August 29, 2016

CPUC Energy Division
Attention: Tariff Unit (EDTariffUnit@cpuc.ca.gov)
505 Van Ness Avenue
San Francisco, CA 94102

RE: **PROTEST OF THE MISSION:DATA COALITION to**:

- Pacific Gas & Electric Company (PG&E) Advice Letter 3744-G-a/4886-E, *Request for Approval of PG&E's Assembly Bill 793 Implementation Plan*
- Southern California Edison Company (SCE) Advice Letter 3446-AE/U 338-E), *Plan to comply with Assembly Bill 793*
- San Diego Gas & Electric Company (SDG&E) Advice Letter 2937-E-A/2500-G-A, *Supplemental – Request for Approval of Program Plans and Budgets to Comply with the Requirements of Assembly Bill 793*
- Southern California Gas Company (SCG) Advice Letter 5003-A (U 904 G).

Dear CPUC Energy Division Tariff Unit:

Pursuant to the *Joint Administrative Law Judge's Ruling Providing Guidance on Compliance with AB 793 Activities,* dated June 10, 2016 ("Joint ALJ Ruling"), Pacific Gas and Electric, Southern California Edison, San Diego Gas and Electric and the Southern California Gas Company (collectively, the "Investor-Owned Utilities" or "IOU"s) submitted Advice Letters (ALs) on August 1 describing their planned implementation of Assembly Bill 793, which requires the IOUs to develop incentives and marketing plans to broaden residential and small and medium business adoption of building energy management technologies. SDG&E filed a supplement on August 5, 2016. PG&E filed a supplement on August 8, 2016. Southern California Edison filed a supplement on August 9. Southern California Gas filed a supplement on August 11.

The Mission:data Coalition, a coalition of approximately 40 technology companies developing data-driven solutions to enable greater consumer adoption of energy efficiency, demand response, renewables and other distributed energy resources, hereby submits this protest to all four advice letters collectively since both the subject matter and basis for protest is the same for each. The plans outlined in the IOU ALs (1) fail to adequately leverage the state's investment in advanced metering infrastructure; (2) do not adequately collaborate with third parties to provide consumers with a choice of energy management technologies; (3) continue to rely on work papers for savings estimation rather than embracing use of metered savings and pay-for-performance models and (4) do not include key metrics.

This protest is timely submitted pursuant to General Order 96-B, Sections 3.11 and 7.4.

I.
BACKGROUND

California has invested over $5 billion in advanced metering infrastructure ("AMI"). According to one of the rate cases supporting AMI deployment, approximately 40% of the anticipated benefits of AMI were to be demand-side savings for consumers.[1] Years following the deployment, however, most Californians still don't know how their advanced meters benefit them, and consumer knowledge and utilization of AMI capabilities to realize energy savings has remained very low.[2] In spite of the fact that California is moving toward time-of-use rates, consumer familiarity with the tools that could help them take advantage of the new rates remains limited.

Observing that in "order to take full advantage of their smart meter's capabilities, the customer must acquire energy management technologies…"[3] the Legislature approved AB 793, which establishes a new Section 717 of the Public Utilities Code to substantially broaden consumer access to and use of energy management technologies[4]:

1. AB 793 requires that IOUs develop programs to educate residential and small/medium business consumers about "energy management technologies." The definition of this term encompasses those technologies that utilize consumers' own advanced meter data to advance consumers' understanding of their individual energy use and their ability to manage that use. Section 717(b) defines energy management technology to 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.*" This language conveys the Legislature's interest in and support for the expanded use of uniquely powerful energy solutions that data-enabled energy management technologies can achieve.

2. During the Assembly Utilities and Commerce Committee's consideration of AB 793, the author expanded the scope of the bill as introduced from one focused primarily on Home Area Network ("HAN") technologies to encompass a broader variety of energy management technologies in order to adopt a more technology-neutral approach that animates markets and fosters increased competition to provide

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[1] PUC HAN Resolution E-4527, September 27, 2012, p. 5.
[2] California Public Utilities Commission, Smart Meter Home Area Network (HAN) Deployment Status: A Primer, April 2, 2015, p. 2.
[3] Assembly Utilities and Commerce analysis of AB 793, April 13, 2015, p. 2, 3.
[4] There is broad support for ensuring that consumers obtain the benefits of tools that harness AMI. See Proposed Decision in A. 14-11-007: "The IOUs will work collaboratively to promote the commercialization of home energy management tools, including AMI-based monitoring and display tools. Additionally, AMI technology was proposed by the IOUs to "offer residential customers the unique opportunities to participate in DR and AMI-enabled technologies services. These opportunities should be made available to all residential customers, including low-income customers." August 16, 2016, p. 249,

consumers with a broader array of choices.[5] AB 793 also sought to encourage an innovative approach that would allow a variety of technologies to compete by requiring the IOUs to work with third parties, local governments, and other interested parties in developing their programs. AB 793 encouraged the IOUs to work creatively and collaboratively with these entities, for example by allowing them to apply for incentives on behalf of customers.[6]

3. Section 717(a)(1) states that "the electric or gas corporation shall establish incentive amounts based on the savings estimation and baseline policies adopted by the commission and "annually report to the commission on actual customer savings…"[7] Mission:data believes that to accomplish the legislative mandate the legislation intended to utilize actual metered data and go beyond the traditional "deemed savings" approach that relies on work papers, emphasizing greater use of pay-for-performance models.

The Joint ALJ Ruling directed the IOUs to file their plans by August 1, referring to AB 793 as an opportunity to "address growing energy driven by plug loads (i.e. loads other than heating and cooling) and develop a new generation of innovative programs that will drive energy efficiency savings and load reductions through demand response…"[8] The Joint ALJ Ruling stressed the importance of ensuring that "implementation of Section 717 is coordinated with, as much as possible, and informed by, the ongoing work" of other Commission proceedings such as those related to energy efficiency (R.13-11-005), demand response (R.13-09-011), integrated distributed energy resources (R.14-10-003), statewide marketing, education and outreach (A.12-08-007) and rate reform (R.12-06-013).[9]

The Joint ALJ Ruling directed the IOUs to include in their plans:

- "Strategies for increasing participation and deployment of current demand-side programs and offerings that meet the Legislation's definition of an energy management technology;
- 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;
- 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);
- 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

[5] Id., p. 3
[6] PU Code Section 717(a)(1)
[7] PU Code Section 717(a)(1); Section 717(a)(3)
[8] Joint ALJ Ruling pp. 3-4.
[9] Joint ALJ Ruling, p. 4. There are clearly synergies that could be obtained from such coordination: for example, that incentives available for energy efficiency technologies could be combined with incentives available for demand response technologies as a greater spur to adoption

associated rebates, budgets, projected uptake, and target market for all programs and offerings;

- A proposal for a process for reporting and tracking of Section 717 program accomplishments and savings to the Commission;
- 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
- A robust two-year marketing plan for energy management technologies that includes the following:
    - Strategies to be employed
    - Metrics and targets
    - Partnerships
    - Integration with other marketing efforts (e.g., device manufacturers, retailers, home builders, contractors, Energy Upgrade California.)"[10]

Enacted with support from a wide array of stakeholders, AB 793 offers California an opportunity to lead in the solution of building energy management challenges and break new ground in leveraging AMI to help consumers better manage their energy use. AB 793 represents an opportunity for the utilities, third parties and other stakeholders to collaborate to provide consumers compelling new options to improve energy management, bring data-driven technologies to scale in support of California's broader environmental and energy goals and demonstrate the value of California's advanced metering investment to consumers.

The IOU plans provide some advancement of the objectives of AB 793, including new incentives for smart thermostats. As the strongest example, PG&E's plan also includes automated HVAC controls through existing thermostats (e.g. Nest Seasonal Savings Assessment),[11] Time of Use Management App (e.g. Bidgely HomeBeat) and the WeatherBug Smart Thermostat Assessment.[12] The PG&E plan also mentions eventual support for energy management technology bundles (software, hardware), Managed Energy Services (software), Commercial Mobile Apps (software) and Energy Management System Pay for Performance that are also promising contemplated offerings. The SCE plan mentions Smart or Connect Whole Home Platform bundles and "potential" support for Data Analytics Platforms, i.e. cloud based energy management programs.[13] The SDG&E plan proposes a Smart Home Hub and use of disaggregation software.[14]

While PG&E's plan provides significantly more helpful detail than the others, all four advice letters miss a critical opportunity to more fully leverage California's $5 billion investment in AMI and collaborate with third parties to provide consumers access to a choice of technologies they can use to gain individualized insights and greater control

[10] Joint ALJ Ruling, p. 6
[11] PG&E Advice Letter, pp. 4-6.
[12] PG&E Advice Letter, p. 9.
[13] SCE Advice Letter, p. 7,9
[14] SDG&E Advice Letter, p. 6

over their own energy use, as directed by the statute and the Commission. The ALs do not incorporate the collaborative approach with third parties or others envisioned by Section 717 or sufficiently encourage "a new generation of innovative programs that will drive EE savings and load reductions" as directed by the Commission. Therefore, Mission:data regrets that it must protest so that the IOU filings can be strengthened.

II.
GROUNDS FOR PROTEST

While Mission:data supports the IOU filings insofar as they go (with respect to the technologies like smart thermostats), Mission:data believes that the proposals are inadequate for the following reasons.

(1) The plans do not adequately consider or promote offerings that empower consumers with their own usage data made available by Advanced Metering Infrastructure**.** The Joint ALJ Ruling required the plans to include 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)…"

On June 24, the Commission hosted a workshop at which third parties presented a wide array of currently-available technologies. These include disaggregation software for residential and small business consumers leveraging both the HAN interface and Green Button Connect, demand response services, energy management software leveraging Green Button Connect, and software–as-a-service models -- a number of which have been offered successfully in collaboration with local governments and utilities, etc. Many of these offerings leverage the Home Area Network and Green Button Connect functionalities enabled by California's AMI and offer savings that are quite cost-effective.

The plans do not include the required list of "all energy management technology programs and offerings that meet the objectives of Section 717" or necessary information such as timelines for deployment, incentive levels or any detail on how or when the IOUs will use their marketing assets or incentives to help scale awareness and use of these technologies, particularly those offered by third parties. They do not outline specific steps to incent energy management software or services mentioned at the workshop or sufficiently leverage California's advanced metering infrastructure. For example, few specific timeframes or activities necessary to launch are outlined to market energy management technologies to consumers or spur adoption through incentives. Although PG&E's marketing plan indicates it will work with BayREN and MCE[15], no specific plans are provided to support partnerships with local governments, some of which have shown promise in generating significant savings at low cost.

[15] PG&E's Local Market Facilitation Plan, p. 13.

There is little mention of how the IOUs will specifically incent energy management technologies that may be helpful in supporting innovation and more choices for consumers. While HAN enablement and Green Button implementation are mentioned as current offerings, the plans do not incent any HAN devices and overlook many Green Button Connect- enabled software and services provided by third parties in the market. For example, the ALs largely lack mention of incentives or marketing of HAN gateways for receiving real-time data directly from meters, in spite of the Commission's 2012 resolution of HAN enablement directing the IOUs to support a minimum number of HAN-enabling devices[16] and a 2015 PUC staff primer documenting low adoption rates.[17] The fact that AB 793 was broadened from HAN-based technologies to more explicitly encompass other technologies such as software was not meant to signal that IOUs should ignore the potential of using the HAN. Rather AB 793's technology-neutral approach was intended to promote a broader range of offerings in the market to promote innovation and customer choice..

(2) The plans fail to adequately collaborate with third parties or animate the market for data-driven technologies**.** AB 793 directs IOUs to work with third parties and other stakeholders in developing their implementation plans. With the exception of PG&E, Mission:data is concerned that outreach to third parties and other stakeholders was minimal and that the plans therefore overlook opportunities to creatively expand use of energy management technologies. As a result, many of the plans predominantly discuss incentives and marketing of existing utility offerings.

(3) The ALs do not make use of metered savings and the Commission's directive to make greater use of such strategies such as pay-for-performance. Notwithstanding the directive in AB 793 to report progress to the Commission on the basis of "actual customer savings" and the Commission's directive that they establish a "proposal for a process for reporting and tracking of Section 717 program accomplishments and savings to the Commission," the IOU plans continue to rely heavily on the use of completed work papers as the basis for claiming savings and establishing incentives.

Work papers are costly and entail a lengthy process to prepare. They are not necessarily well-suited for AMI-enabled software solutions, which are frequently updated. Software solutions also enable behavioral and operations and maintenance energy savings, as opposed to "widgets" for which savings are estimated based on run-times and equipment lifespans. Reliance on work papers slows any program to incent the use of new software tools. Looking for new models, the Commission has "encourage[d] the program administrators to ensure risk-sharing and performance emphasis by utilizing pay-for-performance contracts in all contracts where savings measurement will be performed and

[16] California Public Utilities Commission, Resolution E-4527, September 27, 2012, p. 2, 21.
[17] California Public Utilities Commission, Smart Meter Home Area Network (HAN) Deployment Status: A Primer, April 2, 2015, p. 2.

where risk can be shared and not solely placed on ratepayer funding."[18] These models allow up-front incentives, with a true up once actual savings are determined, for programs where at least one year of pre-installation usage data is available and at least one year of ex post measurement can be performed, with payment structures that "mitigate the risk of up-front savings exceeding the value of actual savings."[19] This is consistent with the emphasis on the methods of measuring savings and ensuring delivery of real value to consumers required by AB 793. However, the ALs do not substantially increase the use of metered savings approaches.

(4) Marketing plans metrics should target actual energy savings and energy management technology adoption**.** Mission:data supports the use of many of the success metrics proposed in the plans. For example the metrics identified in the SDG&E plan include:

- Site visits, page views
- Click through, open rates
- Direct mail response rates
- Marketplace transactions
- Social media engagement, i.e. likes, followers, shares, re-tweets
- Number of media impressions
- Third-party/vendor/partner reports[20]

Certainly these are helpful metrics to document effort, but by themselves they are not sufficient. Southern California Edison cites Nielson's Connect Life Report finding that 7% of Americans own a smart home technology (cf. 61% believe household devices that can connect to the Internet are good for homeowners), though it is not stated the extent to which this number reflects technologies that leverage AMI.[21] Particularly given the directive in Section 717 regarding measurement based on actual savings, as well as SB 350's command to ultimately double building energy savings and the Joint ALJ's Ruling directing the IOUs to consider other relevant proceedings, the appropriate metrics for this program should be (1) measuring the resulting energy savings and (2) measuring actual consumer adoption (increasing the number of consumers acquiring and using the technologies, i.e. how these plans will increase adoption beyond the current level of 7% cited).

[18] Decision Providing Guidance, p. 75
[19] Assigned Commissioner and Administrative Law Judge's Ruling Regarding High Opportunity Energy Efficiency Programs or Projects, December 30, 2015, p. 19-21.
[20] SDG&E Advice Letter, p. D-9
[21] Southern California Edison Advice Letter, p. 30

III.
REQUESTED RELIEF

As detailed above, Mission:data's position is that the IOUs' proposed AB 793 ALs do not comply with the intent or requirements of AB 793 or the Joint ALJ Ruling. To that end, Mission:data asks that the IOUs' proposed plans not be approved until the following changes are made:

- **Incentives and marketing efforts should leverage California's $5 billion investment in AMI.** AB 793 incentive and marketing plans should include the full list of technologies meeting the Section 717 definition – available now – that leverage California's AMI investment and develop plans to incent and market them. In addition to supporting tools like smart thermostats, the plans should both incent and market a significant variety and mix of different third party offerings using HAN and Green Button Connect data. These should address the needs of both residential and small and medium businesses. Plans should include specific timeframes and more detail about the steps needed to implement the directive in the Joint ALJ Ruling, including incentive/rebate amounts, timelines for implementation, and collaboration with interested third parties to jointly optimize marketing and promotional efforts.

- **To animate markets and create broad choices for consumers, incentive programs should include financial incentives, including rebates for hardware, software and services offered by third parties and be coordinated with marketing efforts of third parties and other stakeholders.** The IOUs should consult with third parties, with the objective of ensuring that incentive programs give consumers a robust array of third party software, service and hardware offerings and a focus on enabling and growing the existing market for energy management technologies: incentives should be applied to all eligible devices in each product category, with consumers free to select those best suited to their needs.

  Because third parties have substantial experience in marketing to consumers, the marketing plans can benefit from more consultation with third parties. Offerings should include available Green Button and HAN-based hardware, software and services and new offerings as these are brought to market. Plans should detail and support partnerships that involve local governments and other entities specified in the Joint ALJ Ruling.

  One recommendation is 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 allow consumers wide choice. In addition to rebates and incentives to foster customer acquisition of tools like energy management software, examples of marketing

and promotional activities that should be leveraged include emails/eBlasts to consumers informing them of choices and availability of incentives (with direct links to purchase); display of devices and services through the utility website, on high-traffic pages; bill inserts; newsletters; social media; and paid advertising on the Web. Utilities should also consider partnerships with other EE program administrators, local governments and other entities whose programs have shown significant savings.

As one example, BC Hydro offered customers a $35 rebate for HAN devices that third parties could claim on behalf of and pass on to the consumer. In this case, the utility successfully marketed devices through various different media, resulting in 10,000 devices purchased by consumers that in turn drove a 6% reduction in energy usage.

- **Savings should be measured with meter data and pay-for-performance models should be used, with less reliance on work papers.** While work papers have been completed, or will be soon, for technologies like smart thermostats, these evaluation methodologies do not work as well for software and other rapidly-evolving technologies. Flexibility should be provided for new products that offer promise so that we have a robust array of offerings capable of leveraging AMI and so that programs don't inadvertently favor older technologies. AB 793's directive to use AMI to measure actual savings provides a roadmap for assuring that significant investments are made only in products delivering cost-effective savings. It is possible to overcome the challenge of "ex-ante deemed savings" and/or work papers. PG&E's proposal references pilots to address this, but the other IOUs do not.

- **Marketing plan metrics should be expanded.** Specifically, marketing plans should include metrics reflecting actual customer acquisition and use of energy management technologies, as well as reductions in energy use as documented by metered savings.

IV.
CONTACT INFORMATION

Per General Order 96-B, Section 3.11, we confirm that this protest is being sent simultaneously to the IOUs and the Energy Division, meeting the requirement that the IOUs should receive copies of such protests within one day of the reviewing Industry Division.

Please direct all correspondence regarding this response to:

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Respectfully submitted,

August 29, 2016

/s/ Jim Hawley
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For The Mission:Data Coalition

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