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Additional submitted attachment is included below.

Nuvve Corporation Comments on Docket No. 17-EVI-01
Future Equipment Requirements for CALeVIP

1. Background and Interest

Nuvve is a San Diego-based technology and services company operating in the U.S. and internationally whose vehicle to grid (V2G) technology transforms electric vehicles (EVs) into grid resources when those vehicles are plugged in, while guaranteeing the expected level of charge at the time the driver needs it for transportation. These benefits can be realized across all types of EVs including light-duty vehicles (both battery-only and plug-in hybrids) and medium to heavy duty vehicles, such as school buses and other short haul fleets while integrating stationary batteries and demand response resources. V2G supply chains and business models are still emerging however, and Nuvve takes a leading role in hardware development efforts, closely monitors communications standards formation, and works with regulatory agencies to reveal the value of new use cases via market access and tariff revisions.

Electric Vehicle Supply Equipment (EVSE) with bi-directional capability is so nascent, and the developing patchwork of program requirements is so fragmented, that charging station manufacturers cannot and do not keep up with the constantly-changing requirements. Nuvve dedicates considerable time to understanding what is required where and for which use cases. Our current EVSE partners therefore look to us to be experts in standards and requirements for different states and the US as a whole, and to teach them how to implement specifications and go to market. We therefore view the CALeVIP program in a broader context, recognizing both the significance of a large California funding source to set trends for other programs in California and around the country, and the lack of consistency it may potentially present with other programs and the trends of the industry at large.

2. CALeVIP Program Requirements

CALeVIP and other programs are useful mechanisms to push industry to implement best practices, but it is also essential that such programs take into account the state of the industry with which they are engaging. Nuvve has worked with multiple companies on technical specifications for both DC and AC stations. We have found that our partners are not necessarily aware of updates in existing standards or changes in developing ones, haven't

made decisions about using ISO 15118, do not currently have designs that come off the line energy star-qualified.

CALeVIP is an influential program. While it is essential to focus on the goal of rolling out public charging, administrators must recognize that other programs for different market segments in California and across the country will likely copy CALeVIP's decisions and specifications due to lack of familiarity with the range of requirements. This is happening already and resulting in inappropriate and nonsensical requirements for a variety of market segments. We encourage CALeVIP to introduce language that mitigates this copy-paste effect.

We understand that the goal of CALeVIP is to roll out public charging, and that establishing requirements in programs like this can push the industry more quickly toward adopting universal and interoperable standards. However, as an industry watcher as well as a participant, we feel this is producing unintended consequences. Manufacturers are declining to participate in programs that specifically require versions of ISO 15118 to the exclusion of other standards, because they are waiting for the standards to be completed before developing their models. Specification of standards for funding is in fact slowing development of the industry, and encouraging the few manufacturers who have compliant designs or can afford to redesign or update multiple times to increase market share.

The energy star certification requirement included here is another example of the a conceptually well-intentioned requirement that will likely delay rollout of new charging infrastructure and anywhere else it is required. The energy star requirement for DC charging stations has only just recently been released. Adding this certification to the requirements will incur significant cost, especially as this will be a very new certification practice for NRTLs. In addition, this DC fast charging will require testing to a brand new standard which may not be defined for bi-directional stations and will be expensive and time-consuming to meet if stations are not coincidentally compliant and require design revision. Rather than encouraging manufacturers to level up, this requirement will more likely discourage participation, and increase market share any manufacturer who already meets this specific requirement. We are skeptical of the extent to which such a requirement will facilitate climate and transportation electrification goals when balanced against the potential chilling effect it could have on maturation of the EVSE industry.

3. Conclusion

Nuvve recommends that CALeVIP acknowledge the trendsetting nature of high profile funding programs, and the potential unintended consequences of stringent requirements based on new certifications and standards that provide limited benefit. We do not suggest that energy star and ISO 15118 are not viable paths forward, so much as that mandating them runs too far ahead of the state of the EVSE manufacturing industry at large. To honor to goal of rolling out charging infrastructure and stimulating supply chain formation and maturation of the industry, CALeVIP should resist the temptation to allow the most advanced players to set the bar for the rest of the industry, in effect excluding those who cannot clear that bar in the immediate near-term.

Jacqueline Piero
Director of Policy
Nuvve Corporation
2468 Historic Decatur Road, Suite 200
San Diego, CA 92107