the way to new energy

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SUMMARY

Call For Nomination ITER/C4N/11/5531/JTR

Framework Service contract for Engineering Support to ITER Diagnostics

Purpose

The primary objective of ITER is to show fusion could be used to generate electrical power, and to gain the necessary data to design, construct, and operate the first electricity-producing plant. It will generate 500 MW of fusion power for extended periods of time, ten times more than the energy input needed to keep the plasma at the right temperature. It will therefore be the first fusion experiment to produce net power. It will also test a number of key technologies, including the heating, control, diagnostic and remote maintenance that will be needed for a full-scale fusion power station.

Background

ITER is a joint international research and development project for which initial construction activities have recently started. The project aims to demonstrate the scientific and technological feasibility of fusion power for peaceful purposes. The seven Members of the ITER Organization are the European Union (represented by EURATOM), Japan, the People 's Republic of China, India, the Republic of Korea, the Russian Federation and the USA. ITER will be constructed in Europe, at Cadarache, in southern France, where the ITER Organization (IO) has its headquarters.

Scope of work

The objective of this engineering contract is to support the ITER Diagnostic Team. The scope of the engineering support services requested in this specification covers the supply of suitable and experienced experts to contribute to establish and reinforce the ITER diagnostic systems.

Experience in Tokamaks is highly desirable, and knowledge and experience in nuclear design industry.

The expected services shall in particular complement IO staff in diagnostics engineering support, but at the same time have a wide knowledge about the technologies selected.

- General Diagnostics Engineering
- Experts in concept, design, realisation, interface definition and documentation of Plasma diagnostic systems
- Physics of diverter diagnostics and especially tritium and dust retention
- Neutronics analysis
- Magnetics systems
- Diagnostics Windows systems
- Neutron systems
- Active & Passive Spectroscopy
- Thomson scattering
- Laser surface analysis techniques (erosion)
- Diagnostic engineering interfacing
- Diagnostic project organisation and implementation
- Mechanical design engineering
- In-Vacuum electrical distribution systems
- Integration of Diagnostics systems in Buildings and site infrastructure
- Design engineering (CATIA)
- Administrative support for Conceptual Design reviews.

As a general statement, the details of the services to be provided by the contractor will be defined in the task order technical specification document.

These technical specifications will be defined specifically for each Task depending on the actual requirement and will include a technical scope, the organisation of the task in IO and a description of the deliverables.

Duration of services

The contract will be carried out over an initial period of three (3) years with an option to extend the services for a further two (2) years. The contract is scheduled to come into force in January 2012.

Procurement Time table

A tentative time table is outlined as follows:-

Call for Nomination	8th July 2011
Receipt of nominations	Early August 2011
Issuance of Call for Tender incl Pre-qualification	Mid August 2011
IO Receipt of the pre-qualification questionnaire	Mid September 2011
Notification of Pre- qualification results	Early October 2011
Clarification questions related to this Call for Tender	Mid October 2011
Response to Questions from ITER Organization	End October 2011
Tender Proposals Due Date:	**End November 2011**
Estimated Contract Award Date:	December 2011
Estimated Contract Start Date:	January 2012

Experience

1.1 Companies experienced in providing a significant contribution in engineering diagnostics and system design, analysis of complex systems. These companies shall have proven experience in the following areas:-

- Design of instrumentation or plasma diagnostics
- Commissioning or use of Diagnostics systems or instrumentation
- Basic EM, mechanical and thermal analysis
- Design and analysis of Nuclear systems, and application of codes and standards to Diagnostic designs
- Neutronics analysis (MCNP), nuclear heating, nuclear damage, helium generation, material activation and human dose rates for port-based systems
- Knowledge of the ITER design, in particular the cryostat / PF environment, vessel interfaces…

Experience in large physics experiments will be considered as a major asset for the contractor's selection.

Candidature

Participation is open to all legal persons participating either individually or in a grouping (consortium) which is established in an ITER Member State. A legal person cannot participate individually or as a consortium partner in more than one application or tender. A consortium may be a permanent, legally-established grouping or a grouping, which has been constituted informally for a specific tender procedure. All members of a consortium (i.e. the leader and all other members) are jointly and severally liable to the ITER Organization. The consortium cannot be modified later without the approval of the ITER Organization.

Legal entities belonging to the same legal grouping are allowed to participate separately if they are able to demonstrate independent technical and financial capacities. Bidders's (individual or consortium) must comply with the selection criteria. IO reserves the right to disregard duplicated references and may exclude such legal entities form the tender procedure.

Reference

[RD1] Plant Control Design Handbook (27LH2V)

HTTP://WWW.ITER.ORG/DOC/WWW/EDIT/LISTS/WEBSITETEXT/ATTACHMENTS/94/PCDH_V6_1.PDF

Further information on the ITER Organization procurement can be found at:

HTTP://WWW.ITER.ORG/ORG/TEAM/ADM/PROC/PAGES/WELCOME