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European Union Strategy for clean and energy-efficient vehicles

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Electric vehicles in 2012 “reality check”

- Currently, registrations of new electric vehicles are very low - an average share of 0.06% in EU, USA, Japan, South Korea and China
- 11,000 electric vehicles sold on WE markets in 2011
- “conversion design” still predominant
- Electric vehicles are still very expensive
- Pilot project and test-fleets are still predominant
- Impact of the crisis?
- Revision of public and industrial targets
- BUT market participants believe that there is “no going back” from electromobility
Current global sales of electric vehicles

Total Vehicle Market 2011 (in million units)

- USA: 12.7
- EU 27: 14.7
- Korea: 1.4
- Japan: 3.8
- China: 18.5

Total Market of Electric Vehicles 2011

USA: 41% (12.7 million)
EU 27: 27% (14.7 million)
China: 13% (18.5 million)
Japan: 18% (1.4 million)
Korea: 1% (3.8 million)

< 0.06% of All Vehicles: ~40,000

Most Important EV Markets

- China: 13%
- USA: 41%
- EU 27: 27%
- Korea: 1%
- Japan: 18%
EU27 Electric Vehicle Registrations in 2020 and 2030

- In the EU: 7% market share for electric vehicles expected in 2020 and 31% in 2030
European policy for electric vehicles “reality check” and new actions

- Implementation of the European strategy for clean and energy-efficient vehicles
  - *Investment in RDI*
  - *Type-approval framework and standards*
  - *Legislative framework*
  - *Pilot projects*

- CARS 21 High-Level Group working over 2010-2012 (e-mobility prominently discussed)

- CARS 2020 Action Plan
European Strategy on clean and efficient vehicles

- European Strategy adopted in May 2010
- Part of the European response to the financial/economic crisis of 2008/2009
- Provides a public policy framework for the support to the development of alternative technologies in the automotive sector
- With the main objective to stimulate the competitiveness of the European auto industry and promote sustainable mobility
European Strategy on clean and efficient vehicles

- The European Strategy contributed to guide the European debate on:
  - the measures to promote the decarbonisation of transport, low emissions
  - the changing preferences of consumers (need for industry adaptation and innovation)
  - How to safeguard the functioning of the European internal market during crisis periods (avoid the risk of protectionism)

- The Strategy maintains its interest: the recovery (to pre-crisis levels) is not expected before 2013-2014

- Green technologies have a central role in sustainable development in Europe
Importance of green technologies

Which green technologies?

Source: International Energy Agency
European strategy on clean and efficient vehicles

- The Strategy defends a two-track approach, assuring technology neutrality:
  - Promotion of technologically advanced and fuel efficient vehicles to be put on the market in near future
    - Focus is on the **combustion engine** in 2020 perspective
    - Increased use of sustainable bio-fuels, gaseous fuels
  - European road map and action plan for promoting and facilitating the emergence and proliferation of breakthrough technologies
    - Main focus is on **electric vehicles** (plug-in hybrids and fully electric)
    - **Hydrogen-powered** vehicles
European strategy on clean and efficient vehicles

Specific actions for the deployment of Electric Vehicles:

- Placing of electric vehicles on the market
- Standardisation
- Synergies between renewable energies and electric vehicles
- Infrastructure development
- Recycling and transportation of batteries
European strategy on clean and efficient vehicles

- Main actions under development refer to the Regulatory Framework for Electric vehicles:
  - The main objective: ensuring the safety of electric vehicles
  - The main trend: preference for an international approach to standardisation:
    - to create an international level-playing field for these new technologies, and
    - to provide clarity for vehicle and components manufacturers and gaining confidence of consumers
European strategy on clean and efficient vehicles

- Regulatory Framework for Electric vehicles:
  - How?
    - Via the updating of the regulatory framework to the existence of electric vehicles – this is done in UNECE WP.29 (World Forum for Harmonization of Vehicle Regulations): and adopted by the European Union (type-approval framework directive)
    - Via the adoption of a specific Regulation on the safety of electric vehicles: UNECE Regulation 100
    - Via the work on safety requirements for batteries (also under UNECE 1998 Agreement)
European strategy on clean and efficient vehicles

Updating and completing the regulatory approach to electric vehicles - under 1958 Agreement (UNECE):

**UNECE Regulation No 100** [series 00] on Electric powertrain vehicles


**Crash Safety**: Existing Regulations 12, 94 & 95 amended to cover electric powertrain vehicles.

**Braking systems**: adaptation of Regulation 13

**Batteries**: informal Group on Rechargeable Energy Storage Systems (RESS) – [series 02] amendments to Regulation 100
European strategy on clean and efficient vehicles

The global approach:

UNECE initiative on Electric Vehicles:

- Two informal working groups set up under UNECE 1998 Agreement (November 2011)
  - (1) safety aspects of electric vehicles and their components, including the batteries (safety of occupants against electric shocks in-use, while recharging as well as after an accident,
  - (2) environmental aspects of regulations applied to electric vehicles
- Initiative of EU, USA, Japan and China
European strategy on clean and efficient vehicles

The global approach:

Objectives of the UNECE initiative on Electric Vehicles:

• Convergence of regulatory obligations related to electric vehicles in the global context:
  - Electric vehicles are still produced in relatively small volumes in the different parts of the globe
  - Regulatory convergence can enhance competitiveness and control costs (still one of the deterrents for consumers)
• While reinforcing the safety of these vehicles – essential to build confidence in this new technology

-> a shared objective for all producing countries/regions
Communication CARS 2020

- CARS 2020 Action Plan adopted on 8 November

- Building on CARS 21 High-Level Group vision and recommendations
  - *High-Level Group launched in 2010*
  - *7 Commissioners involved, 9 Member States and a number of stakeholders*
  - *Final Report adopted on 6 June*
  - *Electro-mobility discussed under « new mobility solutions »*

- Implementation of new industrial policy
  - *Communication “A Stronger European Industry for Growth and Economic Recovery” adopted on 10 October*
  - *The need to re-industrialise Europe*
  - *Application of horizontal policy in sectoral setting*
  - *Coordination on electro-mobility to be performed by the Commission*

- The need to react to current economic crisis
Four pillars of the Action Plan

I. Investing in advanced technologies and financing innovation
   - European Green Vehicles Initiative under Horizon 2020
   - Legislative proposal on alternative fuel infrastructure (recharging interface)

II. Improving market conditions
   - Coordination of financial incentives for « green » vehicles put in place by EU Member States

III. Enhancing competitiveness on global markets
   - Work on global standard (GTR) for electric vehicles safety
   - Work on WLTP

IV. Anticipating adaptation
Conclusions

- Reality check for electro-mobility but outlook still positive
- "no going back from electro-mobility"
- Progress in implementation of the 2010 strategy
- EU type-approval framework for EV now in place
- Development of global technical requirements under the UNECE 1998 Agreement
- CARS 2020 Action Plan to be implemented (EV charging standard, infrastructure roll-out, research framework, etc)
- One of the responses to the crisis = invest in innovation
- European Commission proposed the Action Plan. EU Member States and stakeholders are encouraged to take complementary actions
Thank you for your attention!

For more information:
http://ec.europa.eu/enterprise/sectors/automotive/index_en.htm