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**BEFORE THE PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA**

Order Instituting Rulemaking on the Commission's Own Motion to Consider Alternative-fueled Vehicle Tariffs, Infrastructure and Policies to Support California's Greenhouse Gas Emissions Reduction Goals.

Rulemaking 09-08-009  
(Filed August 20, 2009)

**COMMENTS OF THE CONSUMER FEDERATION OF CALIFORNIA IN RESPONSE TO ADMINISTRATIVE LAW JUDGE'S REQUEST FOR ADDITIONAL INFORMATION**

Pursuant to Administrative Law Judge Regina DeAngelis' ruling ("Ruling") dated October 27, 2010, Consumer Federation of California ("CFC") submits these comments providing additional information for issues addressed in the Staff Issues Papers.

**I. SEPARATE METER COSTS**

The Staff Issues Paper titled "The Utility Role in Supporting Plug-in Electric Vehicle Charging" ("Staff Issues Paper") outlined several possible metering options for PEVs, with separate meters being one of the options.<sup>1</sup> Out of the three metering options, the Staff Issues Paper identified separate metering as having substantial installation impacts as well as the greatest cost.<sup>2</sup> The paper concluded that a "dedicated meter was not necessary to enable communication functionality needed for load management, load

<sup>1</sup> Staff Issues Paper, "The Utility Role in Supporting Plug-in Electric Vehicle Charging," pgs. 1-41.

<sup>2</sup> *Id.* at 15-20

management, or smart charging programs.”<sup>3</sup> Based on the information presented in the Staff Issues Paper, customers can still save energy and money on their energy bill without having a separate meter installed. As a result, separate meters are not necessary to reap the benefits of a PEV, but a convenient choice in addition to other functional metering options.

**Question: For PEV customers that choose to use a separate meter who should bear the cost of the separate meter and why?**

**Response:**

CFC believes that if a customer is in a position to choose a meter, and a customer elects the more expensive option—in this case, a separate meter—then the individual customer should bear the cost of the meter.

The Staff Issues Paper noted that separate metering, though offering benefits such as facility of tracking load and offering full billing flexibility, is the most costly. Separate metering requires complex installation with the likely possibility of distribution and panel upgrades. This process requires additional labor, equipment, and inspections.

CFC does not categorically oppose the concept of separate metering; however, we do disagree with the idea of general ratepayers shouldering the cost of meters that may never apply to them, especially if a customer selecting a separate meter has a *choice* to pick a less expensive option.

**Question: How should a separate meter be financed (on billing financing, meter charges, upfront charges, etc) and why?**

**Response:**

A. **On Bill Financing Generally:** On bill financing is a growing popular utility based method that gives customers access to capital to invest in energy savings. It has been

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<sup>3</sup> Staff Issues Paper at 35.

touted as the long-anticipated solution to challenges faced by businesses who need energy efficiency upgrades but cannot afford the upfront cost. Currently, under an on bill financing program a utility funds the upfront capital costs, and the customer pays the utility over time through a zero interest or low interest loan. The seeming customer-side benefit is that the customer's energy savings will offset the cost of the capital investments leaving customers with little change in their utility bill.

### **CFC's Position on On-Bill Financing for Separate Meters**

Though on bill financing is ideal in theory, CFC is concerned with the possible cost to general ratepayers as well as the feasibility of using on bill financing to finance separate meters for residential customers.

1. **Recovery of Costs**: Utilities will pay for the initial capital costs of installing a separate meter. How will the utilities recover these initial costs? Through rates or utility shareholder funds? CFC opposes utilities paying for the upfront expenditures with ratepayer dollars and then financing customer through loans. With this method the utilities recover twice: through upfront charges paid by the ratepayer and again when the individual customer pays back the loan.
2. **Feasibility of On Bill Financing**: Currently, on bill financing is used currently primarily for small business owners who would like energy efficiency upgrades for their business. Small business owners likely require larger energy projects which may go beyond installing a separate meter. In addition, depending on the volume of separate meter installation, it may be more costly for the utility to finance individual residential customers, especially if the utility plans on lending zero interest or low interest loans to each of the customers who want a separate meter. Finally, if utilities plan on financing residential customers who

want to purchase a separate meter, general ratepayers will suffer because the utilities will likely recover the upfront charges from rates. Consequently, is on bill financing feasible for residential customers requiring a separate meter?

3. **Incentives**: Currently on bill financing programs are usually accompanied by incentives and rebates. For example, SCE's website for on bill financing states "Along with on line billing you will also receive these benefits from your energy efficiency projects: Financial incentives for installing qualifying energy efficient equipment."<sup>4</sup> SDG & E's website states "On bill financing works in conjunction with rebate and incentive programs."<sup>5</sup> If on bill financing is extended to metering, would the lending program be in conjunction with incentives and rebates. CFC is concerned with whether general ratepayers will be paying for these incentives and rebates to fund the cost of customers who choose a separate meter.
4. **Savings**: Customers can achieve the same savings without on-bill financing of a separate meter. For example, a customer can choose a single meter and switch to a Time of Use rate for their entire load. The Utilities already offer Time of Use options for customer who want to save on their electricity bill but who do not want to install an additional meter for their plug in electric vehicles.<sup>6</sup>

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<sup>4</sup> <http://www.sce.com/business/onbill/>

<sup>5</sup> <http://www.sdge.com/business/rebatesincentives/programs/onbillfinancing.shtml>

<sup>6</sup> SCE offers a "Home and Electric Vehicle Plan" which is designed for residential customers who combine lighting, heating, cooking and power, in a single family accommodation, with charging electric vehicle(s) on the same meter. Under this schedule, you may receive substantial savings if you charge your electric vehicle(s) during super off-peak hours., found at <http://www.sce.com/residential/rates/electric-vehicles.htm>. PG & E offers a similar time-of-use plan with whole house metering for PEV owners, found at <http://www.pge.com/mybusiness/environment/pge/cleanair/electricdrivevehicles/pluginready/>.

Per reasons stated above, CFC believes that on bill financing is the least plausible option for residential customers choosing a separate meter.

**B. Upfront charges:** Upfront charges to customers are the best way to ensure that the individual customer is paying for his or her own separate meter, with the least probability that other ratepayers will carry the cost. If affordability is an issue, customers could elect for a less expensive option and switch to a TOU rate to monitor load.

**C. Meter Charges:** This is the next best option to upfront charges. Under a metering charge option, the utility finances capital costs and the cost is recovered through tariffed meter charges on PEV users only. In this case, general ratepayers are not funding the costs of parallel metering and infrastructure but the costs are carried by PEV users.

## **II. SUBMETERING PROTOCOL**

**Question: What are the Commission's role and the utility's role in developing a submetering protocol?**

**Response:**

CFC believes that standardization of meters will be necessary in order to ensure to continuing safety, accuracy, and reliability of the meters and the meter data. To that end, The Commission should play a visible and active role in developing well defined regulatory requirements that are flexible to support technological innovations in an evolving market.

**Question: What other agencies need to lead or be involved in this process?**

**Response:**

Agencies who offer guidance and oversight should be involved in the process of developing a protocol. For example, in OIR 94-04-031, the Commission developed standards in connection with American National Standards Institute standards to develop a workable meter protocol.<sup>7</sup>

In addition, while developing a protocol the Commission should bear in mind applicable federal regulations.

**Question: What are the key issues to be addressed in a submetering protocol? Should the Commission consider adopting the metering and meter data requirements similar to the requirements developed in 98-12-080 regarding direct access for PEV submeters?**

**Response**

The Commission issued Decision 98-12-080 (“Decision”) adopting permanent standards for metering and meter data. Among standards adopted in the decision were the following<sup>8</sup>:

- Meter products standards
- Meter communications standards
- Meter data management and meter reading standards
- Validating, editing and estimating rules for meter data
- Meter installation, maintenance, testing and calibration standards
- Meter worker qualifications and classifications

**Issues to be addressed in submetering protocol**

A. Meter equipment

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<sup>7</sup> Decision 98-12-080 at 6.

<sup>8</sup> Decision at 2

In the Decision, the Commission developed standards for meters and metering equipment, to ensure basic accuracy, safety and performance for both meters and accompanying equipment. Here the Commission designed requirements in connection with American National Standards Institute which included the following<sup>9</sup>:

- Requirements for Water-hour Meter Socket
- Test Blocks and Cabinets for Installation of Self-Contained A-Base Watt-hour Meters
- Test switches for Transformer-rated Meters
- Electromechanical Watt-hour Meters
- Instrument Transformers for Revenue Metering
- Electronic Time-of-Use Registers for Electricity Meters
- Protocol Specification for Optical Port
- Surge withstand Capability test
- Applicable Federal Communications Commission Regulations
- Registration and Centralized Database

CFC does not have expertise in what is necessary for specific metering equipment. However, CFC does believe that the Commission should adopt analogous product safety regulatory requirements as it applies to submeters for electric vehicles in order to ensure the safety and accuracy of submeters.

a. **Certification testing requirements.** The Decision enumerated a process whereby meter product manufacturers can self certify that its meter types meet the Certification Testing requirements.<sup>10</sup> CFC feels that there should be a similar process.

#### B. Meter Installation

The Commission should develop a set of standards and procedures to be followed during the installation and removal process of the sub meter. In the Decision, the Staff

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<sup>9</sup> Decision at 6-7

<sup>10</sup> *Id.* at 2.

recommended a series of requirements intended to “promote consistent installations and enhance safety and reliability.”<sup>11</sup> Similarly, as in D. 98-12-080, the Commission should develop standards relating to the installation of instrument transformers, test switches, associated wiring up to the meter socket, electrical hazards, unsafe customer premises, physical hazards, metering security and accessibility, site verification.

**Customer/Utility Boundary** In addition, the Commission should consider how the delineation of customer/utility boundary for metering equipment will impact establishing standards for metering installation.

### C. Meter System Testing

The Commission should develop a meter-system testing standard to “ensure that the accuracy of the overall metering system is within Commission-required limits,[to] ensure safety in meter work procedures, and provide consistent testing.” The Decision highlighted seven meter test<sup>12</sup>s:

- **Voltage test**: This test is necessary to ensure safety in meter work procedures; provide the meter worker with knowledge of the correct service voltage prior to any meter work; and confirm that no short-circuit or hazardous conditions exist in the customer equipment or panel.
- **Light Load and full load test or customer load test**: this test is used to ensure that the meter is accurate during various load conditions
- **Demand Test**: This test is used to ensure the accuracy of the demand function of the meter
- **Register Verification**: this test ensures that the register parts and components are working to provide and retain accurate billing data and information
- **Phase angle test**: this test ensures that the correct wiring is in place for the meter system, which in turn, affects meter site accuracy
- **Separate element check**: this test ensures that each element of the meter is in good working condition
- **Burden test**: this test is performed to check for proper operating conditions of the current transformer

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<sup>11</sup> Decision at page 30

<sup>12</sup> *Id.* at 32.

Safety should be a priority when handling meter equipment. System testing is a necessary step toward guaranteeing a system is working correctly. CFC supports a meter system security requirement that is tailored to PEV submeters in order to certify accuracy.

D. Meter Maintenance and Testing Schedule

The Decision highlighted the need for routine maintenance and testing of meters, the purpose being to “ensure that the meters owned by an entity are accurate while the meters are in service.”<sup>13</sup> CFC believes that the Commission should adopt a similar standard.

E. Meter Worker Qualifications

The Commission should develop standards that include a certification process for meter workers. The Decision noted that in order to “ensure the safe and reliable installation of meters, workers need to have the appropriate training and experience for the different levels of metering work.”<sup>14</sup> A workshop proposed that:

- a. Meter worker qualifications be divided into classes.
- b. Meter workers have to be certified for the class of work they perform
- c. Meter workers can self-certify if they are in a less advanced class
- d. Meter workers who want to be in an advanced class must pass a written and practical exam administered by the Commission or by a designated entity.
- e. The Commission creates a designated entity to manage the function of certifying the higher skill meter workers.

Overall, these recommendations offered in the Decision are, in the abstract, a good start and provide a general framework from which the Commission can develop standards. CFC believes that the regulatory recommendation should be a floor and not a ceiling and will comment appropriately when the question is presented.

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<sup>13</sup> Decision at 31.

<sup>14</sup> *Id.* at 27.

CFC would like to examine the issue of self-certification if this becomes a possible regulatory requirement for PEVs. Depending on the kind of work that the meter worker performs, self-certification would not be appropriate. Also, if a worker is able to self-certify, what safeguards or penalties will be in place to minimize abuse or fraud?

### **III. UTILITY CUSTOMER EDUCATION AND OUTREACH**

The Ruling addressed the topic of utility role in customer education and outreach and suggested guiding principles so that parties can address the additional questions on the topic:

- 1. The utility role with respect to PEV customer education and outreach is to facilitate customer awareness of tariff options, technology options, billing options, installation options, and load management options.**
- 2. Utility customer education and outreach efforts should present information neutrally that gives no preference to a particular rate option and related metering arrangement, charging level or technology, installation provider, and other aspects related to customer installation of customer premise electric vehicle supply equipment.**
- 3. Utilities should be prepared to answer the common customer questions, including but not limited to the following:**
  - a. Customer bill impacts for available PEV rates and usage**
  - b. Bill impacts of combining PEV usage and customer-owned rooftop solar PV generation**
  - c. Customer options in residential MDU or commercial MDU settings.**

Parties were asked to provide responses to questions related to the guiding principles and related issues.

**Question: What specific changes, if any, should the Commission consider to the proposed language above?**

**Response:**

CFC believes that customer awareness and education regarding the benefits of PEVs should be neutral in tone, but does not believe that the utilities are the right entities to perform the task. Customer outreach and education should have one objective: to present the customer with factual information so that the customer can make an informed decision about an item. CFC believes outreach and education sponsored by an entity with a stake in how customers will respond to the PEV market would be nothing more than disguised marketing. CFC opposes the use of ratepayer dollars on what would be essentially product advertisement for the utility.

In the alternative, if the Utilities launch an education and outreach strategy to increase customer awareness regarding PEVs this program sponsored by the utility should not be funded with ratepayer dollars.

CFC supports education and outreach but believes that true and well meaning outreach and education geared toward potential PEV owners should be executed by an independent body free from business interest. For example, the PUC just launched a clean energy web portal Engage 360, a comprehensive platform designed to increase consumer awareness on energy efficiency.<sup>15</sup> In this case, the PUC is a body presenting information in a neutral tone. CFC suggests using a similar neutral entity to educate potential PEV

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<sup>15</sup>[http://www.engage360.com/index.php?option=com\\_content&view=article&id=20&Itemid=3&lang=en](http://www.engage360.com/index.php?option=com_content&view=article&id=20&Itemid=3&lang=en).

owners. In short, CFC respectfully requests the Commission modify the language that ascribes the utility with the responsibility of education and outreach and consider different body capable of performing the task impartially.

### **Distinguishing Education/Outreach and Customer Service**

CFC differentiates outreach/education and customer service. Where outreach and education would be specific program carved out for the specific purpose of adopting PEV customers, customer service is a built in part of a functioning business. CFC believes that guiding principle 3 written in the Ruling fits more within the category of customer service, as it offers a provision of service regarding the impact electric bill before, during, or after a purchase of a Plug-in electric vehicle.

Regarding the issue of customer service, Utilities have an obligation to their customers to provide clear information as it relates to their contract. Utilities should answer common customer questions such as those enumerated in the Ruling as well as 1) questions regarding impacts to the grid with the additional load from PEV 2) if the utility is supplying a meter to the customer, what metering options are available and the costs associated with each option, 3) information on meter reading 4) information on other PEV technologies.

When answering these common questions, the utilities should use the existing funds they use to maintain customer service without using extra ratepayer dollars. Information conveyed should be conveyed clearly and easily and presented in a way so that the customer can receive the information necessary to make a decision that fits their needs.

#### **IV. ELECTRIC VEHICLE SERVICE PROVIDER (EVSP)- APPLICABLE RATE SCHEDULES.**

The staff issues paper examined certain electric rules and presented the question “*Per Rules 2, 15, and 16, should PEV load continue to be designated as ‘new load’ or should distribution systems be treated as ‘special facilities’? If PEV load continues to be designated as ‘new load’ would the current allowances formula apply?*”

Some parties felt that PEV load should not be differentiated from other changes in load that may occur in residential households.<sup>16</sup> Other parties stated that the load is not permanent and that facility upgrades should be considered “special facilities” borne by the individual customer.<sup>17</sup>

CFC is hesitant to categorize a customer’s change in load as permanent at such an early time. The extent of PEV market penetration is unclear. Investing in panel upgrades to accommodate PEVs may prove to be wasteful. CFC suggests an option for PEV service that will give the Commission and utilities time to gauge the market without potentially spending needlessly.

**ii. Question: What changes to Electric Rules are needed, if any, in the near term pertaining to electric vehicle charging and why?**

**Response:**

CFC believes that electric vehicle charging will be considered a change in load for many households; however, general ratepayers should not pay for service upgrades that apply to the few who own electric vehicles. CFC also believes along with TURN that for the customers who own electric cars, this change in load may not be permanent.<sup>18</sup> Because

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<sup>16</sup> SDG & E Comments on Staff Issues Paper “Revenue Allocation and Rate Design,” at 6.

<sup>17</sup> Turn Comments on Staff Issues Paper “Revenue Allocation and Rate Design,” at 5.

<sup>18</sup> Turn Comments on Staff Issues Paper at 5.

the electric car market is in its fledgling stage and it is hard to predict the market in the future, CFC proposes that electric vehicles be considered a change in load; however, the tariff designed would initially be designed comparable to a customer receiving temporary service. Under typical temporary service agreements, a customer applies for temporary electrical service for a certain period of time, pays for all the upfront installation charges for temporary service, after which the customer will notify the utility as to whether there service will be permanent. Under a modification of Rule 13, this temporary service rule would extend to PEV owners. Under a temporary service contract pertaining specifically to PEVS, the customer will have to apply and notify the utility of its current load, pay a flat rate for the installation equipment necessary for the electric vehicle for a period of time the utility designates. After the period of time has ended, the customer will notify the utility and the electric car will become a permanent part of their service. This will give the utility time to gauge the market to see whether distribution and panel upgrades are necessary. Once the market matures, the Commission and Utilities could reevaluate whether these service agreements designed specifically for PEVs are still necessary for electric vehicles.

Dated November 12, 2010

Respectfully submitted,

\_\_\_\_\_/s/\_\_\_\_\_,

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**CERTIFICATE OF SERVICE**

I, Nicole A. Blake, hereby certify that I have this day served a true and original copy of this COMMENTS OF THE CONSUMER FEDERATION OF CALIFORNIA IN RESPONSE TO ADMINISTRATIVE LAW JUDGE'S REQUEST FOR ADDITIONAL INFORMATION on all known parties of record in proceeding R.09-08-009 by delivering a copy via email to the current service list or by delivering a copy via U.S. First Class mail to those parties of the current service list with undeliverable email addresses.

Executed on November 12, 2010, in San Mateo, CA.

By: \_\_\_\_\_ //s// \_\_\_\_\_

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