Contract Title:

Planning Engineer Support

Call for Expertise Technical Specification
Table of Contents

1 Abstract.............................................................................................................2
2 Background and Objective ..................................................................................2
3 Scope of Work ......................................................................................................2
4 ITER Software ....................................................................................................5
5 Duration ..............................................................................................................5
6 Resource Profiles ...............................................................................................5
7 Work Monitoring and Reporting ........................................................................5

1 Abstract

This document specifies the requirements for the provision of Planning Engineer services to the Machine Assembly and Installation (MAI) section.

2 Background and Objective

ITER is undertaking detailed planning for the pre-construction and construction phases of the project which requires the development and/or update of Detailed Work Schedules (DWS). These DWS cover the pre-construction activities of the MAI section, the site assembly of the Tokamak components, the site installation of the associated plant systems, and the maintenance of the integrated Construction Plans for the ITER site. Planning and Scheduling is thus a critical activity in the areas of Machine Assembly and Plant Installation, and full-time planning and scheduling experts are required to support these activities, commencing in August 2013.

The present solicitation is for three, expert Planning Engineers having prior experience in Nuclear (Fusion) projects.

3 Scope of Work

3.1 Planning Engineer 1

The primary area of work for Planning Engineer 1 will be the revision, development and documentation of the associated underpinning of the Machine Assembly baseline DWS. The scope of work shall include, but not necessarily be limited to the following planning and scheduling tasks:

1. Development of updated, detailed, resource loaded schedules for the complete Machine Assembly project, covering both Assembly Phase I and Phase II. The Machine Assembly scope includes all site activities required to receive, handle, prepare, install, test and inspect the machine components.
2. As the senior member of the planning support team for Machine Assembly, provision of support, guidance and organisational expertise to the other schedulers developing individual, sub-project DWS.
3. Implementation of the DWS for all machine assembly scheduling activities, including the preparation and delivery of weekly progress reports to MAI management.
4. Securing approval of deliverable schedules and associated underpinning (Basis of Schedule) from MAI management.
5. Integration of approved, detailed Machine Assembly DWS in the overall Integrated Construction Schedule.
6. Development and documentation of schedule delay mitigation scenarios and proposals.
7. Identification of Risks and Opportunities and the development of associated response plans, workarounds and what-if scenarios.
8. Provision of administration services to maintain the Primavera Construction database. To effectively complete this function Planning Engineer 1 will be a qualified Primavera Administrator.

3.2 Planning Engineer 2

The primary area of work for Planning Engineer 2 will be the development and documentation of the associated underpinning of the Machine Assembly Tooling baseline DWS, and the monthly update and statusing of the MAI Preparation for Construction DWS. The scope of work shall include, but not necessarily be limited to the following scheduling tasks:

1. Development of the detailed, resource loaded DWS for the design and manufacture of the Assembly Tooling to be procured directly by the MAI section, ensuring consistency with the contracting strategy developed by the Responsible Engineers, and the project’s procurement templates.
2. Maintenance and statusing of the Preparation for Construction DWS, which covers the pre-construction activities of the MAI section, including the preparation and delivery of weekly progress reports to MAI management.
3. Maintenance and statusing of the DWS for all MAI scheduling activities, including the preparation and delivery of weekly progress reports to MAI management.
4. Securing approval of deliverable schedules and associated underpinning (Basis of Schedule) from MAI management.
5. Analysis of the impact of Project Change Requests (PCR), delivery delays, deferrals, strategic direction etc., on the Machine Assembly Tooling and Preparation for Construction schedules.
6. Identification of Risks and Opportunities and development of associated response plans, workarounds and what-if scenarios.
7. Identification of issues affecting the execution of the critical MAI contracts Development and documentation of schedule delay mitigation scenarios and proposals.
8. As a Primavera advanced user, provide technical support and guidance to other schedulers working with MAI section.
3.3 Planning Engineer 3

The primary area of work for Planning Engineer 3 will be the development, integration and documentation of the associated underpinning of the baseline schedules for the site-wide installation of the ITER Plant Systems. The scope of work shall include, but not necessarily be limited to the following scheduling tasks:

1. Development and/or integration of updated, resource loaded schedules for the site-wide plant installation activities. In terms of plant, MAI section currently has overall responsibility for the installation of the cooling water and magnet feeder systems and the scope of work for these systems includes both the development and integration of the installation schedules. For all other systems the scope of work is limited to the validation and integration of schedules provided by others.

2. Coordination of the reviews of DWS provided by third parties (Industry, IO or DA) and their integration in the overall planning.

3. As the senior member of the planning support team for Plant Installation, provision of support, guidance and organisational expertise to the other schedulers developing individual, sub-project DWS’.

4. Implementation of the DWS for all plant installation scheduling activities within MAI section, including the preparation and delivery of weekly progress reports to MAI management.

5. Securing approval of deliverable schedules and associated underpinning (Basis of Schedule) from MAI management.

6. Integration of approved, detailed schedules in the overall Site Construction Schedule.

7. Analysis of the impact of Project Change Requests (PCRs), delivery delays, deferrals, etc., on the Integrated Construction Schedule.

8. Development and documentation of schedule delay mitigation scenarios and proposals.

3.4 Work Sub-Tasks

To effectively complete the scope of work, the expert Planning Engineers will be required to execute the following, generic sub-tasks. This list is non-exhaustive:

- Development and iteration of time phased, resource loaded detailed schedules.
- Integration of detailed schedules within the Construction Primavera database.
- Identification and application of coding for every detailed activity.
- Identification of all Plant and Tooling Requirements for every detailed activity.
- Coding and logic integration to enable 4D modelling software integration.
- Evaluation of schedule issues, risks and opportunities.
- Analysis of interfaces and critical dependencies.
- Preparation of summary reports.
- Analysis of design changes affecting machine assembly and plant installation activities.
- Recommendation of schedule optimisations and delay mitigation and recovery measures.
- Preparation of materials and participation in reviews of assembly and installation schedules.
• Support in the areas of Primavera administration and development of database applications.

4 ITER Software

ITER has chosen Primavera as its scheduling tool. The current version is P6 v7.2.

ITER has chosen Intergraph SmartPlant Construction and SmartPlant Enterprise for Owner Operators as the system to support the execution phases of the work. The Expert will not work in Intergraph however the Primavera schedule will be compatible with Intergraph.

The project plans will be compatible with these tools and build upon the processes being defined during the initial rollout of these systems during the first half of 2013.

The work will require detailed investigation and review of existing ITER documentation, collaboration with assembly engineers and technical responsible officers, and will be performed to industry standards and best practices.

5 Duration

The duration of the contract shall be 12 months.

6 Resource Profiles

The work scope identified within this technical specification has been defined through the development of a detailed and resource loaded schedule. The resources that are required to perform the work scope are:

Three [3] Expert Planning Engineers: with background and proven track record in planning for the installation and maintenance of systems of a similar nature and scale to those of the ITER project, and fully familiar with Construction industry and Project Management best practices and global standards.

Minimum of 8 years planning, and scheduling experience. Primavera Administrator / advanced user status.

Ability to function autonomously when required, adding real value to the planning and scheduling process, and with technical skills necessary to build, develop, analyse and update detailed, resource-loaded Primavera Schedules based on existing Assembly Plans.

7 Work Monitoring and Reporting

The expert Planning Engineers shall work under the direction of the Leader of the Machine Assembly and Installation section, who is the Technical Responsible Officer for the contract.

The nature of the work shall require the permanent presence of the expert Planning Engineers at the site of the ITER Organization.
Weekly progress meetings shall be held between the experts and the TRO, or his deputy, along with other relevant staff. The experts shall be responsible for producing minutes of these meetings and tracking actions.

The official language of the ITER project is English.