

# 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"><li>• Ambitious energy policy</li><li>• Strong automotive sector and technological basis</li><li>• CO<sub>2</sub> emission reduction and reduced fossil fuel dependence</li></ul> | <ul style="list-style-type: none"><li>• Committed giants are needed</li><li>• No European or global standards</li><li>• Limited performance: driving range, costs, ...</li><li>• Missing charging infrastructure</li><li>• Scattered research</li></ul> |
| <ul style="list-style-type: none"><li>• Next automotive generation</li><li>• Formidable research on basic components &amp; electronics</li><li>• Strengthening of global competitiveness</li></ul>                  | <ul style="list-style-type: none"><li>• European market will be taken over by foreign manufacturers</li><li>• Safety issues</li><li>• Raw earth magnetic materials &amp; lithium supply limitation</li></ul>  |



# EU R&D Programmes

European  
Green Cars  
Initiative PPP

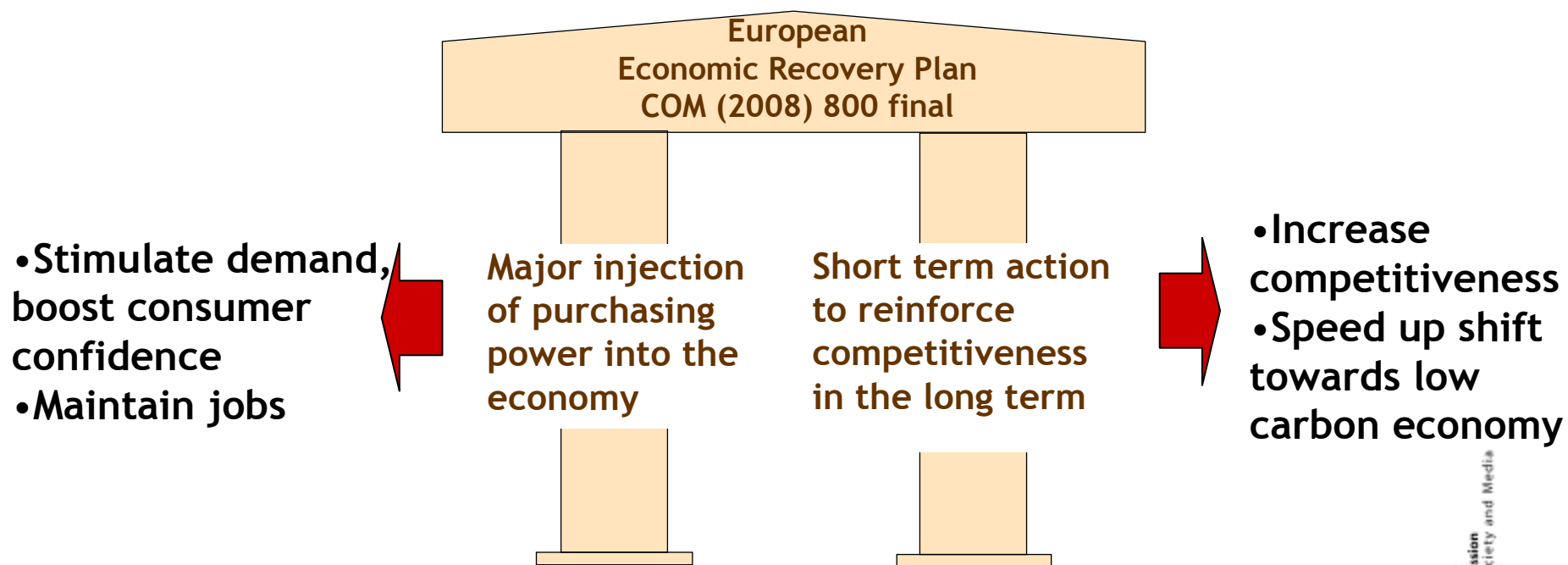
Draft CIP  
WP 2011

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:
  - <http://cordis.europa.eu/fp7/ict/micro-nanosystems/>
  - <http://www.green-cars-initiative.eu/>
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