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Award

STEP P&T – High Heat Flux Testing and Verification Facility

UK INDUSTRIAL FUSION SOLUTIONS LTD

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Notice identifier: 2025/S 000-039725

Procurement identifier (OCID): ocds-h6vhtk-055ed8

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Scope

Reference

PP-UKIFS-334c

Description

An integrated system that will provide cooling for the high heat flux testing for the STEP in-vessel components, as well as cooling the auxiliary systems required for operation, as part of the High Heat Flux Testing and Verification Facility. This system will include:

Temperature Control Unit (226 kW cooling capacity, 150 kW heating capacity and a maximum operating temperature of 350°C)

Chiller (350 kW cooling capacity)

Design of the Temperature Control Unit and Chiller System, along with all necessary

components for operation.

Commissioning of the system.

Installation of the system.

This system is very similar to the operational HIVE test rig which has used this supplier for the last seven years and shares the same fundamental design concept, many similar components, the cooling system and operational principles. These specific nuances are currently only understood by ICS Cool Energy.

This project is an extension of the organisation's Induction-heating based HHF testing programme and there is a stakeholder requirement to ensure equipment is directly comparable, and compatible to the HIVE facility, including physical interfaces, control, and data acquisition (see approved TD-0012050-A: SHR-010, SHR-011, SHR-013). As a result another supplier would have to retrofit the HIVE test to match the proposed HHFTVF facility increasing the cost beyond what we have been quoted.

The absence of this system poses a significant technical risk to the project, as it will result in certain key stakeholder requirements falling out of scope and lead to a diminished operational capability, such as the inability to accurately replicate the first wall environment as well as future use cases. (see approved TD-0012050-A: SHR-008, SHR-009, SHR-016)

To view this notice, please click here:

<https://www.delta-esourcing.com/delta/viewNotice.html?noticeId=965436132>

Contract 1

Supplier

- ICS COOL ENERGY LIMITED

Contract value

- £329,054 excluding VAT
- £394,864.80 including VAT

Above the relevant threshold

Earliest date the contract will be signed

25 July 2025

Contract dates (estimated)

- 26 July 2025 to 25 January 2026
- 6 months

Main procurement category

Services

CPV classifications

- 42510000 - Heat-exchange units, air-conditioning and refrigerating equipment, and filtering machinery
- 45331230 - Installation work of cooling equipment

- 50721000 - Commissioning of heating installations
- 51100000 - Installation services of electrical and mechanical equipment
- 71321000 - Engineering design services for mechanical and electrical installations for buildings
- 73100000 - Research and experimental development services
- 73430000 - Test and evaluation

Contract locations

- UK - United Kingdom

Other information

Conflicts assessment prepared/revised

Yes

Procedure

Procedure type

Direct award

Direct award justification

- Single supplier - technical reasons
- Additional or repeat goods, services or works - further goods, services or works following a competitive procedure

This project is an extension of the organisation's induction heating-based HHF testing program, with a stakeholder requirement to ensure that the equipment is directly comparable and compatible with the HIVE facility which has utilised a very similar cooling system from this supplier for the last seven years. This includes physical interfaces, control systems, and data acquisition (see approved TD-0012050-A: SHR-013).

Our facility needs a distinctive combination of components, most of which are commercial off-the-shelf and suitable for their intended purpose. However, addressing our specific requirements requires a deeper understanding of our needs. The proposed supplier has extensive experience with the HIVE facility, making them uniquely qualified to provide post-purchase support as an extension of their current HIVE services.

Using the same supplier allows for consolidation of maintenance contracts which in turn will lead to cost savings through economies of scale, streamlined administrative processes, and improved response times, ultimately enhancing budget predictability and reducing overall operational expenses.

The team responsible for operating HIVE will also manage HHFTVF. Utilizing equipment from the same manufacturer will mitigate the inherent risks associated with operating new machinery and reduce the costs associated with training staff to operate and troubleshoot a new test rig.

ICS Cool Energy is the best positioned supplier to fully satisfies specific requirements for the temperature control unit, including heating power, cooling power, and operational temperature. (see TCU & Chiller Market Research Document)

Supplier

ICS COOL ENERGY LIMITED

- Public Procurement Organisation Number: PXRH-1519-HLXY

Ics House Stephenson Road, Calmore Industrial Estate, Totton

Southampton

SO40 3SA

United Kingdom

Contact name: Jon Reeve

Email: jon.reeve@icscoolenergy.com

Region: UKJ36 - Central Hampshire

Small or medium-sized enterprise (SME): No

Voluntary, community or social enterprise (VCSE): No

Contract 1

Contracting authority

UK INDUSTRIAL FUSION SOLUTIONS LTD

- Public Procurement Organisation Number: PCRM-7973-DCBL

UK Industrial Fusion Solutions Ltd, Culham Campus, Abingdon, Oxfordshire

Abingdon

OX14 3DB

United Kingdom

Contact name: Operational Procurement

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Organisation type: Public authority - central government