EU policy framework for decarbonising road vehicles and fuels

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Regulation 443/2009 (CO₂ cars) and Regulation 510/2011 (CO₂ vans) establish new vehicle fleet average CO₂ targets:
- 130 g/km in 2012-2015 for cars
- 175 g/km in 2014-17 for vans

Commission proposals to implement 2020 targets:
- 95 g/km for cars
- 147 g/km for vans

Directive 98/70 (Fuel Quality) establishes Low Carbon Fuel Standard:
- 6% reduction in road fuel GHG intensity by 2020
Current activity

- **Finalisation of consideration by co-legislators of Commission proposals for 2020 targets.**

- **Start of work on post-2020 LDV CO\(_2\):**
  - Some studies finished, others being prepared
  - Consultation process to start

- **Preparation of strategy on HDV CO\(_2\) emissions:**
  - Impact Assessment prepared

- **On-going work on development of HDV CO\(_2\) monitoring tool:**
  - proof of concept tests

- **Commission proposal on ILUC under discussion**

- **On-going work on LCFS implementation measure:**
  - Impact Assessment prepared
The challenge

A 70% reduction in transport CO$_2$ emissions in 37 years

- At a constant annual reduction rate, this requires a 3.2% reduction in emissions every year – shown in the graph.

- Reduction rate for each transport sector depends on progress in the others.
- Delaying effect of fleet turnover rates implies need for a faster rate of annual vehicle improvement if this is only achieved through vehicle measures.
Use all levers

- The effect of reductions in fuel GHG intensity, system efficiency and vehicle CO₂ emissions is multiplicative.
- The left graph illustrates how much reduction would need to come from vehicle improvements if both fuel and system improve by 0, 10, 20 or 30% over the period.
- The right graph illustrates possible car CO₂ target scenarios illustrating the wide variation depending on other policy actions.
Monitoring issues

Essential to be able to sufficiently accurately monitor impacts of measures. Otherwise risk diverting effort and resources into activity not delivering desired outcome.

**LDV**
- Clear evidence of flexibilities and their exploitation
- Large proportion of reductions due to technology deployment
- WLTP under development. Aim to address some of the problems
- Measurement of MACC emissions under separate cycle

**HDV**
- Multiplicity of duty cycles, missions, variants
- Computer modelling approach appears most attractive

**Fuel**
- Explicit recognition of accuracy-complexity trade-off
- Implementing measure for emissions previously proposed
- Impact assessment complete
A number of issues (non-exhaustive) have been raised re LDV CO$_2$ beyond 2020 that merit assessment:

- **Embedded emissions**
  - Explored in "Routes to 2050" study

- **Regulatory metric**
  - Two studies completed

- **Footprint as utility parameter**
  - Study underway

- **The level of ambition**

- In addition a future Impact Assessment is likely to need to consider innovation; technology neutrality; competitiveness...
Potential?

From current Commission Impact Assessment

Based on 2020 technology assumptions for a medium car
Next steps

- Consultative Communication on post-2020 LDV regime
- Impact Assessment and proposal for post-2020 LDV targets and modalities
- HDV CO₂ strategy
- Continued development of VECTO tool
- LCFS implementing measure
Thank you

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