

Webinar: Evolving Grid Planning Practices for Electric Vehicles	
Question	Answer
Seems like Li-Ion would be very heavy for long range trucking. Wouldn't individuals use EVs more? Or local/community EV fleets?	Nobody knows the future! Technology changes rapidly and the quantity of use cases for vehicles is enormous. EVs will pop up in a variety of ways and grid planners should be thinking through the implications of more rapid adoption of use cases of which they are skeptical. Long-range trucking may be tough for lithium ion batteries, but there are many shorter range heavy duty vehicles for which it makes more sense. Plus, policy in some states are pushing folks towards electrification.
How do we encourage more collaboration between commercial trucking and utilities? This appears to be potential huge loads that can come on quickly to utilities.	Agree that these are potentially huge loads that can come online very quickly. Hopefully, the Full Report articulates some clear ideas for utilities and commercial fleets to collaborate early and often. The biggest insight for me is to be proactive in outreach and understand both electrification likelihood and differentiate between required charging levels and acceptable charging routines. Early discussions can save headaches across stakeholders.
How much can EV-driven grid stress be reduced by adoption of managed charging?	It depends! Managed charging is not going to solve every grid stress event, but there have been many studies that managing EV charging is more effective than managing traditional load. See the Full Report for more details.
Do you feel like distribution transformer overloading will be a potential problem? Can you comment on what means are there to associate meters with transformers?	Yes - I think many distribution service transformers will be overloaded with the adoption of EVs. We can handle this challenge, but we need to be mindful of the impacts of EVs on these small pieces of equipment. It doesn't take many EVs to overwhelm the grid edge equipment that was not designed with EVs in mind. There are many ways to map meters to the service transformers. Many utilities do not have this mapping today, but have been working towards improving their GIS data (or other databases) to capture this mapping. One method is to use Lat/Long coordinates of equipment paired with premise locations to get an approximate mapping. There is another method with some modern meters, which use PLC communication technology to cluster themselves and report the clustering to the utility backoffice.
What's the difference between automated load management and demand-side management? Seem nearly identical to me...	ALM is the term that is being adopted to differentiate a specific type of demand side management. Specifically, ALM is a system designed to manage load across one or more Electric Vehicle Supply Equipment (EVSE) to share electrical capacity and/or automatically manage power at each connection point. It's primarily oriented around shared electrical capacity and automated premise-level demand management.

<p>Can you comment on the importance of ADMS and visibility at distribution with respect to feeder voltage, thermal ratings, and data quality/validation for powerflow?</p>	<p>Some utilities have made the case that an ADMS is necessary for visibility and control of the distribution system assets. Our task force and the resultant full paper did not directly address any necessary IT/OT/hardware infrastructure to support some of the advanced functionality described. Detailed and accurate planning models that allow for planners to make sense of data from the field is an important first step before worrying about real time controls.</p>
<p>Are there any synergies anticipated between home solar and electric vehicles?</p>	<p>Yes! Many. If folks are at home during the day to charge their vehicles. Much of the early data shows that EV drivers charge their car most often overnight, so there's a bit of a mismatch in timing. This is discussed in more detail in the Full Report.</p>
<p>Do you have an estimate on "some" EVs charge off-peak and "some" during on-peak as they influence profiles?</p>	<p>San Diego Gas & Electric observed that 77% to 87% of charging happened off-peak across various versions of TOU rates.</p>