This is a published notice on the Find a Tender service: https://www.find-tender.service.gov.uk/Notice/006974-2024

Tender

DLSITT1014 - Diamond-II Booster BF and Quadrupole Power Converters

Diamond Light Source Ltd

F02: Contract notice
Notice identifier: 2024/S 000-006974
Procurement identifier (OCID): ocds-h6vhtk-044579
Published 5 March 2024, 10:54am

Section I: Contracting authority

I.1) Name and addresses

Diamond Light Source Ltd

Harwell Science and Innovation Campus

Didcot

OX11 0DE

Contact

Debbie Pryor

Email

procurement@diamond.ac.uk

Telephone

+44 1235567575

Country

United Kingdom

Region code

UKJ14 - Oxfordshire

Companies House

4375679

Internet address(es)

Main address

https://www.diamond.ac.uk

I.3) Communication

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

https://www.diamondtenders@diamond.ac.uk/Home.aspx

Additional information can be obtained from the above-mentioned address

Tenders or requests to participate must be submitted electronically via

https://www.diamondtenders@diamond.ac.uk

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

Scientific Research

Section II: Object

II.1) Scope of the procurement

II.1.1) Title

DLSITT1014 - Diamond-II Booster BF and Quadrupole Power Converters

Reference number

DLSITT1014

II.1.2) Main CPV code

- 31121110 - Power converters

II.1.3) Type of contract

Supplies

II.1.4) Short description

Located on the Harwell Science and Innovation Campus in Oxfordshire, Diamond Light Source (DLS) is a leading-edge facility for science, engineering and innovation. Diamond allows researchers from academia and industry to investigate the structure and behaviour of the world around us at the atomic and molecular level.

To continue delivering the world-changing science that Diamond enables, the facility is being upgraded to Diamond-II, a co-ordinated programme of development that combines a major machine upgrade with new instruments and complementary improvements to optics, detectors, sample environment and delivery capabilities, and computing, as well as integrated and correlative methods. This will be transformative in speed and spatial resolution and will offer users streamlined access to enhanced instruments for life and physical sciences.

The subject of this call for tender are the power converters for the Booster BF and quadrupole magnets as indicated below.

BF

Number of Magnets: 36

Connection Arrangement: Series

Number of Power Converters: 1

Quadrupole

Number of Magnets: 4 per converter

Connection Arrangement: Series

Number of Power Converters: 5

II.1.6) Information about lots

This contract is divided into lots: No

II.2) Description

II.2.3) Place of performance

NUTS codes

- UKJ14 - Oxfordshire

II.2.4) Description of the procurement

Located on the Harwell Science and Innovation Campus in Oxfordshire, Diamond Light Source (DLS) is a leading-edge facility for science, engineering and innovation. Diamond allows researchers from academia and industry to investigate the structure and behaviour of the world around us at the atomic and molecular level.

To continue delivering the world-changing science that Diamond enables, the facility is being upgraded to Diamond-II, a co-ordinated programme of development that combines a major machine upgrade with new instruments and complementary improvements to optics, detectors, sample environment and delivery capabilities, and computing, as well as integrated and correlative methods. This will be transformative in speed and spatial resolution and will offer users streamlined access to enhanced instruments for life and physical sciences.

The subject of this call for tender are the power converters for the Booster BF and quadrupole magnets as indicated below.

BF

Number of Magnets: 36

Connection Arrangement: Series

Number of Power Converters: 1

Quadrupole

Number of Magnets: 4 per converter

Connection Arrangement: Series

Number of Power Converters: 5

The solution foreseen for both types of power converters is two quadrant H-Bridges fed from a DC bus/capacitor. The voltage on the capacitor is controlled by a boost regulator fed from an AC/DC SMPS, as shown in Diagrams 1 and 2. This has the advantage of presenting a fairly constant load to the ac distribution system, with energy circulating between the DC bus capacitor bank and magnets. The Booster Quadrupole power converters could have a common DC bus/capacitor and AC/DC SMPS. The contractor may propose an alternative arrangement. There will be three variants of the Booster Quadrupole power converters. They will all have the same power circuit, but two variants will have reduced current control ranges to achieve greater repeatability, resolution, and stability. This will be achieved by fitting different DCCTs and/or current sense resistors.

II.2.5) Award criteria

Quality criterion - Name: Technical Solution & Quality / Weighting: 50

Quality criterion - Name: Experience of modifying standard items to meet customer requirements / Weighting: 5

Quality criterion - Name: Commercial / Weighting: 5

Quality criterion - Name: Delivery / Weighting: 5

Price - Weighting: 35

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

Duration in months

21

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

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

8 April 2024

Local time

12:00pm

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

8 April 2024

Local time

1:00pm

Section VI. Complementary information

VI.1) Information about recurrence

This is a recurrent procurement: No

VI.4) Procedures for review

VI.4.1) Review body

Diamond Light Source

Harwell Science and Innovation Campus

Didcot

OX11 0ED

Country

United Kingdom