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Xeal Comments on AB 2061 - Electric Vehicle Charging Infrastructure Reliability

See attached letter.

Additional submitted attachment is included below.

September 14, 2023

California Energy Commission
715 P Street
Sacramento, CA 95814-5512

RE: Docket No. 22-EVI-04 Electric Vehicle Charging Infrastructure Reliability

Dear California Energy Commissioners and Staff,

Xeal Energy appreciates the opportunity to provide our input and support for the California Energy Commission's (CEC) rulemaking to establish uptime recordkeeping and reporting standards for electric vehicle chargers and charging stations. Specifically, Xeal strongly supports the development of uptime reliablity standards that will lead to strong consumer confidence and greater electric vehicle (EV) charging investment and adoption.

Xeal offers multifamily and commercial real estate owners and operators the ability to seamlessly install smart electric vehicle supply equipment (EVSE) in their communities with little to no infrastructure upgrades. Clients manage these smart EVSEs remotely through Xeal's dashboard, providing real-time data on charging sessions, energy management, utilization, and revenue share. Xeal's driver app employs a token-based technology for EV drivers to gain reliable access to charging stations without relying on cellular or garage IT infrastructure. Through Apollo, a groundbreaking decentralized communication protocol, building owners can remotely control and monitor smart charging stations through a bi-directional management channel between user smartphones and EVSEs to establish a more secure, reliable, and cost-effective way to stay connected. Xeal delivers an entirely self-sufficient smart charging experience for drivers, enabling near 100% uptime, 50x faster-processing speed, and frictionless user experience.

Xeal strongly supports the inclusion and prioritization of reliable EV charging infrastructure for multi-family and affordable housing sites. Providing reliable at-home charging in multi-family housing is critical to accelerating EV adoption and achieving the State's ZEV goals. Two main hurdles to EV adoption are convenient access to EV chargers, which is lacking at many multi-family sites, and the reliablity of those chargers. According to a 2022 survey by JD Power, 27% of EV buyers who own their home say they are "very likely to consider" an EV, versus only 17% of those who rent. Additionally, 34% of those who indicate they are unlikely to consider purchasing an EV say they lack access to any charging capabilities at home or work. A report by EVAdoption titled 'The State of EV Charging in Apartment Communities' found nearly half of apartment dwellers lack access to "home" charging versus only 5% of single-family homeowners. Further, according to the Air Resources Board, upward of 85% of EV charging is estimated to occur at home. As a result, multifamily properties that don't offer EV charging as an amenity for their tenants are presenting a major barrier to EV adoption. Of the 22 million new households expected to form by 2030, 59 percent are projected to be renters and a high percentage are likely to be EV drivers, meaning the need for multi-family charging is paramount.

We strongly support prioritizing reliability and uptime to reduce barriers to charging and support EV adoption. A report by Cisco titled "The Hidden Costs of IoT" suggests 95% of non-functional electric vehicle chargers are due to connection to a central server. Moreover, a survey by Plug-in America discovered that 54% of drivers reported chargers being non-functional for daily use. Taken together,

reliable IT infrastructure is the central point of failure for all electric vehicle chargers. Additionally, the US Department of Health and Human Services acknowledged that low-income communities have less access to reliable internet that potentially exacerbates the issue of nonfunctional chargers. We respectfully request the CEC adopt an uptime standard for charging infrastructure that can demonstrate 98% or greater uptime and technology advancements to improve reliability.

Connectivity is the backbone for EVSEs to provide smart charging capabilities and reporting. The intent behind AB 2061 (Ting, 2022) is to better understand and address the issues that affect EVSE reliablity in order to provide consumers the confidence needed for greater EV adoption. An EVSE's active connection to the internet is the crux to evaluating a charging system's functionality and health. In order for EVSEs to be as reliable as traditional gas stations, including network connectivity as a variable for uptime calculations is imperative, when the EVSE requires connectivity to function properly. Without connectivity, an EVSE does not provide key data to drivers or the management system that may share data with third party aggregators. Network management systems (NMS) are notified when network connectivity is interrupted and is measurable. This is often referred to as the "heartbeat" of the charger, where signals are sent to ping the charger and ensure the NMS has regular communication with the station. The CEC should consider adding network connectivity as a variable to uptime to ensure the most integral component of smart charging functionality is not overlooked. By not including this crucial piece, the state will have missed a critical opportunity to improve EVSE reliability, perpetuating stranded drivers and high instances of nonfunctional chargers that can result in slower adoption rates of electric vehicles and the State's climate goals. Instead of relying on a heartbeat, our chargers require zero connection to the backend, therefore there is no "loss of connectivity" because it is always present between the driver's phone and the charger through our secure, short-range communication protocol.

Xeal appreciates the opportunity to support and provide input on CEC's rulemaking to establish uptime recordkeeping and reporting standards for electric vehicle chargers and charging stations. We look forward to continuing to work with the CEC and other stakeholders to support the deployment, access, and reliability of light-duty charging infrastructure.

Sincerely,

Michael A. Smith

Michael A. Smith
Head of Deployments and Policy
Xeal Energy