marketing plans need to include new offerings, targets and timelines as directed in this Resolution. Therefore the IOUs shall update their marketing plans and file as Tier 2 ALs within 45 days after the approval of this Resolution.

5. Integration of AB 793 offerings into the EE Rolling Portfolio Cycle and DR Funding Cycle

The IOUs submitted their EE Business Plans for the new ten year rolling portfolio cycle on January 17, 2017 and the DR funding applications, without the benefit of the requirements set forth in this Resolution. Despite this disconnect in timing, we expect that the IOUs will be able to integrate the EE-related AB 793 offerings directed by this Resolution into their EE portfolios, given the high level nature of the Business Plans, the program and budget flexibility associated with the rolling portfolio cycle, and the fact that Implementation Plans will not be developed

PG&E AL 3744-G-A/4886-E-A, PG&E AL 3744-G-B/4886-E-B, PG&E AL 3746-G-A/4890-E-A, SCE AL 3446-E-A, SCE AL 3446-E-B, SCE AL 3449-E-A, SDG&E AL 2937-E-A/2500-G-A, SDG&E AL 2937-E-B/2500-G-B, SDG&E AL 3449-E-A, SoCalGas AL 5003-G-A, SoCalGas AL 5003-G-B and SoCalGas AL 5012-G-A/NS2

until the Business Plans are approved by the Commission. The IOUs should also integrate DR-related AB 793 offerings into the 2018-2022 DR portfolio where feasible.

6. Other timely issues for the IOUs to consider

The Joint Ruling from the assigned ALJs from EE and DR suggested that the low income direction in the AB 793 legislation be addressed in the Low Income Applications, rather than in the AB 793 ALs. However, we believe that EMTs can be particularly useful for customers who have demonstrated concern or difficulty paying their bills (or who can be expected to have difficulty paying) and thus clearly have a particularly strong need to better manage their energy consumption. Additionally, EMTs may also help geographic areas where disconnection rates are high, or which are considered disadvantaged communities.

Thus, for customers who complain about their bills, customers who are behind on their bills, and customers who have been contacted about disconnection or have been placed on a payment plan, the IOUs are directed to follow-up with each customer through the customers' preferred method of communication (phone, email or mailer) on potential EMT solutions to reduce those customers' bills and avoid disconnection. At a minimum the follow-up would include the following information:

1. Direct installation of EMT measures available through EE, DR (including direct install measures that provides a rebate, like Air Conditioning Cycling), and low income or Middle Income (MIDI) direct install programs that may be available to the customer;
2. Specific rebates for EMT products and programs available to the customer that would be tailored to meet the customer's climate zone and the customer's energy consumption patterns, end uses and vintage of their home;
3. Directions on how to access the updated energy technology marketplace website and understand the relevant product

PG&E AL 3744-G-A/4886-E-A, PG&E AL 3744-G-B/4886-E-B, PG&E AL 3746-G-A/4890-E-A, SCE AL 3446-E-A, SCE AL 3446-E-B, SCE AL 3449-E-A, SDG&E AL 2937-E-A/2500-G-A, SDG&E AL 2937-E-B/2500-G-B, SDG&E AL 3449-E-A, SoCalGas AL 5003-G-A, SoCalGas AL 5003-G-B and SoCalGas AL 5012-G-A/NS2

information that would be obtained there (product pricing, product rebates available, savings estimates for the products, customer reviews etc.); and

4. Directions to and tips for navigating the IOU online tools to monitor energy usage and perform online audits, such as through MyAccount, and instructions on how to sign up for bill alerts or bill forecasts.

Finally, the IOUs shall include in their AB 793 Marketing Compliance Filing ALs specific strategies on how they plan to market EMTs to the communities with the highest disconnection rates in their service territories, and to disadvantaged communities. The marketing efforts to these areas shall utilize greater resources and a more targeted effort than general marketing efforts, and the Compliance Filing ALs shall reflect this.

For ED to better evaluate the effectiveness of these efforts, one year after the AB 793 Marketing Compliance Filing ALs are approved, the IOUs shall file a report to the ED on how these efforts for disadvantaged regions impacted customer uptake of EMTs.

COMMENTS

Public Utilities Code section 311(g)(1) provides that this Resolution must be served on all parties and subject to at least 30 days public review and comment prior to a vote of the Commission. Section 311(g)(2) provides that this 30-day period may be reduced or waived upon the stipulation of all parties in the proceeding.

The 30-day comment period for the draft of this Resolution was neither waived nor reduced. Accordingly, this draft Resolution was mailed to parties for comments on January 24, 2017.

PG&E AL 3744-G-A/4886-E-A, PG&E AL 3744-G-B/4886-E-B, PG&E AL 3746-G-A/4890-E-A, SCE AL 3446-E-A, SCE AL 3446-E-B, SCE AL 3449-E-A, SDG&E AL 2937-E-A/2500-G-A, SDG&E AL 2937-E-B/2500-G-B, SDG&E AL 3449-E-A, SoCalGas AL 5003-G-A, SoCalGas AL 5003-G-B and SoCalGas AL 5012-G-A/NS2

Comments on the draft resolution E-4820 were timely filed by Mission:data, Nest, Natural Resources Defense Council (NRDC), and the IOUs including PG&E, SCE, SoCalGas and SDG&E on February 17, 2017. Ecobee filed comments on the draft Resolution on February 23, 2017; however the deadline for comments was February 17, 2017 and thus we reject the comments filed by Ecobee.

IOUs' Comments:

The IOUs' comments focused on the following areas: the direction to provide rebates for HAN devices; the timelines in the Resolution for the launch of certain products and the Compliance filing, and the direction to create an EE marketplace for AB 793 activities.

Despite the IOUs general opposition to the HAN rebate, the IOUs had several key differences on the draft Resolution's direction to offer a rebated HAN program. PG&E is concerned about the timing for implementing HAN rebates with the BPs forthcoming and the Commission's direction to move the EE portfolio increasingly toward third parties as EE implementers. PG&E suggests that because of the direction in D.16-18-019 to increase third party participation in the IOUs' portfolio delivery, that instead of a prescriptive process, the IOUs have a competitive solicitation for products that provide similar capabilities as HAN devices and align with the timing of the BP process.⁴⁹

SCE wants to be able offer additional available devices to satisfy the draft Resolution's direction to create a program so that it doesn't exclusively require HAN devices, but allows any device that can utilize AMI data through other medians, such as the internet and Green Button Connect. SCE suggests that Green Button Connect meets the AB 793 definition of an EMT, which allows customers to better understand and reduce their energy consumption.⁵⁰

⁴⁹ PG&E Reply to draft Resolution p. 2.

⁵⁰ SCE Reply to draft Resolution p. 4-5.

PG&E AL 3744-G-A/4886-E-A, PG&E AL 3744-G-B/4886-E-B, PG&E AL 3746-G-A/4890-E-A, SCE AL 3446-E-A, SCE AL 3446-E-B, SCE AL 3449-E-A, SDG&E AL 2937-E-A/2500-G-A, SDG&E AL 2937-E-B/2500-G-B, SDG&E AL 3449-E-A, SoCalGas AL 5003-G-A, SoCalGas AL 5003-G-B and SoCalGas AL 5012-G-A/NS2

SDG&E has no objections to the draft Resolution's direction to incent HAN devices, which they claim could be accomplished as part of the Plug Load and Appliances program.⁵¹ SoCalGas claims there are currently no commercially available gateway devices on the market available to consumers to enable networking In-Home Display devices with the proprietary communications protocol used by SoCalGas' advanced meter modules.⁵²

Secondly, PG&E, SCE and SDG&E all raised concerns with the deadlines included in the draft Resolution for product launches. SCE requested that the timing of the Tier 2 Compliance Filing be extended to 60 days after the approval of the Resolution.⁵³

SCE also expresses concern with the draft Resolution's direction to include AB 793 products on the EE marketplace website. They request that since the AB 793 proposed offerings include many types of Demand Side Management offering that instead of offering the products on one specific page for EE, the EE programs should be on the EE page, DR on the DR page and there should be a specific AB 793 page. SoCalGas claims that since they don't have an EE marketplace page, they will create an AB 793 specific marketplace page.⁵⁴

Finally, SCE points out that the draft Resolution states that the Commission expects "that the IOUs will integrate the pay-for performance programs and all other AB 793 EE related offering in this Resolution into their EE portfolios and be able to allocate sufficient funding sources to AB 793 offerings." They believe that the programs only apply to the EE portfolio; however AB 793 applies to both EE and DR. Therefore they request that the draft Resolution should be modified to clarify that only EE related offerings are required to be integrated into the IOUs'

⁵¹ SDG&E Reply to draft Resolution p. 3.

⁵² SoCalGas Reply to draft Resolution p. 3.

⁵³ SCE Reply to draft Resolution p. 2.

⁵⁴ SCE Reply to draft Resolution p. 4.

PG&E AL 3744-G-A/4886-E-A, PG&E AL 3744-G-B/4886-E-B, PG&E AL 3746-G-A/4890-E-A, SCE AL 3446-E-A, SCE AL 3446-E-B, SCE AL 3449-E-A, SDG&E AL 2937-E-A/2500-G-A, SDG&E AL 2937-E-B/2500-G-B, SDG&E AL 3449-E-A, SoCalGas AL 5003-G-A, SoCalGas AL 5003-G-B and SoCalGas AL 5012-G-A/NS2

EE portfolios and that DR related AB 793, including DR pay-for-performance programs, will be integrated into the IOUs' DR portfolios.⁵⁵

Mission:data, Advanced Energy Management Alliance, California Energy Efficient Industry Council and TechNet's Joint Comments:

Mission:data et al. express support for the prompt approval of the AB 793 draft Resolution. They claim the Resolution has the potential to realize significant environmental and energy efficiency benefits and consumer savings.⁵⁶

Nest's Comments:

Nest makes two major points in their comments. First, they request that the proposed downstream rebates should be approved expeditiously by all three of the IOUs for smart thermostats. Furthermore they ask that the utilities be directed to implement immediately the elements of their original program that are not subject to modification and suggest edits to Ordering Paragraph 1 to clarify this.⁵⁷

Nest suggests that for smart thermostats it is appropriate to use a deemed savings approach and that a rebate higher than \$50 can be justified.⁵⁸ Nest believes that the California smart thermostat rebate should be larger and would remain cost effective as long as reasonable savings values are approved in the upcoming smart thermostat workpaper.⁵⁹

⁵⁵ SCE Reply to draft Resolution p. 6.

⁵⁶ Mission:data et al. Reply to draft Resolution p. 2.

⁵⁷ Nest Reply to draft Resolution p. 3.

⁵⁸ Nest Reply to draft Resolution p. 6.

⁵⁹ Nest Reply to draft Resolution p. 6.

PG&E AL 3744-G-A/4886-E-A, PG&E AL 3744-G-B/4886-E-B, PG&E AL 3746-G-A/4890-E-A, SCE AL 3446-E-A, SCE AL 3446-E-B, SCE AL 3449-E-A, SDG&E AL 2937-E-A/2500-G-A, SDG&E AL 2937-E-B/2500-G-B, SDG&E AL 3449-E-A, SoCalGas AL 5003-G-A, SoCalGas AL 5003-G-B and SoCalGas AL 5012-G-A/NS2

NRDC's Comments:

NRDC agrees with expanding program opportunities for customers to leverage AMI, but disagrees with the prescriptive program for HAN devices. Instead they suggest that there should be an opportunity for companies to respond to a competitive solicitation to present the best options that satisfy the intent of the Commission's requirement, which could include HAN program.⁶⁰

Additionally, NRDC suggests that instead of having ED create another group, AB 793 be part of a standing item as part of the residential subcommittee of the CAEECC explicitly to facilitate collaboration on this topic.⁶¹ Finally, NRDC shares ED's concern with the potential length of time it could take to finalize a workpaper for these programs and agrees that where other feasible approaches such as pay-for performance should be used. NRDC also suggests that the final resolution indicate that the California Technical Forum should be used to advance the workpapers in a timely manner.⁶²

FINDINGS

1. On August 1, 2016, PG&E filed AL 3744-G/4886-E, SDG&E filed AL 2937-E/2500-G, SCE filed AL 3446-E and SoCalGas filed AL 5003-G requesting approval of their ALs to comply with the requirements of AB 793. Upon request from Commission staff, the IOUs filed supplemental AB 793 ALs PG&E 3744-G-A/4886-EA, SDG&E 2937-E-A/2500-G-A, SCE 3446-E-A and SoCalGas filed AL 5003-G-A, from August 5 - 11, 2016, and SoCalGas AL 5012-A, which included the IOUs' statewide marketing plans for AB 793, including: PG&E AL 3746-G/4890-E, SDG&E AL 2505-G/2941-E and SCE AL 3449-E. Energy

⁶⁰ NRDC Reply to draft Resolution p. 1-2.

⁶¹ NRDC Reply to draft Resolution p. 2.

⁶² NRDC Reply to draft Resolution p. 2.

PG&E AL 3744-G-A/4886-E-A, PG&E AL 3744-G-B/4886-E-B, PG&E AL 3746-G-A/4890-E-A, SCE AL 3446-E-A, SCE AL 3446-E-B, SCE AL 3449-E-A, SDG&E AL 2937-E-A/2500-G-A, SDG&E AL 2937-E-B/2500-G-B, SDG&E AL 3449-E-A, SoCalGas AL 5003-G-A, SoCalGas AL 5003-G-B and SoCalGas AL 5012-G-A/NS2

Division staff requested more supplemental filings, and in response the IOUs filed partial supplemental ALs which separated their product offering from local marketing plans which included:, PG&E AL 3746-G-A/4890-E-A, PG&E AL 3744-G-B/4886-E-B, SDG&E AL 2505-G-A/2941-E-A, SDG&E AL 2937-E-B/2500-G-B, SCE AL 3449-E-A, SCE AL 3449-E-B, SoCalGas 5003-G-B and 5012G-A.

2. It is reasonable to require each of the IOUs to file Tier 2 ALs within 45 days of the approval of this Resolution to update their AB 793 product implementation plans to include the Commission directed modifications to the product offerings included in the Ordering Paragraphs. The product implementation-related ALs are: PG&E's AL 3744-G-A/4886-E-A, SDG&E'S AL 2937-E-A/2500-G-A, SCE's 3446-E-A and SoCalGas' AL 5003-G-A.
3. AB 793 was signed into law by the Governor on October 8, 2015. AB 793 directed the IOUs to develop a program in their demand side management portfolios by January 1, 2017, to provide incentives to residential and SMB customers to acquire EMTs. AB 793 also required the IOUs to develop a plan by September 30, 2016, to educate residential and SMB customers about incentives for EMT offerings available to them.
4. The AB 793 ALs were protested by Mission:data on August 29, 2016, as Mission:data believes the AB 793 ALs failed to live up to the intent of the AB 793 legislation.
5. It is reasonable to require each of the IOUs to refile their AB 793 marketing plans within 45 days of the approval of this Resolution as Tier 2 compliance ALs to update the plans to include new offerings, targets and timelines directed in modifications for the AB 793 ALs. The marketing-related ALs are: PG&E 3744-G-B/4886-E-B, SDG&E 2937-E-B/2500-G-B, SCE 3446-E-B, and SoCalGas 5003-G-B and supplemental AL 5012-A, which included PG&E AL 3746-G-A/4890-E-A, SDG&E AL 2505-G-A/2941-E-A and SCE AL 3449-E-A.

PG&E AL 3744-G-A/4886-E-A, PG&E AL 3744-G-B/4886-E-B, PG&E AL 3746-G-A/4890-E-A, SCE AL 3446-E-A, SCE AL 3446-E-B, SCE AL 3449-E-A, SDG&E AL 2937-E-A/2500-G-A, SDG&E AL 2937-E-B/2500-G-B, SDG&E AL 3449-E-A, SoCalGas AL 5003-G-A, SoCalGas AL 5003-G-B and SoCalGas AL 5012-G-A/NS2

THEREFORE IT IS ORDERED THAT:

1. The AB 793 ALs PG&E AL 3746-G-A/4890-E-A, PG&E AL 3744-G-B/4886-E-B, SDG&E AL 2505-G-A/2941-E-A, SDG&E AL 2937-E-B/2500-G-B, SCE AL 3449-E-A, SCE AL 3449-E-B and SoCalGas 5003-G-A, SoCalGas 5003-G-B and SoCalGas 5012-G-A are approved with the following modifications as described below. Pacific Gas and Electric, San Diego Gas & Electric, Southern California Edison and Southern California Gas shall file a Tier 2 AL to demonstrate compliance with the Commission-directed modifications within 45 days of the approval of this Resolution. Elements of the utility AB 793 offerings not subject to modification herein shall be implemented in an expedited manner.
 - a. Pacific Gas and Electric, San Diego Gas & Electric and Southern California Edison shall offer residential customers rebates for devices that utilize Advanced Meter Infrastructure data through a Home Area Network device or other similar medians such as the internet or Green Button Connect by the Fourth Quarter of 2017. Incentives should include a product rebate at the time-of-sale, but may also include a pay-for-performance component, conforming to the high opportunity projects and program framework, including Section 3.4.3.3. Customer Incentive Design. Before launching programs to provide incentives these devices Pacific Gas and Electric, Southern California Edison and San Diego Gas & Electric shall seek stakeholder feedback from one or more of the California energy efficiency stakeholder groups.
 - b. Pacific Gas and Electric and San Diego Gas & Electric shall update the energy technology marketplaces on their websites to include all required measures listed in the draft Resolution that are relevant to Assembly Bill 793 by the Fourth Quarter of 2017. In addition, Southern California Edison and Southern California Gas shall create energy technology

PG&E AL 3744-G-A/4886-E-A, PG&E AL 3744-G-B/4886-E-B, PG&E AL 3746-G-A/4890-E-A, SCE AL 3446-E-A, SCE AL 3446-E-B, SCE AL 3449-E-A, SDG&E AL 2937-E-A/2500-G-A, SDG&E AL 2937-E-B/2500-G-B, SDG&E AL 3449-E-A, SoCalGas AL 5003-G-A, SoCalGas AL 5003-G-B and SoCalGas AL 5012-G-A/NS2

marketplaces on their websites that include Assembly Bill 793-relevant technologies by the Fourth Quarter of 2017.

- c. By the Fourth Quarter of 2017, Pacific Gas and Electric, San Diego Gas & Electric, Southern California Edison and Southern California Gas shall file a report to Energy Division proposing reporting requirements, targets and metrics, at a minimum, for the number of customers in their service territory who visit energy efficiency marketplaces, customer uptake from those marketplaces, rebates provided, and level of engagement with Green Button Connect My Data.
- d. San Diego Gas & Electric, Southern California Edison and Southern California Gas are required to launch residential pay-for-Performance programs by the Fourth Quarter of 2017. All pay-for-performance programs shall explicitly welcome participation by energy management technology vendors and products, including energy management software-as-a-service. The pay-for-performance programs should not rely exclusively on retrofits, as the intent of Assembly Bill 793 is not to stimulate energy efficiency retrofit activities.
- e. Southern California Edison and San Diego Gas & Electric shall launch small and medium business pay-for-performance programs by the Fourth Quarter of 2017. These pay-for-performance programs should conform to the guidelines in the high opportunity projects or programs Ruling, including Section 3.4.3.3. Customer Incentive Design. All small and medium business pay-for-performance programs shall explicitly welcome participation by energy management technology vendors and products, including energy management software-as-a-service. The pay-for-performance programs should not rely exclusively on retrofits, as the intent of Assembly Bill 793 is not to stimulate energy efficiency retrofit activities.

PG&E AL 3744-G-A/4886-E-A, PG&E AL 3744-G-B/4886-E-B, PG&E AL 3746-G-A/4890-E-A, SCE AL 3446-E-A, SCE AL 3446-E-B, SCE AL 3449-E-A, SDG&E AL 2937-E-A/2500-G-A, SDG&E AL 2937-E-B/2500-G-B, SDG&E AL 3449-E-A, SoCalGas AL 5003-G-A, SoCalGas AL 5003-G-B and SoCalGas AL 5012-G-A/NS2

2. The following marketing AB 793 ALs are approved contingent on implementation of the programmatic modifications described in ordering paragraph 1 above: Pacific Gas & Electric's partial supplemental AL 3744-G-B/4886-E-B, San Diego Gas & Electric's partial supplemental AL 2937-E-B/2500-G-B, Southern California Edison's partial supplemental AL 3446-E-B and Southern California Gas' partial supplemental AL 5003-G-B and supplemental AL 5012-A, which included PG&E AL 3746-G-A/4890-E-A, SDG&E AL 2505-G-A/2941-E-A and SCE AL 3449-E-A. The marketing plans shall be refiled as Tier 2 ALs 45 days after the approval of this Resolution to update the plans to include new product offerings, and timelines directed in this Resolution.
 - a. The IOUs shall include in their AB 793 Marketing Compliance Filing ALs specific strategies on how they plan to market EMTs to the communities with the highest disconnection rates in their service territories or in disadvantaged communities. The marketing efforts in these areas shall utilize greater resources and a more targeted effort than general marketing efforts, and the Compliance Filing ALs shall reflect this.
 - b. For ED to better evaluate the effectiveness of these efforts, one year after the AB 793 Marketing Compliance Filing ALs are approved, the IOUs shall file a report to the Energy Division on how the marketing in these parts of the state impacted customer uptake of EMTs.
3. Finally, Pacific Gas and Electric, San Diego Gas & Electric, Southern California Edison and Southern California Gas shall follow-up with customers who complain about their bills, customers who are behind on their bills, and customers who have been contacted about disconnection or have been placed on a payment plan. The IOUs are directed to follow-up with each customer through the customers' preferred method of communication (phone, email or mailer) on potential EMT solutions to reduce those customers' bills and avoid disconnection.

PG&E AL 3744-G-A/4886-E-A, PG&E AL 3744-G-B/4886-E-B, PG&E AL 3746-G-A/4890-E-A, SCE AL 3446-E-A, SCE AL 3446-E-B, SCE AL 3449-E-A, SDG&E AL 2937-E-A/2500-G-A, SDG&E AL 2937-E-B/2500-G-B, SDG&E AL 3449-E-A, SoCalGas AL 5003-G-A, SoCalGas AL 5003-G-B and SoCalGas AL 5012-G-A/NS2

At a minimum the follow-up would include the following information:

- i. Direct installation energy management technology measures available through energy efficiency, demand response (including direct install measures that provides a rebate, like Air Conditioning Cycling), and low income or Middle Income Direct Install programs that may be available to the customer;
- ii. Specific rebates for energy management technology products and programs that may be available to the customer that would be tailored to meet the customer's climate zone, energy consumption patterns, and the home vintage of the customer;
- iii. Directions on how to access the updated energy technology marketplace website and understand the relevant product information that would be obtained there (product pricing, product rebates available, savings estimates for the products, customer reviews etc.); and
- iv. Directions to and tips for navigating the IOU online tools to monitor energy usage and perform online audits, such as through MyAccount, and instructions on how to sign up for bill alerts or bill forecasts.

Resolution E-4820

April 6, 2017

PG&E AL 3744-G-A/4886-E-A, PG&E AL 3744-G-B/4886-E-B, PG&E AL 3746-G-A/4890-E-A, SCE AL 3446-E-A, SCE AL 3446-E-B, SCE AL 3449-E-A, SDG&E AL 2937-E-A/2500-G-A, SDG&E AL 2937-E-B/2500-G-B, SDG&E AL 3449-E-A, SoCalGas AL 5003-G-A, SoCalGas AL 5003-G-B and SoCalGas AL 5012-G-A/NS2

This Resolution is effective today.

I certify that the foregoing Resolution was duly introduced, passed and adopted at a conference of the Public Utilities Commission of the State of California held on April 6, 2017; the following Commissioners voting favorably thereon:

/s/TIMOTHY J. SULLIVAN
TIMOTHY J. SULLIVAN
Executive Director

MICHAEL PICKER
President

CARLA J. PETERMAN
LIANE M. RANDOLPH
MARTHA GUZMAN ACEVES
CLIFFORD RECHTSCHAFFEN
Commissioners