



International Partnership for Hydrogen and Fuel Cells in the Economy



Country update – European Commission

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European Commission

Energy Conversion & Distribution Systems

14th IPHE Steering Committee Meeting-Shanghai, 23-24 September 2010



Europe 2020 Strategy for Smart, Sustainable and Inclusive Growth

- **Smart growth** - knowledge and innovation
- **Sustainable growth** – resource efficient, green, competitive economy
- **Inclusive growth** – high employment, social and territorial cohesion
 - **Flagship initiative: “Resource efficient Europe”**
 - Decouple economic growth / use of resources
 - Strategic themes: Climate, energy and mobility
 - Complete the internal energy market and implement the Strategic Energy Technologies (SET) Plan



SET-Plan – Technology Pillar of EU Energy and Climate Change Policy

Objective

Accelerate innovation in cutting edge European low-carbon technologies to facilitate the achievements of the 2020 targets and 2050 vision

Main elements

- Broad technology development, identification of key sectors
- New approach - joint strategic planning
- Increase in resources - financial & human
- Reinforced international cooperation



Essence of the European Industrial Initiatives (EIs)

➤ **Industry leadership**

Strengthen industrial participation, boost innovation and accelerate deployment of low-carbon energy technologies. Sectors where the barriers, the scale of investment and the risk involved can be better tackled collectively

➤ **No predetermined model**

Structure of implementation with variable geometry participation and light governance structure

➤ **Public Private Partnerships for innovation**



European Industrial Initiatives (EIs)

4 EIs launched in June 2010

- Wind; Solar; Electricity Grid; Carbon capture and storage
- Joint Statement from Commission, Council Presidency, members of the Steering Group and high-level representatives of the industry

2 EIs to be launched in 2010

- Bio-energy; Sustainable nuclear fission (Gen IV)

1 EI under elaboration – launch in 2011

- Smart cities

On-going initiatives:

- Fuel cells and hydrogen (JTI)



Industry's goals 2020

- Up to 20% of the EU electricity produced by wind.
- Up to 15% of the EU electricity will be generated by solar.
- 50% of networks in Europe operate along “smart principle” effectively matching supply and demand.
- At least 14% of the EU energy mix from cost-competitive, sustainable bio-energy.
- CCS technologies become cost-competitive within a carbon-pricing environment.
- 25 to 30 European cities at the forefront of the transition to a low carbon economy.



European Energy Research Alliance - SET Plan's Research Community Pillar

Key objectives:

- Conceive and implement high quality joint programmes of research in support of the SET-Plan priorities.
- Work towards a long term, durable integration of dispersed research capacities across the EU.
- Develop links and sustained partnerships with industry.
- Develop training, education and outreach activities.



SET Plan- Next steps

- Building a shared effort from EU, MSs, Industry and financial community for a successful implementation of the EII
- SET-Plan Conference in November 2010
 - International cooperation in focus



Energy Research

- Increasing the research investments
- FP7 (excellence in research)
- SET-plan (joint programming)
- Innovation
- Partnerships with the industry - PPP



7th Framework Programme

Energy Theme in FP7 – 2.3 B €

FCH JU →

Hydrogen and fuel cells

CO2 capture and storage technologies for zero emission power generation

Renewable electricity generation

Clean coal technologies

Renewable fuel production

Smart energy networks

Renewables for heating and cooling

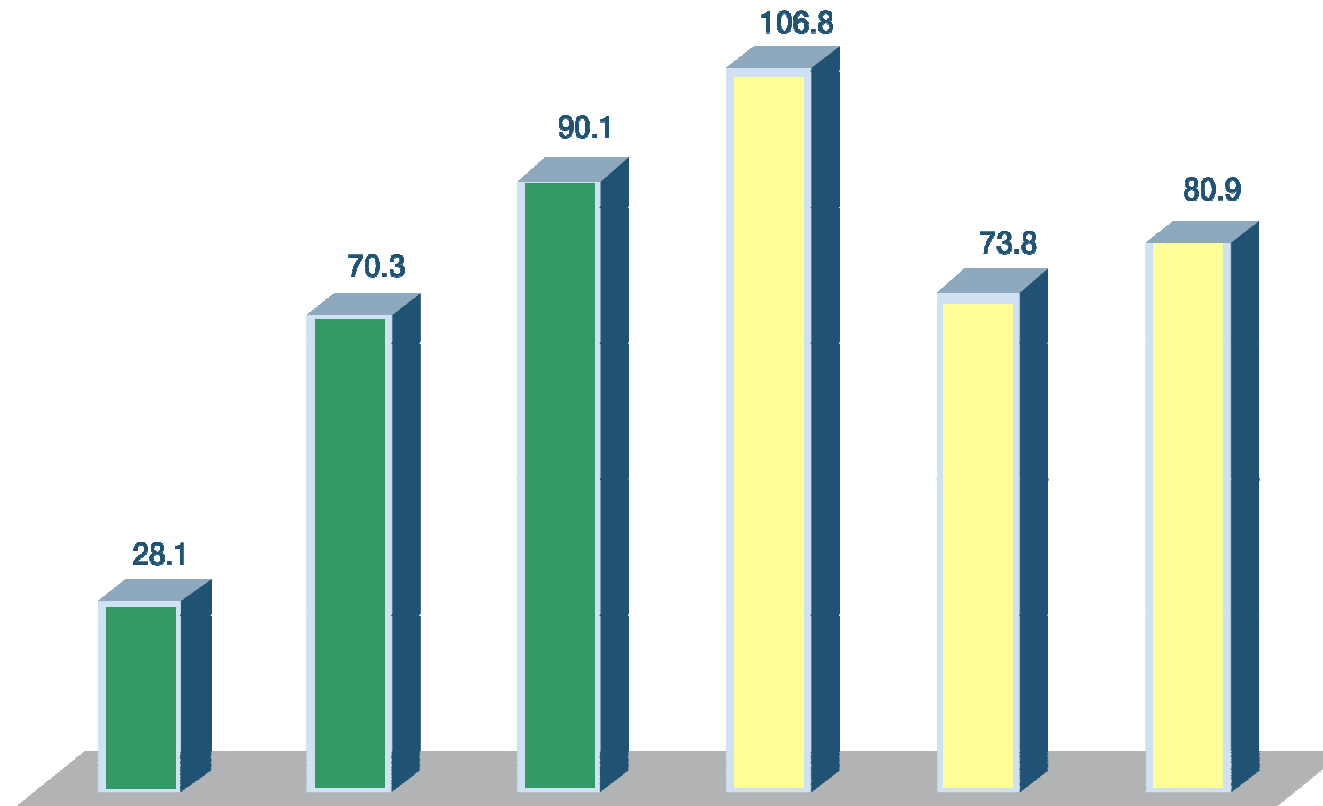
Energy savings and energy efficiency

Knowledge for energy policy making

Horizontal Programme Actions



FCH JU RTD Activities Budget of Annual Calls 2008-2013



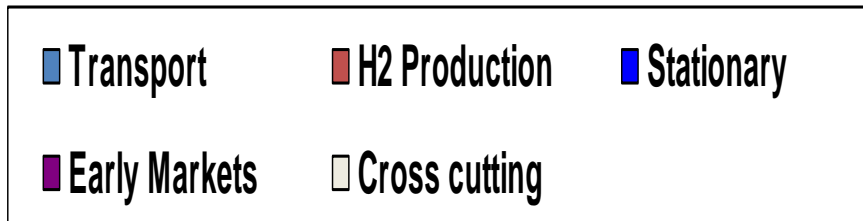
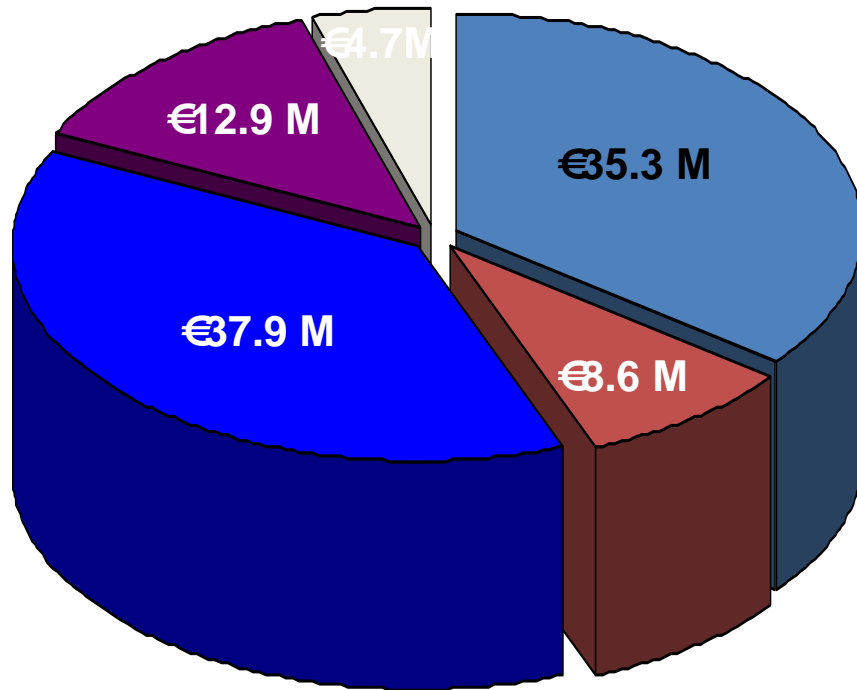
■ Call published

■ Future calls



FCH JU RTD Activities Calls for Proposals to Date

Budget division to date
by application area



Call 2008:

Budget: EUR 28.1 million
16 projects were granted funding in December 2009

Call 2009:

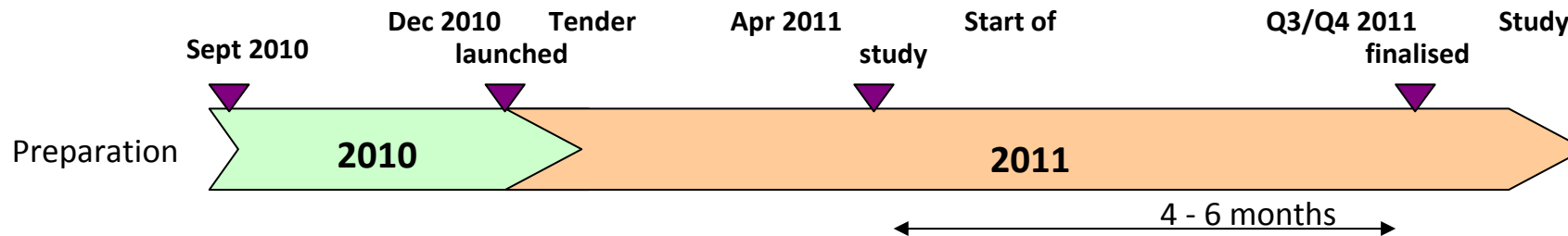
Budget: EUR 71.3 million
26 proposals into negotiations in April 2010

Call 2010:

Budget: EUR 89.1 million
Publication date: 2 July 2010
Deadline: 13 October 2010



Deployment of FCH in Europe- Fuel Cell Vehicles



Cars

- Finalisation of H2 mobility
- Sets approach and methodology for infrastructure roll out in Germany
- Obtains commitment from relevant stakeholders
- Aligns approach and methodology with H2 mobility
- Vision for roll out plan across Europe
- Includes financial, environmental and socio-economic aspects
- Engages Member States, regions, OEMs
- Implementable measures to finance H2 infrastructure

Buses

- Coalition to be formed with relevant stakeholders
- Determine gaps (technical, economic)
- Study to formulate vision of Fuel Cell Bus commercialisation
- Tender to be issued Q1/Q2 2011



EC Communication on clean & energy-efficient vehicles

Technology neutral policy framework for clean and energy efficient vehicles

- promoting clean and energy efficient vehicles based on conventional internal combustion engines
 - Continuing the measures for reducing the emissions of vehicles (Regulatory framework)
- facilitating the deployment of breakthrough technologies in ultra-low-carbon vehicles
 - Supporting research and innovation in green technologies
 - Market uptake and consumer information
- Specific actions for electric cars



Electromobility- European Green Cars Initiative

Support economic recovery through public-private partnership
on clean vehicle technologies

Focus on electric vehicles and improvement of the internal
combustion engine

Financial envelope of **€5 billion**
(€1 billion from FP-7; €4 billion EIB loans)

First calls in July 2009
(overall budget of €108 million)

New calls in July 2010 (overall budget € 100 million)



Transport policy

- Transport policy framework: **White Paper** (end 2010)
- Long-term strategy (2011)
 - **Strategic Transport Technology Plan**
 - **Clean Transport Systems**