



Department for  
Business, Energy  
& Industrial Strategy

**Invitation to Tender for Contractors for Understanding  
Commercial and Industrial Appliances for UK hydrogen  
for heat demonstration (Hy4Heat Work Packages 5 & 6)**

Tender Reference Number (TRN): 15507/2018

Deadline for Tender Responses: 24 August 2018

## Department for Business, Energy & Industrial Strategy

**Date:** 26 July 2018

The Department for Business, Energy & Industrial Strategy (“BEIS”) wishes to appoint a contractor for understanding commercial and industrial appliances for UK hydrogen for heat demonstration (Hy4Heat Work Packages 5 and 6).

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See also the following separate documents:

- Annex A: Pricing Schedules
- Contract terms and conditions
- Questions and answers from supplier engagement days

Please register your interest in submitting a tender for this project on the following website [www.delta-esourcing.com](http://www.delta-esourcing.com). All notifications of updates to the ITT process or answers to questions raised by potential bidders will be published on the Delta portal.

Please read the instructions on the tendering procedures carefully since failure to comply with them may invalidate your tender. Your tender must be received by uploading to the Delta portal by **12 noon on Friday 24 August 2018** clearly marked as “TENDER”.

I look forward to receiving your response.

Yours sincerely,

Steve Loades

Email: [hy4heat@arup.com](mailto:hy4heat@arup.com)

## Privacy Notice

### **Identity and contact details of the Data Controller (and where applicable, the controller's representative) and the Data Protection Officer.**

The Data Controller is the Department for Business, Energy & Industrial Strategy (BEIS). You can contact the BEIS Data Protection Officer at: BEIS Data Protection Officer, Department for Business, Energy and Industrial Strategy, 1 Victoria Street, London SW1H 0ET. Email: [dataprotection@beis.gov.uk](mailto:dataprotection@beis.gov.uk).

### **Purpose of the processing and the legal basis for the processing**

Any personal data contained within submitted tenders will be processed by BEIS or on behalf of BEIS for the purposes of the tender exercise described within the remainder of this Invitation to Tender, or in the event of legal challenge under The Public Contract Regulations 2015 or The Limitation Act 1980.

We are collecting your data as part of our public task.

### **Any recipient or categories of recipients of the personal data**

The data may be shared with other Government Departments or public authorities where necessary as part of the tender exercise.

### **Details of transfers to third country and safeguards**

The data you provide will not be transferred outside the European Union.

### **Retention period or criteria used to determine the retention period**

Unsuccessful tenders will be kept for a period of six months following the date of contract signature. The successful tender will be retained as part of the contract documentation for a period of 6 or 12 years from the date of contract expiry, depending on the nature of the contract.

### **The rights available to individuals in respect of the processing**

A list of your rights under the GDPR is accessible at:

<https://ico.org.uk/for-organisations/guide-to-the-general-data-protection-regulation-gdpr/individual-rights/>

### **The right to lodge a complaint with a supervisory authority**

You have the right to lodge a complaint with the Information Commissioner's Office (supervisory authority) at any time. Should you wish to exercise that right full details are available at: <https://ico.org.uk/for-organisations/guide-to-the-general-data-protection-regulation-gdpr/individual-rights/>.

### **The existence of automated decision making, including profiling and information about how decisions are made, the significance and the consequences.**

The provision of the information you provide is not connected with individual decision making (making a decision solely by automated means without any human involvement) or profiling (automated processing of personal data to evaluate certain things about an individual).

## Section 1: Instructions and information on tendering procedures

### Invitation to Tender for

### Understanding Commercial and Industrial Appliances for UK hydrogen for heat demonstration (Hy4Heat Work Packages 5 & 6)

<b>Tender Reference Number (TRN)</b>	<b>15507/2018</b>
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## A. Indicative timetable

The anticipated timetable for this tender exercise is as follows. The Department reserves the right to vary this timetable. Any variations will be published on the Delta portal and circulated to all organisations who have registered an interest in tendering.

<b>Tender Timeline</b>	<b>Date</b>
Prior Information Notice (PIN) published	26 May 2018
Advert (Contract Notice) and full invitation to tender issued	26 July 2018
Deadline for questions relating to the tender	3 August 2018
Responses to questions published	10 August 2018
<b>Deadline for receipt of tender</b>	<b>Friday 24 August 2018 (12:00 Noon)</b>
Invite suppliers for bid clarification (if needed)	w/c 3 September 2018
All suppliers alerted of outcome	19 September 2018
10-day standstill	20 September – 1 October 2018
Contract award on signature by both parties	8 October 2018
Contract start date	w/c 15 October 2018
Contract completion date	15 April 2019

The contract for each Lot is to be for a period of 6 months unless terminated or extended by the Department in accordance within the terms of the contract.

## **B. Procedure for submitting tenders**

An application must be submitted in accordance with the checklist in item G below.

The maximum page limit for tenders is 20 A4 (excluding declarations, pricing schedule and CVs). The font type should be in Arial, minimum size 12 pt with single line spacing and minimum 2.5cm margins.

To apply for this tender please register on the following website [www.delta-esourcing.com](http://www.delta-esourcing.com). Please contact the Delta Helpdesk on 0845 270 7050 for any registration queries. Please upload your proposal before the deadline via BIP Solutions Delta Website. No hard copies of your submission are required.

For questions regarding the procurement process please contact [hy4heat@arup.com](mailto:hy4heat@arup.com).

Tenders will be received up to the time and date stated. Please ensure that your tender is uploaded onto the portal not later than the appointed time on the appointed date and allow plenty of time for the uploading process. The Department does not undertake to consider tenders received after that time. The Department requires tenders to remain valid for a period indicated in the specification of requirements.

The Department shall have the right to disqualify you from the procurement if you fail to fully complete your response, or do not return all the fully completed documentation and declarations requested in this ITT. The Department shall also have the right to disqualify you if it later becomes aware of any omission or misrepresentation in your response to any question within this invitation to tender. If you require further information concerning the tender process, or the nature of the proposed contract, these should be uploaded onto the Delta portal. All questions should be submitted by 3 August 2018; questions submitted after this date may not be answered. Should questions arise during the tendering period, which in our judgement are of material significance, we will publish these questions on the portal with our formal reply by the end of 10 August 2018; this information will be available– unnamed - to all organisations that have expressed an interest in bidding. All contractors should then take the replies into consideration when preparing their own bids, and we will evaluate bids on the assumption that they have done so.

You will not be entitled to claim from the Department any costs or expenses that you may incur in preparing your tender whether your tender is successful.

## C. Conflict of interest

The Department's standard terms and conditions of contract include reference to conflict of interest and require contractors to declare any potential conflict of interest to the Secretary of State.

For research and analysis, conflict of interest is defined as the presence of an interest or involvement of the contractor, subcontractor (or consortium member) which could affect the actual or perceived impartiality of the research or analysis.

Where there may be a potential conflict of interest, it is suggested that the consortia or organisation designs a working arrangement such that the findings cannot be influenced (or perceived to be influenced) by the organisation which is the owner of a potential conflict of interest. For example, consideration should be given to the different roles which organisations play in the research or analysis, and how these can be structured to ensure that an impartial approach to the project is maintained.

The process by which this is managed in the procurement process is as follows:

- 1. During the bidding process, organisations may contact BEIS, via the Delta portal, to discuss whether or not their proposed arrangement is likely to yield a conflict of interest.** Any responses given to individual organisations or consortia will be published on the portal (in a form which does not reveal the questioner's identity). Any organisation thinking of submitting a bid, should share their contact details with the staff member responsible for this procurement, to ensure they receive an update when any responses to questions are published.
- 2. Contractors are asked to sign and return Declaration 3 (page 63) to indicate whether or not any conflict of interest may be, or be perceived to be, an issue.** If this is the case, the contractor or consortium should give a full account of the actions or processes that it will use to ensure that conflict of interest is avoided. In any statement of mitigating actions, contractors are expected to outline how they propose to achieve a robust, impartial and credible approach to the research.
- 3. When tenders are scored, this declaration will be subject to a pass/fail score,** according to whether, on the basis of the information in the proposal and declaration, there remains a conflict of interest which may affect the impartiality of the research.

Failure to declare or avoid conflict of interest at this or a later stage may result in exclusion from the procurement competition, or in the Department exercising its right to terminate any contract awarded.

**BEIS has appointed Arup+ as the programme management contractor (PMC), who are responsible for delivering work packages 1 and 9 as part of their contract. Arup+ will also be managing the delivery of Work Packages 2 – 8 and, as part of the conditions for the PMC role, have agreed not to bid for the remaining work packages. These work packages will be delivered by other suppliers.**

The Arup+ team is a consortium of the following companies: Arup, Kiwa Gastec, Progressive Energy, Embers and YoEnergy.

## **D. Evaluation of responses**

The tender process will be conducted to ensure that bids are evaluated fairly and transparently, in accordance with agreed assessment criteria. Further details of the assessment criteria are provided in the specification (Sections 3a and 3b).

## **E. Terms and conditions applying to this Invitation to Tender**

The Department's Standard Terms and Conditions of Contract will apply to this contract. These are available to download on BiP Solutions Delta website.

## **F. Further instructions to contractors**

The Department reserves the right to amend the enclosed tender documents at any time prior to the deadline for receipt of tenders. Any such amendment will be numbered, dated and issued by 20 July 2018. Where amendments are significant, the Department may at its discretion extend the deadline for receipt of tenders.

The Department reserves the right to withdraw this contract opportunity without notice and will not be liable for any costs incurred by contractors during any stage of the process. Contractors should also note that, in the event that a tender is considered to be fundamentally unacceptable on a key issue, regardless of its other merits, that tender may be rejected. By issuing this invitation the Department is not bound in any way and does not have to accept the lowest or any tender and reserves the right to accept a portion of any tender unless the tenderer expressly stipulates otherwise in their tender.

## **G. Checklist of documents to be returned**

- Proposal (maximum 20 pages for each Lot, Arial font minimum size 12pt with single spacing and minimum 2.5cm margins)
- Annex A – pricing schedule (*separate documents*)
- Declaration 1: Statement of non-collusion
- Declaration 2: Form of Tender
- Declaration 3: Conflict of Interest
- Declaration 4: Standard Selection Questionnaire
- Declaration 5: Code of Practice
- Declaration 6: The General Data Protection Regulation Assurance Questionnaire for Contractors



## Section 2: Introduction and background information

### Invitation to Tender for

### Understanding Commercial and Industrial Appliances for UK hydrogen for heat demonstration (Hy4Heat Work Packages 5 & 6)

<b>Tender Reference Number (TRN)</b>	<b>15507/2018</b>
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## 1. Background

The Climate Change Act 2008 (the Act) established a legally binding target to reduce the UK's greenhouse gas emissions by at least 80% below 1990 levels by 2050.

Heating and cooling in the UK accounts for nearly one half of primary energy consumption and one third of carbon emissions. Over 80% of homes and business are currently supplied by gas and the UK has one of the most comprehensive gas networks in the world with 282,000km of gas pipes feeding 22.7 million homes and businesses.

Achieving the UK's legally binding 2050 climate change targets is likely to require the almost complete decarbonisation of heat in domestic and non-domestic buildings. The most cost-effective way to decarbonise buildings on the gas grid on the scale required to meet our 2050 targets has yet to be determined.

At this stage, it is not clear which technologies are likely to work best at scale and offer the most cost-effective, long term answer. Crucially, the costs and the barriers to the development of all the heat decarbonisation options are uncertain. For all options, further work on evidence, cost reduction, policy development and innovation is required to help de-risk them.

### The Hydrogen Approach

To be able to inform any future assessment of the feasibility of the costs and benefits of undertaking a hydrogen conversion, a full understanding of issues from end-to-end (production to use) of the gas chain will be required.

The hydrogen gas chain can be split into the following stages:

- Production (including plant and CO<sub>2</sub> off-take, CO<sub>2</sub> sequestration and hydrogen storage)
- Transmission network (involving the pipework that transports the gas under a pressure of between 7 and 85 bar)
- Distribution network down to the end user's gas meter (involving pipework that transports the gas under a pressure of up to 7 bar)
- End-use (i.e. downstream of the meter)

This innovation programme seeks to demonstrate and de-risk the technologies downstream of the meter.

## 2. Hy4Heat programme

The Department for Business, Energy and Industrial Strategy (BEIS) has appointed Arup+, a group of companies led by Ove Arup Ltd, as the Programme Management Contractor (PMC) to manage and successfully deliver Hy4Heat, a programme to demonstrate and de-risk the use of hydrogen for heating in GB homes and businesses.

The Hy4Heat programme's aim is:

- To establish if it is technically possible and safe to replace methane with hydrogen in commercial and residential buildings and gas appliances. This will enable the Government to determine whether to proceed to a community trial

The programme's focus is on researching, developing, testing and demonstrating within the end-use stage of the gas chain. This will involve the gas appliance and equipment sectors as well as consumer research.

The programme is aiming to demonstrate:

- That safe, reliable, efficient and affordable end-use appliances and equipment can be developed for the lower pressure, below seven bar domestic sector (depending on the outcome of a market research study for both the commercial and industrial sectors, a decision will be made on appliance development in these sectors)
- That hydrogen can be safely distributed to the end user appliances in existing buildings' pipework, downstream of the meter
- Initial findings of what the consumer experience of a hydrogen fuelled home will be. This includes testing through unoccupied trials appliance suitability, as well as developing requirements and options for progressing to a potential community trial should a decision be taken to proceed.

Successful demonstration will lay the ground work for a potential follow-on project to undertake an occupied community trial.

The Hy4Heat programme will be completed by the end of March 2021. It is envisaged that it will consist of nine Work Packages:

1. Programme management
2. Definition of a hydrogen quality standard
3. Establishing an appliance and equipment testing capability
4. Development of domestic hydrogen appliances
- 5. Understanding commercial appliances (this Invitation to Tender (ITT))**
- 6. Understanding industrial appliances (this Invitation to Tender (ITT))**
7. Assessment of suitability of hydrogen in existing buildings
8. Hydrogen demonstration trials in unoccupied building
9. Preparations for an occupied consumer community trial

BEIS has appointed Arup+ as the Programme Management Contractor (PMC), who are responsible for delivering Work Packages 1 and 9 as part of their contract. Arup+ will also be managing the delivery of Work Packages 2 – 8 and, as part of the conditions for the PMC role, have agreed not to bid for the remaining Work Packages. These Work Packages will be delivered by other suppliers.

This ITT directly supports the delivery of Work Packages 5 and 6, understanding commercial and industrial appliances.

### 3. Summary of tender requirements

The overall requirement for these Hy4Heat Work Packages is to provide a comprehensive market research report to fully assess the feasibility of converting the commercial and industrial sector appliances from natural gas to hydrogen by understanding sector appliances and industries and identifying any knowledge gaps and technical barriers that may need to be addressed with further practical testing and development.

The work will be delivered through two separate lots split as follows:

Lot #	Description
1	Understanding commercial appliances (Hy4Heat WP5)
2	Understanding industrial appliances (Hy4Heat WP6)

The following tender sections 3a and 3b set out the requirements for Lots 1 and 2 respectively.

**Please note:**

**Tenderers can bid for one or more of the lots and should complete a separate submission for each lot that they wish to bid for.**

**If applying for both lots, tenderers should advise of any discount that will apply if awarded both lots.**

**Each bid will be evaluated on the price for the individual lots, not the discounted price.**

## Section 3a: Understanding commercial appliances (Lot 1) - specification of requirements

### Invitation to Tender for

### Understanding Commercial and Industrial Appliances for UK hydrogen for heat demonstration (Hy4Heat Work Packages 5 & 6)

<b>Tender Reference Number (TRN)</b>	<b>15507/2018</b>
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## 1. Project aim and objectives

The aim of this work is to investigate the feasibility (including safety, costs and user acceptability) of converting the Commercial sector's natural gas fuelled heating requirements to hydrogen. The study will also inform future work in relation to strategic options for wider conversion of Great Britain from natural gas to hydrogen.

The objectives of this work package are to:

- Characterise the Commercial sector with regards to operational activities and the installed base of appliances (type, number and outline capacity) used for these activities which would need to be converted to hydrogen
- Identify any knowledge gaps and technical barriers that need to be addressed through research and development. This should also include any wider barriers or facilitators to conversion of the gas network to hydrogen, which are particular to the Commercial sector.
- Provide estimations on the costs of converting and/or replacing Commercial sector appliances to hydrogen and the timelines required for this (including costs and timescales for research development)
- Provide an appraisal and recommendations that:
  - Allows Hy4Heat to make a decision on what type of appliances (or key 'components' of appliances) could be developed to facilitate Commercial sector conversion for a small community trial.
  - Identifies any further work that would need to be undertaken to demonstrate that hydrogen conversion of different appliances is feasible (including safety, costs and user acceptability).
  - Identifies the extent to which any ancillary conversion work (e.g. on internal pipework) may be required.
  - Identifies what additional information would be necessary to inform any plan for a staged roll-out programme.
- Create a product development and deployment plan for the most likely commercial scale appliances to be found in a small community trial location.

It should be noted that the commercial framework or policy mechanism required to facilitate conversion of the Commercial sector to hydrogen is viewed as important by BEIS in a wider context but is outside the scope of this study.

The success of this work package will be measured against the quality and delivery of the specified outputs.

## 2. Scope of work

This is a market study only. The outputs of the work, however, will help enable subsequent decision-making by BEIS in respect of potential procurement of practical evidence and testing, which may be required to demonstrate that the Commercial sector can be successfully converted to hydrogen for heat generation.

For the Commercial sector the only significant uses of natural gas are<sup>1</sup>:

- Space heating of buildings
- Heating of water (including for sanitary uses and swimming pools)
- Catering

This situation is in common with the Public Administration sector, and for UK energy consumption statistics they are reported together under the Service sub-sectors:

- Community, arts and leisure
- Education
- Emergency Services
- Health
- Hospitality
- Military
- Offices
- Retail
- Storage

It should be noted that the appliances and systems that are used are also common across the wider Service sector and the breakdown of sector gas use in 2016 was:

- Space heating of buildings: ~75%
- Heating of water: ~18%
- Catering: ~7%

The scope is described as covering the Commercial sector, and for the purposes of this study also encompass the Public Administration sector.

The scope of the investigation includes all appliances and equipment providing the heating needs identified above which are currently fuelled by natural gas through the below 7 bar gas network and their replacements with hydrogen fuelled equivalents.

For the purposes of the study, hydrogen is as defined by the gas quality standard ISO14687 Grade A, Type 1, plus the odorant currently used for natural gas. Trace quantities of a flame colourant may also be present although the composition of this has yet to be determined.

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[https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/652638/ECUK\\_Tables\\_2017.xlsx](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/652638/ECUK_Tables_2017.xlsx)

Throughout this document the term 'convert' will be used. This should be interpreted as convert or replace or any combination of both. In effect, whatever is optimum in the circumstances. This must be appliance type and age specific. Modifying a grill manufactured circa 1980 with imperial sizes may not be viable, changing the burner on a <1MW boiler from 2010 clearly would be the best option. The contractor is expected to offer an opinion on this complex issue. This is particularly important regarding the potential for significant NOx reduction (see below)

The contractor should document and collate information through an extensive literature review and stakeholder engagement and report on the feasibility of converting Commercial sector appliances to hydrogen. The report should identify any knowledge gaps and technical barriers and recommend how these could be addressed including any research and development that would be needed.

The purpose of this study is to determine if it is theoretically possible to successfully convert the Commercial sector to hydrogen. This study will enable BEIS to determine the best course of action for addressing the challenges raised within this study.

## **2.1 Market characterisation**

The contractor will need to provide data, in as much granularity as possible, in respect of the current heat applications of natural gas in the Commercial sector and the relevant appliance and system types. The data should cover both the installed base and annual sales volumes and be broken down by; appliance type, application, and output rating.

To assist in understanding the market opportunity for replacing these appliances with hydrogen fuelled appliances, typical lifespans / replacement frequency for natural gas-fuelled appliances should be provided. Data on low-carbon alternatives that already service similar requirements to these natural gas-fuelled appliances should also be provided (e.g. existing hydrogen-fuelled appliances or electrical appliances).

General availability of hydrogen, as a result of conversion gas distribution networks, may present other opportunities for the Commercial sector.

To assist in understanding these other potential market opportunities for use of hydrogen in the Commercial sector, the contractor should identify suitable technical opportunities (with supporting evidence) and estimate the potential scale of each.

For clarity it is suggested that the study covers the following applications: -

- 1) Catering from tiny café to largest commercial kitchen but excluding industrial food preparation
- 2) Heating sub-divided into
  - Hot water <1MW (steam is excluded from this report)
  - Cabinet Air heaters
  - Radiant heaters.

Current commercial scale CHP sites are excluded from this tender. It should not be assumed that existing boilers are replaced on an identical basis e.g. many 300kW to 500kW boilers have been replaced with banks of 90kW pseudo domestic units. The contractor will need to take a view on this matter. Please also cross reference Section 2.5 on emissions.

## **2.2 Technical challenges**

The combustion properties of hydrogen differ to those of natural gas. Consequently, for commercial scale appliances, the impacts of variations in characteristics such as: flame speed, flame temperatures, flame luminescence, etc. and heat transfer represent potential



technical challenges and combustion products and efficiency ratios will require analysis. For each appliance type, the contractor will need to document all relevant technical challenges and the extent to which these represent a barrier to creation of hydrogen fuelled versions. An example would be the increased moisture within a hydrogen fired oven.

### **2.3 Appliance development**

The contractor should identify which types of existing natural gas appliance could be economically redesigned to use hydrogen and which, if any, heating applications would require the development of new hydrogen fuelled appliances. The analysis to support these conclusions should reference similar conversion/redesign initiatives and cover the key components and proposed design approaches. Particular thought should be given to the increased risk from delayed ignition especially for appliances with large combustion volumes. Estimates should be provided for development timescales and costs.

### **2.4 Securing user acceptability**

Businesses are naturally risk averse in respect of infrastructure conversion as this has a potentially significant impact on their productivity. With reference to each of the technical challenges identified and the proposed approach to appliance development, the contractor will therefore need to highlight the nature of the evidence that would be required to secure user acceptance. This might be via programmes of practical research and off-site testing and/or via actual on-site demonstration and pilot trials. For all appliance types, the contractor will need to describe likely costs and timelines associated with all proposed research and testing processes.

### **2.5 Costs and timelines for sector conversion**

For each type of appliance, the contractor will need to provide estimates of the Capex related to conversion to hydrogen. This should include all downstream elements mentioned above. Information should also be provided on the timelines for conversion (which may include the above phases of appliance development or demonstration to secure user acceptability), including any periods for design, procurement, installation and commissioning of hydrogen appliances. Information on both costs and timelines is required at the level of the generic individual appliance and multiplied to calculate the cost of replacing all appliances of that type currently operating in the UK market. Uncertainty bands should be provided for these values, especially if they (of necessity) are large.

### **2.6 Emission and efficiency standards for heating appliances.**

The contractor should refer to current legislation regarding heating plant efficiency and atmospheric emissions (especially NO<sub>x</sub>). The contractor should comment on the potential effect of conversion to hydrogen on these. This should be detailed and broken down by combustion type e.g. low temperature catalytic, blown gas burner. This should be cross referenced to the section 'costs and timelines for sector conversion'. The possible beneficial effects of low NO<sub>x</sub> combustion should be investigated thoroughly.

A brief consideration of the implications of the Eco-design Directive should be included.

### **2.7 Wider barriers and facilitators**

There is potentially a range of non-technical barriers and facilitators specific to the Commercial sector, which require identification and outline analysis. These might include, but are not limited to:

- Cost or commercial benefits of different deployment options, for example, staged conversion of gas distribution networks layout around geographical locations or

conversion of applications based on the economics and availability of hydrogen appliances.

- The specification of hydrogen required by commercial-scale fuel cells or transport.

**Please note:**

- The commercial framework or policy mechanism required to facilitate conversion of the Commercial sector to hydrogen is viewed as important by BEIS in a wider context but is outside the scope of this study.
- This is not an exhaustive list and the contractor is asked to indicate any further questions that they believe need to be answered to fulfil the requirements of this project, and which they would address if appointed.

### 3. Methodology / Approach

Tenderers should set out in their tenders the details of their proposed methodology for obtaining the information necessary to enable them to answer the research questions. The methodology proposed must make clear how contractors will deliver new robust evidence and add value to the Hy4Heat programme.

Where applicable, relevant existing evidence should be interrogated, critically analysed, evaluated and as appropriate used as a basis to build on. Where surveys and interviews are conducted as part of this project, contractors will be required to submit the proposed survey and interview schedules to Hy4Heat for approval.

An outline methodology is suggested below although tenderers may propose their own if they feel it would deliver higher quality outputs:

#### Data collection

**Phase 1:** a desk-based literature review to identify relevant existing evidence and inform the second phase, although it is expected that work on Phase 2 would commence prior to the completion of Phase 1. Planning and arranging the engagement with relevant stakeholders is expected to commence early in the project.

Tenderers are requested to propose a range of sources that will explore when conducting their literature review, for example, Industry standards, guidance and academic sources. Tenderers should specify how and where the different sources that they identify will respond to the areas of interest highlighted in the Scope of Work (above). Tenderers should specify how they will construct research materials to ensure that these can deliver robust and objective evidence.

**Phase 2:** Conduct surveys and interviews to collect new data from relevant stakeholders and experts. This will include:

- Interviews with commercial appliance and component manufacturers
- Interviews with commercial appliance end user and natural gas consumers including a mix of tenants, landlords and owners
- Site surveys for typical conversion types
- Interviews with Gas Distribution Network Operators (GDNOs), energy supply companies and individuals with prior experience of gas supply conversion e.g. town gas to natural gas or the Isle of Man transitions, and other hydrogen conversion projects (Hy4Heat led)
- Interviews with regulators
- Interviews with local authorities
- Interviews with academics who may understand the potential for NO<sub>x</sub> reduction.

During the second phase it is expected that views would be gathered from relevant stakeholders and experts via for example:

- Questionnaires;
- Individual and group meetings with stakeholders;
- Telephone interviews;

Questions must be tailored appropriately to each stakeholder group.

Tenderers should specify in their bids which and how many organisations they intend to approach in each of these categories, the questions they believe each stakeholder will be

able to answer and how answering these questions will help address the evidence needs identified in the Scope of Work (above). These stakeholders should be appropriately representative of the range of stakeholders. Contractors should specify in their tenders how many stakeholders they intend to engage with, and how this will allow them to respond to the areas of interest highlighted in the Scope of Project (above).

It should be noted that many organisations in the commercial sector will have only modest understanding of hydrogen and discussions may need to be held with academics and providers of industrial hydrogen burners and then extrapolations made to the commercial sector. Tenderers should be clear about how they will manage data collection where some sources may have detailed commercial understanding but limited technical understanding, and where others may have detailed technical understanding but limited commercial understanding.

### **Information analysis**

Assess and analyse collated information to identify:

- Gaps in the knowledge base
- Barriers to conversion
- Natural gas fuelled appliances and technologies and their prevalence. These should be mapped against likely hydrogen (or other) replacements.

Once evidence has been gathered, contractors will be expected to present their conclusions to stakeholders to validate their findings.

Contractors should ensure a comprehensive review of all relevant existing literature is undertaken including, but not limited to:

- Appraisal of domestic hydrogen appliances, by Fraser Nash:

<https://www.gov.uk/government/publications/appraisal-of-domestic-hydrogen-appliances>

Tenderers should demonstrate their knowledge of additional related literature that will be reviewed as part of their review.

### **Reporting**

Provision of a comprehensive report which:

- A)** Describes the list of data sources, references and an outline of the analytical approach used
- B)** Describes the size and structure of the existing UK Commercial sector appliance heating market
- C)** Describes the current market (e.g. installed based and sales figures) for natural gas fired appliances and equipment (e.g. by appliance/equipment type and output rating)
- D)** Describes the current use of hydrogen within the Commercial sector
- E)** Includes a clear and succinct list of recommendations for
  - a. Initial actions for furthering the knowledge base (research and development, tests, trials, product development for small community trial etc.)
  - b. Common appliance parts that could be developed in advance to accelerate product development if a community trial was to be undertaken (e.g. common burner types)

- c. Innovative approaches/mechanisms to stimulate the Commercial sector and encourage product development within the market
- F)** Identifies the priority technologies/appliances that need to be developed and presents a development plan for each including:
  - a. List of components that need to be developed
  - b. Functional requirements that need to be met for each appliance considering safety, end user acceptance, business requirements and implications for using hydrogen
  - c. The costs for development
  - d. Timelines for development
- G)** Identifies any new commercial scale applications for hydrogen usage might be developed once the local gas distribution network has been converted to hydrogen
- H)** Identifies what actions would need to be convert the Commercial sector to hydrogen for a community trial, any potential challenges to an expanded roll-out into the Commercial sector and recommendations for how these could be overcome
- I)** Identifies any potential intellectual property issues relating to appliance development that could pose a risk/challenge to a hydrogen conversion

Tenderers should also describe how they intend to engage with each different stakeholder group, taking into consideration factors including:

- That some companies may not wish to engage because of a perceived increase in fuel cost associated with a switch from natural gas to hydrogen
- The desire of some stakeholders for their responses to remain confidential

### **Data analysis and presentation**

Tenderers should describe the methods they intend to use to analyse and present both qualitative and quantitative datasets from both primary and secondary data gathering. This should include how they propose to segment commercial sub-sectors and appliance types, which will subsequently be agreed with BEIS at project inception.

All numerical data analysis should take place in Microsoft Excel (see Deliverables in Section 4), such that any resulting models can be easily re-analysed by BEIS. Any particular tried-and-tested approaches to managing and presenting uncertainties in relation to cost and timeline information should be highlighted in proposals.

Tenderers should also describe how they intend to summarise and present the results of primary research with stakeholders. This should include how to manage and present data which has been gathered on a confidential basis, i.e. such that it can be reported, but only if the respondent remains anonymous.

Tenderers should specify their approach for with potential biases throughout the research process (including, but not limited to 'optimism bias' and 'negativity bias'), as well as the interests and variable levels of expertise of different stakeholders to ensure that they are able to produce robust, transparent, defensible, and objective evidence. For example, in relation to some stakeholder views of the challenges associated with conversion of industry to hydrogen, should also be described.

## 4. Deliverables

During the study, BEIS (and Hy4Heat as the PMC) will expect to review and comment on a range of outputs which relate to the methodology described above; for example, the list of stakeholders for engagement, draft topic guides for interviews and approaches to presentation of data.

In addition, there are several specific deliverables that are expected from the successful contractor, which merit identification in the table below.

<b>Deliverable</b>	<b>Description</b>
Presentation at project inception meeting	The contractor will be expected to present their proposed approach to the study at a meeting of the Hy4Heat and BEIS project team
Final Project Plan	The contractor will need to provide a final project plan to be signed off by BEIS. This should detail key phases of work, a weekly activity plan and delivery dates
Progress updates	Regular telephone updates between the contractor and Hy4Heat Project Manager, at a frequency to be agreed at project inception
Interim meeting presentation	The contractor will be expected to present a progress update at a meeting of the Hy4Heat and BEIS project team
Final presentation	The contractor will be expected to present the draft findings from the study at a meeting of the Hy4Heat and BEIS project team
Written Report	<p>This will be a quality assured written report. In addition, full technical appendices should include (but not be limited to):</p> <ul style="list-style-type: none"> <li>• A table of all relevant model assumptions, to provide transparency to the work and allow the results to be interrogated by third parties</li> <li>• Summary interview and survey data, excluding full transcripts</li> </ul> <p>Draft and Final Reports will be required for submission to BEIS.</p>
Any supporting analysis files used to create the results reported (e.g. spreadsheets, databases etc.)	<p>This will allow the evidence to be used with confidence by BEIS officials to support policy-making. The analysis files should be intuitive to use, with all assumptions recorded in notes sections with links to primary data sources along with uncertainty ranges (where possible). As a general guide, the BEIS assumptions log template and wider quality assurance guidance is available at: <a href="https://www.gov.uk/government/collections/quality-assurance-tools-and-guidance-in-decc">https://www.gov.uk/government/collections/quality-assurance-tools-and-guidance-in-decc</a></p>
Stakeholder engagement notes	Copies of any questionnaires and summaries of responses and interview/meeting notes

## 5. Skills and experience

BEIS would like you to demonstrate that you have the experience and capabilities to undertake the project.

Tender responses should include a summary of each proposed team member's experience and capabilities in the main bid response, as well as CVs for the propose team as annexes (CVs should be limited to two pages each).

Tenderers 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.

Tenderers should identify the individual(s) who will be responsible for managing the project and those who will carry out QA.

The appropriateness of the skills and expertise of the team should match the proposed tasks being undertaken. For instance, this may include a team with expertise in the fields of mechanical or chemical engineering with specific knowledge of natural gas and hydrogen applications, as well as expertise in conducting research and report writing.

The following skills are considered particularly important for this work:

- Public sector, industry body, corporate and individual stakeholder engagement
- Market research, data analysis and report writing
- Social Research, including the performance and analysis of interviews
- Gathering, interpreting and analysing primary evidence/research
- Feasibility assessment from commercial, technical and practical perspectives
- Approval to handle personal data and experience in doing so safely and in compliance with the Information Commissioners Office. Collection of any personal data will need to comply with GDPR and the contractor will require prior agreement from BEIS as to the personal data that is to be collected.
- Project development including scoping and planning.

The main contractor may wish to hire individual sub-contractors who have deep understanding of:

- Modern gas fired catering equipment
- Modern gas fired commercial boiler houses
- Low NO<sub>x</sub> combustion of fuel gas.

## 6. Timetable / Work Plan

As part of the submission, the tenderer is expected to submit a delivery plan including, as a minimum:

- An organisation chart and list of key people within the successful tenderer's delivery team with an outline description of how they will be managed to ensure that delivery will be completed on time
- A detailed schedule of works showing when the scope will be delivered
- The methodology that will be used to produce the deliverables and to ensure the quality of the deliverable
- An outline description of the risks to delivery and your proposed mitigation measures

Aligned with the deliverables presented in Section 4 and the Milestone Payments in Section 8, an indicative, outline time schedule is presented below:

<b>Reporting points/deliverables</b>	<b>Time after contract commences</b>
Project Inception Meeting	Week of contract commencement
Interim Project Meeting / Presentation	Month 2
Submission of Draft Report	Month 5
Submission of Final Report	Month 5
BEIS sign-off	Month 6

The contract duration will be 6 months.



## **7. Budget, pricing and commercial valuation**

The budget for this project is up to **£180,000** (excluding VAT).

The budget has been set based on the approach and deliverables required.

Tenderers should provide fixed prices for the deliverables described in Section 4. The format for providing the fixed price is provided in Annex A with some indicative examples of tasks.

Tenderers should provide a full and detailed breakdown of costs. This should include staff (and day rate) allocated to specific tasks.

Resources and day rates might also be proposed for additional tasks (within or outside the above specified budget), which may reasonably be required in the bidder's opinion, but have not been included within the scope of this ITT.

Total fixed fee for delivering the scope of works set out in this tender will be the commercial criterion against which bids which will be assessed. This should not include an additional tasks proposal by the tenderer, which should be priced separately.

In submitting full tenders, tenderers confirm in writing that the price offered will be held for a minimum of 13 weeks from the date of submission. Any payment conditions applicable to the prime contractor must also be replicated with sub-contractors.

BEIS will retain 10% of the total budget for final payment upon completion and sign-off to the project board's satisfaction of the final programme report.

### **Please note:**

**Tenderers can bid for one of more of the lots and should complete a separate submission for each lot that they wish to bid for.**

**If applying for both lots, tenderers should advise of any discount that will apply if awarded both lots.**

**Each bid will be evaluated on the price for the individual lots, not the discounted price.**

## 8. Payment

Payments will be linked to the completion of key deliverables, as outlined in Sections 4 and 6.

The proposed fee percentage for completion of these deliverables can be found in the table below.

Other costs incurred for attending meetings etc. should be itemised and included within the fixed fee.

Ref.	Expected Milestone	Month after contract commences	Percentage paid
1	BEIS acceptance of the research plan including proposed questionnaires, interview and meeting agendas	0	0%
2	Interim presentation of progress	2	30%
3	BEIS acceptance of the draft report including copies of questionnaire responses, interview and meeting notes	5	40%
4	Receipt of final report	6	20%
5	BEIS acceptance of the final report and QA log	6	10%

Contractors may invoice, subject to the successful delivery of agreed milestones. This can be adjusted and agreed with the contractor based on the tender response. Please advise in your tender response how this breakdown reflects your usual payment processes.

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.

## 9. Evaluation criteria

Tenderers are invited to submit full tenders of no more than 20 pages, (in Arial 12pt), excluding declarations and a maximum of five CVs. Tenders will be evaluated by at least three BEIS/Arup+ staff. The cost criterion will be marked by BEIS staff only.

Criterion		Description	Weighting
0	Conflict of interest		Pass/Fail
1	Skills and expertise	Experience/demonstration of relevant skills and supply a strong team of individuals with the capability to fulfil this project's objectives and required outputs [As set out in section 5 (Skills and Experience) above]	10%
		Demonstrate any relevant capability on previous project(s)	10%
2	Understanding of requirements	Demonstrate clear understanding of the tender requirements [As set out in sections 2 (Scope) and 4 (Deliverables) above]	25%
3	Methodology	Effective proposed approach to deliver the project's objectives.  Clear demonstration of the methodology to be used and demonstration of an ability to deliver robust evidence and recommendations report on the commercial scale gas appliance sector [As set out in section 3 (Methodology) above]	20%
4	Management of delivery	Effective quality, relevance and breadth of management oversight including, planning, risk management / identification, effective working arrangements, information handling and quality assurance. [As set out in section 4 (other information for tenderers) of the tender]	10%
5	Price	Price: To be marked proportionately to the lowest tender [Please see example in section 4.6 below]	25%
<b>TOTAL</b>			<b>100%</b>

Scoring methodology can be found in section 4.6

## **Section 3b: Understanding industrial appliances (Lot 2) - specification of requirements**

### **Invitation to Tender for**

### **Understanding Commercial and Industrial Appliances for UK hydrogen for heat demonstration (Hy4Heat Work Packages 5 & 6)**

<b>Tender Reference Number (TRN)</b>	<b>15507/2018</b>
<b>Deadline for Tender Responses</b>	<b>24 August 2018</b>

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# 1. Project aims and objectives

The aim of this study is to provide evidence to understand the issues relating to potential future conversion of industry to hydrogen, and as much as possible within a desktop study of this nature, to de-risk this opportunity. The study will also inform future work in relation to strategic options for wider conversion of Great Britain from natural gas to hydrogen.

In summary, the objectives of this work are to:

- Characterise the industrial market in respect of the type, number, and capacity of each category of appliances that would need to be converted to hydrogen
- Provide estimates of the costs of converting and/or replacing industrial appliances to hydrogen and the timelines required for conversion (including costs and timescales for research development)
- Document any knowledge gaps and technical challenges associated with conversion of appliances which are currently fuelled by the natural gas distribution network; and where conversion is particularly challenging to consider the options to achieve heat decarbonisation (e.g. fuel switching)
- Determine what new appliances (or key 'components' of appliances) would be developed to help enable conversion
- Highlight the nature of evidence that would be required to secure acceptability from industry for heat generation
- Provide information in respect of any wider barriers or facilitators to conversion of the gas network to hydrogen, which are particular to the industrial sector, including consideration of the potential need for any ancillary conversion work (e.g. on internal pipework). Flagging where appropriate, the need for a product development and deployment plan for the industrial sector.
- Identifies any further work that would need to be undertaken to demonstrate that hydrogen conversion of different appliances is feasible (including safety, costs and user acceptability).

Further information in respect of each of these objectives is provided in the Scope of Work in Section 2, and is also linked to the 'Understanding of Requirements' element of the Evaluation Criteria in Section 9.

## 2. Scope of work

This is a market study only. The outputs of the work, however, will help enable subsequent decision-making by BEIS in respect of potential procurement of practical evidence and testing, which may be required to demonstrate that industry can be successfully converted to hydrogen for heat generation.

The scope of the analysis should include industrial appliances connected at all pressure tiers (Low Pressure (LP), Medium Pressure (MP), Intermediate Pressure (IP)) to the <7bar gas distribution network. It should exclude, however, any large industry sites connected to the Local (LTS) or National Transmission System (NTS).

The core appliance types within scope are:

- High-heat, direct-fired kilns
- High-heat, direct-fired furnaces
- Steam-raising boilers
- Hot water boilers
- Low temperature processes for toasting, baking, grilling, roasting and drying

There may be important variations on the appliance types proposed above, which are relatively common in Great Britain, and so if relevant, tenderers should highlight any such examples.

In line with the main threshold used in the EU Medium Combustion Plant Directive (Directive 2015/2193), it is proposed that hot water boilers/burners <1MWth should be outside the scope of analysis of this Lot (and included within the scope of Lot 1 – Commercial Appliances). All boilers below this threshold are usually ‘package’ appliances and therefore not industrial in nature. However, in tender submissions, tenderers are welcome to propose an alternative approach or value for this threshold.

Consideration of combined heat and power (CHP) appliances, i.e. gas turbines (GTs) and reciprocating engines (‘recips’) is within the scope of the study. However, there are particular challenges associated with determining the costs of converting these appliances to hydrogen, which cannot be met within the scope of a desktop study. Consequently, in the sections immediately below, specific reference is made to where information on CHP appliances is not required, along with that relating to hydrogen fuel cells (FCs).

The work should focus upon all elements of industrial hydrogen use, which are ‘downstream’ of the meter, including pipework, the appliances themselves, control systems and impacts upon manufactured products.<sup>2</sup> All issues associated with supply of hydrogen ‘upstream’ of the meter should be considered to be outside of scope.<sup>3</sup>

Consistent with the objectives described in Section 1 and linked to the ‘Understanding of Requirements’ element of the Evaluation Criteria in Section 9, the areas of analysis to be

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<sup>2</sup> Impacts on manufactured products might include, for example, in the glass-making sector, variations in flame emissivity, which leads to changes in the heat profile in the appliance, resulting in a lower quality product

<sup>3</sup> Evidence in respect of such ‘upstream’ issues is being developed as part of a separate project funded under Ofgem’s Network Innovation Competition. See [https://www.ofgem.gov.uk/system/files/docs/2018/01/h21\\_nic\\_v15\\_final\\_-\\_no\\_field\\_trials\\_0.pdf](https://www.ofgem.gov.uk/system/files/docs/2018/01/h21_nic_v15_final_-_no_field_trials_0.pdf)

undertaken by the successful contractor are defined as follows.

### **Market characterisation**

The contractor will need to provide data, in as much granularity as possible, in respect of the number and capacity (in MWth) of each category of appliances (for example, boilers, furnaces and kilns) currently operating on natural gas in Great Britain that would need to be converted to hydrogen. These should be clearly split across relevant industrial sub-sectors; for example, chemicals, food and drink, automotive, pulp and paper etc. The contractor will also need to provide information in respect of any examples of existing use of hydrogen as a fuel in industrial appliances. With specific regard to FCs, details of any reference projects should be provided to demonstrate feasibility at industrial scale.

### **Technical challenges to conversion**

Hydrogen has a range of different properties to natural gas. Consequently, for industrial appliances, the impacts of variations in such areas as flame speed, emissivity, temperature, luminescence and heat transfer represent potential technical challenges, whilst potential impacts upon refractory linings and combustion products will also require analysis. For all appliance types (including GTs and reciprocating engines, but excluding FCs), the contractor will need to document all relevant technical challenges and the extent to which these represent a barrier to conversion. As part of this process, the contractor will also need to identify any knowledge gaps and limitations to the study.

### **Appliance development**

The industrial sector contrasts with the domestic sector (and to some extent the commercial sector) in respect of the extent to which new appliance development is potentially required. In some cases, it will be possible to convert existing industrial appliances that use natural gas to hydrogen; for example, via the installation of new burners and other equipment, rather than the development of whole new appliances being required. For each of the appliance types (again including GTs and reciprocating engines, but excluding FCs), the contractor will need to determine whether new appliances are needed or whether only key 'components' of appliances should be developed to help enable conversion. The contractor will need to set out a clear rationale as to how each type of appliance could be converted to hydrogen along with evidence supporting the proposed approach.

### **Securing user acceptability**

Industry is naturally risk averse in respect of the acceptance of new fuels or processes which might impact upon core production or give rise to safety concerns. With reference to each of the technical challenges identified and the proposed approach to appliance development, the contractor will therefore need to highlight the nature of evidence that would be required to secure user acceptability. For example, this might be via programmes of practical research and off-site testing, via actual on-site demonstration in partnership with industry or other approaches to be determined by the contractor as part of the work. For all appliance types (excluding FCs), the contractor will need to describe likely costs and timelines associated with all proposed research and testing processes.

### **Costs and timelines for conversion**

For each *core* type of appliance (i.e. excluding GTs, reciprocating engines and FCs), the contractor will need to provide estimates of the Capex related to conversion to hydrogen, and related levels of cost risk/uncertainty. This should include all downstream elements as highlighted above. Information should also be provided on the timelines for conversion (which may include the above phases of appliance development or demonstration to secure user acceptability), including any periods for design, procurement, construction and

commissioning of new or converted appliances. Information on both costs and timelines is required at the level of the generic individual appliance and multiplied to calculate the cost of converting all appliances of that type currently operating in the GB market.

### **Operating costs**

Alongside greater Capex, switching from natural gas to hydrogen may result in an uplift to day-to-day Opex for industrial customers. For each *core* appliance type, the contractor will therefore need to provide high level information and outline estimates as to any additional Opex resulting from changes to, for example, appliance capacity, efficiency, availability, gas detection, training and general operation and maintenance.

### **Standards and certification**

Alongside any potential impacts to direct appliance running costs, for all appliances (excluding FCs) the contractor will also need to provide high-level information relating to the impact and likely costs of conformance with new standards, certification and regulatory requirements. These might include, for example, zoning requirements under the UK Dangerous Substances and Explosive Atmospheres Regulations (DSEAR) Regulations (2002), undertaking of Hazard and Operability (HAZOP) studies. Furthermore, compliance with environmental permits should also be considered, with reference to how this could impact upon Capex and Opex as described above.

### **Wider barriers and facilitators**

There is potentially a range of non-technical barriers and facilitators specific to the industrial sector, which require identification and outline analysis. These might include, but are not limited to:

- Cost or commercial benefits of different deployment options, for example, clustering of industrial sites geographically
- Any impacts or benefits of a switch to hydrogen upon chemical process industries, which are currently reliant on natural gas as a feedstock
- The specification of hydrogen required by industrial-scale FCs (which may be more resilient than those used at domestic-scale or in vehicles) and therefore may offer the potential for roll-out as CHP alliances.

It should be noted that consideration of the following issues is viewed as important by BEIS in a wider context, but is outside the scope of this study:

- The commercial framework or policy mechanism required to facilitate conversion of industry to hydrogen
- Detailed consideration of any technical or cost-related issues in respect of carbon capture, utilisation and storage (CCUS)
- The potential level of job creation and industrial growth which may result from the conversion of industry to hydrogen.



### 3. Methodology and approach

In proposals, tenderers should set out details of their preferred method(s) for providing information in respect of the Scope of Work described above. The methodology proposed must make clear how contractors will deliver new, robust evidence and add value to the existing evidence base.

Where applicable, tenderers should make innovative suggestions on where applicable relevant existing evidence should be found and how it should be interrogated, critically analysed, evaluated and, as appropriate, used as a basis to build on.

#### Data gathering

It is expected that the successful contractor will undertake a phased approach to this work by first undertaking a desk-based literature review to identify relevant existing evidence (Phase 1) to inform a second phase of primary data gathering (Phase 2). However, in proposals, tenderers are welcome to suggest alternative approaches.

Tenderers are requested to propose a range of sources that they will explore when conducting their literature review, for example, industry standards, guidance and academic sources. Tenderers should specify how and where the different sources that they identify will respond to the areas of interest highlighted in the Scope of Work (above). Tenderers should specify how they will construct research materials to ensure that these can deliver robust and objective evidence.

Secondary data for Phase 1 might come from a range of sources, including (but not limited to) Government-sponsored reports, industry-driven reports and academic papers. Where appropriate, this exercise should not be restricted to information generated within the UK, albeit whereby any overseas evidence is used, evidence should be provided to demonstrate that this is relevant in the UK context; for example, that glass furnaces or brick kilns are similar in nature to those operating in the UK.

Existing studies directly relevant to this work include but are not limited to:

- Element Energy on behalf of BEIS (2018) Industrial fuel switching to low carbon alternatives, 2018<sup>4</sup>
- Cadent & Progressive Energy (2018) *HyNet North West: From Vision to Reality*, May 2018  
[https://hynet.co.uk/app/uploads/2018/05/14368\\_CADENT\\_PROJECT\\_REPORT\\_A\\_MENDED\\_v22105.pdf](https://hynet.co.uk/app/uploads/2018/05/14368_CADENT_PROJECT_REPORT_A_MENDED_v22105.pdf)
- Cadent & Progressive Energy (2017) *The Liverpool-Manchester Hydrogen Cluster: A Low Cost, Deliverable Project*, August 2017  
<https://cadentgas.com/about-us/innovation/projects/liverpool-manchester-hydrogen-cluster>
- Northern Gas Networks (2016) *H21: Leeds CityGate*, July 2016  
<https://www.northerngasnetworks.co.uk/wp-content/uploads/2017/04/H21-Report-Interactive-PDF-July-2016.compressed.pdf>
- DECC (2015) *Industrial Decarbonisation & Energy Efficiency Roadmaps to 2050*, March 2015

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<sup>4</sup> Study scheduled to be published during summer 2018

<https://www.gov.uk/government/publications/industrial-decarbonisation-and-energy-efficiency-roadmaps-to-2050>

- Committee on Climate Change (2015) *Scenarios for deployment of hydrogen in contributing to meeting carbon budgets and the 2050 target*, October 2015  
<https://www.theccc.org.uk/wp-content/uploads/2015/11/E4tech-for-CCC-Scenarios-for-deployment-of-hydrogen-in-contributing-to-meeting-carbon-budgets.pdf>

Tenderers should demonstrate their knowledge of additional related literature that will be reviewed as part of their review.

It should also be noted that the successful contractor may be provided with other reports that have not yet been completed or published by BEIS; for example, that which forms part of a wider Industrial Fuel Switching Programme.<sup>5</sup>

In proposals, tenderers should describe how they propose to quickly gather and review this secondary information in a systematic and comprehensive manner.

For Phase 2 it is expected that primary data will be gathered to inform the study. To be proposed by the contractor, this might be by way of surveys, individual telephone or face-to-face interviews, individual and/or group meetings with stakeholders. Where surveys and interviews are conducted as part of this project, contractors will be required to submit the proposed survey and interview schedules to Hy4Heat for approval.

Stakeholder groups might include, for example:

- Operators of major industrial sites
- Appliance (or component) manufacturers, otherwise known as original equipment manufacturers (OEMs)
- Trade associations; for example, British Glass and the Chemical Products Association
- Academic institutions
- Hydrogen industry 'experts'

For each proposed group, tenderers should specify in their bids examples of which organisations they intend to engage with, how many organisations they intend to approach and the associated nature of evidence they expect to be able to gather.

Tenderers should also describe how they intend to engage with each different stakeholder group, taking into consideration factors including:

- Potential industry fatigue resulting from other recent studies of a similar nature
- That some companies may not wish to engage because of a perceived increase in fuel cost associated with a switch from natural gas to hydrogen
- The desire of some stakeholders for their responses to remain confidential

Tenderers should also highlight how they intend to engage existing contact networks to aid this engagement process.

### **Data analysis and presentation**

Tenderers should describe the methods they intend to use to analyse and present both qualitative and quantitative datasets from both primary and secondary data gathering. This

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<sup>5</sup> See <https://www.gov.uk/guidance/funding-for-low-carbon-industry>

should include how they propose to segment industrial sub-sectors and appliance types, which will subsequently be agreed with BEIS at project inception.

All numerical data analysis should take place in Microsoft Excel (see Deliverables in Section 4), such that the resulting model can be easily analysed by BEIS. Any particular tried-and-tested approaches to managing and presenting uncertainties in relation to cost and timeline information should be highlighted in proposals.

Tenderers should also describe how they intend to summarise and present the results of primary research with stakeholders. This should include how to manage and present data which has been gathered on a confidential basis, i.e. such that it can be reported, but only if the respondent remains anonymous.

Tenderers should specify their approach for dealing with potential biases throughout the research process (including, but not limited to 'optimism bias' and 'negativity bias'), as well as the interests and variable levels of expertise of different stakeholders to ensure that they are able to produce robust transparent, defensible, and objective evidence. For example, in relation to some stakeholder views of the challenges associated with conversion of industry to hydrogen, should also be described.

## 4. Deliverables

During the study, BEIS (and the Arup+ Consortium) will expect to review and comment on a range of outputs which relate to the methodology described above; for example, the list of stakeholders for engagement, draft topic guides for interviews and approaches to presentation of data.

In addition, there are a number of specific outputs that are expected from the successful contractor, which merit identification in the table below.

<b>Deliverable</b>	<b>Description</b>
Presentation at Project Inception meeting	The contractor will be expected to present their proposed approach to the study at a meeting of BEIS and the Hy4Heat Project Team
Final Project Plan	Following the Inception Meeting, the contractor will need to provide a final project plan to be signed off by BEIS. This should detail key phases of work, weekly activity plan and delivery dates.
Progress updates	Regular telephone updates between the contractor and Hy4Heat Project Manager, at a frequency to be agreed at Project Inception
Interim Meeting Presentation	The contractor will be expected to present a progress update at a meeting of BEIS and the Hy4Heat Project Team
Final Presentation	The contractor will be expected to present the draft findings from the study at a meeting of BEIS, the Hy4Heat Project Team and a wider group of selected stakeholders
Written Report	<p>This will be a quality assured written report. In addition, full technical appendices should include (but not be limited to):</p> <ul style="list-style-type: none"> <li>• A table of all relevant model assumptions, to provide transparency to the work and allow the results to be interrogated by third parties</li> <li>• Summary interview and survey data, excluding full transcripts</li> </ul> <p>Draft and Final Reports will be required for submission to BEIS.</p>
Full Excel Model used to generate cost and timeline information	<p>This will allow the evidence to be used with confidence by BEIS officials to support policy-making. The model should be intuitive to use, with all assumptions recorded in an assumptions log with links to primary data sources along with uncertainty ranges (where possible). As a general guide, the BEIS assumptions log template and wider quality assurance guidance is available at:</p> <p><a href="https://www.gov.uk/government/collections/quality-assurance-tools-and-guidance-in-decc">https://www.gov.uk/government/collections/quality-assurance-tools-and-guidance-in-decc</a></p>

## 5. Skills and experience

BEIS would like you to demonstrate that you have the experience and capabilities to undertake the project.

Tender responses should include a summary of each proposed team member's experience and capabilities in the main bid response, as well as CVs for the proposed team as annexes (CVs should be limited to two pages each).

Tenderers 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.

Tenderers should identify the individual(s) who will be responsible for managing the project and those who will carry out QA.

The appropriateness of the skills and expertise of the team should match the proposed tasks being undertaken. For instance, this may include a team with expertise in the field of industry, the fields of mechanical or chemical engineering with specific knowledge of natural gas and hydrogen applications, as well as expertise in conducting research and report writing.

The following skills are considered particularly important for this work:

- Public sector, industry body, corporate and individual stakeholder engagement
- Market research, data analysis and report writing
- Social Research, including the performance and analysis of interviews
- Gathering, interpreting and analysing primary evidence/research
- Engineering expertise in both energy generation and industrial contexts
- Expertise in relation to the use of hydrogen for energy generation, ideally in an industrial context
- Feasibility assessment from commercial, technical and practical perspectives
- Approval to handle personal data and experience in doing so safely and in compliance with the Information Commissioners Office. Collection of any personal data will need to comply with GDPR and the contractor will require prior agreement from BEIS as to the personal data that is to be collected.
- Project development including scoping and planning.

## 6. Timetable/ Work plan

As part of proposals, tenderers should include a Delivery Plan including, as a minimum:

- Organisation chart and list of key individuals within the tenderer's project team
- A clear work programme (in the form of a Gantt chart) that will be used to produce and to ensure the quality of deliverables
- Outline description of how the time schedule and resources will be managed to ensure that delivery will be completed on time
- Identification of key risks associated with the study and outline description of how these will be managed

Aligned with the deliverables presented in Section 4 and the Milestone Payments in Section 8, an indicative, outline time schedule is presented below:

<b>Reporting points/deliverables</b>	<b>Time after contract commences</b>
Project Inception Meeting	Week of contract commencement
Interim Project Meeting / Presentation	Month 2
Submission of Draft Report	Month 5
Submission of Final Report	Month 5
BEIS sign-off	Month 6

The contract duration will be 6 months.

## **7. Budget, pricing and commercial evaluation**

The budget for this project is up to £200,000 (excluding VAT).

The budget has been set based on the approach and deliverables required.

Tenderers should provide fixed prices for the deliverables described in Section 4. The format for providing the fixed price is provided in Annex A with some indicative examples of tasks.

Tenderers should provide a full and detailed breakdown of costs. This should include staff (and day rate) allocated to specific tasks. Resources and day rates might also be proposed for additional tasks (within or outside the above specified budget), which may reasonably be required in the tenderer's opinion, but have not been included within the scope of this ITT.

Total fixed fee for delivering the scope of works set out in this tender will be the commercial criterion against which bids which will be assessed. This should not include an additional tasks proposal by the tenderer, which should be priced separately.

In submitting full tenders, tenderers should confirm in writing that the price offered will be held for a minimum of 13 weeks from the date of submission. Any payment conditions applicable to the prime contractor must also be replicated with sub-contractors.

BEIS will retain 10% of the total budget for final payment upon completion and sign-off to the project board's satisfaction of the final programme report.

### **Please note:**

**Tenderers can bid for one or more of the lots and should complete a separate submission for each lot that they wish to bid for.**

**If applying for both lots, tenderers should advise of any discount that will apply if awarded both lots.**

**Each bid will be evaluated on the price for the individual lots, not the discounted price.**

## 8. Payment

Payments will be linked to the completion of key deliverables, as outlined in Sections 4 and 6.

The proposed fee percentage for completion of these deliverables can be found in the table below.

Other costs incurred for attending meetings etc. should be itemised and included within the fixed fee.

<b>Ref.</b>	<b>Expected Milestone</b>	<b>Month after contract commences</b>	<b>Percentage paid</b>
1	BEIS acceptance of the research plan including proposed questionnaires, interview and meeting agendas	0	0%
2	Interim presentation of progress	2	30%
3	BEIS acceptance of the draft report including copies of questionnaire responses, interview and meeting notes	5	40%
4	Receipt of final report	6	20%
5	BEIS acceptance of the final report and QA log	6	10%

Contractors may invoice, subject to the successful delivery of agreed milestones. This can be adjusted and agreed with the contractor based on the tender response. Please advise in your tender response how this breakdown reflects your usual payment processes.

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.



## 9. Evaluation criteria

Tenderers are invited to submit full tenders of no more than 20 pages (in Arial 12pt), excluding declarations and a maximum of five CVs. Tenders will be evaluated by at least three BEIS/Arup+ staff. The cost criterion will be marked by BEIS staff only.

Criterion		Description	Weighting
1	Skills and expertise	Experience/demonstration of relevant skills and supply of a strong team of individuals with the capability to fulfil this project's objectives and required outputs. [As set out in Section 3b.5 (Skills and Experience) above]	10%
		Demonstrate any relevant capability on previous project(s)	10%
2	Understanding of requirements	Demonstrate clear understanding of the tender requirements. [As set out in Section 3b.2 (Scope) and 3b.4 (Deliverables) above]	25%
3	Methodology	Effective proposed approach to deliver the project's objectives.  Clear demonstration of the methodology to be used and demonstration of an ability to deliver robust evidence and recommendations report on the commercial gas appliance sector. [As set out in Section 3b.3 (Methodology) above]	20%
4	Management of delivery	Effective quality, relevance and breadth of management oversight including, planning, risk management / identification, effective working arrangements, information handling and quality assurance. [As set out in Section 4 (other information for tenderers) of the tender]	10%
5	Price	Price – price will be marked proportionately to the lowest tender. [Please see example in Section 4.6 below]	25%
<b>TOTAL</b>			<b>100%</b>

Scoring methodology can be found in Section 4.6.

## Section 4: Other information for tenderers

### Invitation to Tender for

### Understanding Commercial and Industrial Appliances for UK hydrogen for heat demonstration (Hy4Heat Work Packages 5 & 6)

<b>Tender Reference Number (TRN)</b>	<b>15507/2018</b>
<b>Deadline for Tender Responses</b>	<b>24 August 2018</b>

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## 1. Ownership and Publication

BEIS is committed to openness and transparency. All outputs listed in section 3 (with the exception of project updates and reports) should be accessible, non-disclosive and suitable for publication and further use.

The exceptions to this are where:

- 1) the intellectual property rights to an output (or part of an output) are owned by someone other than the contractor. Tenderers should state in their tender if this is the case and indicate whether the third party copyrighted materials can be redacted;
- 2) data is commercial in confidence; and
- 3) a non-anonymised dataset is required for the project.

If these exceptions apply to any part of the outputs, tenderers should indicate this in their proposal alongside any approaches to resolving these.

Unless the above exceptions have been stated in a proposal, all outputs from a project will be assumed to be owned by BEIS. The outputs, raw data and tools developed in the research cannot therefore be used by contractors for purposes other than our work.

BEIS standard terms and conditions require that BEIS retain the Intellectual Property (IP) from all models and software paid for by BEIS:

- Where the contractor is using or building on top of existing IP, such as modules that interface with the model, or proprietary datasets, this must be explicitly stated in the tender response.
- Where open source code or models are to be used within this model, please make clear under which licence this open source software is released.
- The Open Government Licence should be used wherever possible:

<http://www.nationalarchives.gov.uk/doc/open-government-licence/version/2/>

### Non-Disclosure

All outputs must be provided to BEIS in a format that is non-disclosive (i.e. no individuals or individual organisations are identifiable from the data or analysis, directly or indirectly), unless the specification states otherwise or the individual / organisation has given their permission. The contractor is responsible for ensuring that the data is supplied in this form alongside a report on the checks made. A minimum standard for checking includes cell counts within sub-groups for all outputs and analysis. The contractor will be asked to agree their approach to checking for disclosure with BEIS during the course of the contract, before the checks are carried out. Where data or analysis is found to be disclosive during checking, the contractor will be required to suggest an approach or approaches to aggregate the analysis and to agree this with BEIS.

### Storage and Transfer

The contractor will need to ensure that all appropriate regulations are adhered to regarding safe storage and transfer, compliant with BEIS requirements for the data processing and storage of restricted data.

## 2. 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.

Tenderers should include a quality assurance plan that they will apply to their work.

To demonstrate relevant experience in producing high quality reporting, the tenderer must:

- Specify who will be responsible for quality assurance. This must be undertaken before information is issued to Hy4Heat for review and onward circulation to BEIS. More information can be found in the working arrangements in section 5 below.
- Specify the specific responsibilities of the contractor's project manager / director.

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.

The successful bidder will be responsible for any work they or subsequent Work Package contractors supply and should therefore provide assurance that all work in the contract is undertaken in accordance with the Code of Practice.

BEIS reserves the right to request an audit of projects against the BEIS Code of Practice for Research and the commitments made in the tender documents and subsequent contract. Your response could be automatically rejected if the project will not be performed under quality assurance measures that fully meet the Code's requirements.

Other useful sources of guidance and advice that will help bids and the resulting work be of the highest quality include:

- The Government Social Research Code, in particular those that relate to GSR Products: <http://www.civilservice.gov.uk/networks/gsr/gsr-code>
- The Green Book: appraisal and evaluation in central government. <https://www.gov.uk/government/publications/the-green-book-appraisal-and-evaluation-in-central-government>
- [Quality in Qualitative Evaluation: A Framework for assessing research evidence](#) provides a Framework for appraising the quality of qualitative evaluations.
- Rapid Evidence Assessment (REA): <http://www.civilservice.gov.uk/networks/gsr/resources-and-guidance/rapid-evidence-assessment/what-is>. This toolkit will help researchers to identify whether a Rapid Evidence Assessment is best for their needs, and help with the process of planning and carrying out a review

Where relevant, all bids should refer to these pieces of guidance and advice and how they will be used.

The Contractor will be expected to produce high quality reports that meet the following criteria:

General:

- They answer the research questions clearly, in plain English
- They are clearly structured so that information presented in each section of each report is clear
- Connections between sections are clear

- Executive summaries are no more than two sides and set out the findings clearly and their relevance to BEIS policies
- All sections have clear introductions and conclusions (including findings being written concisely upfront)

#### Use of good quality English:

- They are thoroughly peer reviewed for writing quality
- No jargon is used, and all terms are defined and referenced clearly
- All acronyms are written out in full the first time that they are mentioned in each section of each report
- No grammar and phrasing errors are present
- No typos / typographical errors are present
- They contain concise and non-wordy sentences and paragraphs
- They are concise reports that are not too long and do not have vast annexes

#### Visualisations:

- All visualisations are labelled
- All axes are labelled, including with appropriate units
- Clear and appropriate use of visualisations (large enough size, data can be read clearly without reference to the raw data, and there are not too many visualisations presented at once)
- All visualisations are clearly explained and discussed
- A range of different types of visualisations are used to provide more interesting and innovative ways of presenting the results

#### Data quality:

- Any limitations in the research approach need to be clearly stated and justified
- Further research should be stated to build upon the limitations that cannot be addressed in the research
- Where the findings are stronger and more robust and where they are not needs to be stated clearly
- They must use appropriate and consistent units
- All numerical units should include the range of uncertainty / error margin

### **3. Ethics**

All applicants will need to identify and propose arrangements for initial scrutiny and on-going monitoring of ethical issues. The appropriate handling of ethical issues is part of the tender assessment exercise and proposals will be evaluated on this as part of the 'addressing challenges and risks' criterion.

We expect contractors to adhere to the following GSR Principles:

1. sound application and conduct of social research methods and appropriate dissemination and utilisation of findings;
2. participation based on valid consent;
3. enabling participation;
4. avoidance of personal harm; and
5. non-disclosure of identity and personal information.

#### **4. Consortium Bids / Conflicts of Interest**

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.

Tenderers must provide details as to how they will manage any sub-contractors engaged to deliver this tender 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 that the Department 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.

The Department 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 the Department so that it can make a further assessment by applying the selection criteria to the new information provided.

## 5. Working Arrangements

### 5.1 Introduction

This section sets out the Employer Requirements related to working arrangements and management of this project which form part of the Hy4Heat Programme. Notwithstanding the high-level requirements defined in this section, the successful tenderer will be required to comply with the employer/employer's representative's overall project management processes and procedures, which will be communicated at the start of the commission.

**Note:** The employer for this work will be BEIS, however, the management of the contract and the delivery of the work will be conducted through the Programme Management Contractor for Hy4Heat acting on behalf of BEIS.

The successful tenderer will be expected to prepare an organisation chart, identifying one named point of contact through whom all enquiries can be filtered.

An Arup+ Work Package Manager, reporting to a BEIS Project Manager will be assigned to the project and will be the central point of contact for all contractor's enquiries.

The Arup+ Work Package Manager will perform the role of contract manager on behalf of BEIS.

### 5.2 Project Control

The successful tenderers will be required to comply with the project control system in place for the Hy4Heat programme, with particular reference to the following elements:

#### I. Risk

The successful tenderer shall be expected to prepare and maintain a risk register and to contribute as appropriate to the risk management activities carried out by the Hy4Heat Programme. The Delivery Plan shall include an outline description of how risks will be identified and managed by the successful tenderer, and mitigation actions implemented.

Risks and issues should be communicated to the Work Package Manager as soon as reasonably practicable (and included in the monthly/weekly progress report and/or meeting), together with mitigation actions/plans.

The successful tenderer will be deemed to have included in the contract price an allowance for implementing all mitigation measures in connection with all risks for which they are responsible. Those mitigation measures are to be such as will ensure that the risks do not become realities.

#### II. Change Control

The successful tenderer will comply with the change control process in use in the Hy4Heat Programme (which shall be communicated by the Work Package Manager upon award of the contract), and with the contract variation procedures described in the contract.

Request for change will be submitted to the Work Package Manager as soon as possible, using the relevant change request template and uploading this on the Project Team Site as appropriate. Change requests shall include an assessment of impact on time, resources and cost, as well as description of proposed action/plan for implementation.

All change requests raised will be subjected to review by the Work Package Manager and decision by the relevant governance body (e.g. Project Board). This will depend on the level of authority required for the change. Approval or rejection of change will be officially communicated to the contractor by the Work Package Manager and recorded in the programme change log.



## **5.3 Communication and Document Management**

### **I. Communication**

Ways, methods and frequency of communication between the successful tenderer and the Work Package Manager, shall be agreed at the contract kick off meeting.

All communication with BEIS and all external communications (press release, interviews, hands-out and similar), related to this contract or any part of the works shall be submitted to the Programme for acceptance (via the Work Package Manager) prior to issue or release.

All documents and correspondence produced in connection with this contact or any part of the work shall be subjected to the requirements of the Freedom of Information (FOI – Freedom of Information Act 2000), as well as the General Data Protection Regulation (GDPR).

English shall be used for all correspondence, plans, reports, and notes. All documents, plans, and technical reports must express their quantities using the International System of Units (SI).

The successful tenderer shall comply with the communication protocol in use on the Hy4Heat Programme, which shall be communicated by the Work Package Manager upon award of contract.

### **II. Document Management**

The successful tenderer shall use the Hy4Heat Project Team Site (Office 365 SharePoint), for the submittal, circulation, filing and storage of all project documentation. The responsibility for security, access control, availability of this platform lies with the Employer. All correspondence between the successful tenderer and the Work Package Manager shall be filed by the latter using the Arup Mail Manager system (system access is restricted to Arup employees only). BEIS

In addition, the successful tendered shall use the Arup document numbering tool and process in use: all documents uploaded on the Project Team site must have an assigned unique document number.

The Work Package Manager, via the Hy4Heat Project Management Office (PMO), shall organise access to both the Hy4Heat team site and document numbering tool for all relevant parties, as well as provide guidance on use of the platform and technical assistance as required.

The successful tenderer shall comply with the document quality management procedures in use in the Programme, which shall be communicated by the Work Package Manager upon award of the contract.

The Employer uses Microsoft Office suite. All Microsoft files submitted by the Contractor shall be readable by Office 2016 or below.

### **III. Protection of Information**

The successful tenderer shall be expected to confirm that they understand the Employer information security requirements and shall be responsible for complying with them. These include compliance with the Data Protection Act (DPA) 2018 and General Data Protection Regulation (GDPR) 2018, requiring that any information collected, processed and transferred as part of the Hy4Heat Programme, and in particular personal information, must be held and transferred securely. Tenderers must provide assurances of compliance with the DPA and set out in their proposals details of the practices and systems they have in place for handling data securely including transmission between the field and head office and then to the Employer. Contractors will have responsibility for ensuring that they

and any subcontractor who processes or handles information on behalf of the Employer is conducted securely. The sorts of issues which must be addressed satisfactorily and described in contractors' submissions include:

- Procedures for storing both physical and system data
- Data back-up procedures
- Procedures for the destruction of physical and system data;
- How data is protected
- Data encryption software used;
- Use of laptops and electronic removable media; details of person/s responsible for data security
- Policies for unauthorised staff access or misuse of confidential/personal data
- Policies for staff awareness and training of DPA
- Physical security of premises
- How research respondents will be made aware of all potential uses of their data.

The successful tenderer shall be expected to agree to be subjected to audits at the Employer's request for the duration of the contract.

#### **5.4 Commercial management and invoicing**

Notwithstanding the specific contractual requirements in terms of commercial management, the successful tenderer will be required to submit on a monthly basis (or at different frequency as agreed with the Work Package Manager), an updated cost report including, as a minimum, the following information:

- Baseline budget (i.e. contract sum)
- Total estimated planned spent in period
- Total spent to date
- Any variance
- Estimate of cost at completion
- Summary in invoiced in period
- total invoiced to date.

Invoicing shall be linked to an invoicing schedule to be agreed with the Work Package Manager upon appointment. Invoicing will be based on the time and material costs incurred by the contractor for the month in arrears. Deviations to the forecasted invoicing schedules (20+%) will need to be agreed with the work package manager in advance of the expected variance in the month in question.

Payment of invoices shall be subjected to:

- the Work Package Manager's review and approval of the payment application (including weekly time sheets) submitted by the contractor
- the Work Package Manager's recommendation of payment to the BEIS Project Manager
- The BEIS Project Manager's approval of payment recommendation.

## 6. Evaluation Scoring Methodology

Tenders will be scored against each of the criteria above, according to the extent to which they meet the requirements of the tender. The meaning of each score is outlined in the table below.

The total score will be calculated by applying the weighting set against each criterion, outlined above; the maximum number of marks possible will be 100. Should any contractor score 1 in any of the criteria, they will be excluded from the tender competition.

Score	Description	
1	Not Satisfactory	Proposal contains significant shortcomings and does not meet the required standard.
2	Partially Satisfactory	Proposal partially meets the required standard, with one or more moderate weaknesses or gaps.
3	Satisfactory	Proposal mostly meets the required standard, with one or more minor weaknesses or gaps.
4	Good	Proposal meets the required standard, with moderate levels of assurance.
5	Excellent	Proposal fully meets the required standard with high levels of assurance.

### Scoring for Pricing Evaluation

There will be a maximum of 25 marks for the "Price" evaluation.

The lowest priced bid will receive the full 25 marks; all other bids will then be marked as set out below.

#### Proportionate Pricing scoring example

For example, if 25 marks are available and the cheapest bid is £160,000, then:

Supplier	Price	Marks
1 (lowest bid)	£160,000	25
2	£165,000	$160/165 * 25 = 24.2$
3	£171,000	$160/171 * 25 = 23.4$

## **7. Structure of Tenders**

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

Tenderers should ensure that a breakdown of tasks is provided and identify which team members will be working on each task.

Tenders to be submitted in an electronic format:

- 1 full proposal
- ≤ 20 pages, excluding declarations and CVs
- A4, minimum margins 2.5 cm, minimum single line spacing
- Arial font, minimum 12 pt

## **8. Bid Clarification**

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.

BEIS may invite all suppliers for bid clarification if they feel bid clarification should be carried out.

## **9. Feedback**

Feedback will be given to unsuccessful bidders via letters or email.

## Section 5: Further information on tender procedure

### Invitation to Tender for

### Understanding Commercial and Industrial Appliances for UK hydrogen for heat demonstration (Hy4Heat Work Packages 5 & 6)

<b>Tender Reference Number (TRN)</b>	<b>15507/2018</b>
<b>Deadline for Tender Responses</b>	<b>24 August 2018</b>

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## A. Definitions

Please note that references to the "Department" throughout these documents mean The Secretary of State for Business, Energy and Industrial Strategy acting through his/her representatives in the Department for Business Energy & Industrial Strategy.

The Freedom of Information Act 2000 ("FOIA") and the Environmental Information Regulations 2004 ("EIR") apply to the Department. You should be aware of the Department's obligations and responsibilities under FOIA or EIR to disclose, on written request, recorded information held by the Department.

Information provided in connection with this procurement exercise, or with any contract that may be awarded as a result of this exercise, may therefore have to be disclosed by the Department in response to such a request, unless the Department decides that one of the statutory exemptions under the FOIA or the exceptions in the EIR applies.

If you wish to designate information supplied as part of this response as confidential or, if you believe that its disclosure would be prejudicial to any person's commercial interests, you must provide clear and specific detail as to the precise information involved and explain (in broad terms) what harm may result from disclosure if a request is received, and the time period applicable to that sensitivity.

Such designation alone may not prevent disclosure if in the Department's reasonable opinion publication is required by applicable legislation or Government policy or where disclosure is required by the Information Commissioner or the First-tier Tribunal (Information Rights).

Additionally, the Government's transparency agenda requires that tender documents (including ITTs such as this) are published on a designated, publicly searchable web site. The same applies to other tender documents issued by the Department (including the original advertisement and the pre-qualification questionnaire (if used)), and any contract entered into by the Department with its preferred supplier once the procurement is complete.

By submitting a tender you agree that your participation in this procurement may be made public. The answers you give in this response will not be published on the transparency web site (but may fall to be disclosed under FOIA or EIR (see above)). Where tender documents issued by the Department or contracts with its suppliers fall to be disclosed the Department will redact them as it thinks necessary, having regard (inter alia) to the exemptions/exceptions in the FOIA or EIR.

## B. Data Security

The successful tenderer must comply with the Data Protection Act (DPA) 2018 and General Data Protection Regulation (GDPR) 2018 and any information collected, processed and transferred on behalf of *the Department*, and in particular personal information, must be held and transferred securely.

**Contractors must provide assurances of compliance with the DPA and set out in their proposals details of the practices and systems they have in place for handling data securely including transmission between the field and head office and then to the Department.**

Contractors will have responsibility for ensuring that they and any subcontractor who processes or handles information on behalf of *the Department* is conducted securely. The sorts of issues which must be addressed satisfactorily and described in contractors' submissions include:

- procedures for storing both physical and system data;

- data back-up procedures;
- procedures for the destruction of physical and system data;
- how data is protected;
- data encryption software used;
- use of laptops and electronic removable media;
- details of person/s responsible for data security;
- policies for unauthorised staff access or misuse of confidential/personal data;
- policies for staff awareness and training of DPA;
- physical security of premises.
- how research respondents will be made aware of all potential uses of their data.

### **C. Non-Collusion**

No tender will be considered for acceptance if the contractor has indulged or attempted to indulge in any corrupt practice or canvassed the tender with an officer of the Department. Section 4 contains a "Statement of non-collusion" (declaration 1); any breach of the undertakings covered under items 1 - 3 inclusive will invalidate your tender. If a contractor has indulged or attempted to indulge in such practices and the tender is accepted, then grounds shall exist for the termination of the contract and the claiming damages from the successful contractors.

You must not:

- Tell anyone else what your tender price is or will be, before the time limit for delivery of tenders.
- Try to obtain any information about anyone else's tender or proposed tender before the time limit for delivery of tenders.
- Make any arrangements with another organisation about whether or not they should tender, or about their or your tender price.

Offering an inducement of any kind in relation to obtaining this or any other contract with the Department will disqualify your tender from being considered and may constitute a criminal offence.

## Section 6: Declarations to be signed by the tenderer

### Invitation to Tender for

### Understanding Commercial and Industrial Appliances for UK hydrogen for heat demonstration (Hy4Heat Work Packages 5 & 6)

<b>Tender Reference Number (TRN)</b>	<b>15507/2018</b>
<b>Deadline for Tender Responses</b>	<b>24 August 2018</b>

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**Declaration 1: Statement of non-collusion**

To: The Department for Business, Energy & Industrial Strategy

1. We recognise that the essence of competitive tendering is that the Department will receive a bona fide competitive tender from all persons tendering. We therefore certify that this is a bona fide tender and that we have not fixed or adjusted the amount of the tender or our rates and prices included therein by or in accordance with any agreement or arrangement with any other person.

2. We also certify that we have not done and undertake not to do at any time before the hour and date specified for the return of this tender any of the following acts:

- (a) communicate to any person other than the Department the amount or approximate amount of our proposed tender, except where the disclosure, in confidence, of the approximate amount is necessary to obtain any insurance premium quotation required for the preparation of the tender;
- (b) enter into any agreement or arrangement with any other person that he/she shall refrain for submitting a tender or as to the amount included in the tender;
- (c) offer or pay or give or agree to pay or give any sum of money, inducement or valuable consideration directly or indirectly to any person doing or having done or causing or having caused to be done, in relation to any other actual or proposed tender for the contract any act, omission or thing of the kind described above.

3. In this certificate, the word "person" shall include any person, body or association, corporate or unincorporated; and "any agreement or arrangement" includes any such information, formal or informal, whether legally binding or not.

.....  
Signature (duly authorised on behalf of the tenderer)

.....  
Print name

.....  
On behalf of (organisation name)

.....  
Date

## Declaration 2: Form of Tender

To: The Department for Business, Energy & Industrial Strategy

1. Having considered the invitation to tender and all accompanying documents (including without limitation, the terms and conditions of contract and the Specification) we confirm that we are fully satisfied as to our experience and ability to deliver the goods/services in all respects in accordance with the requirements of this invitation to tender.
2. We hereby tender and undertake to provide and complete all the services required to be performed in accordance with the terms and conditions of contract and the Specification for the amount set out in the Pricing Schedule.
3. We agree that any insertion by us of any conditions qualifying this tender or any unauthorised alteration to any of the terms and conditions of contract made by us may result in the rejection of this tender.
4. We agree that this tender shall remain open to be accepted by the Department for 13 weeks from the date below.
5. We understand that if we are a subsidiary (within the meaning of section 1159 of (and schedule 6 to) the Companies Act 2006) if requested by the Department we may be required to secure a Deed of Guarantee in favour of the Department from our holding company or ultimate holding company, as determined by the Department in their discretion.
6. We understand that the Department is not bound to accept the lowest or any tender it may receive.
7. We certify that this is a bona fide tender.

.....  
Signature (duly authorised on behalf of the tenderer)

.....  
Print name

.....  
On behalf of (organisation name)

.....  
Date

### Declaration 3: Conflict of Interest

I have nothing to declare with respect to any current or potential interest or conflict in relation to this research (or any potential providers who may be subcontracted to deliver this work, their advisers or other related parties). By conflict of interest, I mean, anything which could be reasonably perceived to affect the impartiality of this research, or to indicate a professional or personal interest in the outcomes from this research.

Signed .....

Name .....

Position .....

#### **OR**

I wish to declare the following with respect to personal or professional interests related to relevant organisations\*;

- X
- X

*Where a potential conflict of interest has been declared for an individual or organisation within a consortium, please clearly outline the role which this individual or organisation will play in the proposed project and how any conflict of interest has or will be mitigated.*

- X
- X

Signed .....

Name .....

Position .....

Please complete this form and return this with your ITT documentation - Nil returns **are** required.

\* These may include (but are not restricted to);

- A professional or personal interest in the outcome of this research
- For evaluation projects, a close working, governance, or commercial involvement in the project under evaluation
- Current or past employment with relevant organisations
- Payment (cash or other) received or likely to be received from relevant organisations for goods or services provided (Including consulting or advisory fees)
- Gifts or entertainment received from relevant organisations
- Shareholdings (excluding those within unit trusts, pension funds, etc.) in relevant organisations
- Close personal relationship or friendships with individuals employed by or otherwise closely associated with relevant organisations

***All of the above apply both to the individual signing this form and their close family / friends / partners etc.***

If your situation changes during the project in terms of interests or conflicts, you must notify the Department straight away.

A DECLARATION OF INTEREST WILL NOT NECESSARILY MEAN THE INDIVIDUAL OR ORGANISATION CANNOT WORK ON THE PROJECT; BUT IT IS VITAL THAT ANY INTEREST OR CONFLICT IS DECLARED SO IT CAN BE CONSIDERED OPENLY.

## **Declaration 4: Standard Selection Questionnaire**

### **Potential Supplier Information and Exclusion Grounds: Part 1 and Part 2.**

The standard Selection Questionnaire is a self-declaration, made by you (the potential supplier), that you do not meet any of the grounds for exclusion<sup>6</sup>. If there are grounds for exclusion, there is an opportunity to explain the background and any measures you have taken to rectify the situation (we call this self-cleaning).

A completed declaration of Part 1 and Part 2 provides a formal statement that the organisation making the declaration has not breached any of the exclusions grounds. Consequently, we require all the organisations that you will rely on to meet the selection criteria to provide a completed Part 1 and Part 2. For example, these could be parent companies, affiliates, associates, or essential sub-contractors, if they are relied upon to meet the selection criteria. This means that where you are joining in a group of organisations, including joint ventures and partnerships, each organisation in that group must complete one of these self-declarations. Sub-contractors that you rely on to meet the selection criteria must also complete a self-declaration (although sub-contractors that are not relied upon do not need to complete the self-declaration).

When completed, this form is to be sent back to the contact point given in the procurement documents along with the selection information requested in the procurement documentation.

*Alternatively, you can submit the completed Exclusion Grounds of the [EU ESPD \(Part III\)](#) as a downloaded XML file to the buyer contact point along with the selection information requested in the procurement documentation.*

### **Supplier Selection Questions: Part 3**

The procurement document will provide instructions on the selection questions you need to respond to and how to submit those responses. If you are bidding on behalf of a group (consortium) or you intend to use sub-contractors, you should complete all the selection questions on behalf of the consortium and/or any sub-contractors.

If the relevant documentary evidence referred to in the Selection Questionnaire is not provided upon request and without delay, we reserve the right to amend the contract award decision and award to the next compliant bidder.

### **Consequences of misrepresentation**

If you seriously misrepresent any information in filling in the Selection Questionnaire, and so induce an authority to enter into a contract, there may be significant consequences. You may be excluded from the procurement procedure, and from bidding for other contracts for three years. If a contract has been entered into you may be sued for damages and the contract may be rescinded. If fraud, or fraudulent intent, can be proved, you or your responsible officers may be prosecuted and convicted of the offence of fraud by false representation, and you must be excluded from further procurements for five years.

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<sup>6</sup> For the list of exclusion please see [https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/551130/List\\_of\\_Mandatory\\_and\\_Discretionary\\_Exclusions.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/551130/List_of_Mandatory_and_Discretionary_Exclusions.pdf)

**Invitation to Tender for Contractors for Understanding Commercial and Industrial Appliances for UK hydrogen for heat demonstration (Hy4Heat Work Packages 5 & 6)**

**Tender Reference Number (TRN): 15507/2018**

**OPEN**

**Notes for completion**

1. The “authority” means the contracting authority, or anyone acting on behalf of the contracting authority, that is seeking to invite suitable candidates to participate in this procurement process.
2. “You” / “Your” refers to the potential supplier completing this standard Selection Questionnaire i.e. the legal entity responsible for the information provided. The term “potential supplier” is intended to cover any economic operator as defined by the Public Contracts Regulations 2015 (referred to as the “regulations”) and could be a registered company; the lead contact for a group of economic operators; charitable organisation; Voluntary Community and Social Enterprise (VCSE); Special Purpose Vehicle; or other form of entity.
3. Please ensure that all questions are completed in full, and in the format requested. If the question does not apply to you, please state ‘N/A’. Should you need to provide additional information in response to the questions, please submit a clearly identified annex.
4. The authority recognises that arrangements set out in section 1.2 of the standard Selection Questionnaire, in relation to a group of economic operators (for example, a consortium) and/or use of sub-contractors, may be subject to change and will, therefore, not be finalised until a later date. The lead contact should notify the authority immediately of any change in the proposed arrangements and ensure a completed Part 1 and Part 2 is submitted for any new organisation relied on to meet the selection criteria. The authority will make a revised assessment of the submission based on the updated information.
5. For Part 1 and Part 2 every organisation that is being relied on to meet the selection must complete and submit the self-declaration.
6. All sub-contractors are required to complete Part 1 and Part 27.
7. For answers to Part 3 - If you are bidding on behalf of a group, for example, a consortium, or you intend to use sub-contractors, you should complete all the questions on behalf of the consortium and/ or any sub-contractors, providing one composite response and declaration.

The authority confirms that it will keep confidential and will not disclose to any third parties any information obtained from a named customer contact, other than to the Cabinet Office and/or contracting authorities defined by the regulations, or pursuant to an order of the court or demand made by any competent authority or body where the authority is under a legal or regulatory obligation to make such a disclosure.

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<sup>7</sup> See PCR 2015 regulations 71 (8)-(9)

## Part 1: Potential supplier Information

Please answer the following questions in full. Note that every organisation that is being relied on to meet the selection must complete and submit the Part 1 and Part 2 self-declaration.

Section 1	Potential supplier information	
Question number	Question	Response
1.1(a)	Full name of the potential supplier submitting the information	
1.1(b) – (i)	Registered office address (if applicable)	
1.1(b) – (ii)	Registered website address (if applicable)	
1.1(c)	Trading status a) public limited company b) limited company c) limited liability partnership d) other partnership e) sole trader f) third sector g) other (please specify your trading status)	
1.1(d)	Date of registration in country of origin	
1.1(e)	Company registration number (if applicable)	
1.1(f)	Charity registration number (if applicable)	
1.1(g)	Head office DUNS number (if applicable)	
1.1(h)	Registered VAT number	
1.1(i) - (i)	If applicable, is your organisation registered with the appropriate professional or trade register(s) in the member state where it is established?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>
1.1(i) - (ii)	If you responded yes to 1.1(i) - (i), please provide the relevant details, including the registration number(s).	
1.1(j) - (i)	Is it a legal requirement in the state where you are established for you to possess a particular authorisation, or be a member of a particular organisation to provide the services specified in this procurement?	Yes <input type="checkbox"/> No <input type="checkbox"/>
1.1(j) - (ii)	If you responded yes to 1.1(j) - (i), please provide additional details of what is required and confirmation that you have complied with this.	

1.1(k)	Trading name(s) that will be used if successful in this procurement	
1.1(l)	Relevant classifications (state whether you fall within one of these, and if so which one) <ul style="list-style-type: none"> <li>• Voluntary Community Social Enterprise (VCSE)</li> <li>• Sheltered Workshop</li> <li>• Public service mutual</li> </ul>	
1.1(m)	Are you a Small, Medium or Micro Enterprise (SME) <sup>8</sup> ?	Yes <input type="checkbox"/> No <input type="checkbox"/>
1.1(n)	Details of Persons of Significant Control (PSC), where appropriate: <sup>9</sup> <ul style="list-style-type: none"> <li>- Name;</li> <li>- Date of birth;</li> <li>- Nationality;</li> <li>- Country, state or part of the UK where the PSC usually lives;</li> <li>- Service address;</li> <li>- The date he or she became a PSC in relation to the company (for existing companies the 6 April 2016 should be used);</li> <li>- Which conditions for being a PSC are met; <ul style="list-style-type: none"> <li>- Over 25% up to (and including) 50%,</li> <li>- More than 50% and less than 75%,</li> <li>- 75% or more. <sup>10</sup></li> </ul> </li> </ul> (Please enter N/A if not applicable)	
1.1(o)	Details of immediate parent company: <ul style="list-style-type: none"> <li>- Full name of the immediate parent company</li> <li>- Registered office address (if applicable)</li> <li>- Registration number (if applicable)</li> <li>- Head office DUNS number (if applicable)</li> </ul>	

<sup>8</sup> See EU definition of SME: <http://ec.europa.eu/enterprise/policies/sme/facts-figures-analysis/sme-definition/>

<sup>9</sup> UK companies, Societates European (SEs) and limited liability partnerships (LLPs) will be required to identify and record the people who own or control their company. Companies, SEs and LLPs will need to keep a PSC register, and must file the PSC information with the central public register at Companies House. [See PSC guidance.](#)

<sup>10</sup> Central Government contracting authorities should use this information to have the PSC information for the preferred supplier checked before award.



	<p>- Head office VAT number (if applicable)</p> <p>(Please enter N/A if not applicable)</p>	
1.1(p)	<p>Details of ultimate parent company:</p> <ul style="list-style-type: none"> <li>- Full name of the ultimate parent company</li> <li>- Registered office address (if applicable)</li> <li>- Registration number (if applicable)</li> <li>- Head office DUNS number (if applicable)</li> <li>- Head office VAT number (if applicable)</li> </ul> <p>(Please enter N/A if not applicable)</p>	

Please note: A criminal record check for relevant convictions may be undertaken for the preferred suppliers and the persons of significant in control of them.

Please provide the following information about your approach to this procurement:

Section 1		Bidding model			
Question number	Question	Response			
1.2(a) - (i)	Are you bidding as the lead contact for a group of economic operators?	Yes <input type="checkbox"/> No <input type="checkbox"/> If yes, please provide details listed in questions 1.2(a) (ii), (a) (iii) and to 1.2(b) (i), (b) (ii), 1.3, Section 2 and 3. If no, and you are a supporting bidder please provide the name of your group at 1.2(a) (ii) for reference purposes, and complete 1.3, Section 2 and 3.			
1.2(a) - (ii)	Name of group of economic operators (if applicable)				
1.2(a) - (iii)	Proposed legal structure if the group of economic operators intends to form a named single legal entity prior to signing a contract, if awarded. If you do not propose to form a single legal entity, please explain the legal structure.				
1.2(b) - (i)	Are you or, if applicable, the group of economic operators proposing to use sub-contractors?	Yes <input type="checkbox"/> No <input type="checkbox"/>			
1.2(b) - (ii)	If you responded yes to 1.2(b)-(i) please provide additional details for each sub-contractor in the following table: we may ask them to complete this form as well.				
	Name				
	Registered address				
	Trading status				
	Company registration number				
	Head Office DUNS number (if applicable)				
	Registered VAT number				
	Type of organisation				
	SME (Yes/No)				

	The role each sub-contractor will take in providing the works and /or supplies e.g. key deliverables						
	The approximate % of contractual obligations assigned to each sub-contractor						

### Contact details and declaration

I declare that to the best of my knowledge the answers submitted and information contained in this document are correct and accurate.

I declare that, upon request and without delay I will provide the certificates or documentary evidence referred to in this document.

I understand that the information will be used in the selection process to assess my organisation's suitability to be invited to participate further in this procurement.

I understand that the authority may reject this submission in its entirety if there is a failure to answer all the relevant questions fully, or if false/misleading information or content is provided in any section.

I am aware of the consequences of serious misrepresentation.

<b>Section 1</b>	<b>Contact details and declaration</b>	
Question number	Question	Response
1.3(a)	Contact name	
1.3(b)	Name of organisation	
1.3(c)	Role in organisation	
1.3(d)	Phone number	
1.3(e)	E-mail address	
1.3(f)	Postal address	
1.3(g)	Signature (electronic is acceptable)	
1.3(h)	Date	

## Part 2: Exclusion Grounds

Please answer the following questions in full. Note that every organisation that is being relied on to meet the selection must complete and submit the Part 1 and Part 2 self-declaration.

Section 2		Grounds for mandatory exclusion
Question number	Question	Response
2.1(a)	<p><b>Regulations 57(1) and (2)</b></p> <p>The detailed grounds for mandatory exclusion of an organisation are set out on this <a href="#">web page</a>, which should be referred to before completing these questions. These are also included under Annex C.</p> <p>Please indicate if, within the past five years you, your organisation or any other person who has powers of representation, decision or control in the organisation been convicted anywhere in the world of any of the offences within the summary below and listed on the <a href="#">webpage</a>.</p>	
	Participation in a criminal organisation.	Yes <input type="checkbox"/> No <input type="checkbox"/> If Yes please provide details at 2.1(b)
	Corruption.	Yes <input type="checkbox"/> No <input type="checkbox"/> If Yes please provide details at 2.1(b)
	Fraud.	Yes <input type="checkbox"/> No <input type="checkbox"/> If Yes please provide details at 2.1(b)
	Terrorist offences or offences linked to terrorist activities	Yes <input type="checkbox"/> No <input type="checkbox"/> If Yes please provide details at 2.1(b)
	Money laundering or terrorist financing	Yes <input type="checkbox"/> No <input type="checkbox"/> If Yes please provide details at 2.1(b)
	Child labour and other forms of trafficking in human beings	Yes <input type="checkbox"/> No <input type="checkbox"/> If Yes please provide details at 2.1(b)
2.1(b)	<p>If you have answered yes to question 2.1(a), please provide further details.</p> <p>Date of conviction, specify which of the grounds listed the conviction was for, and the reasons for conviction,</p>	

	<p>Identity of who has been convicted</p> <p>If the relevant documentation is available electronically please provide the web address, issuing authority, precise reference of the documents.</p>	
2.2	<p>If you have answered Yes to any of the points above have measures been taken to demonstrate the reliability of the organisation despite the existence of a relevant ground for exclusion? (Self Cleaning)</p>	<p>Yes <input type="checkbox"/></p> <p>No <input type="checkbox"/></p>
2.3(a)	<p><b>Regulation 57(3)</b></p> <p>Has it been established, for your organisation by a judicial or administrative decision having final and binding effect in accordance with the legal provisions of any part of the United Kingdom or the legal provisions of the country in which the organisation is established (if outside the UK), that the organisation is in breach of obligations related to the payment of tax or social security contributions?</p>	<p>Yes <input type="checkbox"/></p> <p>No <input type="checkbox"/></p>
2.3(b)	<p>If you have answered yes to question 2.3(a), please provide further details. Please also confirm you have paid, or have entered into a binding arrangement with a view to paying, the outstanding sum including where applicable any accrued interest and/or fines.</p>	

Please Note: The authority reserves the right to use its discretion to exclude a potential supplier where it can demonstrate by any appropriate means that the potential supplier is in breach of its obligations relating to the non-payment of taxes or social security contributions.

<b>Section 3</b>		
<b>Grounds for discretionary exclusion</b>		
	Question	Response
3.1	<p><b>Regulation 57 (8)</b></p> <p>The detailed grounds for discretionary exclusion of an organisation are set out on this <a href="#">web page</a>, which should be referred to before completing these questions. These are also included under Annex C.</p> <p>Please indicate if, within the past three years, anywhere in the world any of the following situations have applied to you, your organisation or any other person who has powers of representation, decision or control in the organisation.</p>	
3.1(a)	Breach of environmental obligations?	Yes <input type="checkbox"/> No <input type="checkbox"/> If yes please provide details at 3.2
3.1 (b)	Breach of social obligations?	Yes <input type="checkbox"/> No <input type="checkbox"/> If yes please provide details at 3.2
3.1 (c)	Breach of labour law obligations?	Yes <input type="checkbox"/> No <input type="checkbox"/> If yes please provide details at 3.2
3.1(d)	Bankrupt or is the subject of insolvency or winding-up proceedings, where the organisation's assets are being administered by a liquidator or by the court, where it is in an arrangement with creditors, where its business activities are suspended or it is in any analogous situation arising from a similar procedure under the laws and regulations of any State?	Yes <input type="checkbox"/> No <input type="checkbox"/> If yes please provide details at 3.2
3.1(e)	Guilty of grave professional misconduct?	Yes <input type="checkbox"/> No <input type="checkbox"/> If yes please provide details at 3.2
3.1(f)	Entered into agreements with other economic operators aimed at distorting competition?	Yes <input type="checkbox"/> No <input type="checkbox"/> If yes please provide details at 3.2
3.1(g)	Aware of any conflict of interest within the meaning of regulation 24 due to the participation in the procurement procedure?	Yes <input type="checkbox"/> No <input type="checkbox"/> If yes please provide details at 3.2
3.1(h)	Been involved in the preparation of the procurement procedure?	Yes <input type="checkbox"/>

		No <input type="checkbox"/> If yes please provide details at 3.2
3.1(i)	Shown significant or persistent deficiencies in the performance of a substantive requirement under a prior public contract, a prior contract with a contracting entity, or a prior concession contract, which led to early termination of that prior contract, damages or other comparable sanctions?	Yes <input type="checkbox"/> No <input type="checkbox"/> If yes please provide details at 3.2
3.1(j)	Please answer the following statements	
3.1(j) - (i)	The organisation is guilty of serious misrepresentation in supplying the information required for the verification of the absence of grounds for exclusion or the fulfilment of the selection criteria.	Yes <input type="checkbox"/> No <input type="checkbox"/> If Yes please provide details at 3.2
3.1(j) - (ii)	The organisation has withheld such information.	Yes <input type="checkbox"/> No <input type="checkbox"/> If Yes please provide details at 3.2
3.1(j) –(iii)	The organisation is not able to submit supporting documents required under regulation 59 of the Public Contracts Regulations 2015.	Yes <input type="checkbox"/> No <input type="checkbox"/> If Yes please provide details at 3.2
3.1(j)-(iv)	The organisation has influenced the decision-making process of the contracting authority to obtain confidential information that may confer upon the organisation undue advantages in the procurement procedure, or has negligently provided misleading information that may have a material influence on decisions concerning exclusion, selection or award.	Yes <input type="checkbox"/> No <input type="checkbox"/> If Yes please provide details at 3.2
3.2	If you have answered Yes to any of the above, explain what measures been taken to demonstrate the reliability of the organisation despite the existence of a relevant ground for exclusion? (Self Cleaning)	



### Part 3: Selection Questions<sup>11</sup>

Section 4 Economic and Financial Standing		
	Question	Response
4.1	Are you able to provide a copy of your audited accounts for the last two years, if requested?  If no, can you provide <b>one</b> of the following: answer with Y/N in the relevant box.	Yes <input type="checkbox"/> No <input type="checkbox"/>
	(a) A statement of the turnover, Profit and Loss Account/Income Statement, Balance Sheet/Statement of Financial Position and Statement of Cash Flow for the most recent year of trading for this organisation.	Yes <input type="checkbox"/> No <input type="checkbox"/>
	(b) A statement of the cash flow forecast for the current year and a bank letter outlining the current cash and credit position.	Yes <input type="checkbox"/> No <input type="checkbox"/>
	(c) Alternative means of demonstrating financial status if any of the above are not available (e.g. forecast of turnover for the current year and a statement of funding provided by the owners and/or the bank, charity accruals accounts or an alternative means of demonstrating financial status).	Yes <input type="checkbox"/> No <input type="checkbox"/>
4.2	Where we have specified a minimum level of economic and financial standing and/ or a minimum financial threshold within the evaluation criteria for this procurement, please self-certify by answering 'Yes' or 'No' that you meet the requirements set out.	Yes <input type="checkbox"/> No <input type="checkbox"/>

<sup>11</sup> [See Action Note 8/16 Updated Standard Selection Questionnaire](#)

<b>Section 5</b>	<b>If you have indicated in the Selection Questionnaire question 1.2 that you are part of a wider group, please provide further details below:</b>	
<b>Name of organisation</b>		
<b>Relationship to the Supplier completing these questions</b>		
<b>5.1</b>	Are you able to provide parent company accounts if requested to at a later stage?	Yes <input type="checkbox"/> No <input type="checkbox"/>
<b>5.2</b>	If yes, would the parent company be willing to provide a guarantee if necessary?	Yes <input type="checkbox"/> No <input type="checkbox"/>
<b>5.3</b>	If no, would you be able to obtain a guarantee elsewhere (e.g. from a bank)?	Yes <input type="checkbox"/> No <input type="checkbox"/>

<b>Section 6</b>	<b>Technical and Professional Ability</b>
<b>6.1</b>	<p><b>Relevant experience and contract examples</b></p> <p>Please provide details of up to three contracts, in any combination from either the public or private sector; voluntary, charity or social enterprise (VCSE) that are relevant to our requirement. VCSEs may include samples of grant-funded work. Contracts for supplies or services should have been performed during the past three years. Works contracts may be from the past five years.</p> <p>The named contact provided should be able to provide written evidence to confirm the accuracy of the information provided below.</p> <p>Consortia bids should provide relevant examples of where the consortium has delivered similar requirements. If this is not possible (e.g. the consortium is newly formed or a Special Purpose Vehicle is to be created for this contract) then three separate examples should be provided between the principal member(s) of the proposed consortium or Special Purpose Vehicle (three examples are not required from each member).</p> <p>Where the Supplier is a Special Purpose Vehicle, or a managing agent not intending to be the main provider of the supplies or services, the information requested should be provided in respect of the main intended provider(s) or sub-contractor(s) who will deliver the contract.</p> <p>If you cannot provide examples, see question 6.3</p>

	<b>Contract 1</b>	<b>Contract 2</b>	<b>Contract 3</b>
<b>Name of customer organisation</b>			
<b>Point of contact in the organisation</b>			
<b>Position in the organisation</b>			
<b>E-mail address</b>			
<b>Description of contract</b>			
<b>Contract Start date</b>			
<b>Contract completion date</b>			
<b>Estimated contract value</b>			

<p><b>6.2</b></p>	<p>Where you intend to sub-contract a proportion of the contract, please demonstrate how you have previously maintained healthy supply chains with your sub-contractor(s). Evidence should include, but is not limited to, details of your supply chain management tracking systems to ensure performance of the contract and including prompt payment or membership of the UK Prompt Payment Code (or equivalent schemes in other countries).</p>
<p><b>6.3</b></p>	<p>If you cannot provide at least one example for questions 6.1, in no more than 500 words please provide an explanation for this e.g. your organisation is a new start-up or you have provided services in the past but not under a contract.</p>

<b>Section 7</b>	<b>Modern Slavery Act 2015: Requirements under Modern Slavery Act 2015<sup>12</sup></b>	
<b>7.1</b>	Are you a relevant commercial organisation as defined by section 54 ("Transparency in supply chains etc.") of the Modern Slavery Act 2015 ("the Act")?	Yes <input type="checkbox"/> N/A <input type="checkbox"/>
<b>7.2</b>	If you have answered yes to question 1 are you compliant with the annual reporting requirements contained within Section 54 of the Act 2015?	Yes <input type="checkbox"/> Please provide relevant the url No <input type="checkbox"/> Please provide an explanation

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<sup>12</sup> [Procurement Policy Note 9/16 Modern Slavery Act 2015](#)

## 8. Additional Questions

Suppliers who self-certify that they meet the requirements to these additional questions will be required to provide evidence of this if they are successful at contract award stage.

Section 8	Additional Questions	
<b>8.1</b>	<b>Suppliers' Past Performance<sup>13</sup> - (please refer to supplier selection guidance - this question should only be included by central government contracting authorities)</b>	
<b>a.</b>	Can you supply a list of your relevant principal contracts for goods and/or services provided in the last three years?	Yes <input type="checkbox"/> No <input type="checkbox"/>
<b>b.</b>	On request can you provide a certificate from those customers on the list?	Yes <input type="checkbox"/> No <input type="checkbox"/>
<b>c.</b>	If you cannot obtain a certificate from a customer can you explain the reasons why?	Yes <input type="checkbox"/> No <input type="checkbox"/>
<b>d.</b>	If the certificate states that goods and/or services supplied were not satisfactory are you able to supply information which shows why this will not recur in this contract if you are awarded it?	Yes <input type="checkbox"/> No <input type="checkbox"/>
<b>e.</b>	Can you supply the information in questions a. to d. above for any sub-contractors [or consortium members] who you are relying upon to perform this contract?	Yes <input type="checkbox"/> No <input type="checkbox"/>

<sup>13</sup> [Procurement Policy Note 04/15 Taking Account of Suppliers' Past Performance](#)

## Declaration 5: Code of Practice<sup>14</sup>

I confirm that I am aware of the requirements of the Department's Code of Practice<sup>15</sup> for Research and, in the proposed project, I will use my best efforts to ensure that the procedures used conform to those requirements under the following headings<sup>16</sup>:

- Responsibilities
- Competence
- Project planning
- Quality Control
- Handling of samples and materials
- Facilities and equipment
- Documentation of procedures and methods
- Research/work records

I understand that the Department has the right to inspect our procedures and practices against the requirements of the Code of Practice, and that I may be asked to provide documentary evidence of our working practices or provide access and assistance to auditors appointed by the Department.

(There is some flexibility in the application of the Code of Practice to specific research projects. Contractors are encouraged to discuss with the Department any aspects that cause them concern, in order to reach agreement on the interpretation of each requirement.)

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<sup>14</sup> Please note that this declaration applies to individuals, single organisations and consortia.

<sup>15</sup> The Code of Practice is attached to this ITT as Annex B

<sup>16</sup> Please delete as appropriate

# Declaration 6: The General Data Protection Regulation Assurance Questionnaire for Contractors



Declaration 6 -  
GDPR Assurance Que



## **Annex A: Pricing Schedule(s)**

**Invitation to Tender for Contractors for**

**Understanding Commercial and Industrial Appliances for UK hydrogen for heat demonstration (Hy4Heat Work Packages 5 & 6)**

**Tender Reference Number (TRN): 15507/2018**

### **Pricing Schedule – Lot 1**

- Understanding Commercial Appliances - see separate document

### **Pricing Schedule – Lot 2**

- Understanding Industrial Appliances - see separate document

## **Annex B: Code of practice for research**

### **CODE OF PRACTICE FOR RESEARCH**

#### ***Issued by the Department for Business, Energy and Industrial Strategy***

The Department has developed this Code of Practice from the Joint Code of Practice issued by BBSRC; the Department for Environment, Food and Rural Affairs (Defra); the Food Standards Agency; and the Natural Environment Research Council (NERC) which lays out a framework for the proper conduct of research. It sets out the key aspects of the research process and the importance of making judgements on the appropriate precautions needed in every research activity.

The Code applies to all research funded by The Department. It is intended to apply to all types of research, but the overriding principle is fitness of purpose and that all research must be conducted diligently by competent researchers and therefore the individual provisions must be interpreted with that in mind.

#### ***PRINCIPLES BEHIND THE CODE OF PRACTICE***

Contractors and consortia funded by the Department are expected to be committed to the quality of the research process in addition to quality of the evidence outputs

The Code of Practice has been created in order to assist contractors to conduct research of the highest quality and to encourage good conduct in research and help prevent misconduct.

Set out over 8 responsibilities the Code of Practice provides general principles and standards for good practice in research.

Most contractors will already have in place many of the measures set out in the Code and its adoption should not require great effort.

#### ***COMPLIANCE WITH THE CODE OF PRACTICE***

All organisations contracting to the Department (including those sub-contracting as part of a consortium) will be expected to commit to upholding these responsibilities and will be expected to indicate acceptance of the Code when submitting proposals to the Department.

Contractors are encouraged to discuss with the Department any clauses in the Code that they consider inappropriate or unnecessary in the context of the proposed research project. The Code, and records of the discussions if held, will become part of the Terms and Conditions under which the research is funded.

Additionally, The Department may conduct (or request from the Contractor as appropriate) a formal risk assessment on the project to identify where additional controls may be needed.

#### ***MONITORING OF COMPLIANCE WITH THE CODE OF PRACTICE***

Monitoring of compliance with the Code is necessary to ensure:

- Policies and managed processes exist to support compliance with the Code
- That these are being applied in practice.

In the short term, the Department can require contractors to conduct planned internal audits although the Department reserves the right to obtain evidence that a funded project

is carried out to the required standard. The Department may also conduct an audit of a Contractor's research system if deemed necessary.

In the longer term it is expected that most research organisations will assure the quality of their research processes by means of a formal system that is audited by an impartial and competent third party against an appropriate internationally recognised standard that is fit for purpose.

A recommended checklist for researchers can be found on the UK Research Integrity Office (UKRIO) website at <http://www.ukrio.org/what-we-do/code-of-practice-for-research>

## ***SPECIFIC REQUIREMENTS IN THE CODE OF PRACTICE***

### ***1. Responsibilities***

All organisations contracting to the Department (including those sub-contracting as part of a consortium) will be responsible for the overall quality of research they conducted. Managers, group leaders and supervisors have a responsibility to ensure a climate of good practice in the research teams, including a commitment to the development of scientific and technical skills.

The Principal Investigator or Project Leader is responsible for all the work conducted in the project including that of any subcontractors. All staff and students must have defined responsibilities in relation to the project and be aware of these responsibilities.

### ***2. Competence***

All personnel associated with the project must be competent to perform the technical, scientific and support tasks required of them. Personnel undergoing training must be supervised at a level such that the quality of the results is not compromised by the inexperience of the researcher.

### ***3. Project planning***

An appropriate level of risk assessment must be conducted to demonstrate awareness of the key factors that will influence the success of the project and the ability to meet its objectives. There must be a written project plan showing that these factors (including research design, statistical methods and others) have been addressed. Projects must be ethical and project plans must be agreed in collaboration with the Department, taking account of the requirements of ethical committees<sup>17</sup> or the terms of project licences, if relevant.

Significant amendments to the plan or milestones must be recorded and approved by the Department if applicable.

### ***4. Quality Control***

The organisation must have planned processes in place to assure the quality of the research undertaken by its staff. Projects must be subjected to formal reviews of an appropriate frequency. Final and interim outputs must always be accompanied by a statement of what quality control has been undertaken.

The authorisation of outputs and publications shall be as agreed by the Department, and subject to senior approval in the Department, where appropriate. Errors identified after publication must be notified to the Department and agreed corrective action initiated.

### ***5. Handling of samples and materials***

All samples and other experimental materials must be labelled (clearly, accurately,

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<sup>17</sup> Please note ethical approval does not remove the responsibility of the individual for ethical behaviour.

uniquely and durably), and retained for a period to be agreed by the Department. The storage and handling of the samples, materials and data must be as specified in the project plan (or proposal), and must be appropriate to their nature. If the storage conditions are critical, they must be monitored and recorded.

#### **6. Documentation of procedures and methods**

All the procedures and methods used in a research project must be documented, at least in the personal records of the researcher. This includes analytical and statistical procedures and the generation of a clear audit trail linking secondary processed information to primary data.

There must be a procedure for validation of research methods as fit for purpose, and modifications must be trackable through each stage of development of the method.

#### **7. Research/work records**

All records must be of sufficient quality to present a complete picture of the work performed, enabling it to be repeated if necessary.

The project leader is accountable for the validity of the work and responsible for ensuring that regular reviews of the records of each researcher are conducted<sup>18</sup>

The location of all project records, including critical data, must be recorded. They must be retained in a form that ensures their integrity and security, and prevents unauthorised modification, for a period to be agreed by the Department.

A recommended checklist for researchers can be found on the UK Research Integrity Office (UKRIO) website at <http://www.ukrio.org/what-we-do/code-of-practice-for-research>

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<sup>18</sup> Please note that this also applies to projects being undertaken by consortia.

## Annex C: Mandatory Exclusion Grounds

### **Public Contract Regulations 2015 R57(1), (2) and (3)**

### **Public Contract Directives 2014/24/EU Article 57(1)**

### **Participation in a criminal organisation**

Participation offence as defined by section 45 of the Serious Crime Act 2015

Conspiracy within the meaning of

- section 1 or 1A of the Criminal Law Act 1977 or
- article 9 or 9A of the Criminal Attempts and Conspiracy (Northern Ireland) Order 1983

where that conspiracy relates to participation in a criminal organisation as defined in Article 2 of Council Framework Decision 2008/841/JHA on the fight against organised crime;

### **Corruption**

Corruption within the meaning of section 1(2) of the Public Bodies Corrupt Practices Act 1889 or section 1 of the Prevention of Corruption Act 1906;

The common law offence of bribery;

Bribery within the meaning of sections 1, 2 or 6 of the Bribery Act 2010, or section 113 of the Representation of the People Act 1983;

### **Fraud**

Any of the following offences, where the offence relates to fraud affecting the European Communities' financial interests as defined by Article 1 of the convention on the protection of the financial interests of the European Communities:

- the common law offence of cheating the Revenue;
- the common law offence of conspiracy to defraud;
- fraud or theft within the meaning of the Theft Act 1968, the Theft Act (Northern Ireland) 1969, the Theft Act 1978 or the Theft (Northern Ireland) Order 1978;
- fraudulent trading within the meaning of section 458 of the Companies Act 1985, article 451 of the Companies (Northern Ireland) Order 1986 or section 993 of the Companies Act 2006;
- fraudulent evasion within the meaning of section 170 of the Customs and Excise Management Act 1979 or section 72 of the Value Added Tax Act 1994;
- an offence in connection with taxation in the European Union within the meaning of section 71 of the Criminal Justice Act 1993;
- destroying, defacing or concealing of documents or procuring the execution of a valuable security within the meaning of section 20 of the Theft Act 1968 or section 19 of the Theft Act (Northern Ireland) 1969;
- fraud within the meaning of section 2, 3 or 4 of the Fraud Act 2006;
- the possession of articles for use in frauds within the meaning of section 6 of the Fraud Act 2006, or the making, adapting, supplying or offering to supply articles for use in frauds within the meaning of section 7 of that Act;

## **Terrorist offences or offences linked to terrorist activities**

Any offence:

- listed in section 41 of the Counter Terrorism Act 2008;
- listed in schedule 2 to that Act where the court has determined that there is a terrorist connection;
- under sections 44 to 46 of the Serious Crime Act 2007 which relates to an offence covered by the previous two points;

## **Money laundering or terrorist financing**

Money laundering within the meaning of sections 340(11) and 415 of the Proceeds of Crime Act 2002

An offence in connection with the proceeds of criminal conduct within the meaning of section 93A, 93B or 93C of the Criminal Justice Act 1988 or article 45, 46 or 47 of the Proceeds of Crime (Northern Ireland) Order 1996

## **Child labour and other forms of trafficking human beings**

An offence under section 4 of the Asylum and Immigration (Treatment of Claimants etc.) Act 2004;

An offence under section 59A of the Sexual Offences Act 2003

An offence under section 71 of the Coroners and Justice Act 2009;

An offence in connection with the proceeds of drug trafficking within the meaning of section 49, 50 or 51 of the Drug Trafficking Act 1994

An offence under section 2 or section 4 of the Modern Slavery Act 2015

## **Non-payment of tax and social security contributions**

Breach of obligations relating to the payment of taxes or social security contributions that has been established by a judicial or administrative decision.

Where any tax returns submitted on or after 1 October 2012 have been found to be incorrect as a result of:

- HMRC successfully challenging the potential supplier under the General Anti – Abuse Rule (GAAR) or the “Halifax” abuse principle; or
- a tax authority in a jurisdiction in which the potential supplier is established successfully challenging it under any tax rules or legislation that have an effect equivalent or similar to the GAAR or “Halifax” abuse principle;
- a failure to notify, or failure of an avoidance scheme which the supplier is or was involved in, under the Disclosure of Tax Avoidance Scheme rules (DOTAS) or any equivalent or similar regime in a jurisdiction in which the supplier is established

## **Other offences**

Any other offence within the meaning of Article 57(1) of the Directive as defined by the law of any jurisdiction outside England, Wales and Northern Ireland

Any other offence within the meaning of Article 57(1) of the Directive created after 26<sup>th</sup> February 2015 in England, Wales or Northern Ireland

## **Discretionary exclusions**

### **Obligations in the field of environment, social and labour law.**

Where an organisation has violated applicable obligations in the fields of environmental, social and labour law established by EU law, national law, collective agreements or by the international environmental, social and labour law provisions listed in Annex X to the Directive (see copy below) as amended from time to time; including the following:-

- Where the organisation or any of its Directors or Executive Officers has been in receipt of enforcement/remedial orders in relation to the Health and Safety Executive (or equivalent body) in the last 3 years.
- In the last three years, where the organisation has had a complaint upheld following an investigation by the Equality and Human Rights Commission or its predecessors (or a comparable body in any jurisdiction other than the UK), on grounds of alleged unlawful discrimination.
- In the last three years, where any finding of unlawful discrimination has been made against the organisation by an Employment Tribunal, an Employment Appeal Tribunal or any other court (or incomparable proceedings in any jurisdiction other than the UK).
- Where the organisation has been in breach of section 15 of the Immigration, Asylum, and Nationality Act 2006;
- Where the organisation has a conviction under section 21 of the Immigration, Asylum, and Nationality Act 2006;
- Where the organisation has been in breach of the National Minimum Wage Act 1998.

### **Bankruptcy, insolvency**

Bankrupt or is the subject of insolvency or winding-up proceedings, where the organisation's assets are being administered by a liquidator or by the court, where it is in an arrangement with creditors, where its business activities are suspended or it is in any analogous situation arising from a similar procedure under the laws and regulations of any State;

### **Grave professional misconduct**

Guilty of grave professional misconduct

### **Distortion of competition**

Entered into agreements with other economic operators aimed at distorting competition

### **Conflict of interest**

Aware of any conflict of interest within the meaning of regulation 24 due to the participation in the procurement procedure

### **Been involved in the preparation of the procurement procedure.**

### **Prior performance issues**

Shown significant or persistent deficiencies in the performance of a substantive requirement under a prior public contract, a prior contract with a contracting entity, or a prior concession contract, which led to early termination of that prior contract, damages or other comparable sanctions.

### **Misrepresentation and undue influence**

The organisation has influenced the decision-making process of the contracting authority to obtain confidential information that may confer upon the organisation undue advantages in the procurement procedure, or to negligently provided misleading information that may have a material influence on decisions concerning exclusion, selection or award.

## **Additional exclusion grounds**

**Breach of obligations relating to the payment of taxes or social security contributions.**

### **ANNEX X Extract from Public Procurement Directive 2014/24/EU**

#### **LIST OF INTERNATIONAL SOCIAL AND ENVIRONMENTAL CONVENTIONS REFERRED TO IN ARTICLE 18(2) —**

- ILO Convention 87 on Freedom of Association and the Protection of the Right to Organise;
- ILO Convention 98 on the Right to Organise and Collective Bargaining;
- ILO Convention 29 on Forced Labour;
- ILO Convention 105 on the Abolition of Forced Labour;
- ILO Convention 138 on Minimum Age;
- ILO Convention 111 on Discrimination (Employment and Occupation);
- ILO Convention 100 on Equal Remuneration;
- ILO Convention 182 on Worst Forms of Child Labour;
- Vienna Convention for the protection of the Ozone Layer and its Montreal Protocol on substances that deplete the Ozone Layer;
- Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal (Basel Convention);
- Stockholm Convention on Persistent Organic Pollutants (Stockholm POPs Convention)
- Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade (UNEP/FAO) (The PIC Convention) Rotterdam, 10 September 1998, and its 3 regional Protocols.

#### **Consequences of misrepresentation**

A serious misrepresentation which induces a contracting authority to enter into a contract may have the following consequences for the signatory that made the misrepresentation:

- The potential supplier may be excluded from bidding for contracts for three years, under regulation 57(8)(h)(i) of the PCR 2015;
- The contracting authority may sue the supplier for damages and may rescind the contract under the Misrepresentation Act 1967.
- If fraud, or fraudulent intent, can be proved, the potential supplier or the responsible officers of the potential supplier may be prosecuted and convicted of the offence of fraud by false representation under s.2 of the Fraud Act 2006, which can carry a sentence of up to 10 years or a fine (or both).
- If there is a conviction, then the company must be excluded from procurement for five years under reg. 57(1) of the PCR (subject to self-cleaning).