

Thinking Ahead the PPP European Green Cars Initiative

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Outline

- Challenges
- EU Programmes
- European Green Cars Initiative PPP
- Policy
- Conclusions



Global Challenges for a new mobility approach

- Global recession
- EU 20-20-20
- Sustainable transport
- Competitiveness
- Industry / Public sector
- Economic & Social benefit

Current challenges & opportunities

SWOT for the EV in Europe

- | | |
|---|---|
| <ul style="list-style-type: none">• Ambitious energy policy• Strong automotive sector and technological basis• CO₂ emission reduction and reduced fossil fuel dependence | <ul style="list-style-type: none">• Committed giants are needed• No European or global standards• Limited performance: driving range, costs, ...• Missing charging infrastructure• Scattered research |
| <ul style="list-style-type: none">• Next automotive generation• Formidable research on basic components & electronics• Strengthening of global competitiveness | <ul style="list-style-type: none">• European market will be taken over by foreign manufacturers• Safety issues• Raw earth magnetic materials & lithium supply limitation |



EU R&D Programmes

European
Green Cars
Initiative PPP

Draft CIP
WP 2011

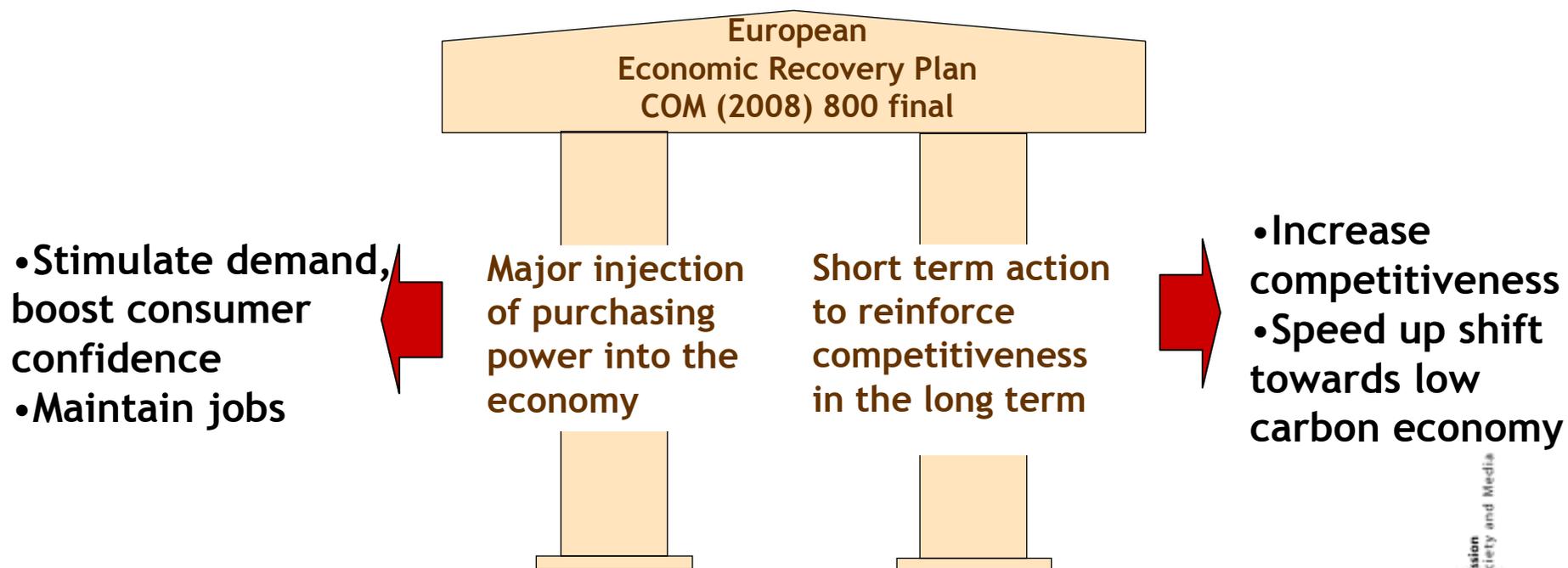
ICT Work
Programme



European Commission
Information Society and Media



European Green Cars Initiative as Part of the European Economic Recovery Plan





European Green Car Initiative - at a glance

- **Three streams of action:**
 - €1 billion funding (FP7, Member States and private)
 - €4 billion EIB loans for R&D
 - public procurement and demand-side measures
- **€ 5 billion total funding for R&D:**
 - passenger cars: electric and hybrid
 - greener ICEs, in particular for trucks
 - bio-methane use
 - logistics and transport system optimization
 - interfaces between vehicles and smart grids



European Green Car Initiative

ICT focus: “Fully Electric Vehicle and its infrastructure” 2010-2013

	M€	
	ICT	FP7
2010	20	105
2011	30	115
2012	30	140
2013	40	140
Total	120	500

- Research Roadmap by ETPs: ERTRAC, EPoSS, SMARTGRID
- Benefits of the fully electric vehicle:
 - At least **40% energy saving**
 - Reduced fossil fuel **dependence** & environmental impact
 - Socio-economic impact:
14 million jobs & international competitiveness
- Challenges:
 - From 1 combustion engine to 2 or 4 **in-wheel electric motors**
 - Energy recovery from braking
 - **Batteries:** cost & business model, driving range, lifetime, energy management
 - Power electronics and safety
 - EU-wide **standards** for chargers/plugs



- **Commission's** Communication on Clean and Energy Efficient Vehicles
28 April 2010
- European **Parliament** Resolution
6 May 2010
- Competitiveness **Council** Conclusions
25 May 2010



European Commission - Communication *A European Strategy on Clean and Energy Efficient Vehicles*

- Action plan with **one major focus on electric vehicles** covering:
 - regulatory framework for reduction of environmental impacts
 - **research and innovation**
 - market uptake and consumer information
 - trade and employment aspects
 - standardisation, charging and refuelling infrastructure
 - recycling and transportation of batteries



European Parliament - *Resolution on Electric Cars*

- Electric vehicles contribute to the Europe 2020 priorities of developing a more resource-efficient and greener economy
- A European standard by 2011 for recharging electric vehicles
- **Support for research and innovation into batteries**
- Improvement of electric networks by introducing smart grids
- Public service vehicle fleets should take the lead



Competitiveness Council Conclusions

Clean and energy-efficient vehicles for a competitive automotive industry and decarbonised road transport

- Electric vehicles are regarded as highly promising ultra-low-carbon power-train technologies with potential to:
 - address the challenges of climate change and fossil fuel dependency
 - cut local air pollution and noise from transport
 - enable synergies with smart grids
 - revitalise the industrial fabric in Europe by fostering innovation, growth and jobs
 - offer a superior well-to-wheel energy efficiency
- Calls on the Commission to present guidelines on financial incentives to encourage consumers to buy 'green' vehicles so as to stimulate the market
- Urges standardisation bodies to develop a harmonised solution by 2011

Policy - Outlook

- CARS 21 - re-launched
- DG MOVE - White Paper on European Transport Policy
- DG ENERGY - “Energy 2020” strategy
- EC Policy action led by DG ENTR with contribution from INFSO
 - **A mandate has just been given to CEN-CENELEC to standardise a charging interface by 2011**



CARS 21

- High Level Group on the Competitiveness of the Automotive Industry in the European Union
 - continuation of the "Competitive Automotive Regulatory System for the 21st century" launched in 2005.
 - up to 40 members representing: **EC, EP, Member States, industry and civil society** (trade unions, NGOs and consumers).
 - recommendations for the short-, medium and long-term public policy in the regulatory framework for the European automotive industry.
 - conducts economical and statistical analysis, assists the Commission, implements the policy set out by Europe 2020



DG MOVE White Paper on European Transport Policy

- “Part I - Challenges”
 - evaluation of recent developments.
 - description of how transport could evolve by 2050 if new policies do not intervene to modify the trends (reference scenario).
- “Part II - Goals and Vision”
 - broad objectives for EU transport policy.
 - identification of limits on emissions.
 - identification of a plausible and desirable way to meet its challenges and to deliver better mobility services to citizens and businesses.
- “Part III - Strategy”
 - the operational part of the White Paper
 - description of initiatives that need to be taken into consideration in the next ten years to put the transport sector on a sustainable path.



Energy 2020 A strategy for competitive, sustainable, secure and affordable energy

- proposal for the next European Council to recall the 20-20-20 target and to intensify the effort to implement all EU legislation
- note of the need for coherence between the goals of security of supply, sustainability and competitiveness and the need for high investments in energy infrastructure
- proposal to implement key initiatives:
 - a new energy efficiency strategy
 - a new energy infrastructure regulation
 - a new external energy policy strategy
 - a new nuclear package
 - a roadmap 2050



An upcoming association

- CSA resulting from the first Green Car call
- Is aiming at building an R&D community, creating a European roadmap and recommending standards, regulations, business cases and R&D priorities for the FEV
- Project partners:
 - VDI/VDE INNOVATION + TECHNIK GMBH, Germany
 - CENTRO RICERCHE FIAT SCPA, Italy
 - SIEMENS AG, Germany
 - AVL LIST GMBH, Austria
 - NXP SEMICONDUCTORS NETHERLANDS BV, Netherlands
 - EUROPEAN AERONAUTIC DEFENCE AND SPACE COMPANY EADS FRANCE SAS, France

17 • An association is planned to be created





Conclusions

- Electrified mobility is a major priority to address acute global challenges
- The Green Car PPP is paving the way for focused R&D and coordination actions
- Electrification of transport is a priority for EU policy makers: communications, white papers, resolutions, CARS21

Thank you! ...

- Information Society and Media:
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