

Comments regarding to HDV GTR

prepared by JAPAN

61st EVE IWG
25th & 26th April, 2023

1. In the "e-HEVS GTR: V2X , PTO, ... virtual mileage concept" [EVE-60-05e] presented by JRC at the 60th EVE-IWG



e-HDVs V2X and PTO virtual mileage concept

- GTR 22: V2X,...

$$\text{Virtual km} = \left(\frac{\text{total discharge energy during V2X [Wh]}}{\text{worst case certified energy consumption of PART B family [Wh/km]}} \right)$$

The total distance used for confirming the compliance with the minimum performance requirements will consist of the sum of the distance driven and the virtual distance. The total percentage of the virtual distance shall be recorded and monitored.

- e-HDVs GTR: V2X, PTO, ...

➔
$$\text{Virtual km(V2X + PTO + \dots)} = \text{Odometer km} \times \left(\frac{\text{total discharge energy during V2X + PTO + \dots [Wh]}}{\text{total discharge energy while driving [Wh]}} \right)$$

Total distance km = Odometer km + virtual km

- Requires two counters: Total discharge energy while driving or total discharge energy during V2X+ PTO+..., etc.
- Counts all energy usage i.e., while parked and extreme use cases
- As per GTR 22 the total distance used for confirming the compliance with the minimum performance requirements will consist of the sum of the distance driven and the virtual distance. The total percentage of the virtual distance shall be recorded and monitored.

- **Energy consumption for operating the “PTO”** : power unit for operating mounted equipment, communication equipment, various lamps, etc.

• **Energy consumption “...”**

that is not related to driving other than PTO:

head lumps, wipers, air conditioning for drivers and bus passengers, destination boards, etc.

The device and functionality to individually measure and store the data would be standard equipment in all HD vehicles.

- Standard installation of energy consumption measurement devices for non-driving applications is not thoroughly implemented by HD-OEM.

<JAPAN comments>

Considering the unique configurations and/or functionalities of HD vehicles,

Japan is under the discussion on the possibility to apply the battery energy throughput instead of mileage for MPR criteria. Japan plans to collect the market data (up to approximately 10 samples) for initial analysis by August 2023.

<Request to JRC>

It'd be appreciated if JRC also provide the following information from the market to help our analysis.

- ✓ the discharged energy of V2X, PTO
- ✓ vehicle odometer