

ILC Cost-update External Review

ILC International Development Team Executive Board

Review of the updated ILC cost

The ILC cost was estimated at the time of the Technical Design Report in 2013 for the baseline machine at 500 GeV centre of mass energy¹ and in 2018 for 250 GeV centre of mass energy² as a staged machine. In May 2024, the Executive Board (EB) of the ILC International Development Team (IDT) decided to update the ILC cost with a goal to complete the work by the end of January 2025.

The updated cost shall be reviewed by an external review committee composed of

- Reinhard Brinkmann (DESY)
- Jie Gao (IHEP)
- Philippe Lebrun (CERN)
- Norbert Holtkamp (SLAC), Observer
- Tor Raubenheimer (SLAC)
- Lenny Rivkin (EPFL and PSI), *Chair*.

The committee is requested to provide a report to the IDT-EB, based on the information presented by the ILC Cost-update Taskforce, on the following three points:

1. Appropriateness of the method applied for the cost estimate,
2. Quality and amount of information,
3. Validity of the estimated costs and uncertainties.

To facilitate the review process, a remote introductory meeting of the review committee will be held in early November 2024, where the procedure being applied in the cost update process will be explained. The main review meeting, in hybrid mode at CERN, will be held on 19th and 20th of December 2024, and submission of a written report by the committee by around January 17th 2025 is desired.

Background information

The ILC Cost-update Taskforce was assembled with the following members:

Gerry Dugan (Cornell)
Andy Lankford (UCI), IDT-EB member
Benno List (DESY)
Shinichiro Michizono (KEK), IDT-EB member
Marc Ross (SLAC)
Hiroshi Sakai (KEK)
Steinar Stapnes (CERN), IDT-EB member
Nobuhiro Terunuma (KEK)
Nick Walker (DESY)
Akira Yamamoto (KEK), *Taskforce Leader*.

The task force shall provide accelerator and civil construction cost for 250 GeV, 350 GeV and 500 GeV options. The overall updated cost will be presented in a similar framework applied

¹<https://linearcollider.org/files/images/pdf/Executive%20Summary.pdf>

²<https://cds.cern.ch/record/2293461/files/arXiv:1711.00568.pdf>

for the TDR cost, i.e. in 2023 USD based on the OECD compiled Purchasing Power Parities and FTEs.