

HDV metrics discussion

61st EVE • 30 May 2023 • Geneva, Switzerland

State of play

- GTR No. 22 was designed for LDVs
- The HDV battery durability GTR will apply to HDVs, and starts with the example of GTR No. 22
- For GTR No. 22 we selected metrics for the minimum performance requirement (MPR) which apply well to LDVs
 - Percentage of SOCE retained, after
 - x Years of Service
 - or y Mileage (combination of Road Mileage and Virtual Mileage)
- Can the HDV GTR utilize the same metrics?
- Or, is the use case sufficiently different to consider different metric(s) selected for the HDV application?

A few possibilities

Scope	Metric 1	Metric 2	Metric 3
LDV	Years	Road mileage	Virtual mileage
HDV (A)	Years	Road mileage	Virtual mileage
HDV (B)	Years	Road mileage	PTO energy throughput
HDV (C)	Years	N/A	Total energy throughput
HDV (D)	Years	Road mileage	Total energy throughput
HDV (E)	Years	N/A	Capacity throughput
HDV (F)	Years	Road mileage	Capacity throughput

- This is not a complete list
- It is important for EVE to identify and make a decision soon on the appropriate metrics to proceed with for HDV

Considerations

- Options that include a virtual mileage require a way to convert non-road energy usage to virtual road mileage
 - For LDV, virtual mileage = kWh used / (worst case kWh/mi)
 - For HDV, do we always have a kWh/mi certification value to rely on?
- Users are concerned with work performed, so options that employ capacity (Ampere-hour) may be less preferable from the user's point of view
- PTO energy throughput, or total energy throughput, may be difficult for users of some types of vehicles to relate to work performed
- Can there be different metrics for different types of HDV vehicles?
 - Mileage-centric, for vehicles that do a lot of road travel and for which customers think in terms of mileage?
 - Energy-centric, for vehicles that do a lot of PTO work and for which customers think in terms of work performed?
 - Some combination of the two?