Mitigation of Climate Change : URBAN TRANSPORT (INDIA)

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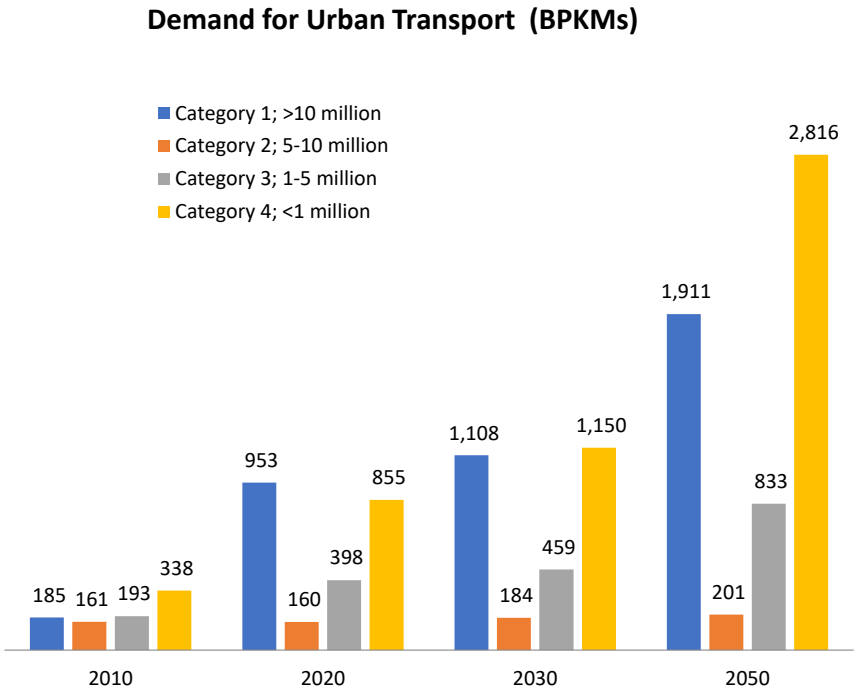
Urban Scenario

City Category	2010	2020	2030	2050
>10 million	7%	20.75%	19.15%	20.79%
5-10 million	8.00%	4.59%	4.19%	2.6%
1-5 million	18.45%	20.06%	18.36%	12.61%
< 1 million	67.29%	54.60%	58.30%	64.0%
Urban Population (Million)	382.28	476.43	600.37	874.12



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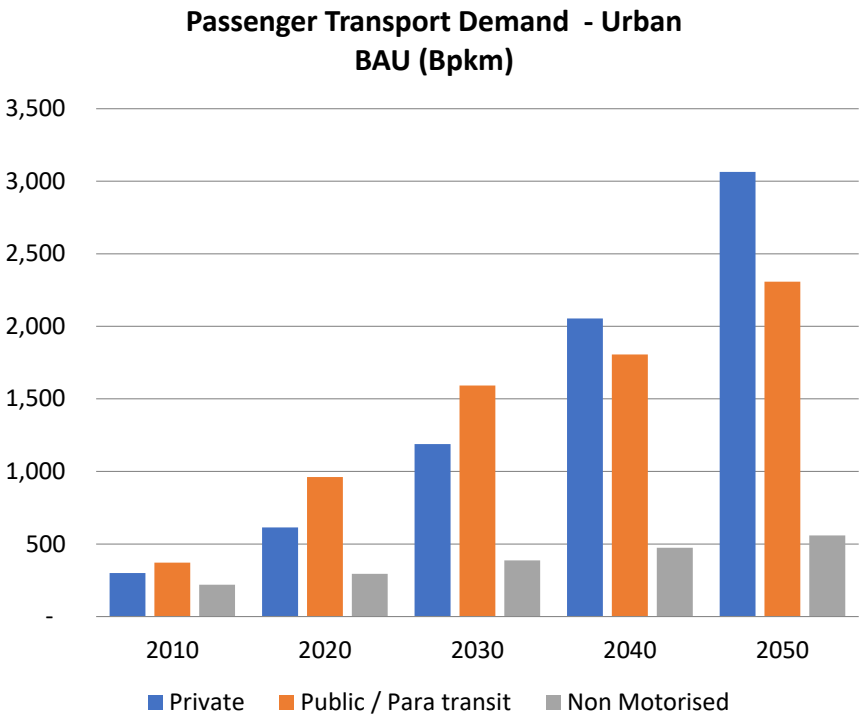
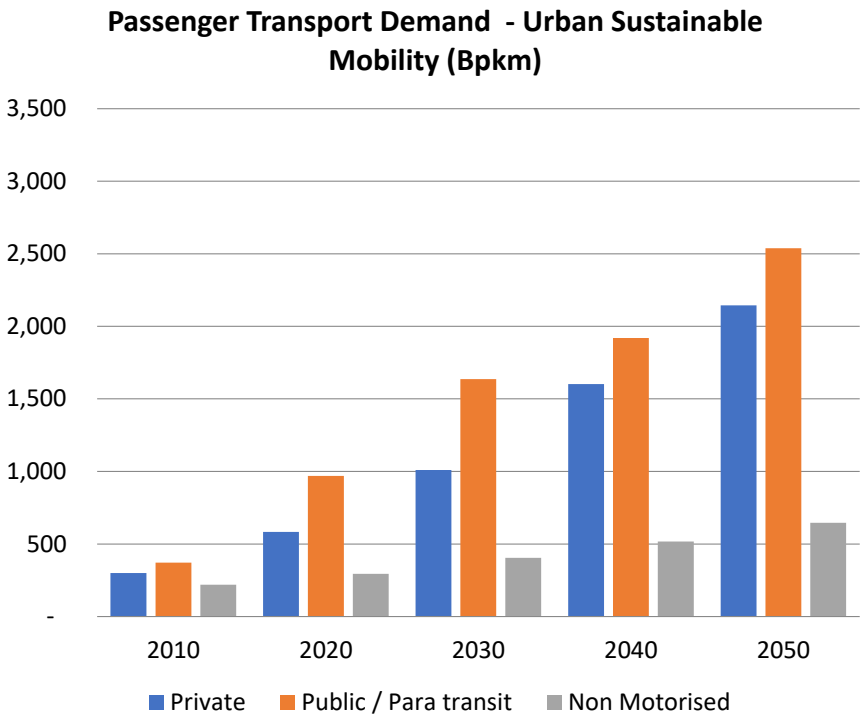
Mobility Demand





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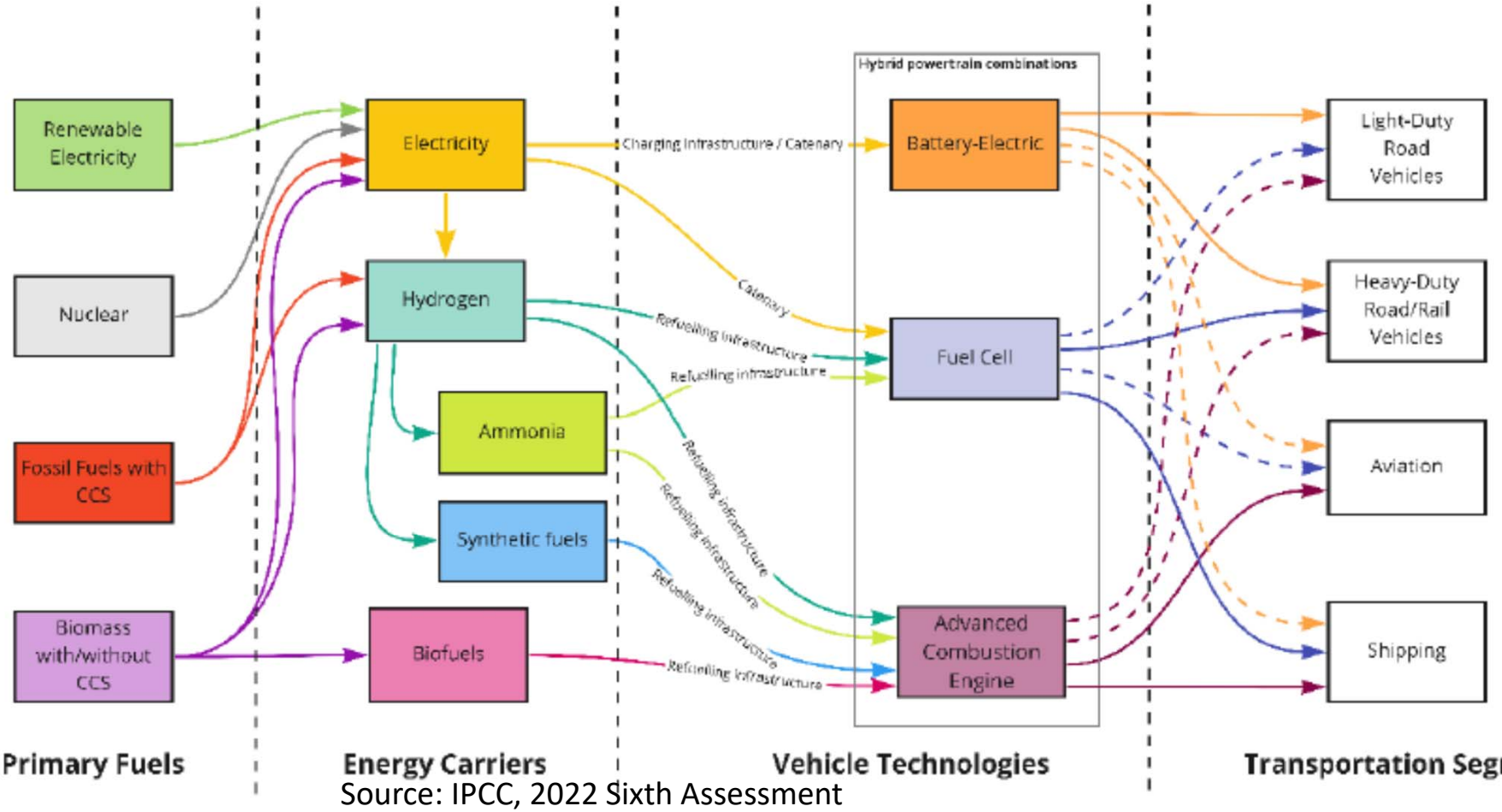
Systemic effect : City form

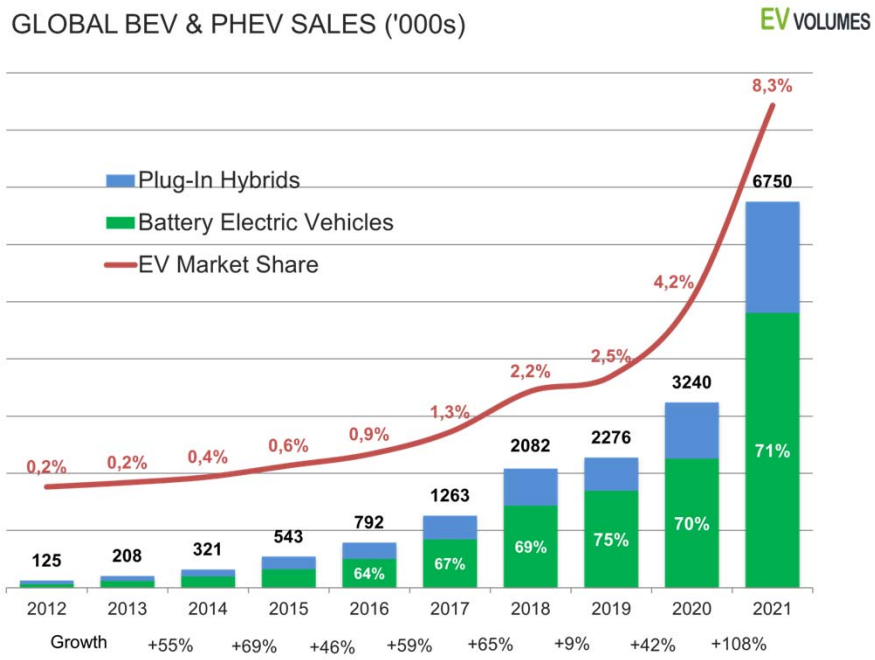
Annual Transport Emissions and Co-Benefits	Walking Urban Fabric	Transit Urban Fabric	Automobile Urban Fabric
Transport GHG	4 t/person	6 t/person	8 t/person
Health benefits from walkability	High	Medium	Low
Equity of locational accessibility	High	Medium	Low
Construction and household waste	0.87 t/person	1.13 t/person	1.59 t/person
Water consumption	35 kl/person	42 kl/person	70 kl/person
Land	133 m^2/person	214 m^2/person	547 m^2/person
Economics of infrastructure and transport operations	High	Medium	Low

Pathways for decarbonizing transport technologies



Source: IPCC, 2022 Sixth Assessment

Trends in EVs



- Electric vehicles powered by low-emissions electricity offer the largest decarbonisation potential for land-based transport," IPCC SPM C8
- Upcoming Challenges
  - Increasing costs of raw materials
  - Disposal of batteries

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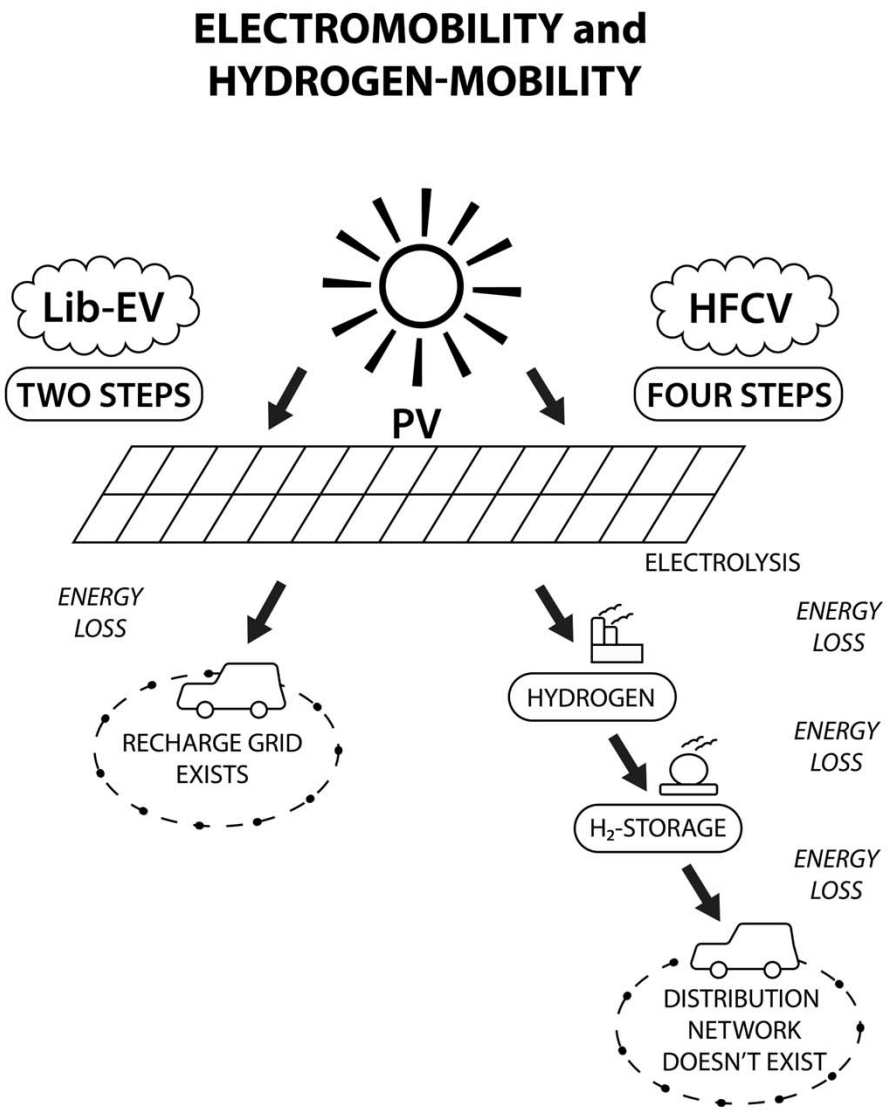
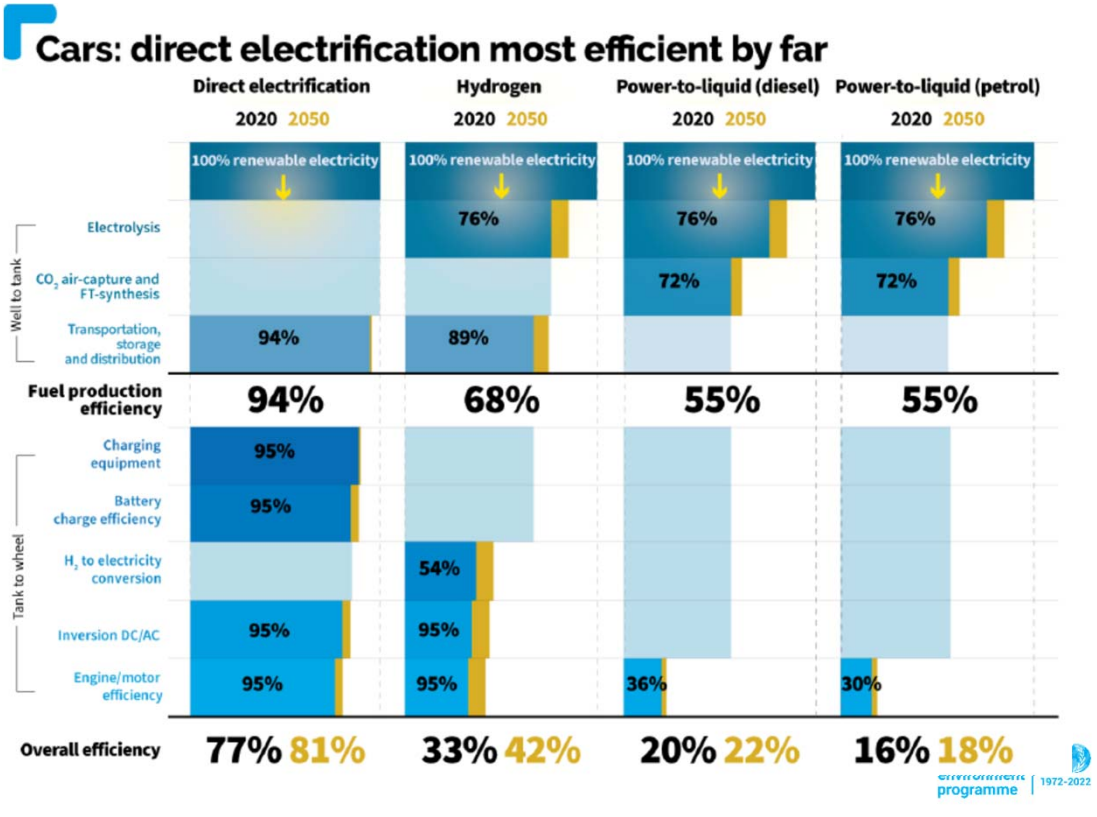
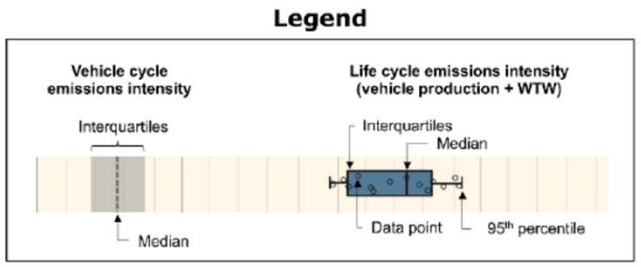
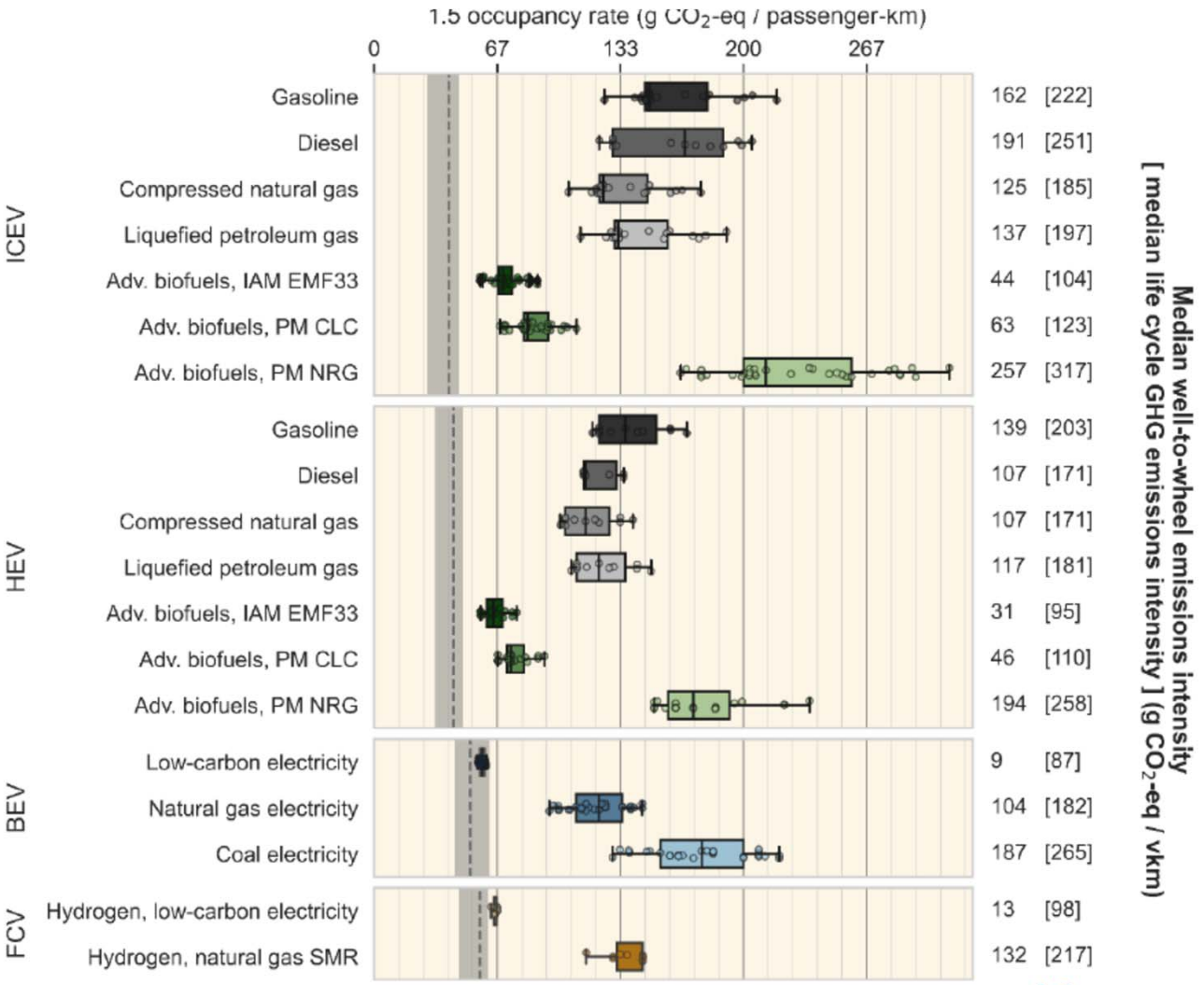
EVs, Hydrogen & Synthetic Fuels





Life cycle emissions of different technologies for LDVs





Source: IPCC, 2022 Sixth Assessment

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