International Transport Forum

Joint Committee on Environment and Climate Action
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Opening Statement
Pierpaolo Cazzola

Dear chair, Dear committee members,

- **Thank you** for inviting me to contribute to your work.

- My name is **Pierpaolo Cazzola**, I am **Advisor on energy, technology and environmental sustainability at the International Transport Forum**, which I joined in 2019. Prior to this, I worked for almost 20 years at the intersection of transport, energy and sustainability issues at the International Energy Agency, the United Nations, the European Commission and the Environment Directorate of the Organisation for Economic Cooperation and Development. I am an aerospace engineer by education.

- **The International Transport Forum at the OECD is a global transport policy think tank with 63 member countries**[1]. The ITF's Decarbonising Transport initiative[2] aims to help policy makers make the right decisions to meet their climate ambitions, based on quantitative evidence. **We are very grateful for our cooperation with our member country Ireland,** who has held ITF's presidency in 2020 and 2021.

- In the following, I will **focus on the subject of electric vehicles**, following the desire expressed by the Committee, after the publication of its *Report on reducing emissions in the transport sector by 51% by 2030*, for a more in-depth examination of this subject.

- I understand that **the main aim of the Committee is to ascertain how Ireland can achieve our emission reduction targets and other desirable outcomes**. To respond to this, **my contribution will build on publications that I coordinated an authored, including the reports published by the ITF** (*Cleaner Vehicles – Achieving a Resilient Technology Transition*, *How Urban Delivery Vehicles can Boost Electric Mobility*, *Regulations and Standards for Clean Trucks and Buses* and *Good to Go? Assessing the Environmental Performance of New Mobility*) **and by the International Energy Agency** (including several editions of the *Global EV Outlook series* – 2019, 2018, 2017 and 2016, the *Nordic EV Outlook 2018* report and several editions of the Energy Technology Perspectives series – 2017, 2016 and earlier).

- **Electric mobility will certainly be one of the important pillars of transport decarbonisation, even if it should not be seen as the unique solution for it.**

- **Deep cuts in emissions will also require "avoid & shift" measures**, allowing to better manage travel demand and increase the share of travel taking place in energy efficient public transport modes. This is not conflictual with a parallel development towards EVs.

[1] https://www.itf-oecd.org/about-itf
[2] https://www.itf-oecd.org/decarbonising-transport

OECD

- **Deep GHG emission cuts will also require action that is not limited to direct emissions (tailpipe), but taking also into account other lifecycle emissions** of transport vehicles and services: in particular **vehicle manufacturing, energy production and distribution, infrastructure construction and operational services** (most relevant for new forms of mobility).

- The transition to **electric mobility should also be seen in the broader context of other megatrends that can have positive impacts on economic productivity**, in particular **digitalisation** (including increased computational capacity, enhanced digital connectivity, artificial intelligence and automation) and **the falling costs of renewable energy**.

- Further to this, electric mobility should also be framed into the context of **policies and market developments geared towards innovation**. Policies aiming to stimulate innovation in clean vehicle and clean energy technologies have been indeed **key determinants of the cost cuts observed in the past decade for emerging low-carbon technologies**, in particular wind, solar electricity and battery storage.

- These developments, which brought technologies that used to be more expensive than fossil-based alternatives close and often also already beyond the cost competitiveness threshold, had **major impacts in the capital markets**, as shown by major **increases in market capitalisation of automakers and energy companies.**

- **Covid-19 has also further accelerated these processes**, as many governments put in place economic stimuli aiming to drive a recovery subject to lower financial, climate and sustainability risks.

- **Electric and digital technologies allowed new actors to enter the transport vehicle, service and energy markets**, driven by prospects for market growth and spurred by technological advantages over incumbents. Key examples include, respectively, companies like Tesla, CATL, Uber and Iberdrola. Other examples with strong transport ties are also available when looking at freight movements (e.g. Amazon). More can be found in the context of companies generally labelled as "big tech", also integrating maps and transport services in the range of those that they offer.

- All this – in particular clear opportunities for effective GHG emission abatement, energy efficiency improvements and greater economic productivity – points towards a context that will likely see an **acceleration of both policy action and private sector investment globally, geared towards the adoption of clean, connected and autonomous vehicles**.

- **As connected and autonomous vehicles may indeed increase travel demand, it will be important for governments interested in reducing GHG emissions from transport to design policies that will manage these impacts**, maximising opportunities to make transport vehicles more environmentally sustainable.

- **In the near term, a policy framework for supporting the uptake of clean vehicles includes several elements**:

- A **clear vision** with medium- to long-term targets.
- **Technical standards and regulations enabling the roll out at scale of EVs and laying the foundation for their sustainable production, use and end-of-life treatment.**
- **Energy prices and taxes** that are conducive to a transition to clean vehicles.
- **Ambitious public procurement programmes** (giving priority to high mileage applications) helping kicking-off demand first, and scale it up later.
- **Economic incentives** that enable cost reductions for new technologies and foster industrial transformations (paying attention not to subsidise use cases that are already cost effective, and focusing on access to financing mechanisms, in those circumstances, and the abatement of other barriers).
- **Regulatory requirements** for the **market penetration of clean vehicles and clean energy, based on their lifecycle impacts** (note: this does not mean that they should all be taken care of in the same regulation).
- The **reinforcement of networks for the distribution of low-carbon energy** vectors.
- The deployment of **charging infrastructure**, abating barriers (e.g. administrative approvals) for business models that work well (home, workplace, destination charging, as well as some of the fast charging solutions, e.g. if they are financed by OEMs) and designing deployment mechanisms that can leverage private investments.

- To meet GHG emission abatement goals, **a transition to both direct electrification of vehicles and renewable energy should be prioritised**. Direct electrification of vehicles and renewable electricity are best placed to deliver timely and significant environmental benefits and energy efficiency for road transport vehicles. They also reduce costs and increase economic productivity and therefore should be prioritised in industrial strategies.

- **Regulatory frameworks should also allow electric vehicles to help stabilise the electricity network and optimise its use, leveraging digital technologies to better align electricity demand and supply**. This will also be important for creating synergies between developing electric mobility and the renewable energy sources they need, in particular wind and solar, which are inherently subject to variable supply patterns.

- Addressing **challenges in resource efficiency and sustainable supply chains** will be necessary. Key instruments include:
  - **Regulations that extend the life of batteries into second-life applications and ensure adequate end-of-life treatment** through recycling.
  - **Solutions that help to avoid oversizing vehicles and batteries, including plug-in hybrid electric vehicles if mainly used in all-electric mode and electric road systems**, which can enable large shares of all-electric driving for trucks, with smaller batteries.
  - **Requiring the traceability of materials**, not only to help **minimise the carbon footprint of batteries** and enhance recycling rates, but also **to stimulate sustainable labour and environmental practices** in resource extraction and processing, i.e. across the vehicle and battery manufacturing value chains.

- **Governments should prepare for a transition from fuel duties to road pricing** by **seizing opportunities arising from increased connectivity** and accelerating enabling regulatory actions, **as clean vehicles need to pay for the road transport infrastructure they require**. **Regulations for connected vehicles and intelligent transport systems should require manufacturers to make on-board telematics systems capable for digital road-use charging**. Regulations should also ensure these systems can be interoperable across borders, that they are future-proof and backward-compatible. **Additional opportunities to address congestion effectively can come from ensuring that user charging can be location- and time-specific**.

- **Covid-19 recovery packages should support the roll-out of charging infrastructure and the strengthening of electricity transport networks**. Electric vehicles will become increasingly cost-competitive and prevalent, and providing charging points aligns well with the post-pandemic focus on publically-funded infrastructure. Public investment is also vital for electric road systems. **Covid-19 recovery funds for connected transport infrastructure to enable smart road user charging**, geo-fencing and other applications can also support a resilient transition to low-carbon vehicles and energy.

- Governments should also **prepare for the impact of the sustainable mobility transition on jobs, required skill sets and social equity**. This requires:
    - **Strengthening their ability to assess the wider impacts of the concurrent shift towards electrification, renewable energy, digitalisation and automation**. Improving their foresight capacity will also give them a better understanding of socio-economic consequences and, for instance, help to anticipate the impact on jobs and required skills.
    - **Developing policies and programmes for training and up-skilling** will be **crucial to ensuring that affected workers are adequately supported and that the benefits of the transition to sustainable mobility are shared among all citizens**. This is a vast challenge, most relevant for cases where large portions of the population (e.g. in countries where the automotive and energy sectors account for significant parts of the GDP and the workforce) are exposed to the implications of these technology transitions.