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SUMMARY

Call For Nomination IO/14/CFN/10010837/CHD

Central Safety System for Occupational Safety (CSS-OS)

Final Design and Procurement

Purpose

The Safety Control System for Occupational Safety (SCS-OS) is the ITER Control System in charge of the execution of Occupational Safety I&C functions in order to protect people and the environment against non-nuclear hazards.
The SCS-OS is composed of the Central Safety System for Occupational Safety (CSS-OS) procured by PBS48 and of Plant Safety Systems for Occupational Safety (PSS-OS) provided by plant systems.
The Central Safety System for Occupational Safety (CSS-OS) shall coordinate the individual protection that is to be provided by the intervention of locally distributed Plant Safety Systems for Occupational Safety (PSS-OS).

The purpose of the contract is to provide the CSS-OS final design, procurement, commissioning and first year of maintenance.

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.
Some of these components are involved in the implementation of occupational Safety I&C functions and therefore will be interfaced with the CSS-OS.
To achieve this integration, the Control System Division has developed a set of standards called Plant Control Design Handbooks, and publically available at:
http://www.iter.org/org/team/chd/cid/codac/plantcontrolhandbook
The Central Safety System for Occupational Safety (CSS-OS) shall comply with the requirements applicable to safety-related system as mentioned in the IEC61508 and IEC61511.

Scope of work

The Central Safety System according to its current design consists in:

- A set of cubicles located in main server room (Control building – B71) and in backup server room (Personnel Access Control Building – B24), hosting the CSS-OS critical equipment
- The OS safety operator desks, located in main control room (B71) and backup server room (B24)
- The OS test, simulation and training facility
- The interfaces between the CSS-OS and CODAC, Central Interlock System (CIS) and CSS-N.

Occupational Safety Network infrastructure (networks cables, cubicles located in hutches including network hardware) is not part of this contract

The contract will be phased as following:

1. Final design and engineering of CSS-OS (Second semester 2015):

   This phase starts once the Chits 1 of Preliminary Design Review are solved and finishes with the resolution of Chits 1 and 2 of the Final Design Review.

2. Procurement of CSS-OS v1, installation and commissioning (Second semester 2016):

   This phase includes:

   - CSS-OS hardware procurement
   - FACTORY Acceptance Test (FAT)
   - Installation
   - Site Acceptance Test (SAT) and stand-alone validation
   - Verification of the CSS-OS logic and Safety Integrity Level (SIL) assessment.

3. CSS upgrade from v1 + 1 year maintenance (Second semester 2017):

   This phase includes the update of the CSS-OS in order to connect PSS-OS that will be provided by the Domestic Agencies during this period. Maintenance of hardware and software provided during previous phase is also part of this phase.

Duration of services

The Contract is scheduled to come into force in second half of 2015 for a duration of three (3) years.

Procurement Time table

A tentative time table is outlined as follows:

Call for Nomination release	July 2014
Receipt of nominations	15 September 2014
Issuance of Pre-qualification Application	October 2014
Receipt of Prequalification Application	November 2014
Notification of Prequalification results	November 2014
Issuance of Call for Tender	December 2014
Tender Proposals Due Date:	February 2015
Estimated Contract Award Date:	April 2015
Estimated Contract Start Date:	June 2015

Experience

The company's experience shall cover a broad range as listed below.

- Experience in hardware integration of safety industrial control systems
- Relevant experience in the design, construction and operation of instrumented safety systems based on Siemens S7 PLC technologies for large heterogeneous facility.
- Expertize with IEC 61508 / IEC 61511 standards
- Expertize in reliability assessment of heterogeneous safety I&C systems
- Experience on contract and project managing for large multidisciplinary I&C projects
- Experience in development of safety software for S7-300 and S7-400 FH PLC series
- Knowledge of interfacing Siemens Step 7-400FH series PLCs and their input/output modules;
- Experience working industrial SCADA for safety related systems, especially WinCC OA
- Knowledge in Linux operating system.

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/generalinfo