

DOCKETED

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Additional submitted attachment is included below.

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August 8, 2022

California Energy Commission
715 P Street
Sacramento, CA 95814

Re: 22-DECARB-02 – Blueprint Power’s Comments on the California Energy Commission’s Proposed Building Decarbonization and Electric Vehicle Charging Equipment Web Guide

I. Introduction

Blueprint Power Technologies Inc. (“Blueprint”) appreciates the opportunity to respond to the California Energy Commission’s (“CEC”) Docket Number 22-DECARB-02, Building Decarbonization and Electric Vehicle Charging Equipment Web Guide. We respectfully submit our responses to this Docket for the CEC’s consideration as they develop a new webpage on building decarbonization best practices.

Blueprint is a software-enabled services company that helps commercial real estate owners embed energy sustainability and decarbonization into their daily operations. Through our real-time energy intelligence and orchestration platform, simulation and implementation services for onsite power infrastructure upgrades, and energy marketplace services, we help our customers create new revenue opportunities and reduce carbon by transforming the energy profile of their buildings.

We submit this response with input from AMPLY Power, Inc. (“AMPLY”). AMPLY is a comprehensive charging and energy management provider for electric vehicle fleets focused on reducing costs and environmental impact. AMPLY offers a proven, scalable ecosystem of cloud-based software, onsite hardware, and customer-centric service to simplify charging operations for fleets.

II. Enabling Decarbonization with the Blueprint DIGBOX®

Visibility into the granular, real-time energy usage data of commercial real estate is foundational to implementing actionable decarbonization strategies. Blueprint’s proprietary metering hardware, the DIGBOX®, captures granular, real-time energy data from building systems, energy assets, and major load sources. DIGBOX-sourced data feeds into our Blueprint Portal software to provide building owners with data visibility, actionable analytics, and notifications that support energy management decision making at scale to reduce costs and carbon footprints.

DIGBOXes are designed to support commercial real estate buildings. DIGBOXes speak a variety of industry protocols for building management, commercial IoT, and distributed energy control. DIGBOXes connect buildings to the secure Blueprint cloud using ethernet, Wi-Fi, or cellular service. To install a DIGBOX, Blueprint develops design drawings and provides them to local, licensed electricians for installation. The cost of installation varies depending on the location and complexity of the property. DIGBOXes require minimal maintenance, and service frequency is less than once per year for most installations. Blueprint is the exclusive provider of DIGBOXes.

III. Leveraging Software to Decarbonize the Built Environment

Blueprint provides software and software-enabled services to help commercial real estate owners evaluate, implement, optimize, and monetize decarbonization strategies through smart energy management and behind-the-meter (BTM) distributed energy resources (DERs), such as solar PV, battery energy storage systems (BESS), EV charging infrastructure, and electrification upgrades. BTM DERs can reduce a property's carbon footprint by reducing consumption of carbon-intensive grid power, generating renewable energy onsite, storing energy for smart dispatch of clean power, and creating controllable, flexible energy loads that can be shaped to curtail demand for grid power when carbon intensity is highest. Meanwhile, hardware innovation, regulatory incentives, and new avenues for participating in energy markets have enabled an ROI case for DER investments, allowing real estate owners to reduce their carbon footprint and make money at the same time.

The Blueprint Power Energy Transformation Platform, which includes both our DIGBOX hardware and software Portal, is specifically built to give companies more visibility, control, and security over the energy profile of their buildings. DIGBOX-sourced data is aggregated, organized, and presented in the user-friendly Blueprint Portal, which allows users to see and report on the real-time performance and energy usage data of assets, down to the sub-load level or at the aggregate portfolio level. The Portal tracks essential data such as energy load consumption curves, energy consumption by source, demand response performance, and DER asset metrics. The Platform also provides actionable analytics to inform smart energy management that can reduce GHG emissions. For example, smart "spotter" algorithms learn building behavior and search real-time data to notify users where energy is being wasted. With predictive data, the Portal can highlight and provide notifications for securely shifting energy consumption down or to lower-cost, lower-carbon sources. By merging hardware and software capabilities, and complying with rigorous security standards, the Platform creates higher-value "smart electrons" that offer more data visibility, more data accuracy, more revenue potential, and more energy optionality – all key components of achieving ROI-positive decarbonization.

Blueprint’s energy and decarbonization simulation software uses industry reference points, proprietary Blueprint intelligence, and building-level data (collected and organized through the DIGBOX) to generate strategies for building or full real estate portfolio decarbonization. Blueprint’s energy simulation models, purpose-built for commercial real estate, evaluate various DER sizes and combinations, which may include solar, BESS, EV charging, and electrification upgrades; projected costs of DER procurement & installation; and available market incentives to reduce or offset capital expenditures, save on electricity costs, and create future revenue streams. In collaboration with the client and in consideration of the unique framework of each client’s investment strategy, Blueprint uses simulation results to help the client create customized investment plans that seek to optimize economic value created and GHG emissions abated. The investment plans include projected cash flows / project economics, engineering concept designs, and expected project timelines.

Blueprint’s marketplace connectivity services support the connection of buildings and DERs to relevant grid programs that incentivize and reward clean, flexible energy capacity – for example, wholesale and retail demand response programs. Facilitated by Blueprint’s Energy Transformation Platform, our marketplace connectivity services seek to optimize performance in these programs to generate value (through revenue or cost savings) for asset owners and enable an ROI case for investment in decarbonization projects. The Platform provides real-time tracking and post-event performance analysis and settlement data.

In many cases, commercial real estate owners may be able to decrease their carbon footprint and save costs through electrification of their fleets or tenant fleets. OMEGA™ CMS, AMPLY’s proprietary charge management system, optimizes charging for lowest cost energy, while offering improved resilience and reliability, all in a user-friendly dashboard. Managed charging is a necessary component for the deployment of charging equipment for fleets looking to electrify and decarbonize at scale. AMPLY’s charge management solution is intended to complement a vehicle fleet’s initial deployment and assist with future growth.

- **Optimized Load Management:** OMEGA Charge Management Software works to co-optimize multiple objectives - from electricity rates and vehicle ready times to battery State-of-Health (SOH) impact and EVSE capabilities - all without violating service capacity limitations. This comprehensive optimization is achieved through integrating with various aspects of the fleet and facility: vehicle telematics, fleet management systems, and distributed generation/loads at the facility. The OMEGA platform staggers the charging load to minimize both the peak demand charge and the capacity impact on the grid while providing day-ahead notice of peak events. The Command Center’s business rules will be architected to coincide with the cheapest time-of-use rates, while simultaneously minimizing any demand charge amounts monthly and ensuring that the vehicles’ required state-of-charge (SOC) is reached before starting the next shift.

- **Futureproofing, Integration, and Interoperability:** AMPLY is hardware- and partner-agnostic, meaning the OMEGA Charge Management Software can seamlessly integrate to all of these components that may be selected for future use as new technology becomes available. The Command Center can accommodate different classes of vehicle, different vehicle OEMs, and different charger OEMs within AMPLY's one charge management solution. Within different vehicle characteristics, the Command Center can also coordinate charging between different classes of vehicles, different battery capacities, different battery types, different charging rates, and different battery states of health.
- **Dynamic Managed Charging Dashboard:** OMEGA Command Center provides a managed EV charging service to enhance reliability of the EV chargers and the EV charging process, optimize to ensure e-fueling of every vehicle every day, drive visibility to the uptime of vehicles and chargers, proactive monitoring and notification of vehicle plug-ins, working chargers, and charging operations, and reporting in real-time and summary form on e-fuel activities and costs.
- **Distributed Energy Resource Integration and Co-Optimization:** AMPLY anticipates that energy storage could support cost savings by reducing load during times when the price of electricity is high, by minimizing downtime during power outages, and by optimizing for when the grid is most clean. AMPLY's OMEGA CMS integrates with microgrid controllers as well as the EV charging stations and vehicle telematics. This combination allows fine-grained control of a multi-source power solution (solar, battery storage, generators, utility grid) while optimizing charging times and power levels to minimize cost and maximize green power sources where possible.
- **Vehicle-to-Grid (V2G) Functionality:** The OMEGA Charge Management System (CMS) enables bidirectional vehicle-to-grid (V2G) charging, allowing the energy stored in their EVs to be redistributed back to the grid when the vehicles are not in use and with no impact to their fleet's operations. OMEGA supports V2X across EVSE communications using OCPP2.0, Vehicle Telematics, EVSE – to – Vehicle with ISO-15118-DRAFT20, utility communications with OpenADR (certified), and Grid Communications with either DNP3 or IEEE2030.5 (prototype).
- **Customer Service Orientation:** AMPLY does not benchmark against how many chargers they have deployed, but rather they spotlight our uptime, reliability, and energy savings. What distinguishes AMPLY from other competitors is that they track these metrics on a month-to-month basis, and they have yet to encounter another charging provider that does. Customers do not focus on the number of chargers deployed, but rather they care about the efficiency and reliability of the system. AMPLY is uniquely positioned in that they are the only charge management service provider who focuses on these issues while hitting the reliability metrics.

Disclaimer: The product and service descriptions above are meant for descriptive purposes only and are not intended to guarantee any specific results or performance. Descriptions regarding the product and services of AMPLY Power, Inc. have been provided by AMPLY to Blueprint. Blueprint cannot attest to the accuracy or completeness of such descriptions.

Sincerely,

/s/Andy Rubin

Andy Rubin
Vice President of Sales
Blueprint Power