

# **Fuel cells and hydrogen**

## **Joint undertaking**

**PROPOSALS: from submission to selection**

**AIP 2011**

**FCH JU RULES for PARTICIPATION**

**PREPARATION, SUBMISSION and  
EVALUATION of PROPOSALS**

**CLOSING RECOMMENDATIONS**

## Indicative FCH JU funding: 36 M€

### Demonstration

Focus on large-scale demonstration of FCEVs including the build-up of the necessary refuelling infrastructure.

Technologies for the refuelling stations - improvement of 700 bar refuelling concepts and technologies, research on the filling process.

Reduce GHG emissions in the aircraft sector - FC APUs can play an important role.

### Research and Development

Fuel cell systems still need further research and development on competitive and reliable components.

- components, such as peripheral components (e.g. air supply subsystems), membranes, membrane electrode assemblies and bipolar plates.
- Characterisation and diagnostic techniques as well as modelling and simulation
- Degradation of fuel cells

## Indicative FCH JU funding: 16 M€

**Basic and applied R&D** in innovative hydrogen production and supply chains from renewable energy sources and improved solid state and underground storage.

Sustainable hydrogen production and supply chains should be demonstrated and ready for commercialisation by 2013 -> **Demonstration** of production facilities, based on electricity or biogas as primary energy source, which should provide an effective coupling to the hydrogen delivery infrastructure.

The demonstration projects of renewable hydrogen production will prepare the ground for future large investments in synergy with the AA on "Transportation & Refuelling Infrastructure".

## Indicative FCH JU funding: 38 M€

Aim to achieve competitive electrical efficiencies of 45%+ for power units and of 80%+ for CHP units.

Focused efforts to address lifetime requirements of 40,000 hours for cell and stack, as well as commercial target costs.

### **Basic research activities**

- new generation stack and cell designs

### **Applied research activities**

- developing components and sub-systems

### **Demonstration activities**

- proof-of concept
- technology validation
- market capacity build up

**Field demonstration activities** are split into small (residential and commercial) and large (distributed generation or other industrial or commercial) applications **scale**.

## **Indicative FCH JU funding: 15 M€**

Coverage of both demonstration activities for more mature fuel cell systems and R&D for enhancing systems to meet operational and cost requirements or to reduce the time to demonstration and deployment.

### **Demonstration**

Demonstration and deployment of material handling and BUP or/and UPS products, with improved technology maturity.

The demonstrations projects are intended to be at a scale to achieve cost reductions through economies of scale and thereby addressing cost barriers for Future commercial deployment.

### **Research and Development**

1-10kW fuel cell systems, portable systems and Balance of Plant for small portable systems to achieve focused technology improvements against operational and performance targets, and against future cost competitiveness objectives, and in order to reduce the time to demonstration deployment and market readiness.

### **Indicative FCH JU funding: 4 M€**

These activities are to ensure that non-technical barriers to the deployment of these technologies are properly addressed.

All project will be type CSA except 5.4

They will include:

- Studies on assessment of benefits on the use of hydrogen as an energy storage medium, as well as on advanced financing instruments to achieve acceleration of market introduction of hydrogen and fuel cell technologies
- Educational aspects, with the development of hydrogen safety training for first responders, considered critical for the successful introduction of market-ready products
- Development of harmonised testing protocols for PEM stacks, in order to achieve a set of testing procedures that provide a uniform look at their characteristics



AIP 2011

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# DEFINITIONS

according to the model FCH JU Grant Agreement

- **Public body**: any legal entity established as such by national law, and international organisations
- **Research organisation**: a legal entity established as a non-profit organisation which carries out research or technological development as one of its main objectives
- **Higher and secondary education establishments**: term used by Financial Regulation / Implementing Rules and includes universities, schools for applied sciences and similar
- **Industry**: for the purpose of the FCH JU Grant agreement - means a legal entity pursuing an economic activity with a profit objective, or an affiliated entity to such a legal entity
- **SMEs** (\*): mean micro, small and medium-sized enterprises within the meaning of Commission Recommendation 2003/361/EC in the version of 6 May 2003

(\*) enterprises which employ fewer than 250 persons and which have an annual turnover not exceeding EUR 50 million, and/or an annual balance sheet total not exceeding EUR 43 million

# WHO CAN PARTICIPATE in FCH JU PROJECTS?

- Participation in projects shall be open to legal entities and international organisations once the minimum conditions have been satisfied
- The **minimum conditions** to be fulfilled for Collaborative Projects and Coordinating Actions funded by the FCH JU shall be the following:
  - **At least 3 legal entities must participate**, each of which must be established in a Member State or an Associated Country, and no two of which are established in the same Member State or an Associated Country
  - **All 3 legal entities must be independent of each other** as defined in Article 6 of the Rules for Participation of the Seventh Framework Programme[1]
  - **At least 1 legal entity must be a member of the NEW IG or the RG**
- The **minimum condition** for service and supply contracts, Support Actions, studies and training activities funded by the FCH JU shall be the **participation of one legal entity**

*[1] Regulation (EC) No 1906/2006 of the European Parliament and of the Council of 18 December 2006 laying down the rules for the participation of undertakings, research centres and universities in actions under the Seventh Framework Programme and for the dissemination of research results (2007-2013)*

# GENERAL PRINCIPLES

## Implementation and Grant Agreement

**Principles of co-financing and non profit**

**Forms of grants (EU Financial contribution):**

- **Reimbursement (in whole or in part) of eligible costs is the preferred method**
- **A grant will be awarded by means of a Grant Agreement between the FCH JU and the project participants**
- **The project activities shall be financed through a financial contribution from the FCH JU and through in-kind contributions from the legal entities participating in the activities**
- **The industry contribution shall at least match the EU contribution, i.e. the financial (cash) contribution coming from the FCH JU**

# ELIGIBLE COSTS

- **actual**
- **incurred during the duration of project**
- **in accordance with the usual accounting principles of beneficiary**
- **recorded in the accounts of beneficiary**
- **used for the sole purpose of achieving the objectives of the project**

**Non-eligible: identifiable indirect taxes including VAT, duties, interest owed, provisions for future losses or charges, exchange losses, costs declared, incurred or reimbursed in another EU project etc...**

# DIRECT/INDIRECT COSTS

**Eligible costs shall be composed of**

**Direct costs = attributable directly to the action**

**Indirect costs = not attributable directly to the action, but which have been incurred in direct relationship with the direct costs**

**The reimbursement of participants' costs shall be based on their eligible direct and indirect costs**

# UPPER FUNDING LIMITS

## Funding schemes:

CP: Collaborative project

CSA: Coordination and Support Action

Type of organisation	Type of Activity		
	RTD	Demonstration	Other[1]
Industry (other than SME)	CP: max. 50%	CP: max. 50%	CP: max. 100% CSA: max. 100%
SME	CP: max. 75%	CP: max. 50%	CP: max. 100% CSA: max. 100%
Non-profit public-bodies, universities & higher education establishments, non-profit Research organisations	CP: max. 75%	CP: max. 50%	CP: max. 100% CSA: max. 100%

[1] "Other" activities refer to management activities, training, coordination, networking and dissemination (including publications). Please note that scientific coordination is not considered to be a management activity.

# INDIRECT COSTS

**The reimbursement of indirect costs for every beneficiary will be:**

- Either a maximum of 20% of the direct eligible costs**
- Or a flat rate of 20% of the direct eligible costs**

**excluding its direct eligible costs for subcontracting and the costs of resources made available by third parties which are not used on the premises of the beneficiaries.**

**First option is mandatory for industry, except for those whose accounting system does not allow to distinguishing direct from indirect costs. Under this option, beneficiaries shall declare their actual indirect costs under eligible costs.**

**CSA funding scheme: reimbursement limit of 7% of direct costs**



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# **PREPARATION, SUBMISSION and EVALUATION of PROPOSALS**

**CLOSING RECOMMENDATIONS**

# ROAD MAP

- Publication of the Call **03.05.2011**
- Submission of Proposals **18.08.2011 17:00 GMT**
- Check against Eligibility and Evaluation criteria
- Evaluation process **September 2010**
- Evaluation results **October/November 2010**
- Next steps



Please refer to...

ANNUAL IMPLEMENTATION PLAN 2011

GUIDE FOR APPLICANTS

Electronic Proposal Submission System (EPSS)  
- USERS GUIDE

**Includes the Call Fiche for the 2011 Call**

**Identifies the topics specific for the Call**

**Specifies Funding Scheme for each Topic**

**Provides Eligibility criteria as well as Evaluation Criteria**

**Indicates detailed evaluation procedure & timetable**

# GUIDE FOR APPLICANTS

**Includes description of Funding Schemes**

**States how to submit proposal incl. instructions for  
Parts A & B  
(*template & page limits*)**

# ELECTRONIC PROPOSAL SUBMISSION SYSTEM-EPSS

## Electronic submission of proposals in EPSS ® CORDIS

- Fill in Part A proposal details using on-line web form
- Upload PDF of Part B proposal description
- Remember to Save and Submit regularly
- Latest Submission overwrites previous one
- Don't wait until last minute!

# PARTS of PROPOSAL

**PART A: Administrative information about the proposal and the participants**  
**(On-line web forms)**

**PART B: Scientific & Technical content of proposal**

- Template or list of headings – provided as WORD/RTF file
- To be uploaded into the EPSS
- In PDF and within size limit of 10Mbytes

**To be only submitted electronically by the coordinator using the Commission's EPSS**



# BEFORE SUBMITTING YOUR PROPOSAL

## - Check List

- Does your planned work address the topic(s) open in the call?
- Is your proposal eligible?
- Is your proposal complete?
- Are you applying for the right funding scheme?
- Does your proposal follow the required structure?
- Do you have the agreement of all the members of the consortium to submit it on their behalf?

# ELIGIBILITY CRITERIA

**Minimum conditions that a proposal must fulfil to be retained for evaluation:**

- **Submission of proposal before the deadline**
- **Minimum number of eligible, independent participants (incl. membership of IG/RG)**
- **Completeness of proposal (parts A & B)**
- **Scope**

# EVALUATION

**Peer-review carried out by independent experts selected by the FCH JU**

**Experts selection is based on high level expertise and appropriate competences. Furthermore, academic/industrial balance, as well as geography, gender, « rotation » balances.**

**Experts sign confidentiality and non-conflict of interest declarations**

**Following the FCH JU “Rules for submission of proposals, and the related evaluation, selection and award procedures”**

# EVALUATION CRITERIA

Divided into three main criteria

**S&T Quality (including relevance to the topic of the call)**

Concept, objective/state of the art, work-plan/methodology

**Implementation (operational capacity of participants)**

Individual participants and consortium as a whole (management structure, complementarity/balance of partners)

Allocation of resources (appropriateness, justification of budget, staff)

**Impact**

Contribution to expected impacts listed in work programme (at European level)

Plans for dissemination/exploitation (appropriateness of measures, including IPR)

## NEXT STEPS

### After evaluation

**Results of evaluation are communicated to the coordinator in the initial information letter which includes the Evaluation Summary Report (ESR)**

**FCH JU informs relevant advisory bodies (States Representative Group and Scientific Committee)**

**FCH JU draws up final list of proposals for possible funding (respecting funding availability, including matching principle)**

**→ Governing Board decision**

**Opening negotiation letters are sent**

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To calculate industry co-financing contribution, project budget figures have to be accurate. This determines the funding rate!

Budgets submitted at proposal stage often contain mistakes, which necessitates budget clarification phase of several weeks.

-> this year FCH JU offers a budget verification tool



# Budget verification tool

<http://www.fch-ju.eu/content/launch-fch-ju-2011-call-proposals>

Microsoft Excel - Sheet for budget verification CP

File Edit View Insert Format Tools Data Window Help

Text Box 215

How to use the budget verification sheet

Please enable macros when opening the file

0. Enter the number of participants in your project and press the button **Change participants**
1. Chose the appropriate organisation type (similar as in EPSS), and verify that the type shown is correct . **(in the blue square)**
2. Chose the indirect cost model from the drop-down list.
3. Fill in all colored boxes, the calculation of the maximum contribution is automatic.
4. Make sure that the requested amount is not higher that the calculated amount. **(in the blue square)**

Project name		(A)	(B)	(C)	
TEST					
Activity type	Type of participant	Direct costs	Subcontracts	Indirect costs	Total eligible costs ( D=A+C)
Research	Industry	0	0	0	0
	SME	0	0	0	0
	RO	0	0	0	0
Demo	Industry	0	0	0	0
	SME	0	0	0	0
	RO	0	0	0	0
Other	Industry	0	0	0	0
	SME	0	0	0	0
	RO	0	0	0	0

Personnel costs	0	0	0	0
Subcontracting	0	0	0	0
Other direct costs	0	0	0	0
Total (direct costs)	0	0	0	0
Reimbursed direct costs	0	0	0	0
Indirect costs	0	0	0	0
Reimbursed indirect costs	0	0	0	0
Total budget	0	0	0	0
Requested EC contribution	0	0	0	0
Total Receipts				
Maximum reimbursed	0	0	0	0
Matching funds	0	0	0	0

Nbr participants

1

Change participants

## Budget verification tool

Microsoft Excel - Sheet for budget verification CP

File Edit View Insert Format Tools Data Window Help

Type a question for help

Text Box 215

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Total

Nbr participants  
1

Change participants

Project name  
TEST

PART_NUM	Organisation	Non_Profit	Public	Research	Higher Educ	SME	Description	RTD	Demonstration	Management	Other	TOT	Indir Cost mtd
1		N	N	N	N	N	Industry						Actual
							Personnel costs					0	
							Subcontracting					0	
							Other direct costs					0	
							Total (direct costs)	0	0	0	0	0	
							Reimbursed direct costs	0	0	0	0	0	
							Indirect costs					0	
							Reimbursed indirect costs	0	0	0	0	0	
							Total budget	0	0	0	0	0	
							Requested EC contribution	0	0	0	0	0	
							Total Receipts					0	
							Maximum reimbursed	0	0	0	0	0	
							Matching funds	0	0	0	0	0	

# Do's and Don'ts (best practice from the previous calls)

- **What exactly is the novelty of the proposal?**

**Do:** Include a clear State of the Art, SoA (not only EU but international) which illustrates this novelty

**Do:** Provide details of any preliminary activities already performed by members of the consortium to show that they don't start from scratch and that the risk is limited

- **What are you planning to do and how?**

**Do:** Critically review the number of deliverables (too many OR too few are bad indicators)

**Do:** Provide clear milestones which allow to evaluate the progress of the project (including Go/NoGo decision points)

**Do:** Structure the Work Plan in a clear and consistent way showing the relationship among the different Work Packages (WP) and/or tasks

**Do:** Try to have a balanced (sectorial and geographical) and complementary consortium; avoid adding "cosmetic" partners

**Don't:** mix deliverables and milestones

**Don't:** Avoid using sub-contractors and third parties - a strong consortium should be able to perform the major tasks with their own resources

## Do's and Don'ts (best practice from the previous calls)

- **How is your budget/resources planned over the activities and duration of the project ?**

**Do:** explain as clearly as possible the allocated resources (e.g. man-months) per partner and activities - avoid over-estimation of the effort needed

**Do:** try to declare as accurately as possible the estimated costs, especially for indirect costs (use the correct method of declaration of indirect costs)

**Don't:** include partners with 0 total costs - the requested funding can be zero, but the budget should reflect the contribution to the project

- **What can be expected as a result of the project?**

**Do:** Describe precisely the main outcome of the project - avoid using too many ambiguous terms (e.g. illustrate, evaluate, assess, recommend, etc)

- **What would be the impact on energy technology?**

**Do:** Describe the potential impact of the project outcome, not of the technology being addressed

**Do:** Provide quantitative estimates of critical parameters (e.g. performance, size, weight, cost, etc) which allow to compare the resulting outcome with the SoA

***The proposal should provide clear and concise answers to the questions above (which are questions addressed by the criteria/sub-criteria of evaluation)***

# CLOSING RECOMMENDATIONS

**Choose your partners carefully to cover the needed expertise**

**Check your proposal against the check list provided in the Guide for Applicants**

**Do not wait until the last moment to submit the proposal**

**Read the reference documents before preparing the proposal**

- Annual Implementation Plan 2011 (including call fiche)
- Guide for Applicants
- FCH JU Rules for submission, evaluation and award procedures
- FCH JU model Grant Agreement

**Find a document :**

**<http://www.fch-ju.eu/page/documents>**

**Do not hesitate to ask for help or further information at:**

**[fch-projects@fch.europa.eu](mailto:fch-projects@fch.europa.eu)**

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*THANK YOU FOR YOUR ATTENTION !*