

Hard-to-Abate

Decarbonising Heavy Duty Road Freight

Matteo Craglia

Transport Analyst/Modeller – International Transport Forum (ITF)

matteo.craglia@itf-oecd.org

VIRTUAL | VIRTUEL

XVI WORLD WINTER SERVICE AND ROAD RESILIENCE CONGRESS XVI° CONGRÈS MONDIAL DE LA VIABILITÉ HIVERNALE ET DE LA RÉSILIENCE ROUTIÈRE XVI CONGRESO MUNDIAL DE VIALIDAD INVERNAL Y RESILIENCIA DE LA CARRETERA



Momentum on decarbonising trucks

Global MOU on M-HDVs 30% ZEV sales by 2030 and 100% by 2040

Austria, Canada, Chile, Denmark, Finland, Luxembourg, Netherlands, New Zealand, Norway, Scotland, Switzerland, Turkey, UK, Uruguay, Wales. + subnational governments, private sector

Net Zero Pledges*

In law: 12 countries + 3 proposed legislation	9%
In policy document: 53 countries	76%
Under discussion: 76 countries	5%
Total	90%

Key point: Most road tonne kilometres now occur in countries with Net Zero ambitions

* Energy and Climate Intelligence Unit (2021), + Share of global road tkm in 2019, from ITF Outlook 2021



Share of road

tonne km⁺

>4%





Project Framing

- New zero emissions technologies require new infrastructure
- Government intervention is likely necessary to overcome market uncertainty and risk
- Policymakers seek a technology neutral approach
- This group aims to explore if there is enough certainty to take policy action
- If not, why not and what might change?



Questions for discussion

- Technical barriers: What are the timescales needed to adopt new technologies? Which options can decarbonise fastest? What is the role of transitional technologies?
- Economic potential: How do the business cases of technologies compare? Which can decarbonise at lowest cost and minimise financial risks? How might competition and path dependency in technology adoption affect their adoption?
- Policy pathways: How can policy stimulate the most promising technologies? Where does technology neutrality remain important? How do different countries/regions compare?



Initial insights



 As part of the project we are modelling how quickly different technologies may become cost competitive and the associated CO₂ emissions reductions.



6

Initial insights



Cf road freight emissions will be from emerging economies by 2050 (in BAU)

As part of the project we are modelling regional differences in CO₂ emissions reductions.

Find out more: https://www.itf-oecd.org/dtimplement

#PIARCCalgary2022



Initial insights

- Deploying refuelling infrastructure in the 2020s is essential to reach ambitious decarbonisation targets.
- For urban delivery and short distance applications battery electric vehicles are well placed in the near term and lead to significant emissions reductions.
- Other more challenging use cases e.g. long-haul are less certain and infrastructure decisions are crucial.
- There is some consensus that 'no-regret' options include: improving grid infrastructure near main roads and areas of high demand, and developing modular electrified vehicles that can accommodate different technologies and hedge against uncertainty.

Find out more: https://www.itf-oecd.org/dtimplement







Thank you

Dr. Matteo Craglia

Transport Analyst/Modeller – International Transport Forum (ITF)

matteo.craglia@itf-oecd.org

VIRTUAL | VIRTUEL

XVI WORLD WINTER SERVICE AND ROAD RESILIENCE CONGRESS XVI° CONGRÈS MONDIAL DE LA VIABILITÉ HIVERNALE ET DE LA RÉSILIENCE ROUTIÈRE XVI CONGRESO MUNDIAL DE VIALIDAD INVERNAL Y RESILIENCIA DE LA CARRETERA

