DPS FRAMEWORK SCHEDULE 4: LETTER OF APPOINTMENT AND CONTRACT TERMS

Part 1: Letter of Appointment

Dear Sirs

Letter of Appointment

This letter of Appointment dated Thursday 30th January 2020, is issued in accordance with the provisions of the DPS Agreement (RM6018) between CCS and the Supplier.

Capitalised terms and expressions used in this letter have the same meanings as in the Contract Terms unless the context otherwise requires.

Order Number:	[TBC]
From:	The Department for Business, Energy and Industrial Strategy 1 Victoria Street, London, SW1H 0ET ("Customer")
To:	IFF Research Ltd 5th Floor, St Magnus House, 3 Lower Thames Street, London, EC3R 6HD ("Supplier")

Effective Date:	Thursday 6th February 2020
Expiry Date:	Thursday 30th April 2020

Services required:	Set out in Section 2, Part B (Specification) of the DPS Agreement and refined by: · the Customer's Project Specification attached at Annex A and the Supplier's Proposal attached at Annex B

Key Individuals:	[redacted]

	[redacted]

Contract Charges (including any applicable discount(s), but excluding VAT):	£79,868.75.
Insurance Requirements	Additional public liability insurance to cover all risks in the performance of the Contract, with a minimum limit of £1 million for each individual claim. Additional employers' liability insurance with a minimum limit of £1 million indemnity. Additional professional indemnity insurance adequate to cover all risks in the performance of the Contract with a minimum limit of indemnity of £1 million for each individual claim.
Liability Requirements	**Suppliers limitation of Liability** (Clause 18.2 of the Contract Terms); Clause 18.2 of the Contract Terms shall be replaced with the following: "The Supplier's liability to the Authority during the Term shall not exceed an amount equal to GBP 1,000,000 (one million pounds sterling), save in the event of the Supplier's fraud, negligence or wilful misconduct, or any other default for which liability cannot be capped as a matter of law."
Customer billing address for invoicing:	All invoices to be emailed to such person as the Customer may notify to the Supplier from time to time.

FORMATION OF CONTRACT

BY SIGNING AND RETURNING THIS LETTER OF APPOINTMENT (which may be done by electronic means) the Supplier agrees to enter a Contract with the Customer to provide the Services in accordance with the terms of this letter and the Contract Terms.

The Parties hereby acknowledge and agree that they have read this letter and the Contract Terms.

The Parties hereby acknowledge and agree that this Contract shall be formed when the Customer acknowledges (which may be done by electronic means) the receipt of the signed copy of this letter from the Supplier within two (2) Working Days from such receipt For and on behalf of the Supplier: For and on behalf of the Customer:

[redacted]

ANNEX A

Customer Project Specification

1. Background

Heating is responsible for over a third of the UK's greenhouse gas emissions. In 2019 the UK Government set a legally binding target to achieve net-zero greenhouse gas emissions by 2050. Meeting this legal commitment will require virtually all heat in buildings to be decarbonised, and heat in industry to be reduced to close to zero carbon emissions. Heat Networks are a crucial aspect of the path towards decarbonising heat. In the right circumstances, they can reduce bills, support local regeneration and can be a costeffective way of reducing carbon emissions from heating.

Heat networks deliver heating, hot water, and/or cooling from a central source or sources to domestic dwellings, public sector buildings, shops, offices, sport facilities, hospitals and universities. They are uniquely able to unlock otherwise inaccessible sources of larger scale renewable and recovered heat sources such as waste heat and heat from rivers and mines.

In the UK there are approximately 480,000 customers spread across around 12,000 communal heat networks (serving only one building) and 2,000 district heat networks (serving multiple buildings).[1] District heat networks currently supply around 10TWh of heat which represents just under 2% of UK heat demand.[2]

We know there is significant potential for the number and scale of heat networks to increase dramatically. In 2015 the Committee on Climate Change (CCC) estimated that around 18% of UK heat will need to come from heat networks by 2050 if the UK is to meet its carbon targets cost-effectively. Up to £16 billion of capital investment in heat networks is likely to be needed to deliver such growth. Therefore, while the number of networks is rising steadily, we need a step-change in the pace of rollout and adoption of heat networks with lower-carbon heat sources to meet our carbon reduction targets.

There is already a growing heat network market in this country on which to build. This is supported by strong Government commitment through our Heat Network Investment Project (HNIP) of up to £320m and the work of the Heat Network Delivery Unit (HNDU) supporting local authorities and project developers in the early phases of scheme development. The Government's commitment to low-carbon heating in new homes from 2025 (the Future Homes Standard[3]) creates a further significant opportunity for faster rollout of low-carbon heat networks.

There is a risk that the UK heat network's supply chain may not attain capability and capacity needed at the pace to keep up with the market growth that is being driven and

[1] "District heat network" means the distribution of heat from a central source of production through a network to multiple buildings or sites. "Communal heat network" means the distribution of heat from a central source to multiple dwellings in a single building.

[2] BEIS (March, 2018): https://data.gov.uk/dataset/26afb14b-be9a-4722-916e-10655d0edc38/energyconsumption-in-the-uk The experimental statistics may not wholly reflect the true position of the current heat network market due to networks not reporting or providing incorrect returns

[3] The Future Homes Standard: changes to Part L and Part F of the Buildings Regulations for new dwellings consultation: https://www.gov.uk/government/consultations/the-future-homes-standard-changes-to-part-l-andpart-f-of-the-building-regulations-for-new-dwellings

accelerated by government support. Yet, to deliver on net-zero and the CCC's estimated heat supply share of 18%, market growth rates will need to increase significantly in the

near to medium term and a strong supporting supply chain for the market to mature. It is crucial that, as a sector, we close the evidence gap of what supply chain skills are required, any current gaps and any future gaps arising from a transition to a lower carbon economy. Such transition may add more pressure on certain skill sets and pose risks to transforming the heat networks market to achieve our legally binding targets.

This research is a qualitative assessment on the overall ability of the heat networks supply chain to meet this future demand by:

- reviewing the skills available and needed in each of the supply chain segments (see a suggested segmentation in **Table 1** below),
- assessing available qualifications and career paths in the sector,
- drawing conclusions on the ability of the market to meet the CCC's recommendations on skills,
- reviewing learnings from other relevant and/or high growth sectors, and
- developing areas for actions and highlight opportunities of the highest value to growing the capability and capacity at pace in the UK.

The output will inform what will be needed to increase the capability and capacity of the heat networks sector and enable business and market growth in order to realise industrialisation.

Table 1: A Heat Networks supply chain segmentation

Segment	Core
Professional services (technical, commercial, project, legal)	Primary
Package (DBOM: Design, Build, Operate, Maintain)	Primary
Package (DBOM: unbundled)	Primary
Hardware, demand & customer management systems (supply)	Secondary
Hardware, demand & customer management systems (supply, install)	Secondary
Hardware, demand & customer management systems (supply, install, operate, maintain)	Secondary

2. Aims and Objectives of the Project

This project aims to baseline the skills landscape in the UK heat networks sector, place the industry on a front foot, and set out the practical steps needed to grow the capability and capacity in the UK heat networks supply chain; considering synergies with other industries, in the context of a skills transition to net zero.

Overall aims:

1. To investigate the heat networks skills required to design, build (incl. installation), operate and maintain heat networks. The heat generation manufacturing and assembling skills are out of scope. Areas of interaction between manufacturers and heat networks developers/installers of hardware, demand & customer management systems will be considered.
2. To identify where skills are currently being developed (e.g. professional education providers, universities, colleges, employers etc.) and sourced (e.g. labour import, related sectors),

a. Highlight where the heat networks supply chain in the UK has particular expertise that could make it internationally competitive, where there are opportunities for growth and which segment could provide highly skilled professions.

3. To understand how the UK heat networks market can become an attractive and diverse market for new young entrants, those in mid-career related professions (e.g. oil & gas, rail, construction and offshore) and a review of barriers to capability and capacity growth of the supply chain.
4. To identify potential skills pathways, drawing on successful transformations of other high growth sectors, the available skills today and the necessary heat networks market growth by 2050.
5. To determine which policy levers and highlight opportunities of the highest value to growing and accelerating the capability and capacity of the UK heat networks supply chain, while minimising disruption in the transition to low carbon heating.
6. To provide specific, practical and timely recommendations for government interventions and industry leadership.

***Need for the research**:*

There is an evidence gap around currents skills available in the UK heat networks work force and what areas require action to grow the capability and capacity at pace in the UK to meet the CCC's recommendations on skills. The global heat networks market is very competitive, yet the UK is a high growth market in contrast to more established European markets – this work will build our understanding of how the UK can compete internationally.

Research questions:

The overarching research questions are:

1. What's the existing skills base in the supply chain and its segments (see table 1) and how can this be increased to meet future demand? (capacity)

2. What's the current capability to deliver the volume of heat networks (e.g. largely using high temperature and generation through fossil fuels) – and with the transition to net zero (e.g. lower temperature with clean heat solutions), how can that skills base be increased to meet future demands? (capability)

3. What are the risks to heat network deployment in the UK presented by a skills gap in the supply chain?

4. In context of question (1) and (2), how quickly can skills (the labour force) be mobilised through, (a) training, (b) other sectors, or (c) import?

5. What's the role of government?

We do not want to prescribe a specific approach as we are interested in the quality of the deliverable. We will evaluate the extent that your stated response will be more likely to deliver the requirements relative to other bidders.

However, in your response we would like to understand the following as a minimum:

- The composition of the UK heat networks workforce (professions, employment type, company size, diversity, age, gender, ethnicity),
- An analysis of the skills required for occupations in the heat networks sector's supply chain and those available:
- *Sector skills demand* (including occupation, workforce skills needs by segments),
- *Sector skills supply/provision* (including qualifications, starters/in-training, learning providers (college, university, professional development), demographic, geographical location),
- Identify routes to qualification required in heat networks, opportunities for career progression and benchmarking against related industries (e.g. construction, offshore wind, rail, nuclear),
- Identify barriers to entry, reasons for leaving the industry and which industry the sector competes with for labour, professional networks available for professionals and employers,
- Identify skills shortage, misalignment, utilisation, participation, including any skills that are prolific or sparse in a particular region,
- Analysis of the skills gap (current skills vs. needed to grow the market and future skills),
- Draw comparisons to other sectors/countries and what has been successful and is applicable for the UK context,
- Identify priorities to close the gap, considering both capability and capacity,

- An indicative bibliography of articles (e.g. academic, grey literature) and any other publications that you might draw on as part of your evidence-based research and/or describe the method (s) you would adopt to make such selections to better ensure that bias does not enter your analysis,
- Identify relevant data sources for future modelling and future research,
- an indicative timeline and resource allocation making clear who would be responsible for what (please ensure that all key members are provided with accompanying CVs with relevant experience), and
- a list of company names of strategic partners you plan to interview (both within and without of your organisation).

3. Suggested Methodology

If applicable:	**Insert numbers:**
Total number of Interviews (qualitative)	**25**
Total number of Focus Groups	**3**

We remain open to how this research is conducted, and bidders should provide a detailed response as to their methodology, including interview design, skills mapping methods and analysis for the low carbon transition from existing literature and interviews. An example methodology is set out below.

It is important that bidders take ownership of the aims of the project and produce evidence that supports the skills provision and recommendations for the UK Government regarding the development of capability and capacity in the heat networks supply chain.

1. Literature review: a desk-based review, building on previous research, examining existing literature and identifying what additional information will be needed by looking specifically at skills and making the comparison to other sectors and countries (e.g. offshore, construction, nuclear, rail), skills audit frameworks (e.g. by the construction sector), and lessons to be learned from other high growth industries. We anticipate this review to also point out relevant data sources for future modelling. We expect literature sources to include, academic literature and grey literature.

2. Skills mapping stage 1: Through the review of existing research, develop an understanding of the structure, availability and effectiveness of qualifications and career pathways and progression in the sector; including barriers and enablers to entry and progression. Testing existing assumptions of the skills landscape in the supply chain. We would expect to appoint a contractor with a strong track record of supply chain and/or skills mapping expertise.

3. Interim output: Preliminary report to present findings from literature review and skills mapping stage 1, testing assumptions of the skills landscape in the supply chain. Decide which industries will provide most useful insight, because of their relevance to transferring skills to heat networks (and vice versa) but may also face critical skills shortages or have faced rapid growth. Using findings from the literature review to create, with support from BEIS, a list of industry stakeholders for further information to answer the research questions and test assumptions. Develop and design of final interview questions and initial report outline, e.g. using an adapted form of the former UKCES Skills Surveys[4] or the Skills Audit of the UK Film & Screen Industries[5].

4. Interviews with the heat networks supply chain (demand) and education providers (supply): at least 25 targeted semi-structured interviews and 3 focus groups with the UK heat networks supply chain as well as education providers. As the UK heat networks sector is a growing market, at present there are only a small number of companies in the market. This may include, but are not limited to, professional service providers, design, build, operate, maintain providers (packaged and unbundled), industry associations, think tanks, qualification bodies & providers, consumer protection bodies, and hardware, demand & customer management systems.

The interview responses should build on the findings from stage 1-3, testing assumptions and filling missing information to understand, including,

- Current skills levels, offers and needs,
- Ability for the sector to increase capability and capacity at pace (including lead times) and how,
- which of the current skills in heat generation, distribution and construction will remain relevant and which ones need to adapt as technologies advance to 2050,
- Regional challenges, barriers and enablers, and • Access to training and career development etc..

Interviews may last around 60 minutes and are likely to involve the discussion of commercially sensitive information. The disclosure of commercially sensitive information may have higher chances of success in a face-to-face interview. However, as organisations will be based across the UK or potentially overseas, telephone interviews may be most practical. We would expect the

[4] UKCES (2015) www.gov.uk/government/publications/energy-sector-skills-and-performancechallenges
[5] BFI (2017) www.bfi.org.uk/film-industry/bfi-film-skills-fund-bfi-business-development-fund

contractor to have expertise interviewing manufacturing professionals. The contractor will be given parameters within which to discuss potential future policy options.

5. Skills mapping stage 2: Using the insights from task 1-4 developing an overview of the current skills composition, shortages and demands as well as training provision, routes/barriers to qualifications and to entry to work. Building on the current landscape, draw conclusions and provide commentary on the ability of the market to meet the CCC's recommendations on skills, drawing on comparisons from studied sectors.

Develop areas for actions and highlight opportunities of the highest value to growing the capability and capacity at pace in the UK and make recommendations,

- how to address shortages and barriers,
- for industry leadership, and • for government intervention.

6. Validation of results and recommendations: Where possible, together with BEIS, testing results with industry to ensure there is a consensus with the findings and recommendations by the contractor. This should include areas for actions and collaboration with other sectors to govern skills going forward.

Below are some of the relevant literature the successful bidder may want to consider when conducting their analysis:

Committee on Climate Change (2019). *Net-zero: technical report (in particular, Chapter: Buildings),* www.theccc.org.uk/publication/net-zero-the-uks-contribution-to-stopping-globalwarming.

IPPR (2019). *A Just transition: realising the opportunity of decarbonisation in the North of England*, www.ippr.org/research/publications/a-just-transition.

BEIS (2018). *Heat networks: developing a market framework*, https://www.gov.uk/government/publications/heat-networks-developing-a-marketframework.

Cedefop (2018). *Skills for green jobs in the United Kingdom: an update*, www.cedefop.europa.eu/en/uploads/dfu/countryreportuk.

CMA (2018). *Heat networks market study: Final report*, www.gov.uk/cma-cases/heatnetworks-market-study.

ETI (2018). *District Heat Networks in the UK: Potential, Barriers and Opportunities*, www.eti.co.uk/news/new-eti-report-highlights-how-the-capital-costs-of-uk-heat-networkscould-be-reduced-by-30-40.

UKCES (2015). *Skills and performance challenges in the energy sector*, www.gov.uk/government/publications/energy-sector-skills-and-performancechallenges.

ILO (2011). *Anticipating skills needs for a low carbon economy? Difficult, but not impossible*, www.ilo.org/skills/pubs/WCMS_168352/lang--en/index.htm.

There are a range of additional resources we will further make available to the successful bidder following appointment.

4. Deliverables

It is our intention that a version of the final report will be made publicly available for example through the .gov website. As such bid responses should ensure to price for producing a publishable document.

- Literature review - a short review, the results of which will go into the interim and final reports.
- Interview guide - used to structure the engagement with the supply chain • Interviews - can be a mixture of telephone and face to face for focus groups.
- Primary data collection from interviews
- Interim report - to contain the results of the literature review, conclusions of the skills mapping exercise
- A validated version of the results
- A summary presentation of the key findings and recommendations
- Final report (approx. 100 pages) and shorter summary document (see below)
- Weekly phone calls and/or email progress updates with the BEIS project manager
- Monthly meetings with the steering group to update on progress, including creation and distribution of delivery updates and progress to timeline.

Final report:
The report output will be required to answer the research questions, but we are open to proposals for a suitable structure, this may include some of the following sections:

1. Literature review

Findings from the research:

2. Heat networks occupations and skills in the UK heat networks sector ○ Occupations
    - ○ Career pathways and progression routes (recruitment) ○ Barriers and enablers to progression
    - ○ Effectiveness of qualifications to progression
3. Training and re-training offers ○ Qualifications and standards in the heat networks sectors (incl. relevant developing bodies)
    - ○ Employer familiarity with setting standards
4. The heat networks sector environment ○ Skills status quo
    - ○ Shortages affecting all key occupations
    - ○ Diversity, age, regionality, mobility, flexibility, competition ○ Organisational skill planning

5. Future skills ○ Key factors/drivers affecting the sector

- Impacts on drivers affecting future workforce and skills challenges
- Expectations on professions/skills evolving
- Workplace challenges and risks
- Opportunities and potential solutions

6. Learnings from other sectors/industries that have had to adapt to high growth

In a separate presentation the contractor will be required to develop areas for actions and highlight opportunities of the highest value to growing the capability and capacity at pace in the UK and make recommendations

- how to address shortages and barriers,
- for industry leadership, and
- for government intervention.

We will work with the successful bidder to assess the extent to which commercially sensitive information will or will not be included within the report.

Working arrangements/Emerging findings:

Selection of the preferred bidder will be on Monday, 27th January 2020. The contract start and kick off meeting is planned for Monday, 3rd February 2020. It is proposed that the work is structured as follows:

- Kick-off meeting w/c 3rd February 2020 to agree and finalise approach to the study;
- Meeting to discuss literature review and report outline w/c 17th February 2020;
- Meeting to review interim report, initial findings and themes w/c 2nd March 2020;
- Meeting to review draft final report w/c 30th March 2020;
- Meeting to review final report w/c 6th April 2020;
- Meeting and summary presentation w/c 20th April 2020.

It is important that BEIS are kept informed of emerging findings and project progress. The successful contractor will be expected to identify one named point of contract through whom all enquiries can be filtered. A BEIS project manager will be assigned to the project and will be the central point of contact.

Weekly progress updates will be required throughout the project. These can be delivered via e-mail and/or phone call to the BEIS project manager. At each milestone listed above, the contractor will be presenting an update to the findings to BEIS and any arising risks to the project delivery will require a mitigation plan by the contractor. Any changes to contractor team identified in the bid must be approved by BEIS with a plan for mitigating this to reduce impact on project. All research tools and methodologies will need to be agreed by BEIS.

BEIS will own the intellectual property rights of any and all intermediate products, including the final deliverables, and in particular including presentation slide packs, reports and data. BEIS will strive to be supportive if any authors wish to publish any findings or work in academic/scientific journals once BEIS has published the main report, although reserves the right to decline this.

Timetable:

A high level, example timetable of milestones is set out below. BEIS is open to the approach adopted we invite bidders to propose their own, suitably detailed timetable to achieve the above deliverables in the timeframe that allow sufficient time for BEIS to

provide comments on draft research materials such as literature review search strategies and interview guides. However, steps 1 to 5 (in section 3 above) should be completed by 31st March 2020 and step 6 should be completed by 9th April 2020.

Contractors must demonstrate that they can meet the following provisional timetable for the research:

Event / Milestone	Date and Time
Contract start date	Monday, 3rd February 2020
Kick-off meeting to agree and finalise approach to the study	Monday, 3rd February 2020
Meeting to discuss literature review and report outline	Monday, 17th February 2020
Interim report and initial findings and themes	Monday, 2nd March 2020
Draft final report	Monday, 30th March 2020
Final report	Thursday, 9th April 2020
Summary presentation incl. key background facts and analysis	Monday, 20th April 2020

Interviews:

A privacy notice will be required when collecting the personal data of those interviewed. The content of this can be agreed after the contract is awarded.

Presentation:

Near the close of the project the contractors should give a presentation of the draft report within BEIS to the Heat Networks team. This should be timed to allow for any comments received to be taken account in finalising the report.

Reports:

The interim report should be a 20-30-page document or presentation summarising the work to date, including the results of the literature review, conclusions of the skills mapping exercise and where possible visualisation of findings. This must be written in plain English.

At the end of the project (after the draft final report) we require a finalised, fully quality assured, thorough report (around 100 pages) and a separate summary report (10-20 pages). The reports must be written in plain English. We expect that 2-3 drafts will be needed to Version 1.0 reach the finalised reports and these drafts should be delivered well in advance with sufficient time built in for review and comments. Each draft must be proofread and delivered at a professional and publishable standard. Clear, precise and succinct language is essential. We expect this to be costed and accounted for in the timeline.

Quality assurance and peer review:
All work completed for this research must be subject to appropriate quality assurance. Project milestones, research approach, outputs, quality assurance should be agreed by BEIS and the contractor at the start of the contract. Final outputs will be reviewed by BEIS before the project is signed off.

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. BEIS reserves the right to refuse to sign off outputs which do not meet the required standard specified in this Invitation to Quote. The contractor must state how all work on the project will be quality assured within the proposal.

All analysis carried out as part of the project should be subject to quality assurance consistent with the Aqua Book guidance[6].

BEIS may wish to appoint an external peer reviewer for the project. If we do this then we will endeavour (though cannot guarantee) to align timings of this of this with the first or second set of comments from BEIS on the first or second draft of the report.

Publication:
The final report for this research / evaluation project must be formatted according to BEIS publication guidelines, therefore within the Research paper series template and adhering to BEIS accessibility requirements for all publications on GOV.UK. The publication template will be provided by the project manager. Please ensure you note the following in terms of accessibility:

Checklist for Word accessibility
Word documents supplied to BEIS will be assessed for accessibility upon receipt. Documents which do not meet one or more of the following checkpoints will be returned to you for re-working at your own cost:

1. document reads logically when reflowed or rendered by text-to-speech software
2. language is set to English (in File > Properties > Advanced)
3. structural elements of document are properly tagged (headings, titles, lists etc.)
4. all images/figures have either alternative text or an appropriate caption
5. tables are correctly tagged to represent the table structure
6. text is left aligned, not justified
7. document avoids excessive use of capitalised, underlined or italicised text
8. hyperlinks are spelt out (e.g. in a footnote or endnote)
9. Please see Annex A for BEIS Social Research Report Writing Guidelines.docx below

ANNEX B

Supplier Proposal

[redacted]

[redacted]