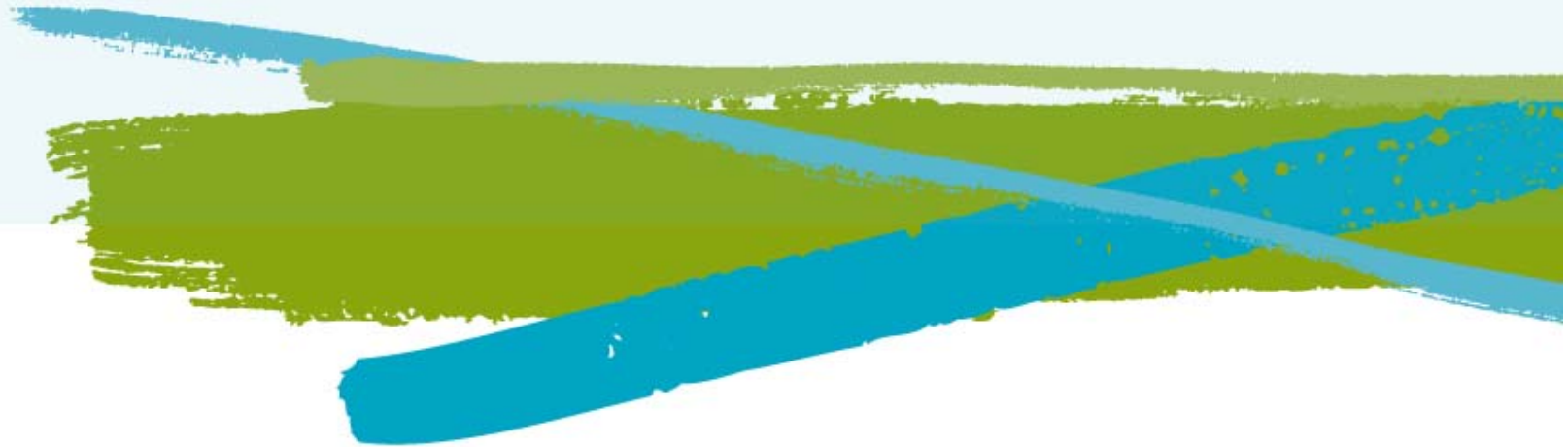


6 December 2011

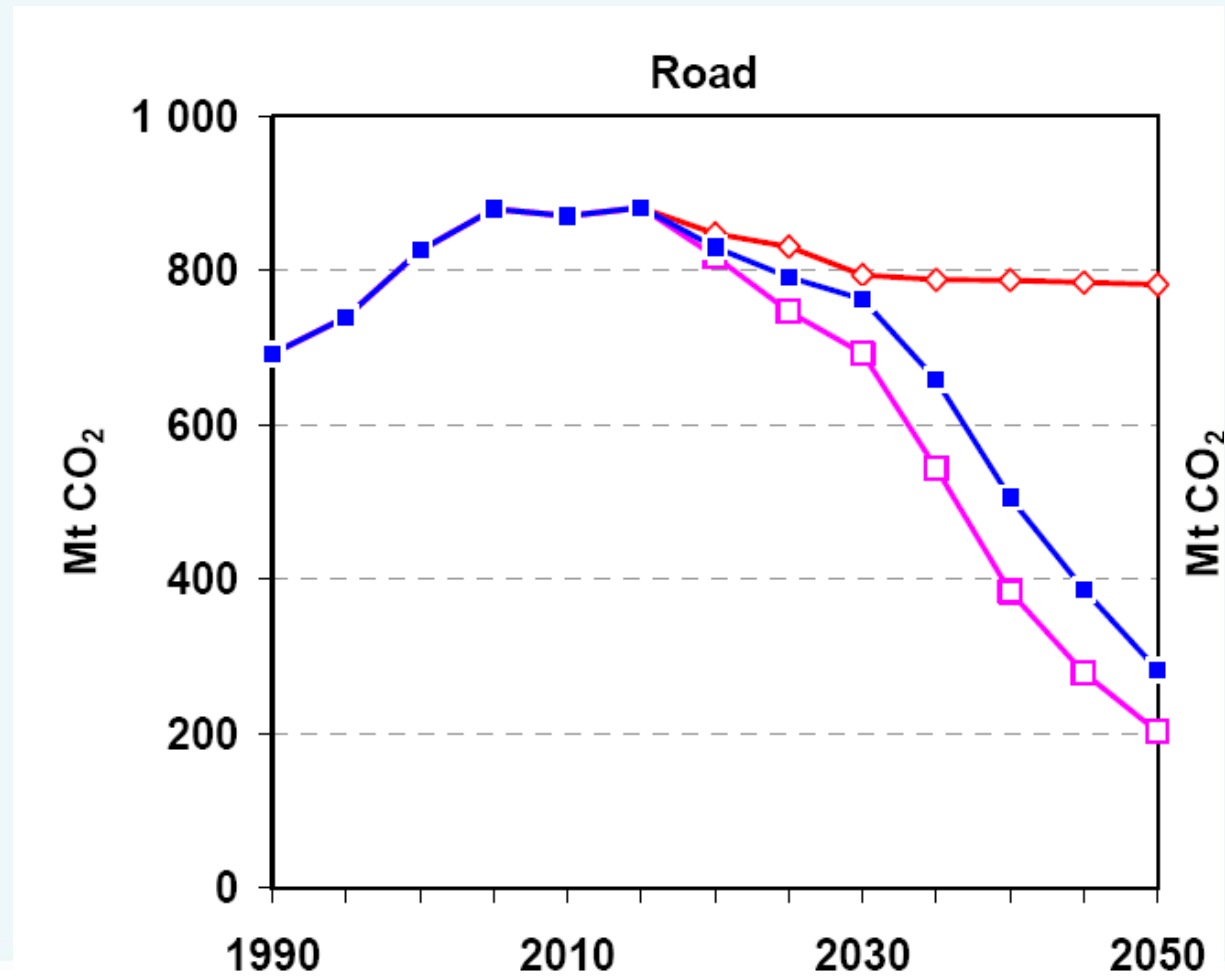
DG CLIMA

Stakeholder meeting on LDV CO₂ emissions

What should happen after 2020?



Reduction pathways 2020 - 2050



Source: PRIMES



Cost and technology

- Some uncertainty over cost and technology to 2020;
- Uncertainty over technological potential and cost increases further into the future;
- Many other factors uncertain, e.g. energy costs;
- Further in the future it is increasingly difficult to determine with certainty the likely optimal level of future reductions.



Cost and technology

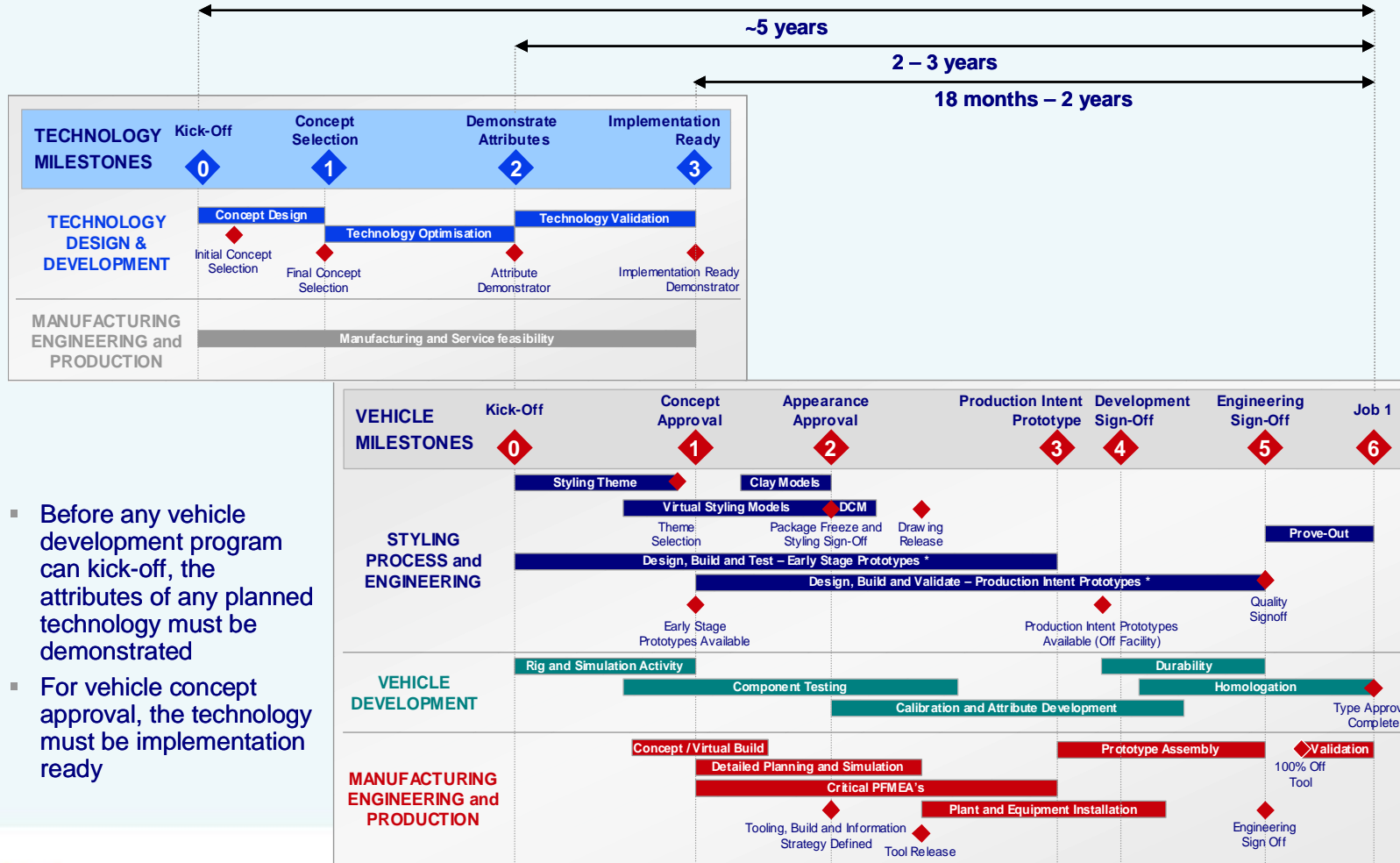
- Achievable ICE based passenger car reductions of some 60% compared to 2002 baseline.
- Expectation that different powertrains likely to be needed beyond this,
- Alternative powertrains coming to the market
- Potential wide variations in technology
- For lowest cost CO₂ reductions the regulatory approach should not distort technology choice.



Long term assurance

- Industry desires planning certainty
- Easier to amend plans where the product development process has not yet started
- Developing a technology and implementing it in a vehicle platform needs approx. 5 years

Long term assurance



- Before any vehicle development program can kick-off, the attributes of any planned technology must be demonstrated
- For vehicle concept approval, the technology must be implementation ready



Long term assurance

- Vehicle platforms change every 6-8 years
- Engine platforms have lives of 10-15 years
- Costs to manufacturers can be reduced by understanding the likely level of reductions for 10 years ahead.
- Enables longer term planning of R&D expenditure.
- Conflict between certainty over optimal CO₂ reduction level and manufacturer planning certainty.



Regulatory metric

- Regulatory approach based on tailpipe CO₂ emissions
- Upstream emissions not taken into account.
- For different powertrain/energy choices, there is no fixed relationship between:
 - Energy use and CO₂ emissions
 - Vehicle energy use and total energy use
 - Vehicle exhaust CO₂ and total CO₂
- Upstream emissions significant for BEVs, FCEVs, PHEVs
- Choice of regulatory metric influences the attractiveness of different technologies.



Regulatory metric

- Regulatory metric can matter.
- Does ignoring upstream emissions result in optimal choice or distort market?
- How does metric affect attractiveness of different technologies and costs?
- Metric could be important in achieving most cost-effective reduction of CO₂ emissions from road vehicles.



Study

- New study underway to:
 - assess implications of the metric on the efficiency and effectiveness of legislation on LDV CO₂ emissions
 - develop a list of possible options for the regulatory approach and metrics for road vehicle CO₂ emissions
 - assess the relative merits of a wide range of regulatory approaches
 - illustrate the expected impact of the different regulatory options on GHG emissions over the relevant time period



Study

- Minimum set of options to be assessed and compared:
 - vehicle CO₂ emissions:
 - tailpipe CO₂ emissions with and without Zero Emission Vehicles
 - tailpipe CO₂ emissions with notional GHG intensity for Zero Emission Vehicles
 - tailpipe CO₂ emissions adjusted to take account of WTW emissions
 - tailpipe CO₂ emissions with WTW efficiency factors
 - vehicle energy use:
 - energy used in the vehicle per vehicle-km
 - energy use per vehicle-km adjusted for WTW consumption
 - inclusion of road fuel use in the EU ETS
 - vehicle manufacturer based trading scheme based on lifetime vehicle GHG emissions.



Level of ambition

- CO₂ reductions from cars, vans and HDVs need to be compatible with EU's CO₂ reduction ambitions;
- Modelling the three together ensures compatibility of ambition and comparability of assumptions;
- Setting levels of ambition together helps ensure trade-offs are addressed.



Current thinking

- How to address longer term in the review:
 - Modelling to provide the level of ambition.
 - Assessment of impact of metric and other factors
- Two elements enable a view on the right approach and associated level of ambition.
- No decision regarding the form yet - Communication accompanying the legislative proposal is one option.



Stakeholder input

- Views welcome in particular on:
 - the length of time frame to consider;
 - the metric;
 - the form in which long-term signals should be set, eg in a legislative target or in a Communication.