

April 15, 2016

Ms. Rajinder Sahota
California Air Resources Board
1001 I Street
Sacramento, CA 95812-2828

Re: Comments of Roseville Electric on the March 29, 2016 Public Workshop on Cap-and-Trade Regulation Post-2020 Emissions Caps and Allowance Allocation

Roseville Electric appreciates the opportunity to provide comments to the California Air Resources Board (CARB) on its March 29, 2016 “Cap-and-Trade Regulation Post-2020 Emissions Caps and Allowance Allocation” workshop (workshop). During the workshop, CARB staff discussed setting post-2020 emissions caps as well as post-2020 greenhouse gas (GHG) allowance allocations.

A Publicly Owned Utility (POU) established in 1912, Roseville Electric is located in Northern California and serves over 57,000 customers, with an annual electricity load of over 1.1 million MWh. Roseville Electric appreciates the workshop discussion facilitated by CARB staff, and supports CARB’s efforts to achieve the goals of AB 32. Roseville Electric’s comments on specific issues raised in the workshop are as follows:

- Roseville Electric supports Option 1 (a linear decline between current 2020 and expected 2030 cap level) for cap-setting, as it will result in greater market certainty and regulatory consistency;
- Roseville Electric believes quantifying and verifying load increase due to transportation electrification is a complex issue. The most immediately urgent of these issues are regulatory consistency, and developing guidelines for the additional, non-load GHG emissions reductions electric vehicles (EVs) can provide.

1. Roseville Electric Supports Option 1 for Post-2020 Cap Setting For Less Market Volatility and Greater Regulatory Consistency

During the workshop, CARB staff presented two options for setting post-2020 allowance caps:

- Option 1 would be a linear decline between current 2020 and expected 2030 cap levels.
- Option 2 would be a linear decline from estimated 2020 covered GHG emissions and the expected 2030 cap.

Option 1 would represent a smooth transition from current cap levels, while Option 2 would result in a currently unknown, but potentially significant, drop in allowances between 2020 and 2021. Roseville Electric supports Option 1 because it will result in less market volatility and greater regulatory consistency. In both cases, the same 2030 cap would be reached.

Option 2 will result in greater market uncertainty and volatility, as well as potentially higher prices resulting from speculation. All else equal, the larger the gap between 2020 and 2021 allowance caps, the higher allowance prices would be expected to rise. Option 1 would ensure continued certainty in the allowance market and an orderly transition into a low-carbon economy.

Adopting Option 1 would also ensure regulatory consistency with other aspects of the cap and trade program. As CARB staff explained during their workshop presentation, free allowances are distributed to protect electric ratepayers “from cost increases,” and for the purpose of transition assistance, or to “ease carbon costs into the economy.”¹ It would seem to be inconsistent or even contradictory to risk rate shock for ratepayers- particularly those in disadvantaged communities- or a more abrupt transition between 2020 and 2021 for covered entities by implementing Option 2.

For the reasons stated above, Roseville Electric supports the adaptation of Option 1, or a linear decline between current 2020 and expected 2030 cap levels.

2. Accurately Quantifying and Verifying Load from Transportation Electrification is Complex; the Most Pressing Issues are Regulatory

a. Introduction

The CARB workshop presentation stated there would be “evidence-based allocation for increasing electrification.” Additionally, CARB staff requested feedback “on appropriate data sources and methodologies to use to... calculate [Electricity Distribution Utility, or] EDU-level allocation.”² In other words, it is Roseville Electric’s understanding that CARB will require EDUs to quantify and verify the additional load and associated GHG emissions from transportation electrification in order to be credited allowances offsetting the GHG emissions associated with this additional load.

In principle, this is a straightforward goal; in practice, the accounting and verifying of additional EDU load from transportation electrification will be complex, as there are several barriers as well as interactions with other programs and aspects of electrical service. The most pressing issues are regulatory consistency, and developing guidelines for the additional, non-load GHG emissions reductions electric vehicles (EVs) can provide.

Accurate data are important to both CARB and the EDUs. Excess allowances would undermine the price signal for reducing GHG emissions, while a shortage would result in an inequitable cost burden spread across all ratepayers, including those who lack the wherewithal to purchase electric vehicles (EVs). Therefore, Roseville Electric respectfully submits the following issues and regulations, for CARB staff consideration in developing principles and guidelines for the verification and quantification of load from transportation electrification.

b. Issues to Consider In Quantifying and Verifying Transportation Electrification

Ideally, an EDU would be able to identify when an EV is charging, utilizing sub or separate metering paired with advanced metering infrastructure (AMI). This would allow quantification and verification of the following: determination of which EDU should be credited with GHG allowances; measurement of the kWh load; quantification and valuation of grid services provided by the EV, if any; and verification of the GHG emissions associated with the EDU’s generation mix at the time of load,

¹ Slide 12, March 29, 2016 workshop presentation.

² Slide 24, Id.

netted against the emissions of comparable conventional vehicles, to determine the net amount of GHG emissions avoided and therefore the amount of GHG allowances that should be credited.

However, there are currently a number of barriers to obtaining this goal, the first two being the most important in the near term:

1. CARB will need to reconcile allocating GHG allowances for transportation electrification with other programs, such as the Low Carbon Fuel Standards (LCFS) and its credits, and determine whether particular goals and guidelines are conflicting, complimentary, or redundant in order to minimize the regulatory burden and cost on EDUs.
2. In the future, EVs may provide ancillary services or even electricity in the form of storage, demand response, or demand side management. These services will likely provide additional value, including GHG emissions reductions, and should be quantified and verified accordingly.
3. Not all EDUs will have AMI by 2020, and guidelines should be developed for EDUs which will have limited to no AMI. Even among those which plan to have AMI by 2020, such as Roseville Electric, it is unclear that AMI alone could identify EV load. A ratepayer may plug their vehicle into a wall outlet, for example, or decline to assist the EDU in quantifying and verifying data.
4. The privacy and security of such granular, individualized data should be protected. While developing the investor owned utilities' voluntary LCFS plans for residential ratepayers, identifying EV owners was an issue, as the DMV was unable to divulge individuals' information directly to investor owned utilities. Additionally, Roseville Electric is concerned that the cost and resources required to secure such volumes of data in the future may represent a significant regulatory burden.
5. Identifying the residences of EV-owning ratepayers is necessary, but insufficient for accurate quantification and verification of load:
 - a. The performance characteristics of an EV, driving habits of the ratepayer, and driving conditions will affect the amount of GHG emissions offset. In particular, partial EVs- such as the more common hybrid vehicles today- will pose an additional quantification and verification challenge.
 - b. Ratepayers may charge their EVs at work or during travel, which may be outside the EDU territory in which their domicile is located.
 - c. Ratepayers may also move between EDU service territories, potentially leading to inaccurate allocation of GHG allowances from transportation electrification during the period in which the records are outdated.
6. Education and outreach efforts should be made in order to educate EV owners about the benefits of transportation electrification and ensure maximum participation and accountability.

These are a few of the factors Roseville Electric believes CARB staff may wish to consider. At a minimum, these issues highlight the need for conceptual framework to create a robust, carefully considered set of guidelines in quantifying, verifying, and reporting the additional load from transportation electrification. As explained below, CARB has already taken steps in addressing some of these issues, although much remains to be done.

c. Current Regulatory Methodologies and Discussion Relating to Transportation Electrification

It is Roseville Electric's understanding that the LCFS group within CARB has developed reporting guidelines for electricity used as a transportation fuel, under [Section 95481\(a\)\(3\)\(D\)](#) of the LCFS regulations. For residential EVs, the regulations essentially require either metering or an estimate based on the number of non-metered vehicles multiplied by the "best available data" for daily average EV electricity use and the number of days in the compliance period. Specifically, as explained in a [recent notice](#), CARB uses Department of Motor Vehicle (DMV) and Clean Vehicle Rebate Project (CVRP) data to estimate LCFS credits for non-metered residential electric vehicle charging.

Additionally, the California Public Utilities Commission (CPUC) has recently issued [Decision \(D.\) 16-01-045](#) on January 28, 2016, for Application (A.) 14-04-014 and Rulemaking (R.) 13-11-007 on Vehicle-to-Grid Integration (VGI). Pertinent sections may include 3, which lists the decision's guiding principles; 5.7.12, Education and Outreach; 5.7.13, Bidirectional Power Flow; and 5.7.15, Electricity from Direct Access Providers. CPUC staff have also published a [VGI paper](#) in 2014, discussing how and where the resource is defined on page 24, in addition to metering and telemetry as well as communication standards on page 31.

In summary, Roseville Electric recommends CARB adopt Option 1- a linear decline between current 2020 and expected 2030 cap level- for cap-setting, in order to maintain regulatory consistency and market certainty. Additionally, Roseville Electric recommends that CARB address the issues surrounding transportation electrification, particularly to ensure regulatory consistency with other programs and appropriately value the grid services EVs can provide. Roseville Electric appreciates the opportunity to submit comments, and looks forward to working with CARB staff in developing solutions to these issues.

Respectfully Submitted,

/s/ _____

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