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Contract

## **9000291 - Supply of Front End X-ray Beam Position Monitor (XBPM) Upgrade**

Diamond Light Source

F03: Contract award notice

Notice identifier: 2024/S 000-004883

Procurement identifier (OCID): ocds-h6vhtk-043593

Published 14 February 2024, 10:24am

### **Section I: Contracting authority**

#### **I.1) Name and addresses**

Diamond Light Source

Harwell Science and Innovation Campus

Didcot

OX11 0DE

#### **Contact**

Debbie Pryor

#### **Email**

[procurement@diamond.ac.uk](mailto: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

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## **Section II: Object**

### **II.1) Scope of the procurement**

#### **II.1.1) Title**

9000291 - Supply of Front End X-ray Beam Position Monitor (XBPM) Upgrade

Reference number

9000291

#### **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 leadingedge 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.2.5) Award criteria**

Price

## **II.2.11) Information about options**

Options: No

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## Section IV. Procedure

### IV.1) Description

#### IV.1.1) Type of procedure

Award of a contract without prior publication of a call for competition in the cases listed below

- The 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

### IV.2) Administrative information

#### IV.2.1) Previous publication concerning this procedure

Notice number: [2024/S 000-002994](#)

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## **Section V. Award of contract**

### **Contract No**

9000291

### **Title**

Supply of Front-End X-ray Beam Position Monitor (XBPM) Upgrade

A contract/lot is awarded: Yes

### **V.2) Award of contract**

#### **V.2.1) Date of conclusion of the contract**

9 February 2024

#### **V.2.2) Information about tenders**

Number of tenders received: 1

Number of tenders received from SMEs: 1

Number of tenders received by electronic means: 1

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

#### **V.2.3) Name and address of the contractor**

FMB Feinwerk

Friedrich-Wohler-Strasse 2

Berlin

12489

Country

Germany

NUTS code

- DE - Germany

Handelsregister Abteilung B, Germany

DE 137201969 (HRB 37774)

The contractor is an SME

Yes

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

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

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## **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