

Clean and energy-efficient vehicles - European strategy for the uptake of green vehicles

From economic crisis to a more resource efficient, greener and more competitive economy

- The European car industry is **slowly recovering from an economic crisis**. Clean and energy efficient technologies are an opportunity to recreate and reinvent the position of market leader and technological champion.
- Green vehicles, including those capable of using electricity, hydrogen, biogas and liquid biofuels in high blends can contribute significantly to the Europe 2020 priorities of promoting a **more resource efficient, greener and more competitive economy**.
- The flagship initiative of '**Resource-efficient Europe**' spelt out in the Europe 2020 strategy promotes new technologies to modernise and decarbonise the transport sector, including clean and energy-efficient vehicles and thus increases competitiveness.
- The **EU's global competitors on both the American and Asian continents** are investing in research in low-carbon technologies and launching targeted programmes to shift to low-carbon road transport.

Key elements of the strategy:

This strategy aims to provide an appropriate and technology neutral policy framework for clean and energy efficient vehicles. Two tracks are followed simultaneously: promoting clean and energy efficient vehicles based on conventional internal combustion engines and facilitating the deployment of breakthrough technologies in ultra-low-carbon vehicles.

Action plan for green vehicles:

1. Continuing the measures for reducing the emissions of vehicles (Regulatory framework)

- **Type approval of two- and three-wheelers and quadricycles:** The Commission will propose a Regulation on type-approval requirements for two- and three-wheelers and quadricycles (L-category vehicles) in 2010 that will set emission standards and will adapt or develop measures to take account of new technologies.

- **Implementing the Regulation on CO₂ emissions from cars by 2011, including rules:**
 - on the monitoring and reporting of emission data,
 - on the application for a derogation from the specific CO₂ emission targets for small volume and niche manufacturers,
 - on the procedure for approving innovative technologies (eco-innovations) and
 - on the methods for the collection of excess emissions premiums.
- **Marketing of 'green additionality' of vehicles:** develop rules to avoid misleading environmental claims.
- **Fuel consumption:** A proposal will be presented by 2011 to reduce fuel consumption impacts of **mobile air conditioning systems**.
- **Inventory of environmental benefits of 'integrated approach':** The measures offered under the approach should be considered listed as soon as possible. Further steps, including regulatory means, to promote such measures, need to be determined.
- **Additional measures on CO₂ and pollution emissions from road transport:** Any further measures contributing to a reduction such as eco-driving, Intelligent Transport Systems (ITS), infrastructure measures, and urban transport management should be taken into account.
- **Revision of test cycle to measure emissions:** To ensure the reduction of CO₂ and pollutant emissions under real-world driving conditions, the test cycle should be revised at the latest by 2013. In addition, a robust procedure shall be developed by 2012 to measure real world emissions, considering the use of portable emissions measurement systems.
- **Noise emissions:** A proposal to amend Directive 70/157/EEC will be presented by the end of 2011 to reduce noise emissions of vehicles.
- **Sustainability criteria for biofuels:** The European Union needs to implement these criteria as well as promote the development of advanced low carbon fuels and sustainable biofuels and engine technology that is capable of using these fuels.
- **Heavy Duty Vehicles:** A strategy targeting fuel consumption and CO₂ emissions from heavy duty vehicles should be prepared.

2. Supporting research and innovation in green technologies

- **Research and Development:** European research should continue to target low carbon fuels and clean and energy efficient transport, including the improvement of conventional engines, electric drive-trains including alternative battery technologies and hydrogen technologies with grants focusing on topics with clear added value at EU level.
- **Research Grants:** Administrative rules for obtaining EU research grants need to be simplified and streamlined of obtaining EU research grants.
- **Research Strategy:** In 2011 the long term strategy on research should be outlined in the Strategic Transport Technology Plan and in the Communication on Clean Transport Systems.
- **Support by European Investment Bank:** The continued support by the Bank needs be insured for research and innovation projects to promote clean and energy-efficient automotive products to support the transformation of the industry.

3. Market uptake and consumer information

- **Guidelines on financial incentives:** Coordination of demand-side measures adopted in Member States for the purchase of green vehicles needs to be encouraged by the end of 2010. Benefits accruing to industry should be in line with existing State Aid rules.
- **Revision of the energy taxation directive:** Better incentives need to be created for the efficient use of conventional fuels and the gradual uptake of alternative low-carbon emitting fuels.
- **Vehicle Taxation:** More coordination is needed for an overall improvement of the effectiveness of measures taken by Member States on taxation in order to promote green vehicles.
- **Clean and energy efficient vehicles:** The monitoring of implementation of Directive 2009/33/EC (promotion of clean and energy-efficient road transport vehicles) needs to continue.
- **Consumer opinion:** A research project should be launched to fully understand consumer expectations and buying behaviours. Different possible information tools should be tested to compare green and fuel-efficient cars with conventional vehicles.
- **Car Labelling:** An amendment to Directive 1999/94/EC will be presented.
- **Electromobility Demonstration Project:** Within the European Green Cars Initiative a project will be launched in 2011 to assess consumer behaviour, usage patterns and foster user awareness of all types of electric technology. Specific attention will be on new developments in the area of standardisation for electric vehicles and future initiatives of this kind may be targeted especially to those urban areas that have sustained air quality exceedance levels.

4. Global issues

- **International cooperation:** International standardisation activities, regulatory dialogues, and technical assistance to non-EU countries should be initiated with a view to promoting trade and preventing market-distorting rules on green vehicles.
- **UNECE harmonised regulation:** Regulatory cooperation initiatives should be continued to be promoted at a global level with countries that are not contracting parties at UNECE.
- **Raw Materials Initiative:** Access to materials in short supply needs to be supported.

5. Employment

- **European Sectoral Skills Council:** A network of Member States' national observatories needs to be created based on the declaration of the Automotive Partnership.
- **European Social Fund:** Financing in order to encourage retraining and upskilling needs to be in place as of 2011.

6. Mid-term review of CO₂ emissions legislation

- **Emission performance standards for new passenger cars:** The review of Regulation (EC) No 443/2009 should be done by 2013. This review should look at the modalities of reaching the 2020 target of **95 g/km for passenger cars** and the long-term (2030) perspective, whilst building on the experience gained from implementing the short term targets.

- **CO₂ emissions from light commercial vehicles (vans):** A review of the modalities of reaching the 2020 target of 135 g/km set out in the Commission proposal should be considered to reduce CO₂ emissions from light commercial vehicles (vans) by 2013.

7. Specific actions for electric vehicles

7.1. Placing on the market

- **Electric safety requirements** should be proposed in 2010. Other type-approval requirements covered by Directive 2007/46/EC should be reviewed by 2011.
- **Crash Safety requirements and potential risks due to the quietness** of electric vehicles need to be reviewed by 2012.

7.2. Standardisation

- **Standardised charging interface:** A mandate for European standardisation bodies should be set in 2010 for development of a standard by 2011 within the framework of Directive 98/34EC. The **standardised charging interface** should ensure interoperability and connectivity **between the electricity supply point and the charger of electric vehicle**. Smart charging and the possibility for users to take advantage of the use of electricity during "off peak hours" should also be considered in standardisation.
- **Implementation of the standard:** A method needs to be identified for implementation of the standard charging interface, so that it is adopted by all industry players, including vehicle manufacturers, electricity providers and electricity distribution network operators.
- **Global standards:** Global technological and market developments need to be monitored and European standards in consequence need to be updated if necessary.

7.3. Charging and refuelling Infrastructure

- **Refuelling Infrastructure:** The EU should take a leading role by working with Member States at national and regional levels on the build-up of charging and refuelling infrastructures.
- **Investment in infrastructure and services:** The European Investment Bank should explore how to provide funding to stimulate build-up for green vehicles.

7.4. Energy, power generation and distribution

- **Life-Cycle Approach:** Environmental and carbon footprint of vehicles with different propulsion systems should be compared using the approach.
- **Low carbon energy sources:** It should be evaluated whether the promotion of electric vehicles leads to the additional provision of low-carbon electricity generation via the promotion of low carbon energy sources to ensure that the electricity consumed by electric vehicles does not go to the detriment of low carbon electricity that would already be available.
- **Load Management:** The impact of the increased requirement for low-carbon electricity on the supply system and on the grid needs to be evaluated.

7.5. Recycling and transportation of batteries

- **End of Life vehicles/Recycling of batteries:** Consider changes to existing legislation to adjust to the new market circumstances.
- **Research on Batteries:** European research programmes on recycling and reusing of batteries need to be encouraged.

- **Transport of batteries:** Options for changing the rules need to be considered after carefully evaluating the costs and potential risks.

8. Governance:

- **CARS 21 High Level Group:** The Group should be re-launched with a revised mandate and extended stakeholder involvement to in particular address the barriers to market uptake of alternative technologies.
- **European Climate Change Programme (ECCP):** The strategy to reduce CO₂ emissions from road vehicles needs to be implemented. The workflows from ECCP and CARS 21 should be closely coordinated.
- **White Paper on European Transport Policy:** The integration of this strategy into the overall EU transport policy needs to be ensured.
- **Internal Market:** The coordination and co-operation of Member States on the actions of this strategy needs to be ensured in particular to avoid fragmentation of efforts, to create sufficient critical mass for the industry and to monitor and discuss national developments.

European Commission's website on European strategy on clean and energy efficient vehicles

http://ec.europa.eu/enterprise/sectors/automotive/competitiveness-cars21/energy-efficient/index_en.htm