

Introduction

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2. TECHNICAL RESPONSE

Respondents are asked to provide the following information within the following categories:

1. Infrastructure Installation, Placement, and Operation

a) What considerations should be taken into account when developing DCFC or hydrogen refueling stationing plans?

Plans should prioritize coverage of frequent travel corridors as well as tourist destinations. Corridors that service tourism may be of initial first interest due to low current ownership of EVs in Wyoming, while neighboring states that have EV infrastructure and EV vehicle ownership would be a larger demographic as well as benefit the state economically with increased tourism access for places that are not currently accessible to EVs.

Prioritize DCFC over hydrogen refueling because the penetration of fuel cell vehicles is currently much lower than battery electric vehicles.

b) How does corridor development and funding help or hinder statewide infrastructure emplacement?

Funding can greatly speed up the deployment of DCFCs around the state. With funding, prioritization areas can be developed as well to incentivize maximum coverage with minimal overlap.

c) How close or far from major travel routes should refueling and charging stations be located?

Within 1 mile of a route. Even at one mile, you diminish the value of the charging station when there is up to 1% range loss going to and from a station for a vehicle with 200 rated miles per charge.

d) Are there any additional environmental, safety, or other issues that must be addressed (parking, access, amenities, future expansion)?

Access to amenities may be important, but I don't think it requires prioritization via funding

mechanisms.

e) As a REV West signee, Wyoming voluntarily agreed to mutual coordination of signage and other common infrastructure, are there any other considerations necessary outside of the REV West agreement?

f) How can revenue be collected from users after refueling?

Revenue is usually collected via a charging network where a user may either be a member using a mobile app or pay on an adhoc basis. Other methods include credit card mechanisms similar to vending machines.

g) If the strategy is route or corridor based, what considerations should be given to prioritizing route or corridor build out?

As mentioned before, tourism corridors may provide an initial benefit to communities around the state more so than other corridors.

h) What is the best way to address off corridor or route communities?

Possibly having funding incentives targeted specifically toward local governments so each of those communities can provide initiative toward installing DCFCs. Another suggestion would be increased funding incentives for off-corridor communities after corridors are covered.

i) The National Institute of Standards and Technology (NIST) publishes Handbook 44, Specifications, Tolerances, and Other Technical Requirements for Weighing and Measuring Devices. Currently, Section 3.40, Electric Vehicle Fueling Systems – Tentative Code, has not been fully approved by the National Conference on Weights and Measures and is nonenforceable.

1. What is your familiarity with the development of the tentative code?

Currently unfamiliar.

2. Are you manufacturing or installing charging equipment that complies with the current version of the tentative code?

I am planning on having equipment installed through a third-party installer, however I have not inquired about the NIST tentative code.

3. Do you anticipate any difficulty supplying charging equipment that will meet the requirements of the National Type Evaluation Program administered by NCWM?

No.

j) In what ways can we posture aviation infrastructure to be ready for the integration of zero emissions aircraft?

I believe zero emissions aircraft will not have significant penetration in the next 5 years.

2. Utilities

a) What utility access and capability considerations should be present (power, broadband, wireless, cellular, other)?

Power capability is the most important for DCFC. There are solutions that can use battery storage when insufficient power is available on site for fast charging, however it adds significant capital cost. Some sort of Internet access will need to be available for payment processing and equipment monitoring. Usually cellular access is sufficient for this use.

b) How should demand charges be addressed?

With the current rate structure, low DCFC usage will result in higher per user charges to accommodate current demand chargers. There are states that are allowing for different rate structures for DCFC charging installations. I would be very interested in Wyoming investigating this. Due to the rural nature of our state, we may have many low usage chargers.

c) What utility incentives aid in infrastructure development?

Utility incentives can be used as a conduit for DCFC funding. Utilities will be working with DCFC operators, and may be best to evaluate certain criteria. It may also incentive utilities to upgrade electrical infrastructure to prepare for DCFC installations.

3. Statutory and Policy Considerations

a) What current Wyoming statutes hinder infrastructure development? How should they be changed?

DCFC cannot technically sell electricity unless they are a utility. There is an exception for natural gas vehicles. I believe the Minerals committee is currently considering a bill to have a similar exception for EVSE.

b) What state agency rules and regulations hinder infrastructure development? How should they be changed?

c) What incentives should the state implement to encourage infrastructure development? What has worked best in other states?

Similar funding incentives that other states have implemented have spurred DCFC development. Incentives that split the equipment and installation costs with the

operator/installer.

d) Should the use of state lands be considered for infrastructure emplacement? Why or why not?

Yes. State lands can provide an initial land lease near major corridors. These leases can be targeted toward prioritized areas and can spur installations faster by having land available.

e) What should be considered as “fair” road system maintenance taxation rates for zero emissions vehicles?

Either all vehicles should switch to a mileage based system or road maintenance should be funded by an alternate source such as property taxes, etc.

f) What are additional considerations for commercial vehicles?

Electric buses and other heavier duty vehicles have different charging and station considerations, and may not be able to share the same DCFC infrastructure as light duty vehicles.

g) Are there climate change or carbon policy considerations?

4. Incentives

a) Should corridor and local travel infrastructure incentives be handled differently? If so, how?

b) What type and amount of financial incentives work best to encourage infrastructure installation?

c) Other than government financial assistance, what other incentives may be helpful?

d) If the strategy is route or corridor based, what is the best way to incentivize infrastructure installation in off-corridor communities?

e) Are there climate change or carbon policy considerations?