

**CONTRACT TECHNICAL SPECIFICATIONS**

**Integration and Engineering support  
Technical Specifications**

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## **1 Abstract**

This contract covers support of ITER Central Integration and Engineering Directorate (CIE) in reviewing and improving its activities. It makes use of the experience of the contractor in these areas especially from the viewpoints of cost reduction, schedule, and quality assurance.

## **2 Background and Objectives**

A key mission of CIE is to ensure that a systematic and integrated approach is adopted for the execution of the engineering processes for the realisation of the ITER scope and that the project data are controlled and made available in timely manner according to the need of the project.

The ITER approach to systems engineering management must ensure that:

- The objectives of the Project are clearly identified;
- The requirements and constraints are defined and are continuously monitored during all phases of the Project;
- The choice among different design options aims at simplification of the design, reduction of cost, improvement of the performance and minimization of the risks;
- The engineering activities are organized in an integrated way, and the critical interfaces among the systems are identified and controlled; for each system a set of phases and milestones is established at which the design is validated against the requirements;
- A risk management plan is established aiming at the systematic identification, mitigation and monitoring of all risks;
- A baseline configuration of the Project is established and updated with the progress of the design and construction work, and a configuration management system is put in place that allows the timely assessment, resolution, and recording of all changes, including the consideration of the impacts on schedule and cost;
- An adequate management and quality programme is implemented to ensure that the systematic actions are planned and executed so as to provide adequate confidence that all items and functions of the Project perform satisfactorily.”

## **3 Scope of Work**

The work scope is to coordinate a review and propose improvements for the overall engineering process, in particular with reference to cost reduction, schedule, and quality assurance.

## **4 Estimated Duration**

The contract is expected to run from December 2010 until July 2011 and involve a maximum of 7 experts working full time.

## **5 Work Description**

Details of work to be performed will be specified as the needs arise by the Director of the Central Integration and Engineering Directorate or his delegated representative. It will include:

- Establishment & proposal of Design Flow and Documents
- Establishment & proposal of the amount of drawings (2D and 3D), estimating the cost of engineering

- Establishment & proposal of the new framework of engineering, including industrial support
- Establishment & proposal of scenario for the new framework
- Improvement of the Work Breakdown Structure for associated activities
- Proposal of simplifying the procedure related to the safety regulations
- Solving issues related to Intellectual Property Rights, Conflict of Interests regarding industrial support to ITER
- Review & improvement of the organization structure in CIE in order to accelerate engineering and system integration
- Review & Modification of the current designs of each component, considering the necessary conditions of System Requirement Documents

Each work task will be individually specified in consultation with the contractor, and a deliverable date agreed.

The work will generally be performed at the ITER site in order to allow the contractor to discuss aspects of the work or to meet with members of IO staff.

## **6 List of deliverables and due dates (proposed or required by ITER)**

As mentioned above, each specific item of work to be performed will be discussed with the contractor before its commencement, and a deliverable date will be agreed.

## **7 Acceptance Criteria (including rules and criteria)**

Each item of work to be completed according to agreed deliverables shall be reviewed and accepted by the contract Responsible Officer or a nominated representative.

## **8 Work Monitoring / Meeting Schedule**

Completion of work items will be checked by the contract RO. For longer tasks an interim monitoring point may be defined. Meetings, to be held in ITER offices, will be scheduled from time to time as required and in discussion with the contractor.

## **9 Payment schedule / Cost and delivery time breakdown**

Payments shall be effected on a monthly basis, covering days actually worked, relevant reimbursable travel expenses and per diems as applicable.