



October 16, 2013

California Energy Commission  
Docket Number: 12-HYD-01  
1516 Ninth Street  
Sacramento, CA 95814-5512



**Subject: Submittal by FirstElement Fuel, Inc.; Comments on Draft Hydrogen Fuel Infrastructure Solicitation 12-HYD-01**

FirstElement Fuel is pleased to have the opportunity to comment on the Draft Hydrogen Fuel Infrastructure Solicitation. In general, the draft solicitation concepts appear considerably more attractive than the previous solicitation for hydrogen infrastructure. Specifically, the increase in potential cost share from the Commission, the addition of the 10% Early Completion Bonus, and the Operation and Maintenance Support Costs are particularly appealing.

The following comments detail our specific impressions of the document:

**Concept #7:**

We feel that the designation of back up station sites may be problematic in cluster regions with multiple bidders. For example, if an area had 3 bidders, each would need a back-up site, requiring 6 total, feasible sites. Given the historic difficulty in locating viable sites based on footprint or unwilling land owners, this seems like a tall order. Additionally, finding a back-up site within 6 minutes of the primary site does not necessarily ensure that it will serve the same community. In general, FirstElement urges the Commission to evaluate sites and proposals holistically, and avoid stringent quantitative boundaries to the extent possible.

**Concept #8:**

FirstElement is pleased with the increase in total award cap per recipient to the new 60% level, as well as the language that allows the Commission to remove or modify the cap at the Commission's discretion.

**Concept #13:**

FirstElement commends the Commission for pursuing renewable hydrogen through the renewable set aside. The substantial environmental “up-side” of hydrogen and fuel cell vehicles through 100% renewable fuel is a goal that the industry must strive for. But, the realities of the developing hydrogen refueling industry necessitate pragmatic near-term solutions. FirstElement believes that the Commission has struck a good balance by allocating approximately 10% of the available funds to completely renewable fuel. As the industry grows, the cost effectiveness of renewable hydrogen will better align with the costs for non-renewable sources, and greater portions of funding can be allocated to renewable hydrogen sources.

**Concept #14**

The mobile refueler set-aside is a valuable idea and the need for such technology is well-documented in the draft PON. However, the Commission has allocated up to \$1.75 MM for stations meeting all the performance requirements listed in Concept #11, yet only \$1.0 MM for equipment meeting identical performance that is mounted to a moving vehicle. This appears to be technically and economically infeasible. The performance specifications (e.g., daily capacity, hourly rate) need to be dramatically reduced to enable potential mobile refueler projects to meet the Commission’s allocated budget. Considering that a mobile refueler will serve primarily at destination sites, special events, or during station downtime, the lower performance will likely be acceptable.

**Concept #15 F:**

FirstElement understands the need for a comprehensive network of stations in California. However, we recommend that a more holistic view be taken of the network and that the 6 minute coverage language be removed from the solicitation. For example, two stations within 6 minutes of drive time from one another in a less dense area may be overkill in this early phase of hydrogen infrastructure development, but two stations located within 6 minutes of one another within a dense, traffic-laden region such as the Santa Monica cluster may be necessary and desirable for commercializing fuel cell vehicles.

**Additional Comments:**

In addition to the specific comments above, FirstElement urges the Commission to explore other funding mechanisms beyond the current solicitation process. For example:

- (1) The Commission could offer the funding through a combination of several paths including the normal solicitation and capital grant, low or zero interest loans, or rebates that provide a guaranteed level of reimbursement for stations that have been successfully built with private investment. The rebate idea appears particularly attractive as it would reward cost reduction and ensure successful completion of projects, before the Commission distributes funds. Clearly, the stations would be required to meet all of the Commission’s criteria for performance, location, etc. to qualify for a rebate. The rebate could then be based on the



daily capacity. For example, the Commission could provide \$5,000 for each kg/day of capacity; a successfully executed 200 kg/day station would then receive \$1,000,000 from the Commission.

FirstElement believes fuel cell vehicles will change the world if a sufficient network of fueling stations is in place to enable their commercial success. We are eager to work with the Commission, automakers, industrial gas companies, and other stakeholders to ensure that safe, reliable hydrogen fuel is available for the commercial launch of fuel cell vehicles.

Sincerely,

A handwritten signature in blue ink, appearing to read 'Joel Ewanick', written over a horizontal line.

Joel Ewanick  
Chairman and CEO  
FirstElement Fuel, Inc.

A handwritten signature in blue ink, appearing to read 'Tim Brown', written over a horizontal line.

Tim Brown, Ph.D.  
President and Co-Founder  
FirstElement Fuel, Inc.