Presidencia Española eu 2010.es

Reunión informal de Ministros de COMPETITIVIDAD
(INDUSTRIA e INVESTIGACION)

Prospects for the electric vehicle from the institutional standpoint

Antonio Cuevas Delgado
Presidente de la Comisión de Industria Turismo y Comercio

San Sebastián 9 febrero 2010

Congreso de los Diputados

Contents

- Energy targets through 2020
- EU27 stakes in the development of the electric car
- Regulation and harmonisation of standards
- Need for administrative push
- Conclusions

Energy targets through 2020

Base legislation regarding energy efficiency (EE)

- EE Action Plan (2000-2006)
- Green book on energy efficiency
- EE Action Plan (2007-2012)

- Directive 2002/91/EC on the energy performance of buildings
- Directive 2004/8/EC on the promotion of cogeneration
- Directive 2005/32/EC on eco design requirements for energy-using products
- Directive 2006/32/EC on energy end-use efficiency and energy services

- 2008–2012 Action Plan for the Energy Savings and Efficiency Strategy in Spain
- Regulation on Buildings' Thermal Installations
- Technical Building Code, RD 314/2006
- Building Energy Certification, RD 47/2007
- Regulation on Energy Efficiency in Outdoor Lighting Installations, RD 1890/2008
- Public Sector Contracting Act, Law 30/2007

Targets through 2020

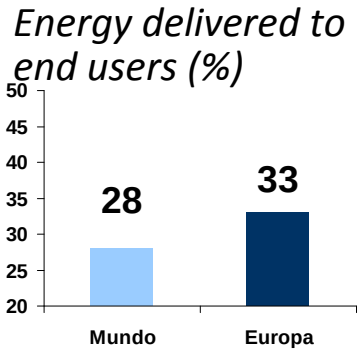
20/20/20

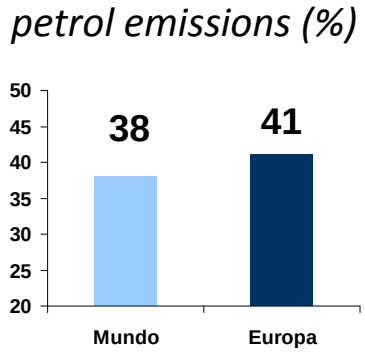
- Energy efficiency
  (20% savings by 2020)
- CO2 emissions
  (20% cut in emissions in 2020 versus 1990)
- Renewable energies
  (20% of energy from renewable sources by 2020 including 10% biofuel mix in vehicle fuel)

The transport energy context

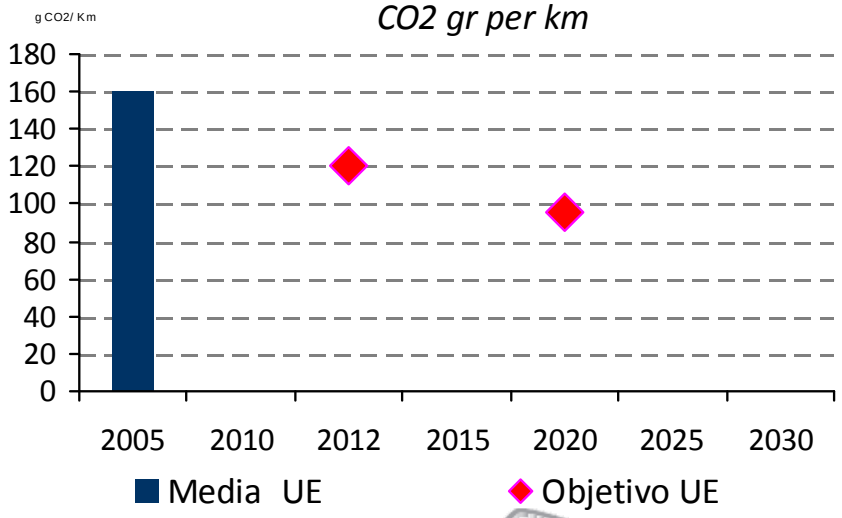
Significant energy consumption and source of CO2 emissions

- Transport accounts for 28% of global consumption of energy. In the EU27 this figure rises to 33%.
- Worldwide, petrol is responsible for 38% of CO2 emissions; this figure rises to 41% for the EU27 (2007).
- In the EU27, 23% of total emissions in 2007 derived from road transport
- Regulation (EC) No 443/2009 sets emission performance standards for new passenger cars, imposing a reduction in CO2 emissions from the current average of 160g/km to a target of 95g/km by 2020.





Source: International Energy Agency



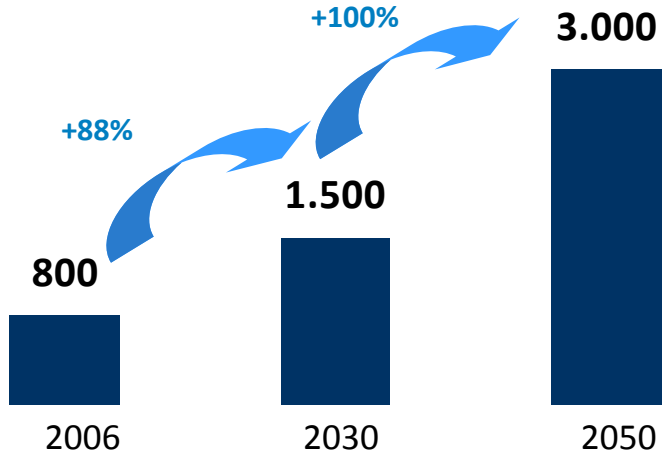
Source: Eurostats and Regulation (EC) No 443/2009

The transport energy context

Exponential demand for energy

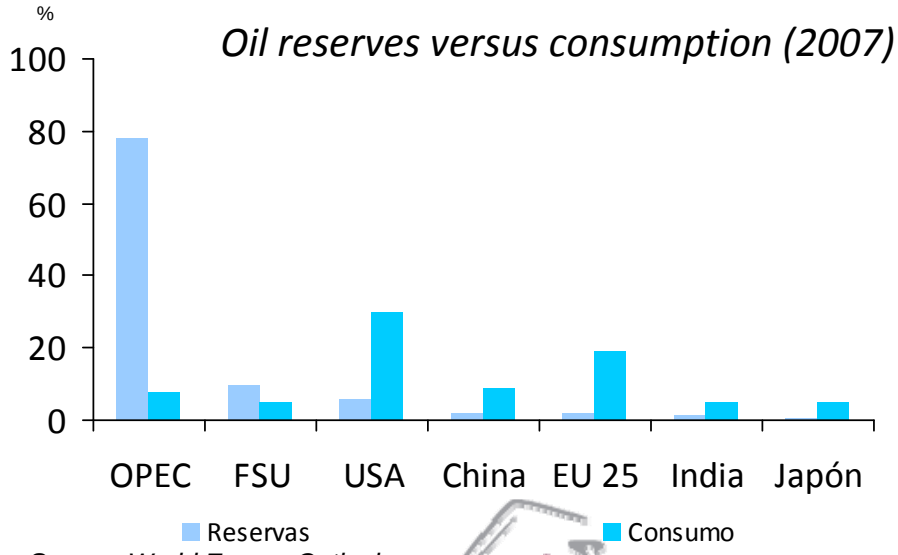
- In 2006, according to the IEA, 800 million vehicles were in circulation worldwide.
- This figure is set to double by 2030 to a forecast 1.5 billion vehicles, driven mainly by growth in developing economies.
- This jeopardises supply security and will deplete oil reserves more swiftly.

Vehicles (millions)



Source: International Energy Agency

Oil reserves versus consumption (2007)



Source: World Energy Outlook

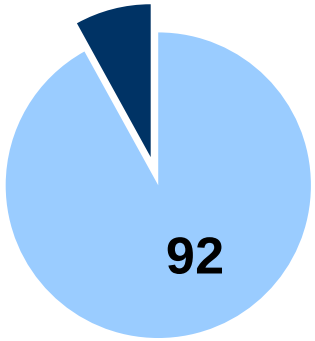
Congreso de los Diputados

EU27 interest in the development of the EV

Energy dependence

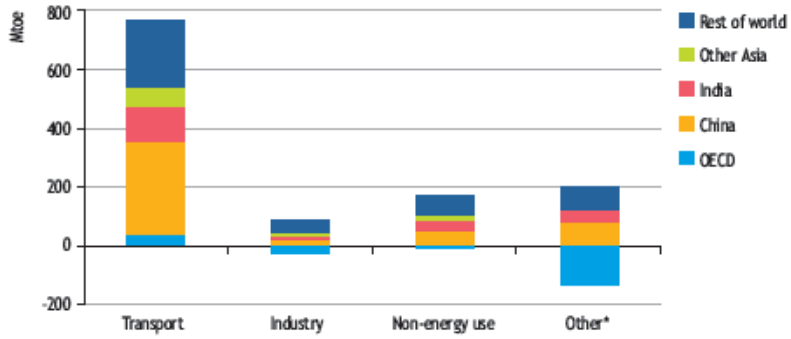
- The EU27 transport sector is hugely dependent on oil-derived fossil fuels (92%).
- Primary demand for oil is forecast to rise by 25% between 2007 and 2030, driven mainly by OECD demand, with the transport sector accounting for almost half of total demand.

Dependence on oil (%)



Source: International Energy Agency

Forecast growth in demand for oil by sector (2007-2030)



* Includes residential, services, agriculture, power generation and other energy sectors.

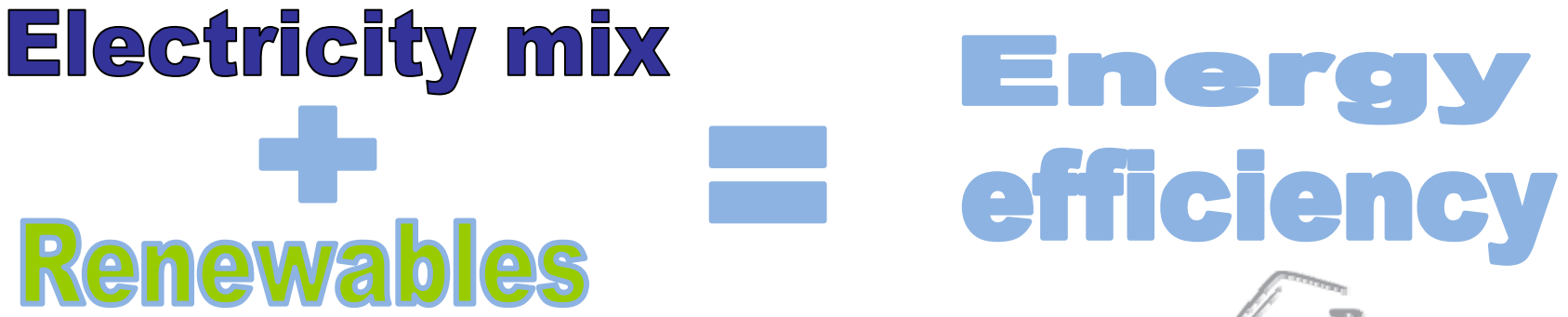
Source: WEO 2008

Congreso de los Diputados

EU27 interest in the development of the EV

Greater energy efficiency in transportation

- The **enhanced energy efficiency of electric vehicles**, their consumption of electricity generated using a growing component of indigenous, low-emission sources (in contrast to imported fossil fuels which currently constitute the bulk of transportation fuels) and the scope to manage demand in order to optimise the use of the power grid constitute powerful tools for delivering on Europe's energy targets, in terms of efficiency, greenhouse gas emission reductions and the use of renewable energy sources.

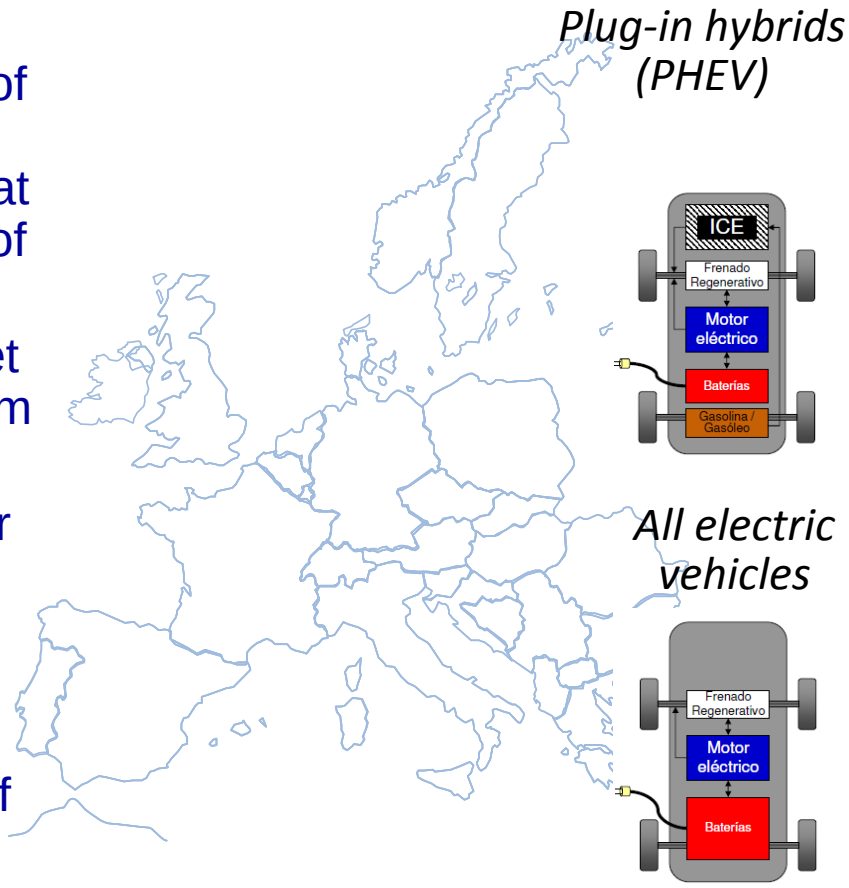


Congreso de los Diputados

EU27 interest in the development of the EV

Technological evolution

- Car markers announce line production of automobiles using electric or mixed technology with attributes and prices that could be attractive to a significant pool of buyers
- In Europe these vehicles will need to get most of the electricity they consume from the power grid
- This becomes an important target under the umbrella of EU27 energy and industrial policy
- Enhanced energy efficiency of electric vehicles, consumption of electricity generated from a growing component of indigenous, low-emission energy sources

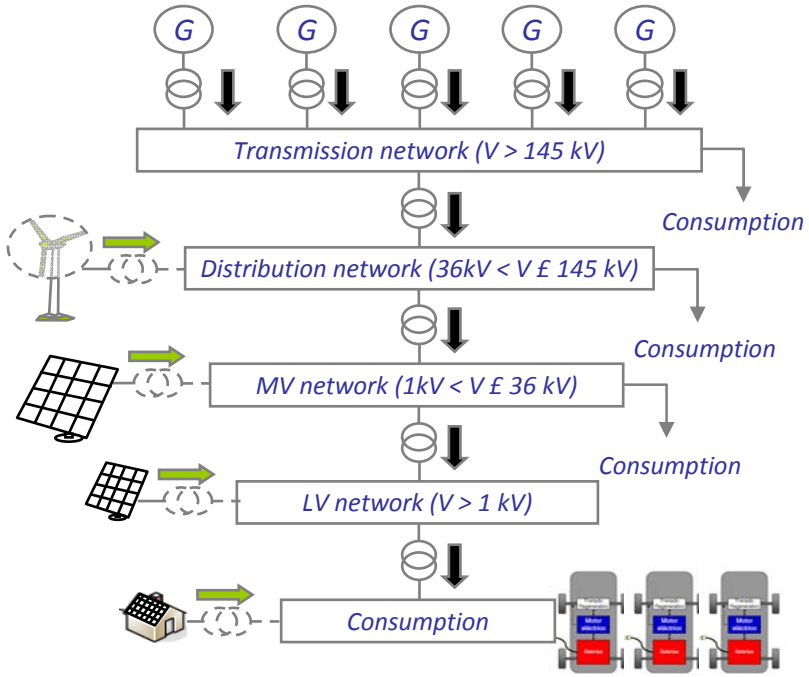


EU27 interest in the development of the EV

Development of smart grids and charging infrastructure

- Power grids need to evolve towards so-called smart grids which had hitherto been driven exclusively by the need to distribute power generated from renewable sources. These grids will enable connections between EV charging and renewable sources.
- The widespread rollout of the EV will face challenges deriving from the lack of charging infrastructure, among other factors.
- The EU27 cannot afford to stay on the sidelines in the industrial revolution implied by the development of electric vehicles, meaning the design and manufacture of the new vehicles (and their parts) and of the required charging infrastructure.

Smart grids



Private charging infrastructure

Regulation and harmonisation of standards

Key targets for development of vehicle electrification

Need for new regulations with European scope:

- Deliver infrastructure and communications standards to ensure electric vehicles can freely circulate within EEC
- Development of the necessary energy infrastructure, leveraging and adapting existing energy infrastructure, established as a fundamental basis for swift rollout
- Ensure ease of use and generation of tangible benefits at the local government level
- Facilitate rollout using incentives designed to benefit the common good
- Ensure open competition and supply security, optimising use of energy

Regulation and harmonisation of standards

Short term priorities

- Standardisation of equipment, charging protocols and communications infrastructure.
- Setting of emission reduction targets and development under the framework of passenger vehicle efficiency and emission standard performance.
- Putting aid in place to:
  - Stimulate R&D
  - Encourage pilot testing in major cities
  - Orientate drivers and manufacturers towards the electric vehicle and development of the necessary electric infrastructure
- Setting of targets for rolling out charging stations.
- Coordinating the initiatives being taken by the various administrations.

Need for the Administration push

European Union

1. Development of a White Book on the electric vehicle
2. Component standardisation, regulation and certification
3. Tax breaks for electric vehicle during launch phase
4. Greater allocation to European R&D programs for work on the electric vehicle

Spanish Government

1. Coordination of regulatory efforts
2. Tax breaks
3. Strategic communication of the virtues of the electric vehicle
4. Public fleets
5. Boost to pilot projects
6. Regulation of the electricity market
7. Encouragement of 'smart' demand management
8. Enlisting cooperation of regional governments
9. R&D programs for industrial development of the EV in Spain

Need for the Administration push

Regional Governments

1. Adoption of technical and regulatory recommendations in development of public charging stations networks.
2. Facilitation of red tape
3. Promotion of tax incentives
4. Promotion of technology clusters related to the EV.

Local Authorities

1. Facilitation of public charging networks
2. Public transport and municipal service fleets
3. Facilitation of red tap for installation of charging stations
4. Provision of tax breaks to individuals and corporations purchasing electric cars
5. Other measures devised to promote the use of the EV (extended charging/discharging hours for electric cars, discounts on on-street parking, restricted traffic areas, etc.).

Need for the Administration push

Prevailing EU27 measures

NORWAY:
- Elimination of taxes
- Grants of over €3,400
- Import duty free

UK:
- Elimination of congestion charges
- Insurance benefits
- Discounts on charges
- Planned grant of over £5,000 for the purchase of either a BEV or PHEV

FRANCE:
- Grant of over €3,200
- Concessions on congestion charges

SPAIN:
- Incentive of over €10,000 on purchase and financing of car
- Lower levies, free parking, etc.

Incentives based on:
- Tax rebates
- Purchase grants
- Savings on congestion charges
- Free parking and battery charging

ITALY:
- Grant of 65% on surplus cost
- Incentive of over €10,000 on financing

SWEDEN:
- Grant of 40% of price differenct

DENMARK:
- Generous tax breaks
- Insurance benefits

GERMANY:
- The government plans to spend €500 million on the development of battery technology and installation of charging stations

AUSTRIA:
- Discounts of > €1,100 or 15% on ticket price
- 50% VAT discount
- Variable discounts

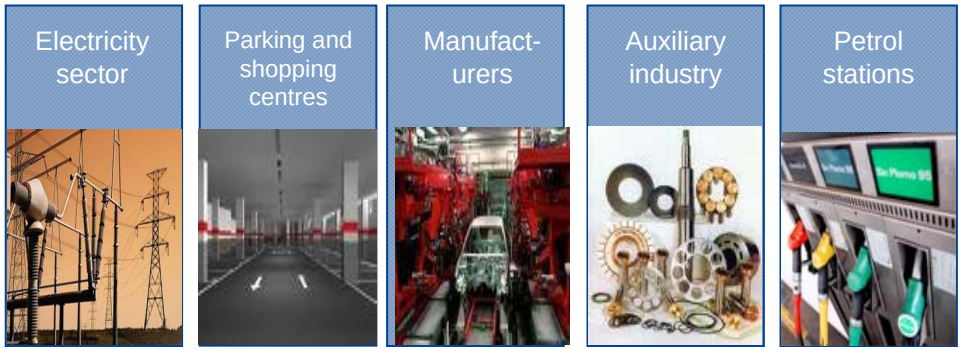
GREECE:
- Generous tax breaks
- Other smaller deductions

"Incentives need to be harmonised"

Need for the Administration push

Standards need to be harmonised across Europe

- Promote agreement and collaboration of all implicated parties
- Coordinate training in new EV related qualifications

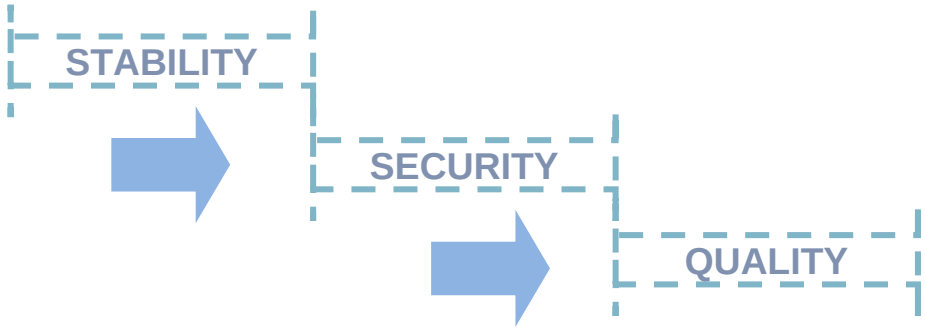


- Facilitate transposition of European standards
- Achieve legislative amendments and the development of charging stations at buildings along with smart meters.
- Oversee consistency in local level EV policy
- Coordinate the development of binding standards for the gradual installation of charging stations at strategic sites.
- Build consensus among all administrations to maintain tax breaks and regulatory support until the electric vehicle reaches a specific market share.

Conclusions

The future is here and now is the time to get to work and join forces

- Among the essential elements of European legislation is the need to generate the **CONFIDENCE** of all engaged stakeholders (EV users, manufacturers and importers, energy companies, banks, insurance providers, etc.);



"Need for a legal framework that guarantees STABILITY, SECURITY and QUALITY across the various institutional levels"

- The enhanced energy efficiency of electric vehicles, their consumption of electricity generated from a growing level of indigenous, low-emission energy sources and the scope to manage demand to optimise the use of the power grid constitute powerful tools for delivering on Europe's energy targets, in terms of efficiency, greenhouse gas emission reductions and the use of renewable energy sources.

Prospects for the electric car from the institutional standpoint

Antonio Cuevas Delgado

Presidente de la Comisión de Industria Turismo y Comercio

San Sebastián 9 febrero 2010