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Numerous comments including hydrogen via electrolysis using directed electrons should gain LCFS credits.

Additional submitted attachment is included below.

ITM POWER
Energy Storage | Clean Fuel

ITM Power Inc.
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August 16, 2017

Dear California Energy Commission (CEC),

ITM Power appreciates the opportunity to provide comments on the July 31st Staff Workshop on Draft Solicitation Concepts for Renewable Hydrogen Transportation Fuel Production Facilities & Systems.
This is an extremely important topic as without a renewable supply of hydrogen in state, fuel cell vehicles will always have a carbon footprint associated with their use and will never be a truly zero carbon transportation system.

ITM Power makes the following comments:

1) We encourage the CEC to add funds to the $2m available if possible. The funding is just 1% of the funding allocated to hydrogen station roll out. California has a shortage of capacity within its current fossil fuel based hydrogen production facilities, if the stations are built without the corresponding production facilities there will be a problem in the future. Renewable facilities are expensive and take time to build and permit therefore the time is now to start this program on a much larger scale than $2m.

2) ITM asks the CEC to confirm that renewable facilities will need to confirm that hydrogen meets SAE J2719 at the facility rather than at the station locations?

3) ITM asks the CEC to work with the Air Resources Board (ARB) to establish a philosophy that allows Low Carbon Fuel Standard (LCFS) credits to be generated via a grid tied Renewable Energy Credits (RECs) based system to bring parity between electrolysers and directed biogas based reformer systems.
One of the main benefits of using centralized or distributed electrolysis to produce renewable hydrogen is the fact that the electrolysis assets provide a grid balancing service, by default this uses the grid to transfer electrons from renewable assets to electrolyzers. As California increases renewable generation to 50% and beyond this will be a very valuable service to the electricity grid. At present the LCFS credit system does not allow a system to generate renewable electrons (tracked via RECs) in one location and use those electrons somewhere else on the electrical grid which is a huge disadvantage to the technology and makes most, if not all, grid based electrolysis systems uneconomic.
By contrast a biogas plant can inject biogas molecules into the gas network in one location and extract them from a natural gas pipeline in another location (as long as a physical pathway exists between the 2 locations), reform them and make renewable hydrogen that generates LCFS (and RIN) credits. Quite simply this is a dangerous

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system which clearly benefits one technology over another and goes against California's technology agnostic policy.

4) Can the CEC confirm what level of data collection will be required for the facility? Depending on the type of data there may be additional hardware required to collect the data increasing the price of the facility. ITM urges the CEC to select data which is non intrusive and simple/economical to gather.

5) When selecting the time framers for the project term ITM considers the following to be adequate; 3 months from solicitation release to proposal submittal, 24 months from CEC business meeting to opening the facility.

Kind regards,

Steve Jones

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