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Planning

Energy Innovation Needs Assessments 2.0

Department for Business, Energy & Industrial Strategy

F01: Prior information notice

Prior information only

Notice identifier: 2023/S 000-008665

Procurement identifier (OCID): ocds-h6vhtk-03b5e0

Published 24 March 2023, 1:54pm

Section I: Contracting authority

I.1) Name and addresses

Department for Business, Energy & Industrial Strategy

London

Email

reza.karavieh@beis.gov.uk

Country

United Kingdom

Region code

UK - United Kingdom

Internet address(es)

Main address

<https://www.gov.uk/government/organisations/department-for-energy-security-and-net-zero>

I.3) Communication

Additional information can be obtained from the above-mentioned address

I.4) Type of the contracting authority

Ministry or any other national or federal authority

I.5) Main activity

General public services

Section II: Object

II.1) Scope of the procurement

II.1.1) Title

Energy Innovation Needs Assessments 2.0

II.1.2) Main CPV code

- 73000000 - Research and development services and related consultancy services

II.1.3) Type of contract

Services

II.1.4) Short description

BEIS is considering a supplier to undertake a comprehensive update of the 2019 published Energy Innovation Needs Assessments (EINAs). The project will be delivered in consultation with government technical and analytical experts and will allow BEIS to build a robust knowledge base to guide UK decisions for the support of innovation in net zero related technologies, systems and processes. It will be further supplemented by ongoing BEIS led expert engagement activities and relevant analysis projects. Project deliverables will provide insights into the potential of technologies, systems and processes to:

- lead to a reduction in energy and/or decarbonisation costs;
- improve UK energy security;
- generate economic benefits to the UK;
- help meet UK climate change targets;

and help contextualise UK challenges and capabilities in meeting such opportunities by identifying, exploring, and quantifying key UK net zero innovation barriers and enablers.

II.1.5) Estimated total value

Value excluding VAT: £480,000

II.1.6) Information about lots

This contract is divided into lots: No

II.2) Description

II.2.2) Additional CPV code(s)

- 73110000 - Research services

II.2.3) Place of performance

NUTS codes

- UK - United Kingdom

II.2.4) Description of the procurement

Compared to 2019 EINAs, additional focus is expected on: a) innovation barriers and enablers; b) energy security. The overall analysis should prioritise innovations/technologies which require state support within this decade and have a realistic chance of commercialisation by 2040 to ensure tangible impacts on the 2050 net zero target.

BEIS welcomes suggestions for methodological improvements on the original EINA methodology if within budget, able to address core objectives and without compromising the

feasibility or robustness of key expected deliverables.

Please note: Except for whole energy system modelling, this project does not expect further work on the transport sector.

Objectives:

1. Build a robust evidence base to guide UK government net zero innovation prioritisation, investment decisions, address market failures and enhance energy security.
2. Develop a common understanding of the most significant innovation needs from a whole system perspective at UK and regional level to facilitate multi-sector coordinated planning across UK government.
3. Develop an in-depth understanding of key UK innovation barriers and enablers across identified innovation opportunities where further government action is required for unlocking potential.
4. Allow cross-comparison and prioritisation of UK innovation needs within technology families and across the energy system based on cost-effective decarbonisation, economic benefits and improved energy security.
5. Provide UK government with the evidence needed to identify and communicate UK priority areas to researchers, innovators, developers and investors.
6. Provide an understanding of key international technological developments and how the UK can maximise its opportunities within such context based on relevant capabilities.

Expected services:

The following information acts as a high-level guideline of the general asks to be expected from the project. For each selected technology family BEIS requires the analysis to:

1. Identify opportunities for UK relevant net zero innovation technologies, and the systems and processes in which they are utilised. A shortlisting exercise is expected to narrow the scope of the analysis.
2. Update or provide up-to-date cost estimate ranges for identified technologies and innovations, including their potential future trajectories to at least 2050, to feed into modelling. Cost trajectory limits should be set by technical feasibility rather than historical trends.

3. Provide whole system scenario trajectories based on identified innovations to model deployment and ensure consistent system wide quantitative comparability across technologies. The use of models such as UK TIMES or equivalent is expected.

4. Identify, assess and quantify key risks or opportunities arising from selected technologies for UK energy security during and after the transition to net zero.

5. Estimate the value to the UK - and ideally UK regions - from:

- reducing energy costs through innovation, based on information on current and cost reduction potential for technologies and related systems and processes (“innovation value” and “opportunity costs” are examples from 2019 EINAs)

- economic growth opportunities, both domestic and from export. This can be based on updating and improving existing job calculators:

- a) Gross Value Added (GVA) to the UK economy;

- b) an estimate of the jobs generated within the UK.

6. Identify existing barriers, enablers, market failures and assess where government could play a critical role in addressing such gaps. Where previous EINA or new GVA/job calculators can be relied on, more in depth quantitative estimates of such gaps is expected: e.g. estimation of workforce skill requirements to meet deployment pathways.

7. Provide an estimate of necessary support and investment from private and government sources to unlock identified innovations and related benefits, as well as benefits attributable to public R&D support.

II.3) Estimated date of publication of contract notice

28 April 2023

Section IV. Procedure

IV.1) Description

IV.1.8) Information about the Government Procurement Agreement (GPA)

The procurement is covered by the Government Procurement Agreement: Yes

Section VI. Complementary information

VI.3) Additional information

A supplier event will be held on 31 March 2023 from 2 - 3.30pm. If you wish to take part in this supplier day please register through the eventbrite link below.

<https://www.eventbrite.co.uk/e/energy-innovation-needs-assessments-20-supplier-event-tickets-598319538847>

In the event of issues with registration, please contact Reza Karavieh at Reza.Karavieh@beis.gov.uk

Slides and Q&A will be circulated after the event.

The event and following tender are relevant to organisations and individuals with high expertise in technical energy/net zero research and analysis.