



European Hydrogen and Fuel Cell Technology Platform

“Strategy to Action”

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H2&FC FOR EU POLICY PRIORITIES



Strategic Challenges

- 1. SECURITY OF SUPPLY**
Future oil production
peak/geopolitical issues
- 2. CLIMATE CHANGE, and environmental pollution in general**
- 3. EU COMPETITIVENESS**
As compared to the US,
Japan, China, India,
Brazil...)



Potential Contribution from H2&FC

- 1.** H2 produced from many primary energy sources and used for many applications, allowing for **energy efficiency** and **energy saving**
- 2.** H2 (+FC) can reduce greenhouse gas emissions of transport vehicles down to zero in the long term - cleaner & more efficient conversion
- 3. POTENTIALLY HUGE MARKET: INVESTMENT & JOB CREATION, EU GROWTH & COMPETITIVENESS**

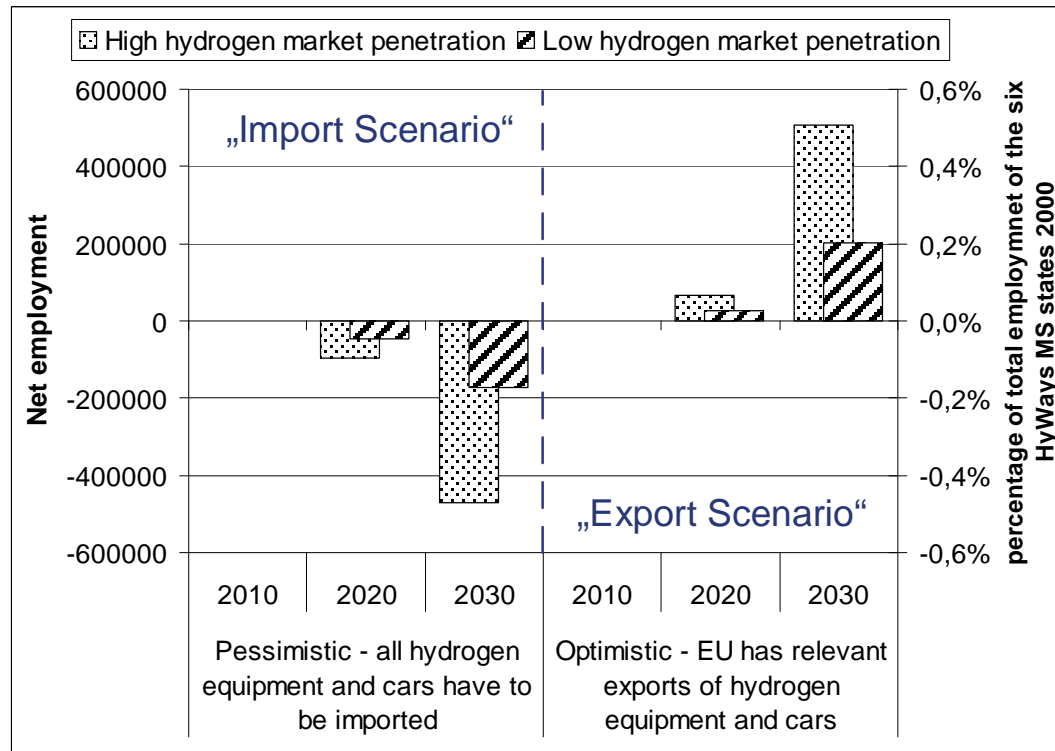
H2&FC TECHNOLOGY PLATFORM IS READY...



... AND LOOKS AT THE LISBON PRINCIPLES



Net employment effects* of hydrogen car introduction scenarios



Hydrogen passenger car penetration:
 High scenario: 2020: 6 Mio. vehicles
 2030 45 Mio. vehicles
 Low scenario: 2020: 1,3 Mio. vehicles
 2030 14 Mio. vehicles

Time is of the essence in order to transfer European Innovative RD&D into competitive business for European and export markets!

500,000 jobs can be created or lost (by 2030)

Source: HyWays, WHEC 16, Lyon, France, 15 June 2006

* Calculations from the EU-funded project HyWays (European Hydrogen Energy Roadmap) for the six member state partners in Phase I (France, Germany, Greece, Italy, Norway, The Netherlands)

SIX POLICY ACTIONS FOR LEAD MARKET PICK-UP



1. **JOINT TECHNOLOGY INITIATIVE** proposal without further delay: the most effective instruments for concentrating industry effort & funding over the whole innovation chain
2. **LIGHTHOUSE DEMONSTRATION PROJECTS** including public procurement enhance current demonstration projects towards commercialization
3. **PUBLIC PROCUREMENT & BUYERS' POOLS** – example: MOU Joint Public Procurement of H2 buses by European Cities and Regions (5 October 06)
4. **STRATEGIC PROCUREMENT APPROACH** for **start-ups** (pre-commercialization phase): include H2&FC in the current EC public procurement legislation
5. **REMOVE REGULATORY BARRIERS**, harmonize **CODES & STANDARDS** internationally – example: EC Regulation on H2 vehicles
6. **FINANCING INSTRUMENTS**: specific approaches for **SMEs**, but also a need for new financing approaches, based on equity investments to address the specific needs of independent private developers



1. MARKET FAILURE

JTI will establish a joint implementation roadmap combining public and private investments, provide supportive long-term political framework with appropriate funding and co-ordinate European, national and regional initiatives

2. GOVERNANCE SCHEME

Viability of the decision-making structure and governance scheme is ensured by mayor bodies:

- The JTI Governing Board
- The Industry Grouping
- The JTI-Program Office
- The JTI Business Plan and
- The Ad-hoc committee composed by member states and associated candidate countries representatives

The JTI will facilitate co-ordination with member states, regions, research community, industry and specific action to support participation of micro and SMEs

3. ROLE OF PUBLIC


The Governing Board of the JTI represents public and private stakeholders on equal basis and will approve the JTI business Plan, supporting industry objectives and public interests in a balanced and coherently planned manner

4. ADDITIONAL RESEARCH

52 industrial companies including micro, small, medium and large corporations have declared their intention to increase spending on hydrogen and fuel cell technologies with the JTI creation

H2&FC INDUSTRY IS ACTIVE AND COMMITTED



 The European Hydrogen and Fuel Cell Technology Platform

INDUSTRY DECLARATION OF INTENT TO THE PROCESS OF CREATING A JOINT TECHNOLOGY INITIATIVE ON HYDROGEN AND FUEL CELLS

RECOGNISING the importance of the creation of the Joint Technology Initiative on Hydrogen and Fuel Cells to accelerate the hydrogen and fuel cell technology deployment process with benefits for energy security, the environment and European competitiveness in the framework of funded research and development under the Seventh Framework Programme of the European Commission;

BUILDING on the activity of the European Hydrogen and Fuel Cells Technology Platform (HFP), and in particular on the recommendations of its Advisory Council and the work undertaken by the HFP JTI Working Group created by the Advisory Council to prepare the establishment of a Joint Technology Initiative in the legal form of a Joint Undertaking with the European Commission under Article 171 of the EC Treaty;

TAKING INTO ACCOUNT the work of the Constitutive Committee of the industry grouping of the JTI;

AWARE that a few steps remain in the path to the creation of the JTI, and committed to achieve this objective together;

The signatory companies adopt this Joint Declaration of Intent as a further step in the creation of a JTI on hydrogen and fuel cells technologies.

1. The signatories are ready to create the JTI Industry Grouping as a legal entity to represent Industry in the JTI, on the basis of the work of its Constitutive Committee and as a prerequisite for the creation of a JTI
2. Once created, the Industry Grouping will contribute to the management operational costs of the JTI, in equal part with the European Commission and on a continuous basis for the duration of the EU Seventh Framework Programme
3. The signatories share objectives being developed within the Implementation Panel of the HFP, for industry to invest over Euro 5 Billion in the next 10 years in hydrogen and fuel cell technologies, including public funded projects. The Signatories anticipate the level of industry investment to continue and probably increase well beyond 2016.
4. The signatories consider that an Interim Structure is essential to start the preparatory work as soon as possible and avoid further delays for the entry into force of the Joint Technology Initiative. The signatories are committed to support this Interim Structure on the same basis as laid down in Point 2 of this Declaration.

52 companies including Large corporations, Micro, Small & Medium enterprises signed-up a JTI industry declaration in October 2006 and the establishment of the industry legal entity is planned for early 2007

“the Industry Grouping will contribute to the management operational costs of the JTI ... on a continuous basis for the duration of the EU Seventh Framework Programme”

“... for industry to invest over Euro 5 Billion in the next 10 years in hydrogen and fuel cell technologies, including public funded projects”

CONCLUSION



- Ø European Hydrogen and Fuel Cell Industry expects EC to act:
A lead market approach is needed to complement RD&D efforts
- Ø The proposed six policy actions complement & reinforce each others
- Ø PRIORITY: Joint Technology Initiative
- Ø TIME IS CRUCIAL!