



California Energy Commission

DOCKETED
12-HYD-01

TN 72106

OCT. 16 2013

October 16, 2013

California Energy Commission
Alternative and Renewable Fuel and Vehicle Technology Program
via e-mail: docket@energy.ca.gov

Re: Docket 12-HYD-01

At the California Hydrogen & Fuel Cell Summit last week in Sacramento, there was a genuine buzz of anticipation that we are finally at the threshold of the adoption of hydrogen fueled vehicles in California. There are several people and companies representing automobile manufacturers, industrial gas companies, hydrogen cleantech manufacturers and project developers on the California Hydrogen Business Council and California Fuel Cell Partnership who have been actively working towards this goal for over 15 years. There are also many new companies and entrants that are interested in participating in this emerging market. However, the single most important initiative driving this activity is the Alternative and Renewable Fuel and Vehicle Technology Program for Hydrogen Fuel Infrastructure of the California Energy Commission.

The following are Hydrogenics' comments on the CEC's latest *Draft Solicitation Concepts* for the procurement of hydrogen fueling stations dated September 25, 2013 (Docket 12-HYD-01).

Comments

2. Maximum Award

- A. The Per Project Cost Share of \$2.8 million is sufficient, but we recommend that the CEC increases the set aside to \$11 million. This addresses the need to develop and deploy clean alternative hydrogen fueling technologies and innovative approaches and would only reduce the total amount of stations by one.

Under the proposed minimum funding guidelines, the CEC would procure at least one (1) 100% renewable hydrogen fueling station, one (1) mobile refueler, and at least fifteen (15) conventional hydrogen fueling stations for a total of 17.

Raising the funding available for the Renewable Hydrogen Set-Aside Competition as recommended would increase the number of 100% renewable stations to four (4) and 16 stations overall – this is only one station less, but this will drive innovation and help accelerate the cost reduction of 100% renewable hydrogen.

Should the set aside be undersubscribed it can be rolled into 2-C.

C. This is fair since the last PON with a 70% match share was heavily subscribed to.

4. Late Project Penalty

If the project plan is being pushed back and it is obvious that the project will not be completed within 18 months, the proponent should not be allowed to bid on another project with the CEC for hydrogen refuelling infrastructure until this is complete. This will increase the good faith in commitments from applicants.

8. Single Applicant Cap

This cap should be at most 40% with an option to increase this cap if insufficient applications are submitted. This will encourage at least three different technologies to enter and compete in the market. As we have seen in the previous awards, three different fueling technologies have failed resulting in weeks/months of delay. Diversity is a must.

11. Minimum Technical Requirements

D. It currently reads that up to 42 kg in one hour since it states three 70MPa type A AND 3-35MPa Type B. This should be changed to three 70MPa type A OR 3-35MPa Type B. Also, should state 'refuel' instead of 'recharge' in last sentence.

12. Renewable Hydrogen Requirements.

We appreciate that the CEC has structured the draft solicitation concepts to achieve multiple objectives. Judging from the presentations and discussion at the California Hydrogen & Fuel Cell conference, nearly everyone agrees that it is essential to get to a critical mass of 68 hydrogen fueling stations in California in a few short years, and that the ultimate goal is to have renewable hydrogen for fueling. The debate is over the best way to get there. If there are delays in building out the hydrogen fueling infrastructure, it will slow the commercial roll-out and adoption of fuel cell vehicles and delay the fundamental benefit of having zero emission

vehicles—cleaner air where people drive their vehicles. However, if the renewable hydrogen fueling objective is put on the back burner until after the initial infrastructure is in place, it will slow the development and cost reductions of renewable H2 fueling technologies such as electrolysis significantly and delay realization of GHG abatement benefits. We need to deploy alternative technologies to move down the learning curve. The 33% renewable hydrogen requirement which is based on previous PONs is a laudable target and strikes a good balance between these two overarching objectives.

18. Operation and Maintenance Support Costs

Recommend increasing the limits to \$150K / \$130K / 100K for the maximums for the respective actual station operational dates, and cover all operational costs including electricity; if cars don't arrive the equipment will simply consume energy with little to no sale of H2.

Additional Comments – Suggest adding a map of all stations built and awarded to date on the polygons



Michel Archambault
Hydrogenics Corporation
Director, Business Development & Sales
OnSite H₂ Generation - The Americas
Office: +1 450 482 1622
Mobile: +1 514 518 6448
marchambault@hydrogenics.com
www.hydrogenics.com