

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?

Koulomb LLC is DC Fast Charging Network Operator based out of North Carolina. Koulomb specializes in installing, owning, and operating 360kW DC "ultrafast" chargers capable of charging most models on market today in 15-20 minutes. Koulomb is the consumer-facing brand extension of Pure Power Contractors, an electrical contracting firm based out of North Carolina that has 10 years of experience in installation of EV chargers and utility scale solar projects.

Our long-term plans are to build, own, and operate a portfolio of EV charging stations along the East Coast that are competitively priced, conveniently located, and have best-in-class uptime, the latter of which is supported by privately-run O&M operation that is also backed by Pure Power Contractors' footprint along the East Coast.

We are able to build, install, and maintain 50 -100 new chargers per year. Our funding

source is a diverse mix of founder equity, institutional capital, equipment debt, and unsecured debt.

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.

1. *DC Fast Charging initiatives. Our strong belief is that while 80% of charging will be done in the home or the workplace, the remaining 20% of charges will be attracted by 15-minute charging experiences, not 45-60 minute charging experiences.*
2. *Battery-supported designs like Koulomb's that shave peak demands preserving grid resiliency. We designed our systems to avoid expensive demand charges levied by the utilities, but its nevertheless a positive for the grid. Unfortunately, batteries are expensive and have long payback periods without incentives.*
3. *In Florida specifically, we are also planning formats that include solar panel installations and more sophisticated battery management systems. These solar inclusions would appear on land that we purchase to make room for a bigger array capable of materially offsetting the charging taking place. This "microgrid" model is a defensive play against emergency situations and future unknowns in grid management.*

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

Mobilizing private investment efficiently. There are so many unknowns around interconnection, zoning, etc. even in site selection. In most states, we've noticed there's an assumption that the best places for Level 3 chargers are already owned or already leased by the applicants for the NEVI funds. That's a short-sighted approach, especially when you think about optimizing for very tactical NEVI rules, e.g., 1 site every 50 miles, within 1 mile of corridor, etc.

As a result, we suggest a framework written with some flexibility. For example: Company A, in exchange for \$X from the DOT, you must deploy Y level 3 fast chargers by ZZ/ZZ/ZZZZ, but it must be used along certain corridors. At the time of "land control", i.e., land purchase agreement, signed hosting agreement, etc., (evidence of land ownership) there can't be another L3 charger along the corridor within X miles in either direction according to AFDC.com. Dollars are released at interconnection approval.

This would put the responsibility on the private sector to put the "dots on the map" in the right places, but also give private sector the confidence to invest in areas that would be less attractive without the incentive dollars.

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 order:

1. *Corridor access, agnostic of surrounding demographics*
 2. *Well-lit / feels safe*
 3. *Security cameras that are closed circuit and monitored 24/7*
 4. *Prepared for emergency evacuations, i.e., battery management + solar*
5. Please describe your process, including market research, land use requirements, and business development opportunities for determining a DCFC site location.

Koulomb leases parking spots from property owners and also purchases land for “gas-station”-like formats in areas that have proximity to corridors or in high “visitor-per-day” locations. We maintain proprietary models that optimize site selection for factors including-but-not limited to: 1. EV ownership, 2. Scarcity of existing DC chargers, 3. Minimum land requirements (typically 0.25AC).

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?

Amenities are less important to our model because we deliver a fast charge. That allows us to be more flexible in where we locate our chargers. Our experience is akin to a gas station. For slower charges, companies may be looking to add amenities like bathrooms, convenience stores, etc. A full charge may take 15 minutes, but we expect most charges to be between 5 – 10 minutes. With all that being said, we do look to co-locate with built in amenities.

Regarding disruption, we are also planning formats that include solar panel installations and more sophisticated battery management systems. These solar inclusions would appear on land that we purchase to make room for a bigger array capable of materially offsetting the charging taking place. This “microgrid” model is a defensive play against emergency situations and future unknowns in grid management.

Partnerships and Business Models

6. 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.

Pure Power Contractors has experience installing chargers for third-party owners like Duke Utility and EVGo. Koulomb partners with local landowners on lease arrangements and we leverage a “Hosting Agreement” that binds Koulomb and the landowner to terms mutually agreed upon. Terms typically include monetary remuneration, roles and responsibilities, and “what-if” scenarios.

7. 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.

Mutually beneficial arrangements. For example, our charging solution is very attractive to property owners with retail locations because drivers will want to drive an extra mile to get to our fast chargers than to settle for a slower Tesla or Electrify America station. Our third-party software integrations make EV drivers' dashboard GPS systems aware of our location so marketing spend is limited.

8. 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.

Can take several forms. Because we typically are primary metered, we share our electricity bills to support our billing where applicable:

- 1. Percentage revenue share, typically 1-5% of revenue.*
- 2. Bonus structures, whereby, if we exceed a certain visitors-per-day hurdle over the course of six-months / year, we pay a bonus to the host.*
- 3. Most are typical ground leases.*

9. 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.

Considerations for Florida:

- Existing technicians that can operate and maintain power supply equipment, sensitive electronics, and constantly evolving technologies*
- Required ability to operate and maintain equipment with minimal additional training (vendor-specific EV charger training). We plan on sending our technicians through manufacturer technical training and keeping them consistently re-certified.*
- Need for regression testing against new EV models. While there is consensus building around a CCS connector standard, all models interact with CCS differently and there are invariably "bugs" as new models come online whose battery management systems are not yet optimized for all DC charging models. Our company rents new vehicles to test that they work against our chargers.*

Equipment

10. 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.

In times of normal supply-chain environment, 6 weeks. In today's strained environment, where forecasting 6-month lead times, where the bottlenecks are primarily in transformer

and switchgear lead times.

11. 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, our manufacturer will be assembling products onshore in 2022.

12. 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.

Transformers and switchgears. Batteries where applicable, however, batteries are more of a luxury than a hard requirement. We have hired supply chain consultants to help us expedite shipping when required, and have also partnered with a design firm to build a proprietary design that helps us optimize certain parts of the supply chain.

13. 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 licensed software resides in a highly secure Virtual Private Cloud (VPC) with multiple layers of data security including encryption on all data storage and communications, PCI-DSS SOC "A" compliance, multi-factor user authentication and redundant back-ups. Physical security of all servers is provided by Amazon Web Services which employs data center and network architecture built to meet the requirements of the most security-sensitive organizations. Driver transactions are processed by Braintree, a PayPal company, with full PCI security compliance. Credit and debit card numbers are not stored via the App or on our platform, but rather saved as an encrypted token. Our payment processing is done via Braintree, a PayPal company, and is Payment Card Industry (PCI) compliant and follows Data Security Standards (DSS).

Operation, Maintenance and Data Sharing

14. 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 charges to POS drivers are energy-based, quoted in \$/kwh. Our payment is collected via a mobile app (available on Apple / Android) and in the form credit card reader. All major forms of payment are accepted.

15. 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 proprietary O&M routines include the following dimensions:

- *Our affiliate company is Pure Power Contractors, 100+ employee electrical contracting firm*
- *Existing O&M division that maintains solar assets*
- *Routine quarterly maintenance*
- *Electrical checks*
- *Thermal imaging*
- *Checking air filters*
- *Work order responses – escalations from software provider, customer complaint*
- *Manufacturer certified technician - training*
- *24/7 video support – cleanliness / status*
- *“MOP” for installation*
- *Quality Control checklists*
- *Leverage Procore for our project Management software*

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

We can provide information flexibly via flat file and/or via API. We can share anonymized visitor data, time and length of charge, amount paid for charge, repeat customer flag. Additional data may be able to be provided if requested and covered by our terms and conditions.

16. 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.

Regarding disruption, we are also planning formats that include solar panel installations and more sophisticated battery management systems. These solar inclusions would appear on land that we purchase to make room for a bigger array capable of materially offsetting the charging taking place. This “microgrid” model is a defensive play against emergency situations and future unknowns in grid management.

Our ultra-fast DC chargers are uniquely advantageous in these scenarios in that we can provide a maximal charge in 15 minutes and a meaningful charge, i.e., enough to evacuate, in less. That means higher turnover and more cars charged per hour than others.

Strategies for Low Utilization

17. 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.
- Guaranteed number of projects for economies of scale
 - Short term operation and maintenance agreements (5 years or less)
 - Long term operation and maintenance agreements (longer than 5 years)
 - Any others?

It is Koulomb's belief that to prevent stranded assets an upfront incentive dollars would be enough to offset the low-utilization risk. Any company who requires a critical minimum number of local projects in a geography to warrant building out an O&M team likely isn't a firm the State of Florida would want to engage.

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

Our software has the ability to create rewards programs or subsidized programs, where drivers who register their email addresses on our mobile app (via their device) can register for discounted charges.

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.

Koulomb is the consumer-facing EV charging brand for Pure Power Contractors, a utility scale solar contractor operating in North Carolina for over 10 years. Through shared ownership and formally via a O&M contract, Koulomb is affiliated with Pure Power Contractors, who has installed 1,200 MW utility solar plants and over 50 EV chargers in the last 10 years.

Pure Power has relationships with major equipment manufacturers including Eaton, GE, Wesco, and Boarder States to ensure comprehensive access to equipment and materials. Koulomb has also engaged Atlantec Engineering for the equipment specifications and stamped engineering sets, as well as utility coordination for service to specific properties. Justin Taylor is founder and CEO of Pure Power Contractors Justin has been an integral component to the expansion of renewable energy in the Southeast for 10 years.

Jeff Constantineau is a co-founder of Koulomb and previously Managing Director of Sunlight Financial, a residential solar lender and was responsible for product development, customer service and operations oversight.

Pure Power has existing relationships with Duke Energy (utility), City Electric Supply (procurement) and will seek to partner with local businesses to provide discounted charging solutions for their employees and customers. All Koulomb charging stations will be compliant with current NFPA NEC 2020 codes, ADA regulations, and state/local environmental and stormwater management practices. Pure Power Contractors will also utilize in-house commissioning teams to ensure all power equipment and conductors are tested prior timely and safe project startup. Each power cabinet from the medium voltage transformers, power units, and charging stalls will be marked with NFPA compliant signage utilizing either engraved placards or UV resistant mylar material.

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.

Should we be allocated incentive dollars, we would look to partner with Florida NEVI team on locations and installation requirements, e.g., charger only, charger + solar + battery. From there, Koulomb would procure all equipment, obtain necessary approvals and interconnection, install, and operate chargers for the length warranted by its real estate contracts (typically 20 years).

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.