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Planning

Partnership opportunity for a Mission led AI & Simulation Supercomputing Centre at UKAEA's Culham Campus.

UKAEA

F01: Prior information notice

Prior information only

Notice identifier: 2024/S 000-021923

Procurement identifier (OCID): ocds-h6vhtk-047de7

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Section I: Contracting authority

I.1) Name and addresses

UKAEA

Culham Campus

Abingdon

OX14 3DB

Contact

Paula Barham

Email

paula.barham@ukaea.uk

Telephone

+44 1235464626

Country

United Kingdom

Region code

UKJ14 - Oxfordshire

National registration number

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/rwlentrance_s.asp?PID=83809&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

Partnership opportunity for a Mission led AI & Simulation Supercomputing Centre at UKAEA's Culham Campus.

Reference number

T/LP117/24

II.1.2) Main CPV code

- 30211100 - Super computer

II.1.3) Type of contract

Supplies

II.1.4) Short description

Due to the closure of JET (the Joint European Torus), UKAEA's Culham Campus offers a unique and timely value proposition for UK Government priority projects and sectors that require significant high-power infrastructure. Available power supplies are capable of delivering 575MW peak capacity, 144MW steady state capacity and due to upgrade works will receive dual supply resilient connection to National Grid by mid-2026. Culham Campus itself, a state-of-the-art research centre dating back to the 1960's is a secure/patrolled closed site, with proximity to London/Oxford/Harwell, National Rail, the A34 and the River Thames. Culham therefore offers a unique opportunity not only for fusion startups, but also for locating large scale data centres in support of the unprecedented growth in the AI / Tech and adjacent sectors who urgently require expansion of large-scale computer.

II.1.6) Information about lots

This contract is divided into lots: No

II.2) Description

II.2.2) Additional CPV code(s)

- 30211200 - Mainframe hardware

- 30211300 - Computer platforms

II.2.3) Place of performance

NUTS codes

- UKJ14 - Oxfordshire

II.2.4) Description of the procurement

1.1. Background

Due to the closure of JET (the Joint European Torus), UKAEA's Culham Campus offers a unique and timely value proposition for UK Government priority projects and sectors that require significant high-power infrastructure. Available power supplies are capable of delivering 575MW peak capacity, 144MW steady state capacity and due to upgrade works will receive dual supply resilient connection to National Grid by mid-2026. Culham Campus itself, a state-of-the-art research centre dating back to the 1960's is a secure/patrolled closed site, with proximity to London/Oxford/Harwell, National Rail, the A34 and the River Thames. Culham therefore offers a unique opportunity not only for fusion startups, but also for locating large scale data centres in support of the unprecedented growth in the AI / Tech and adjacent sectors who urgently require expansion of large-scale compute.

1.2 Opportunity

UKAEA is considering releasing land and its reconfigured power connections to both its 132kV and 400kV UK electricity grids for the explicit purpose of growing a cluster of facilities and tenant organisations to accelerate the UK's mission to deliver fusion power to grid in the 2040's.

With digital technologies at the heart of UK's fusion strategy, UKAEA is evaluating how this newly available land and infrastructure might be used in partnership with industry (including other commercial or service sectors) to deliver a mission-led AI & Simulation centre, potentially adjacent to other use cases (either Government led or commercial) – ideally with a focus upon driving near term economic growth and longer term economic opportunities towards Net Zero.

This PIN is to establish third party interest in this opportunity, please see description of opportunity 1.3 for more details.

1.3 Call for Interest

Culham Campus has a range of green and brown field plots suitable for hosting large scale data centres in support of the Government's mission to be a leading player in

Artificial Intelligence and supercomputing. These disruptive technologies underpin UKAEA's fusion roadmap but will also be essential for other applications targeting Net Zero (e.g. battery technology, off-shore wind turbines, Small Modular Reactors, Fly Net Zero etc.). Available plots vary in size from 4,000m² up to 38,000m². Culham's high voltage infrastructure provides connections to both 132kV and 400kV electricity grids with available spare capacity to deliver up to 100MW of steady state, dual resilient power by mid 2026).

The lease-hold value of these plots as well as the power infrastructure is substantial, a significant fraction of which UKAEA may be willing to offer "in kind" to partners who would be willing to bring suitable in-kind value into the partnership themselves.

UKAEA would like to gauge industry's interest in partnering opportunities to deliver the AI & Simulation capabilities needed for fusion, in the most sustainable manner possible, whilst exploring commercial terms which make this an attractive investment opportunity. This opportunity may be of interest to Data Centre hosting organisations, Cloud Service Providers, industrial HPC / AI users, OEMs within the HPC supply chain and other forms of private investment.

To enable interested parties to understand more about this opportunity, UKAEA is offering the opportunity for a 1-1 session on 15th August 2024. Please confirm if you would like to attend UKAEA Culham campus on this date outlining details as to why you are in the market for such an opportunity and any wider experience you have which is pertinent.

This visit will allow interested parties to view the proposed plots and associated infrastructure as well as to meet technical and commercial representatives from UKAEA.

II.2.14) Additional information

Meetings will be held at the UKAEA Campus in Culham. Please send meeting requests via the EU supplier messaging function.

Please respond by the 31st July 2024.

II.3) Estimated date of publication of contract notice

31 December 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