Fuel Cells and Hydrogen Joint Undertaking

2007/0211(CNS) - 09/10/2007 - Legislative proposal

PURPOSE: to establish a Joint Technology Initiative (JTI) on 'Fuel Cells and Hydrogen' to stimulate an integrated research, technological development and demonstration effort in fuel cell and hydrogen technologies of sufficient critical mass to contribute significantly to European energy public policy objectives.

PROPOSED ACT: Council Regulation.

BACKGROUND: Joint Technology Initiatives (JTIs) are introduced in the Seventh Framework Programme (FP7) as a way of creating public-private partnerships in research at European level. The "Co-operation" Specific Programme identifies fuel cells and hydrogen as one of six areas where a JTI could be particularly relevant, alongside aeronautics and air transport, innovative medicines, embedded computing systems, nanoelectronics and global monitoring for environment and security (GMES). JTIs arise mainly from the work of European Technology Platforms (ETPs). In a small number of cases, ETPs have achieved such an ambitious scale and scope that they will require the mobilisation of high public and private investments as well as substantial research resources to implement important elements of their Strategic Research Agendas. JTIs are proposed as an effective means of meeting the needs of these ETPs.

Fuel cells are very quiet, highly efficient, energy converters capable of delivering substantial cumulative greenhouse gases (GHG) and pollutant reductions. They offer flexibility to the energy mix as they can be operated on hydrogen and other fuels such as natural gas, ethanol and methanol. Fuel cells using hydrogen are intrinsically clean energy converters because the only exhaust product is steam, while other types using natural gas and other fossil fuels also reduce emissions because they use less fuel owing to their higher efficiency. The introduction of hydrogen as a flexible energy carrier can contribute positively to energy security and stabilise energy prices as it can be produced from any primary energy source, and as such can introduce diversity into the transport mix, which is currently 98% dependent on oil.

Although significant EU public funds have already been directed to research into fuel cells and hydrogen, and they are already included in the FP7 energy and transport research portfolio as an important component of research, technological development and demonstration (RTD&D) strategy, the technologies are unlikely to be commercially available as quickly as is desirable. There is a danger of fuel cell and hydrogen industrial development stagnating and falling further behind global competitors. An integrated strategy is required to maximise the benefits of transition technologies with fuel cells using natural gas, biogas, methanol and ethanol, if possible combined with carbon capture and storage (CCS) in the pathway and exploiting strategic niche markets in a planned and optimised framework to avoid economic disruption.

CONTENT: the Fuel Cells and Hydrogen Joint Undertaking resulting from the Technology Platform on Hydrogen and Fuel Cells contributes to the implementation of the Environmental Technologies Action Plan (ETAP) as foreseen in the Communication which included this Technology Platform within priority actions of the ETAP (INI/2004/2131). The European Parliament adopted a Written Declarationin May 2007 which called upon the EU Institutions to support fuel cell and hydrogen technologies for portable, stationary, and transport applications through a partnership with committed regions and cities, SMEs and civil society organisations (DCE/2007/2123).

The FCH Joint Undertaking shall contribute to the implementation of the Seventh Framework Programme (2007-2013) of the European Community for research, technology development and demonstration and in particular the 'Cooperation' Specific Programme themes for "Energy", "Nanosciences, Nanotechnologies,

Materials and New Production Technologies", "Environment (including Climate Change)", and "Transport (including Aeronautics)". It shall, in particular:

- support research, technological development and demonstration (RTD&D) in the Member States and Associated countries in a coordinated manner to overcome the market failure and focus on developing market applications and thereby facilitate additional industrial efforts towards a rapid deployment of fuel cells and hydrogen technologies;
- support the implementation of the research priorities of the JTI on Fuel Cells and Hydrogen, notably by awarding grants following competitive calls for proposals;
- aim to encourage increased public and private research investment in fuel cells and hydrogen technologies in the Members States and Associated countries;
- conclude service and supply contracts necessary for the functioning of the FCH Joint Undertaking;
- ensure the efficiency and effectiveness of the JTI on Fuel Cells and Hydrogen.

The FCH Joint Undertaking shall be considered as an international body which shall be located in Brussels, Belgium. It should be set up for an initial period of 10 years ending on 31 December 2017. This period may be extended. The founding members of the FCH Joint Undertaking shall be: (a) the European Community, represented by the Commission, and (b) the European Fuel Cell and Hydrogen Joint Technology Initiative Industry Grouping Aisbl established under Belgian law (hereinafter the 'Industry Grouping').

The EC budget, totalling **EUR 470 million**, will come from the following FP7 "Cooperation" Specific Programme budget lines: Energy; Nanosciences, Nanotechnologies, Materials and New Production Technologies; Transport (including Aeronautics); and Environment (including Climate Change) in DG RTD and Transport in DG TREN.

Lastly, the Commission shall present to the European Parliament and to the Council an annual report on the progress achieved by the FCH Joint Undertaking.