DCFC

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Technical Assistance Request

Solar Micro-Grid EV DCFC Stations

Turning Charging Deserts into Solar Oases

Project Description

There is a lack of EV chargers in underserved communities, commonly referred to as "charging deserts," contributing to environmental injustice and hindering nation's effort in electrification of transportation. To tackle the challenge, the project involves constructing self-powered Direct Current Fast Charging (DCFC) stations, integrating localized micro-grid ground mounted solar arrays and energy storage, without relying on the grid. It will enable quick deployment of EV chargers, provide a profitable business model to station operators, aid grid stability, and bring environmental justice to underserved communities.

Request 1: Business Development (5/5)

Currently, the solution is in the conceptualization phase, where key assumptions and analyses for the station design have been outlined to demonstrate demand. We would like to request support in business development and the creation of a comprehensive and robust business plan. Our goal is to eventually become site developers' "one-stop shop," providing complementary services to site design, such as market research, site evaluation, due diligence, AHJ engagement, and technical support. The ideal support team should help us develop sales strategies and enhance the company value proposition.

Request 2: Marketing & Funding Opportunities (5/5)

The success of the solution hinges on securing the necessary commitments to accelerate site development and achieve the requisite economy of scale. We would like to request assistance in securing seed investment, venture capital, or angel funding to aid in design development and/or site acquisition. Marketing experts to enhance exposure to our solution and identify potential customers interested in our solutions are much needed.

Request 3: Prototyping, Manufacturing, and Testing Partnerships (5/5)

The stations utilize Direct Current (DC) to fulfill their primary electricity needs. Since most commercially available electrical components in the country are Alternating Current (AC), we would like to connect with equipment manufacturers specializing in the design, prototyping, manufacturing, and testing of DC-based solar and EV charging equipment. Experts in obtaining UL certifications for our equipment are needed.

Request 4: Software and Cyber Security (5/5)

Our solar equipment and EV chargers require software interfaces and remote capabilities. Drivers visiting the stations should be provided with payment options and data visibility in line with industry standards. We would like to connect with industry partners to assist in building, improving, and maintaining the software part of the system. Additionally, remote capabilities further highlight the importance of cyber security.

Request 5: Integration with Solar Technology (4/5)

To seamlessly incorporate solar technology into our EV chargers, we recognize the imperative for expertise from seasoned solar professionals. Their specialized knowledge is vital in ensuring the seamless integration of our charging infrastructure with solar equipment, optimizing the efficiency and sustainability of our system. This collaboration will not only enhance the environmental benefits of our charging stations but also contribute to the broader goal of advancing renewable energy solutions in the transportation sector.

Request 6: Connecting with Local Communities (4/5)

The stations are expected to be heavily concentrated in rural, economically disadvantaged communities, and predominantly minority neighborhoods, where charging deserts are located. We would like to request connections with local non-profit organizations, advocacy groups, schools, and local communities to gather feedback on the solution and how it could better serve them. We would also like to network with local communities that lack EV charging infrastructure to be part of the partnership. Moreover, local construction companies, engineering consulting firms, permitting experts, and job agencies specializing in the solar industry are much needed to assist in constructing and maintaining the stations.

Request 7: Legal, Insurance, and Public Policy (4/5)

The company will need assistance with legal aspects related to daily operations and patents on system design. Insurance services are needed to protect company and client assets. Public policy experts who are well-versed in local, state, and federal regulations pertaining to EV charging infrastructure are needed to ensure our projects comply with all necessary laws and regulations, avoiding potential legal complications.

Requests are subject to change.

Public Link on Hero X:

https://www.herox.com/solarprizeround7/round/2891/entry/48487