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Contract

SBRI Competition: Fusion Industry Challenges Cycle 1 Phase 2

United Kingdom Atomic Energy Authority

F03: Contract award notice

Notice identifier: 2023/S 000-012276

Procurement identifier (OCID): ocds-h6vhtk-03c50f

Published 28 April 2023, 12:24pm

Section I: Contracting authority

I.1) Name and addresses

United Kingdom Atomic Energy Authority

Culham Science Centre

Abingdon

OX14 3DB

Contact

Ioanna Bampatsia

Email

ioanna.bampatsia@ukaea.uk

Telephone

+44 0123546

Country

United Kingdom

Region code

UKJ14 - 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.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

SBRI Competition: Fusion Industry Challenges Cycle 1 Phase 2

Reference number

T/IB204/22

II.1.2) Main CPV code

- 73110000 - Research services

II.1.3) Type of contract

Services

II.1.4) Short description

This is a Small Business Research Initiative (SBRI) competition funded by the UK Atomic Energy Authority. The aim of the competition is to develop solutions to fusion energy challenges in two key priority areas. The competition has two themes.

1. Accelerating fusion power plant design with next-generation digital tools
2. Reducing fusion power plant fuel requirements with advanced production and handling technology for hydrogen isotopes

This is phase 2 of the competition. All successful phase 1 applicants are invited to this further competition.

II.1.6) Information about lots

This contract is divided into lots: Yes

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

Value excluding VAT: £5,669,174.58

II.2) Description

II.2.1) Title

Accelerating fusion power plant design with next-generation digital tools

Lot No

1

II.2.2) Additional CPV code(s)

- 73110000 - Research services

II.2.3) Place of performance

NUTS codes

- UKJ14 - Oxfordshire
- UKJ1 - Berkshire, Buckinghamshire and Oxfordshire
- UKJ - South East (England)
- UK - United Kingdom

II.2.4) Description of the procurement

A Pre-Commercial Procurement Activity under SBRI

Accelerating fusion power plant design with next-generation digital tools

To meet Net Zero targets, there is not enough time for traditional Design-Build-Test-Learn (DBTL) approach for fusion power plants. Increasing emphasis will be placed upon emerging innovation from in silico engineering design:

Exascale artificial Intelligence era Digital Thread platform

- beyond current Product Lifecycle Management
- endures for the lifetime of the product (100 years)
- low-code
- time efficient
- scalable
- enable and promote automation
- enable design integration and accelerate the product development lifecycle

Optimise the extraction of information and knowledge from experiment and simulation

Text update 19 May 2021: we have changed the detail below to clarify what we are looking for in applications.

- data science for experiment and simulation automation and optimisation
- decisions based upon all prior data rather than tacit knowledge
- dramatically improve extraction of information from data

- surrogate models and emulators
- improve extrapolation of simulation and empirical data

II.2.5) Award criteria

Quality criterion - Name: How well does the proposal meet the challenge?' / Weighting: 5

Quality criterion - Name: How valid is the technical approach towards fusion application? / Weighting: 20

Quality criterion - Name: How do you intend to compete with other technologies being developed by competitors? / Weighting: 15

Quality criterion - Name: Does the proposal contain a well addressed project delivery plan? / Weighting: 10

Quality criterion - Name: Organisational and Team capability / Weighting: 15

Quality criterion - Name: Are the budget and costs realistic, justified and appropriate for the aims and methods? / Weighting: 10

Quality criterion - Name: Commercial potential / Weighting: 15

Quality criterion - Name: Scalability / Weighting: 10

Price - Weighting: 0

II.2.11) Information about options

Options: No

II.2.13) Information about European Union Funds

The procurement is related to a project and/or programme financed by European Union funds: No

II.2) Description

II.2.1) Title

Reducing fusion power plant fuel requirements with advanced production and handling technology for hydrogen isotopes

Lot No

2

II.2.2) Additional CPV code(s)

- 73110000 - Research services

II.2.3) Place of performance

NUTS codes

- UKJ14 - Oxfordshire
- UKJ1 - Berkshire, Buckinghamshire and Oxfordshire
- UKJ - South East (England)
- UK - United Kingdom

II.2.4) Description of the procurement

A Pre-Commercial Procurement Activity under SBRI

Reducing fusion power plant fuel requirements with advanced production and handling technology for Hydrogen isotopes

Tritium is a radioactive isotope with a half-life of around 12 years, because of this natural reserves are scarce. Developing techniques for safely and efficiently managing hydrogen isotopes is an essential step in the path to making fusion a commercial energy source, for example:

- Hydrogen Isotope Separation Technologies
- improving efficiency of tritium and hydrogen systems (e.g. pumps, sealants, inner loop)
- waste management and decommissioning
- development of on-line Tritium production measurement (e.g. Raman spectroscopy)
- tracking and location of hydrogen, e.g. Atom probe tomography, Raman spectroscopy
- Storage and delivery of Tritium

II.2.5) Award criteria

Quality criterion - Name: How well does the proposal meet the challenge?' / Weighting: 5

Quality criterion - Name: How valid is the technical approach towards fusion application? / Weighting: 20

Quality criterion - Name: How do you intend to compete with other technologies being developed by competitors? / Weighting: 15

Quality criterion - Name: Does the proposal contain a well addressed project delivery plan? / Weighting: 10

Quality criterion - Name: Organisational and Team capability / Weighting: 15

Quality criterion - Name: Are the budget and costs realistic, justified and appropriate for the aims and methods? / Weighting: 10

Quality criterion - Name: Commercial potential / Weighting: 15

Quality criterion - Name: Scalability / Weighting: 10

Price - Weighting: 0

II.2.11) Information about options

Options: No

II.2.13) Information about European Union Funds

The procurement is related to a project and/or programme financed by European Union funds: No

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 procurement falls outside the scope of application of the regulations

Explanation:

Pre-Commercial Procurement under SBRI. Not subject to Public Contract Regulations 2015.

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

The procurement is covered by the Government Procurement Agreement: No

Section V. Award of contract

Lot No

1

Title

Accelerating fusion power plant design with next-generation digital tools

A contract/lot is awarded: Yes

V.2) Award of contract

V.2.1) Date of conclusion of the contract

1 March 2023

V.2.2) Information about tenders

Number of tenders received: 5

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

V.2.3) Name and address of the contractor

University of Manchester

Oxford Road

Manchester

M13 9PL

Country

United Kingdom

NUTS code

- UKD33 - Manchester

National registration number

University of Manchester

The contractor is an SME

No

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

Total value of the contract/lot: £833,306.36

Section V. Award of contract

Lot No

1

Title

Accelerating fusion power plant design with next-generation digital tools

A contract/lot is awarded: Yes

V.2) Award of contract

V.2.1) Date of conclusion of the contract

1 March 2023

V.2.2) Information about tenders

Number of tenders received: 5

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

V.2.3) Name and address of the contractor

Full Matrix limited

Cambridge

Country

United Kingdom

NUTS code

- UKH12 - Cambridgeshire CC

National registration number

Full Matrix limited

The contractor is an SME

Yes

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

Total value of the contract/lot: £796,409.70

Section V. Award of contract

Lot No

2

Title

Reducing fusion power plant fuel requirements with advanced production and handling technology for hydrogen isotopes

A contract/lot is awarded: Yes

V.2) Award of contract

V.2.1) Date of conclusion of the contract

1 March 2023

V.2.2) Information about tenders

Number of tenders received: 7

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

V.2.3) Name and address of the contractor

Aqsorption Limited

Nottingham

Country

United Kingdom

NUTS code

- UKF14 - Nottingham

National registration number

Aqsorption Limited

The contractor is an SME

Yes

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

Total value of the contract/lot: £830,900.24

Section V. Award of contract

Lot No

2

Title

Reducing fusion power plant fuel requirements with advanced production and handling technology for hydrogen isotopes

A contract/lot is awarded: Yes

V.2) Award of contract

V.2.1) Date of conclusion of the contract

1 March 2023

V.2.2) Information about tenders

Number of tenders received: 7

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

V.2.3) Name and address of the contractor

Genco Limited

4 De Havilland Drive

Liverpool

L24 8RN

Country

United Kingdom

NUTS code

- UKD72 - Liverpool

National registration number

Genco Limited

The contractor is an SME

Yes

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

Total value of the contract/lot: £785,179.80

Section V. Award of contract

Lot No

2

Title

Reducing fusion power plant fuel requirements with advanced production and handling technology for hydrogen isotopes

A contract/lot is awarded: Yes

V.2) Award of contract

V.2.1) Date of conclusion of the contract

1 March 2023

V.2.2) Information about tenders

Number of tenders received: 7

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

V.2.3) Name and address of the contractor

IS-Intruments

Tonbridge

Country

United Kingdom

NUTS code

- UKJ41 - Medway

The contractor is an SME

Yes

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

Total value of the contract/lot: £779,833.46

Section V. Award of contract

Lot No

2

Title

Reducing fusion power plant fuel requirements with advanced production and handling technology for hydrogen isotopes

A contract/lot is awarded: Yes

V.2) Award of contract

V.2.1) Date of conclusion of the contract

1 March 2023

V.2.2) Information about tenders

Number of tenders received: 7

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

V.2.3) Name and address of the contractor

University of Bristol

Bristol

BS8 1QU

Country

United Kingdom

NUTS code

- UKK11 - Bristol, City of

The contractor is an SME

No

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

Total value of the contract/lot: £832,730.98

Section V. Award of contract

Lot No

2

Title

Reducing fusion power plant fuel requirements with advanced production and handling technology for hydrogen isotopes

A contract/lot is awarded: Yes

V.2) Award of contract

V.2.1) Date of conclusion of the contract

1 March 2023

V.2.2) Information about tenders

Number of tenders received: 7

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

V.2.3) Name and address of the contractor

Cage Capture Limited

Epsom

Country

United Kingdom

NUTS code

- UKJ26 - East Surrey

The contractor is an SME

Yes

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

Total value of the contract/lot: £810,814.04

Section VI. Complementary information

VI.4) Procedures for review

VI.4.1) Review body

UK Atomic Energy Authority

Culham Science Centre

Abingdon

OX14 3DB

Country

United Kingdom

Internet address

<https://www.gov.uk/government/organisations/uk-atomic-energy-authority>

VI.4.2) Body responsible for mediation procedures

UK Atomic Energy Authority

Culham Science Centre

Abingdon

OX14 3DB

Country

United Kingdom

Internet address

<https://www.gov.uk/government/organisations/uk-atomic-energy-authority>

VI.4.3) Review procedure

Precise information on deadline(s) for review procedures

VI.4.2)Body responsible for mediation procedures

VI.4.3)Review procedure

Pre-commercial Procurement. Not subject to Public Contract Regulation 2015.

VI.4.4) Service from which information about the review procedure may be obtained

UK Atomic Energy Authority

Culham Science Centre

Abingdon

OX14 3DB

Country

United Kingdom

Internet address

<https://www.gov.uk/government/organisations/uk-atomic-energy-authority>

