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?

- As a subsidiary of Enel Group, a \$65B energy company and the world's largest producer of renewable energy, we can serve as a long-term partner for any of your broader clean technology needs inclusive of EVSE and more.
- Enel X Way is a global leader in smart electric vehicle charging solutions with nearly 350,000 charging ports worldwide, including roaming agreements. As a subsidiary of Fortune 200 renewable energy leader, the Enel Group, Enel X Way is committed to providing smart mobility solutions for drivers, businesses and partners to make driving electric simple. Enel X Way's flagship home charging station, the JuiceBox, has been named the "Best EV Charger Overall" in 2022 by CNET and Car and Driver. Enel X Way North America has more than 4,500 business customers spanning over 10,000 sites and 110,000+ charging stations installed across North America. Enel Group represents approximately \$10.5B in energy spend under management, approximately 4.7 GW of demand response capacity and over 70 battery storage projects that are operational and under contract.

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.

- Key strategic utility partnerships include: Sonoma clean power, Puget sound energy, Seattle City Light, EPUD, SRP, Hoosier Energy, American Electric Power, SMUD, Eversource Energy, Pacific Gas and Electric, DTE, BC Hydro, Southern California Edison, Duke Energy Excel Energy, National Grid, Hawaiin Electric, Black Hills Corporation, Central Hudson, Consumers Energy, City of Ashland, Black River, IPL, TEP, City of Fort Collins, Georgia Power, Platte River Power Authority, LADWP, Gulf Power, PSEG Long Island.
- Additional case studies and partnerships can be found online and include: Sage Condominiums Case Study: Smart EV Charging for Multi-family Residences, Portland Pearl District Multifamily High-Rise Smart Charging for Multifamily buildings, Jones Beach Energy and Nature Center Case Study. Destination Smart Charging, Sacramento Municipal Utility District Deploys Smart EV Charging to Smooth the Transition to Renewables, Inside Gillette Stadium's Demand-Side Energy Strategy, Hawaiian Electric Accelerates Electrification of Transportation with smart EV charging, Shrine Auditorium Saves \$200K on Smart EV Charging, Sonoma Clean Power Deploys 3,000 JuiceBox Smart EV Chargers to Residential Customers
- <u>https://evcharging.enelx.com/resources/case-studies</u>
- Contracting Mechanisms: Enel X Way has deployed varying contracting mechanisms based on the preference of partner/end user. These structures include: 3<sup>rd</sup> party owner/operator, partner owned and utility owned. Our contracts also leverage state and utility incentives across the country to lower make ready and hardware costs for end users. Our chargers need to hit rigorous data reporting, uptime and hardware qualification specifications to remain enrolled in the programs.

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.

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.

- Enel X Way's partner Tritium's new factory in Tennessee is expected to start production in Q3 2022. The factory is designed to produce around 10,000 DC fast charging units per year, with the potential to produce up to 30,000 DC fast charging units per year. Tritium has also initiated localization of additional component parts from US suppliers, and the Tennessee facility is expected to start producing chargers complying with applicable Buy America Act provisions under Federal Highway Administration ("FHWA") requirements for domestic sourcing in 2023.
- The manufacturing process includes the integrated manufacturing and assembly of all DC fast charging unit materials, including mechanical assembly, calibration, in-process testing, and final systems integration testing. In addition, purchased component content, which is fabricated from steel alloy, including rolling extruding, bending, machining, grinding, drilling, coating, and epoxy coating is expected to be sourced from US manufactures with US certified steel.

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. – Enel X Way does not currently foresee DCFC component shortages that would delay the deployment of DCFC in FL. Enel X Way has inventory of several versions of our DCFC. This is dependent on scale and timing. Clearly communicated timelines ensure proper planning of inventory.

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?

- Enel has adopted National Institute of Standards and Technology's cyber security framework and follows its industry standard best practice, our vulnerability management process is fully aligned with NIST and the process includes vulnerability Identification, vulnerability evaluation, vulnerability treating and vulnerability reporting. This process is annually audited and attested by an external third party SOC2 and FedRAMP auditors. As far as vulnerability mitigation is concerned, Enel takes a "Risk Based Approach" if a mitigation is required for any vulnerability that has been identified. Enel has internal dedicated Risk Manager that reviews the risk associated with the vulnerability and approves the mitigation up to a certain level that is acceptable by Enel based on various factors.
- Enel X Way tests our devices and software with penetration testing on at least an annual basis
  or more frequently and that we also ensure that all data is processed and stored and transited in
  an encrypted state (TLS/AES).

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.

• Enel X Way software enables several different means of fee structures by setting rates by kWh, session, hour or any combination thereof. Payment collection can be done via QR code and the APP as well as through a credit card reader. Administrators can assign devices and settings to locations and sublocations as well as set charging station hours of operation.

- Stripe is the backed end payment mechanism for QR code payment. Payter is used for the UPT credit card reader.
- The Enel X Way network is futureproofed with respect to payment technologies, which is why they allow multiple forms of payment such as QR Code, JuicePass mobile app and UPT. As payment technologies evolve Enel X Way will continue to provide various methods of payment.

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.

- Our comprehensive maintenance and support plan covers all EVSE operational aspects to ensure 98% annual availability and hassle-free asset ownership of all Enel X Way charging stations. Enel X Way delivers customers peace of mind, offsetting the care of charging stations into our professional hands. To get most out of the stations, the O&M Program encompasses best-in-class truck-roll services that include: parts and labor costs coverage, 24/7 remote troubleshooting, professional technicians dispatching, preventive services and robust charging station health monitoring.
- Enel X Way offers a full and comprehensive truck roll maintenance service for charging stations under the O&M Plan. Our remote monitoring will help identify problems before drivers do, ensuring stations are operational 98% of the time. On rare occasions of malfunctioning, our service teams are available for troubleshooting 24/7, and for cases that require truck roll service, Enel X Way will coordinate and dispatch certified professionals to address the problem in the most timely fashion. Enel X Way will cover the cost of technician labor, parts and a full replacement of the charging station if needed under this service. The O&M Plan may be purchased with either 3-years or 5-years of coverage, providing customers financial flexibility with two industry-standard service choices.

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

• JuiceNet platform data is currently provided via SFTP service (exchanging with utilities).

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.

## 1. Summary of Experience

- FDOT is interested in a summary that describes your organization's experience with DCFC EVSE.
  - Enel X Way has deployed DCFC infrastructure for varying use cases from private charging, fleet applications to public infrastructure. Our deployments span across the US from New York to California.

## 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

## 175kW Block Diagram Figure 1: Single charger block diagram Load Break Switch Main Contacto Current Sensor Fuse 400V 50Hz / -480V 60Hz / -600V 60Hz 16 1. Þ CCS 200 -920VDC 5-350A 175kW Ma Contacto Diode DC 950VDC 185kVA Transformer (Reinforced Insulation) T1 ø 山山山 Voltage Sensor DC DC Contacto 350A -CHAdeMO 200 -500VDC 5-200A 100kW Max Current Diod Limiting Fuse Contac DC Ó Voltage Sensor DC Contacto 35kW DC 35kW 2-Pole RCBO Power supply to the CCU, vehicle and other auxiliaries 230VAC IMD Control Fuses 2.0kVA Transformer (Basic Insulation) T2 Control shelf, heating circuit and other auxiliaries 2-Pole RCBO SPD SPD CB 230VAC/ 24VDC Comms Unit PE PE

User Unit

Isolated Power Unit

## Block diagram