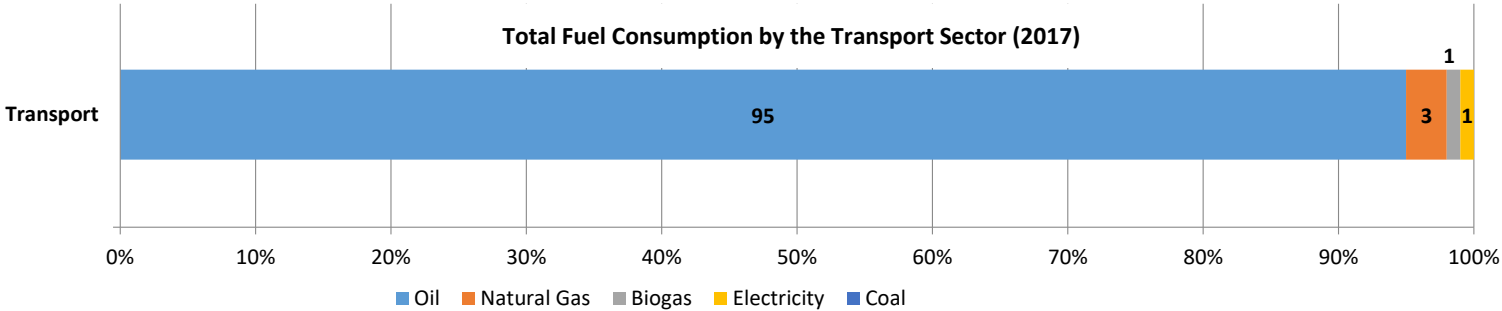




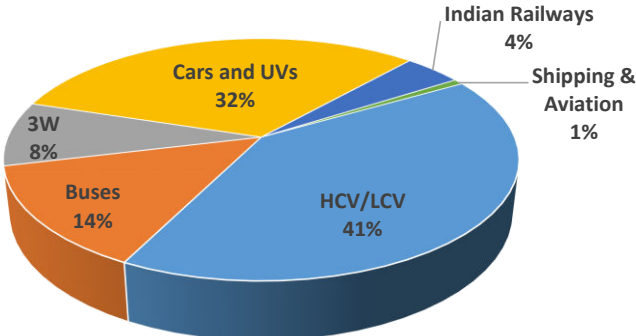
Image source: Siemens AG

Operation of HDVs with overhead electric traction on Indian Highways

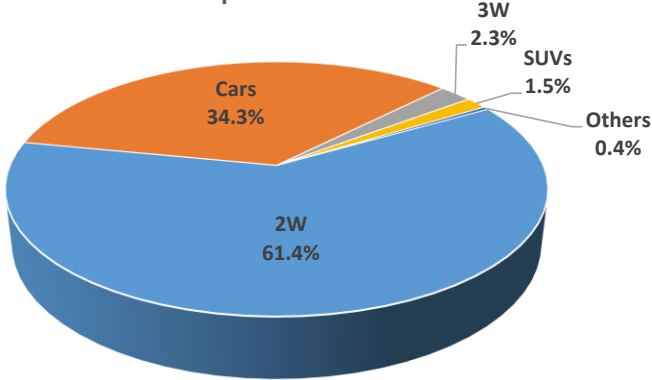
Fuel Consumption: Indian Transport Sector



Share of Vehicle Segments in Total HSD Consumption by Transport Sector



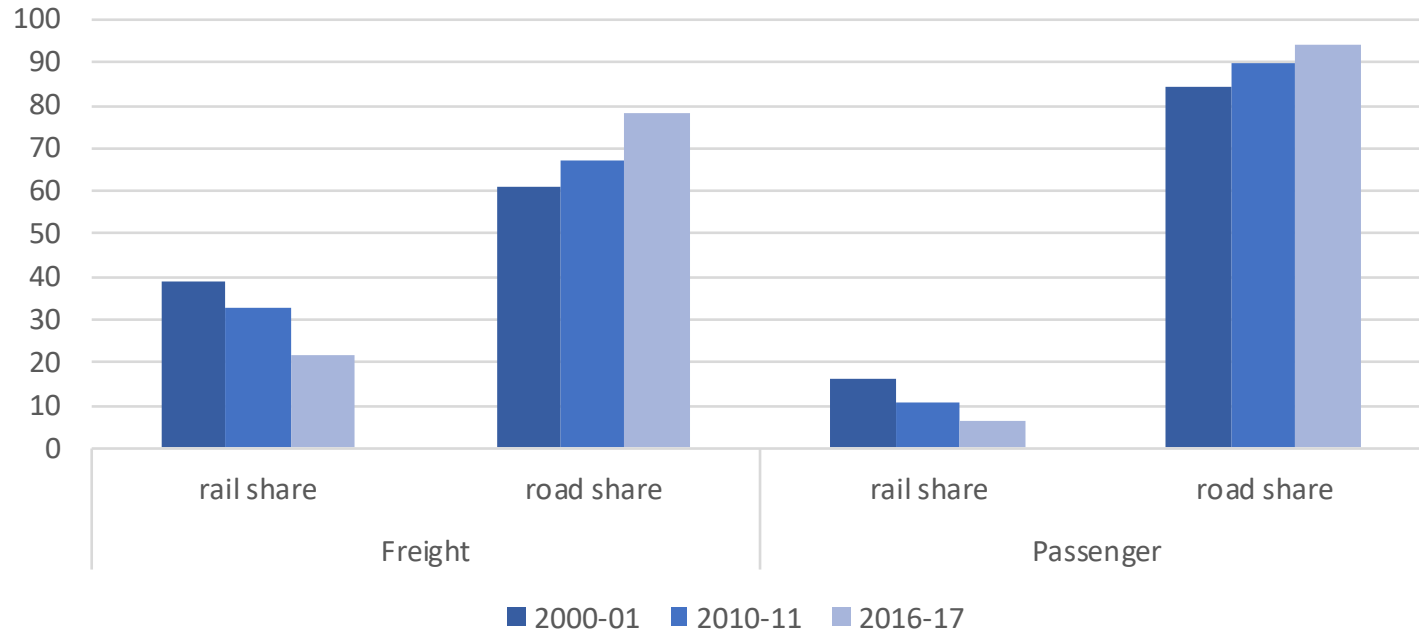
Share of Vehicle Segments in Total Gasoline Consumption



Source: India in Depth Review, 2020, IEA & PPAC

Modal Share: India

Land Transport (%)



Road Freight: India' Current Scenario

- Share in total freight carried: **76% (2,000 BTKM)**
- Share in overall fuel combustion: **80%**
- India's oil import dependency: **~85%**
- Share of Goods Vehicles in total registered vehicles: **5%**
- HDV's contribution in total 1,437 billion VKTs: **42%**
- VKT number projected in 2030: **4,733 billion**
- CO₂ load of HDVs: **~70%**

Alternate Fuel Technologies - Road

Vehicle segment	Passenger	Freight			
Fuel	Bus	3W	LCV	MCV	HDV
Gasoline					
Diesel					
CNG					
LNG					
LPG					
Biofuels					
Battery Electric					
Hydrogen/Fuel Cells					
Overhead Traction					
Hybrid					

India-specific challenges

- Policy Design – Vision and Plan?
- Road Design?
- Selection of Pilot Highways?
- Ownership of trucks?
- Current dimension of trucks: standardization?
- ODC movement?
- Opportunity for Retrofitted IChargeHDV?
- Electric supply reliability and network capacity?
- Traffic operation on Indian Highways?

Thank you

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