



FDOT EV Infrastructure Program RFI

Submitted by:

EnviroSpark Energy Solutions, Inc.

1050 Crown Pointe Pkwy Ste 500

Atlanta, GA 30338

404-736-9173

aaron.luque@envirosparkenergy.com

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?

EnviroSpark is an Atlanta-based, nationally licensed, General/Electrical Contractor, with extensive experience in Florida, that specializes solely in EV charging design, engineering, construction, maintenance, and hardware provision. Founded in 2014, we have designed and built thousands of EV charging installations for national networks like Tesla, Volkswagen, Rivian, and Volta. EnviroSpark holds licenses in over 25 states, including Florida. Through Tesla's SuperCharger and Destination Charging programs, we have installed and maintained over 5,000 charging stations since 2014. Long term goals include continued growth within the EV sector as a turnkey provider, developing, installing, and maintaining a minimum of 15,000 charging stations over the next three years. We continue to adapt as the industry evolves, following trends in energy production options, charging as a service, information technology needs, and the ability to install charging stations in all settings and under all conditions.

Annually, we continue to grow our capacity to design, build, and install EV charging stations. Design, build, and installation times vary based on charging station level, supply chain issues, labor shortages, centralization of buildout planning with clients and host sites, and coordination with utilities, and varies by state. In 2016 - 2017 alone, EnviroSpark completed more than 2,400 installations for one major partner in the EV industry. Since then, our total installation capacity has expanded. EnviroSpark is also capable of maintaining any and all installations that are designed and built by EnviroSpark staff.

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.

EnviroSpark sees the most significant gap in the deployment of DCFC networks as the upfront capital investments needed to make the electrical grid upgrades in order to install the charging infrastructure, especially in targeted locations with lower EV adoption rates. NEVI funding can provide the majority of the upfront capital investment, allowing properties to provide EV charging with lower financial risk, and can provide funding for longer term maintenance needs.



NEVI funds can be used to ensure solutions are customized to Florida, particularly due to the hurricane-prone seasonality. This can cause major disruptions to the grid and require unique considerations for more utilization in off-grid solutions such as solar canopy charging units. Solar canopies could be combined with energy storage for potential self-generation. This energy storage would be highly effective for load efficiency and act as a back-up power supply in an emergency situation.

EnviroSpark has a proven history of success in various sectors. EnviroSpark has a dedicated site acquisition team that helps to raise awareness, forge partnerships, and facilitate arrangements with amenities-owners, micro-transport providers, and various other partnerships that will result in the successful use of NEVI funding. In addition, certain geographic locations could greatly benefit from enhanced support through NEVI funding. Interstate highway systems and state highway systems, tourist destinations, rural and remote areas, and under-served and low-income communities in urban areas can all benefit from NEVI funded projects.

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

The goals of the NEVI program are:

- Put the U.S. on the path to a network of 500,000 EV chargers.
- Accelerate the adoption of EVs.
- Reduce greenhouse gas emissions.
- Help the U.S. lead global transportation electrification efforts.
- Build out alternative fuel corridors.

Educating drivers and site hosts about EV charging infrastructure, forging efficient partnerships with local power companies, and negotiating the often lengthy process for permits are challenges that need to be mitigated to reach the goals of the NEVI program. Florida's need for evacuation routes and infrastructure resilient to extreme weather events is a particular concern. Barriers in more rural and low utilization areas include a lack of cellular service, power sources, and long commutes for maintenance. In addition, manufacturer supply chain issues, labor shortages, and transportation issues can be severely detrimental to the efficiency of the installation process. These can be potentially mitigated by using a turnkey provider such as EnviroSpark where multiple aspects of the EV installation process are done in-house. Turnkey providers can also provide more efficiencies avoiding negative impacts on EV installation and therefore advancing the operational goals of the NEVI program. States that create strong Interagency Electric Vehicle Coordinated Councils can benefit from their involvement to face challenges.



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?

As EV charging typically has a longer wait time than traditional refueling, it is important that DCFC locations have the amenities and/ or attractions that will draw in EV drivers. An ideal DCFC location would coincide with already existing travel stops such as local businesses, rest stops, stores and other places customers can easily spend time, as this would be the most convenient for the end-users who will typically need to stop at such locations. These sites will also have easy access to utility power. Other DCFC locations should coincide with pre-existing travel destinations, such as State Parks and Agri-tourism destinations (U-Pick farms, Wineries, Farmer's Markets) to drive tourism to these locations and allow drivers to create unique experiences while stopped to charge.

Other factors that should be considered when choosing a DCFC location include nearby EV charging designated corridors, traffic levels, evacuation routes, median income, nearby housing and office space, and proximity to transportation hubs.

EnviroSpark evaluates the feasibility of sites selected using our internal, proprietary system that calculates a score allowing for measurement and comparison of different site options.

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

Our sales team is able to find leads for potential property sites based on the requirements of NEVI. Given the priority locations mapped out by the FDOT EV Infrastructure Master Plan, EnviroSpark's sales division can evaluate potential property partners based on feasibility, value for drivers, and leveraging previous private partnerships. Our sales team guides the property owners through the benefits of providing EV charging, costs and timeline of installation, as well as creating flexible contract plans to provide property options based on various cost, ownership, and operation structures. Our typical process includes our sales team members who are given focus locations to prospect, reaching out to property owners, as well as existing private partners, within the area. Our sales team members and in-house electricians walk the property and provide a site evaluation to discuss options with property owners, as well as to facilitate agreements based on their needs, EnviroSpark also has the capability to provide a full viability report that combines historical utilization data, regional data (such as EV penetration, demographics, proximity to other charging stations, etc.), utility tariff analysis, and other factors. EnviroSpark has a scoring system that will assign a numerical value to the viability of a location using these factors, as well as a percentile rating.



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/disruptors are coming?

As EV adoption rates increase, DCFC sites will need to be able to expand their capabilities, highlighting the importance of future-proofing during initial installations. For EV drivers, the location of DCFC is a determining factor for stops along the way to their destination. Sites that are selected to be fast charging hosts, such as stores, rest stops, restaurants, and small businesses, will get increased traffic and revenue as EV adoption increases. Site hosts and local amenities will gain further marketing and exposure through placement of EVSE, such as is supplied by EnviroSpark, as EV drivers will see them as an option for their stops. By being intentional with selecting sites with attractive amenities, FDOT will not only create more value for end-users of the charging stations, but also incentivize further charging infrastructure as it becomes a competitive advantage.

Micromobility may potentially become a subset of EV infrastructure in a very specific application found in highly dense urban areas, but this is a small number of potential sites. Our view is that the optimal sites for charging are those that focus mostly on a combination of Level 2/Level 3 charging infrastructure for typical EV vehicles (not micromobility focused vehicles) that allows convenient access from main roads, along with walkable distance to highly amenitized or scenic locations.

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.

EnviroSpark has significant experience in partnering with utility owners, other EVSE entities, and other private entities. EnviroSpark has partnered with Georgia Power through their Make Ready funding program, including site outreach and guiding property owners through the process of applying for the funding. Through our efforts over the past 7 years, EnviroSpark has helped to provide more than \$10,000,000 worth of EVSE construction and maintenance services for Georgia Power. EnviroSpark also has partnered with municipalities to develop EV charging strategies for their communities. Examples in Florida include Dunwoody, Savannah, Jonesboro, Bainbridge, Naples, and West Palm Beach. EnviroSpark also has extensive experience handling the installation of EV chargers for some of the biggest names in the EV space, as well as other private sector partners such as property management groups, restaurant chains, and retail. Specifics are available for discussion upon request.



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.

Much like the service industry, a successful business model requires a solid foundation. The foundation starts with key personnel with expert skills and builds upwards. Key personnel include a wide variety of individuals from the founders and CEO to the laborers on any given installation site. Each plays a role that pushes the organization in a forward direction. EnviroSpark brings its strengths of experience and adaptability, holding over fifty licenses and certifications in twenty states, assembling over two dozen teams working on site on any given day, and performing more than 35 site assessments per week, with an average site assessment turnaround time of less than one week. EnviroSpark brings together a blend of knowledge and efficiency that promotes results. In addition to Key Personnel, a Board of Directors who are titans of the industry and hold the passion and the know-how to influence successful, high-level, decision making is greatly important. Success in the foundation of a company will attract partners and investors that can grow the company and help revolutionize the field in which they serve.

In this era of fast-moving technology, it is important to build partnerships around knowledgeable and driven individuals. Using a core team of highly skilled and licensed individuals, with the sole purpose of providing excellent customer service along with a state-of-the-art product, and a transparent approach with the consumer as well as partners, is beneficial to the success of the partnership. This transparency with all entities of a project promotes a project management style that leads to more customer satisfaction and provides companies the ability to access information at any time in order to satisfy reporting requirements.

A successful partnership equally aligns the interests of all those impacted by the installation, including Site Owners, Property Management, Charging Network Providers, and End Users. EnviroSpark specializes in working with site owners and managers to create optimized solutions. Most site owners and managers do not want to be in the business of being a refueling provider, and thus need a solution that will ensure their constituents have working amenities without having to deal with the difficulties that come with directly operating or maintaining the equipment themselves.

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.

With EnviroSpark, one option is for the customer to own the equipment and to keep the majority of the revenue. The customer pays for software, communication, maintenance, and other costs associated with the system after installation. Another option is for the network operator to own the equipment, and then the majority of the revenue goes to the operator. There is also the possibility of a hybrid revenue-sharing approach, where both players have an equal or semi-equal stake in the game and split costs associated with software, communication, and maintenance, with the



split reflecting each party's level of risk. While these are options, in terms of optimal use of NEVI funding, we encourage clients to consider our full turnkey approach, especially in instances of subsidized government programs where there is significant funding available. This alleviates much of the burden of installation, maintenance, coordination, and planning that would otherwise be on the customer. Instead, EnviroSpark is able to efficiently handle these operations in-house, at a cost savings as well as a significant time savings due to our internal process and economies of scale that customers typically aren't able to match.

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.

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.

The estimated time frame from site assessment to completed installation is 5 to 8 months. Under current conditions, supply chain issues, shipping delays, and labor shortages may impact typical timelines beyond what the average timeline normally would be.

EnviroSpark Timeline Expectations	
Level	Time from Task Order to Completion of Installation
Level 2 Chargers	4 to 6 months
Level 3 Chargers	5 to 8 months
Solar Canopy Charging	9 to 12 months

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, EnviroSpark and the partners used for installations through EnviroSpark are able to meet the requirements of Buy America for DCFC infrastructure projects.



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.

We continue to evaluate and mitigate the risk to our supply chain based on contracts as well as our professional relationships, and can further prepare through advance ordering and planning, due to custom projects and scope of signed contracts.

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?

EnviroSpark recognizes and understands the importance of cybersecurity and mitigates cybersecurity vulnerabilities by adhering to the NIST Cybersecurity framework, consistent with industry standards. EnviroSpark's proprietary management system is developed and maintained in-house using a cloud-based solution. While we have not yet assessed our system for compliance with Florida's 60GG-2, EnviroSpark is able and willing to provide any necessary documentation, update any policies or procedures, and any other means of ensuring that all compliance requirements are met, at the request of the funder. As a small business, we are able to offer flexibility and responsiveness to satisfy the information reporting needs of our largest customers.

As an example of our ability to work with customer requirements, here is a sample cybersecurity and privacy clause used in a recent agreement:

Data Security. Licensee shall comply with obligations under Owner's most current privacy policy as provided to Licensee, which may be updated or replaced, from time to time, by notice to Licensee (email acceptable). Licensee shall be responsible for compliance with law, including provision of required disclosures and obtaining required consent, with respect to the collection and use of Services Data. Licensee shall take all commercially reasonable security measures—administrative, technical, and physical—to protect Services Data from unauthorized use, access, disclosure, alteration, or destruction. Such security measures shall include, without limitation: (i) 128-bit encryption of data at rest within Licensee's servers, movable computing devices, and data communications; (ii) firewalls; (iii) virus detection and anti-virus software; (iv) authentication techniques, such as usernames and passwords, or authorization formats, which limit access to particular users; and (v) additional security controls consistent with SOC 2 reporting standards. Only duly authorized Licensee personnel or contractors are permitted to access Services Data, and only to fulfill the obligations of this Agreement. Licensee shall immediately notify Owner of



any known or suspected security breach that may result in the unauthorized use, access, disclosure, alteration, or destruction of Services Data. Licensee shall immediately notify Owner of any legally binding request for disclosure of Services Data by a governmental authority and shall provide Owner an opportunity to waive its rights or to seek a protective order, unless Licensee is prohibited by law from doing so.

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.

Our networking software gives us flexibility in different forms of fee-structures. Currently, a majority of our chargers have a time-based fee structure. Given the most recent federal guidelines, we have the capability to switch our fee structure to kW/Hour, or we can devise a structure using a combination of the two. At our chargers, drivers are able to scan a QR code which will allow them to pay using their phone.

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.

Typical maintenance includes, but is not limited to, storing the charging cables securely, ensuring the parts are checked on a schedule, and cleaning equipment. Occasionally components such as outlets or cables need to be replaced. Our networking software keeps track of real-time data on our chargers to make sure they are online, and their power output is consistent with expectations. The system can perform yearly maintenance checks to ensure that the power feeding the stations is not degraded in any way. The typical lifecycle of DCFC equipment exceeds one decade.



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

Our software is OCPP (Open Charge Point Protocol) 1.6 compliant. Using our network software, we can report the following data with the State from our Charger Session Data:

Field Name	Description
SessionID	Unique identification number of the charging session
LocationID	Unique identification number of the site provided by SCE
EVSEID	Unique identification number of the EVSE
PortID	Unique identification number of the port
ChargeStartDateTime	Charge start date and time
ChargeEndDateTime	Charge end date and time
ChargeDuration	Charge duration; the time of power being provided to EV
SessionStartDateTime	Session (connection) start date and time;
SessionEndDateTime	Session (connection) end date and time
SessionConnectionTime	the time the charge port is physically connected to the EV
ChargeKWH	Energy (kWh) usage per session
ChargeMaxDemandKW	Peak demand (kW) per session
ChargeAverageDemandKW	Average demand (kW) per session
SessionSaleAmount	Fees charged to end user
User ID	User Email or Login information

Based on the Session Data, we can report the overall Utilization of each charging station to the State. We can provide Utilization Data to the State on a monthly report or as requested. We are finalizing the development of a back-end online dashboard for our clients to check Utilization in real time that the State will be able to use if they decide to utilize that service option. In addition, EnviroSpark can customize the format of the data for integration with a FDOT sponsored central data repository.

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.

Through abiding by the newly released federal guidelines, FDOT can ensure end-users of convenient and reliable charging experiences by standardizing the 97% uptime requirement for funding, as well as consistency and transparency in payment methods. As a result of the process EnviroSpark follows for site selection, design, and build, end-users will find charging stations that are safe, adequately lit, easy to use, and well maintained.

It is critical that any EVSE infrastructure remain able to adjust to rapid condition changes necessitated by emergency evacuations and power outages. For areas where flooding occurs more frequently, it is imperative that durable electrical equipment be installed that is rated to operate under these conditions. EV charging sites that are able to connect to the main electrical grid as well as alternative emergency power sources, such as backup generators, will be best



able to remain operational in times of severe weather conditions. Charging stations should have equipment redundancies built into place so that a single equipment failure does not render the entire charging station unusable. Charging stations with multiple types of hookups will also increase the utility of the stations enabling users of new and older EVs to charge up. State emergency plans can include mobile DCFC charging stations that may be placed in strategic locations prior to evacuation orders. These mobile units can also be placed nearby evacuation shelters to aid in the return of residents to their homes after the evacuation order has been lifted.

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?

It is important for FDOT to select sites that encourage EV use in rural areas with lower EV adoption as well as disadvantaged neighborhoods in suburban and urban areas. By choosing sites that have a higher concentration of potential users, such as near multi-family housing developments, FDOT can help to spur increased adoption of EVs, which can have a cumulative effect of motivating nearby businesses and retail locations to follow suit. Sites within walking distance of multi-family properties that have in excess of 500 housing units are exceptionally attractive locations. In rural areas, choosing sites that are near essential services where users are likely to park for a longer period of time, such as county and state offices serving the public, medical centers, public schools, community colleges, and bus and train stations is an effective strategy. Additionally, rural areas can create EV charging islands along interstate routes attracting EV users on long trips.

The lower ROI can be offset with hardware and installation costs being subsidized by the NEVI program, together with the economies of scale that can be realized with these funding opportunities. Price efficiencies can be gained with projects that include a greater number of charging outlets per pad. Choosing locations that have easier access to a sufficient electrical supply also reduces unit price. Long term maintenance agreements with a turnkey installation and hardware provider is an ideal partner for the state. Additionally, public-private partnerships introduce new sources of innovation and business models and can increase utilization while reducing costs.



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

- **EV Education and Outreach Programs:** We have found success in outreach programs (such as Ride and Drive Events) as opportunities to showcase electric vehicles and educate drivers in communities that we partner with. For many individuals, electric vehicles are still an unfamiliar concept, so the more tangible exposure to EVs and chargers the more likely they will make the switch to electric vehicles.
- **Local Business and Intentional Site Selection:** As mentioned, EV chargers can bring a significant competitive advantage and bring interest to local businesses and attractions in rural areas. Strategic locations as well as getting ahead of demand and long lines by long term planning by installing several chargers per site can be useful. NEVI requires 4 fast chargers per site less than 50 miles apart, and in addition to this, utilizing additional funding to increase the number of stations per site could get ahead of future logistic concerns of long lines and wait times, especially in light of the fact that this is subsidized.
- **EV Purchase Incentives:** As the EV industry grows, the price difference between ICE vehicles and EVs will lower significantly, and electric vehicles will become more accessible. However, in the meantime, federal, state and local incentive programs for EV ownership will increase EV adoption in communities with lower adoption rates.



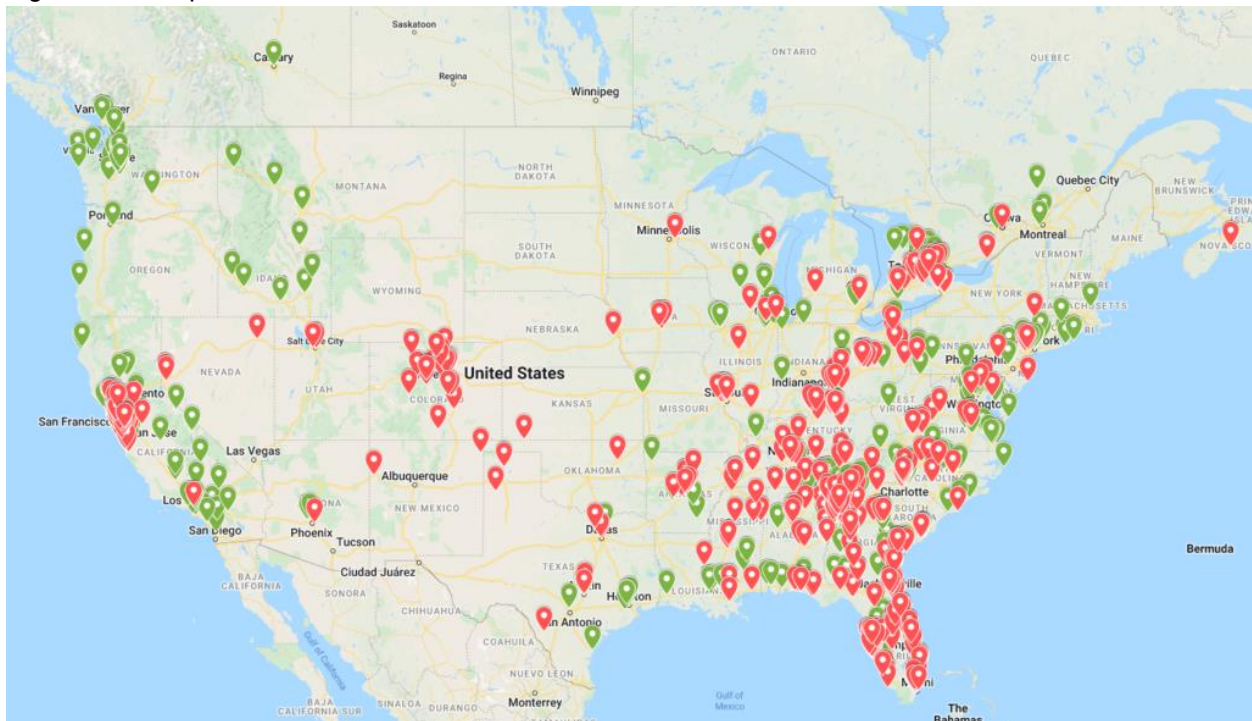
Specific Information Requested

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.

Figure. EnviroSpark EVSE Installation Sites



EnviroSpark is an Atlanta-based nationally licensed general/electrical contractor that specializes solely in EV charging design, engineering, construction, maintenance, and hardware provision. We have designed and built thousands of installations for national networks like Tesla, Volkswagen, Rivian, and Volta and are licensed in over 25 states, including Florida.

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.

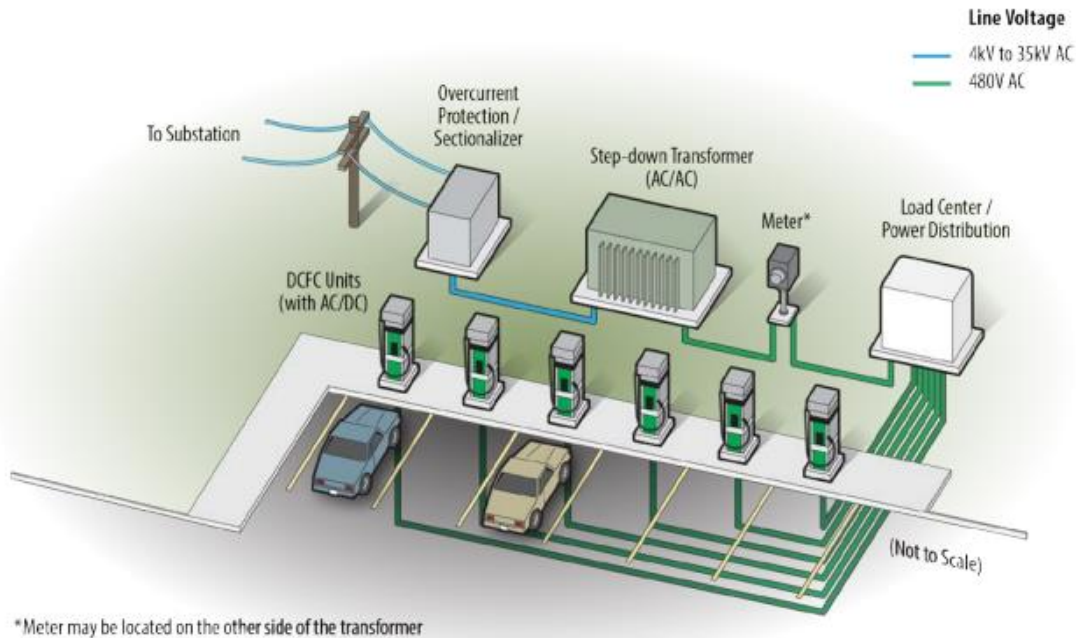


Figure ES-1. Diagram of a hypothetical multi-port DCFC complex.

3. Hardware Information

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

EnviroSpark has, in its resources, datasheets and technical specifications for many different EVSE configurations. As hardware specifications for fast charging are based on many complex factors, we would like to present this documentation once given more specific information regarding a sample site layout.

4. Software Information

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

Our network software allows us to track the utilization of our chargers at each site location in real time. As we notice higher utilization at these sites as EV adoption increases, we will leverage future-proofing during installation and relationships with the property owners to discuss solutions for expanding charging capabilities. We also see the NEVI program as the beginning of DCFC



EV charger deployment along these AFCs and see more properties opting into EV charging on their property as EV adoption expands, alleviating strains on existing charging infrastructure.

Our software is OCPP (Open Charge Point Protocol) 1.6 compliant. Using our network software, we can report the following data with the State from our Charger Session Data:

Field Name	Description
SessionID	Unique identification number of the charging session
LocationID	Unique identification number of the site provided by SCE
EVSEID	Unique identification number of the EVSE
PortID	Unique identification number of the port
ChargeStartDateTime	Charge start date and time
ChargeEndDateTime	Charge end date and time
ChargeDuration	Charge duration; the time of power being provided to EV
SessionStartDateTime	Session (connection) start date and time;
SessionEndDateTime	Session (connection) end date and time
SessionConnectionTime	the time the charge port is physically connected to the EV
ChargeKWH	Energy (kWh) usage per session
ChargeMaxDemandKW	Peak demand (kW) per session
ChargeAverageDemandKW	Average demand (kW) per session
SessionSaleAmount	Fees charged to end user
User ID	User Email or Login information

Based on the Session Data, we can report the overall Utilization of each charger station to the state. We can provide Utilization Data to the state on a monthly report or as requested. We are in development of a back-end online dashboard for our clients to check Utilization in real time that the state will be able to use once launched in several months.

5. Maintenance Plan

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

EnviroSpark responds to Warranty calls for installed work or materials expeditiously, reporting to the designated representative expeditiously to any issued warranty call.

For Level 2 Chargers, less regularly scheduled maintenance is required than for DCFC chargers. Level 2 sites may require replacement of the electrical outlet or charging cables, and the charging device itself may need to be replaced after about ten years. For DCFC networked stations, maintenance schedules also include replacement of filters, checking of cooling systems, as well as constant monitoring of power levels.