

Brussels, 10 October 2007

The Fuel Cells and Hydrogen Joint Technology Initiative

The proposal for a Fuel Cells and Hydrogen Joint Technology Initiative has been adopted by the European Commission (see [IP/07/1468](#)). It will be a public private partnership with industry in the lead. The Commission will fund 470 M€ from the FP7 programme and at least the matching amount will come from private industry. Details of the concept of Joint Technology Initiatives are given in [MEMO/07/191](#). This MEMO gives some detail about the Fuel Cells and Hydrogen proposal.

Rationale for the Fuel Cells and hydrogen JTI

Current situation of hydrogen and fuel cells (FC/H₂) research in the EU

- R&D in FC/H₂ has received increasing levels of funding from EU Framework Programmes: FP2 (8m€) to FP6 (315m€).
- National funds available for FC/H₂ are dispersed
- There are still many technical and non technical barriers to overcome before widespread commercial availability is possible.
- Strong R&D competition is coming from other global players (not only US/Japan but increasingly China)

Factors which will risk failure with a "business as usual" scenario

- The research needed is often so complex that no single fuel cell company or public research institution can perform it alone;
- There is no agreed long-term budget plan and strategic technical and market objectives to encourage industry to commit more of their own resources;
- There is insufficient integration of the EU R&D programme (from fundamental research through to large-scale EU-level demonstrations);
- Technical breakthroughs are needed to improve performance and durability and reduce system costs to meet the expectations of potential customers.

Elements of the JTI

The Joint Technology Initiative, JTI, will be a new way of realising public-private research partnerships at European level. The JTI will bring public and private interests together into a new, industry-led implementation structure. This structure will ensure that the jointly defined research programme will better match industry's needs and expectations, and accelerate the hydrogen and fuel cell technology acquisition and deployment process.

Added value of the JTI

This new kind of research cooperation has a number of clear advantages.

- The JTI will contribute to reduced time to market for hydrogen and fuel cells technologies by between 2 and 5 years.
- There will be a quicker impact on improving energy efficiency, security of supply, pollution, and on improving potential for reducing greenhouse gases.
- A pre-defined budget of sufficient critical mass and a 6 year time horizon will raise confidence in public and private investors and allows industry to make long-term investment plans and manage its cash flows.
- Industry's lead role, together with the European Commission, in defining priorities and timelines, in consultation with the research community, will ensure that full advantage is taken of the fundamental research capacities in universities and research centres and that RTD and demonstration efforts are integrated under common management.
- The JTI will create a stronger link between demonstration projects and fundamental and applied research projects, accelerating the pace of learning and moving faster along the experience curve.

Scope and deliverables

- The JTI will implement basic research and industrial applied R&D, demonstration actions and supporting activities, based on the work already done by the European Technology Platform. Perhaps not adding much of useful info
- The intention with the JTI is to deliver robust hydrogen supply and fuel cell technologies developed to the point of commercial take-off. For the automotive sector, the aim is to achieve breakthroughs in bottleneck technologies and to enable industry to take the large-scale commercialisation decisions necessary to achieve mass market growth in the time-frame 2015-2020. For stationary fuel cells (domestic and commercial) and portable applications, the JTI will provide the technology base to initiate market growth from 2010-2015.

Legal basis and structure

- The JTI will be established as a Joint Undertaking according to the provisions of Article 171 of the EC Treaty.
- This entity will initially be established for 10 years. → The seat of the JTI will be Brussels.

Members

- The founding members of the JTI are: the European Community, represented by the European Commission and an Industry Grouping established as an international not-for-profit association representing European industry interests.
- A similar grouping representing the interests of the European research community may be formed and become a member of the JTI.

Timing

The JTI is created by a decision of the Council, after an opinion from the European Parliament. The further legislative process may then take several months to complete. In order to facilitate the start-up of the JTI and ensure a rapid transition to full operational readiness, the Commission will enter into a grant agreement in 2007 with the Industry Grouping that will become the founding member of the JTI along with the European Community. This will allow the set-up of an interim JTI structure.

Financing

The European Commission will contribute up to 470M€ for the 6-year period until 2013. This, and any other public sources of funding that can be leveraged, have to be at least be matched by private investments in JTI projects.

The costs for the basic administration of the JTI programme, estimated at about €20m will be shared: 50% from the Industry Grouping and 50% from the other member(s) of the JTI.

JTI work programme and project financing

- The resources will be available to finance JTI projects.
- The JTI will develop its own work programme that will take into consideration the strategic documents developed by the hydrogen and fuel cells technology platform, and in particular the Implementation Plan. This plan contains a RTD&D programme with actions needed for a commercial take-off in the time-frame of 2010-2020.
- The implementation of the work programme of the JTI will be mainly through calls for proposals.
- The JTI will also take appropriate measures to leverage additional financing from other sources, including from national and regional programmes, as well as exploring opportunities to make use of the FP7 Risk-Sharing Finance Facility (with the European Investment Bank).
- It is expected that Member States and Regions may invest directly or indirectly into those JTI projects of interest to them. A flexible set of mechanisms will be put in place to allow their optimal participation in JTI activities.

Governance of the JTI

- The executive bodies of the JTI will be the Governing Board and the Executive Director assisted by the staff in a Programme Office.
- The Governing Board will be composed of representatives of the Industry Grouping, the Commission and, if established, the Research Grouping. The Governing Board shall have overall responsibility for the operations of the JTI: implementation of the activities, approval of the annual implementation plan, budget, accounts and the balance-sheet; approval of the list of selected project proposals, etc.
- The Programme Office will, under the responsibility of the Executive Director, be in charge of the daily management of the JTI as well as managing the launch of the calls for project proposals, the evaluation and selection of the projects, among others.
- The Scientific Committee is an advisory body to the Governing Board.
- The High Level Member States Group will follow the work of the Joint Technology Initiative and advise the Governing Board.
- The Stakeholders Forum will take place once a year.