



**CALL FOR TENDERS**  
**N° FCH contract 163**

**TENDER SPECIFICATIONS**

**Study on trends in terms of investments, jobs, growth  
and environmental impact of Fuel Cells and Hydrogen 2  
Joint Undertaking**

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## 1. Context and background information

The [Fuel Cells and Hydrogen 2 Joint Undertaking \(FCH 2 JU\)](#) is a unique public private partnership supporting research, technological development and demonstration (RTD) activities in fuel cell and hydrogen energy technologies in Europe. Its aim is to accelerate the market introduction of these technologies, realising their potential as an instrument in achieving a carbon-lean energy system.

Fuel cells, as an efficient conversion technology, and hydrogen, as a clean energy carrier, have a great potential to help fight carbon dioxide emissions, to reduce dependence on hydrocarbons and to contribute to economic growth. The objective of the FCH 2 JU is to bring these benefits to Europeans through a concentrated effort from all sectors.

The three [members](#) of the FCH 2 JU are the European Commission, fuel cell and hydrogen industries represented by Hydrogen Europe and the research community represented by Research Grouping N.ERGHY.

The FCH JU was established by a Council Regulation on 30 May 2008 as a public-private partnership between the European Commission, European industry and research organisations to accelerate the development and deployment of fuel cell and hydrogen technologies.

On 6th May 2014, the Council of the European Union formally agreed to continue the Fuel Cells and Hydrogen Joint Technology Initiative under the EU Horizon 2020 Framework Program. This phase (2014-20), will have a total budget of 1.33 billion euros, provided on a matched basis between the EU represented by the European Commission, industry, and research.

The second phase of the FCH JU (the FCH 2 JU) will reinforce this commitment to achieve a real, strong, reliable and committed European platform on fuel cells and hydrogen where industry, research, and local, national and European officials act to address, through the technology, major socio-economic and environmental challenges.

The projects under FCH 2 JU will improve performance and reduce the cost of products as well as demonstrate on a large scale the readiness of the technology to enter the market in the fields of transport (cars, buses and refuelling infrastructure) and energy (hydrogen production and distribution, energy storage and stationary power generation).

An interim evaluation of the FCH 2 JU will be carried out by 30 June 2017 and its results will be taken into account in the in-depth assessment and interim evaluation of the H2020 Programme.

In this context and more broadly as part of its mission as interface between public authorities and private actors in the Fuel Cell and Hydrogen sector, the FCH 2 JU would like

to have the best possible estimation about the recent evolution of the degree of investments, the level of employment and turnover, the environmental impact as well as an industry's forecast for the coming years.

It is noted that a similar study was conducted in 2012 (for more information see [here](#)). The maturity of the first phase of the FCH JU will now allow better illustrating the impact achieved.

## 2. Objectives, Requested Services & Deliverables

### 2.1 Objectives of the study

The objective of the proposed study is to find and report on the socio-economic impact of FCH 2 JU's activities. The study will provide both an objective and a subjective evaluation of the social, economic and environmental impact created by the project outputs, will capture the state-of-play in the sector and will quantify the positive impact of the Joint Undertaking notably in terms of competitiveness, growth and jobs. This study could be also considered as an independent contribution to the interim evaluation of FCH 2 JU by the European Commission. To this effect, this study needs to be available for publishing by **December 15<sup>th</sup> 2016**.

The study should focus on the perceived benefits of the 184 projects funded by the FCH 2 JU under FP7 and H2020. It should be noted that, while FCH 2 JU is an industry-led programme, impacts are known to have been achieved in related domains such as education, regional policies on innovation, etc. It is important that such secondary impacts are also measured and disseminated.

FCH 2 JU envisages the report to cover the following major periods:

- (1) from 2008 (baseline date of FCH JU establishment) to 2016 (present) and
- (2) the prospects from 2016 to 2020 (end of H2020 Programme), 2024 (end of FCH 2 JU mandate) and 2030 (future-looking in line with EU new energy policy framework).

The study should focus on what has been achieved, including but not limited to:

- General impact of the project(s) on the beneficiary's activity (in terms of activities, networking, participation in other projects, etc.)
- Impact on investment
- Impact of FCH technology in jobs and curricula (creation, evolution of the number of academic courses and number of students, trainees...)
- Patent applications
- Environmental impact (critical materials, CO<sub>2</sub>, NO<sub>x</sub>)
- Impact on policy-making at local, national and EU level, for example in investment in innovation, SME development, etc.

Impact must be considered both on what is related to activities “inside” projects, but also what occurs “outside” of projects as additional activities and leverage.

The study should also provide objective analysis based on “Facts & Figures” relevant for the markets covered by FCH 2 JU, both within Europe and in the world-wide context, sourced from project participants (where available) as well as from generic reports, surveys, etc.

The study should also collate subjective feedback based on direct feedback from project participants, in the form of success stories, testimonies, etc.

## **2.2 Beneficiaries Survey**

The FCH 2 JU has funded around 571 beneficiaries and wishes to observe the trends of the FC&H sector in terms of investments, jobs, curricula and turnover between 2008 and today and from today to 2020, 2024 and 2030, by means of a survey of its beneficiaries. Therefore, the main task required from the consultant consists of organising a survey based on the draft questionnaire in annex, as well as of direct interviews with beneficiaries in FCH 2 JU funded projects.

Based on its experience, the tenderer is free to suggest improvement to the methodology and/or to the questionnaire.

In its tender, the tenderer is requested to explain how it would conduct that survey and what it plans to do to obtain a high level of answer within the deadline available. Particular attention should be given to confidentiality. Beneficiaries must be assured that their answer will be treated in a perfectly confidential way and that only aggregated data will be communicated. The tenderer must propose in its offer a methodology/organisation to ensure the confidentiality necessary to obtain the trust of the beneficiaries while enabling to identify beneficiaries that have answered.

## **2.3 Desk Review**

In order to complement the results of the survey and to have a more global view, the consultant is requested to collect available data and figures (today + trends over the last decade + if available projection for the period 2016 up to 2020-2024-2030) on

- Turnover and investments in FC&H sector in EU and other geographical area (US, Japan, Korea, China, others)
- Public support for FC&H sector in EU (EU + member states) and other geographical area (US, Japan, Korea, China, others)
- Employment in FC&H sector in EU and other geographical area (US, Japan, Korea, China, others)

- Shipments of fuel cell systems and possible environmental impact of FC&H activities in EU and other geographical area (US, Japan, Korea, China, others)
- Impact of FC&H activities in academia (evolution in number of curricula, students) in EU and other geographical area (US, Japan, Korea, China, others)
- Patenting activity in FC&H sector in EU and other geographical area (US, Japan, Korea, China, others)
- Others

The tenderer must make a proposal explaining which of these data it is able to obtain, where from, and how it intends to proceed to collect them. The tenderer is free to propose collecting additional data on the current and future level of activity in the FC&H sector. The tenderer must also ensure that the data used is suitable for publication by FCH 2 JU (with appropriate references to the source).

## 2.4 Qualitative Interviews of Major Stakeholders

While it is important to collect the views of all the FCH 2 JU beneficiaries, it is essential to have the opinion of the limited number of actors that will have a major role in deciding the degree of investment in the FC&H sector for the period 2016-2024. These actors specifically include major industrial players (Original Equipment Manufacturers, Energy Service Companies, etc.), selected SMEs, research and academia as well as high level officials and politicians in the most advanced member states and/or at EU level.

The tenderer must make a proposal explaining who it would interview, what would be the content of the interviews and how it proposes to exploit them.

## 2.5 Deliverables

The consultant must submit an interim report (not publishable, to allow discussion and eventual recalibration of the exercise) and a final, publishable report that gathers the results of the tasks mentioned above, preferably before 15th December 2016. The report must be delivered in a neutral document (e.g. MS-Word document plus MS-EXCEL workbook with anonymised data-point values for charts etc). If requested, the source of the report (i.e. the selected contractor) will be duly credited in the final publication.

## 2.6 Information publicly available

- [Report](#) to the EP on socio-economic impact (January 2016)
- Programme review days reports (all reports can be found [here](#))
- Previous study on jobs and investments (study can be found [here](#))

- Public summary of In-Kind Additional Activities Plan 2014-2015 (plan can be found [here](#))

## 2.7 Information to be provided by FCH 2 JU to the successful tenderer

- List of participants in projects (contacts), identifying key actors
- List of contacts at other relevant organisations

## 2.8 Link with other initiatives

Simultaneously, the European Commission and/or other EU Institutions may launch activities or initiatives in FC&H sector, on research & innovation in this field in Europe, etc.

The objective of this study is to complement these initiatives by targeting a different audience (for the survey) and focussing on different questions (investments/leverage, employment, turnover, environmental impact). There might however be some overlap.

## 3. Indicative Calendar

Publication in FCH 2 JU website	23 June 2016
Invitation to submit an offer	7 July 2016
Deadline for submitting an offer	21 August 2016
Evaluation and selection	By 29 August 2016
Signature of contract	Before 15 September 2016
Study	15 September – 15 November 2016
Intermediate report / analysis	By 30 November 2016
End of the study in a publishable document	15 December 2016

## 4. Volume of contract and Prices

The maximum amount available for this study is € 80,000.

Tenderers shall indicate the total price they propose for carrying out this study.

In addition, the tenderers shall give an indicative repartition of this price between different categories of costs (staff, travel including accommodation and per diem costs, publication costs, etc.) and the tasks/roles of the various staff members involved in the project.

## 5. Contractual aspects

The relation between the FCH 2 JU and the selected contractor shall be ruled by the signed service contract.

Tenderers are recalled that they keep the possibility to propose a subcontractor with a sector specific expertise when submitting a tender for this specific contract.

## **6. Structure and content of the tender**

The tenders must be presented as follows:

Part A: Identification of the tenderer (see section 6.1)

Part B: Non-exclusion (see section 7.1)

Part C: Selection (see section 7.2)

Part D: Technical offer

The technical offer must cover all aspects and tasks required in the technical specifications and provide all the information needed to apply the award criteria. Offers deviating from the requirements or not covering all requirements may be rejected on the basis of non-compliance with the tender specifications and will not be evaluated.

Part E: Financial offer

The price for the tender must be quoted in euro. Tenderers from countries outside the euro zone have to quote their prices in euro. The price quoted may not be revised in line with exchange rate movements. It is for the tenderer to bear the risks or the benefits deriving from any variation.

Prices must be quoted free of all duties, taxes and other charges, including VAT, as the FCH 2 JU is exempt from such charges under Articles 3 and 4 of the Protocol on the privileges and immunities of the European Union. The amount of VAT may be shown separately.

### **6.1 Identification of the tenderer**

The tender must include a cover letter signed by an authorised representative presenting the name of the tenderer (including all entities in case of joint tender) and identified subcontractors if applicable, and the name of the single contact point (leader) in relation to this procedure.

In case of joint tender, the cover letter must be signed either by an authorised representative for each member, or by the leader authorised by the other members with powers of attorney. The signed powers of attorney (see Annex 2) must be included in the tender as well. Subcontractors that are identified in the tender must provide a letter of intent signed by an authorised representative stating their willingness to provide the services presented in the tender and in line with the present tender specifications.

All tenderers (including all members of the group in case of joint tender) must provide a signed Legal Entity Form with its supporting evidence. The form is available on:



[http://ec.europa.eu/budget/contracts\\_grants/info\\_contracts/legal\\_entities/legal\\_entities\\_en.cfm](http://ec.europa.eu/budget/contracts_grants/info_contracts/legal_entities/legal_entities_en.cfm)

Tenderers that are already registered in the Contracting Authority's accounting system (i.e. they have already been direct contractors) must provide the form but are not obliged to provide the supporting evidence.

The tenderer (or the leader in case of joint tender) must provide a Financial Identification Form with its supporting documents. Only one form per tender should be submitted. No form is needed for subcontractors and other members of the group in case of joint tender. The form is available on: [http://ec.europa.eu/budget/contracts\\_grants/info\\_contracts/index\\_en.cfm](http://ec.europa.eu/budget/contracts_grants/info_contracts/index_en.cfm)

## **7. Exclusion, selection and award criteria**

The evaluation is based solely on the information provided in the submitted tender. It involves the following:

- Verification of non-exclusion of tenderers on the basis of the exclusion criteria
- Selection of tenderers on the basis of selection criteria
- Verification of compliance with the minimum requirements set out in these tender specifications
- Evaluation of tenders on the basis of the award criteria

FCH 2 JU may reject abnormally low tenders, in particular if it established that the tenderer or a subcontractor does not comply with applicable obligations in the fields of environmental, social and labour law.

The tenders will be assessed in the order indicated above. Only tenders meeting the requirements of one step will pass on to the next step.

### **7.1 Exclusion criteria**

All tenderers shall provide a declaration on their honour (see Annex 1), duly signed and dated by an authorised representative, stating that they are not in one of the situations of exclusion listed in the annexed template declaration.

In case of joint tender, each member of the group must provide a declaration on honour signed by an authorised representative.

The declaration on honour is also required for identified subcontractors whose intended share of the contract is expected to be above 20%.

FCH 2 JU reserves the right to verify whether the successful tenderer is in one of the situations of exclusion by requiring the supporting documents listed in the declaration of honour.

The obligation to submit supporting evidence does not apply to international organisations.

A tenderer (or a member of the group in case of joint tender, or a subcontractor) is not required to submit the documentary evidence if it has been submitted for another procurement procedure and provided the documents were issued not more than one year before the date of their request by the contracting authority and are still valid at that date. In such cases, the tenderer must declare on its honour that the documentary evidence has already been provided in a previous procurement procedure, indicate the reference of the procedure and confirm that there has been no change in its situation.

A tenderer (or a member of the group in case of joint tender, or a subcontractor) is not required to submit a specific document if the contracting authority can access the document in question on a national database free of charge.

## **7.2 Selection criteria**

Tenderers must prove their legal, regulatory, economic, financial, technical and professional capacity to carry out the work subject to this procurement procedure.

The tenderer may rely on the capacities of other entities, regardless of the legal nature of the links which it has with them. It must in that case prove to the Contracting Authority that it will have at its disposal the resources necessary for performance of the contract, for example by producing an undertaking on the part of those entities to place those resources at its disposal.

The tender must include the proportion of the contract that the tenderer intends to subcontract.

### **7.2.1 Declaration and evidence**

The tenderers (and each member of the group in case of joint tender) and subcontractors whose capacity is necessary to fulfil the selection criteria must provide the declaration on honour (see Annex 1), signed and dated by an authorised representative, stating that they fulfil the selection criteria applicable to them individually. For the criteria applicable to the tenderer as a whole the tenderer (sole tenderer or leader in case of joint tender) must provide the declaration on honour stating that the tenderer, including all members of the group in case of joint tender and including subcontractors if applicable, fulfils the selection criteria for which a consolidated assessment will be carried out.

This declaration is part of the declaration used for exclusion criteria (see section 7.1) so only one declaration covering both aspects should be provided by each concerned entity.

FCH 2 JU will evaluate selection criteria on the basis of the declarations on honour. Nevertheless, it reserves the right to require evidence of the legal and regulatory, financial and economic and technical and professional capacity of the tenderers at any time during the procurement procedure and contract performance. In such case the tenderer must provide the requested evidence without delay. FCH 2 JU may reject the tender if the requested evidence is not provided in due time.

A tenderer (or a member of the group in case of joint tender, or a subcontractor) is not required to submit the documentary evidence if it has already been submitted for another procurement procedure and provided the documents were issued not more than one year before the date of their request by the contracting authority and are still valid at that date. In such cases, the tenderer must declare on its honour that the documentary evidence has already been provided in a previous procurement procedure, indicate the reference of the procedure and confirm that there has been no change in its situation.

A tenderer (or a member of the group in case of joint tender, or a subcontractor) is not required to submit a specific document if the contracting authority can access the document in question on a national database free of charge.

#### **7.2.2 Legal and regulatory capacity**

Tenderers must have the capacity to pursue the professional activity necessary to carry out the work subject to this call for tenders.

*Evidence required:*

All tenderers shall provide a declaration on their honour (see Annex 1), duly signed and dated by an authorised representative, as part of their tender response, stating that they have the legal and regulatory capacity to pursue the professional activity needed for performing the contract to meet the requirement as stated above.

The tenderer shall provide the following evidence listed below upon request by the FCH 2 JU at any time during the procurement procedure:

- Authorisation to perform the contract under national law, as evidenced by inclusion in a relevant professional or trade register (except for international organisations), membership of a specific professional organisation, express authorisation of entry in the VAT register.

#### **7.2.3 Economic and financial capacity criteria**

The tenderer must have the necessary economic and financial capacity to perform this contract until its end. In order to prove their capacity, the tenderer must comply with the following selection criteria:

- Turnover of the last two financial years above EUR 160,000; this criterion applies to the tenderer as a whole, i.e. the combined capacity of all members of a group in case of a joint tender.

*Evidence (to be provided on request):*

- Copy of the profit & loss account and balance sheet for the last two years for which accounts have been closed,
- Failing that, appropriate statements from banks,
- If applicable, evidence of professional risk indemnity insurance;

If, for some exceptional reason which the Contracting Authority considers justified, a tenderer is unable to provide one or other of the above documents, it may prove its economic and financial capacity by any other document which the Contracting Authority considers appropriate. In any case, the Contracting Authority must at least be notified of the exceptional reason and its justification. The Commission reserves the right to request any other document enabling it to verify the tenderer's economic and financial capacity.

#### **7.2.4 Technical and professional capacity criteria and evidence**

Tenderers (in case of a joint tender the combined capacity of all members of the group and identified subcontractors) must comply with the criteria listed below. The evidence must be provided only on request.

- The team delivering the services must prove experience in the field of (1) fuel cells and hydrogen sector as well as in (2) survey techniques, (3) data collection and statistical analysis and (4) working and drafting reports in English with at least 1 project delivered in the last three years showing the necessary language coverage.

*The following evidence should be provided to fulfil the above criteria:*

- List of relevant services provided in the past three years, with sums, dates and recipients, public or private;
- The educational and professional qualifications of the persons who will provide the service for this tender (CVs) including the management staff. Each CV provided should indicate the intended function in the delivery of the service.

### 7.3 Award criteria

The contract will be awarded based on the most economically advantageous tender, according to the 'best price-quality ratio' award method. The quality of the tender will be evaluated based on the following criteria. The maximum total quality score is 100 points.

	Criteria	Points
1	<b>General understanding of the global project</b> <ul style="list-style-type: none"> <li>• Shows an understanding of the general objective of the contract and of the working practices with the FCH 2 JU and the industrial coalitions.</li> <li>• Shows an understanding of the issues and already defines what success means</li> <li>• Already shows analysis and provides first insights that are used in the approach</li> <li>• Adds own aspects/views – has added unexpected elements that are meaningful to achieve success</li> </ul>	30
2	<b>Quality of the proposal</b> <ul style="list-style-type: none"> <li>• Provides a detailed description of project organisation and management (including the collection and treatment of data)</li> <li>• Clearly defines scope, milestones and deliverables of work done</li> <li>• Clearly articulates approach/methodology to achieve objectives</li> <li>• Provides communication and stakeholders' engagement strategy</li> <li>• Timeline and resource allocation is realistic and at the right level of detail</li> </ul>	40
3	<b>Expertise of the team</b> <ul style="list-style-type: none"> <li>• Involvement of one or more of the most senior level staff in the consultancy</li> <li>• Involvement of specialists in key areas of fuel cells and hydrogen technologies</li> <li>• Experience with respect to field of study and reputation within industry</li> </ul>	30
	<b>Total</b>	Max = 100

**Only tenders achieving a maximum of 70% of the overall score will be further evaluated in relation to price.**

## 7.4 Ranking of tenders

The best value-for-money offer is determined by weighting the technical proposal 60% and the financial proposal 40% using the following method:

Tenderers will be ranked based on the total value of points allocated to each of them, according to the following formula:

$$\text{Score for tender X} = \frac{\text{cheapest price}}{\text{price of tender X}} * 40 + \frac{\text{Total quality score (out of 100) for all technical criteria of tender X}}{100} * 60$$

## 8. ANNEX: Draft questions for the survey

It is assumed that the survey would be carried out in the form of one or more questionnaires, adapted to the audience(s) being surveyed, followed up with selective direct-contact interviews to receive more inputs. **The following outline is a suggested reference, for the purposes of submitting for the tender, and is therefore a guide only.** Tenderers should identify in general terms the questionnaire and methodology they propose to use when executing the tasks.

### Questionnaire outline:

- 1) Participant identification
  - a) Permission to call for short interview? (yes/no)
- 2) Participation in which projects?

#### **A. Past and present (Period 2008-2016)**

1. Turnover and investment
  - i. How much money your organisation has spent in fuel cells and/or hydrogen sector between 2008 and 2016 (include R&D projects and deployment/production)?
  - ii. Distinguish investment and expenditure by application (in figures or estimated percentage):
    - a. *Transport*: all transport means (cars, buses, etc.) including material handling vehicles and refuelling infrastructure
    - b. *Energy*: Hydrogen production and distribution, stationary power generation, energy storage, Combined Heat and Power (CHP), portable (battery recharging, for emergency and remote power, for recreational, educational and personal portable power applications)
    - c. *Cross-cutting*, pre-normative and others.

- iii. If possible distinguish investment and expenditure by geographical area (in figures or estimated percentage):
    - a. EU
    - b. US
    - c. Japan
    - d. Korea
    - e. China
    - f. Other
2. Public support
- i. How much of your investments and expenditure was financed by FCH programme?
  - ii. How much of your investments and expenditure was financed by other EU programmes/national/regional subsidies?
  - iii. How much of your investments and expenditure was financed by national subsidies/private investment?
  - iv. How much less, in your opinion, your organisation would have spent in the sector in case FCH 2 JU would not have been there (in figures or estimated percentage)?
3. Human resources
- i. How many people did your organisation employ in 2008 in the fuel cells and/or hydrogen sector compared to today (in figures or estimated percentage)?
  - ii. *For participants coming from the academic sector:* How many FC&H related curricula did you have in 2008 compared to today (in figures or estimated percentage)?
4. Environmental impact
- i. Impact of FCH projects in terms of reduction of emissions (CO<sub>2</sub>, NO<sub>x</sub>), reduction in use of critical materials, reduction in noise in the period 2008/2016.
5. Patenting activity
- i. Patenting evolution 2008/2016

## **B. Future (Period 2016-2020/2024/2030)**

In order to measure the FCH 2 JU additionality (impact and importance of support provided by the FCH 2 JU), we would like you to answer with the assumption that the FCH 2 JU will be continued. Second, we ask you to estimate what would be the impact of a non-continuation of the FCH 2 JU after 2024.

1. Turnover and investment
- i. What are your forecasts in terms of FCH market development (sector turnover, market growth, etc.)?

- ii. How much money your organisation will spend in fuel cells and/or hydrogen sector (include R&D projects and deployment/production) in 2020, 2024 and 2030?
- iii. In case FCH 2 JU programme would not be prolonged, how much less you would spend in FCH sector in 2020, 2024 and 2030 (in estimated percentage)?
- iv. Distinguish investment and expenditure by application (in figures or estimated percentage):

	Assuming FCH2 JU continuation	Impact on the distribution of investment between applications <u>if the FCH 2 JU were not continued*</u>
Transport		
Energy		
Cross-cutting		

\*No impact, bigger share for the specific application or lower share for the specific application

- v. If possible distinguish investment and expenditure by geographical area (in figures or estimated percentage):

	Assuming FCH2 JU continuation	Impact on the distribution of investment between geographical areas <u>if the FCH 2 JU were not continued*</u>
Transport		
Energy		
Cross-cutting		

\*No impact, bigger share for the specific application or lower share for the specific geographical area

## 2. Public support

- i. How much of your investments and expenditure do you expect to be financed by FCH programme?
- ii. How much of your investments and expenditure do you expect to be financed by other EU programmes/national/regional subsidies?
- iii. How much of your investments and expenditure do you expect to be financed by national subsidies/private investment?



3. Human resources
  - i. How many people is your organisation expected to employ in 2020, 2024 and 2030 in the fuel cells and/or hydrogen sector compared to today (in figures or estimated percentage)?
  - ii. *For participants coming from the academic sector:* How many FC&H related curricula are you expected to have in 2020, 2024 and 2030 compared to today (in figures or estimated percentage)?
  - iii. Impact of no continuation of FCH 2 JU in employment, research positions by 2030.
  
4. Environmental impact
  - i. Expected impact of FCH projects in terms of reduction of emissions (CO<sub>2</sub>, NO<sub>x</sub>), reduction in use of critical materials, reduction in noise by 2020, 2024 and 2030
  
5. Patenting activity
  - i. Expected patenting evolution by 2020, 2024 and 2030
  
6. Open questions (to be developed)
  - About the future
  - Continuation with an FCH 3 JU
  - Evolution EU versus rest of the world