

Meeting Notes: Bidirectional EV Working Group - Meeting 2 – Vehicle Class Implications

Date: March 31, 2026 | Time: 9:00 AM ET

On March 31, 2026, Customized Energy Solutions (CES) facilitated the second meeting of the Bidirectional EV Working Group (Bidirectional EV WG). The meeting was held via Microsoft Teams. This memo summarizes the major topics of discussion, questions, and comments raised by participants.

1 Key Vehicle Class Distinctions and Relevance for ESS

CES introduced the rationale for discussing ways of categorizing bidirectional EVs, including PURA’s directive that the WG consider “differentiated requirements or recommendations for [Medium and Heavy Duty or MHD] vehicles compared to [Light Duty or LD Electric Vehicles or EVs]”, potential implications for program design recommendations which might differ by vehicle type, and understanding the potential level of potential participation by category of EV.

CES noted that the Program Administrators (PAs) will define LD EVs as having a gross vehicle weight rating (GVWR) of 8,500 lbs or less, and MHD as having 8,501 or above. CES noted other places this definition is used, including in the Connecticut Managed Charging program. CES also noted that this distinction may not always align with another means of classifying vehicles, namely, for personal and fleet/commercial use, given that some primarily personal use vehicles would be defined as MHDs using the GVWR definition.

Participants suggested that other distinctions may be more instructive for conversations related to integrating bidirectional EVs into the Energy Storage Solutions (ESS) program. Specifically, multiple participants agreed that commercial vs. residential use (which could be tied to the rate class of the meter where the resources are being interconnected) is likely a more useful distinction, aligning with different usage patterns and other characteristics relevant to ESS. Another participant suggested that the magnitude of potential discharge from a vehicle is correlated with weight; in that way the LD/MHD framing may sometimes be useful. CES summarized the emerging consensus – the WG report will consider and address LD/MHD distinctions, but that future discussions will likely focus on a residential vs. non-residential categorization, in line with the current ESS program.

CES highlighted MHD/LD distinctions for battery size, noting that while larger vehicles tend to have larger batteries, there is a wide variety in battery size in within LDs and MHDs; CES also noted that EVSE and interconnection also dictate the kW that a given vehicle can discharge.

CES briefly discussed the importance of understanding usage patterns and how they do or do not align with ESS event windows, considering both diurnal and seasonal usage patterns. Electric school buses were

highlighted as having usage patterns (particularly seasonal patterns) uniquely well-aligned with ESS events.

CES briefly described the distinction between AC vs. DC coupled bidirectional EVs; in AC-coupled systems, the inverter is in the vehicle, while in DC-coupled systems, it is not (instead it is usually in the electric vehicle supply equipment or EVSE). Currently, almost all bidirectional EVs are DC-coupled; CES suggested that while this is likely to remain the case for MHDs, there may be more AC-coupled LD EVs as relevant certifications and interconnection processes adapt to the nuances associated with an AC-coupled system.

CES briefly noted that vehicle ownership and operational profile, which would be better linked with residential vs. commercial categorization as opposed to LD vs. MHD may also have important implications for integrating bidirectional EVs into ESS.

CES noted that level of participation was important to the program for two primary reasons: 1) the ESS program has a 580 MW cap, and the PAs would like to ensure that program capacity is allocated to resources that perform robustly, and 2) there are administrative costs associated with implementing the program, so some minimum level of performance could help ensure that benefits justify the administrative costs. Several participants reiterated that they thought that a residential vs. commercial distinction will be more helpful than LD vs. MHD. One participant commented that the ESS program has shifted to a primarily pay for performance model, mitigating risks of compensating resources that do not perform. Participants asked about the primary drivers of administrative costs, e.g., whether it was attributable to individual participants or to adding a vehicle class. The Program Administrators said that it was both, citing costs to establish ESS for bidirectional EVs overall, handling integrations into the distributed energy resource management systems (DERMS), ongoing data management costs, etc.

2 Market Readiness and Potential Gating Criteria

CES provided some high-level statistics related to EV registrations and purchases in Connecticut, noting that, to date, there is significantly more adoption of LD vehicles than MHD. CES also highlighted statistics related to bidirectional-capable EVs registered in Connecticut, noting that not all bidirectional EVs owners have bidirectional capable EVSE (electric vehicle supply equipment) or other required hardware for the vehicles to be discharging energy.

CES highlighted the importance of EV/EVSE interoperability for ensuring a positive customer experience and that assets (e.g., a specific EVSE or EV) do not become effectively stranded. The positive customer experience is critical for ensuring the sustained adoption of bidirectional EVs.

One participant drew on experience from the Massachusetts Clean Energy Center's V2X pilot program to describe the administrative burden of managing a pre-approved matched-pair list: determining which chargers are bidirectionally capable, which operate grid-parallel, which commercial vs. residential installations are eligible, and which specific model years of vehicles interoperate with approved chargers is resource-intensive and prone to errors. Another participant agreed, pointing out that specific communication protocols may vary by generation of a specific type of equipment, further complicating attempts to document interoperability. This led to a conversation related to the feasibility of using qualified product lists as a means to determining whether specific EV/EVSE pairings will be V2G-capable, vs. an approach that relies primarily on resources demonstrating their ability to export energy. The group

discussed that the latter option might place more of an onus on participants to establish which EVs and EVSE would be compatible. One participant suggested that EVSE manufacturers are better positioned to identify viable pairings, as they tend to run interoperability testing. CES posited that perhaps aggregators/the entities responsible for enrolling individual resources could ultimately be responsible for ensuring compatibility.

CES asked for participants to provide thoughts on possible gating criteria that could be used to establish whether EV models, vehicle classes, or other units of aggregation of EVs were ready to participate in the ESS program. This would consider the anticipated level of provided benefits (and how this compares to administrative costs) as well as customer experience. Participants offered the following possible gating criteria:

- Ability to integrate with the utilities' DERMS (Distributed Energy Resource Management System) providers.
- Meeting interconnection requirements as well as criteria laid out in current managed charging and/or make ready programs. A participant noted that one exception might be the requirement for make-ready incentives that EVSE be interconnected behind a dedicated meter; the participant did not think this requirement (which would prohibit EVSE being collocated with existing load) was appropriate for ESS.
- One participant emphasized that the current use of a qualified product list, which enables customers to easily identify eligible equipment, is one key to the success of the current ESS program.
- There was a brief discussion around the possibility that aggregators (which, in some instances, might also be EVSE and or EV manufacturer) could be required to meet some minimum level of enrolled capacity in order to participate in the program.

3 Enrollment and Participation Pathways

CES gave a brief overview of the current pathways through which ESS customers enroll in the program and through which telemetry data flows to the DERMS providers. CES asked for participants to discuss how they envision these pathways working for bidirectional EVs.

One participant noted that for bidirectional EVs, there will be instances in which data flows from the manufacturer's (potentially EVSE or EV) data cloud to an aggregator before being transmitted to the DERMS. The participant noted that, even for a given EVSE manufacturer, there may be instances in which data flows directly from the manufacturer to the DERMS provider and other instances in which the data flows through an aggregator.

Several participants emphasized the importance of maintaining flexibility in how customers could enroll and data may be aggregated and transmitted to the DERMS.

4 Action Items and Next Steps

CES reiterated that meeting recordings and materials are available at www.energystoragect.com/bevvg. CES requested that any members interested in opining on a list of potentially applicable standards and

certifications which would be discussed during the third working group meeting should send an email expressing that interest by 4/1.

5 Attendee List

An attendee list is provided below. Organizational information was not collected; information collected below is based on CES' best attempt at associating individuals' names with the appropriate organization.

Attendee	Organization
Aileen Cole	Great Plains Institute (IXWG Rep)
Alex Wang	OCC
Amanda Stevens	Eversource
Amy Findlay	ChargeScape
Ann Yu	CES
Anna Bella Korbatov	Fermata
Benjamin North	DEEP
Brian Morris	UI
Chris Kluesener	Matcha
Devin Sorgi	Uplight
Dominic Gatti	Tesla
Emmett Werthmann	WRI (World Resources Institute)
Eric Annes	DEEP
Frances Bell	Bidirectional Energy
Gaurav Saini	Zum
Jacqueline Piero	Mobility House
Jennifer Runyon	Eversource
Julie Mitchell	ChargeScape
Katie Peterson	Mobility House
Kevin Boughan	Eversource
Kevin Moss	Connecticut Green Bank
Kipling Haviland-Hack	Energy Hub
Lean Brams	Highland
Logan Taricani	UI
Madeline Frierson	CES
Mark Scully	People's Action for Clean Energy
Max Clarke	EV Energy
Nachum Sadan	GridEdge Networks
Nikhon Schuler	Eversource
Nitin Satish	Zum
Pallav Prakash	Zum
Prabisha Bhandari	OCC

Robert Whelan	UI
Sara Harari	Connecticut Green Bank
Sara Pyne	Connecticut Green Bank
Sergio Carrillo	Connecticut Green Bank
Stephan Wollenburg	CES
Stephen Crolius	Carbon-Neutral Consulting
Steve Letendre	VGIC (Vehicle Grid Integration Council)
Tiffany Hammond	First Student
Toni Berlandy	Eversource
Walter Barozi	DEEP
Zach Woogan	VGIC (Vehicle Grid Integration Council)