

## **EMAIL COMMENT #1**

**From:** Charles Myers [<mailto:cmyers@massh2.org>]  
**Sent:** Tuesday, June 23, 2015 9:17 PM  
**To:** Gobin, Anne  
**Subject:** Public Comments - Hydrogen Fueling Stations

Anne,

Thank you for providing the industry with an opportunity to offer feedback usable in the development of the forthcoming RFP. Based on the understanding that a PON will be issued shortly for the construction of two hydrogen fueling stations with a total value of \$450,000 I offer the following comments for your consideration.

### **Areas that will attract bidders which carry no direct cost to the State of Connecticut**

The State can make the PON more attractive to bidders by offering an Enhanced Use Lease of State property to site the station on should the bidder locate state property suitable for use as a station. By offering an EUL, bidders can realize additional cost benefits in the early years of operation. Use of an EUL by the State does not cost the State money in the early years and can be a revenue generator in later years. The EUL should be for as little as \$1 for the early years with lease revenue charges increasing at a rate matching the growth in station utilization.

The State can make the PON more attractive to bidders by waiving any associated permitting fees associated with the construction of the hydrogen fueling stations.

To help promote the stations, the State shall place signage on highways indicating the presence of a hydrogen fueling station as they do now for electric vehicle charging infrastructure.

The State shall coordinate with the State Fire Marshalls office to provide the station builder with a hydrogen safety training resource.

### **Station Risk Mitigation Strategies for both the Bidder and the State**

As part of the bid process to mitigate financial risks being borne by the station builder, the state shall place an order for FCEV, timing the delivery of the FCEV to the completion of the hydrogen station. The State should define the number of FCEV they intend to buy, where those FCEV will be garaged and the zip codes those FCEV will be operated in. This hydrogen station bidder will review this information and see how to combine it with automaker inputs and offer a response to the state that indicates which garage locations and operating regions the two stations will support.

As the bidder is the one taking the bulk of the financial risk, the bidder should be the one who defines the location of the station. The bidders response should spell out how the process and parties the bidder will use to make the determination of the location. To encourage this collaboration, the State should agree to keep the names of parties the bidder is using to determine siting locations in confidence should the bidder request it. For example, while NEESC in concert with NREL and H2USA has created the semblance of regional mapping, however the actual zip codes where FCEV will be available is determined by the automakers. Therefore any station builder should have defined input from one or more FCEV makers.

To mitigate the lower station utilization rate associated with the early days of station operation, the station operator should be allowed to establish hydrogen fueling purchase agreements with fleets, automakers and individuals.

The bidder should have full rights and responsibilities to determine the appropriate dispenser and station operation software so that it is fully integrated with other stations the bidder may be constructed now or in the future in the Northeast.

FCEV automakers will likely want proprietary information tracked through the hydrogen station operator. Recognition that such use information is proprietary and not the property of the State is important to attract bidders as such information in the early days is important to each of the automakers and if it was made known that such information was being collected by the State some prospective bidders may decline to bid, reducing the pool of respondents.

Respectfully submitted,

Charlie

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## EMAIL COMMENT #2

**From:** Hanley, Richard C

**Sent:** Thursday, June 25, 2015 5:45 PM

**To:** Farrell, Paul

**Cc:** Overturf, Bradley J

**Subject:** CT DOT comments on CT DEEP Hydrogen Fueling Station Grants

Paul:

Congratulations on the new CT DEEP Hydrogen Fueling Station grant program. The program appears to encompass most of the important criteria recommended by the technical literature. I would like to submit comments on behalf of Connecticut DOT:

### 1. Capacity to Perform

- a. Technology - the applicant must have assembled, in their own capacity or with an partner, at a minimum ONE functional hydrogen fueling station operational prototype station – available for review by the State and/or their designee(s).
- b. Construction - the applicant should be able to produce a construction bond to cover the estimated design and construction cost of the station at market rates, in event of non-performance by the applicant and/or their partners.
- c. Timeframe – the applicant must perform in a certain timeframe or be considered in default.

### 2. Station Design

- a. Dispenser redundancy – recommend a minimum of two Hydrogen dispensers for several reasons, including throughput capacity, equipment redundancy, dispenser availability during maintenance. (While redundant systems may not be practical for hydrogen creation or storage, dispensing should be low-hanging fruit for the system);
- b. Vehicular considerations – recommend a non-directional island configuration for fueling dispensers. Experience with EV fueling has shown manufacturers do not standardize location of the fueling port, and islands tend to provide the most versatility. In addition, one island can accommodate multiple dispensers and vehicles;
- c. Fire suppression – appropriate fire suppression TBD should be required;
- d. Fueling pad grounding – to eliminate grounding spark, a grounded pad should be required at Hydrogen dispenser;
- e. Permitting – the expertise of the CT Hydrogen Fuel Cell Coalition (CHFCC) should be accessed to develop a standardized permitting system for Hydrogen Fueling facilities;
- f. Appropriate highway signage – Hydrogen refueling signage requirements should be addressed with both CT DOT and consistent with Federal Highway Administration (FHWA), and the 8-state Zero-Emission Vehicle (ZEV) coalition guidelines;
- g. Motorist services – recommend well-lit with security panic button in a non-isolated location with access to rest rooms, food and water in general vicinity.

### 3. Hydrogen fuel

- a. Weights & measures – Hydrogen is typically sold by kilogram due to volumetric expansion with temperature, price should be posted or by a subscription service

- b. Payment – Debit and credit cards accepted at a minimum, cash optional.
  - c. Green vs. Brown Hydrogen – “green” hydrogen (made from electrolysis) should be favored if economically and technically possible versus “brown” hydrogen (made from reformed natural gas). On-site production of type of hydrogen should be favored versus importing by truck. Both green and on-site would dramatically reduce carbon footprint of fuel supply chain.
  - d. Fueling availability – 24/7/365 desirable
4. Business Plan Viability
- a. Public-Private Partnership – a cooperative venture with a Hydrogen Producer, Fuel Cell manufacturer, or hydrogen supplier (especially with facilities and jobs in CT) would be most desirable.
  - b. Co-location with other hydrogen users – Several large warehouse facilities in CT may already be equipped with hydrogen fueling for forklifts and may support external fueling activities – Amazon, Sysco, Wal-Mart all have hydrogen forklift fleets (not known if they are in CT yet) *[See Email Comment #2 – Addendum for correction to this statement]*
  - c. Use of State-grant and payment milestones – the grant should be apportioned so it is not all awarded at the project outset but based on milestones. However, there should be no constraints on the grant money of what the money should be used for – equipment, operations, etc.
5. Training / Outreach
- a. Location at/near a state-facility available to both fleet and public vehicles – CHFCC has fleet data for state, Frank Sanzos @ DAS Fleet is supportive as is CT DOT Fleet
  - b. First-responder training – CHFCC has experience with this
  - c. Public / legislative outreach – Need someplace as showplace for technology & concept-
  - d. State jobs training opportunity – Community college opportunity (CCSU already has EV charging stations for this purpose), Tunxis had fuel-cell service tech training program

Please feel free to contact me with any questions or comments.

Thanks,  
Rick

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## **EMAIL COMMENT #2 - ADDENDUM**

From: Hanley, Richard C  
Sent: Monday, October 19, 2015 4:06 PM  
To: Farrell, Paul  
Cc: Overturf, Bradley J  
Subject: FW: Plug Power

Paul:

There is an error in the CT DOT comments I submitted to you on Thursday, June 25, 2015 as CT DOT public comment on the DEEP hydrogen fueling stations (see attached).

==> In item 4b, Amazon is NOT known to be using hydrogen fuel-cell powered forklifts in their new Connecticut facility.

Can you please either change the on-line posting or post this email as an addendum?

Thank you,  
Rick

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### EMAIL COMMENT #3

**From:** Jim Motavalli [<mailto:jmotavalli@gmail.com>]  
**Sent:** Thursday, July 02, 2015 2:54 PM  
**To:** Farrell, Paul  
**Cc:** Thompson, Scott; Bob Wall; [duncankeith01@gmail.com](mailto:duncankeith01@gmail.com)  
**Subject:** fuel cell grant proximity to hartford

Paul:

I'm an auto journalist, soon to launch a new website on hydrogen cars, and a member of the Fairfield Clean Energy Task Force. I'm curious why a requirement of the Connecticut Center for Advanced Technology (CCAT) grant (of up to \$450,000) is that the stations be within 10 miles of the city of Hartford. I understand that this may be to enable cars within the state fleet, but isn't it also true that Fairfield County--which has the affluence and population density to support purchases of, for instance, the Toyota Mirai--might be also worth considering?

What's the reason for that requirement? Is it a DEEP specification? I'm copying three other members of my committee.

Jim Motavalli  
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