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European Union Statement IPHE Steering Committee Meeting

Paris, 27th January 2005

European Commission Statement





- ✘ **Progress of the European Commission in the development of hydrogen, and next steps**
- ✘ **Contribution to IPHE activities**
- ✘ **European Commission position regarding some issues for discussion in this Steering Committee meeting**





EU Policy Context

- **Security of EU energy supply**
- **Reduction of EU greenhouse gases and pollutant emissions (Kyoto and beyond)**
- **Improve energy efficiency, reduce energy intensity**
- **Increase share of renewable energy**
- **Improve EU industrial competitiveness**



Elements of a European Strategy for Hydrogen and Fuel Cells

- **Green Paper: « Towards a European Strategy for Security of Energy Supply »**
- **High Level Group H₂ and FCs (2002-2003) - Vision report : “*Hydrogen energy and Fuel Cells – A vision of our future*”**
- **European Hydrogen and Fuel Cell Technology Platform - HTP**

Next step

- **FP7 (2006-2010) –Hydrogen Joint Technology Initiative, under preparation**



European Hydrogen and Fuel Cell Technology Platform HTP

➤ Overall platform goal:

“To facilitate and accelerate the development and deployment of cost-effective, world class European hydrogen and fuel cell based energy systems and component technologies for applications in transport, stationary and portable power”

- **Optimising and Capitalising past and ongoing RTD and Demonstration projects**
- **Build with stakeholder an Integrated Strategy for hydrogen research and deployment in Europe**
- **Stimulate public/private partnerships to implement research and deployment elements of the Integrated strategy**
- **Creating the Hydrogen European Research Area**

*(To be elaborated by Jeremy Bentham, chairman of Advisory Council
– more details in annex 1)*

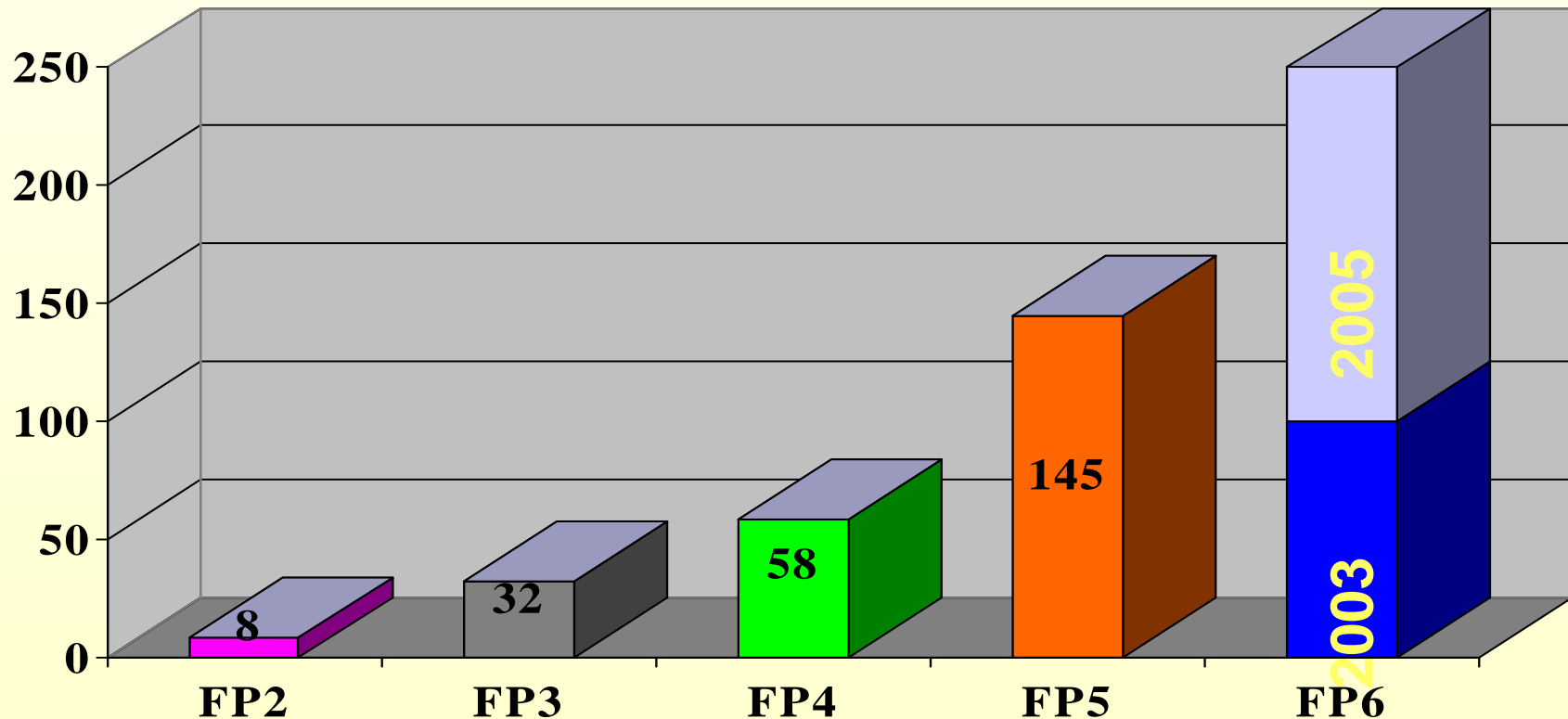


European Hydrogen and Fuel Cell Technology Platform : 2nd General Assembly

- × High profile event scheduled for 17-18 March 2005 in Brussels
- × Ministerial level presentations from Commission, EU member states;
- × Keynote speeches from Members European Parliament, senior industrial
- × Presentation and validation of the Strategic Research Agenda and Deployment Strategy “foundation” documents and joint strategy document
- × Assimilation of ongoing EU and national projects in technical sessions covering hydrogen systems, fuel cells for stationary, transport and portable applications



EC Support to Fuel Cell/Hydrogen projects



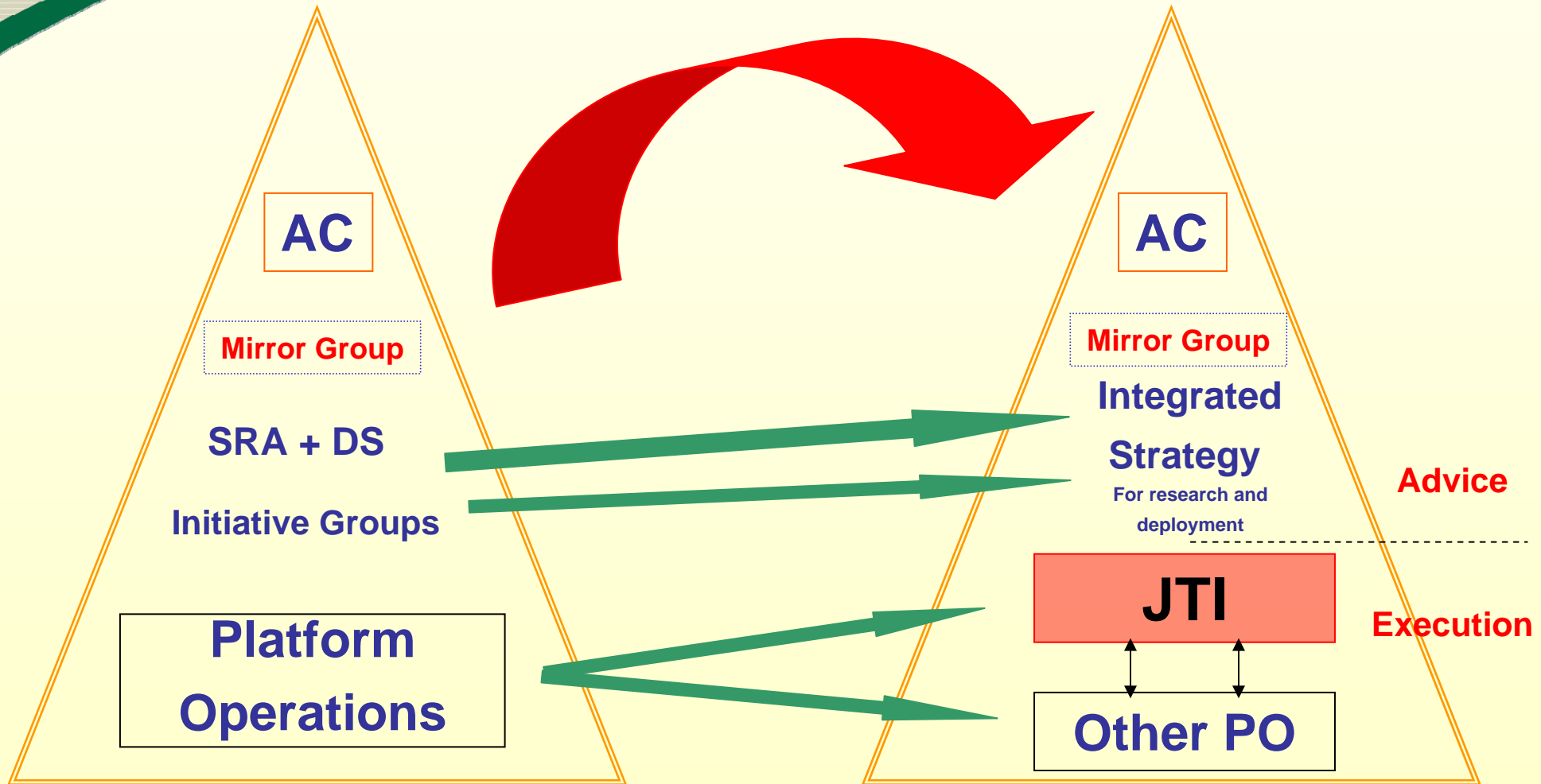
In annex 2 you can find further details on financed projects

7th Framework Programme

- **For the period 2006-2010 (possibly -2013)**
- **At least doubling the research budget**
- **Orientations presented in Commission Communication (COM/2004/353 of 16 June 2004)**
- **Proposes a new concept of European Joint Technology Initiatives (JTI), in particular for Hydrogen and Fuel Cells**
- **Tentative timetable:**
 - ✓ **FP7 proposal of the Commission – Spring 2005**
 - ✓ **First calls – late 2006**



Evolution of the HFP



JTI concept and values

- ✘ Implements in an effective and efficient manner the Integrated Strategy for research and deployment developed in the Technology Platform
- ✘ It is a Public-Private-Partnership with an appropriate governance and management structure (avoiding conflicts of interest)
- ✘ Envisages strong industrial participation
- ✘ Supporting a European Research Area
- ✘ Developing outreach at international level
- ✘ Capitalising on FP5 and FP6



Possible scope for JTI

- ✘ Fuel cell systems – transport, stationary and portable
- ✘ Hydrogen production, focus on sustainable renewable routes and transition from fossils
- ✘ Hydrogen delivery and storage
- ✘ Hydrogen safety and testing
- ✘ Lighthouse projects, Demonstration to trigger deployment
 - ✓ HyCOM – transportation and stationary
 - ✓ HyPOGEN - hydrogen production from fossil fuels with CO₂ capture and storage
- ✘ Support to development of policy and regulatory framework, including pre-normative research, socio-economic research, education and training, dissemination
- ✘ Collaborative fundamental research – materials, processes



EU actions supporting IPHE

Active contributions to all ILC activities, in particular:

- × Opening and expand workshops to IPHE, « FC Test » Seminar (Ulm, September 2004) and Bus Demon (Porto, November 2005)
- × Development of scoping paper on Regulations codes and standards (*presentation by M Steen, JRC*), and contributions to all the other scoping papers
- × Hosting IPHE workshop on Hydrogen Storage (Lucca, Italy, 20-22 June 2005)
- × Hosting IPHE workshop on hydrogen production from renewable primary energy sources (Seville, Spain, 24-26 October 2005)
- × Progressing IPHE event on hydrogen safety (Pisa, Italy, 8-10 September 2005)

In annex 3 you can find further details on these events



Issues for discussion in this Steering Committee meeting

✘ IPHE Partnership:

- ✓ Inclusiveness and transparency are very important but IPHE should now start to generate momentum with established partners, while examining carefully the pace and procedures for growing the partnership; there will be opportunities to enlarge once IPHE has matured operating procedures

✘ Stakeholder Involvement :

- ✓ EU – Technology platform already provides broad EU-wide framework for industry, research community, and public authority stakeholder participation – EU platform is offered as an effective two-way channel for EU stakeholder support to IPHE
- ✓ Stakeholder buy-in is crucial, but EU remains to be convinced of real added value of systematic stakeholder involvement at SC or ILC level;



Issues for discussion in this Steering Committee meeting

✗ Instruments for Effective Collaboration

- ✓ Further to the document on recognition rules, the IPHE and members need to develop instruments and tools for effective cross-national collaboration – including funding and legal aspects. Applications should be submitted in an open and transparent way.

✗ Hydrogen production

- ✓ As energy carrier hydrogen can be produced from any energy source, however the European Commission aim is to support research in the most sustainable options. IPHE should avoid giving the impression of focusing in one single source.





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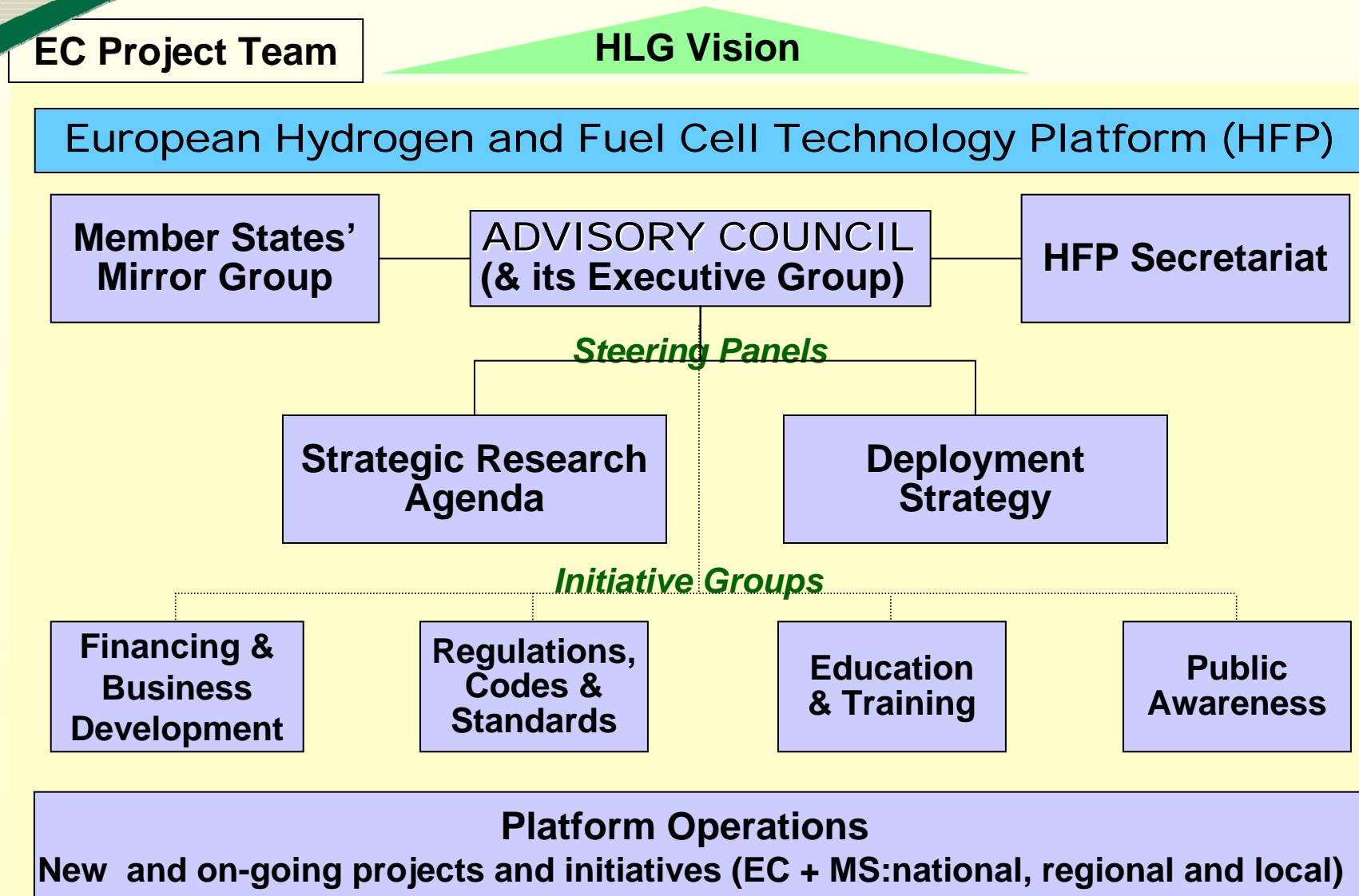
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Annex 1

Hydrogen Technology Platform (<https://www.hfpeurope.org/>)



HFP: Its Operational Structure



Strategic Research Agenda and Deployment Strategy “foundation” documents

- × **Strategic Research Agenda:**
 - Research strategy for 2005-2015 (targeted)
 - Mid-term perspective to 2030
 - Long term perspective to 2050 (qualitative)
- × **Deployment Strategy:**
 - “Snapshot 2020” for deployment of transport, stationary and portable applications;
 - Policy issues
 - Technical, regulatory and economic barriers to deployment
 - Socio-economic assessment
- × **Managerial appraisal and funding issues under development**
- × **Foundation documents available for review on platform website: <http://www.hfpeurope.org>**
- × **Preparing merged strategy document**





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Annex 2

Hydrogen and Fuel Cell research activities co-financed by the European Commission



FP6: First Call for proposals : 31 contracts, 103 Meuro: Projects started in 2004

Area		Number of contracts	Type of action or instrument*	EC funding (MEURO)
Hydrogen	H ₂ production	5	1 IP / 4 STREP	14.6
	H ₂ storage	2	1 IP / 1 RTN	13.3
	H ₂ safety, regulations, codes & standards	2	1 NoE / 1 SSA	7.5
	H ₂ pathways	8	2 IP / 1 STREP / 3 CA / 2 SSA	21.5
	H ₂ end use	3	2 IP / 1 SSA	13.5
	Hydrogen Subtotal:			70.4
Fuel Cells	High Temperature Fuel Cells	4	1 IP / 3 STREP	15.1
	Solid Polymer Fuel Cells	5	2 IP / 3 STREP	14.95
	Portable applications	2	2 STREP	2.85
	Fuel Cells Subtotal:			32.9
TOTAL:				103.3 Meuro

*Instrument: **IP**=Integrated Project; **NoE**=Network of Excellence; **STREP**=Specific Targeted Research Project; **CA**=Coordination Action; **SSA**=Specific Support Action; **RTN**: Research Training Network

Ongoing FP6 projects with potential IPHE interest

- × **HyWAYS** – hydrogen pathway analysis
- × **HySAFE** network for hydrogen safety
- × **StorHy** – compressed and liquid hydrogen storage
- × **HARMONHy** – gap analysis strategy for pre-normative RTD
- × **NATURALHy** – distribution of H₂/NG mixes
- × **FURIM** – high temperature PEM membranes
- × **Zero-Regio** – hydrogen cars demonstration



FP6: Third Call

Closed 8th Dec 2004 : EU funding ca. 130-150 Meuros (Projects to start in 2005 and 2006)

Main RTD & Demo topics:

- ✓ Fuel cell materials, processes and systems for small, large stationary CHP, also road vehicle traction; marine and aircraft APUs
- ✓ FC system modelling and testing
- ✓ Hydrogen production: large scale gaseous fossil fuels fuel processors, electrolysis, vehicle fuel dispensers
- ✓ Hydrogen storage advanced materials
- ✓ Demonstration of H₂ and alternative fuelled vehicles and infrastructure
- ✓ Benchmarking, planning for integrated RTD and demonstration of hydrogen and fuel cell “communities” (HyCOM, HyPOGEN)
- ✓ Pre-normative research for regulatory and safety of vehicles and hydrogen infrastructure

Proposals encouraged with IPHE dimension!





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Annex 3

IPHE events in the European Union in 2005

