Transport emissions

Global CO₂ emissions from transport
This is based on global transport emissions in 2018, which totalled 8 billion tonnes CO₂. Transport accounts for 24% of CO₂ emissions from energy.

<table>
<thead>
<tr>
<th>Mode</th>
<th>CO₂ Emissions (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Road (passenger)</td>
<td>45.1%</td>
</tr>
<tr>
<td>Road (freight)</td>
<td>29.4%</td>
</tr>
<tr>
<td>Aviation</td>
<td>11.6%</td>
</tr>
<tr>
<td>Shipping</td>
<td>10.6%</td>
</tr>
<tr>
<td>Rail</td>
<td>1%</td>
</tr>
<tr>
<td>Other</td>
<td>2.2%</td>
</tr>
</tbody>
</table>

74.5% of transport emissions come from road vehicles.

- 24% of global GHG-emissions comes from Transport, 18% from Road transport
- Transport emits 8 billion metric tons of CO₂ emissions
- 45% coming from cars & buses
- 85% of motorised road passenger transport emissions comes from individual transport modes

BUS = 1,25% of global GHG-emissions

ANSWERS

- Low & Zero emission technologies : BEV, FHEV, PHEV, ...
- The collectivisation of road transport
Electrification of buses

Availability of green electricity

More than one-third of global electricity comes from low-carbon sources; but a lot less of total energy does

TCO electric vs diesel bus > 1

=> First deployment of electric buses only in public or big private operators & with strong external financial support

- Capex : > 2 (incl depot adaptations.)
- Opex : ??? <= lifetime of the battery

battery waste management staff training

.....

⇒ further consolidation of the industry
Global transport emissions increased by less than 0.5% in 2019 (compared with 1.9% annually since 2000) owing to efficiency improvements, electrification and greater use of biofuels.
Collectivisation + electrification

• A passenger car carrying one person emits 89 pounds of CO2 per 100 passenger miles, while a full bus emits only 14 pounds.

• A single person who switches from a 20-mile commuting alone by car to existing public transportation, can reduce their annual CO2 emissions by 20 pounds per day. That is equal to 10% reduction in all greenhouse gases produced by a typical two-adult, two-car household.

• How many car miles would we need to replace by bus-miles to equal the effect of the electrification of the bus fleet?
Collectivisation of motorised road transport reduces emissions and congestion

- Policy, regulations, taxation, .....based on data analysis
- **Infrastructure** (dedicated buslines, prioritizing collective transport modes, car free city centers, multi modal hubs, ...)
- Stimulating & Facilitating the use of public transport => **DIGITAL TOOLS**
  - Safe for all (road safety, hygienic, avoiding criminality, ...)
  - Comfortable & Ease of Use vs other modes (offer & schedule, crowdyness, commercial speed, ITS & MaaS, multimodal system, first & last mile solutions, ...)
  - Affordable

LOWER budget consumption & possible NOW
Busworld worldwide: stay in touch

Partnerships with UN HABITAT & UN CRD, ASRTU, ...

Happy to meet you!

kulwant.singh@busworld.org
jan.deman@busworld.org