

## **Technical Specifications (In-Cash Procurement)**

# **Technical Specification and Statement of Work - Technical Assistance Services for OPD**

This document is a technical specification to specify the scope of works to be provided by the Contractor

to the ITER Organization Operations Division (OPD) within a Service Contract.

It defines the scope of the services throughout support of subject matter specialists during Commissioning, Maintenance & Operations activities, the requirements for those services and the

process of defining deliverables. The document describes the technical scope linked to a Service

Contract to be awarded ...



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## 1 Purpose

This document is a technical specification to specify the scope of works to be provided by the Contractor to the ITER Organization Operations Division (OPD) within a Service Contract.

It defines the scope of the services throughout support of subject matter specialists during Commissioning, Maintenance & Operations activities, the requirements for those services and the process of defining deliverables. The document describes the technical scope linked to a Service Contract to be awarded to a Contractor selected through a competitive process.

## 2 Scope of work

The scope of work is covering the Commissioning, Maintenance and Operations needs of ITER Organization for technical assistance from subject matter specialists.

The requested Services covers various categories and associated fields as listed below in Table 1:

Categories	Fields of Services
Discipline/Component expertise	Rotating equipment
	Valves
	Instrumentation
	Under pressure equipment
	Piping
	Heat-exchanger / Chiller
	Material / corrosion (incl. metallurgical analysis)
	Vibration monitoring and analysis
	Chemistry (primary side)
	Mechanical/Electrical Quality Control
Maintenance engineering	Maintenance Contract
	Spare parts management
	System Maintenance and Inspection plans definition
	SAP PM/MM and WCM Business Architecture
Operation engineering	Operation manual

Table 1: Categories and Fields of Services

This technical specification aims to set up a service contract based on Service needs expressed by OPD to solve Commissioning, Maintenance and Operation complex issues through the provision of the type of deliverables detailed in section 6.1.

Works will be performed on the ITER worksite or remotely depending on IO request.



### 3 Definitions and acronyms

A list of ITER abbreviations used throughout the ITER Project can be found at IDM:

<https://user.iter.org/?uid=2MU6W5>

### 4 Regulation/standard and References document.

#### 4.1 Regulation and certification

- **Decree 2010-1017** obligation of the contracting authority:  
<https://www.legifrance.gouv.fr/jorf/id/JORFTEXT000022758761>
- **Decree 2010-1016** obligation of the employers
- **Decree 2010-1118** operation on (or in the vicinity) an electrical installation and the authorization
- **Decree 2010-1018** various provisions relating to the prevention of electrical hazard in workplace
- **Order of the 07/02/2012:** Safety for the INB
- **Former Decree 92-158 of February 20th 1992:**  
<https://www.legifrance.gouv.fr/jorf/id/JORFTEXT000000722815>
- **Former decree 94-1159 of December 26th 1994:**  
<https://www.legifrance.gouv.fr/jorf/id/JORFTEXT000000551159>

#### 4.2 References documents

The list of applicable document for OHS is available in the PGC Annex 0 ([42FYPZ](#)).

The main references documents are listed below; other missing references documents such as Working Instructions, templates and How to will be specified by IO during the execution of the contract.

[1]	Project Specification ( <a href="#">2DY7NG</a> )
[2]	ITER Concept of Operations ( <a href="#">S7T73E</a> )
[3]	Order dated 7 February 2012 relating to the general technical regulations applicable to INB - EN ( <a href="#">7M2YKF</a> )
[4]	Preliminary Safety Report (RPrS) ( <a href="#">3ZR2NC</a> )
[5]	Decree No. 2012-1248 dated 9 November 2012 authorising IO to create a basic nuclear facility called "ITER" - EN ( <a href="#">CZK7M5</a> )
[6]	ITER RGE presentation
[7]	Commissioning Management Procedure ( <a href="#">VH9352</a> )
[8]	System Commissioning Master Schedule ( <a href="#">WEUTLA</a> )
[9]	ITER Policy on Safety Security and Environment Protection Management ( <a href="#">43UJN7</a> )
[10]	Arrêté du 9 août 2013 portant homologation de la décision no 2013-DC-0360 de l'Autorité de sûreté nucléaire du 16 juillet 2013 relative à la maîtrise des nuisances et de l'impact sur la santé et l'environnement des installations nucléaires de base
[11]	Etude d'Impact - Pièce 6 de la Demande d'Autorisation de Création de L'TNB ITER ( <a href="#">6L9SGW</a> )
[12]	Provisions for implementation of the generic safety requirements by the external interveners (SBSTBM)
[13]	ITER Procurement Quality Requirements (ITER_D_22MFG4)
[14]	Maintenance Management Procedure (ITER_D_VH9LAB)
[15]	Procedure for preservation of Equipment (ITER_D_WML9CF)



[16]	ITER Concept of Operations (ITER_D_S7T73E)
[17]	Contractor Safety Management procedure (ITER_D_Q2GBJF)

## 5 Contract Start and Duration

The total duration of the contract is 3 years (36 months) from the contract signature. Start of the activities is defined as T0 = contract assignment.

## 6 Works description

### 6.1 Description of the Services

This summary covers the technical services to be provided to IO under the scope of this contract. The Contractor will provide Services according to the table below.

Category	Field of Services	Services Deliverables	Expected Deliverables
Discipline/Component expertise	E1: Rotating Equipment	E1.1	- Analysis report of Maintenance plans / strategies for rotating equipment
		E1.2	- Analysis report of Preservation Requirements
		E1.3	- Troubleshooting report
		E1.4	- Analysis report on tests/commissioning
		E1.5	- Technical/organizational note
	E2: Valves	E2.1	- Analysis report of Maintenance plans / strategies for valves
		E2.2	- Analysis report of Preservation Requirements
		E2.3	- Troubleshooting report
		E2.4	- Analysis report on tests/commissioning
		E2.5	- Technical/organizational note
	E3: Instrumentation	E3.1	- Analysis report of Maintenance plans / strategies for instruments
		E3.2	- Analysis report of Preservation Requirements
		E3.3	- Troubleshooting report
		E3.4	- Analysis report on tests/commissioning
		E3.5	- Technical/organizational note
	E4: Under pressure equipment	E4.1	- Analysis report of Maintenance plans / strategies for static (metallurgical) components
		E4.2	- Analysis report of Preservation Requirements
		E4.3	- Troubleshooting report/Technical note
		E4.4	- Analysis report on tests/commissioning
		E4.5	- Technical/organizational note
	E5: Piping	E5.1	- Analysis report of Preservation Requirements/strategy



Category	Field of Services	Services Deliverables	Expected Deliverables
		E5.2	- Analysis report on welding/NDT
		E5.3	- Technical/organizational note
	E6: <b>Heat-exchanger / Chiller</b>	E6.1	- Analysis report of Maintenance plans / strategies for Heat Exchangers and Chillers
		E6.2	- Analysis report of Preservation Requirements
		E6.3	- Troubleshooting report
		E6.4	- Analysis report on tests/commissioning
		E6.5	- Technical/organizational note
	E7: <b>Material / corrosion (incl. analysis)</b>	E7.1	- Analysis report of Maintenance plans / strategies
		E7.2	- Troubleshooting report
		E7.3	- Analysis report on tests/commissioning
		E7.4	- Technical/organizational note
	E8: <b>Vibration monitoring and analysis</b>	E8.1	- Troubleshooting report
		E8.2	- Analysis report on tests/commissioning
		E8.3	- Technical/organizational note
	E9: <b>Mechanical/Electrical Quality Control</b>	E9.1	- Analysis report for implementation of modifications
		E9.2	- Technical/organizational note on Quality Control processes
<b>Maintenance engineering</b>	E10: <b>Chemistry (primary side)</b>	E10.1	- Troubleshooting report
		E10.2	- Analysis report on chemistry analysis/process
		E10.3	- Technical/organizational note
	E11: <b>Maintenance Contract</b>	E11.1	- Analysis report on Contracting strategy, market survey, contract model optimization, development of unit rates systems, etc.
		E11.2	- Technical/organizational note
	E12: <b>Spare parts management</b>	E12.1	- Analysis report on strategy, standardisation/optimization of Spare parts, definition of overall Spare parts policy, definition of decision-making matrix to purchase/store Spare parts.
		E12.2	- Technical/organizational note
	E13: <b>System Maintenance and Inspection plans definition</b>	E13.1	- Analysis report on overall strategy for the development of Maintenance programs and Maintenance procedures
		E13.2	- Technical/organizational note
	E14: <b>SAP WCM Business Architecture</b>	E14.1	- Analysis report on configuration and usage of SAP for ePTW and other application
		E14.2	- Technical/organizational note
	E15: <b>SAP PM/MM Business Architecture</b>	E15.1	- Analysis to support the configuration and usage of SAP PM according Maintenance processes
		E15.2	- Technical/organizational note



Category	Field of Services	Services Deliverables	Expected Deliverables
Operation Engineering	E16: Operation manual	E16.1	- Analysis report on overall strategy for the development of Operating procedure
		E16.2	- Technical/organizational note

Depending on the nature of the Service request issued, one or more deliverables listed in the table above can be selected by IO.

The Contractor warrants, represents and undertakes that:

1. The Contractor will provide the services promptly (according to requirements from IO) and with all due skills, care and diligence, in a good and workmanlike manner and otherwise in line with best practice within the Nuclear industry;
2. Contractor's personnel will possess the qualifications, professional competence and experience to carry out such services in accordance with the best practices within the industry;
3. The Contractor will be responsible for maintaining such insurance policies in connection with the provision of the Services as may be appropriate or as the ITER Organization may require;
4. The Contractor will propose recommendations as part of its analysis reports or technical/organizational notes to solve issues raised within those deliverables;
5. Contractor's personnel will be bound by the rules and regulations governing IO safety and security and as a rule will not be authorized to perform physical works on the ITER site. However it is expected for the contractor to provide the required health and safety plans, such a PPSPS and a prevention plan to cover its activities;
6. The Contractor will name one person at the Contractor premises or headquarters who will be the Contractor Responsible Officer.

The ITER Organization shall make available to the dedicated Contractor's personnel mobilized to provide the Services:

1. Relevant documentation, information, data and any specialized equipment necessary for the Contractor to perform its functions under this Scope of Work;
2. A safe work area that meets the generally-accepted requirements for the satisfactory execution of the Services;
3. Access to the premises and to the dedicated work areas as it may be required for the analysis, services;
4. Any necessary and appropriate related safety training.

## 6.2 Documentation

All documents/deliverables prepared by the Contractor shall be reviewed and approved by IO. Comments provided by IO on submitted documents must be taken into account by the Contractor, the document will not be considered as finalized until IO approves it. Within the scope of this contract, the Contractor will be requested to issue Commissioning, Operations, Maintenance related documentation (see Table in section 6.1 for more details) according to the nature of the request as required by IO in the Service Request. The Contractor may also be





required to review existing IO documentation and provide to IO its own document review sheet as part of an analysis report.

### 6.3 Location

The Contractor personnel is not expected to be permanently located at the ITER Organization site. However, the Contractor personnel will be required to be mobilized on the ITER Organization site according to the Services requested by IO.

IO may require some services which will be performed remotely and therefore will not require mobilization to site of the Contractor personnel

The Contractor Responsible Officer and entry point for IO is not expected to be mobilized on site.

### 6.4 Staffing & Competencies

The Contractor is expected to provide Suitably Qualified and Experienced Personnel (SQEP) to fulfil the Service request in a timely manner.

### 6.5 Mobilization

Mobilization of resources will depend on the nature of the Instruction to Proceed issued by IO (Field of services, expected deliverables, complexity, etc.). The Contractor Contract Responsible Officer is expected to be available from the start of the Contract.

### 6.6 Contract Mechanism

IO will classify according to the estimated complexity level (Low, Medium, High) and will also request if mobilization to ITER Organization Site is required. In case the Service requires mobilization on ITER site, the work duration below does not include the time necessary for travel of the Contractor personnel.

The duration of the Service to be provided by the Contractor for each complexity level is defined below.

Low Complexity Activities	Medium Complexity Activities	High Complexity Activities	Long lasting Activities	Mobilization to ITER
2 days	5 days	10 days	21 days	Yes
2 days	5 days	10 days	21 days	No

*(Duration are expressed in working days)*

Actual work duration may vary as long as the total budget, defined within each Instruction to Proceed, is not exceeded.

### 6.7 IO Responsibilities

IO shall assign one Contract IO responsible Officer (IO RO), to work as the Contractor interface for administration of the contract as detailed in the ITPs;

- The IO RO will work directly with contractor staff to define and clarify work;



- The IO RO will assess the performance and quality of the work;
- The IO RO shall be responsible for checking the deliverables against requirements;
- IO shall make available to the Contractor all technical data and documents which the Contractor requires to carry out its obligations pursuant to this specification in a timely manner. Generally, data will be available in IDM for documentation. Contractor personnel will be either given access as required to these databases or transmitted the required documentation. For delays of more than two weeks in making technical data and documents available, the Contractor shall advise IO representative of the potential impact on the delivery of the Services and associated deliverables, to agree and define all the correction actions to take in place.

## **6.8 Contractor's responsibility**

The Contractor shall ensure that he/she complies with the provisions of the Services Contract in particular with the following:

- The Contractor shall guaranty that all input information provided to perform the task remain property of IO and shall not be used for any other activity than the one specified in this specification;
- The Contractor shall be in charge of the training & coaching of all its resources;
- The Contractor shall provide an organization suitable to perform the work as describe in this specification;
- The Contractor shall perform the activities accordingly to this specification taking into account all relevant additional documents and IO processes into account (hand books, export control, intellectual properties, etc.);
- the Contractor shall submit in IDM the deliverable(s) associated with each Instruction To Proceed no later than 5 working days following the end of the Service. In case of comments during the review process of IO, the Contractor will take no later than 5 days to update its deliverable(s).

Prior to the start of work on each Service, the Contractor shall review the input technical information provided by IO for completeness and consistency check, and shall advise the IO representative of any deficiencies it may find. The contractor shall not be responsible for errors in the input technical information that could not be reasonably detected during such review; duration of this review will be agreed between Contractor and IO representative and will have no impact on the delivery schedule of the Service and associated deliverables.

## **7 Implementation of the Contract**

### **7.1 Monthly meeting**

The Contractor shall organize monthly meetings related to the on-going contract, with the ITER Responsible Officer (IO RO) and concerned other ITER IO staff such as the dedicated Service requests IO Technical Responsible Officer (TRO), in order to examine progress of recent and ongoing activities (ITPs), to review short-term schedules and to review new, eventual changes or necessary amendments in the existing Contract, schedule of activities and list of deliverables.

The minutes of these meetings shall be written by the Contractor in the simplified form using the ITER provided template, with action items and submit the minutes for the approval of the ITER Contract Manager in ITER Document Management (IDM) system.



The Contractor written progress reports to the ITER Responsible Officer is a deliverable every month. The monthly progress report shall be submitted in IDM and include the following information for the reporting period:

1. Safety Performance Indicator
2. Summary of the work carried out for the ongoing Service Contract;
3. Description of any problems encountered for the ongoing Service Contract;
4. References to any produced deliverables for all on-going Services;
5. Status and schedule of all ongoing Services according to the ITPs;
6. Staffing plan and competencies issues (if any) according to IO Service requests;
7. Performance of the Contractor (see section 9)

The progress report shall be submitted by the Contractor three working days before the monthly meeting. The progress report shall be approved by the IO RO.

## 7.2 Ad hoc Meetings

To be scheduled at the discretion of the IO RO or the Contractor depending on the need. The minutes of these meetings shall be written by the Contractor in a simplified form of a table of action items and archived in IDM.

## 8 Deliverables and Due Dates

The deliverables within this Contract consist of:

- Commissioning/Operation/Maintenance Technical or Organizational deliverables (E1.1 through E16.2) for each category/field of the Services (as per section 6.1).

Deliverables identified by IO in the Service Request shall be transmitted to IO no later than 5 working days following the end of the Service unless agreed otherwise by IO.

An approved deliverable is a report or document delivered in the ITER document management system (IDM), submitted or reviewed by the TRO (Technical Responsible Officer(s)) and approved by the IO RO of the contract

- Monthly Progress report as defined in section 7.1. must be submitted on a monthly basis

Deliverable Ref.	Deliverable Content	Due Date
D1	1 <sup>st</sup> Monthly progress report on Services E1 to E16 <i>This report shall contain as a minimum the deliverables defined in section 7.1 for each Service completed in the previous month. The content shall be the same for all other deliverables (D2 – D36)</i>	T0 + 1 month
D2	2 <sup>nd</sup> Monthly progress report on Services E1 to E16	T0 + 2 months
D3	3 <sup>rd</sup> Monthly progress report on Services E1 to E16	T0 + 3 months
D4	4 <sup>th</sup> Monthly progress report on Services E1 to E16	T0 + 4 months
....	....	....
....	....	....
D34	34 <sup>th</sup> Monthly progress report on Services E1 to E16	T0 + 34 months
D35	35 <sup>th</sup> Monthly progress report on Services E1 to E16	T0 + 35 months
D36	36 <sup>th</sup> Monthly progress report on Services E1 to E16	T0 + 36 months



## 9 Performance

Performance will be reviewed during the monthly meeting; the Contractor is expected to prepare its monthly performance report according to the criteria defined below:

- 1- Services adherence vs forecast (number of Service Requests fulfilled vs Service Requests issued). The Contractor may provide subcontracted solutions if no internal capabilities.
- 2- Schedule adherence vs forecast (list of deliverables provided to ITER): Time to issue documentation (Analysis/troubleshooting report, technical note, etc.) vs forecast
- 3- Quality of the deliverables - Efficient integration of IO comments for deliverables and issuance of required updated revision

## 10 General conditions and requirements

### 10.1 Applicable codes and standards

The Contractor shall comply in performing the contract, with applicable laws, decrees, circulars and standards. The Contractor shall be responsible for all requests for administrative authorisations and declarations that are required by virtue of applicable regulations.

### 10.2 Language

Since the official language of the ITER Organization is English, all written communication and deliverables shall be in English.

### 10.3 Quality Assurance (QA) requirements

The organisation conducting these activities should have an ITER approved QA Program or an ISO 9001 accredited quality system. The general requirements are detailed in ITER Procurement Quality Requirements (ITER\_D\_22MFG4).

Prior to commencement of the task, a Quality Plan must be submitted for IO approval giving evidence of the above and describing the organisation for this task; the skill of workers involved in the study; any anticipated sub-contractors; and giving details of who will be the independent checker of the activities (see Procurement Requirements for Producing a Quality Plan (ITER\_D\_22MFMW)).

Management of contractual deviations will be proceeded through ITER\_D\_2LZJHB and ITER\_D\_22F53X.

Documentation developed as the result of this task shall be retained by the performer of the task or the DA organization for a minimum of 5 years and then may be discarded at the direction of the IO. The use of computer software to perform a safety basis task activity such as analysis and/or modelling, etc. shall be reviewed and approved by the IO prior to its use, in accordance with Quality Assurance for ITER Safety Codes (ITER\_D\_258LKL).

### 10.4 Safety Requirements



ITER is a Nuclear Facility identified in France by the number-INB-174 (“Installation Nucléaire de Base”).

For Protection Important Components and in particular Safety Important Class components (SIC), the French Nuclear Regulation must be observed, in application of the Article 14 of the ITER Agreement.

In such case the Suppliers and Subcontractors must be informed that:

- The Order 7th February 2012 applies to all the components important for the protection (PIC) and the activities important for the protection (PIA).
- The compliance with the INB-order must be demonstrated in the chain of external contractors.
- In application of article II.2.5.4 of the Order 7th February 2012, contracted activities for supervision purposes are also subject to a supervision done by the Nuclear Operator.

For the Protection Important Components, structures and systems of the nuclear facility, and Protection Important Activities the contractor shall ensure that a specific management system is implemented for his own activities and for the activities done by any Supplier and Subcontractor following the requirements of the Order 7th February 2012.

## **10.5 Confidentiality**

All information exchanged in the frame of these activities shall be considered as confidential and shall not be disclosed to other party.