



**CONTRACT FOR THE PROVISION OF PROJECT ON LOW CARBON  
HYDROGEN PRODUCTION STANDARDS TO THE DEPARTMENT FOR  
BUSINESS, ENERGY AND INDUSTRIAL STRATEGY**

**Purchase Order Number:** TBC

**DUNS Number:** 221238863

This Contract is dated Thursday, 10<sup>th</sup> December 2020 and is made between:-

**1. The Secretary of State for Business, Energy and Industrial Strategy [(“the Authority”)]** of 1 Victoria Street, London, SW1H 0ET, acting as part of the Crown;

and

**2. E4tech (UK) Ltd (the “Contractor”)** whose registered office is at 83, Victoria Street, Westminster, London, United Kingdom, SW1H 0HW

## **INTRODUCTION**

(A) On Friday, 6<sup>th</sup> December 2020 the Authority issued an invitation to tender for Project on Low Carbon Hydrogen Production Standards this including the specification a copy of which is set out in Schedule 1 (the “Specification”).

(B) In response the Contractor submitted a proposal dated Friday, 27<sup>th</sup> December 2020 and entitled E4tech (UK) Ltd explaining how it would provide the services a copy of which is set out in Schedule 2 (the “Proposal”).

The parties agree as follows:-

## **1. SUPPLY OF SERVICES AND PRICE**

In consideration of payment by the Authority to the Contractor of the sum of [REDACTED] (exclusive of Value Added Tax) (the “Contract Price”) and in accordance with (a) the Specification; (b) the Proposal; and (c) the Authority’s Standard Terms and Conditions of Contract for Supplies/Services (the “Standard Terms” (a copy of which were issued by the Authority with the Invitation to Tender and are attached at Schedule 3); the Contractor shall provide the Services described in the Specification and the Proposal to the Authority.

## **2. COMMENCEMENT AND CONTINUATION**

This contract shall commence on Monday, 14<sup>th</sup> December 2020 and subject to any provisions for earlier termination contained in the



Standard Terms continue for a period of 4 months and end on Wednesday, 31st March 2021.

### **3. TERMS AND CONDITIONS**

- 3.1 The Standard Terms shall form part of this Contract.
- 3.2 The Contractor's Standard Terms and Conditions of business shall not apply to this Contract.
- 3.3 This Contract is formed of these clauses and the Schedules hereto. Any other attachments are provided for information purposes only and are not intended to be legally binding. In the event of any conflict or inconsistency, the documents prevail in the following order:
- a) these clauses
  - b) the Standard Terms
  - c) the Specification
  - d) and finally, the Proposal

### **4. CONTRACTOR'S OBLIGATIONS**

- 4.1 Where the Contractor is supplying goods to the Authority these shall be delivered to the Authority in full compliance with the Specification and shall be of satisfactory quality and fit for purpose. Where the Contractor is performing services for the Authority it shall do so in accordance with the Specification and exercise reasonable skill and care.

### **5. MANAGEMENT AND COMMUNICATIONS**

- 5.1 The Contractor shall perform the Services under the direction of the Authority.
- 5.2 Any direction by the Authority may be given by [REDACTED] (the "Contract Manager") who is a Senior Policy Adviser for Hydrogen Economy or such other person as is notified by the Authority to the Contractor in writing.
- 5.3 The Contractor appoints [REDACTED] who will be the day to day contact (as Project Manager) to be the Contractor's first point of contact for this Contract. All queries to the Contractor from the Authority's Contract Manager shall initially be addressed to the Contractor's first point of contact.
- 5.4 The Contractor's first point of contact and the Contract Manager shall meet as often as either the Contractor or the Authority may require to review the Contractor's performance of the Contract.



**6. INVOICES AND PAYMENT**

6.1 Subject to the Contractor providing the Services to the Authority in accordance with this Contract and submitting invoice/s to the Contract Manager in the manner reasonably required by the Contract Manager payment will be made by the Authority to the Contractor in accordance with (as referred to in Condition 11 of the Standard Terms & Conditions).

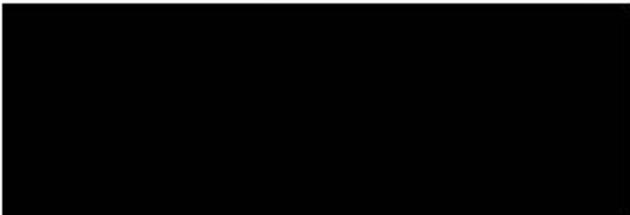
**7. TRANSPARENCY**

7.1 The Authority is required to publish information about this contract within the Official Journal of the European Union and through the Governments Transparency website, Contracts Finder.

The Authority's decision not to publish full details of the contract does not however preclude it publishing such information in the future (subject to applicable redactions) and the Authority may be required to disclose such information under the Freedom of Information Act 2000, the Environmental Information Regulations 2004 (EIR) or other legal requirement. In such cases, the Authority would need to consider disclosure in the context of the particular circumstances of the request or requirement concerned.

**Signed by the parties' duly authorised representatives:-**

For the Secretary of State for **Business, Energy and Industrial Strategy**

 .....

Date: 14/12/20 .....

For the Contractor **E4tech (UK) Ltd**

 .....

Job Title: Director .....

Date: 11/12/20 .....



**The following Schedules form part of this Contract:**

Schedule 1	The Authority's Specification
Schedule 2	The Contractor's Proposal
Schedule 3	the Authority's Standard Terms & Conditions of Contract for Supplies/Services



## Schedule 1 The Authority's Specification

### **1. Background**

#### **Introduction and summary of requirements**

The Department for Business, Energy and Industrial Strategy ("BEIS") wishes to appoint a specialist contractor/consortium to identify and compare options for a standard that defines low carbon hydrogen, allowing us to incentivise and support low carbon hydrogen production for supply across the energy system.

This project will (but is not limited to):

- Develop our understanding of the main challenges to address as we develop a UK standard that defines low carbon hydrogen and sets out the maximum acceptable levels of greenhouse gas emissions associated with low carbon hydrogen production;
- Perform lifecycle assessments (LCAs) to determine greenhouse gas emissions from different hydrogen production technologies from well-to-tank (i.e. from production of the feedstock up to and including transportation, and storage) for different end-uses;
- Use the evidence from LCAs to identify and evaluate options for the maximum levels of greenhouse gas emissions acceptable under a UK low carbon hydrogen standard;
- Identify whether more detailed analysis and consultation is required in 2021 to define a UK standard further; and
- Identify high-level options for delivering and administering the standard, including whether this should be (for example) industry-led or conducted through existing standards bodies.

The final product will be a report covering the above, for publication alongside a UK Hydrogen Strategy in early 2021. We also expect a spreadsheet of the lifecycle assessment data and assumptions. It will inform ongoing policy development, including design of capital and revenue support schemes for low carbon hydrogen.

This work will allow BEIS to consider a range of options for a UK standard, and enable the publication of an initial consultation in Spring 2021 alongside the hydrogen business models consultation.

#### **Background**

Government is committed to the development of hydrogen as a decarbonised energy carrier, with low carbon hydrogen now considered critical to meeting net zero. Future demand is expected across industry, transport, power and heat (blending into the gas grid or potentially 100% hydrogen to heat our buildings) to varying degrees. The CCC's 'further ambition' scenario shows that 270TWh of low carbon hydrogen will be needed in the UK energy system by 2050. This is broadly consistent with a range of recent external reports (National Grid 152-597TWh, Aurora 210-500TWh). However, current UK hydrogen use is only around 10-27TWh, of which around 95% is fossil-based



(therefore not low carbon) and used in the petro-chemical sector. A small amount of low carbon hydrogen is in use, mostly for transport. To achieve our legally binding net zero targets we will therefore need to support a massive scale up of new low carbon hydrogen production.

BEIS are developing new policies to encourage the deployment of new low carbon hydrogen production, including capital and revenue support to help achieve sufficient levels of production by 2030 to put us on the right path to meet expected 2050 demand. It is imperative that the production incentivised is sufficiently low carbon to help meet our decarbonisation goals. However, there is currently no common UK standard defining what is meant by low carbon hydrogen. **BEIS therefore requires advice and research to inform policy decisions on a potential emissions accounting standard that could define and standardise what is meant by 'low carbon' hydrogen.**

Beyond providing a criteria for government funding, a low carbon hydrogen standard could be developed into a voluntary certification scheme to underpin deployment of low carbon hydrogen production technologies and trade in the UK. The standard could provide assurance to consumers that the hydrogen they are purchasing meets their technical /environmental expectations.

This standard will need to be applicable across different production technologies, including the two main types of low carbon hydrogen production (large scale CCUS enabled 'blue' hydrogen, and smaller scale electrolytic 'green' hydrogen from renewables). Other production technologies under development, which are further down the technology readiness levels, should also be covered by the standard e.g. biomass gasification with CCUS, and hydrogen from advanced nuclear technologies.

Hydrogen has a variety of end uses, e.g. heavy industry, localised transport, blending into the gas grid etc. Any standard(s) produced is expected to provide a single set of GHG emission threshold(s) for all end uses but should not supersede any existing quality/safety standards for end use applications (e.g. hydrogen as a transport fuel).

## 2. Aims and Objectives of the Project

The purpose of this project is to help Government understand and compare options for a standard that defines low carbon hydrogen, including:

1. Setting out the maximum acceptable levels of greenhouse gas emissions associated with low carbon hydrogen production;
2. Setting out the methodology for calculating GHG emissions (e.g. the LCA system boundary);
3. Defining assumptions of the hydrogen delivery conditions (e.g. purity level, output pressure).

This project will help us to meet our workplan to develop and consult on a UK specific low carbon hydrogen standard during 2021. This will inform the development of a low carbon hydrogen production standard which will:

- Provide clear criteria for businesses seeking financial support from HMG on hydrogen production;
- Be a key priority referenced in the 2021 UK hydrogen strategy;
- Encourage increased carbon reductions from low carbon hydrogen production, supporting net zero ambitions;
- Ensure private sector investment is focused on new low carbon



hydrogen production (while ensuring existing production methods are not excluded if they are made sufficiently low carbon); and

- Provide confidence to end users that the hydrogen purchased is a low carbon alternative to existing fuels.

### 3. Suggested Methodology

<b>Total number of Interviews (qualitative)</b>	<b>10-15</b>
<b>Total number of Case Studies</b>	<b>5-7</b>

#### Expectation

Contractors will produce a report, including simplified options for a low carbon hydrogen standard, for publication and dissemination across government in support of our ongoing workplan. We also expect a spreadsheet of the lifecycle assessment data and assumptions. We aim to consult on options for a low carbon hydrogen standard during 2021.

#### Overarching considerations

This work should focus on standards that will allow us to incentivise and support low carbon hydrogen production for supply across the energy system. The work should be informed, in part, by the work of the DECC Green Hydrogen Working Group, and the DECC Call for Evidence on Green Hydrogen Standard published in 2015, including the government's response. We expect contractors to consider lessons learnt from comparable approaches and standards both nationally and internationally to inform this work e.g. how we define and measure "renewable" in the context of renewable heat and the Renewable Energy Directive.

We deem the following issues out of scope for this work:

1. End use safety/quality standards e.g. DfT regulation for use of hydrogen in transport, BEIS regulations on hydrogen boilers.
2. Standards for other (non-hydrogen) decarbonised gases.
3. Gas Safety (Management) Regulations for blending hydrogen into the gas grid.
4. Gas quality- Wobbe Index.

Any modelling work should be conducted in line with BEIS guidance and Aqua Book approaches to quality assurance, including producing detailed assumptions logs and appropriate modelling guidance. All modelling and associated documentation will be provided to BEIS, as part of the sign-off processes.

We expect that contractors will work closely with BEIS to help ensure work is of high rigour and value e.g. sharing database of literature sources, ensuring new evidence



is highlighted and gaps are appropriately signposted. All analysis should look to articulate and understand the uncertainty that exists around these work packages.

### **Work Packages**

The successful contractor will deliver the following Work Packages:

#### **Work package 1: Challenges to be addressed through the development of a low carbon hydrogen standard in the UK, and global lessons learnt.**

**Objective:** *Develop a broad view of the main technical, economic, commercial, and policy challenges that need to be addressed through the development of a UK standard for low carbon hydrogen, the likely challenges faced when implementing standards, and criteria for assessing options for a low carbon hydrogen standard.*

#### The research questions are:

1. Drawing on international comparisons and comparable low carbon technologies, what are the challenges of implementing standards faced by (1) governments and (2) developers and operators of production facilities.
2. What low carbon hydrogen production standards have been or are being explored in other countries that could be applicable to our objectives?
3. Drawing on the lessons learnt from other countries' comparable technologies' standards, what should the criteria be for a UK low carbon hydrogen standard?

#### Review point

There will be a review point early in the project to agree the criteria that we will assess different standards options against, including but not limited to:

1. **Technology neutral:** the standard should cover all potential low carbon hydrogen technologies, including production pathways not focused on in this project;
2. **Cost-effective:** the potential costs for calculating/auditing GHG emissions for operational hydrogen production technologies must be taken into account when determining the LCA methodology (e.g. system boundaries);
3. **Transparent:** methodologies for calculating GHG emissions must be transparent in approach and assumptions to build confidence;
4. **Comparable:** approach should be comparable with the approach used by other low carbon technologies and other countries to ensure low carbon hydrogen produced in the UK are not at a competitive disadvantage;
5. **Support innovation:** encourage innovations in hydrogen production pathways that lead to reduced GHG emissions;
6. **Support net zero:** the ability to deliver against hydrogen carbon intensity trajectories assumed in scenarios to meet the 2050 net zero target and carbon budgets in the interim;
7. **Fair:** consider potential risks of unintended consequences if there are interactions with standards from the wider hydrogen value chain (e.g. risk of double counting when combined with other incentive schemes primary energy sources or end use).



## **Work package 2: Lifecycle assessments (LCAs)**

**Objective** *Perform LCAs of different production technologies. This assessment should include carbon emissions, as well as the potential global warming impact of hydrogen and other Kyoto basket greenhouse gases, e.g. methane.*

The research questions are:

1. What LCA approach should be taken when assessing the life cycle emissions of hydrogen pathways (e.g. well-to-tank, meaning from feedstock production up to transportation and storage)?
2. Which hydrogen production technologies should be assessed for their emissions, e.g. electrolysis (grid, renewables, nuclear), Steam Methane Reforming /AutoThermal Reforming with Carbon Capture and Usage or Storage (CCUS), biomass gasification with CCUS, others?
3. What are the life cycle emissions for the different hydrogen production technology pathways now? This should consider:
  - Variations in upstream emissions/emissions from feedstock production e.g. how/where the methane is extracted and exported can affect emission levels.
  - The risk of methane and hydrogen leakage in the production processes.
  - The sensitivity of the Life Cycle results to the assumed GWP of hydrogen over the next 30 years.
  - Other key factors influencing emissions, e.g. hydrogen purity levels, efficiency, air quality and output pressure, and how variations in these characteristics affect emission levels.
  - How the life cycle emissions vary with different end uses of hydrogen (depending on the production, transportation, and storage pathways involved).
4. What is the potential for emission levels to change in future (trajectory over time).
5. What is the most suitable way of calculating the emission levels of hydrogen (e.g.  $\text{kgCO}_2\text{eq/kgH}_2$ , or  $\text{kgCO}_2\text{eq/kWh}$  etc.)?

### Review point

There will be review points during the course of the project to:

- Agree on which production pathways should be in the scope of this project, including variations in policy scenarios.
- Identify key evidence gaps for the LCAs and agree on ways to address these.
- Review the interim reports for Work Packages 1 and 2.

## **Work package 3: Define and evaluate the range of possible low carbon hydrogen production standards**

**Objective:** *Identify and evaluate the different options for a low carbon hydrogen standard for hydrogen production. We will assess and score the options against criteria agreed in work package 1 to finalise the recommended options.*

The questions are:

1. What are the key features of the options for a low carbon hydrogen standard, including the system boundary for calculating GHG emissions, emissions thresholds, assumed delivery conditions (e.g. including hydrogen purity level, output pressure), that differentiate the options from each other?
2. Should the standard be tightened over time in alignment with UK carbon



budgets?

3. Do the options for the standard meet the criteria set out in workstream 1?
4. What are the most promising options for a standard? Why?
5. What additional areas should we seek to explore through consultation?

#### **Work package 4: Delivery and Administration of the standard**

**Objective:** To develop options for the delivery and administration of the standard.

The questions are:

1. Who can deliver and administer the standard? Should this be government or industry led? What should the interaction be between the administration body and the body auditing government support for low carbon hydrogen (if they are different)?
2. Should there be any penalties for non-compliance?

Contractors should review lessons learnt from similar standards/criteria.

#### **Methodology**

This document sets out a suggested methodology, but we welcome tenderers to propose the methodology that they think will best meet the overall aims and objectives of the project. The proposed methodology will be the main criteria that tenders are evaluated against.

#### **Suggested Methodology - Work packages 1 and 2:**

This work is likely to require a combination of literature reviews (domestic and international studies), gathering expert opinion from academics, hydrogen production technology manufacturers, performing LCAs for hydrogen pathways, and systematic assessment against the learning from standards and life-cycle assessments for comparable low carbon technologies.

We will also expect that the contractor will have sufficient knowledge and expertise to provide their own expert insight in comparable fields, not necessarily specific to hydrogen, that adds value in addition to the literature reviews on standards (hydrogen and comparable low carbon technologies).

We will also recommend that the contractor holds discussions with the authors of relevant studies (if applicable), or any others involved in their production, where this is possible, to understand the existing and underlying evidence on low carbon hydrogen production standards. This will inform a recommendation as to whether (and what) further primary research is required, such as structured interviews or discussions with project developers that may enable us to gather further evidence that builds on published evidence.

**For work package 1,** contractors will work with BEIS to develop the criteria for evaluating the options for a UK standard. Additional criteria will be informed by:

- The lessons learnt from comparable technologies and other countries;
- The government response to the DECC Call for Evidence on a Green Hydrogen Standard;
- The work of the International Partnership on Hydrogen and Fuel Cells in the Economy's (IPHE) Hydrogen Production Analysis Taskforce which is developing a common methodology for determining greenhouse gas



emissions associated with hydrogen production (using a Well-to-Gate approach)<sup>1</sup>.

**For work package 2**, BEIS will provide reliable reports and studies on GHG emissions associated with the input fuel for the hydrogen production process (e.g. biomass, offshore wind, methane extraction, nuclear) where these exist. We would also welcome the inclusion of other literature and expect contractors to consider the reliability of the evidence sources used. Contractors will perform life cycle assessments themselves, informed by the evidence collated. This will enable a more comprehensive assessment of potential standards to be undertaken as part of work package 3.

#### **Suggested Methodology - work package 3:**

This work is likely to require a combination of expert opinion and systematic assessment against the features of existing standards for low carbon hydrogen, to develop options for a UK standard. The options will be assessed using evaluation criteria and scoring which will be agreed during the first review point.

#### **Suggested Methodology - work package 4**

The focus of the report will primarily be work packages 1-3, while a high-level assessment should be made for work package 4.

This work is likely to require a systematic assessment against existing frameworks for monitoring and enforcing standards for comparable low carbon technologies. The outcome will be to identify high-level options (1-2 page summary) for administration and enforcement of a low carbon hydrogen standard. The options should clearly set out the nature and duration of Government's involvement and enforcement. This could include options that include no government intervention. This should consider learning from the development of standards in other parts of the UK energy system.

### **4. Deliverables**

The final outputs from the work will be:

- interim reports on challenges, life-cycle assessments, and boundary conditions.
- a standalone, quality assured final report, including a discussion and recommendations section, ready for publication and dissemination that addresses the objectives for the work.
- Full details of the project methodology and assumptions, including associated quality assurance documentation for all qualitative and quantitative analysis
- A spreadsheet of the lifecycle assessment data. This should set out the emissions from each production technology by year under each sensitivity and should include a tool allowing BEIS analysts to easily see the impact of varying assumptions on emissions. It should include an assumptions log setting out the source of each

<sup>1</sup>[https://eur02.safelinks.protection.outlook.com/?url=https%3A%2F%2F1fa05528-d4e5-4e84-97c1-ab5587d4aabf.filesusr.com%2Fugd%2F45185a\\_a8c87fe85635417686f65cd242731700.pdf&data=02%7C01%7CBenjamin.Harropp%40beis.gov.uk%7C9acf6b284dd84ac41a9208d7fbc674d2%7Ccbac700502c143ebb497e6492d1b2dd8%7C0%7C0%7C637254839524844857&sdata=gw1MaOjBXmiYpRFDgr%2FkyRk93X7tuibaxW4rjVz3UE%3D&reserved=0](https://eur02.safelinks.protection.outlook.com/?url=https%3A%2F%2F1fa05528-d4e5-4e84-97c1-ab5587d4aabf.filesusr.com%2Fugd%2F45185a_a8c87fe85635417686f65cd242731700.pdf&data=02%7C01%7CBenjamin.Harropp%40beis.gov.uk%7C9acf6b284dd84ac41a9208d7fbc674d2%7Ccbac700502c143ebb497e6492d1b2dd8%7C0%7C0%7C637254839524844857&sdata=gw1MaOjBXmiYpRFDgr%2FkyRk93X7tuibaxW4rjVz3UE%3D&reserved=0)



assumption feeding into the assessment.

- Supplementary annexes, including transcripts of any calls made to stakeholders that have contributed to the development of the report.

The final product will be a report, including simplified options for a standard demonstrating the effect of their suggestions, for publication and dissemination across government to inform our ongoing policy development. All assumptions should be justified or referenced. The report will need to fully address the research questions set out in the project methodology in the ITQ questions document.

The conclusions should be forward looking, synthesising findings from all work packages, and recommendations should outline the scope for further analysis (including the value of addressing uncertainties) of a selection of standards.

### **Contract operation and expectations**

We expect that the contractors will lead the design, development and delivery of the report, working closely with BEIS project leader. The project will need to involve teams across government which will be coordinated by the BEIS project leader, with input from contractors.

The project will have an internal steering group of officials from across government and the contractor, who will be responsible for the overall quality of the outputs.

Contractors will be expected to:

- Consider the reliability of the evidence sources used in line used in line with BEIS quality assessment criteria.
- Use their expertise and judgement as to the exact range of issues explored as part of the proposed review points included in the project.

Draft outputs should be shared with BEIS throughout the project. We welcome proposals from tenderers on the most appropriate review points but we suggest:

- After completion of Work Package 1.
- Prior to and after the LCAs have been conducted for different hydrogen production pathways.
- After options for a low carbon hydrogen standard have been identified and assessed for work package 3.
- Upon receipt of the draft final report.

### **Quality Assurance**

This project must comply with the BEIS Code of Practice for Research (Annex B) and bidders must set out their approach to quality assurance in their response to this ITT **with a QA plan**.

Any modelling work should be conducted in line with [BEIS guidance](#) and [Aqua Book](#) approaches to quality assurance, including producing detailed assumptions logs.



Contractors will be expected to consider the reliability of the evidence sources used in line with BEIS quality assessment criteria when conducting the evidence review. They should highlight where evidence builds on existing information published by government. We expect that contractors will work closely with BEIS to help ensure work is of high rigour and value e.g. maintaining weekly update meetings, sharing database of literature sources, ensuring new evidence is highlighted and gaps are appropriately signposted.

Sign-off for the quality assurance must be done by someone of sufficient seniority within the contractor organisation to be able take responsibility for the work done. Acceptance of the work by BEIS will take this into consideration. BEIS reserves the right to refuse to sign off outputs, which do not meet the required standard specified in this invitation to tender. We may consider commissioning an external peer review as part of the project.

All model inputs must be quality assured and documented. Contractors should include a quality assurance plan that they will apply to all of the research tasks.

- This QA plan should be no longer than [1 or 2] sides of A4 paper.
- The following link contains an externally accessible version of the Modelling QA guidance, and the QA log <https://www.gov.uk/government/publications/quality-assurance-guidance-for-models>
- The QA log should be filled during the project and submitted at project completion to demonstrate the QA undertaken
- When model inputs are submitted to BEIS, during the project or at completion, they should be accompanied by confirmation by a senior (partner or equivalent) of the contracting organisation, that the assurance has taken place in accordance with approaches outlined in the QA plan agreed with BEIS.

### **Ownership and Publication**

BEIS will own any intellectual property rights to utilise the data, including any financial models or analytical outputs from the report. The department anticipates that the data will be used to inform policy development. BEIS is committed to openness and transparency, the report will be published at an appropriate time following associated policy development.

### **Working Arrangements**

The successful contractor will be expected to identify one named point of contact through whom all enquiries can be filtered. A BEIS project manager will be assigned to the project and will be the central point of contact.

### **Skills and experience**

BEIS would like you to demonstrate that you have the experience and capabilities to undertake the project. Your tender response should include a summary of each proposed team member's experience and capabilities to meet the requirements.

The following skills are considered particularly important for this work:

- Experience project managing a study of this nature and size.
- Demonstrated expertise on life cycle assessments for greenhouse gas emissions of low carbon technologies, with transferable knowledge to hydrogen.



- Understanding of low carbon hydrogen in the energy system, encompassing a wide range of deployment scenarios.
- Understanding of the carbon accounting system.
- Understanding of different low carbon hydrogen production technologies.
- Some understanding of how standards are successfully administered for comparable low carbon technologies across the energy system.

Contractors should propose named members of the project team, and include the tasks and responsibilities of each team member. This should be clearly linked to the work programme, indicating the grade/ seniority of staff and number of days allocated to specific tasks.

Contractors should identify the individual(s) who will be responsible for managing the project.

### **Consortium Bids**

In the case of a consortium tender, only one submission covering all of the partners is required but consortia are advised to make clear the proposed role that each partner will play in performing the contract as per the requirements of the technical specification. We expect the bidder to indicate who in the consortium will be the lead contact for this project, and the organisation and governance associated with the consortia.

Contractors must provide details as to how they will manage any sub-contractors and what percentage of the tendered activity (in terms of monetary value) will be sub-contracted.

If a consortium is not proposing to form a corporate entity, full details of alternative proposed arrangements should be provided in the Annex. However, please note BEIS reserves the right to require a successful consortium to form a single legal entity in accordance with Regulation 28 of the Public Contracts Regulations 2006.

BEIS recognises that arrangements in relation to consortia may (within limits) be subject to future change. Potential Providers should therefore respond in the light of the arrangements as currently envisaged. Potential Providers are reminded that any future proposed change in relation to consortia must be notified to BEIS so that it can make a further assessment by applying the selection criteria to the new information provided.

## **5. Timescales**

<b>Milestone</b>	<b>Date</b>
Inception meeting	W/C Monday, 14 <sup>th</sup> December 2020
Interim report on challenges and criteria for low carbon hydrogen standards	W/C Monday, 11 <sup>th</sup> January 2021
Interim report on life cycle assessments	W/E Friday, 22 <sup>nd</sup> January 2021
Provision of final draft report	W/E Friday, 5 <sup>th</sup> March 2021
Final report issued	Wednesday, 31 <sup>st</sup> March 2021

Payments will be linked to the delivery of key milestones. We propose monthly performance reviews with weekly update calls to monitor progress.

The March deadline for issuing the final report is fundamental to the ongoing work programme of BEIS. We intend to publish a Hydrogen strategy in Spring 2021, and consult on low carbon hydrogen standards during 2021 and require this work to be completed to enable further internal analysis.



## 6. Assessment Criteria

### Budget

A budget of Maximum of £100,000.00 (ex-VAT) is expected for this project. Contractors should provide a full and detailed breakdown of costs, itemised for each component (including options where appropriate). This should include staff (and day rate) allocated to specific tasks.

Cost will be a criterion against which bids which will be assessed.

Supplier proposals shall be sought on a Firm Priced basis with payment being made on the successful achievement of contractual milestones only when deliverables have met the pre-agreed performance/quality standards specified within the contract. The indicative milestones and phasing of payments are stated above.

This can be adjusted and agreed with the contractor based on the tender response/details. Please advise in your tender response how this breakdown reflects your usual payment processes:

In submitting full tenders, contractors confirm in writing that the price offered will be held for a minimum of 60 calendar days from the date of submission. Any payment conditions applicable to the prime contractor must also be replicated with sub-contractors.

The Department aims to pay all correctly submitted invoices as soon as possible with a target of 10 days from the date of receipt and within 30 days at the latest in line with standard terms and conditions of contract.

### Structure of Tenders

Contractors are strongly advised to structure their tender submissions to cover each of the criteria above. Complete the price schedule attached at Annex X, specifying the daily rates (ex-VAT) you will charge for each level of your staff.

### Evaluation of Tenders

Contractors are invited to submit full tenders of no more than 16 pages, excluding declarations. Tenders will be evaluated by at least three BEIS staff.

BEIS will select the bidder that scores highest against the criteria and weighting listed below:

Questionnaire	Question subject	Maximum Marks
Price	<b>Price</b>	20%
Quality	<b>Methodology</b> <i>Answers should demonstrate:</i> <ul style="list-style-type: none"> <li>• <i>A clear description of the proposed approach</i></li> <li>• <i>Evidence for the efficacy of approach</i></li> <li>• <i>Simple LCA modelling approach</i></li> </ul>	35%



	<ul style="list-style-type: none"> <li>• <i>Quality assurance processes</i></li> <li>• <i>Timeline and schedule</i></li> <li>• <i>Risk management</i></li> </ul>	
Quality	<p><b>Resource and Capability</b></p> <p><i>Answers should demonstrate:</i></p> <ul style="list-style-type: none"> <li>• <i>Within your appointment decision please identify the appropriate expertise, management and technical knowledge that your key members would bring to the project</i></li> <li>• <i>Cover for staff absence</i></li> <li>• <i>If the research is delivered by a consortium, how the different organisations will work together including;</i></li> <li>• <i>Any possible risk factors</i></li> <li>• <i>A Demonstration of your tools and processes to mitigate risk in this project</i></li> </ul>	25%
	<p><b>Capability of Staff</b></p> <p><i>Answers should provide:</i></p> <ul style="list-style-type: none"> <li>• <i>Curriculum Vitae for each of the key members of the project team as a pdf document.</i></li> </ul>	For Information Only
Quality	<p><b>Understanding the subject area</b></p> <p><i>Answers should demonstrate an understanding of:</i></p> <ul style="list-style-type: none"> <li>• <i>Existing policy and market frameworks and their applicability to hydrogen, offshore wind, CCUS, biomass gasification, and nuclear;</i></li> <li>• <i>LCA techniques and their use in policy;</i></li> <li>• <i>The different low hydrogen production technologies;</i></li> <li>• <i>The challenges and opportunities presented by different hydrogen production technologies, including renewable and CCUS enabled methods;</i></li> <li>• <i>The UK's carbon budgets;</i></li> <li>• <i>The energy system and the potential role hydrogen will need to play in decarbonising the UK economy in line with the UK's 2050 net zero target and interim carbon budgets.</i></li> </ul>	20%
<p><b>Bid Clarification</b></p> <p>The Department reserves the right to award the contract based on applicants' written evaluation only if one candidate emerges from the evaluation stage as significantly stronger than the others.</p> <p>BEIS may invite all suppliers for bid clarification if they feel bid clarification should be carried out.</p> <p><b>Feedback</b></p>		



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Feedback will be given in the unsuccessful letters or emails.



## AW5.2 Price Schedule

Day rate to be filled in only.  
No Price rate to be filled in only.



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## Schedule 3 The Authority's Standard Terms & Conditions of Contract for Supplies/Services



CR20121 - DPF31  
Terms and Conditions