



California Energy Commission

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12-HYD-01

TN 72113

OCT. 17 2013

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California Energy Commission
1516 Ninth Street
Sacramento, CA 95814

Regarding: Docket No: 12-HYD-01, Comments on Draft Solicitation Concepts

Dear Commissioner Scott and Energy Commission Staff:

General Motors appreciates the opportunity to provide comments on the Draft Solicitation Concepts (Subject Area – Hydrogen Fuel Infrastructure) proposed by the Energy Commission on September 25, 2013. As described in the California Fuel Cell Partnership's *A California Road Map: The Commercialization of Hydrogen Fuel Cell Vehicles* (June 2012), establishing an initial network of stations to ensure coverage for early adopters of fuel cell vehicles is the critical first step towards the early commercialization.

General Motors recognizes the continued progress with awarding hydrogen stations. The latest concepts described in this draft solicitation represent significant progress from the initial hydrogen station awards made by the Air Resources Board and the Energy Commission. While stakeholders still need to work closely together to accelerate the deployment of all awarded stations in California, General Motors supports overall strategy contained in these concepts. General Motors further encourages the Energy Commission to work with stakeholders to develop a more comprehensive statewide plan for hydrogen, with guiding principles and a time horizon beyond the current annual *Investment Plan*. This proposed statewide plan should strive to meet the hydrogen infrastructure goals established within the CaFCP's *Road Map* and future stakeholder and CaFCP analyses.

General Motors offers the following detailed input on the concepts:

Maximum Award (#2)—General Motors promotes the advantages of using renewable-based hydrogen in fuel cell vehicles to generate zero emission miles. We also appreciate the benefits of including renewable-based hydrogen within the station network. However, we do not see a strong need for a specific set-aside, the *Renewable Hydrogen Set-Aside (#2a)*. As an alternative, the Energy Commission might consider using the extent to which renewables are incorporated into a station (or network of stations) during the proposal evaluation process. This discretion would allow the Commission the flexibility to support the best proposals while continuing to support the lowest carbon fuels. Furthermore, the Energy



Commission should also consider how the inclusion of any set-aside supports the aggressive deployment timelines necessary to establish the initial network of hydrogen stations.

General Motors supports the increase in eligible cost share. General Motors also recognizes the interaction of this capital cost-share incentive with the operation & maintenance incentive (#18). An adjustment to either would influence the overall impact to a station operator and should be the key consideration as (if) these concepts are adjusted.

Early Completion Bonus (#3) & Late Project Penalties (#4)—General Motors supports each of these concepts. The Energy Commission may also consider expanding these concepts in the solicitation—for example, multiple timeframes with additional bonus/penalty.

Limit One Station per Proposal (#6)—While this concept is not anticipated to significantly impact the ability to develop an initial network of stations, it may be valuable to support network development goals by considering how one proposal would include multiple stations. For example, a bidder may consider installing five stations, with four stations in clusters and one station in an emerging market or destination. The bidder's network proposal may offer added value to early customers by including such a new market, but the single emerging market station may not qualify on its own. This concept is not unlike the business models emerging for electric vehicle charging.

Since a bidder is only able to propose a single station which cannot consider potential scale economies, the current concept also limits the Energy Commission's ability to assess if cost reductions may be realized for awarding multiple stations or a network of stations.

Back-up Sites for Hydrogen Station Proposals (#7)—The value of providing "a back-up location" is unclear (#6, #7). It is not immediately obvious to General Motors how to value a backup location within the proposal or if one back-up location would support multiple locations. Further description of how this concept will be used may be necessary. In addition, as publicly stated in multiple workshops in 2012 and in 2013, General Motors strongly encourages the Energy Commission to establish a separate process for including direct automaker input into the value of any station location, particularly as it relates to a new, alternative location after an award has been made.

Single Applicant Maximum (#8)—General Motors appreciates the need to promote market diversity. General Motors also infers, per the discussion within the document, this concept may be adjusted or eliminated should proposals (per #6) offer a network solution. Per our comments on #6, General Motors acknowledges that flexibility may be necessary.

Minimum Technical Requirements (#11)—General Motors encourages the Energy Commission to continue to coordinate directly with SAE for the specific language within



Fueling Protocol (B). As language related to hydrogen fueling protocols are adopted and adjusted, the spirit of the solicitation/proposal process as well as the performance/ operation at a station should ensure fueling protocols across the network are consistent and transparent. From a customer's perspective, this will be critical for commercialization.

General Motors encourages the Energy Commission to take a close look at the *Minimum Station Daily Fueling Capacity (D)* as it relates to the development of the network. With a minimum average capacity of 100 kilograms per day, awarding lower-capacity stations in priority station location areas may limit network capability. For example, our assessment of the CaFCP's *Road Map*, which identifies a network of 68 stations, assumed stations are being deployed with increasing capacity. The projected capacity of the 68 station network was approximately 20,000 kilograms per day. Therefore, minimum daily fuel capacity for each subsequent solicitation should address how network capacity is growing in relation to each cluster as well as the overall network.

Mobile Refueler Set-Aside Competition (#14)—General Motors acknowledges the potential benefit of a mobile refueler to support the overall network, particularly when a station(s) becomes unavailable for an extended period of time. General Motors also believes other concepts would work to address this concern. For example, deploying awarded stations in a timely manner creates natural redundancy which does not exist today due to few operational stations. Also, the Energy Commission could establish operation and maintenance (O&M) penalties for extended downtime or bonuses for stations that do have redundancy—such as a pre-permitted capability of using temporary hydrogen sources.

While it would be desirable to have a low-cost, mobile refueler capable of meeting all the J2601 performance targets, General Motors also understands this represents a technical challenge. Furthermore, a mobile refueler will require set-up and break-down costs each time it is deployed. Without a clear description of these types of details, or a comparison of alternatives which reach similar goals, General Motors encourages the Commission to include requirements which show a “positive net value” of the mobile refueler.

Station Location Area (#15, #16)— General Motors is comfortable making the station location area concept an optional requirement, with bonus for priority regions and placing importance on the market viability scoring criteria. General Motors' observation is this optional criterion includes five pages (pages 9-13) of considerations. These considerations may introduce complexity in the proposal development, in stakeholder coordination (including automakers), and in analysis to determine what is within or outside the priorities.

Operation & Maintenance Funding (#18)—General Motors supports the inclusion of O&M cost reimbursement, particularly as it relates to all publicly-accessible stations and as it is in addition to the maximum award concept. General Motors believes Energy Commission will need to clarify if a station operator is eligible to receive this award in addition to previous O&M awards, particularly with PON-12-606.



General Motors also encourages the Energy Commission to consider how the State can signal to all station operators that O&M funding will be a core concept of future solicitations. For example a statement addressing the spirit of this concept may include, “*While future competition and solicitations would be necessary, O&M funding is anticipated to be available beyond the current solicitation term of October 2018.*” General Motors believes it is important to signal to the market that a station is anticipated to have an appropriate amount of support beyond the three years noted in these draft concepts.

California Environmental Quality Act (#21) and Permitting (#22)—General Motors is pleased and encouraged to see the participation of the Office of Business and Economic Development to support these critical program actions. General Motors looks forward to see the progress that can be made to accelerate station deployment timelines.

General Motors appreciates the opportunity to comment on the *Draft Solicitation Concepts* paper (dated September 25, 2013) for future hydrogen infrastructure solicitations. We value the working relationship between the Energy Commission, the CaFCP, and General Motors and look forward to continue the stakeholder dialogue on how to bring a robust, economical network of hydrogen stations to support early commercialization of fuel cell vehicles.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Alexander Keros".

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