



TECHNICAL SUMMARY

Framework contract

Engineering support and oversight of construction and testing activities for buildings and services

1. Purpose

ITER is a joint international research and development project aiming 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. The ITER Organization is located in Saint Paul lez Durance – France. Further information is available on the ITER website: <http://www.iter.org>.

The Purpose of this document is to provide a summary description of the technical requirements of the ITER Organization (IO) associated with a future framework contract for Engineering support and oversight of construction and testing activities for buildings and services.

The Building and Civil Works (BCW) section within the ITER Organization (IO) is responsible for all matters relating to the design, construction, commissioning and operation of the ITER buildings and site infrastructure. The ITER Organization is the Nuclear Operator and undertakes this role in accordance with requirements of French Legislation. In this regard, BCW is responsible for implementing the requirements of the French Quality Order dated 7 February 2012 and for ensuring that all IO policies, procedures, working instructions and other applicable documentation are adhered to BCW executes the majority of its responsibilities as part of a joint Project Team (PT) with the European Domestic Agency (F4E).

In order to carry out its activities effectively and to accommodate peaks in civil works activities required for the ITER Project, the BCW section requires assistance from the Contractor across a range of activities summarized in this document.

This document shall apply to the Call for Nomination issued by the IO to the ITER Domestic Agencies for the services to be carried out. This document is not the final specification for the future framework Contract which will contain more detail of IO requirements.

2. Scope and deliverables types

Under the scope of this Framework contract, suitably experienced personnel shall be made available to the ITER Organization (IO) to carry out activities described here below.

2.1 Oversight of design activities

2.1.1 Maintain System Requirements Documentation: the Contractor shall maintain and update

the existing System Requirements Documents (SRD). These require updating as and when they are affected by a Project Change. This activity includes the reconciliation/ propagation exercise to ensure compliance of the Site and Buildings SRDs with the overall Project Requirements (PR) document via the generation of Requirements Propagation Matrices (RPMs).

2.1.2 Maintain Interface Control Documents and Interface Sheets/Data: These interface documents contain the raw interface data (loads, sizes, temperature requirements etc.). These “live” documents are updated to reflect data maturity levels. This data is currently stored in text documents and Excel spreadsheets, but it is planned to migrate it to an appropriate Engineering Database and the Contractor may take part in this migration and use either system for the data management.

2.1.3 Maintain Bespoke Documentation such as Loads Reports, Design Codes: the Contractor shall prepare and maintain other reference documents such as Load Specifications and design codes that have been developed specifically for the ITER buildings and site infrastructure.

2.1.4 Participate in and follow-up Technical Meetings: The Contractor shall play a lead role in regular meetings which are a forum for interaction between the Designers and Users of the facilities. The Contractor shall prepare a concise written report after each meeting (minutes of Meetings/ Records of Decisions/ Action Lists). The Contractor shall report the outcomes of the meeting to the BCW Section/ Group Leader and/ or the BCW Technical Responsible Officer(s) (TRO) as appropriate.

2.1.5 Design reviews participation (Final Design Reviews, Design Integration Reviews, Manufacturing Readiness Reviews, Construction Readiness Reviews, As-Built package acceptance): Different roles can be given to the Contractor depending on the organization in place. This can be technical secretary (close out reports and follow up of review sheets resolution) or acting as expert in one particular discipline to review a package of documents. This task will include the drafting, on behalf of the BCW TROs; the Acceptance Plans and Acceptance Reports as appropriate, follow up of resolution actions plans.

2.2 Oversight of construction activities

A major role of BCW section is to undertake the supervision of activities relating to the construction of the buildings and site infrastructure located within the ITER Nuclear Island (termed INB perimeter at ITER) most of which perform a nuclear safety function and which are therefore subject to a specific and rigorous Quality Assurance regime. As almost all the major buildings have a nuclear safety related function, the Contractor resources shall have experience of working in the construction of nuclear facilities. It does not exclude that the Contractor will participate to oversight of construction in auxiliary buildings not part of the INB.

The oversight of construction activities will include:

- Review and mark-ups intervention points within the Contractors control plans
- Production of inspection plans, records and reports
- Assessment of Non-Conformances and Deviation Requests
- Follow-up of Buildings modifications on site

2.3 Oversight of testing and commissioning activities

The Contractor shall undertake the task of oversight and commissioning of the Building and the

Building Systems (elevators, doors, HVAC, Low voltage systems, Instrumentation and Control and Lightning and Earthing protection).

The oversight of testing and commissioning activities will include:

- Production of commissioning plans, records and reports
- Review and mark-ups intervention points within the Contractors control plans
- Assessment of Non-Conformances and Deviation Requests

2.4 Operation

The Contractor will be involved in drafting the so-called “concept of operations” documents for buildings that are transferred to the Operation Department. This kind of document is aiming at describing the different modes of operation of the system, referring all associated documents like user manual, maintenance procedures, diagrams, etc.

A template will be provided to the Contractor.

2.5 Oversight of Taking-Over of Completed Works

The Contractor shall undertake the task of oversight of the final Taking-Over for completed Works or sections of Works from the EU-DA (F4E) Contractors to the IO Construction and/or Operation Teams.

The oversight of Taking Over activities will include:

- Attendance at on-site inspections and support in generation of defects lists
- Assessment of Non-Conformances and Deviation Requests
- Drafting of Taking-Over Documentation including Contractor Release Notes (CRNs) for Taking-Over
- Coordination and follow up of close-out and removal of defects before and after Taking-Over
- Participation to walk-downs and meetings

2.6 Support to Project/ Document Administration Activities

The Contractor shall undertake the task of administering some of the key project administration processes on behalf of the BCW section and the BIPS. This will include the administration and management of documentations and data relating to, inter alia, the following processes:

- Non-Conformance Reports and Deviation Requests
- Requests for Information (RFIs)
- Design Reviews
- Construction Coordination, Commissioning and Taking Over/ Handover Documentation
- Taking-Over Documentation including Contractor Release Notes (CRNs) for Taking Over
- Nuclear Safety Reports and Audits
- Maintenance of the Site and Buildings Technical Baseline in ITER project platforms (IDM, PLM, Smartplant, ENOVIA etc)
- Minutes of meetings
- Preparation and summary of lessons learnt meetings
- Preparation of supports for ASN inspections

2.7 Support with Miscellaneous Technical/ Design Activities

Where requested for time to time, the Contractor shall undertake specific technical tasks as directed by the BCW team and Contract CRO. These will relate to the general scope of Site and Buildings and will require the technical expertise of the Contractor. Such tasks may include items such as:

- Design tasks (potentially including civil and/or geotechnical structural analysis, ventilation calculations, detailed drawings)
- Expert advises: conducting analysis and issue of technical reports relating to specific issues which may arise (technical, nuclear safety, etc)
- CAD support for 3D models refinement, data extraction (CATIA and AUTOCAD competencies)

3. Contract type

It is foreseen to place a framework Service Contract. The signature of the Framework Contract shall not imply, in any way, any obligation on the ITER Organization to proceed with any purchase through Task Orders further to its signature. Only implementation of the Framework Contract through Task Orders shall be binding on the ITER Organization. The Contractor shall execute the Services requested in each individual Task Order, in accordance with the task specification.

4. Work location

Considering the above description, it is envisaged that the Contractors staff will be authorized to share his activities between his own offices and the ITER site, Cadarache, France. This will be decided with the IO Contract Responsible in the frame of each Task Order signature. It is estimated that 50% to 80% of the task will be performed on-site in Saint Paul lez Durance (France).

5. Required skills and experience

Considering the above description, the Contractor shall have the following skills:

- Good command of English (written and spoken)
- Experience with codes and standards used in the French Nuclear Industry related to civil engineering, HVAC, lifting systems and electricity
- Experience in nuclear civil engineering
- Experience in geotechnical engineering
- Experience in lifting systems design, installation and testing
- Experience in HVAC systems design, installation and testing
- Experience in low voltage and I&C systems architecture, installation and testing
- Experience of construction Project administration and document management tools (PLM)
- CAD (CATIA/ENOVIA, AUTOCAD and PDMS) experience

The Contractor shall have ISO 9001 certification.

6. Duration of the Contract

The contract is scheduled to come into force in early January 2022 and last for 3 years with an option to extend it for further one year. It is expected that the resource required fulfilling the Task Orders

(TO) will be equivalent to 10 Full Time Equivalent (FTE) at the maximum with a minimum of 3 FTE. This minimum will be called “core team”.

The actual level of effort required will be defined on bi-monthly basis depending of the requirements of the project.

The IO shall be under no obligation to place Task Orders summing up to the estimated amount of the contract.

7. Timetable

The tentative timetable is as follows:

- Pre-Qualification issuance: April 2021
- Call for tender issuance: June 2021
- Call for tender submission: August 2021
- Award: October 2021
- Contract starting date: Early January 2022
- Contract end date without option (3 years): End December 2024.

8. 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 groupings shall be presented at the pre-qualification stage. The tenderer's composition cannot be modified without the approval of the ITER Organization after the pre-qualification.

Legal entities belonging to the same legal grouping are allowed to participate separately if they are able to demonstrate independent technical and financial capacities. The IO reserves the right to disregard duplicated reference projects and may exclude such legal entities from the pre-qualification procedure.

Candidates (individual or consortium) must comply with the selection criteria as will be set in the pre-qualification documentation.