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Planning

UKRI-1241 NQCC WP1 High Fidelity Two-Qubit Microwave Gates

UK Research and Innovation

F01: Prior information notice
Prior information only
Notice identifier: 2021/S 000-013398
Procurement identifier (OCID): ocds-h6vhtk-02bbc9
Published 14 June 2021, 4:15pm

Section I: Contracting authority

I.1) Name and addresses

UK Research and Innovation

Polaris House

Swindon

SN2 1FL

Contact

Elizabeth Gage

Email

Elizabeth.gage@ukri.org

Telephone

+44 7563420665

Country

United Kingdom

NUTS code

UK - United Kingdom

Internet address(es)

Main address

https://www.ukri.org/

I.3) Communication

Additional information can be obtained from 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

UKRI-1241 NQCC WP1 High Fidelity Two-Qubit Microwave Gates

Reference number

UKRI-1241

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

This tender is related to UKRI-1241 NQCC WP1 High Fidelity Two-Quibit Microwave Gates.

The National Quantum Computing Centre has an objective to deliver an early-stage quantum computer (Noisy

Intermediate Scale Quantum, NISQ machine) that can outperform conventional computing for a range of tasks, by

2025.

II.1.5) Estimated total value

Value excluding VAT: £290,000

II.1.6) Information about lots

This contract is divided into lots: No

II.2) Description

II.2.3) Place of performance

NUTS codes

- UK - United Kingdom

Main site or place of performance

UNITED KINGDOM

II.2.4) Description of the procurement

The NQCC has developed a technology roadmap, and has identified a series of technical work packages (WPs) that are suitable for delivery by external contractors. These WPs focus on the delivery of technology solutions according to a set of required technical performance specifications, for both hardware and software, related to quantum computing. The NQCC intends to hold an event to inform potential suppliers of the tendering process and requirements for two work packages related to ion trap systems:

WP1 - High Fidelity Two-Qubit Microwave Gates for Ion Traps. WP1 involves (i) the development of an in-lab demonstrator comprising an ion trap system with RF/microwave-controlled two-qubit gates at or beyond the fidelity of laser-driven gates, and (ii) a paper-based study describing a means to use the basic gate mechanism demonstrated in this two-qubit device for a future scaled system with 1000+ ions.

WP2 - Ion Processor Fully Controlling 10+ Qubits.

II.2.14) Additional information

The Supplier Event for both WP1 and WP2 is being held on 12:00pm 13th July 2021.

Suppliers are to confirm whether they will be attending the Supplier Event by emailing their contact name, organisation name and conatct details to Elizabeth.Gage@ukri.org no later than Thursday 8th July 2021.

II.3) Estimated date of publication of contract notice

19 July 2021

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: No

Section VI. Complementary information

VI.3) Additional information

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