

Engineering design documentation

Outline :

One of the main missions of the ILC pre-lab on the engineering front would be to complete an engineering design report (EDR), derived from the TDR published in 2013. The EDR would represent the “technical readiness” for actual construction of the ILC and would also be expected to serve as critical material to be evaluated in certain countries in the context of formal project approval. EDR includes basic specifications and drawings for manufacture and construction etc.. Cost re-estimate, scheduling and preparation for the mass production are also included in this activity.

Timeline

1st year: Work on TDR-based cost-estimate confirmation, started by an international team centered at the Pre-lab.

2nd year: Complete the cost-estimate confirmation, and an internal review in the latter half of the 2nd year. The review also reports on the progress of technical issues during the preparation period.

3rd year: Conduct an external review and completed scrutiny of costs and risks. Complete the draft of Engineering Design Report (EDR).

4th year: Publish EDR (in first half year), report progress on technical issues and prepare for starting each large bid.

Items:

- Engineering design and documentation based on WBS
- Cost confirmation/estimates, tender and purchase preparation
- Transport planning, mass-production planning and QA plans
- Schedule follow up and construction schedule preparation
- Resource follow up and planning

Expected FTE

<i>Contents (based on TDR Vol. 3- II)</i>	<i>Human Resources (FTEy)</i>
<i>Accelerator design</i>	3
<i>Main Linac and SCRF*</i>	20
<i>Sources</i>	5
<i>Damping ring</i>	5
<i>BDS</i>	5
<i>Beam dump</i>	2
<i>RTML</i>	2
<i>Conventional facilities and siting</i>	5
<i>Control</i>	3
<i>Construction schedule, commissioning and operations</i>	3

* includes cryogenics, rf system (high power and low-level rf)