State of New Hampshire

Request for Information

for

Direct Current Fast Charging Infrastructure

Response

March 13, 2020
Company Background:

Gilbarco Veeder-Root is the worldwide technology leader for retail and commercial fueling operations offering the broadest range of integrated solutions from the forecourt to the convenience store and head office. For over 150 years, Gilbarco Veeder-Root has earned the trust of its customers by providing long-term partnership, uncompromising support, and proven reliability. Expanding on our more than 150-year history of transportation expertise, we also offer EV charging and e-Mobility solutions to support transportation and mobility for the future. For more information, please visit https://www.gilbarco.com/e-Mobility. We are pleased to respond to New Hampshire’s RFI with the information below. For additional information or clarifications, please contact:

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What costs should be eligible? Why?

We suggest the costs of the following items should be eligible for reimbursement as each is incurred to properly install and operate EVSE:

- DCFC units (one CHAdeMO connector and one SAE CCS Combo Type 1 connector on each DCFC unit), power conversion hardware, and associated equipment
- Reasonable utility upgrades such as transformers and extensions
- Design, engineering and permitting
- Shipping of equipment
- Personnel costs for site design, site preparation, and installation
- Equipment and materials necessary to construct, operate, and maintain the proposed charging stations
- Warranty, software, and one-time cloud service purchases for the charging equipment
- All other hard costs (concrete, conduit, wire, signage, bollards, etc.) directly related to the installation of the chargers

What costs should be ineligible? Why?

We suggest the costs of the following items or activities be ineligible for reimbursements as they are not required for EVSE installation or operation:
- Purchase or rental of real estate
- Other capital costs (e.g., construction of buildings, parking facilities, etc.)
- Cost of solar installation, energy storage, and related equipment
- General maintenance of the site in which the EVSE is located
- Electricity costs
- Administrative costs

**What level of cost share/match is recommended? Why?**

The ROI for EV chargers remains low given current EV charging traffic; accordingly, programs with 80% - 100% funding of project costs (which includes make ready infrastructure, equipment, and installation) have a much higher probability of finding site hosts. Funding like this can be effective at getting the infrastructure in place to support increased vehicle penetration, ultimately driving self-sustaining markets without the need for external funding. Accordingly, Gilbarco suggests that New Hampshire funds projects at the maximum level to increase attractiveness of the program to the best-suited site hosts.

**Please provide input on program structure:**

**A. Allow for multiple awards or have a winner-take-all approach?**

Multiple awards-- we believe that New Hampshire should offer multiple awards over time. Multiple awards allow potential applicants much needed additional time to evaluate the program and research the benefits of electrifying their site. Additionally, each award should be open to all qualified applicants. A winner-take-all approach limits the subset of site hosts that can feasibly address all RFP site requirements.

**B. Assuming both DCFC and Level 2 charging will be required at each location, how many chargers of each type should be required at a minimum? Should the minimum differ by location in the state?**

Both market research and industry thought leaders contend that a primary obstacle to widespread EV adoption is public access to high-speed DCFC charging infrastructure. Given the high cost of such project for site hosts, we believe New Hampshire should focus this program 100% on DCFC.

With that, our location guidance is as such: First, all stations should be publicly accessible. Second, we believe the primary focus for the state should be to build out much-need charging infrastructure along highway corridors to support mass transit with a minimum of two chargers
per site. After corridor needs are met, we believe the state should shift focus to city centers in major population areas.

**How many charging sites should be anticipated with a total budget of approximately $2 million?**

The State of New Hampshire should seek to maximize their funds while following the funding guidance above of 80-100% reimbursement per project. Given that, we estimate a $2 million-dollar budget can expect to fund 7 – 10 charging sites.

**Is the goal of having at least one charger on each of the corridors identified on the attached map realistic?**

Yes. We feel this goal is realistic so long as the state does not take a “winner-take-all” approach that will greatly limit the universe of potential respondents.

For the identified corridors that are longer than 50 miles, we suggest multiple charging sites. This approach not only accommodates existing EV owners, but also supports increased EV adoption, ultimately driving self-sustaining markets without the need for external funding.

**How can the State design a solicitation that will ensure DCFC locations in the more rural parts of the state are included in project proposals?**

We suggest New Hampshire designs a cost share/match program that links funding to population zones. Rural zones should qualify for 100% funding of project costs. This approach of increased reimbursement rates for rural parts of the state will ensure rural regions are included in DCFC station development.

**What communications protocols should be allowed/required?**

We believe standard protocols such as OCPP1.6J should be required, as these protocols will make integration between the customer, vehicle, charger and ecosystem simple and secure.

**What payment methods should be allowed/required?**

Gilbarco suggests that New Hampshire requires external credit card readers on the charger that allow EV drivers to replicate the familiar “pay-at-the-pump” experience that all drivers enjoy. Being an EV driver in today’s network driven landscape requires memberships to many different network payment apps. Additionally, drivers need to take cumbersome steps to figure out which network a specific charger belongs to. A key finding in our research and discussions with EV drivers is that most drivers do not enjoy this user experience and feel it is inconvenient.

Thus, we believe it is advantageous for New Hampshire to support non-networked solutions. Gilbarco offers a non-networked payment solution that solves for these customer complaints.
This solution replicates the user experience of filling up a gasoline vehicle at the pump – no network memberships and easy, intuitive payment with a credit card directly at the charger.

**What operations and maintenance standards should be required of hosts?**

Our research has found that EV drivers want the following characteristics in a charging site: 24/7 access; well-lit and safe premises; on-site access to food, beverage, and snack options while charging; and proximity to major corridors. Additionally, drivers prefer charging stations that always have an attendant on-site. Accordingly, we believe that this program should prioritize locations that meet those characteristics; we view convenience stores as ideal locations.

Operations and maintenance standards should first require site hosts to procure chargers that are accompanied with a robust standard warranty, guaranteeing equipment be free from manufacturing defects for at least three years. In the event of issues, site hosts should have the ability to resolve issues remotely. In the case issues cannot be resolved remotely, site hosts should have the capacity to swiftly dispatch a service technician that is certified, licensed and insured to perform all needed service requests with needed parts and expertise to restore the equipment to full operation.

**The entity named in the Contract must be the owner of the installed EVSE equipment for the duration of the Contract and will have the responsibility for ensuring continued operation of the equipment during the Contract period. Can you suggest potential ownership models for the EVSE funded through the RFP that would meet these criteria?**

In our discussions with prospective site hosts (especially c-stores along high-traffic corridors), they overwhelmingly require ownership of the EVSE given the cost share requirements of many funding programs. Accordingly, Gilbarco recommends a program that provides site host ownership of equipment to maximize interest with potential respondents.

**What do you consider to be an adequate length of time to complete a satisfactory proposal in response to an RFP?**

We believe 12 weeks is an adequate length of time to receive a satisfactory proposal in response to an RFP. The process of completing a fitting proposal can be time intensive for prospective applicants. 12 weeks will allow potential applicants the proper time to evaluate the program, conduct proper research and submit an adequate proposal.

**What networking requirements (if any) should be included for EVSE funded using VW Environmental Mitigation Trust funds?**

Based on feedback from EV drivers, we believe that any program in New Hampshire should support non-networked solutions. Gilbarco suggests that New Hampshire requires external
credit card readers on the charger that allow EV drivers to replicate the familiar “pay-at-the-pump” experience that all drivers enjoy.

What future-proofing requirements for EVSE at the selected sites should be considered? Please provide information on new charging technologies that should be considered, if appropriate.

- Minimum charger power capacity (in kW) – 50 kW
- Minimum number of chargers – Minimum 2 chargers per site
- Minimum number of non-proprietary plugs per station, by type (CHAdeMO and CCS Combo Type 1) – Stations must support both CHAdeMO and CCS
- Minimum electrical capacity from the utility, or related make-ready provisions to make future expansions less costly (e.g., additional conduit, larger transformers, etc.). – Three primary ways to future-proof: 1) larger transformers of 1 MVA or higher to support 6+ chargers at each site; 2) oversized conduits to allow for future cable pulls; 3) tailoring the design layout of greenfield sites with EV charging in mind to allow for easier expansion.