# **Driving Green:**

# **Navigating Incentives in Solar-EV Colocation**

### **Prepared by:**

Andy Bayliss Emily Cummins Diane Neumayer Marley O'Neil In Partnership with: OneEnergy

Masters of the Environment

Advisor: Derek Fehrer

### **The Partner**

OneEnergy Renewables, a solar developer

headquartered in Seattle, WA, is exploring the significant intersection of solar energy generation and EV charging as a potential market for expansion.

## The Opportunity

The demand for electrified fleets continues to grow each year, thanks to a number of market drivers. These include the passage of state-level electrification requirements and large federal incentive packages, like the Bipartisan Infrastructure Law and the Inflation Reduction Act, in addition to an increase in corporations setting ESG targets. These drivers are relatively new, and developers like OneEnergy and its competitors are starting to move quickly into this space.

## The Process

## Our objective is to produce a set of resources to aid OneEnergy in its identification of ideal solar-EV colocation sites across the nation.

We began by creating a comprehensive and accessible database compiling all federal and state-wide incentives supporting commercial fleet electrification. These could include: tax incentives, policy measures, utility rebate programs, and more.



### **Phase I: Research**

To gather the necessary information, our team took a multidisciplinary approach to research, consulting many sources to design a database of information for OneEnergy that can be used as an internal document and referenced throughout the year to access various incentives.



#### **Phase II: Financial Analysis**

Via comparative financial modeling, we quantified the effects of the incentive and policy initiatives we found across states prioritized by OneEnergy.

This exercise helped illustrate the benefits of solar-EV colocation, including the addition of revenue from charging customers and the reduction in real estate costs from a combined-use site.



- → Real estate costs play a large role in determining the financial suitability of solar-EV colocation projects.
- → Canopy solar at an EV charging depot is more expensive to construct than traditional ground-mounted solar.
- → Geographic areas suitable for large solar projects may or may not fall within transportation corridors or areas with commercial EV demand.

### The Results

Our database and financial analysis led us to determine which specific states are best suited for OneEnergy's solar-EV project development. We divided the states we researched into **Tier 1, Tier 2 and Tier 3** states. Our recommendations, based on these findings, will include geographical focus areas along with project structure notes based on our financial analysis.

Our final report will include an analysis of the database and the opportunities described therein, as well as a dynamic financial analysis using the model we've developed. The report will detail our recommendations of target states for co-location projects, the current status and appetite for EV charging incentives across the country, and will hopefully serve as a useful tool as OneEnergy explores the growing electric vehicle charging market.



**PV GENERATION** 

TRANSPORTATION

**REAL ESTATE** 

Breakdown of Database Entries Not including provisions from newly passed or non implemented legislation.