

# **TECHNICAL SUMMARY**

## **Design and Build contract for the Adaptation and Extension of Building 56**

### **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 associated with a future design and build contract to adapt and extend Building 56.

Building 56 was erected in 2014 for the pre-assembly of the so-called cryostat, the vacuum-tight container that will surround the ITER vacuum vessel and superconducting magnets. Once this pre-assembly activity is completed, the building needs to be adapted and extended to house the ITER Maintenance Test Facility (IMTF). The goal of the IMTF is to confirm the ITER on-site remote handling maintenance capabilities by testing maintenance equipment and training maintenance personnel.

The envisaged extension has a total floor surface of approximately 2250 m<sup>2</sup> and is composed of a workshop of 1800 m<sup>2</sup> and a technical annex building of 450 m<sup>2</sup>. The workshop will include a concrete pit of 3.6 m deep and be equipped with an overhead crane with a lifting capacity of 30 T.

For this purpose, the ITER Organization plans to place a contract with a qualified Contractor in order to design and build the necessary adaptation and extension works.

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

### **2. Scope**

The scope includes all activities necessary to design and build the adaption/extension of Building 56, in particular:

- Worksite installations;
- Geotechnical investigations;
- Preparatory works, including the rerouting of utility networks;
- Design and construction of the foundations and superstructure for the extension;
- Design and installation of building services and networks of the extension: HVAC, electrical installations (high and low voltage), low current, earthing, lightning protection, fire detection, potable water, raw water, fire water, drainage, compressed air and nitrogen;
- Design and installation of an overhead crane;

- Design and modification of the HVAC system of the existing building;
- Testing and commissioning of all the works;
- Provision of a complete set of as-built documentation.

### **3. Contract type**

It is foreseen to place a FIDIC Plant and Design Build contract (“yellow book”).

### **4. Work location**

It is anticipated that the Contractor’s activities will be conducted mostly on the ITER site in Saint-Paul-Lez-Durance, France.

### **5. Required skills and experience**

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

- Experience with codes and standards used in the France and Europe related to civil engineering, HVAC, lifting systems, pressurized systems and electricity;
- Experience in civil engineering and works;
- Experience in geotechnical engineering;
- Experience in lifting systems design, installation and testing;
- Experience in HVAC systems design, installation and testing;
- Experience in pressure systems design, installation and testing;
- Experience in high voltage, low voltage and I&C systems architecture, installation and testing;
- Experience of construction project administration and document management tools;
- CAD (CATIA/ENOVIA, AUTOCAD and PDMS) experience.

The Contractor shall have ISO 9001 certification.

The Contractor shall have at least two nominated persons based full-time at the ITER Site during the works who are able to communicate effectively both verbally and in writing in English and prepare necessary documentation in English.

### **6. Duration of the Contract**

The contract is scheduled to come into force in November 2022 with a Time for Completion of nineteen (18) months.

### **7. Timetable**

The tentative timetable is as follows:

- Pre-Qualification issuance: March 2022

- Call for tender issuance: May 2022
- Call for tender submission: July 2022
- Award: October 2022
- Contract signature: November 2022
- Completion of the works: May 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.