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June 28, 2022

VIA OVERNIGHT MAIL

The Department of Transportation
Attention: Paul Baker
605 Suwannee Street
MS20
Tallahassee, FL 32399

Subject: Florida Department of Transportation's Request for Information on Electric Vehicle Infrastructure

Dear Mr. Baker:

Please find attached, Duke Energy Florida, LLC's Response to the Florida Department of Transportation's (FDOT) Request for Information (RFI) regarding electric vehicle infrastructure, received on June 7, 2022.

Thank you for your assistance in this matter. Please feel free to call me at (727) 820-4493 should you have any questions.

Respectfully,

A handwritten signature in black ink, appearing to read "Luis J. Rosario".

Luis J. Rosario

REQUEST FOR INFORMATION (RFI) from the Florida Dept. of Transportation

This RFI is being issued by the Florida Department of Transportation (FDOT) to solicit feedback and recommendations for the planning, coordination, and development of electric vehicle charging infrastructure within the State of Florida. The FDOT is currently developing a Statewide EV Infrastructure Deployment Plan, which is in response to the recent The National Electric Vehicle Infrastructure (NEVI) Formula Program Guidance authorized under the Bipartisan Infrastructure Law (BIL). As such, the purpose of this RFI is to collect input from potential market participants across varying sectors to obtain information on how to best support the deployment for direct current fast charge (DCFC) electric vehicle supply equipment (EVSE).

Background

According to Federal Highway Administration (FHWA) guidance for the NEVI formula program under the BIL, Florida can expect to receive \$198 million in federal funding between 2022-2026. While formula funds are essentially guaranteed for each state, the BIL requires each state DOT to submit an EV Infrastructure Deployment Plan which details how the NEVI formula funds will be utilized consistent with FHWA guidance on developing charging networks along designated alternative fuel corridors (AFC's). Responses from this RFI will be used to inform FDOT's Statewide EV Infrastructure Deployment Plan as well as future competitive solicitations.

Respondents are requested to not provide proposals or marketing material and should instead focus on providing detailed answers to the questions in this RFI. Respondents may also choose to abstain from answering questions that may not be relevant to them. Furthermore, the purpose of this RFI is for information-gathering purposes only; FDOT will not select a vendor for DCFC EVSE deployment based on responses to this RFI. No contracts will result from this RFI.

Information Requested:

General

1. Please describe your organization's involvement and experience with DCFC infrastructure. What are your long-term EV plans? How many chargers and/or charging stations are you able to build, install, and/or maintain on an annual basis?

In 2018, Duke Energy Florida (DEF) set out to install 530 electric vehicle charging stations in the state of Florida. Today, over 625 total EV stations are installed including over 50 DCFC dispensers. Additionally, 50 new DCFC and 50 upgraded stations were approved by FPSC in 2021 with installations beginning in 2022. The program is scheduled for completion in 2025. While specific customer information must be held confidential until stations are online, DEF is happy to share general locations/interchanges where existing and planned sites are located for purposes of coordination.

DEF has also established a rebate program for commercial & industrial customers to install electric vehicle service equipment (EVSE). The rebate program is open to all DEF commercial & industrial customers and provides rebates for installation of qualifying equipment, including both Level 2 and DCFC hardware.

Furthermore, while not associated with DCFC, DEF established a Residential Off-Peak credit program that provides incentives in the form of \$10 monthly bill credits for residential EV drivers who are not on a time-of-use rate to charge their vehicles off peak.

2. Where does your organization see the biggest opportunities for the utilization of NEVI funds? This could be in terms of innovative technology solutions, partnerships, and/or targeting geographic locations.

Naturally, FDOT's NEVI plan could target DCFC for highway - personal vehicles, as is the design at the federal level. With that, the state may want to consider the following:

1. Mix of power levels:
 - a. 150 kW as specified
 - b. Higher-powered (up to 350 kW)
 - c. Sites that are expandable or upgradeable
2. Consider the impact of EV voltage architectures - some large battery EVs will accept power at 800V and some at 400V. With lower voltage, more amperage capacity is required of the DCFC dispenser to deliver the same power. If this is deemed important, failure to include the appropriate detail in specifications could lead to unintended results.

If the state desires to press into community charging, we suggest considering the following applications:

1. Low/medium income areas
2. Populations that do not have private parking at home
 - a. Multi-unit dwellings
 - b. Street / curbside parking
3. Rural and smaller towns throughout the state - especially tourist areas
4. Hybrid applications - for example those that enable workforce charging by day and resident charging by night

3. What are the biggest challenges or barriers that should be addressed to expedite reaching the goals of the NEVI program?

NEVI funding presents a valuable opportunity for Florida to continue its progress in support of EV drivers, but the road to satisfying the goals of the NEVI plan are not without pitfalls. DEF offers the following topic for consideration as the state formulates its NEVI plan.

1. As the state decides what it will prioritize with its NEVI funding (for example a higher powered DCFC network than required vs use of discretionary funds to install community charging), making those priorities clear will help all interested parties respond in a helpful manner.
2. EV charging loads at DCFC sites could be impactful to electric system peaks; supplier ability to manage these peaks at DCFC sites should be valued as the state undergoes sourcing activities.
3. Particularly in use cases where EV charging loads (including as DCFC sites) will be concentrated, utilities may struggle to both keep pace with the speed of electrification and needed expansion of the grid, and to bring the necessary generating capacity to customers in

the most cost-effective manner possible. In the long term, regulatory and procedural changes might be helpful, but in the short term, electric utilities must be engaged early and often.

4. NEVI sites require utility transformers that today have very long lead times yet will be required by utilities across the nation to support NEVI.
5. Generally, supply chain and inflationary impacts will likely impact ability to deploy sites quickly and in a cost-effective manner. The state may wish to consider sourcing approaches that hedge against such risks.
6. Uptime & maintenance of EV charging stations can be challenging. The state should educate itself as well as it can and be prepared to commit resources to ongoing maintenance.

Site Location

4. Please describe what you believe makes an ideal DCFC location including amenities as well as any risk factors that should be considered. How would you rank the relative importance of these factors?

In addition to valuing driver amenities, DCFC location choice should reflect on quantitative metrics for today's traffic volume as well as number of gas stations relative to DCFC. Such analysis can be used to score locations relative to one another. Proximity to designated Alternative Fuel Corridors should be viewed as a basic requirement of DCFC sites. Finally, both ease of delivering the appropriate electrical power and availability/type of amenities can be reviewed to further fine tune site scoring and rank locations for deployment. However, we do not advise that power availability be viewed as the primary screen for DCFC locations; ultimately, public charging must work for where drivers are or want to go.

5. Please describe your process, including market research, land use requirements, and business development opportunities for determining a DCFC site location.

N/A.

6. What do you think the DCFC site of the future looks like? Will location to amenities be as important or will micromobility be used to get to the amenities? What innovations/disrupters are coming?

N/A.

Partnerships and Business Models

7. Please explain any previous partnerships regarding EV infrastructure your organization has had including which parties initiated the outreach and what, if any, contracting mechanisms were used. These should include public and private entities as well as utility owners.

DEF has not undertaken unregulated commercial partnerships in this space. However, regarding outreach, we would suggest that there are many willing site hosts that could be engaged with relative ease regardless.

8. Describe what makes a successful business model and partnership. Also, please describe threats that can lead to a business and partnership's failure. These can be examples from current and/or previous partnerships.

DEF has not undertaken unregulated commercial partnerships in this space.

9. Please provide your organization's viewpoints on contracting methods for DCFC infrastructure, including leasing and/or revenue sharing agreements. Have you implemented any cost/revenue sharing models for the operation of DCFC EVSE? If yes, please share what you can about the terms of those partnerships.

DEF has not undertaken unregulated commercial partnerships in this space.

10. Does Florida have the workforce required to operate and maintain DCFC EVSE charging sites? If not, please describe what you think is required to develop it.

As noted in the response to question 3, ongoing maintenance will be a key driver to the success of Florida's NEVI deployment. Today, it is unlikely that there are sufficient trained & factory certified DCFC charger troubleshooting, maintenance & repair technicians in the state.

Equipment

11. On average, how long does it take to install a DCFC from start to finish? This includes site determination, design, permitting, site preparation, utilities, and installation.

For planning purposes, those accountable for bringing DCFC sites online should expect 3.5 to 5 months from the time that an application for utility service is submitted until the time that conductors are made ready for connection to the utility side of the meter and the meter installed within the meter base. This timeframe can be impacted by transformer requirements and associated lead time.

12. Are you currently able to meet the requirements of Buy America for DCFC infrastructure projects? If not, please explain your plans to meet the requirements and any potential issues.

Given that much of DCFC hardware is manufactured outside of the United States, FDOT should anticipate significant exception requests related to the IJIA Buy America requirement.

13. Are there any components required for DCFC infrastructure that are in short supply that could delay the goals of the NEVI program? Please describe what steps you have taken or what processes you have implemented to ensure the continuity of your supply chain.

Yes. Well-regarded DCFC hardware has very long manufacturing lead times today (24-60 weeks), and we expect that demand may continue to outpace supply for some time. In particular, power module to convert AC power to DC as well as dispenser cables are in short supply. As suggested by the response to question 12, supply is also negatively impacted by the location of manufacturing overseas.

14. Please describe how your organization mitigates cybersecurity vulnerabilities. Is this consistent with industry standards? If not, where are the differences? Do you follow national cybersecurity standards including National Institute of Standards and Technology (NIST) Cybersecurity Framework? Do you comply with Florida's 60GG-2 for ensuring the security of your infrastructure? What other technologies do you offer for an end-to-end secured operation?

The Cybersecurity Program at Duke Energy leverages the National Institute of Standards and Technology (NIST) Cybersecurity Framework (CSF). Duke's Cybersecurity Controls Matrix typically meets or exceeds FERC/NERC/NIST standards while also conforming to PCI, SOX, DFARS and CMMC.

Operation, Maintenance and Data Sharing

15. What are your current or planned fee structures (time-based, energy-based, power-based, etc.) and what payment mechanism do you accept? Please explain any issues you have encountered or identified.

For DCFC stations, DEF leverages FPSC-approved rate FCF-1 to assess fees "at the pump."

16. Describe the typical maintenance for your organization's EVSE infrastructure as well as the maintenance schedule including any required hardware and software updates. Please include the typical lifecycle for your DCFC and what performance measurements are monitored.

DEF has historically leveraged manufacturer extended warranty and a primary, turnkey provider as the primary means of ensuring charger operability. Today, the Company is retooling those practices to respond to impacts from the growth of the industry and observed equipment performance. However, as is also the case with DCFC lifecycles, it is too soon yet to share any conclusions.

17. How would your EVSE share data to a FDOT sponsored central data repository? What type(s) of data can you provide?

While DEF does not actively seek NEVI funding, to the extent that the state calls on DEF to deploy & operate DCFC stations, the Company would be glad to consider effective means of data sharing.

18. What should FDOT do to ensure the end-users of EVSE infrastructure have the most convenient and reliable charging experience? Please include how emergency evacuations and power outages should be addressed.

As noted previously, maintenance and uptime are non-trivial considerations. Ensuring that software & hardware compatibility result in clear operator and user communications is also important and related to ensuring charger operability. Finally, because most chargers rely on cellular network communications, all installations should include protocols to measure cellular signal strength & reliability both prior to construction and over time.

Strategies for Low Utilization

19. FDOT is looking to provide DCFC in rural and disadvantaged communities that may have a lower return on investment and is interested in how to make these projects more desirable to potential applications. What strategies can FDOT utilize to encourage deployment of DCFC EVSE into rural, underserved, or disadvantaged communities? When answering please include information on driving factors.

- a. Guaranteed number of projects for economies of scale
- b. Short term operation and maintenance agreements (5 years or less)
- c. Long term operation and maintenance agreements (longer than 5 years)
- d. Any others?

DEF has not considered these questions in the context of an unregulated, commercial investment. We applaud FDOT's efforts to serve rural and disadvantaged communities. Typically, for day-to-day driving patterns, Level 2 charging is the most cost-effective for all population segments. To that extent, we suggest that the state consider if DCFC – regardless of location – is best suited for travelers as opposed to local residents and consider accompanying utilization rates.

20. To increase utilization rates to rural, underserved, or disadvantaged communities what considerations or innovation solutions should be considered?

Please see the response provided for question 19. DCFC utilization can be optimized by placing sites in areas of traveler need (high long-distance travel traffic density). Underserved communities may be best supported with Level 2 community charging projects that enable daily use at lower installation and electric costs.

Specific Information Requested

Interested vendors may respond to some or all the following topics, based on their proposed role in the creation of a DCFC EVSE network:

1. Summary of Experience

FDOT is interested in a summary that describes your organization's experience with DCFC EVSE.

2. System Block Diagram

FDOT is interested in a high-level system block diagram that illustrates all components and connections required to create the proposed system.

3. Hardware Information

FDOT is interested in datasheets and technical specifications for components included and required to create a typical DCFC system.

4. Software Information

FDOT is interested in information on software components included and needed to create a typical DCFC system.

5. *Maintenance Plan*

FDOT is interested to know about the maintenance services and typical maintenance schedule for DCFC infrastructure.

6. *Project Approach*

FDOT is interested in the approach that your organization would take to deliver the DCFC EVSE.

The Department may exercise the choice to invite each vendor that responds to the questions above to meet and discuss the information provided in more detail.

Please Email Responses to: Co.Purch@dot.state.fl.us

Subject Line: DOT-RFI-22-9114-PB

Please note there is a 25MB limit on emails received by the Department.

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Please provide one copy of the response to this RFI on a non-returnable flash drive.

Contact for Questions or clarification:

Please email Paul Baker at co.purch@dot.state.fl.us with any questions or comments

The requested information must be received by 5:00 pm (EST) on June 28, 2022.

Send to: The Department of Transportation

Attention: Paul Baker

Subject: DCFC EVSE

Mailing Address:605 Suwannee Street, MS20, Tallahassee, FL 32399

PLEASE NOTE:

- 1) Responses to this Request for Information (RFI) will be reviewed by the agency for informational purposes and will not be considered as offers to be accepted by the agency to form a binding contract.
- 2) The Department may contact respondents that respond to the questions to discuss product information in further detail.
- 3) Information obtained in response to this RFI is public record as defined by Chapter 119, Florida Statutes (F.S.).
- 4) In accordance with Section 287.057, F.S., information obtained in response to this RFI may be used to develop scope and solicitation documents for future procurements at the discretion of the Department. Respondents eligible to respond to this RFI will remain eligible for any subsequent related contract with the agency.
- 5) Advertisement of any subsequent competitive solicitation that may result from this RFI will be posted on the Florida Vendor Bid System.

If the responses to this RFI are subject to non-disclosure, then the Proposer must include any materials it asserts to be exempted from the public disclosure under Chapter 119, Florida Statutes, in a separate bound document labeled "Confidential Materials". The proposer must identify the specific Statute that authorizes exemption from the Public Records Lay. Any claim to confidentiality on materials the

Proposer asserts to be exempt from public disclosure and placed elsewhere in the proposal will be considered waived by the Proposer upon submission, effective after opening.