

California Energy Commission

**DOCKETED
12-HYD-01**

October 11, 2013

To: California Energy Commission
From: Paul Staples, HyGen Industries
Date: October 11, 2013
Via Email: docket@energy.ca.gov.
Re: Docket 12-HYD-01

TN 72066

OCT. 11 2013

I thank you for the opportunity to comment. I am writing regarding the draft solicitation concepts in the draft 12-606 PON. Clearly this is an improvement and I feel for the first time as though our input has been heard. Especially in my dealings and conversations with Jean Baronas and Sarah Williams, who made me feel that what we had to say was important and worth considering. However, it seems as though other forces are influencing this process that still keeps Fossil Fuel Hydrogen running the show. This PON needs to show a clear preference for 100% Renewable Carbon-free Hydrogen in order to move this process forward and meet the roll-out timeline, which only 100% Renewable Carbon-free Hydrogen can accomplish. Otherwise we will remain a target for the Tesla/BEV people and the environmental community for criticism as lackeys of the petroleum/Fossil Fuel Industry. The Sierra Club is on the fence about hydrogen because the use of fossil fuels and NG-Fracking used to make it. This program could push them our way, or against hydrogen. Also it will continue to have problems permitting due to safety issues. I have outlined the problems and issues with the PON below.

[Blue Font-Recommendations/comments.](#) *Italics – PON Text.*

6. Limit of One Station per Proposal

Proposals shall be limited to one hydrogen fueling station per proposal. However, Applicants are encouraged to identify back-up station locations (see Concept #7).

The original proposal concept that allowed multiple stations was the correct approach. In order to optimize cost-effectiveness, the best deployment scenario requires the construction of multiple fueling stations. Especially if all are identical systems.

This also makes sense from the perspective of utility and practicality and ultimately, consumer acceptance. One station does not constitute a significant advancement in hydrogen fueling infrastructure. Multiple stations (15/20/30, etc.) located in the right market could mean the difference between continued stagnation of hydrogen fueling infrastructure development and a leap forward in renewable hydrogen technology adoption and the dramatic reduction in greenhouse gas emissions that would accompany it.

If the goal of the solicitation is to fund projects that significantly expand the network of publicly accessible hydrogen fueling stations and to accommodate the planned large scale roll out of hydrogen fuel cell electric vehicles beginning in 2015, then the solicitation shoots itself in the foot if it imposes a one station limit per proposal. It leaves it in the reviewers hands to cherry pick stations and discard the rest, where if presented in one proposal for all of the stations, as an all in proposal, then the value of a large number of stations, i.e., 15/20, needs to be judged on it's merits and if it advances more stations to deployment by the time the OEMs vehicle roll-out, better than funding several proposers with lower quantities of stations, then it is in the best interests of the CEC, the OEMs and the AB 118 Program to fund the larger proposal and meet the goals that AB 118 intended.

Especially since the original amount of \$40 mil for hydrogen infrastructure has been reduced to much less over the years since the legislation was first signed. This is the main reason that response to the PONs for Hydrogen Infrastructure has been so poor for renewable hydrogen resulting in all the funds going to a few Fossil Fuel hydrogen producers which only gives the naysayers and the BEV companies/advocates credibility that hydrogen is a fossil fuel boondoggle and unsustainable.

Recommendation: reinstate multiple station proposal eligibility, at least for 100% Renewable, carbon free hydrogen fueling where the systems are identical. It will enhance and improve the application process, and decrease duplication and make-work improving big picture review.

8. Single Applicant Cap

To promote market diversity, a single Applicant is eligible for no more than 60% of the total funds awarded under this solicitation. This is referred to as the "Single Applicant Cap." The Energy Commission reserves the right to modify or eliminate this cap if necessary. Cap increased relative to PON-12-606.

While I appreciate the sentiment about promoting market diversity, the reality is that there are better and worse ways of promoting hydrogen fueling infrastructure. One of the worst would be to advance systems that rely on hydrogen produced via fossil sources. One of the best, if not *the* best, would be systems that utilize renewable hydrogen. I am pleased that the CEC reserves the right to modify this cap and it is my opinion that you should, by eliminating it completely, only in the case of proposals that propose utilizing 100% renewably-produced hydrogen.

Arbitrarily imposing this cap for the stated reason ignores the fact that a single entity might well make the best and most efficient use of the funds in a renewable hydrogen context. Allowing a single applicant can optimize the effectiveness of the funding with respect to system integration, streamlined communications, and avoidance of duplication, as well as unit cost/station allowing for more stations to be deployed with the same budget. It should also be noted that multiple private sector participants stand to benefit even if a single applicant is awarded under the PON.

Recommendation: Eliminate cap for projects that propose 100% renewable carbon-free hydrogen.

13. Renewable Hydrogen Set-Aside Competition

Of the funding available, up to \$2.8 million is designated for stations that will dispense 100% renewable hydrogen fuel on--site or off--site. Projects under this set--aside are eligible for up to 80% of the total project cost or \$2.80 million, whichever is less.

This set aside is only 10%??? This is the same as the last PON, no improvement at all. This number should be 100%. In otherwords, it should be the preference of the PON, to fund first, all 100% Renewable Non-Carbon Hydrogen station proposals that meet all minimum requirement scores. After that, then the fossil fuel hydrogen by the Industrial Gas Industry (IGI). Otherwise this becomes a 90% set-aside for the Industrial Gas Industry and Fossil Fuels. If the IGIs believe their unsustainable, non-renewable carbon based Fossil Fuel paradigm is better to invest the 20-30% required in this PON, then let them invest 100% of the cost, rather than using up scarce taxpayers money that could go to funding the solution. After all, they have more money than the Government.

Otherwise, it says when 1 100% Renewable station is awarded, the rest could go to the IGIs. Resulting in 90% of the award going to the Fossil Fuel Industry, as it has since this program has started, and with abysmal results. – no commercial fueling stations operation after 2 PONs, the biggest one in 2010. This is no preference for 100% Renewable non-carbon hydrogen at all. In fact it codifies in the PON a preference for fossil fuel hydrogen and the Industrial Gas Industry.

Recommendation: Make the PON a 100% Renewable Non-Carbon Hydrogen Preferred PON by funding all 100% Renewable Non-Carbon Hydrogen Fuel Stations that scores the minimum required first, then all the rest.

15. **Station Location Area Competition**

The Station Location Area Competition will occur after the Mobile Refueler Set-Aside Competition. All proposals with stations that are within or assigned to a Station Location Area will be scored and ranked according to score.

C. Primary Priority Station Location Areas: Proposed stations within the following Station Location Areas will receive 20 bonus points to their final score:

Beverly Hills/Westwood – **Recommendation:** move line east a few blocks to LaCienega Blvd.
Hollywood/West Hollywood/Melrose - **Recommendation:** move line west to LaCienega Blvd.
Pasadena – **Recommendation:** Move line south a couple of blocks to California Blvd.
San Diego #1
San Francisco
Torrance/Redondo Beach
Westminster/Huntington Beach

Recommendation: Need to add to Primary Location Areas:

Pacific Palisades, Sacramento, Laguna Beach, Los Altos/Los Altos Hills/Palo Alto, Manhattan Beach/El Segundo, Malibu, Santa Monica, San Jose, and Berkeley/Oakland to the Primary Priority Station Location Areas. These are all areas of significant demographics priority.

D. Secondary Priority Station Location Areas: Proposed stations within the following Station Location Areas will receive 15 bonus points to their final score:

Berkeley/Oakland – move to Primary
Dublin/Pleasanton/Hayward
Los Gatos
Manhattan Beach/El Segundo - – move to Primary
Milpitas
Pacific Palisades - – move to Primary
Sacramento – move to Primary
San Diego #2 (La Jolla)
San Clemente
Santa Barbara
Woodside/Menlo Park/Atherton/Redwood City

Recommendation: Should add Santa Ana, Orange, Newport Bch., and add to Secondary Priority Station Location Areas a connector station between L.A. and S.F., especially along the coastal routes, i.e., 101, where there are communities that will support it.

F. Station Location Area Competition Guidelines: The Energy Commission will evaluate and recommend for funding proposals utilizing the following guidelines:

- Only one hydrogen fueling station will be funded per Station Location Area. Once a station is awarded under a Station Location Area (whether within the boundaries or assigned), all remaining proposals competing for that Station Location Area will be

disqualified and no longer eligible for funding.

Recommendation: Must give preference to 100% RH first.

- Once an Applicant exceeds the Single Applicant Cap (see Concept #8), remaining proposals from the Applicant will be disqualified and not eligible for funding. The Energy Commission reserves the right to modify or eliminate this cap if necessary.

Recommendation: Must exempt 100% RH.

- G. Determining Location of a Proposed Hydrogen Fueling Station:** To determine whether a proposed hydrogen fueling station is: 1) inside a Station Location Area; 2) assigned to a Station Location Area; or 3) is within 6 minutes drive time to an existing or planned hydrogen fueling station, Applicants may contact the UCI STREET team at bps@apec.uci.edu or (949) 824--7302, ext. 11--127.

Applicants will not know whether their proposed station is within the 6 minute drive time of newly proposed stations since locations of newly proposed projects are confidential until the release of the Notice of Proposed Awards.

Recommendation: The Cleanest most renewable one is chosen that meet the minimum to qualify.

The 6 Minute Away Rule: Cannot be enforced and is invalid if the applicant has no way of knowing where other proposed stations will be located.

Recommendation: The 6 min. rule in this case should not be a factor in dealing with competition. Just who is the cleanest. 100% Renewable/Sustainable Carbon Free wins.

16. Unassigned Station Competition

If funding remains available, the Unassigned Station Competition will occur after the Station Location Area Competition. All proposals with stations that are not within the boundaries of, or assigned to, a Station Location Area will be scored and ranked according to score. Eligible proposals achieving a passing score will be recommended for funding in ranked order until funds in this solicitation have been exhausted.

The Energy Commission will evaluate and recommend for funding proposals utilizing the following guidelines:

- Proposals will be scored in accordance with the scoring criteria.
- Once an Applicant exceeds the Single Applicant Cap (see Concept #8), remaining proposals from the Applicant will be disqualified and not eligible for funding. The Energy Commission reserves the right to modify or eliminate this cap if necessary.

Recommendation: Cap should be eliminated for 100% renewable Non-Carbon Hydrogen.

- Hydrogen fueling stations must be separated by 6 minutes or more drive time (according to UCI's STREET model) from existing, planned or newly proposed stations.

Recommendation: Can not penalize applicants for not knowing where proposed stations are to be located, encourages corruption and insider information trading. Eliminate this rule from proposed stations. Also, How far is six minutes? Indicate in the PON.

Proposed hydrogen fueling stations falling within the 6 minute drive time from existing or planned stations will be disqualified and not eligible for funding.

Again, can not know where proposed stations are??? How far is six minutes?

- Proposed hydrogen fueling stations that fall within the 6 minute drive time from other newly proposed stations will be recommended for funding based on the highest overall final proposal score.

Again, after 100% Renewable Carbon Free Hydrogen Stations meet minimum eligibility, Preference should be given to 100% Renewable Carbon Free Hydrogen Stations over Fossil Fuel Hydrogen stations.

17. Match Share Funding Requirements

The balance of the project cost beyond the Energy Commission grant is the Applicant's required match share this is also referred to as "match funding." Proposals competing under the Renewable Hydrogen Set--Aside Competition and Mobile Refueler Set-Aside Competition must provide a minimum match share of 20% of the total project costs. Applicants competing under the Station Location Area Competition and Unassigned Station Competition must provide a minimum match share ("match funding") of 30% of the total project costs.

Recommendation: This is not fair if you are proposing 100% RH which qualifies for 80%. Must be exempt for 100% renewable Non-Carbon Hydrogen, or reduced to 20%.

Match share funding is calculated as follows: if a proposed project has a total project cost of \$2,500,000, a 30% minimum match share funding requirement is \$750,000 ($\$2,500,000 \times 30\%$).

Recommendation: Again, this is not fair if you are proposing 100% RH. Must be exempt for 100% renewable Non-Carbon Hydrogen.

Proposals with a greater percentage of the total project costs in match share funding will be scored higher than those with lower match share funding. The following applies to match share funding:

Recommendation: Again, This is not fair if you are proposing 100% RH. Must be exempt.

20. Scoring Criteria and Points

Summary of the Scoring Criteria and Points:

9. Sustainability 30 points

Recommendation: Sustainability should be higher, raise to same as Market Viability -90 points

Qualifications of the Applicant/Project Team (30 points): Applicants must achieve a minimum of 70% (or 21 points) to be eligible for funding. Proposals will be evaluated on the degree to which...The project team's qualifications including relevant expertise, experience, and skill sets as they apply to performing the tasks described in the proposed Scope of Work. Project teams with better qualifications will score higher and those with no applicable experience will receive zero points.

Recommendation: Since there are few 100% Renewable non-carbon hydrogen fueling stations, this is going to be hard to quantify and qualify. This would be unfair if you are proposing 100% RH. Reword to account for this.

Project Budget (40 points): Proposals will be evaluated on the degree to which -

- Stations have a lower average cost per kg of hydrogen. Stations with a lower average cost per kg of hydrogen will score higher.
- The proposed station's project budget and cost are reasonable and suitable for the station's capacity.
- The proposed match share exceeds the minimum match share requirements specified in the solicitation. Proposals with higher match share percentages and commitments will score higher.
- State funds are necessary for the installation of the proposed project. Stations that articulate a greater need for state funds will score higher.

Recommendations: Should be determined on a long term basis, otherwise Fossil Fuel hydrogen developers (Industrial Gas Companies) could rig the deal by selling at a loss, since their cost of feed stock is proprietary. Long term, 100% Renewable non-carbon Hydrogen get less costly the more you use because it is infinite and it can't be depleted, whereas fossil fuel hydrogen gets more expensive since it is finite and unsustainable. Eliminate the cost/kg as a factor, as well as the hardware for 100% Renewable non-carbon Hydrogen in this pilot plan and use mass production projections. Exempt...

Sustainability (30 points): Proposals will be evaluated on the degree to which...

Recommendation: Should be Higher, raise to 90 points, equal to that of Market viability.

21. California Environmental Quality Act (CEQA)

Applicants must complete a CEQA form (provided with the Final Solicitation) for each proposed hydrogen fueling station.

Recommendations: Zero Carbon, Zero Pollution from well to wheel. 100% sustainable indefinitely into the future? 100% Renewable Non-Carbon Hydrogen should be declared Exempt.

Recommendation: Since you were this late in getting a draft out, and since the review will take at least 1 month. It would be unfair to many businesses, especially small and medium size businesses in these times, to release the final PON during the holidays. I recommend, and I am sure most will concur, that you not release the PON until after the New Year, and give at least 60 days to respond. No earlier than December 20th. This way we don't lose more than 1 week of working on the proposal, with a due date no earlier than March 3, 2014. Otherwise you run up the cost of proposal development by at least 50% in labor cost.

I appreciate your attention to these problems and hope you seriously consider the recommended changes outlined herein. Let's get this right and get stations deployed asap so that the rollout is delayed no longer, and make the rollout successful for all of us. Let's get to work and clear the air and finally bring about a truly clean sustainable energy paradigm consolidating California as the world leader in renewable energy and climate change abatement.

Sincerely,

Paul Staples, Chairman/CEO
HyGen Industries, 707-667-5329

**P.O. Box 6911
Eureka, California, 95502**

www.hygen.com

**707-667-5329
e-mail: h24u@hygen.com**