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# Planning SUPPORT FOR: REDUCED TRANSPORT MODEL DEVELOPMENT

United Kingdom Atomic Energy Authority

F01: Prior information notice Prior information only Notice identifier: 2021/S 000-014589 Procurement identifier (OCID): ocds-h6vhtk-02c070 Published 25 June 2021, 4:36pm

# Section I: Contracting authority

## I.1) Name and addresses

United Kingdom Atomic Energy Authority

Culham Science Centre

Abingdon

OX14 3DB

Contact

Daniel Brown

Email

daniel.brown@ukaea.uk

## Telephone

+44 123546

#### Country

United Kingdom

#### NUTS 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=38526&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

### SUPPORT FOR: REDUCED TRANSPORT MODEL DEVELOPMENT

Reference number

T/DB111/21

#### II.1.2) Main CPV code

• 73110000 - Research services

#### II.1.3) Type of contract

Services

#### II.1.4) Short description

Turbulent core transport in the relevant plasma conditions for STEP (a high beta burning ST) is likely to be dominated by electromagnetic turbulence: by micro-tearing modes (MTM) and kinetic ballooning modes (KBM). This is very different from the character of turbulence found in low ? conventional aspect ratio tokamaks. The most advanced reduced core transport models available for integrated scenario modelling, have been constructed or tuned to model the transport arising from electrostatic turbulence. UKAEA are looking for support in the development & exploitation of reduced transport models for: Development of state-of-the-art reduced physics-based transport models, to improve the credibility of transport predictions for high beta burning plasmas that are likely to be dominated by transport from electromagnetic turbulence & MTMs. Running of advanced scenario simulation tools that incorporate these models for scenario predictions supporting STEP, and support & training of such tools.

#### 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)

- 73200000 Research and development consultancy services
- 73300000 Design and execution of research and development

#### II.2.3) Place of performance

NUTS codes

• UKJ1 - Berkshire, Buckinghamshire and Oxfordshire

#### II.2.4) Description of the procurement

Turbulent core transport in the relevant plasma conditions for STEP (a high beta burning ST) is likely to be dominated by electromagnetic turbulence: by micro-tearing modes (MTM) and kinetic ballooning modes (KBM). This is very different from the character of turbulence found in low ? conventional aspect ratio tokamaks. The most sophisticated reduced core transport models available for integrated scenario modelling, have been constructed or tuned to model the transport arising from electrostatic turbulence. UKAEA are looking for expert support in the development and exploitation of reduced transport models, to improve the credibility of transport predictions for high beta burning ST plasmas that are likely to be dominated by transport from electromagnetic turbulence & MTMs. Running of advanced scenario simulation tools that incorporate these models for scenario predictions in support of STEP, and support & transport bols.

# II.3) Estimated date of publication of contract notice

25 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