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Communication Standardization for EVSE and Grid, and Cities infrastructures

Additional submitted attachment is included below.

To get to State goal, we need a deeper public-private involvement. We should provide more applications and revenue generation opportunities for EVs/owners.

1. An application such as:
 - a. Beside Ancillary Services, reliability, and resiliency providers
 - b. EVs can be used as communication nodes especially with the presence of Smart street lightings
 - c. Traffic management/update can be done vehicles
2. Revenue/Incentives:
 - a. Beside Ancillary services
 - b. Micro Energy market structure for charging/discharging: As we know grid controllability is moving toward decentralization and local control
 - i. (BMW results show the owners willingness to participate in this micro-market). Considering the recent CPUC approval for two IOUs to install more EVSE, the EVSE fleet installation will be more possible, and this may cause over load on transformers. The communication between EVSE and grid assets such as digital substation is a must to have quick, secure, reliable communication.
3. We talked about the importance of cybersecurity for homes EVSE, but Cybersecurity is important in public/fleet EVSE too. Over loading may cause the Transformer burn out and that means loss of power at that location.

Therefore, Not only communication between EVs and Grid (EVSE) should be standardized, but also the standard for the communication between EVs and City nodes (Smart street lighting) is necessary.

Finally, all of these can be summarized as "Shareability". Storage can be shared. Car2Car communication can be shared between different entities (Police, First Responders), But these application needs to have aggregator/Implementer which use a global and standard communication which can be utilized by the grid and other entities such as cities, first responders, etc.