SUMMARY

Call For Nomination IO/14/CFN/70000100/BGD

PSP / CLM Database Support Services

Purpose

CODAC is the integrated and distributed <u>C</u>ontrol, <u>D</u>ata <u>A</u>ccess and <u>C</u>ommunication system responsible for operating the ITER device. The main purpose of CODAC is to provide a fully integrated and automated system. The overall plant control system consists of multiple packages developed and procured over several years of the ITER assembly phase. Proper tracking and follow-up of development of these systems is essential in order to succeed with the integration and commissioning.

The purpose this contract is to provide ITER Control System Division (CSD) with database services related to Instrumentation and Control (I&C) design, procurement and integration.

Background

ITER will be constructed from a large number of components or "plant systems", which will be delivered complete or in parts by the participating countries as "in kind" contributions, in compliance with contractual agreements, called Procurement Arrangement (PA), with the ITER Organization. These components will be assembled at the ITER site in Cadarache. Each of these components will be delivered with its own local control system (called "Plant System I&C") and all of these must be integrated in the central CODAC system. To achieve this integration the Control System Division has developed a set of standards, called Plant Control Design Handbook (PCDH), and publically available at
http://www.iter.org/org/team/chd/cid/codac/plantcontrolhandbook.

CODAC as a central system interfaces to more than 200 Plant System I&Cs, split between about 100 procurement packages. Each Plant System I&C goes through progressive design phases and represents multiple deliverables. Depending on plant system procurement schedule each of the Plant System I&Cs can be at a different design maturity level at a given time. All this requires rigorous planning and follow-up. For this purpose CSD has set up several database applications; two of them – Plant System Profile (PSP) database and Component Life cycle Management Database (CLM) – will be covered by this contract.

The main purpose of PSP is to record the I&C top-down design, keep track of technical and administrative data, support clear definition of interfaces. The main purpose of CLM is to keep inventory of procured and installed CODAC components on site.

Scope of work

Both PSP and CLM are established products with several years' history in production. Thus the focus of the contract will be given to maintenance and gradual improvement activities.as follows:

1. Administration and support: this includes maintenance of the existing infrastructure, first line user support, preparation and update of documentation.
2. Application development: this includes implementation of new features or bug fixes on the database side or on the user interface.
3. Integration services: this includes integration with other ITER databases, regular data exchanges, data verification for completeness and consistency in accordance with given criteria; data quality metrics.
4. Data migration: this includes identifying duplicate sets of data in various databases and working to eliminate them by merging or moving data from one database to another.

The Contractor shall provide at least one staff permanently on ITER site to interact on a daily basis with IO- Technical Responsible Officer. Back-office support could be envisaged at Contractor's premises if deemed necessary.

Duration of services

The Contract is scheduled to come into force in third quarter of 2014 for a duration of three (3) years.

Procurement Time table

A tentative time table is outlined as follows:

Call for Nomination release	End February 2014
Receipt of nominations	End March 2014
Issuance of Pre-qualification Application	**April 2014**
Receipt of Prequalification Application	May 2014
Notification of Prequalification results	May 2014
Issuance of Call for Tender	June 2014
Clarification questions related to this Call for Tender	June 2014
Response to Questions from ITER Organization	June 2014
Tender Proposals Due Date:	**July 2014**
Estimated Contract Award Date:	July 2014
Estimated Contract Start Date:	September 2014

Experience

The company(ies) selected shall provide support in the following areas:

- Experience in database design;
- Experience in programming in MS SQL Server and PostgreSQL environment;
- Knowledge of the MS SSRS technology;
- Experience with MS Windows and Linux platforms;
- Experience in building web user interfaces;
- Experience in web services development;
- Experience in security of web applications;
- Knowledge of Java and Eclipse framework;
- Knowledge of Java Hibernate technology;
- Knowledge of scripting languages such as Python;
- Experience in basic XML technologies (including XSD, XSLT, JAXB bindings);
- Experience in application of XML to databases;

- Experience in software quality assurance: life cycle, documentation, configuration control, versioning, etc.
- Knowledge of Subversion, Bugzilla, Jenkins, Maven;

- Ability to interpret technical documents;
- Ability to work together with the ITER team and other related Contractors;
- Ability to work in the multi-cultural environment of the ITER project;
- Complete command (oral, writing, reading) of English;

- Knowledge of configuration management problem in a scientific or industrial environment would be an advantage;
- Understanding of industrial control system principles would be an advantage;
- Experience in the field of inventory systems would be an advantage.

The CV of the persons, who will be later involved in the execution of the Contract, shall be provided by the tenderer at the tender stage.

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' (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

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

http://www.iter.org/org/team/adm/proc/overview