



Department for
Energy Security
& Net Zero

Request for Information (RFI)

Hydrogen Heating Programme – Data on existing gas installations within domestic and non-domestic buildings.

Reference: PRJ_3550

Customer: Department for Energy Security and Net Zero (“DESNZ”)

Start date: 20/03/2024

Date response required: 22/04/2024

Background and Introduction

The objective of the Hydrogen Heating Programme is to enable Ministers to make strategic decisions in 2026 on the role of hydrogen in heat decarbonisation. The Programme is required to gather evidence to be able to:

1. Identify the changes, decisions and options which would be required to enable the use of 100% hydrogen for heating in parts or all of the gas network in Great Britain.
2. Accurately assess the costs, impacts, benefits and feasibility of these changes and options.

The evidence we collate between now and 2025 will feed into an appraisal to assess the optimal decarbonisation technologies for different end user types across GB. To be able to assess the case for hydrogen, we need an accurate representation of the existing natural gas installations, an understanding of the different conversion activities that will be required within buildings, and the costs and impacts of converting all types of domestic and non-domestic properties currently connected to the gas grid. Our current assumption is that a hydrogen boiler installation will look very similar to a natural gas combi boiler installation, with the addition of hydrogen specific safety mitigations (such as detectors and excess flow valves). Therefore, if we collect data on natural gas combi boiler installations in different types of properties this should give us a picture of conversion activities and considerations for a hydrogen conversion. This Request for Information (RFI) seeks information relating to acquiring data to support our submission to Ministers ahead of the 2026 decision.

Please note the following general conditions:

- Your responses will help us to refine the requirements. DESNZ reserves the right to use the responses to this market engagement activity to inform and update our future tender documentation.
- This RFI is to assess suppliers' appetite and capabilities to undertake this work and seek to understand suppliers' view on the clarity and achievability of the requirements and scope specified.
- **This is an RFI only. We reserve the right not to proceed with a further competition through the indicated, or any, route to market.** Nothing shall constitute a commitment to ordering, unless we undertake a further competition that results in the award of a Call-Off Contract.
- Should a Call-Off Agreement be awarded following a further competition, the Potential Provider agrees to supply the services in accordance with the CCS Call-Off Terms associated with the final route to market.
- Any and all costs associated with the production of such a response either to this RFI or a subsequent further competition must be borne by the Supplier. DESNZ will not contribute in any way to meeting production costs of any response.
- Information contained within this document is confidential and must not be disclosed to any third party without prior written consent from the Authority.
- No down-selection of Potential Providers will take place because of any responses or interactions relating to this RFI.
- We expect that all responses to this RFI will be provided by Potential Providers in good faith to the best of their ability in the light of information available at the time of their response.
- No information provided by a Potential Provider in response to this RFI will be carried forward, used, or acknowledged in any way for the purpose of evaluating the Potential Provider, in any subsequent formal procurement process.

Our requirements

This Request for Information (RFI) seeks information relating to acquiring data to:

- Understand the conversion activities required for different types of properties which require a combi-boiler installation.
- Understand prevalence of a proposed safety mitigation being applied (e.g. meter locations – potential mitigation: internal meters being moved externally).
- Understand the decision tree/logic which outlines whether a property is suitable for a combi boiler and the type of ancillary activities required.
- Understand the key drivers of cost within a gas installation.
- Understand the prevalence of conversion activities across the GB building stock.
- Understand the prevalence of other gas appliances within domestic properties.
- Have an accurate estimate of the installation, design and labour costs and time (including material costs).

The list below outlines the data variables we believe are important to achieve the above aims and are the data parameters we require from the supplier:

(However, please note this list is not exhaustive and we require the supplier's expertise in any additional factors that are key gas installation activities and could drive conversion cost.)

Building Property Data:

- Type of property
- Address
- Ownership/Tenure
- Building Construction
- Age
- Market Value

Gas Installation Data:

- Boiler
 - Make and Model
 - Location
 - Number of relocations
 - Flue
 - Flue type
 - Location of Flue
 - Repair requirement
- Gas Meter
 - Existing Location/suitability to natural gas regulations
 - % which required relocating
 - New location (if relocated)
- Pipework
 - % of homes which required pipework repairs / installation
 - Pipework material required and amount (e.g. 3m of 28mm)
- Gas Appliances
 - Type and number of gas appliances within a dwelling (e.g. gas hob)

- Make and Model of respective gas appliances
- Location of gas appliances
- Number of TRV installations per household
- Number of decommissioned appliances per household

Conversion Activity:

- List of activities to install a new boiler (including decommissioning of old appliance)
- List of activities to install a new gas hob (including decommissioning of old appliance)
- List of activities to install new gas fire (including decommissioning of old appliance)
- List of activities to install new gas oven (including decommissioning of old appliance)

Installation costs:

- Costs per activity (cost to install boiler, cost to install meter, boiler relocation etc.)
- Cost for ancillary equipment (scaffolding, pipework etc.)
- Cost to decommission appliance.

Time estimates:

- Time per activity
- Time for total installation in various systems (e.g. combi to combi, non-combi to combi)

Methodology:

- Variables to understand household boiler requirements (i.e. what variables affect the size of the boiler installed within a home)
- Variables to understand NG mitigation work (i.e. what variables affect whether a property requires TRV's, Powerflush, boiler relocation)

Additionally, to support our understanding of whether any groups are disproportionately impacted by a conversion to hydrogen, we ideally require the data below:

Property data:

- Homeownership type
- Property market value

Personal data:

- Age
- Gender
- Ethnicity
- Disability/vulnerability
- Income group

Additionally, we require data that can be spliced at different geographical perspectives:

- National Level (i.e. England, Scotland, Wales)
- Regional level (i.e. North East, South West etc.)
- Local Authority Level (Luton, Ashfield etc.)
- Postcode level (WF7 etc.)

Why do we need it

The outputs from this work should support us in understanding the gas installations in domestic properties, applying cost estimates to various conversion activities, and the likelihood/prevalence these are required across the building stock. We need to be able to analyse the data within geographical regions which will feed into a model to determine the optimal decarbonisation option for different property types. The outputs from the supplier should allow us to:

- Understand the prevalence of gas installation activities in different types of homes and materials required across the UK building stock currently, based on the supplier's customer database. For example, x% of properties having a standard boiler to combi boiler conversion require xm of pipework.
- Determine if groups of conversion activities are linked to different types of properties i.e. a 1970's semi-detached property is likely to require a particular set of conversion activities compared to a recently converted set of flats.
- Understand indicators within properties that lead to different activities e.g. if someone has a vertical flue, they may require scaffolding.
- Understand the prevalence of other gas appliances within homes.
- Understand the ranges of costs for appliances/installations/labour.
- Understand the time estimates for conversion activities.
- Refine our list of conversion requirements.

We require input from the supplier on the most feasible way to deliver this request and the most suitable format e.g. a report or database.

The supplier will need to advise on their ability to provide cost and prevalence data on different gas installation activities based on consumer data across the UK, and what the outputs could look like.

Timelines

Please fill in the provided table in "Market Engagement Questionnaire" and send your responses to Nina Hakovirta by the deadline to submit the PIN/RFI responses.

The market engagement questionnaire is not a mechanism to shortlist potential bidders. The purpose is just to gain an understanding of market interest and to obtain feedback on the specification of requirements. The questionnaire contains yes/no questions and free text boxes. There is also the opportunity for suppliers to give general feedback on the content of the specification. If you have any questions, you need to ask them as soon as possible after the RFI is published. We have a set deadline for submitting questions (please refer to the timelines below). This gives you the chance to check that you understand everything before submitting your response.

Please note, the timetable is subject to change. The Department reserves the right to not commence a procurement process for this requirement.

Anticipated timeline for this market engagement:

Activity	Approximate Timing
PIN (market engagement) issued	20/03/2024

Deadline to submit PIN clarification questions (to the contact provided in this RFI via the email)	12/04/2024
Deadline for submitting PIN responses	22/04/2024 16:00
Potential ITT issue date	May 2024
Potential contract start date	July 2024

Market Engagement Questionnaire

Please answer the below questions and upload your responses to Nina Hakovirta by 16:00 April 2024.

Ref.	Question	Guidance	Your response
1	Do you feel that the specification of what the department is hoping to achieve is sufficiently clear?	Please respond yes/no and if no please elaborate on which aspects should be clarified.	
2	<p>Do you collect the data outlined within the Summary of Requirement section on your gas installer customers across the UK?</p> <p>a) Which data items do you hold out of the provided list and are there any others you think are important to collect that have not been mentioned?</p> <p>b) Is your data collected geographically as outlined?</p> <p>c) Do you have an existing database that collates some/all of the data variables listed? If so, do you overlay external data sources to create a more holistic view of the gas installations across the UK?</p> <p>d) Do you collect data on both domestic and non-</p>	Please provide details on how you collect and store data on gas installations across the UK.	

	<p>domestic/commercial consumers?</p> <p>e) Do you collect data on multi occupancy buildings (e.g. flats) including low, medium and high rise buildings?</p> <p>f) Do you collect data on commercial properties which may have a domestic gas installation set up (i.e. a high street shop which uses a domestic boiler like a hairdresser).</p>		
3	Do you have data at the geographic levels stated above (national, regional, local authority, postcode)? If not all of the above, please state which ones are applicable.		
4	How long do you think would be required to provide the data?	Please outline whether you think the requirement is feasible and what timeframe would be achievable to deliver.	
5	Please outline how much the required data acquisition will likely cost		
6	Would we be able to publish data you provide following procurement within an appraisal/if we receive an FOI request?	Please give details if any of the data would have IP restrictions/commercial sensitivities and how we could use the data requested. We understand cost data will be commercially sensitive so please advise on how this could be navigated (e.g. ranges rather than exact costs).	

General contact for this RFI

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