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Fermata Energy Comments on 18-TRAN-01 SB 114 Funding Available for ZESBI

Attached please find comments on behalf of Fermata Energy.

Additional submitted attachment is included below.

April 17, 2024

CEC Commissioners and Staff
California Energy Commission
Research and Development Division
1516 Ninth Street
Sacramento, CA 95814

Via: CEC Docket #18-TRAN-01 SB 114

Re: Fermata Energy Comments on 18-TRAN-01 SB 114 Funding Available for Zero Emission School Buses and Infrastructure (ZESBI)

Dear California Energy Commission,

Fermata Energy is pleased to submit comments in response to the California Energy Commission's ("CEC") proposed program design for ZESBI grants and the April 8, 2024, Work Group #2 to Discuss the SB 114 Grants for ZESBI.

Background

Founded in 2010, Fermata Energy is a leading Vehicle-to-Everything ("V2X") bidirectional charging services provider. Fermata Energy designs, supplies, and operates the technologies required to integrate electric vehicles ("EVs") into homes, buildings, and the electric grid. Fermata Energy's V2X platform incorporates multiple connector types in a bidirectional charger and management software platform that connects the EV and electricity user to the grid. Fermata Energy's V2X platform extends the value of an EV and allows the vehicle to act as a dispatchable energy storage resource when the vehicle is not in use.

Fermata Energy's customers today are earning thousands of dollars per EV and EVSE pair through Vehicle-to-Grid ("V2G") and Vehicle-to-Building ("V2B") programs nationwide. The company's bidirectional EV charging system is the first to be certified by UL Solutions in North America to UL 9741, the Standard for Bidirectional EV Charging System Equipment and is the first to earn approval in the U.S. from a major OEM for battery warranty. In addition to developing the hardware and software required to perform V2X activities, Fermata Energy has spent over 10 years studying how V2X can unlock additional value streams from EVs, including those that are commercially viable today without regulatory intervention and how to best monetize these value streams. Fermata Energy has extensive experience with analyzing use cases, monetization mechanisms, and business models to maximize the benefits of V2X technologies.

In March 2024, Fermata Energy, BorgWarner, and Lion Electric were awarded \$3-million in CEC grant funding under GFO 22-612 to bring grid-supporting and cost-saving V2G solutions to the Conejo Valley Unified School District and the Los Angeles County Office of Education, in cooperation with school bus fleet operator American Transportation. The project is intended to serve as a large-scale demonstration of how electric school buses can provide value to the grid while parked. The buses will charge their batteries with excess power from renewable sources during the day, and V2G tech will enable them to generate revenue through participation in demand response programs, sending energy back to the grid during high-demand evening hours, or during emergency events. The grant will fund the installation of 21 BorgWarner 125 kW UL-listed bidirectionally-enabled CCS chargers, paired with at least 20 LionD electric school buses. Fermata Energy's V2X software platform will optimize and manage the charging and discharging of the buses to maximize grid benefits and V2X revenue for the school districts.

Fermata Energy Comments and Recommendations Regarding ZESBI Program Design

1. Fermata Energy supports the CEC's inclusion of bidirectional charging capability in the eligibility criteria for school bus replacements. We also appreciate the incremental funding support given to bidirectional chargers in the proposed funding guidelines (\$95,000 proposed funding amount per bidirectional charger). To further incentivize the deployment of V2G-enabled school buses and charging infrastructure, we recommend that bidirectional charging capability be a preference category for funding. Applicants scrapping old buses and replacing them with bidirectionally-capable electric buses should be eligible for additional points in the scoring process in recognition of the grid-supporting and cost-saving benefits of V2G technology. In the absence of a preferential funding category for bidirectional-capable school buses and bidirectional chargers, we recommend V2G technologies be eligible for additional incremental funding.
2. Longer-term, we recommend that the CEC ensure that bidirectional bus deployments be paired with bidirectional EVSE to ensure better ROI on these investments, to incentivize bidirectional buses to provide grid services, and to increase opportunities for data-collection of V2G projects. A lack of V2G performance requirements for these bidirectional buses is a missed opportunity to realize grid reliability benefits and cost-savings. School buses are a prime use case for V2G services; their long dwell times during the CAISO system-wide peak hours of 4-9 pm and predictable duty cycles make them an ideal form of dispatchable capacity. Incentivizing the deployment of bidirectional buses alone, without ensuring that they are also used to provide grid services with bidirectional EVSE, represents a lost opportunity for:
 - a. School bus fleets to reduce their total cost of ownership (TCO)

- b. Supporting the decarbonization of the power sector by providing necessary grid services as renewable energy and distributed energy resource penetration increases.
- c. Increase affordability by reducing electricity bills for school districts
- d. Improve grid resiliency and security during extreme weather events.

While performance requirements may be outside of the scope of the ZESBI program, CEC GFO 22-612 (Electric School Bus Bidirectional Infrastructure) sets a precedent for establishing performance requirements for CEC-funded bidirectional charging infrastructure. In the case of CEC GFO 22-612, the EVSE must participate in a grid-supporting demand response program of choice (such as the Emergency Load Reduction Program) for a minimum of 3 years.

- 3. We also recommend that the CEC consider including software costs (for software development and software services) for DERMS integration/V2G services as an eligible infrastructure cost. As currently worded, the Proposed Eligible Infrastructure Costs do not explicitly include software. For VGI and V2G technologies in particular, software costs for software development work (e.g. DERMS integration) and ongoing software services to enable DER interoperability and optimization make up a significant amount of overall project costs and direct labor. Projects should be eligible to receive funding for software-related costs, provided they are not currently receiving CEC funding for software services under other GFOs or funding programs.

Fermata Energy appreciates the opportunity to provide these comments in response to the and the April 8, 2024, Work Group #2 to Discuss the SB 114 Grants for ZESBI. We look forward to collaborating with CEC staff as they finalize the ZESBI program guidelines.

Respectfully submitted,

/s/ Anna Bella Korbatov

Director of Regulatory Affairs

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