



HEV can be the best deal for fleet owners and for a faster fleet emission reduction

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Picture: Pixabay

Taking into account a broader perspective on the environmental impact of the life cycle of a commercial vehicle, considering different types of powertrains, a Chinese team of scientists has concluded that a **hybrid powertrain** may constitute the **lowest weighted environmental impact**, while it showed the **best total cost of ownership for some use cases**. Total cost of ownership is a factor which is often disregarded but, in reality, the single most important one for a fleet owner's choice of vehicle, thus being a **crucial factor in the transition** towards lower carbon emission transportation.

Considering the **limitations of the current charging infrastructure and battery supply**, replacing the current heavy-duty diesel trucks with only fully electric ones may prove to be a decarbonisation path too ambitious. Having to

provide charging stations capable of charging batteries with hundreds of kilowatt hours reasonably fast everywhere to effectively support a growing percentage of fully electric long-haul trucks is a **huge task**, that combined with the decarbonisation of the electricity grid could **slow down the emission reduction** and efficiency of road transport.

Hybrid electric trucks put less stress on charging infrastructure and battery supply and allow for a **cheaper and less constrained** path of implementation of these technologies into road transport, while also contributing significantly to **GHG emissions reduction** and depending on circumstances even providing an **improved TCO** due to fuel savings and lower truck prices.

Read more: <https://doi.org/10.1016/j.trd.2023.103661>