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Planning

MARKET ENGAGEMENT TO UNDERSTAND SUPERCOOLED MAGNET INSULATOR TECHNOLOGIES

United Kingdom Atomic Energy Authority (UKAEA)

F01: Prior information notice

Prior information only

Notice identifier: 2021/S 000-014510

Procurement identifier (OCID): ocds-h6vhtk-02c021

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Section I: Contracting authority

I.1) Name and addresses

United Kingdom Atomic Energy Authority (UKAEA)

Culham Science Centre

Abingdon

OX14 3DB

Contact

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Email

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Telephone

+44 7546653628

Country

United Kingdom

NUTS code

UKJ1 - Berkshire, Buckinghamshire and Oxfordshire

National registration number

United Kingdom Atomic Energy Authority (UKAEA)

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/rwlenrance_s.asp?PID=38509&B=UK

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

MARKET ENGAGEMENT TO UNDERSTAND SUPERCOOLED MAGNET INSULATOR TECHNOLOGIES

Reference number

T/DB103/21

II.1.2) Main CPV code

- 73300000 - Design and execution of research and development

II.1.3) Type of contract

Services

II.1.4) Short description

The aim of this project is to engage with the wider market to understand and test current available materials as magnet insulators that will be used in the toroidal, poloidal and correction coils, as well as the central solenoid - These materials must encapsulate the coils to protect and stabilise the magnets from the hostile environment e.g. irradiation

UKAEA will survey and assess organic potting compounds for application in a fusion environment. including, but not limited to: epoxy blends, benzoxazines and polyimides. Identify, survey and assess inorganic material e.g. geopolymers. Engagement with wider industry to understand the range of available COTS products developed in other industries which could be applicable to the requirement. Follow on work might include mechanical testing of these products to validate their suitability for nuclear environments.

II.1.5) Estimated total value

Value excluding VAT: £200,000

II.1.6) Information about lots

This contract is divided into lots: No

II.2) Description

II.2.2) Additional CPV code(s)

- 24300000 - Basic inorganic and organic chemicals
- 24500000 - Plastics in primary forms
- 73111000 - Research laboratory services
- 73300000 - Design and execution of research and development
- 31630000 - Magnets

II.2.3) Place of performance

NUTS codes

- UKJ1 - Berkshire, Buckinghamshire and Oxfordshire

II.2.4) Description of the procurement

Part of the STEP programme is the development of magnet insulators that will be used in the toroidal, poloidal and correction coils, as well as the central solenoid. These materials must encapsulate the coils to protect and stabilise the magnets from the hostile environment. This environment, particularly the high levels of neutron irradiation, present a significant materials challenge to select and validate potting compounds which avoid degradation in thermal, mechanical, and electromagnetic properties under these conditions. The aim of this project is to Engage with the wider market to understand and test current available materials which can be applied to the Requirements. UKAEA will survey and assess organic potting compounds for application in a fusion environment., including, but not limited to: epoxy blends, benzoxazines and polyimides, Identify, survey and assess inorganic material options, including, but not limited to, geopolymers. Engagement with wider industry to understand the range of available COTS products developed in other industries, such as aerospace, which could be applicable to the requirement. Follow on work might include mechanical testing of these products to validate their suitability for nuclear environments. Testing will be carried out by external suppliers, therefore engagement with wider industry to understand testing capability and standard testing procedures will also form a part of this project.

II.3) Estimated date of publication of contract notice

22 October 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: Yes