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Tender

Design and build geothermal infrastructure for the UK Geoenergy Observatory at Cuningar Loop, Glasgow, UK

UK Research & Innovation

F02: Contract notice
Notice identifier: 2021/S 000-005420
Procurement identifier (OCID): ocds-h6vhtk-029c9d
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Section I: Contracting authority

I.1) Name and addresses

UK Research & Innovation

Polaris House, North Star Avenue

Swindon

SN12 1FL

Contact

Kate Richardson

Email

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Telephone

+44 756267366

Country

United Kingdom

NUTS code

UKK14 - Swindon

Internet address(es)

Main address

www.ukri.org

I.3) Communication

The procurement documents are available for unrestricted and full direct access, free of charge, at

https://www.delta-esourcing.com/tenders/UK-UK-Swindon:-Construction-work./XE899B3ED7

Additional information can be obtained from the above-mentioned address

Tenders or requests to participate must be submitted electronically via

https://ukri.delta-esourcing.com/respond/XE899B3ED7

Tenders or requests to participate must be submitted to the above-mentioned address

I.4) Type of the contracting authority

Body governed by public law

I.5) Main activity

Other activity

Research

Section II: Object

II.1) Scope of the procurement

II.1.1) Title

Design and build geothermal infrastructure for the UK Geoenergy Observatory at Cuningar Loop, Glasgow, UK

Reference number

UKRI-1107

II.1.2) Main CPV code

- 45000000 - Construction work

II.1.3) Type of contract

Works

II.1.4) Short description

The British Geological Survey (BGS) and the Natural Environment Research Council (NERC) are constructing a mine water geothermal research facility on the Cuningar Loop in east Glasgow as part of the UK Geoenergy Observatories project (from now on referred to as the 'Glasgow Observatory'). Both NERC and BGS form a part of the UK Research and Innovation (UKRI).

The tender is for the procurement of a supplier to provide the design and build support to BGS (the Client) in delivery of the geothermal infrastructure for the Glasgow Observatory.

The Contractor's main responsibilities will include but are not limited to: detailed design and construction of the works; testing and commissioning the works.

The supplier shall be appointed under an NEC4 ECC.

II.1.5) Estimated total value

Value excluding VAT: £310,000

II.1.6) Information about lots

This contract is divided into lots: No

II.2) Description

II.2.2) Additional CPV code(s)

- 45210000 - Building construction work
- 71541000 - Construction project management services
- 71500000 - Construction-related services
- 76300000 - Drilling services
- 45100000 - Site preparation work
- 45120000 - Test drilling and boring work
- 45200000 - Works for complete or part construction and civil engineering work
- 45220000 - Engineering works and construction works

II.2.3) Place of performance

NUTS codes

- UKM82 - Glasgow City

Main site or place of performance

Glasgow City

II.2.4) Description of the procurement

UK Research and Innovation (UKRI) wishes to establish a contract for design and and build of geothermal infrastructure for the UK Geoenergy Glasgow Observatory.

The supplier will develop the ‘Detailed Design Specification’ through collaboration with the Client, to deliver an engineering design for the bespoke research infrastructure that meets the science requirements within the specified budget. Assuming the design is accepted, the supplier will build the design such that the facility is ‘research-ready’.

The geothermal infrastructure will comprise (but may not be limited to) the following:

1. Extend four of the mine-water borehole wellheads above ground level and construct a low brick wellhead chamber and associated pipework.

2. To complete the hydraulic and thermal design of a pumping main and reinjection main, associated manual valve work and other infrastructure. To excavate and install this pipe infrastructure in trenches.

3. To install a cable duct within the main pipework trench to be routed to a control panel at a heat centre at Site 1.

4. To select and install an electrical submersible pump, associated cabling and rising main in boreholes GGA05 and GGA07. Consideration should be given to the termination and support of these items through the upper wellhead flanged plate. A suitable valve arrangement and wellhead sensors are also to be incorporated into the design.

5. To design and install a reinjection main in boreholes GGA01 and GGA08, with a corresponding pressure-tight wellhead upper-flanged plate. A suitable valve arrangement and wellhead sensors are also to be incorporated into the design.

6. To install two access tubes in all four boreholes, one of which shall be installed with a sensor to determine and log downhole water head, temperature and electrical conductivity.

7. The well equipment and pipework shall be selected to deliver a variable flow rate up to a maximum of 12 L/s and down to a minimum of 3 L/s, while maintaining a positive gauge pressure of at least 1 bar throughout the entire pumping-heat exchange-reinjection main system. 8. The wellhead flange plates should be designed to accommodate both a reinjection main and a pump rising main in the future.

9. To select and install a “heat centre” within the Site 1 compound.

10. To select and install a reversible water-air chiller / heat pump adjacent to the heat centre, with a nominal maximum output of 200 kW in both heating and cooling mode.

11. To design and install a heat exchanger circuit in the heat centre. The circuit should include three equally-sized shell-and-tube heat exchangers with a combined heat exchange capacity of 200 kW.

12. To design and install an insulated heat transfer fluid circuit connecting the heat exchangers to the heat pump / chiller unit, with temperature and pressure sensors, circulation pump, glycol pressure regulation and top-up equipment, any necessary thermal buffering, and a sampling tap for sampling the glycol.

13. To install monitoring equipment within the heat centre on the mine water circuit to include an electromagnetic flowmeter, chemical dosing pump, temperature, pressure and

electrical conductivity sensors, and a sampling tap.

14. To equip the heat centre with a control panel / management system for receiving and logging signals from the various installed sensors, and also sending control signals to the submersible pumps and the heat pump/chiller.

15. To prepare full design, installation, operation and maintenance documentation for the infrastructure installed in this Contract.

16. To prepare a maintenance schedule for the facility.

17. Commission, test and demonstrate the facility.

18. To providing training on operating the system.

A brief summary of the requirements has been provided above, please ensure you review all additional appendices for full details of this contract.

II.2.5) Award criteria

Quality criterion - Name: Quality / Weighting: 70

Price - Weighting: 30

II.2.6) Estimated value

Value excluding VAT: £310,000

II.2.7) Duration of the contract, framework agreement or dynamic purchasing system

Duration in months

6

This contract is subject to renewal

No

II.2.10) Information about variants

Variants will be accepted: No

II.2.11) Information about options

Options: No

II.2.13) Information about European Union Funds

The procurement is related to a project and/or programme financed by European Union funds: No

II.2.14) Additional information

To respond to this opportunity please click here: https://ukri.delta-esourcing.com/respond/XE899B3ED7

Section III. Legal, economic, financial and technical information

III.1) Conditions for participation

III.1.2) Economic and financial standing

Selection criteria as stated in the procurement documents

III.1.3) Technical and professional ability

Selection criteria as stated in the procurement documents

Section IV. Procedure

IV.1) Description

IV.1.1) Type of procedure

Open procedure

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

The procurement is covered by the Government Procurement Agreement: Yes

IV.2) Administrative information

IV.2.2) Time limit for receipt of tenders or requests to participate

Date

21 April 2021

Local time

2:00pm

IV.2.4) Languages in which tenders or requests to participate may be submitted

English

IV.2.6) Minimum time frame during which the tenderer must maintain the tender

Duration in months: 3 (from the date stated for receipt of tender)

IV.2.7) Conditions for opening of tenders

Date

21 April 2021

Local time

2:00pm

Section VI. Complementary information

VI.1) Information about recurrence

This is a recurrent procurement: No

VI.3) Additional information

The contracting authority considers that this contract may be suitable for economic operators that are small or medium enterprises (SMEs). However, any selection of tenderers will be based solely on the criteria set out for the procurement.

For more information about this opportunity, please visit the Delta eSourcing portal at:

https://ukri.delta-esourcing.com/tenders/UK-UK-Swindon:-Construction-work./XE899B3ED7

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GO Reference: GO-2021317-PRO-17945094

VI.4) Procedures for review

VI.4.1) Review body

UK Research and Innovation

Swindon

Country

United Kingdom