



The Role of Electromobility in Heavy Duty Vehicles

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Business Areas

Volvo Trucks



Renault Trucks



Mack Trucks



UD Trucks



Buses



Construction Equipment



Volvo Penta



Volvo Aero



Financial Services



Battery requirements



10 kg for 10 km
Possible!



20 tons for 1000 km
Not possible!



40 kg for 10 km
Possible!



200 kg for 10 km
Possible!



45 000 tons of batteries. Normal
take off weight is 413 tons !
Not possible!

Hybrid Heavy Duty Vehicles

- Development driven by fuel efficiency
- Noise and emissions
- Short range with zero emissions



Plug-in for superstructure supply

- Fuel efficiency
- Work environment
- Noise
- Emissions

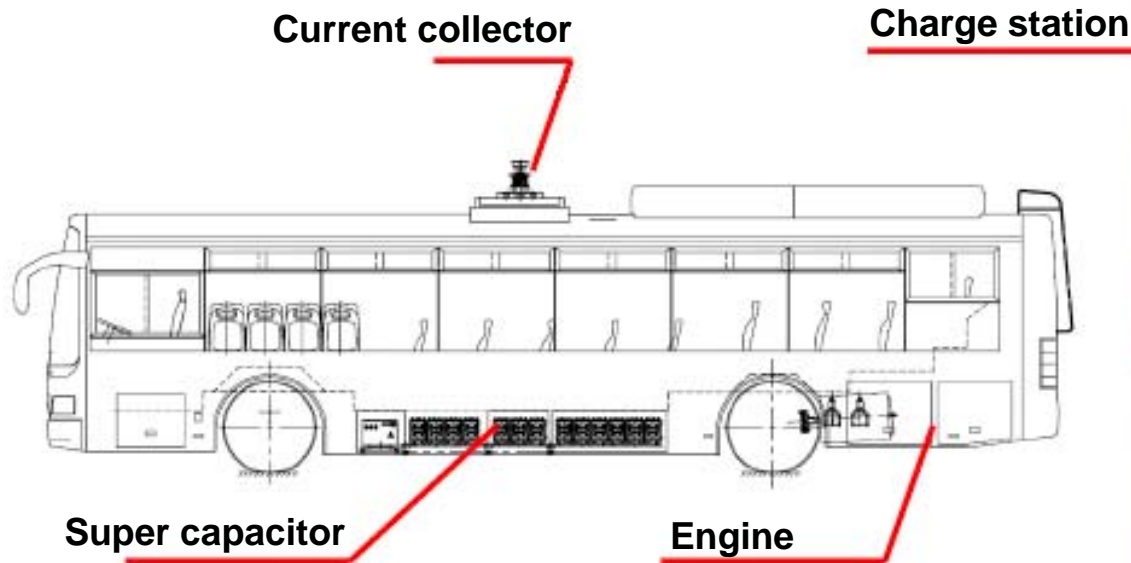


Fully electric trucks

- Short range
- Low payloads
- Areas with zero emission requirements

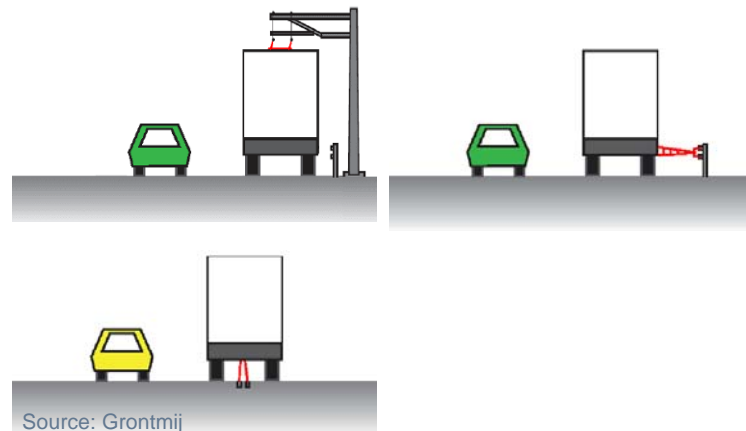


City buss charged at each bus stop



Continual power supply for vehicles?

- Trolley systems for city buses are not new
- Could highways be electrified?
 - Common system for HDVs and cars?



Conclusions

- Fully electric heavy duty vehicles need continual power supply
 - Current battery capacity is not enough
- Superstructures and smaller vehicles in special applications can be fully electric
- Electricity is not always “clean”, need to include power supply data
- Research, development and demonstration needed
- We are learning fast!
 - Hybrid solutions cover many basic technologies needed in electric vehicles

