



## EUROPEAN COMMISSION

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### INTRODUCTION AND BACKGROUND

The European Commission (EC) is the executive arm of the European Union (EU), a unique treaty-based, economic, and political partnership between currently twenty seven member states, covering a territory of 4,323,000 km<sup>2</sup>. The EU-27 has an estimated total population of 502,480 million with a nominal GDP in 2011 of 12,629 billion Euros and an average GDP growth rate of 0.2%. The most recent data on the EU and of the individual member states' primary energy structure and electricity production and consumption can be found in the EC issued statistical pocketbook 2010, "EU energy and transport in figures."<sup>1</sup>

The EC is responsible for proposing policy and legislation, implementing decisions, ensuring that all abide with the European treaties and laws, and for managing the general day-to-day running of the EU affairs. It therefore handles a number of policy areas and portfolios, including science and research. The Commission Directorates-General responsible for the policy areas most relevant to IEA-HIA are DG Energy (ENER), DG transport and mobility (MOVE), and DG Research and Innovation (R&I). Additionally, the Directorate-General Joint Research Centre (JRC) provides independent scientific and technological support for EU policy-making. The JRC Institute for Energy and Transport,<sup>2</sup> located in Petten (the Netherlands) and in Ispra (Italy), focuses on energy and transport issues, and represents the EC in the IEA HIA. Sources for this update include the seven JRC Institutes, as well as close cooperation and networking at European and global levels.

### 2011 RELEVANT POLICY UPDATES & MILESTONES

The EU policy document EU 2020 Strategy (COM[2010]2020) sets out the main policy lines for delivering smart, sustainable and inclusive economic growth in the EU. This overall strategy is implemented through a number of Flagship Initiatives, one of which is directly relevant for energy-transport-climate change issues, namely, the Flagship Initiative Resource Efficient Europe (COM[2011]571).

As for energy policy within this overall frame, the Commission has published the EU 2050 low-carbon roadmap (COM[2011]112), as well as the Energy 2050 Roadmap (COM(2011)885), which explores the challenges posed by delivering the EU's decarbonisation objective while at the same time ensuring security of energy supply and competitiveness. In the transport policy area, the Commission has published the White Paper on Transport (COM[2011]144) with ambitious goals to reduce transport-generated carbon and pollutant emissions, through cleaner, more integrated and accessible transport systems. A number of European Industrial Initiatives (EIIs) have been launched in the frame of the Strategic European Technology Plan (SET-Plan) to address technology as a policy-enabler for energy and transport.<sup>3</sup> All of these are industry-led public-private partnerships that have established a dedicated roadmap with a 2020 time horizon for the energy technology considered. Such a roadmap sets RDD priorities and also includes information on required budgets. A Strategic Transport Technology Plan is expected for publication in 2012.

### VITAL STATISTICS

*Executive Arm of EU-27*

*27 member states*

#### Population

499,694 million

#### Territory

4,323,000 km<sup>2</sup>

#### Nominal GDP

2,405,409 billion Euro

#### Average Annual GDP Growth

1.8%

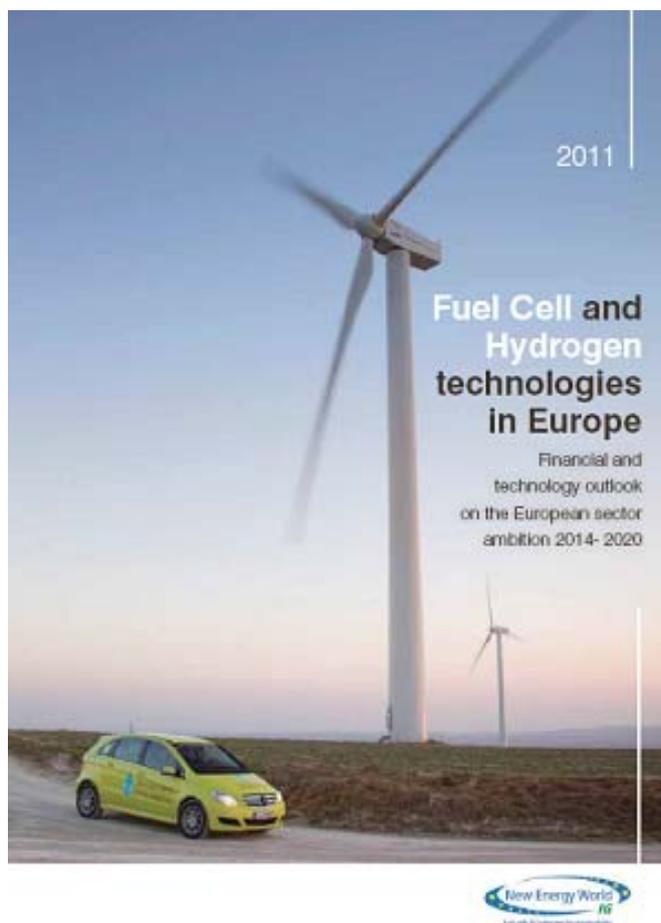


Figure 1: Cover page of FCH

## EUROPEAN FUEL CELLS AND HYDROGEN JOINT UNDERTAKING

In the aforementioned policy-papers, the potential of hydrogen and fuel cells technologies is mentioned, stressing, however, that further technology development is needed. EU-level efforts related to that goal are mainly performed within the Fuel Cells and Hydrogen (FCH) Joint Undertaking (FCH JU).<sup>4</sup> This public-private, industry-led, partnership composed of the European Industry, the European Commission and the European Research Community has been set up to overcome fragmentation and co-ordinate the European research, technological development and demonstration efforts in this field in a market driven fashion. The FCH JU is investing nearly 0.5 billion Euros, to be matched by contribution of all the legal entities participating in the FCH JU activities, in the period 2008–2013 while ensuring the involvement of all key stakeholders and striving at enhancing international collaboration. Its Multi-Annual Implementation Plan (MAIP) 2008–2013 has been revised in 2011, and, as required for the SET-Plan European Industrial Initiatives, an FCH Technology Roadmap containing a financial and technology outlook on the European sector ambition for the period 2014–2020 has been developed under industry leadership.<sup>5</sup> In 2011, the 4th call for FCH-JU proposals with a total indicative funding of 109 M€ was launched. In November 2011, during the FCH JU Stakeholders General Assembly, the progress of the on-going FCH JU was reviewed in relation to the targets of the MAIP. The report on this Review exercise is available on the FCH JU website.<sup>6</sup>



## ENDNOTES

“EU energy and transport in figures - Statistical pocket book 2010”, issued by EC Directorate General for Energy and Transport ISBN 978-92-79-13815-7; [http://ec.europa.eu/energy/publications/statistics/statistics\\_en.htm](http://ec.europa.eu/energy/publications/statistics/statistics_en.htm)

JRC/IET web site: <http://iet.jrc.ec.europa.eu/>

[www.setis.ec.europa.eu](http://www.setis.ec.europa.eu)

The Fuel Cells and Hydrogen Joint Technology Initiative - webpage: <http://www.fch-ju.eu/>

<http://www.fch-ju.eu/sites/default/files/111026%20FCH%20technologies%20in%20Europe%20-%20Financial%20and%20technology%20outlook%202014%20-%202020.pdf>

<http://www.fch-ju.eu/sites/default/files/FCH%20JU%20Programme%20review%202011%20final%20report%20pdf%20-%20April%202012.pdf>