

Tender Specifications:

Study on business models and financing arrangements for the commercialisation of stationary Fuel Cells

Table of Contents

1. Introduction	2
1.1 The FCH JU activities	2
1.2 Context	2
2. Starting point and objectives	3
2.1 Background	3
2.2 Objectives of the study	3
3. Study process and analytical framework	4
3.1 What are the Market Barriers?	4
3.2 What are the potential solutions?	5
3.3 What are the actors, their roles and responsibilities?	5
4. Requested services	6
5. Deliverables and definition of success	7
5.1 Deliverables:	7
5.2 Definition of success:	8
6. Contractual obligations	8
6.1 General	8
6.2 Subcontracting	8
6.3 Information and confidentiality	9
7. Calendar	9
8. Volume of the contract and Prices	9
9. Legal Situation of the Tenderer: Exclusion Criteria	10
10. Selection Criteria	10
10.1 Economic and financial capacity criteria and evidence	10
10.2 Technical capacity criteria and evidence	11
11. Award Criteria and Award of the Contract	11
Appendix A - Business Model Assessment	13
Appendix B – Analysis of Actors	16
Appendix C:	18

1. Introduction

1.1 The FCH JU activities

The Fuel Cells and Hydrogen 2 Joint Undertaking (**FCH JU**) represents a public-private research partnership at the European level. Its members are the EU represented by the Commission as public representative, the 'Industry Grouping' (Hydrogen Europe), and the 'Research Grouping' (N.ERGHY). The FCH JU brings public and private interests together in a new, industry-led implementation structure, ensuring that the jointly defined research programme better matches industry's needs and expectations, and accelerates hydrogen and fuel cell technology acquisition and deployment processes. Carried out with the involvement and cooperation of stakeholders from industry (including SMEs), research centres, universities, Member States and regions, the Joint Undertaking builds on the achievements of the European Hydrogen and Fuel Cell Technology Platform and on the results of completed and ongoing EU funded activities.

The FCH JU implemented a Joint Technology Initiative (JTI) within the Seventh Framework Programme 2007 – 2013 (FP7) with a total budget of approx. EUR 1 billion, with an EU contribution of approx. € 0.5 billion.

In the frame of the Horizon 2020 research and Innovation framework programme, the existence and the mandate of the FCH JU have been extended with an additional budget of ~1.33 Billion out of which 665 million of EU contribution for the period 2014-2020.

Beyond its support to R&D activities, the FCH 2 JU aims at placing Europe at the forefront of fuel cell and hydrogen technologies worldwide and enabling the market breakthrough of fuel cell and hydrogen technologies, thereby allowing market forces to drive the substantial potential public benefits.

1.2 Context

Stationary fuel cells can play a beneficial role in Europe's changing energy landscape

The energy systems across Europe face significant challenges as they evolve against the backdrop of an ambitious climate agenda. As energy systems integrate more and more generation capacity from intermittent renewables, numerous challenges arise. Amongst others, Europe's energy systems of the future require new concepts for complementary supply, such as efficient, distributed power generation from natural gas. At the same time, significant investments to modernise the electricity grid infrastructure are needed. Long-term storage solutions become a growing priority to ensure permanent power supply, e.g. power-to-gas. Moreover, Europe puts greater emphasis on energy efficiency in order to save primary energy, reduce fuel imports and increase energy security.

Against this background, distributed generation from stationary fuel cells promises significant benefits.

Last year the FCH JU and Roland Berger Strategy consultants conducted a study¹ with 30 companies, public institutions and associations outlining a pathway for commercialising stationary fuel cells in Europe.

This study produces a comprehensive account of the current and future market potential for fuel cell distributed energy generation in Europe, benchmarks stationary fuel cell technologies against competing conventional technologies in a variety of use cases and assesses potential business models for commercialisation. Considering the results of the technological and commercial analysis, the study pinpoints focus areas for further R&D to sustain innovation and provides some recommendations for supportive policy frameworks.

The action of the FCH JU also includes large scale demonstration projects like Enefield², Soft-pac³, and future even more ambitious projects.

On the member state level, considerable projects and actions have been undertaken or are about to start such as the concluded Callux program and the TEP (Technologieeinführungsprogramm).

2. Starting point and objectives

2.1 Background

Stationary fuel cells are technologically ready for market in Europe, already tested (hundreds or thousands of units in a few countries) but not yet widely commercialised. The benefits are now thoroughly understood as a result of the FCH JU/Roland Berger study but the markets are still struggling to grow. We need to understand why and to overcome the barriers.

The most obvious explanations lies with costs because (1) fuel cells remains expensive because of low production volumes and (2) they entail higher CAPEX but less OPEX (running energy costs) than traditional power and/or heat appliances such as combustion engines, turbines or condensing boilers. There may also be other significant barriers to market growth which do not appear clearly yet. Indeed before selling units it is difficult to find out what other barriers to growth there are beyond the point of sale – addressing e.g. aspects such as servicing and, ultimately, end-of-life recycling.

The key challenge for market actors and policymakers therefore is to understand and articulate how widespread FC adoption can be made to happen in such a way that Europe is able to realise the list of benefits identified for homes and businesses by the FCH JU/ Roland Berger study.

2.2 Objectives of the study

The core objectives of the study are

1. To analyze and evaluate existing and future potential end-to-end business models and associated contractual and financing arrangements concentrating on European focus markets for fuel cells commercialization

¹ FCH JU (2014) Advancing Europe's energy systems: Stationary fuel cells in distributed generation; available at <http://www.fch.europa.eu/studies>

² <http://enefield.eu/>

³ <http://www.soft-pact.eu/>

2. To derive recommendations for industry-wide business model innovation
3. To foster collaboration among value-chain actors to turn new business models into practice

Whilst focus markets are the European countries the analysis shall account for those global aspects that bear on their emergence and subsequent development. For practical reasons, the study should focus on the largest and most advanced markets: Germany, UK and Italy, Benelux, France and possibly Poland.

In terms of market segment, this study shall cover the three main types of applications analysed in the previous study: residential micro CHP (up to 5kw), commercial (5-400kw) and industrial (400kw and above). Realistically, the study should focus and provide detailed results for the most attractive cases (combination of market segment and geographical markets)

The main audiences of the study are the value-chain core and peripheral industry actors (fuel cells OEMs, energy industry, project developers, financial institutions etc.), policy makers and to a lesser extent the general public.

3. Study process and analytical framework

In terms of process, the contractor should organize the study as a platform for inter-stakeholder dialogue and specific FC business model innovation initiatives/partnerships.

In terms of analytical framework, the study should cover the following steps:

1. Identification of Market Barriers
2. Characterization of Potential Solutions
3. Value-chain Actors, Roles and Responsibilities
4. Recommendations and Next Steps

3.1 What are the Market Barriers?

This section will answer the question, “What are the current barriers to widespread adoption of fuel cells in European homes and businesses, including, but not limited to CAPEX?”

Building on the work initiated in the FCH JU/Roland Berger study, and adopting an end-to-end approach, this work package will identify and characterise the various barriers across the value-chain that are holding back market development in different member states.

Barriers are likely to come in many different shapes and sizes (economic, technical, supply chain, market awareness, customer confidence, etc.). The study should take into account variances between member states resulting from differences in policy and regulation, climate, market structure, supply chain or technical issues (e.g. local gas quality)

The study should look at the different end-to-end business models that are currently in use and attempt to characterise them as a series of types. It should then explain which barriers apply to which business model.

We anticipate that business model types might, for instance, include:

1. Classic sales channel model – based on traditional direct sale or sale through installer or wholesaler
2. Alternative models – including leasing and contracting models, incorporating long term power and/or heat purchase agreements (only the produced kWh will be paid)
3. Power as a service;
4. Exploitation of novel revenue streams (e.g. payment for grid services and/or coordination of a group of fuel cells working as a virtual power plant or grouping several regional customers for one decentralized fuel cell)
5. Other solutions.

In all cases, the objective will be to work through the full life cycle of the business model and attempt to assess the barriers that currently hinder its end-to-end deployment.

3.2 What are the potential solutions?

This part of the study will identify possible solutions to the barriers identified in the previous step.

It will first

1. Characterize the inner-workings of prevailing business models (notably in terms of assessing their Strengths, Weaknesses, Opportunities and Threats);
2. Survey best business practices adopted in other technology-oriented markets, both energy and non-energy related – viz. solar PV, energy saving or other technologies with high capex, high technological jump – to ascertain their fitness-for-purpose in the stationary fuel cells segment;
3. Benchmark European, Asian and US approaches for deployment of stationary fuel cells.

Based on this collection of information, it will identify best business practices (including aspects such as product and service offer, routes to market, revenue models, supply chains, financial/economic/industrial implications, etc.), that are pivotal for the development of the stationary fuel cells marketplace. Where appropriate, risk analyses and identification of possible mitigation strategies will be performed to support the reasoning on specific business options. Where relevant, hindering/limiting legislative factors will be also listed.

3.3 What are the actors, their roles and responsibilities?

The various potential business model types are likely to involve different groups of actors with varying appetites for risk, opportunity and investment.

Likely actors will include:

- Manufacturing industry (OEMs + part suppliers)?
- Energy Service Companies (ESCOs) or project developers
- Utilities (from small local actors to international players)
- Banks / other financial institutions/lenders
- Network operators
- Trade associations
- Planners and engineering companies

- Facility management and service provider
- Etc.

This part will assess the potential roles of the various actors and evaluate the various benefits and drawbacks of including them with the potential delivery consortia needed for different business model types.

The following questions that will be explored:

- What is the precise need for this actor? How can they play a constructive part?
- What are the funding/financing opportunities arising from their engagement?
- What would a successful consortium look like?
- What combination of actors would work?
- What are the likely roles within each consortium model?

A fuller analysis of the various possible actors and of how they may be engaged in different business model types is attached at Appendix B.

3.4: Recommendations

Based on steps 2 and 3, this section will identify sets of recommendations for subsequent action. More than one set of recommendations may be required if the objective is to support multiple business models e.g. in different national markets.

These recommendations should include potential business model blueprints with potential partners. They should include clear and concrete elements on optimal contractual and financing arrangements.

4. Requested services

The contractor will be requested to

- Organise concrete discussions to test different business cases, risk allocations and financing schemes between
 - manufacturers,
 - utilities,
 - Financial institutions. In particular promotional banks or similar institutions willing to take a higher risk and/or charge lower interest despite the novelty of the technology
 - Other types of lenders
 - investors/project developers
 - associations representing potential customers.
 - Distribution network operators
- Evaluate the appetite of the different actors for different business case and financing arrangements in different national markets taking into account specifics of national market (incumbent sales channel, customer attitudes, attitudes of financing institutions regulatory framework, spark spread) –

The contractor should invite stakeholders to participate, find effective ways to encourage the provision of insights, ensure that discussions are sufficiently specific to prepare concrete actions and that results can be made public.

The FCH JU will bring a number of actors

- Manufacturers (pure fuel cells manufacturer and manufacturer of heating solutions)
- A few interested utilities (tbc)
- A channel to discuss with other utilities through CEDEC⁴ (Tbc)
- Contact with European Investment bank (tbc)
- COGEN Europe⁵, the European association promoting cogeneration (Tbc)

Building on its own network, the contractor shall bring further market actors, in particular utilities, project developers, financing institutions willing to learn about fuel cells and business model, willing to consider financing schemes to deploy fuel cells (e.g. national promotional banks or financing institutions acting as national intermediaries of EIB and EIF schemes). To demonstrate their capacity to bring these markets actors, **tenderer shall include in their offer** declarations from these actors confirming their willingness to contribute to the study.

5. Deliverables and definition of success.

5.1 Deliverables:

1. Produce a report (pdf document and presentation material) document giving a clear and shared view of the most promising and realistic business models and financing arrangements for stationary fuel cells taking into account the specifics of the different national markets. The document shall include a list of legislative and normative hurdles for the identified business models for the selected markets
2. Dissemination obligation:
 - a. The study should be printed in 500 copies.
 - b. The contractor should provide a list of stakeholders to whom the study will be posted or emailed.
 - c. In addition an event should be organised in Brussels where the results of the study will be presented and copies of the study will be distributed. The event should be attended by ~ 60 people with a balanced representation of the categories of stakeholders.
3. Create a mutual learning dynamic between all the stakeholders (fuel cell manufacturers, utilities, ESCO, project developers, planners and engineering companies, financing institutions and possibly public authorities).

⁴ <http://www.cedec.com/>

⁵ <http://www.cogeneurope.eu/>

5.2 Definition of success:

The study will be regarded as a success firstly if all categories of actors (manufacturers, utilities, financial institutions and other types of lenders, investors/project developers, associations representing potential customers, distribution network operators and public authorities) have clear views of

1. the needs of the other categories
2. contractual and financing arrangements that could fulfill those needs
3. Regulatory elements that can contribute to fulfill those needs.

This clear view should not only be available to the few organisations that will be involved in the study but also for other organisations through a clear report.

Secondly the study will be a success if a number of organisations involved in the study continue the work afterwards and enter in concrete negotiations.

6. Contractual obligations

6.1 General

The contract will be a bilateral contract between the FCH JU and the winning tenderer. In drawing up the tender, the tenderer should bear in mind the provisions of template contract attached to these Specifications.

The contractor must perform this contract to the highest professional standards.

The contractor will have the sole responsibility for complying with all legal obligations incumbent on him, notably those arising from employment law, tax law and social legislation.

The contractor may neither represent the Fuel Cells and Hydrogen Joint Undertaking nor behave in any way that would give such an impression. The contractor must inform third parties that he does not belong to the European public service, but is exercising the tasks on behalf of the Fuel Cells and Hydrogen Joint Undertaking.

6.2 Subcontracting

Sub-contracting is permitted. Certain tasks provided for in the contract may be entrusted to subcontractors, but the main contractor retains full responsibility and liability towards FCH JU for the performance of the contract as a whole. Accordingly, FCH JU will treat all contractual matters (e.g. payment) exclusively with the main contractor, whether or not the tasks are performed by a subcontractor. Under no circumstances can the main contractor avoid liability towards the FCH JU on the grounds that the subcontractor is at fault.

If subcontracting is proposed, the file must include a document mentioning the reasons why subcontracting is proposed; stating clearly the roles, activities and responsibilities of

subcontractor(s) and a letter of intent by each subcontractor stating their intention to collaborate with the tenderer if he wins the contract.

During execution of the contract, the contractor will need FCH JU written authorisation to replace a subcontractor with another and/or to subcontract tasks for which subcontracting was not envisaged in the original tender.

Please note that if subcontractors are proposed, the declaration relating to the exclusion criteria and the documents relating to the selection criteria must be provided by each of them.

6.3 Information and confidentiality

Where confidential information needs to be obtained and used, the consultant is responsible for setting up the appropriate confidentiality agreement and to remain within its boundaries.

7. Calendar

Interested applicants have to submit their proposal, by 16th of March 2016.

It is expected that the evaluation will take place in March and that the contract will start at the beginning of April.

The contractor is expected submit an interim report at the beginning of September 2016 and the final report of its study by 30th November 2016

8. Volume of the contract and Prices

The maximum amount for this study including all the deliverables as mentioned above is €400.000.

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

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.

Prices should be fixed amounts.

Prices should be quoted free of all duties, taxes and other charges, including VAT, as the FCH JU is exempt from such charges under Articles 3 and 4 of the Protocol on the privileges and immunities of the EU; the amount of VAT should be shown separately.

9. Legal Situation of the Tenderer: Exclusion Criteria

Tenderers shall be excluded from participation in the present procurement procedure if there are in one the situation referred in the annexed declaration of honour (Appendix C)

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

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

The successful tenderer **shall provide the documents mentioned as supporting evidence in Appendix C**, before signature of the contract and within a deadline given by the contracting authority.

This requirement applies to all members of the consortium in case of joint tender. In case of doubt on this declaration on honour, the contracting authority may also request the evidence for subcontractors whose intended share of the contract is above 20%.

10. Selection Criteria

The tenderer has to have the necessary technical, professional, economic and financial capacity to execute the contract.

10.1 Economic and financial capacity criteria and evidence

In order to prove their economic and financial capacity, the tenderer (i.e. in case of joint tender, the combined capacity of all members of the consortium and identified subcontractors) must comply with the following criteria:

- Turnover of the last two financial years above € 1 Million

The following evidence should be provided:

- 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 FCH JU considers justified, a tenderer is unable to provide one or other of the above documents, he or she may prove his or her economic and financial capacity by any other document which the FCH JU considers appropriate. In any case, the FCH JU must at least be notified of the exceptional reason and its justification in the tender. The FCH JU reserves the right to request any other document enabling it to verify the tenderer's economic and financial capacity.

10.2 Technical capacity criteria and evidence:

In order to assess of their technical and professional capacity, tenderers shall provide:

- Details of no more than five previous assignments, in no more than 10 pages, demonstrating capacity to undertake the work required, in particular
 - experience in managing multi-stakeholder study projects and in involving utilities and financing institutions in studies.
 - Experience of innovation in energy services, including new business models and related contractual and financial arrangements.
- Evidence of activity and strong existing networks in all EU focus markets covered by the study
- CV of the staff proposed for this contract with particular reference to the principal person proposed by the tenderer to liaise with FCH JU in the performance of the contract.

11. Award Criteria and Award of the Contract

The ranking of the proposals that passed the exclusion and selection stages will be based on the quality/price ratio where quality and price will have a 60/40 weighting. The following formula shall be used:

$$\text{Score for proposal X} = \frac{\text{Cheapest price}}{\text{Price of candidate X}} \times 40 + \frac{\text{Quality of candidate}}{\text{Quality of best candidate}} \times 60$$

The technical evaluation of tenders will be done on the basis of the following award criteria. The tenderers shall provide in their proposal the information necessary to assess such criteria.

	Criteria	Points
1	<p>General understanding of the project,</p> <p>The proposal:</p> <ul style="list-style-type: none"> • Shows good understanding of the objectives of the study, the challenges and opportunities of fuel cell commercialisation • Already shows analysis and provides first insights • Adds own aspects/views - have put in unexpected elements that are meaningful to achieve success 	25
2	<p>Quality of the proposed services</p> <ul style="list-style-type: none"> • Quality of proposed methodology for conducting the work, and to achieve clear and action oriented conclusions • Quality of the proposed process for creating a mutual learning dynamic between all the stakeholders (fuel cell manufacturers, utilities, ESCO, project developers, financing institutions and possibly public authorities). • Time line and resource allocation is realistic and at the right level of details 	35
3	<p>Expertise of the team in charge of the study and quality of the actors proposed as contributors to the study</p>	40

	<ul style="list-style-type: none"> • Involvement in the team actually in charge of the study of individuals that are specialists of all aspects of the study • Number and diversity of market actors in particular utilities, project developers, financing institutions committed to support the tenderer in conducting the study. 	
	Total	Max =100

Appendix A - Business Model Assessment

Here is the preliminary FCH JU assessment of business models on which the contractor is expected to build⁶. However, this preliminary assessment should not limit the freedom of applicants to propose alternative analysis.

a. In the classical sales channel

- Sale of equipment to end customers through installers or retailers
 - How do you actually go about buying and owning a fuel cell?
 - Why not? What's standing in the way?
 - How can you remove those barriers?
- Value: reduction of energy consumption which compensate for higher capex (upfront payment)
- but requires financing options even with subsidies because upfront payment will remain high
 - a. Customer takes a loan either with mortgage loan or consumer loan or specific loan offered by government for energy investments.
 - b. Supplier can offer a financing scheme (need to be negotiated with a financing institution). Alternatively the supplier could offer a renting/leasing scheme but this requires that the supplier gets financing to pre-finance the equipment.
- still necessary to allocate risks between supplier/installer/client
 - a. main issue is the allocation of the technology (performance) risk
 - b. the rest is probably assumed by customer (will he/she accept?)
 - c. usually not possible to provide confidence level needed to overcome trust barriers
- Installation and maintenance
 - a. In addition to the skilling/experience development issue, there is, in some countries, a separate challenge of legacy supply chains and vested interests ("gilded cage" of existing supply chain and risk to manufacturers of penalties from installers and wholesalers to legacy product lines if they attempt to reinvent).
 - b. Who can install and fix it? (Who is the installer / maintenance network and how do we ensure they acquire the skills they need?)
 - Indeed, are they the right people to even be trained in the first place?
 - And how do we ensure they get the experience with the product once they've been trained – e.g. what "rollout" models are needed?
 - c. Warranty analysis
 - Required duration (years)?
 - Scope (just stack? Balance of plant? Whole System?),
 - Risk owner? (Who underwrites this? The utility? Manufacturer? A separate insurer?)
 - Cost implications (how much extra does it add?)
- Legal and contractual

b. In alternative business models

⁶ This preliminary assessment is essentially for micro-CHP. A revision might be necessary for other segments.

- Core idea: making a link between the future energy bill and the payment of the equipment. Energy savings help finance capex and maintenance.
- Second element: bundling several elements
 - i. Equipment + maintenance + fuel (gas and possibly electricity)
 - ii. Selling energy performance
- Numerous contractual arrangements can be envisaged.
- Financing will be a key issue
 - i. Option 1: Financing by end consumer but decoupled from operation; offered as a high-yield investment
 - ii. Option 2: Financing by supplier using government programs and banking opportunities
- Risk allocation will be another key issue
 - i. Maybe decoupling consumption from factors like energy price level, weather, etc. by providing flat rate
 - ii. Performance risk and functionality risk lies with the supplier
- Additional revenue stream (see 3.) could be incorporated
- What is the customer value proposition for each of the different business models?
 - i. How is the proposition to be sold to the customer/end-user? Why should they buy/lease/rent a fuel cell?
- What needs to be understood from a legal and contractual side?

c. When one combines with additional revenue stream

- Grid services / virtual power plant /demand response
 - i. Demand response and fuel cell (example questions include:
 1. How will fuel cell fit into the current and future competitive landscape for demand response?
 2. What are the drivers (by country, regional, sector)
 3. What are the commercial and legal frameworks?
 4. What are the various barriers/key concerns for fuel cell combined with demand response?
 - a. Technical
 - b. Regulatory
 - c. Legal
 - d. End-user attitudes
 - e. Etc.
 5. What are the associated values and costs?
 - a. I.e. will it add an extra €1,000 to the yearly revenue or an extra €10?
 - b. Where do the extra values come from (e.g. arbitrage)?
 - c. What are the associated costs?
 - d. What are the values/costs that exist/absent today – and which will be present/absent in the future?
 6. What and where are the best opportunities for fuel cell combined with demand response?
 7. What is the size and nature of the opportunity for fuel cell and DR?

8. What operational strategies would work best for fuel cell and DR?
 9. What is the customer value proposition?
 10. What are the business cases? (examples, case studies)
 11. What needs to be understood from a legal/contractual perspective?
- ESCOs/Contracting (Heat and Power)
 - i. How will fuel cell fit into the current and future competitive landscape for heat/power contracting?
 - ii. What are the commercial and legal frameworks?
 - iii. What are the various barriers/key concerns
 - a. Technical
 - b. Regulatory
 - c. Legal
 - d. End-user attitudes
 - e. Etc.
 2. What are the associated values and costs?
 - iv. What and where are the best opportunities for fuel cell combined with demand response?
 - v. What is the size and nature of the opportunity for fuel cell and ESCO?
 - vi. What strategies would work best for fuel cell and ESCO?
 - vii. What is the customer value proposition?
 - viii. What are the business cases? (examples, case studies)
 - ix. What needs to be understood from a legal/contractual perspective?
 - Other revenue streams (e.g. PPAs, etc.)

Appendix B – Analysis of Actors

Here is the FCH JU preliminary analysis of the various possible actors and of how they may be engaged in different business model types⁷. However, this preliminary assessment should not limit the freedom of applicants to propose alternative analysis.

Roles of the actors in different types of business cases

1. In the classical sales channel

- Manufacturer, wholesaler, installer, customer
- A financing actor offering a leasing/loan to
 - The customer/end-user
 - The manufacturer/the wholesaler

2. in the alternative business cases

- Leading actor
 - Utility (gas/electricity provider)
 - OR Project developer/investor (e.g. someone organizing the financing, installation and operation of a large number of units.)
 - Energy Service Companies
- Other actors
 - Manufacturer
 - Wholesaler?
 - Installer
 - Customer
 - DSO, Regulator (if additional revenue stream is included, see 3.)
- Financing actors
 - Equity of utility or project developer
 - Debt finance: Major issue because of risks (technology risk and sales risk)
 - Investors backed the PV industry (pension funds, etc.) – what’s needed to get them behind FC?
 - And where is the money? Which banks, financial institutions (public/private), other specialist funding mechanisms.
 - Do these groups need education about the business models, paybacks, the technology, etc.?

3. When one combines with additional revenue stream

- Need to involve electric distribution system operator (DSO)?
- Need to involve regulator?
- Barriers (accompanied by recommendations around removing these)
- What needs to be understood from a legal/contractual perspective?

⁷ This preliminary assessment is essentially for micro-CHP. A revision might be necessary for other segments.

Risks identification and distribution among actors

- Sales risk (Finding client)
- Financing risk
- Technology/performance risks
- Regulatory risk (if any)
- Customer Credit Risk
- Risk of Prognosis Mistakes (e.g. miscalculating the revenue) k
- Risk of termination of long term contract?
- Gas and power price
- Volume and load profile
- Weather
- Etc.

The allocation of risk is pretty clear in classical sales channel (direct sales). More complex for alternative business models.

Appendix C:

Comments *[in grey italics in square brackets]* are to be deleted and/or replaced by appropriate data.

Declaration on honour on exclusion criteria and selection criteria

The undersigned *[insert name of the signatory of this form]*, representing:

<i>(only for natural persons)</i> himself or herself	<i>(only for legal persons)</i> the following legal person:
ID or passport number:	Full official name: Official legal form: Statutory registration number: Full official address: VAT registration number:

(1) declares whether the above-mentioned person is in one of the following situations or not:		
SITUATION OF EXCLUSION CONCERNING THE PERSON	YES	NO
(a) it is bankrupt, subject to insolvency or winding up procedures, its assets are being administered by a liquidator or by a court, it is in an arrangement with creditors, its business activities are suspended or it is in any analogous situation arising from a similar procedure provided for under national legislation or regulations;	<input type="checkbox"/>	<input type="checkbox"/>
(b) it has been established by a final judgement or a final administrative decision that the person is in breach of its obligations relating to the payment of taxes or social security contributions in accordance with the law of the country in which it is established, with those of the country in which the contracting authority is located or those of the country of the performance of the contract;	<input type="checkbox"/>	<input type="checkbox"/>
(c) it has been established by a final judgement or a final administrative decision that the person is guilty of grave professional misconduct by having violated applicable laws or regulations or ethical standards of the profession to which the person belongs, or by having engaged in any wrongful conduct which has an impact on its professional credibility where such conduct denotes wrongful intent or gross negligence, including, in particular, any of the following:		

(i) fraudulently or negligently misrepresenting information required for the verification of the absence of grounds for exclusion or the fulfilment of selection criteria or in the performance of a contract;	<input type="checkbox"/>	<input type="checkbox"/>
(ii) entering into agreement with other persons with the aim of distorting competition;	<input type="checkbox"/>	<input type="checkbox"/>
(iii) violating intellectual property rights;	<input type="checkbox"/>	<input type="checkbox"/>
(iv) attempting to influence the decision-making process of the contracting authority during the award procedure;	<input type="checkbox"/>	<input type="checkbox"/>
(v) attempting to obtain confidential information that may confer upon it undue advantages in the award procedure;	<input type="checkbox"/>	<input type="checkbox"/>
(d) it has been established by a final judgement that the person is guilty of any of the following:		
(i) fraud, within the meaning of Article 1 of the Convention on the protection of the European Communities' financial interests, drawn up by the Council Act of 26 July 1995;	<input type="checkbox"/>	<input type="checkbox"/>
(ii) corruption, as defined in Article 3 of the Convention on the fight against corruption involving officials of the European Communities or officials of EU Member States, drawn up by the Council Act of 26 May 1997, and in Article 2(1) of Council Framework Decision 2003/568/JHA, as well as corruption as defined in the legal provisions of the country where the contracting authority is located, the country in which the person is established or the country of the performance of the contract;	<input type="checkbox"/>	<input type="checkbox"/>
(iii) participation in a criminal organisation, as defined in Article 2 of Council Framework Decision 2008/841/JHA;	<input type="checkbox"/>	<input type="checkbox"/>
iv) money laundering or terrorist financing, as defined in Article 1 of Directive 2005/60/EC of the European Parliament and of the Council;	<input type="checkbox"/>	<input type="checkbox"/>
(v) terrorist-related offences or offences linked to terrorist activities, as defined in Articles 1 and 3 of Council Framework Decision 2002/475/JHA, respectively, or inciting, aiding, abetting or attempting to commit such offences, as referred to in Article 4 of that Decision;	<input type="checkbox"/>	<input type="checkbox"/>
(vi) child labour or other forms of trafficking in human beings as defined in Article 2 of Directive 2011/36/EU of the European Parliament and of the Council;	<input type="checkbox"/>	<input type="checkbox"/>
(e) the person has shown significant deficiencies in complying with the main obligations in the performance of a contract financed by the Union's budget, which has led to its early termination or to the application of liquidated damages or other contractual penalties, or which has been discovered following checks, audits or investigations by an Authorising Officer, OLAF or the Court of Auditors;	<input type="checkbox"/>	<input type="checkbox"/>
(f) it has been established by a final judgment or final administrative decision that the person has committed an irregularity within the meaning of Article 1(2) of Council Regulation (EC, Euratom) No 2988/95;	<input type="checkbox"/>	<input type="checkbox"/>

<p>(g) for the situations of grave professional misconduct, fraud, corruption, other criminal offences, significant deficiencies in the performance of the contract or irregularity, the applicant is subject to:</p> <ul style="list-style-type: none"> i. facts established in the context of audits or investigations carried out by the Court of Auditors, OLAF or internal audit, or any other check, audit or control performed under the responsibility of an authorising officer of an EU institution, of a European office or of an EU agency or body; ii. non-final administrative decisions which may include disciplinary measures taken by the competent supervisory body responsible for the verification of the application of standards of professional ethics; iii. decisions of the ECB, the EIB, the European Investment Fund or international organisations; iv. decisions of the Commission relating to the infringement of the Union's competition rules or of a national competent authority relating to the infringement of Union or national competition law; or v. decisions of exclusion by an authorising officer of an EU institution, of a European office or of an EU agency or body. 	<input type="checkbox"/>	<input type="checkbox"/>
---	--------------------------	--------------------------

Only for legal persons other than Member States and local authorities, otherwise delete this table

(2) declares whether a natural person who is a member of the administrative, management or supervisory body of the above-mentioned legal person, or who has powers of representation, decision or control with regard to the above-mentioned legal person (this covers the company directors, members of the management or supervisory bodies, and cases where one natural person holds a majority of shares) is in one of the following situations or not:

SITUATIONS OF EXCLUSION CONCERNING NATURAL PERSONS WITH POWER OF REPRESENTATION, DECISION-MAKING OR CONTROL OVER THE LEGAL PERSON	YES	NO
Situation (c) above (grave professional misconduct)	<input type="checkbox"/>	<input type="checkbox"/>
Situation (d) above (fraud, corruption or other criminal offence)	<input type="checkbox"/>	<input type="checkbox"/>
Situation (e) above (significant deficiencies in performance of a contract)	<input type="checkbox"/>	<input type="checkbox"/>
Situation (f) above (irregularity)	<input type="checkbox"/>	<input type="checkbox"/>

(3) declares whether a natural or legal person that assumes unlimited liability for the debts of the above-mentioned legal person is in one of the following situations or not:

SITUATIONS OF EXCLUSION CONCERNING NATURAL OR LEGAL PERSONS ASSUMING UNLIMITED LIABILITY FOR THE DEBTS OF THE LEGAL PERSON	YES	NO	N/A
Situation (a) above (bankruptcy)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Situation (b) above (breach in payment of taxes or social security contributions)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
---	--------------------------	--------------------------	--------------------------

(4) declares whether the above-mentioned person is in one of the following situations or not:		
GROUNDS FOR REJECTION FROM THIS PROCEDURE	YES	NO
(h) has not distorted competition by being previously involved in the preparation of procurement documents for this procurement procedure;	<input type="checkbox"/>	<input type="checkbox"/>
(i) has provided accurate, sincere and complete information to the contracting authority within the context of this procurement procedure;	<input type="checkbox"/>	<input type="checkbox"/>
(5) acknowledges that the above-mentioned person may be subject to rejection from this procedure and to administrative sanctions (exclusion or financial penalty) if any of the declarations or information provided as a condition for participating in this procedure prove to be false.		

REMEDIAL MEASURES

If the person declares one of the situations of exclusion listed above, it should indicate the measures it has taken to remedy the exclusion situation, thus demonstrating its reliability. They may include e.g. technical, organisational and personnel measures to prevent further occurrence, compensation of damage or payment of fines. The relevant documentary evidence which appropriately illustrates the remedial measures taken should be provided in annex to this declaration. This does not apply for the situations referred in point (d) of this declaration.

EVIDENCE UPON REQUEST

Upon request and within the time limit set by the contracting authority the person shall provide information on the persons that are members of the administrative, management or supervisory body, as well as the following evidence concerning the person or the natural or legal persons which assume unlimited liability for the debt of the person:

For situations described in (a), (c), (d) or (f), production of a recent extract from the judicial record is required or, failing that, an equivalent document recently issued by a judicial or administrative authority in the country of establishment of the person showing that those requirements are satisfied.

For the situation described in point (a) or (b), production of recent certificates issued by the competent authorities of the State concerned are required. These documents must provide evidence covering all taxes and social security contributions for which the person is liable, including for example, VAT, income tax (natural persons only), company tax (legal persons only) and social security contributions. Where any document described above is not issued in the country concerned, it may be replaced by a sworn statement made before a judicial authority or notary or, failing that, a solemn statement made before an administrative authority or a qualified professional body in its country of establishment.

If the person already submitted such evidence for the purpose of another procedure, its issuing date does not exceed one year and it is still valid, the person shall declare on its honour that the

documentary evidence has already been provided and confirm that no changes have occurred in its situation.

(6) declares whether the above-mentioned person complies with the selection criteria as provided in the tender specifications:		
SELECTION CRITERIA	YES	NO
(a) It has the legal and regulatory capacity to pursue the professional activity needed for performing the contract as required in section [<i>insert</i>] of the tender specifications;	<input type="checkbox"/>	<input type="checkbox"/>
(b) It fulfills the applicable economic and financial criteria indicated in section [<i>insert</i>] of the tender specifications;	<input type="checkbox"/>	<input type="checkbox"/>
(c) It fulfills the applicable technical and professional criteria indicated in section [<i>insert</i>] of the tender specifications.	<input type="checkbox"/>	<input type="checkbox"/>
(7) declares that the above-mentioned person will be able to provide the necessary supporting documents listed in the relevant sections of the tender specifications and which are not available electronically upon request and without delay.		

Full name

Date

Signature