Award

Specification for DLS Front End X-ray Beam Position Monitor upgrade

Diamond Light Source Ltd

F15: Voluntary ex ante transparency notice
Notice identifier: 2024/S 000-002994
Procurement identifier (OCID): ocds-h6vhtk-043593
Published 30 January 2024, 9:34am

Section I: Contracting authority/entity

I.1) Name and addresses

Diamond Light Source Ltd

Harwell Science and Innovation Campus

Didcot

OX11 0ED

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.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

Specification for DLS Front End X-ray Beam Position Monitor upgrade

Reference number

DLSITT1010

II.1.2) Main CPV code

- 38582000 - X-ray inspection equipment

II.1.3) Type of contract

Supplies

II.1.4) Short description

Located on the Harwell Science and Innovation Campus in Oxfordshire, Diamond is a leading-edge facility for science, engineering, and innovation. It is the largest science facility to be built in the UK for 40 years and produces ultra-violet, infra-red and X-ray beams of exceptional brightness.

The Diamond machine is being upgraded (to Diamond-II) to increase the intensity of light available to users. This upgrade will increase the storage ring energy from 3.0 GeV to 3.5 GeV and several existing beamlines are receiving new insertion devices. Additionally, three entirely new flagship beamlines are proposed to be built.

Diamond's front end X-ray Beam Position Monitors (XBPMs) are used to monitor the position of the incident white X-ray beam on most beamlines. They are capable of measuring the X-ray beam position with sub-micron resolution at bandwidths of 10 kHz.

The upgrade includes the modification of Diamond's existing front end XBPMs. They must be modified to operate optimally with the improved X-ray source points and to withstand the increased white beam power loads expected from Diamond-II. New front end XBPMs will be purchased where required. To provide best value for money, the intention is to re-use as much existing equipment as possible.

The scope of the contract is to:

- develop a cost-effective upgrade plan in collaboration with

Diamond.

- state an upper bound on the acceptable intercepted power load per XBPM blade and demonstrate the validity of this upper bound e.g. using FEA modelling and/or operational data from previous installations.
- modify existing Diamond XBPMs that require modification for use on Diamond-II.
- produce new XBPMs for each of Diamond's new beamlines which are compatible with existing ones.
- supply Diamond with drawings, modification and maintenance procedures, and spare components as may be required as part of the upgrade plan.

II.1.6) Information about lots

This contract is divided into lots: No

II.1.7) Total value of the procurement (excluding VAT)

Value excluding VAT: £840,190

II.2) Description

II.2.3) Place of performance

NUTS codes

- UKJ14 - Oxfordshire

II.2.4) Description of the procurement

Approximately 37 of Diamond's existing front end XBPMs will require upgrading. About 14 of these will only require a modification of the existing flange insert (new "blade holders" and potentially with some alteration to a copper aperture at the entrance to the XBPM);

about 23 of these XBPMs will require entire new flange inserts, including new blade holders.

Approximately 16 new XBPMs will need to be supplied (including support column, 2-axis motorised motion stage, vacuum vessel, vacuum bellows, and flange insert) to be compatible with the existing XBPM's.

The contract is proposed to be divided up into 5 separate work packages (WPs). The proposed WPs are outlined below.

• WP1, Planning phase:

• WP2, Initial delivery of new XBPM flange inserts:

• WP3, "Recycling" of existing XBPM flange inserts:

• WP4, Final delivery of new XBPM flange inserts:

• WP5, Delivery of complete new XBPMs

II.2.11) Information about options

Options: No

Section IV. Procedure

IV.1) Description

IV.1.1) Type of procedure

Negotiated without a prior call for competition

- The works, supplies or services can be provided only by a particular economic operator for the following reason:
  - protection of exclusive rights, including intellectual property rights

Explanation:

• FMB und Messtechnik GmbH (FMB) designed and own the

Intellectual Property Rights for the existing Beam Position

Monitors (BPM's).

• This contract is for the modification of 37 existing BPM's and

the supply of 16 new ones.

• Only FMB can modify the existing units due to IPR issues.

• Use of an alternative supplier for the 16 new units would

create issues with compatibility.

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

The procurement is covered by the Government Procurement Agreement: Yes

Section V. Award of contract/concession

Title

Specification for DLS Front End X-ray Beam Position Monitor upgrade

A contract/lot is awarded: Yes

V.2) Award of contract/concession

V.2.1) Date of conclusion of the contract

30 January 2024

V.2.2) Information about tenders

The contract has been awarded to a group of economic operators: No

V.2.3) Name and address of the contractor/concessionaire

FMB Berlin

Friedrich-Wohler-Strasse 2

Berlin

12489

Country

Germany

NUTS code

- DE3 - Berlin

Handelsregister Abteilung B

DE 137201969 (HRB 37774)

The contractor/concessionaire is an SME

Yes

V.2.4) Information on value of contract/lot/concession (excluding VAT)

Total value of the contract/lot/concession: £840,190

Section VI. Complementary information

VI.4) Procedures for review

VI.4.1) Review body

Diamond Light Source

Harwell Science and Innovation Campus

Didcot

OX11 0DE

Country

United Kingdom