A NEW STRATEGY TO DECARBONISE EUROPEAN TRANSPORT

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Transport: a major obstacle to European decarbonisation

- **Paris Agreement**: EU committed to cut its GHG emissions to 40% below 1990 levels by 2030
- **1990-2015**: emissions decreased significantly in all sectors - with the exception of transport

**EU GHG emissions, 1990-2015**

**EU GHG emissions, 2015**

- Buildings, 12%
- Other, 16%
- Industry, 19%
- Transport, 26%
- Electricity and heat, 27%

Source: Bruegel based on EEA [2017].
Stronger policy action needed, notably on road transport

EU transport GHG emissions by mode, 2015

- Road transport: 73%
- Maritime: 13%
- Aviation: 13%
- Rail: 1%
- Other transport: 0%
- Cars: 44%
- Heavy duty trucks and buses: 19%
- Other road: 10%

Source: Bruegel based on EEA (2017).

- Decarbonising road transport is also decisive to improve **air quality** in cities
- Air pollution is responsible for more than **400,000 premature deaths** each year in Europe
First challenge to road transport decarbonisation: Fostering tech innovation and deployment of clean vehicles

- **EVs**: most promising way to decarbonise a substantial fraction of road transportation...

- ... but they currently represent only **0.2% of the EU’s total vehicle fleet**

- Further **technological breakthroughs** are needed to reduce cost and increase range of EVs

- In addition to EVs, **other clean tech** might also emerge, based on major **R&D investment**

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**EU vehicle fleet by technology, 2015**

*Source: Bruegel based on ACEA (2017).*
First challenge to road transport decarbonisation: Fostering tech innovation and deployment of clean vehicles

- **Good news:** Europe is by far the world’s largest investor in automotive R&D
- **Bad news:** automotive industry still appears to be primarily focused on developing ICE
- This represents a **risk** for road transport decarbonisation, but also to the longer-term competitiveness of the European automotive industry

**Automobiles & parts R&D, 2016**
*(Top 2500 companies)*

**Patenting in power trains by EU automotive industry, 2012-14**

Second challenge to road transport decarbonisation: Promoting modal shift

- **To reduce demand for transport**, key to promote public transport, alternative modes (eg walking, cycling) and new ‘mobility-as-a-service’ solutions

- Main challenge: **governance**, as road transport is governed by a complex series of policy frameworks developed separately at different levels

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**The governance of road transport: who regulates what?**

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<th>City level</th>
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**Example of various approaches taken by countries and cities:**

France, Ireland, Netherlands and UK announced in 2017-18 bans on sales of diesel & petrol cars and vans by 2030-40

Copenhagen, Paris, Madrid, Athens, Rome announced in 2017 bans on circulation of diesel cars between 2020-2030

Source: Bruegel.
Europe can foster road transport decarbonisation, but it needs new policies

- EU's key policy tool in the field (CO₂ emission standards) has not delivered as projected

- 'Clean Mobility Package': a positive attempt to enhance EU policy, but more should be done

- EU needs a new post-2020 road transport decarbonisation strategy

- We propose a 3-step strategy
Step 1: encourage EU countries and cities to adopt plans to ban diesel and petrol vehicles

- These plans are a simple but **effective tool to provide investment certainty** to the European automotive industry – and to foster its focus on clean vehicles.

- These plans are also a tool to induce citizens’ behavioural change and **promote modal shift**.

- EU could establish a ‘**EU Clean Transport Fund**’ to provide dedicated financial support to countries and cities committed to the phase-out of diesel and petrol vehicles.

- This fund should allow **cities to bid for EU money** to support **decarbonisation measures**:
  - Deployment of alternative fuels infrastructure
  - Zero-carbon public buses
  - Sharing and pooling solutions allowing a reduction in car ownership
  - Promotion of more sustainable modes of transport such as cycling

- No need for new money, just **make better use of existing financial resources**.

- **2014-20: €100 billion** to transport in Connecting Europe Facility, Structural & Cohesion Funds
Step 2: stimulate an EU-wide reflection on the future of transport taxation

- **Taxation**: a key policy tool to foster road transport decarbonisation

- Transport taxes can **influence user decisions** and **automotive industry’s strategies**

- To promote clean vehicles deployment, **taxes can be differentiated** on the basis of vehicles’ **carbon emissions** – or simply allow for subsidies, grants, tax credits or tax exemptions

- European countries still have very **different transport taxation regimes**

- **Only 10 countries consider CO₂ emissions** in composition of their vehicle registration taxes

- EU should promote a **new discussion** among EU countries on the **future of transport taxation**, as is being done in the field of **digital taxation**
Step 3: more focused and impactful research and innovation funding for transport

• The introduction of bans on diesel and petrol vehicles by countries and cities could lead to a quick take-up of already commercially-viable clean vehicles, such as EVs.

• This should not prevent currently less-mature technologies from developing and demonstrating their longer-term potential to contribute to road transport decarbonisation.

• EU should focus its post-2020 transport-related research and innovation funding on early-phase technologies, such as hydrogen, solid-state batteries or electrofuels.

• This would be the most sensible way to invest the limited available resources (equivalent to 0.2% of EU automotive industry’s R&D) in areas that otherwise might not find private funding.
Transport decarbonisation: a win-win-win strategy

- Good for the climate
- Good for the air we breathe
- Good for the EU industry
Thank you!