

NEVI RFI FOR APPROVAL

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?

- FPL launched FPL EVolution in 2019 to expand electrification of Florida's transportation and solidify its commitment to ensuring the future of EVs in Florida. FPL is creating a network of universal fast charging stations at sites strategically located along major highway corridors and dense metropolitan areas. Since inception, FPL EVolution has deployed 80 public universal fast charging ports across 16 sites and is building one of the largest fast charging networks in the state. FPL EVolution is partnering with site hosts and charger manufacturers (e.g. ChargePoint, Power Electronics) to deploy high-quality sites consisting of four to six high-powered dispensers.
- FPL EVolution owns and operates the charging infrastructure and supports an all-hands-on-deck approach to filling the infrastructure gap at this nascent stage of market development. In addition, FPL EVolution operates its own stand-alone charging network and mobile app to provide a bespoke experience for EV drivers.
- Leveraging the scale, experience, and focus of our expert team members, FPL can successfully execute the development, time, and operation of the fast chargers and can easily scale based on demand.
- As the largest utility in the state, FPL has formed strong relationships with stakeholders in 43 of the 67 counties in the state.

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.

- Leveraging utilities to utilize funding provides significant opportunity to maximize the deployment of charging infrastructure. Utilities are well positioned to build high-quality, highly reliable sites across the state. Utilities are also able to build beyond major corridors to include low and moderate income and rural areas. They have the expertise, ability to raise capital, and importantly, considerable experience with keeping assets operating well.
- Founded in 1925, FPL is an experienced industry leader, taking a long-term approach to our investments, including EV infrastructure. As the largest utility in Florida, FPL is a trusted company operating in 43 of the state's 67 counties. FPL is continuously looking at opportunities to improve our resiliency and enhance the reliability of our service. We have invested more than \$5 billion over the past five years to upgrade the grid to make it stronger, smarter and more resilient. Our investments are paying off every day for our customers with better service reliability. FPL's passion for reliability extends to our EV charging network. Our sites include several design considerations focused on resiliency, including:
 - All electrical cables are in conduit installed underground.

- All our EVSE equipment will be engineered and constructed to High Velocity Hurricane Zone (HVHZ) building codes.
- All EVSE sites are designed for future growth. Additional infrastructure, including conduit and equipment pads, will be installed at each site to allow for future expansion.
- A dedicated transformer will be utilized to power the chargers separately from the site host's power source, which will strengthen the reliability.

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

- Leveraging utilities to utilize funding provides significant opportunity to maximize the deployment of charging infrastructure. Accustomed to building highly resilient energy infrastructure throughout Florida, utilities are well suited to develop a strong and robust EV charging infrastructure. Aside from siting charging stations along major highway corridors, utilities are able to include locations in low, moderate and rural areas with the experience, access to capital and history of maintaining reliable assets.
- Permitting times with local municipalities are lengthy and are often cause for significant delay. An expedited permitting process for EV infrastructure would help improve deployment timelines.
- Permitting agencies from time to time also penalize the installation of EV parking spaces because they count EV spaces as an adverse impact to the site plan, as they subtract from spaces required in a site plan.
- Supply chain backlogs are a major cause of delay and could lead to a slow roll-out.

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?

- Optimal siting should include locations that meet the following criteria, without which, sites may be at risk for low utilization:
 - Four to six parking spaces
 - Safe (well lit, in primary parking areas)
 - 24/7 access
 - Amenities (restrooms, food and beverage, shopping, etc.)
- In addition, low income and underserved areas should be considered.

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

- FPL uses several tools and techniques to identify optimal siting of DCFC sites. We analyze the following factors to determine the best location needs:
 - Major and minor highway corridors
 - EV registration data
 - Traffic density

- Demographics
- Population density
- Existing charging infrastructure
- Amenities

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

- FPL's approach ensures the fast charging needs of today's vehicles are met with robust solutions that are prudently built to serve the needs of tomorrow. FPL is already thinking about the DCFC site of the future. This comes to life in our state-of-the-art FPL EVolution Plaza in downtown West Palm Beach, which incorporates ultra-fast EV charging with solar and battery storage - all in a location that is walkable to the amenities and excitement in the downtown area.

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.

- As part of the FPL EVolution roll out, FPL has partnered with over 100 public and private entities to deploy electric vehicle charging infrastructure. This includes a partnership with FDOT to deploy five public fast charging sites. All partners contracted with FPL use a simple standard site host agreement that provides FPL the ability to install charging stations on their property. FPL performed a comprehensive evaluation of all leading DCFC equipment providers and these deployments leverage EVSE from ChargePoint and Power Electronics.

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.

- FPL believes that utilities should play a role in deploying EV charging infrastructure. Utility investments that encourage transportation electrification, including investments in infrastructure, will benefit all utility customers. Most vehicle charging occurs during utility off-peak periods where utilities will not incur significant increased costs from the new load. Revenues received for providing this off-peak electricity will exceed incremental costs, and this will in turn put downward pressure on rates for all customers. This is mutually beneficial for utilities, customers and society. Emitting zero emissions, EVs contribute to a cleaner, greener future for all Floridians, and all FPL EVolution fast chargers generate 100% renewable energy.

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.

- FPL has leveraged a simple contracting structure and offering for site hosts. FPL EVolution provides turn-key equipment, installation and maintenance at **no cost to the host**.

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 America's largest electric utility, Florida Power & Light Company serves more customers and sells more power than any other utility, providing clean, affordable, reliable electricity to more than 5.7 million accounts, or more than 12 million people in 43 counties. FPL has the workforce to operate and maintain DCFC EVSE and can leverage our vast expertise and workforce to execute on these sites. Operations and maintenance are critical to a successful network. The ability to implement proactive monitoring, uptime metrics, dispatch service level agreements for repairs, real-time 24/7 support and troubleshooting are important considerations.

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.

- Once we have an agreement in place with the site host, we are able to execute projects in approximately 32 weeks. The agreement process typically takes 12 weeks.
 - Survey: 4 weeks
 - Design: 4 weeks
 - Utility impact study: 5 weeks
 - Permitting: 8 weeks
 - Distribution upgrades: 5 weeks
 - Construction: 6 weeks

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.

- Yes.

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.

- As an experienced developer and operator of renewable energy assets (all of which require the same inverter technology as level 3/DC fast chargers), we maintain strong relationships throughout the EV supply chain. For example, we are the largest customer of one of the leading EVSE manufacturers and one of the largest customers of several of the top EPC firms focusing on EVSE implementation.

- Supply chain constraints of key components used in EV charger manufacturing are impacting fleet electrification plans globally. FPL is currently in discussions with our major EV charger manufacturers to review their procurement lead times and will make risk purchase decisions of critical items on the BOM.
- Depending on the type of charger and preferred technology, charger lead times can be as much as nine to 12 months. FPL can mitigate these constraints through our close relationships with major hardware vendors. FPL's parent company, NextEra Energy, deploys over \$14B in capital annually and our purchasing power yields preferential requests for key clients, reducing lead times by weeks to better manage expected delivery times.
- There are several components across the supply chain that have been affected by shortages. These include but are not limited to charging stations, transformers, panel boards, meter cans, concrete pads, wire and fiber.

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?

- Our organization follows all cybersecurity best practices and performs extensive reviews and analysis of our vendors' protocols to ensure they meet our cybersecurity requirements. We're consistent with industry standards in the way we secure our network and equipment and perform internal penetration testing to ensure vulnerabilities are addressed. At our charging sites, server communication occurs over secured Websocket connection, with servers rejecting any connection attempts from devices not compliant with OCPP 1.6J protocol.
- We measure ourselves using the DOE's C2M2 model, which is based on NIST's Cyber Security Framework. Our last assessment had several MIL 3 ratings which exceeded the minimum MIL 2 rating.

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.

- FPL uses rate schedule UEV, an energy-based rate, approved by the Florida Public Service Commission in Docket Number 20200170-EI order number PSC-2020-0512-TRF-EI, wherein station users pay a rate of \$0.30/kWh plus applicable taxes and fees for use of the station. Station users authorize payment for charging sessions using the FPL EVolution mobile app. Acceptable forms of payment include credit card, debit card, Apple Pay and Google Pay.
- The FPL EVolution mobile app has everything a driver needs to locate charging stations, initiate a session, view fees to charge, make payments, receive push notifications, view nearby amenities and remotely track the status of a charging session by kWh charged, estimated cost and time elapsed.

- FPL has avoided the use of credit card readers on charging equipment to prevent fraud (e.g. card skimmers).

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.

- FPL has a dedicated asset management team responsible for ensuring the highest uptime. All EV charging stations have a comprehensive manufacturer maintenance plan with scheduled and unscheduled service and required preventative maintenance of all equipment. The maintenance of the equipment includes but is not limited to power module and components, inverters and DC electrical system (including the panel). The development team works closely with the manufacturers and keeps abreast of new products and services with managed ongoing training programs.

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

- Data can be shared via a JSON REST API to the data repository. We can provide data on availability, session statistics, uptime, utilization and any other factors needed.

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.

- Consider allocating funding to incorporate the inclusion of solar canopies and battery storage.
- Incorporate emergency charger maintenance into the FDOT road ranger program.
- Work with utilities to coordinate emergency planning and outages.
- Explore partnering with utilities to deploy mobile chargers to support evacuations at strategically located sites such as highway rest areas and park and ride facilities.

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?
- Leverage utility programs to deploy infrastructure. Utilities are able to build beyond major thoroughfares to include low and moderate income and rural areas. They have the expertise,

ability to raise capital and importantly, considerable experience with keeping assets operating well.

- Operations and maintenance should align with all investments.

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

- Leverage utility programs to deploy infrastructure. Utilities are able to build beyond major corridors to include low and moderate income and rural areas. They have the expertise, ability to raise capital and importantly, considerable experience with keeping assets operating well.