



SMUD

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P.O. Box 15830, Sacramento, CA 95852-1830; 1-888-742-SMUD (7683)

August 5, 2011
LEG 2011-0439

**Mr. Richard Corey
Chief, Stationary Source Division
California Air Resources Board
1001 I Street
Sacramento, CA 95814**

**Re: Proposed Regulatory Changes for Low Carbon Fuel Standard
Regulations**

Dear: Mr. Corey

SMUD appreciates the opportunity to comment on ARB Staff's proposed revisions to the Low Carbon Fuel Standard (LCFS) regulations that were the subject of the July 22, 2011 workshop. Our comments relate to how the proposed regulations credit the use of electricity as a low carbon transportation fuel. SMUD continues to support the overall approach the ARB has taken in the LCFS arena. We agree with the policy choice that designates electric distribution utilities as the 'opt-in' regulatory party for electricity used to charge vehicles in residential situations.

SMUD has a 22 year history of supporting transportation electrification and has poured over \$20 million in ratepayer funds toward creating this market to improve air quality, reduce our dependence on oil, and create jobs. The origination of SMUD's program in the late 1980's was in response to local air quality problems and the need for economic job growth resulting from the Air Force base closures at McClellan and Mather. Businesses formed at that time still exist today, along with the fruits of workforce training, educational support from local universities and early investment in charging infrastructure, all of which supports the current market. SMUD looks forward to future growth in this market and remains committed to supporting use of electricity in the transportation sector in a manner that provides air quality benefits, minimizes grid impacts and provides the right incentives for growth.

In addition to a commitment to being a leader in electric transportation and local environmental improvement, SMUD is committed to a far-reaching goal – reducing GHG emissions for serving our retail load to 10% of 1990 level by 2050. SMUD policies that will enable us to reach this goal include attainment of 20% by 2010 renewable portfolio standard target (RPS) and 33% RPS target for 2020, as well as energy efficiency and clean distributed generation programs.

Our commitment to electric transportation and the LCFS market paradigm goes hand-in-hand with this goal. We point out, however, that SMUD must find a way to achieve these profound reductions despite a cross-sectoral shift in GHG emissions from the increased electricity load represented by electric transportation. No other actor in the electric transportation sector sees an increased carbon obligation as the market grows.

We offer the following comments as proposed improvements to ARB Staff's proposed regulation.

Summary

SMUD supports the rationale expressed by Staff at the recent workshop that utilities are expected to upgrade distribution systems in the future due to increasing loads and that utilities can be expected to return credit revenues to EV owners as regulated entities. We also understand that non-utility EVSPs can play a vital role in the market by establishing public access charging infrastructure. SMUD believes that establishing electric distribution utilities as the primary, regulated party for LCFS credits will: 1) simplify administration of the LCFS credit market; 2) maximize assurance of returning LCFS credit value to customers; 3) maximize the availability of LCFS credits from electricity to the market; and 4) support the creation of in-state jobs for development of the infrastructure necessary to make electric transportation widespread. Our reasoning for establishing the electrical distribution utility as the primary regulated party is explained below, followed by our specific recommendations to the proposed regulations.

Simplicity and Long Term Market Support

Utilities are the cleanest and most practical alternative fuel provider, and in the long run are highly motivated to see the use of electricity grow as a transportation fuel. We believe that the value of the LCFS credits should be awarded to fuel providers that incur the carbon liability for providing that fuel, whether it is electricity or another fuel. There may be regulatory and/or market advantages for awarding credits to parties that are not incurring potential carbon liability, but there should be strong and transparent reasons for this treatment other than short term, narrow economic gain.

The notion that electric transportation load is so low in the near term that utilities don't need the value that LCFS credits provide is short sighted and should not drive long-term LCFS policy structures. Electric transportation load is expected to be significant if ARB expects to reach its overall AB 32 goals. This will require long-term investment in distribution system upgrades, energy procurement, renewable energy development, energy storage, and customer delivery channels, underpinning additional market creation across a wide front of our society. Also, this nascent market can ill afford to risk its reputation from news stories of blown transformers or cuts in service to non-PEV owners due to distribution infrastructure that is not ready for the new electric cars. Utilities have a long record of helping the electric transportation sector to be ready when the vehicles are a reality. This industry provides a simple and stable structure to support the PEV market and needs funding sources to make necessary grid investments.

SMUD has already established, and is continuing to make, many investments to help the electric transportation market grow, including:

- An incentive rate that discounts costs for PEV customers, including customers using EVSP products (and potentially EVSPs themselves)
- Free consulting and outreach to customers on PEV's, charging infrastructure and installation options
- Developing a financing program for EVSE installation
- Developing a buy-down incentive for EVSE equipment and sub-metering to help customers access our incentive rate
- Conducting research and development with EVSE companies to improve functionality, lower hardware and installation costs, and improve customer service options
- Historic early investment support for EVSE and EVSE installation companies, including installation and maintenance of public access EV charging equipment.

Returning Credit Value to End Users

We believe that the value from electricity LCFS credits should be returned to the PEV customers and ratepayers who are purchasing vehicles, installing charging infrastructure, and supporting the necessary infrastructure upgrades. Fundamentally, this is necessary to enable PEV customers to use their vehicles. On a broader scale, it will help grow the market, incent the use of electricity as a transportation fuel, and support the necessary grid upgrades to maintain safe and reliable electricity service for everyone. Given that utilities are regulated entities, either by the California Public Utilities Commission or by local public utility boards, there is no potential for LCFS credit value to be siphoned off for purposes that won't support the PEV customer or the long-term marketplace.

Utilities also provide an efficient and perhaps unique avenue for capturing and managing the return of the long-term value of LCFS credits to the end user. In the short term, utilities can estimate the value of multiple years of credits and return that value up front in the form of incentives to address the high up-front costs of charging equipment, in addition to reducing the cost of the electricity fuel to help induce customers to consider the electric transportation option. In the long run, as the costs of charging equipment decrease, utilities are positioned to use the value to offset the longer term grid infrastructure costs of a dramatically larger electric transportation market.

Job Creation:

SMUD sees this market creating jobs for electrical installation contractors, who will be needed irrespective of the utility or equipment service provider. The electrical contractor industry has been decimated by the building construction downturn and utilities have seen record numbers of contractors re-training in the alternative energy field such as solar, energy efficiency and now EV infrastructure installations. Utilities have worked actively with contractors, service providers and others to develop these new markets to benefit both utility customers and private industry.

Additional jobs will be created in the utility sector associated with providing the fuel – electricity. Additional personnel will be needed as load grows for all aspects of the utility business, from customer service to power plant operations to grid operations, as well as for grid and potentially power plant additions. It is important to note that these are all in-state jobs associated with electricity as a fuel, as opposed to many traditional transportation fuel jobs, whereas the foreign origin of petroleum more high paying jobs overseas.

Maximizing Credits to Market

Nearly all electric delivery service in the state flows through the various electrical distribution utilities. No other business has the energy delivery customer relationships, including the trust, at that broad a level to reach nearly all potential electric transportation energy users. Since almost all the electricity used in the state is already metered by Electric Distribution Utilities the mechanism to collect electricity energy data en mass already exists. Whereas separate electricity metering has historically been required to track electric transportation charging use, SMUD believes that smart grid analytic screening technology can be used to detect electric vehicle charging activity at the house or small building level without the need for a separate PEV meter. This could be conducted at all charging levels (Level 1 and Level 2) and would be especially effective for residential charging which is expected to reach 80% of the market. The potential to use this technology to detect simple Level 1 charging through a normal 120V outlet is important since most of this load will never be separately metered. While we do not anticipate that this analytic data will be at fidelity to support classic utility level billing activities, the data could be collected and used to create and estimate LCFS Credits, using a conservative adjustment factor to ensure that only electric transportation load is captured. The adjustment factor could be derived from comparison of actual metered electric vehicle circuits versus house level smart meter analytic data.

Using this type of smart grid analytic data, utilities will be in the position to detect a majority of charging activity and bring those credits to market. Whereas other potential, directly metered techniques such as networked EVSE with embedded meters are available, this technology is relatively expensive on an individual basis and would only provide a minority patchwork of data collection, since PEV customers may not purchase a networked EVSE and or go with simple Level 1 charging. In addition if a networked

EVSE unit's embedded meter or communication circuitry fails sometime during the EVSE lifetime that data flow could be lost. Not so for normal residential utility metering. utilities are obligated to maintain the household meters and a useful data stream would always be available. Given the wide customer coverage of electric distribution utilities, the robustness of household utility meters, the utilities obligation to service those meters, and the simplification of analytic screening, utilities are in the strongest position to aggregate electricity LCFS credits and get them to market.

Specific Recommended Regulatory Changes

Section 95841: Definitions and Acronyms

The term "Utility Distribution Company" used in the regulations is not a defined term, and the regulations inappropriately refer to the California Public Utilities Commission for a definition (the CPUC does not define what is meant by a local publicly owned electric utility). The regulations should use the term "Electrical Distribution Utility", consistent with the proposed cap and trade regulations. A definition of "Electrical Distribution Utility" should be added on page 8, copied from the definition currently in the proposed cap and trade regulations, as follows:

(17) "Electrical Distribution Utility(ies)" means an Investor Owned Utility (IOU) as defined in Public Utilities Code sections 216 and 218, or a local publicly owned electric utility (POU) as defined in Public Utilities Code section 224.3, which provide electricity to retail end users in California.

The definition of "Public access fueling facility" should include a statement that home fueling is not public access. This should be changed to read:

(38) "Public access fueling facility" means a fueling facility that is not a private access fueling dispenser facility nor a facility dispensing fuel at single or multi-family homes or apartments.

Section 95854: Requirements for Regulated Parties

We recommend changes to the section regarding regulated parties for electricity to simplify the regulation, increase the ability to ensure that the LCFS credit value is returned to the end users to help grow the EV market, and ensure that as many credits as possible are developed for use in the market. We have annotated in footnotes the rationale for the changes suggested below, rather than separate the redlined language with explanations. Specifically, the *regulated parties for electricity* subsection on page 30 should read:

(6) *Regulated Parties for Electricity.* For electricity used as a transportation fuel, the regulated party is determined as in the order specified below:

(A) ~~For transportation fuel supplied through Level II electric vehicle (EV) charging equipment Home fueling or Private access fueling facilities in single and multi-family homes or apartments, the Electrical Distribution Utility-Utility Distribution Company (as defined by the California Public Utilities Commission as an entity that provides regulated services to customers) is the regulated party in their defined utility territory. In order to receive credit for electricity supplied as a transportation fuel, the Electrical Distribution Utility-Utility Distribution Company must establish a return of LCFS credit value to end users using one or more of the following methods:~~

1. ~~Provide EV time-of-use pricing as a rate option that includes a discount² for off-peak charging, and~~
2. ~~Provide a web-based user-friendly tool that allows EV customers to compare rate structure options and provides examples of one or more typical EV households-.~~
3. ~~Provide incentives for installation³ of EV charging and service equipment, separate metering support equipment, or end-user upgrade costs (~~

(B) ~~For transportation fuel supplied through a Public access fueling facility⁴ (containing public access EV charging equipment), the regulated party is the non-utility Electric Vehicle Service Provider (EVSP) or Electrical Distribution Utility-Utility⁵ Distribution Company that has installed the equipment, or had an agent install the equipment, and who:~~

~~1. has a contract with either~~

~~a1. The property owner where the equipment is located to maintain or otherwise service the charging equipment, or~~

~~b2. EV owners using the charging equipment; and~~

~~2. establishes a return of LCFS credit value to end users using one or more of the following methods:~~

¹ Changes here insure that all residential charging is covered, not just Level II, and establish a general requirement to return credit value to end users.

² Note that we have proposed including provisions to establish a return of value to customers in all parts of this section. We don't believe that this principle should be limited to residential charging nor to utilities. We have expanded the options somewhat to make the action of returning value make sense in more circumstances.

³ We think that this option should also be mentioned as a way to return value to end users. Translating the multi-year value of LCFS credits into upfront incentives helps to address an initial market barrier.

⁴ We suggest using the term "public access fueling facility" as defined earlier in the regulations for clarity.

⁵ We propose adding Electrical distribution utility as an option here, as there are some circumstances where utilities will be installing and maintaining equipment (historically, we have done so), and we don't want the credits to disappear from the market.

- a. Provide EV time-of-use pricing as a rate option that includes a discount for off-peak charging.
- b. Provide a web-based user-friendly tool that allows EV customers to compare rates.
- c. Provide incentive options (rebates or financing) for installation of EV charging and service equipment, separate metering support equipment or grid upgrade costs (if present in rate structures)

is the regulated party⁶

C) For transportation fuel supplied to a fleet of three or more EVs, ~~an a non~~⁷ governmental agency or company operating the fleet (fleet operator) may opt-in to the regulation to become a regulated party. If the fleet operator elects not to become a regulated party, the Electrical Distribution Utility Utility Distribution Company may become is the regulated party. provided there⁸ is a contract or other written evidence of mutual agreement that the fleet operator has transferred regulated party designation to the Utility Distribution Company. In either case, in order to receive credits, the regulated party must establish a return of LCFS credit value to end users using one or more of the following methods:

1. Provide EV time-of-use pricing as a rate option that includes a discount for off-peak charging.
2. Provide a web-based user-friendly tool that allows EV customers to compare rates.
3. Provide incentives option (rebates or financing) for installation of EV charging and service equipment, separate metering support equipment or grid upgrade costs (if present in rate structures)

⁶ This has simply been moved into the paragraph above for clarity.

⁷ We see no reason to leave the credits associated with government fleets out of the market. There may be some regulatory issues, but there should at least be the option to include.

⁸ There cannot be a contract to transfer regulated party designation if the fleet operator has not elected to become a regulated party. There should be a general provision to transfer regulated party status in a manner that promotes simplicity.

D) For transportation fuel supplied through Private access fueling facilities at businesses and workplaces, the regulated party is Electrical Distribution Utility, unless there is a contract between the Electrical Distribution Utility and the workplace or business specifying that the workplace or business is the regulated party, and the workplace or business opts in to the regulation to become a regulated party. To receive credits, the regulated party must establish a return of LCFS credit value to end users using one or more of the following methods:⁹

1. Provide EV time-of-use pricing as a rate option that includes a discount for off-peak charging.
2. Provide a web-based user-friendly tool that allows EV customers to compare rates.
3. Provide incentive options (rebates or financing) for installation of EV charging and service equipment, separate metering support equipment or grid upgrade costs (if present in rate structures)

E In the event that criteria for regulated party designations in B, C, and D above¹⁰ are not met, or there is measured electricity as a transportation fuel that is not covered in A through D above, the regulated party is the Electrical Distribution Utility. To receive credits, the regulated party must establish a return of LCFS credit value to end users using one or more of the following methods:

1. Provide EV time-of-use pricing as a rate option that includes a discount for off-peak charging.
2. Provide a web-based user-friendly tool that allows EV customers to compare rates.
3. Provide incentive options (rebates or financing) for installation of EV charging and service equipment, separate metering support equipment or grid upgrade costs (if present in rate structures)

Closing

In summary, SMUD strongly encourages the ARB to simplify the LCFS regulated party for electricity fuel in a manner that most ensures that the value of LCFS credits are returned to the end users – vehicle owners – in order to grow the electric transportation

⁹ We've added proposed new language to cover workplace charging, as discussed in the July 22 workshop. For simplicity, we suggest that the utility be the regulated party, unless the workplace desires to opt-in and be the party themselves. Note that this does not cover public access charging at businesses.

¹⁰ We propose a "catch all" category, for maximum inclusion of credits in the market. For simplicity, we propose that the utility be the regulated party here.

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marketplace. In addition, SMUD believes that attention should be paid to the principle that the fuel provider that is encountering a carbon obligation for that fuel provision should be the first order regulated party for LCFS credits.

Respectfully submitted,

/s/

WILLIAM W. WESTERFIELD, III
Senior Attorney
Sacramento Municipal Utility District
P.O. Box 15830, M.S., B406, Sacramento, CA 95852-1830

/s/

Bill Boyce
Electric Transportation Supervisor
Sacramento Municipal Utility District
P.O. Box 15830, M.S., B257, Sacramento, CA 95852-1830

/s/

TIMOTHY TUTT
Government Affairs Representative
Sacramento Municipal Utility District
P.O. Box 15830, M.S. B404, Sacramento, CA 95852-1830

cc: Corporate Files