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SENT VIA ELETRONIC MAIL

Mr. Sam Wade
Chief, Transportation Fuels Branch
California Air Resources Board
Industrial Strategies Division
P.O. Box 2815
Sacramento, CA 95812

RE: 2018 LCFS Preliminary Draft Regulatory Amendment Text

Dear Mr. Wade,

Thank you very much for the opportunity to submit these comments. Following the November 6, 2017 public workshop, we seek to provide comments on Pre-Rulemaking 2018 Low Carbon Fuel Standard (LCFS) Preliminary Draft Regulatory Amendment Text and other Staff Discussion Papers that have been released during this process conducted by the California Air Resources Board (CARB or ARB). Specifically, our comments will focus on electricity as a transportation fuel in the LCFS market.

Background

SRECTrade is one of the largest solar renewable energy credit ("SREC") transaction and management firms in the industry. SRECTrade provides aggregation, management, and technology solutions to more than 1 GW of solar assets across more than 100,000 projects. SRECTrade works in an agency capacity to help solar asset owners with all aspects of project registration and certification, generation reporting, and certificate transactions and settlement. Since 2008, SRECTrade has been one of the leading sources for information regarding SREC price trends and legislative updates, bringing a wealth of knowledge and transparency to some of the fastest growing state markets in the solar industry. We exist to accelerate the adoption and participation in these state incentive programs by providing services and technology that minimize the time, cost, and risk associated with achieving benefits and compliance in environmental commodity markets.

SRECTrade is active in state markets throughout the Northeast, the Mid-Atlantic and the Midwest. Our comments reflect our experience in solar markets in Massachusetts, New Jersey, Pennsylvania, Ohio, Delaware, Maryland, Illinois and D.C. in the hopes that we can contribute to the ongoing development of the California Low Carbon Fuel Standard. We provide support and services to market stakeholders including residential home owners, small and medium businesses, institutional asset owners, competitive electricity suppliers, energy utilities, tracking registries, and regulatory bodies. We hope to take our experience and apply it to the CA LCFS program, specifically with a focus on electricity and the distributed nature of electricity as a transportation fuel.

Our comments cover the following LCFS subject areas: Third-Party Aggregator; Renewable Electricity Pathways; Considerations for the Verification of Electricity; and Residential LCFS Electricity Credit Generators.

Third-Party Aggregator

As outlined in the Staff Discussion Paper: *Electricity as a Transportation Fuel* dated November 23, 2016 (the Staff Discussion Paper), SRECTrade supports CARB's consideration for the use of Third-Party Aggregators. We agree it is likely that current and future entities eligible to generate credits under the electricity as a fuel category may not opt in to the program due to resource limitations and total financial incentives available to each participant.

Currently, in SREC markets, SRECTrade exists to solve this problem and maximize program participation. We are evolving our existing services to apply them to the CA LCFS market and are working within the current framework to register our first eligible entity clients. Allowing Third-Party Aggregators will enable participation from more eligible entities, regardless of resources and total financial value to the eligible party. We understand that many eligible entities utilizing electricity as a fuel may not necessarily have the capability, experience or sophistication necessary to participate in the environmental commodity market, especially site hosts in the private access electric vehicle (EV) charging category. With the availability of a Third-Party Aggregator role, entities like SRECTrade can help facilitate registration and certification of the EV charging asset in LRT-CBTS. Aggregators would assist in reporting kWh usage data and ultimately facilitate credit transactions in the market. Regardless of the number of credits produced by an entity, they could leverage the infrastructure of a Third-Party Aggregator to manage and transact any number of credits on a regular basis. Additionally, because they would be aggregated with other similar sized entities, they would be able to reach the same scale of other, larger credit generators and be able to efficiently transact in the market place.

For clarity, we recommend a Third-Party Aggregator account to be the single registration account on behalf of many EV charging station owners. Ownership would be designated by each unique asset. An agency management document signed by both the asset owner and the aggregator should be required. This is common in other tracking registries such as PJM-GATS and NEPOOL GIS. It also takes the burden of account management off the eligible entities and puts the responsibility on the aggregator. SRECTrade would be more than happy to provide a detailed demonstration to CARB Staff such that a clear picture could be portrayed of how we envision this working in practice.

SRECTrade agrees with the registration approach laid out in the November 23, 2016 Staff Discussion Paper. It is important to register, certify, and report for each unique EV station, allowing each station to have a unique facility ID that correlates to credits and ultimate transactions. In REC tracking registries, such as PJM-GATS and NEPOOL GIS, each renewable energy asset is assigned a unique asset ID, which is then tied to the resulting credits issued and transacted. We find this to be an ideal structure in practice, especially among aggregated groups of assets, such that generation and credits produced can be uniquely tied back to the facility registered in the program. It also allows aggregators and their clients to maintain clear delineation for credit ownership in all transactions and to minimize the risk of double counting.

This is similar to how aggregators participate in the tracking registries in the northeast (e.g., PJM Generation Attribute Tracking System (PJM-GATS), and NEPOOL Generation Information System (NEPOOL-GIS)). Upon credit issuance, aggregators would help market the credits and facilitate transactions, acting as agent on behalf of the EV owners and facilitating all contracting

and delivery obligations with the buying entities. Credit aggregators would be aligned to achieve the best price possible, as they would be passing along a substantial value, net a service fee, back to the end owner. Typically, SRECTrade has structured these fees on a percentage basis to establish incentive alignment and to ensure we are continuously working on a best efforts basis to maintain a longstanding relationship with clients. By way of example, in the SREC markets, SRECTrade clients tend to utilize our service offering for the term of their SREC eligibility, commonly 10+ years. Service providers in this position are aligned to provide a high quality and innovative service to ensure a longstanding relationship.

Renewable Electricity Pathways

SRECTrade is in support of CARB's efforts to establish lower CI pathways for renewable electricity used in EV charging infrastructure.

First, we agree that updating CA grid average CI annually would be a good approach to more accurate CI levels for eligible entities utilizing electricity as a transportation fuel. Additionally, encouraging renewable energy to be paired with EV charging infrastructure could help drive further adoption of renewable energy and make participation in the LCFS program more attractive. We believe that pairing renewable energy and EV charging assets can be done in two ways. As staff laid out in the November 23, 2016 Staff Discussion Paper, and as was further discussed in the November 6, 2017 public meeting, renewable electricity pathways can be approved through on-site, co-located renewables or other flexible, non-co-located renewable electricity resources.

For co-located renewables, SRECTrade would suggest there be an additional registration process in LRT-CBTS to validate the on-site renewable energy project. This would be something that a Third-Party Aggregator or eligible entity could facilitate directly on behalf of the project owner. If a pathway exists in the lookup table, for example, as is being considered for 100% solar or wind energy, the project could utilize that pathway. Otherwise, an individual pathway would have to be established. Once the project is registered, EV charging data should be able to be reported in the same manner, but would qualify for that specific asset ID with a lower CI score.

If EV charging assets are utilizing other flexible, non-co-located renewable electricity resources, such as a Green Tariff Shared Renewables Program or purchasing electricity from another renewable energy supply agreement (e.g., Community Choice Aggregator), we believe there should be a framework for EV charging asset owners to benefit from the lower CI due to their renewable energy purchases. SRECTrade supports the comments submitted on October 6, 2017 by the SMART Charging EV Group as well as the comments submitted on September 5, 2017 by Tesla about how the California Air Resources Board can support lower CI pathways through co-located and non-co-located renewable energy sources providing electricity as a transportation fuel.

Considerations for the Verification of Electricity

In the November 23, 2016 Staff Discussion Paper for Electricity as a Transportation Fuel, SRECTrade appreciates that staff is considering reducing the cost associated with verification of electricity data. Given our current experience, we understand the need for reliable and accurate mechanisms to report data for credit generation and issuance, but also believe that if the process is too burdensome and costly, it will hinder participation in the program.

We support staff's consideration to exempt small providers of grid electricity as a transportation fuel from third-party verification by an ARB-accredited verification body. We believe that a threshold based on annual credit generation would be preferable and relatively straightforward to implement. Mathematically, it would be possible to quantify the maximum kWh utilized by a charging station based on the station's total capability to dispense energy should it be 100% utilized over the course of a day, month, or year. We believe this maximum threshold could address annual credit generation maximums while also being applied to a single location.

With respect to EV charging data reporting, we encourage staff to maintain flexible metering and reporting requirements, so long as data can be validated and provided. We understand staff is considering adoption of EV charging meter accuracy requirements as set forth in the California Department of Food and Agriculture Division of Measurement Standards, but believe that threshold maximums combined with reportable data accurate credit generation can be achieved. We recommend that EV charging asset owners implement data reporting capabilities that can be: 1) manually read from a meter or inverter or 2) reported via the internet. If data were to be validated or audited, charging station owners could provide downloadable reports of kWh usage data, or even take a picture of the data screen on the physical device. For example, this is how generation data is validated in REC tracking registries. In instances where production is exceeding threshold maximums, additional information, such as a meter reading photo or screenshot of online generation reporting device, is provided to the applicable tracking registry for verification and approval.

Residential LCFS Electricity Credit Generators

While we understand that Electric Distribution Utilities (EDUs) are typically the first in line entity to generate credits for electricity as a transportation fuel entities, unless the site host opts in (e.g., in the case of private access EV charging equipment), we would recommend that the California Air Resources Board provide a similar opt in mechanism for residential EV owners. While the administrative burden associated with managing so many registrations could be large, SRECTrade would recommend requiring residential EV owners to utilize and register a Third-Party Aggregator. Similar to comments submitted on September 5, 2017 by Tesla, SRECTrade believes that providing the credit generation to an automaker or Third-Party aggregator on behalf of the EV owner is a more direct route to incentivizing EV adoption. The individual or family that buys the vehicle gets direct access to the LCFS program at the time of purchase (e.g., a discount on the sticker price of the car) or continued benefit and participation in the LCFS program over the life of ownership of the EV. This market structure would more closely align the incentive with the party responsible for providing the benefit (i.e., the EV purchaser). We also believe that the administrative cost and burden put on the EDUs would be dramatically reduced. In Tesla's September 5, 2017 comments, they note that each EDU is spending between \$500,000 and \$1,300,000 annually to administer LCFS credits. Allowing residential owners to directly claim the benefit puts the cost of administration on manufacturers and Third-Party Aggregators, which is ultimately paid for through services fees borne by the owner of the Electric Vehicle. EV owners will ultimately pay for LCFS management services net of the credit values. Manufacturers and aggregators bear the risk of investing in marketing, administration, and other expenses, and utilities will not need to bear this financial or administrative burden or risk.

In our experience, this allows for innovative marketing and education models to present themselves in the market. Manufacturers and aggregators will be incentivized to create awareness and educational programs about how the LCFS market can benefit EV owners. Credit aggregators, manufacturers, and installers of EV equipment (some of which may have overlap) can nimbly create partnerships and marketing campaigns to inform consumers of the benefits of

the program and allow for EV adoption to flourish quickly. It is possible that manufacturers, aggregators and other market participants could create financing solutions that help drive more value to end residential EV owners. Comparisons can be made to similar mechanisms created for residential solar financing such as power purchase agreements (PPAs) and solar loan offerings. Market participants have created these products and developed solutions in which residents could get the benefits of energy independence without having to cash finance 100% of the cost upfront. Not only has this market design encouraged innovation, but this structure has also helped support the adoption of solar in SREC markets and has led to job creation across the solar industry. By way of example, the Massachusetts SREC market, introduced in 2010, has supported the development of over 1,600 megawatts across nearly 70,000 projects and has generated over 18,000 solar jobs in the state (*Sources: MA Department of Energy Resources and Massachusetts Clean Energy Center - 2016 Massachusetts Clean Energy Report*). We believe that a similar structure could be applied to the CA LCFS market for greater adoption of EVs at a residential level. This could have a great economic impact in the State of California, while also achieving the goals of the LCFS program to reduce the carbon intensity of California's transportation fuels.

Thank you very much for your time and consideration as you review these comments and consider our recommendations. We appreciate the opportunity to provide you with information on how other similar environmental commodity markets have been structured. We welcome the opportunity for further clarification and discussion of our comments.

Best Regards,



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