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Planning

H3AT - Water Detritiation System

United Kingdom Atomic Energy Authority

F01: Prior information notice
Prior information only
Notice identifier: 2024/S 000-016021
Procurement identifier (OCID): ocds-h6vhtk-04694a
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Section I: Contracting authority

I.1) Name and addresses

United Kingdom Atomic Energy Authority

Culham Campus

Abingdon

OX14 3DB

Contact

Nicola Adams

Email

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Telephone

+44 1235465379

Country

United Kingdom

Region code

UKJ1 - Berkshire, Buckinghamshire and Oxfordshire

National registration number

N/A

Internet address(es)

Main address

http://www.gov.uk/government/organisations/uk-atomic-energy-authority

Buyer's address

https://uk.eu-supply.com/ctm/Company/CompanyInformation/Index/72814

I.3) Communication

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

https://uk.eu-supply.com/app/rfq/rwlentrance_s.asp?PID=81937&B=UKAEA

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

Fusion Research

Section II: Object

II.1) Scope of the procurement

II.1.1) Title

H3AT - Water Detritiation System

Reference number

T/AW137/22

II.1.2) Main CPV code

- 38424000 - Measuring and control equipment

II.1.3) Type of contract

Supplies

II.1.4) Short description

The purpose of the WDS is to capture tritium from a larger volume of tritiated water into a small volume of hydrogen gas which is transferred to the Isotope Separation System for separation. Other hydrogen isotopes are discharged to atmosphere via the building stack after being sufficiently detritiated, while the oxygen released from the water is diverted to the ADS. This is done using a technology called Combined Electrolysis and Catalytic Exchange (CECE), which consists of electrolysis of tritiated water to produce tritium-containing hydrogen, then passing the released hydrogen through Liquid Phase Catalytic Exchange (LPCE) columns which promote isotopic exchange of the tritium with hydrogen in clean water.

II.1.6) Information about lots

This contract is divided into lots: No

II.2) Description

II.2.2) Additional CPV code(s)

- 09320000 - Steam, hot water and associated products
- 09343000 - Radioactive materials
- 31161400 - Primary water systems

- 38340000 - Instruments for measuring quantities
- 38420000 - Instruments for measuring flow, level and pressure of liquids and gases
- 38570000 - Regulating and controlling instruments and apparatus
- 38930000 - Humidity and moisture measuring instruments
- 42120000 - Pumps and compressors
- 42122100 - Pumps for liquids
- 42131100 - Valves defined by function
- 42131140 - Pressure-reducing, control, check or safety valves
- 45255400 - Fabrication work
- 45262670 - Metalworking
- 45262680 - Welding
- 45300000 - Building installation work
- 51100000 - Installation services of electrical and mechanical equipment
- 51110000 - Installation services of electrical equipment
- 51120000 - Installation services of mechanical equipment
- 51810000 - Installation services of tanks
- 51820000 - Installation services of reservoirs
- 71242000 - Project and design preparation, estimation of costs
- 71320000 - Engineering design services
- 71323200 - Plant engineering design services
- 71335000 - Engineering studies
- 71350000 - Engineering-related scientific and technical services

II.2.3) Place of performance

NUTS codes

- UKJ1 - Berkshire, Buckinghamshire and Oxfordshire

Main site or place of performance

Culham Campus Abingdon

II.2.4) Description of the procurement

The purpose of the WDS is to capture tritium from a larger volume of tritiated water into a small volume of hydrogen gas which is transferred to the Isotope Separation System for separation. Other hydrogen isotopes are discharged to atmosphere via the building stack after being sufficiently detritiated, while the oxygen released from the water is diverted to the ADS. This is done using a technology called Combined Electrolysis and Catalytic Exchange (CECE), which consists of electrolysis of tritiated water to produce tritium-containing hydrogen, then passing the released hydrogen through Liquid Phase Catalytic Exchange (LPCE) columns which promote isotopic exchange of the tritium with hydrogen in clean water.

The main functions of the WDS are:

• Receipt and interim storage of tritiated water produced by the H3AT tritium plant

• Recovery and concentration of tritium from tritiated water into hydrogen gas

• Discharge of tritium-enriched hydrogen gas to the ISS

• Receipt of low-tritium hydrogen gas from ISS

• Discharge detritiated hydrogen gas to stack

• Discharge of oxygen released from tritiated water to the ADS

• Transfer of tritiated water into or out of storage drums to allow for import or export of tritiated water

II.3) Estimated date of publication of contract notice

23 September 2024

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: Yes