

Charter of the DUNE Program Committee (DPC)

September 2026

The DUNE Program Committee (DPC) is part of the international governance and oversight structure for the international Deep Underground Neutrino Experiment (DUNE), hosted by Fermilab. It is a review and advisory committee charged by and reporting to the Fermilab Director that provides external scientific peer review and monitors the technical and scientific progress of the international DUNE collaboration, and those aspects of the facility construction and operations that have direct impact on the DUNE experiment. The DPC reviews DUNE from a scientific, technical, resource, scope, schedule, risk and management perspective.

Background

The DUNE experiment is an international collaboration established to build, operate, analyze data, and publish scientific results from the DUNE experiment. The DUNE experiment comprises detectors located at the far site in Lead, SD and a suite of detectors located at the near site in Batavia, IL. DUNE is governed as an international collaboration. The DUNE collaboration elects two co-spokespeople as the international experiment leaders.

The Long-Baseline Neutrino Facility (LBNF) provides the infrastructure for DUNE. LBNF includes the caverns at the far site, the conventional infrastructure at the near site, and the neutrino beamline coming from Fermilab. The Proton Improvement Plan-II (PIP-II) is the upgrade to Fermilab's accelerator complex delivering the powerful neutrino beam to DUNE. LBNF, PIP-II, and the US contribution to building DUNE are governed as US DOE Order 413.3c projects with international partners. The review process for LBNF/DUNE-US and PIP-II is conducted through Director's reviews and the usual DOE Order 413.3c process.

The DUNE Program Resources Review Board (RRB) is composed of representatives from each funding agency (including CERN) that substantially supports DUNE and the LBNF and PIP-II facilities. The RRB provides monitoring and oversight of DUNE, with the assistance of the RRB Resources Scrutiny Group (RSG) and the DPC. The RSG scrutinizes the usage and plans for resources provided to the DUNE collaboration by the funding agencies.

Scope of the DPC

The purpose of the DPC is to review the scientific, technical, resource, scope, schedule, risk and management plans and decisions of the DUNE experiment, and to provide reports to the Fermilab Director and recommendations to the DUNE Collaboration; the reports are made available to the DUNE spokespeople, Fermilab leadership, and the RRB.

This includes:

- Evaluating the scientific scope of the DUNE experiment and the technical capabilities (including scientific computing) needed to meet them. In particular, evaluating and providing assessments regarding the final technical configuration of the neutrino beamline, and near and far detectors;
- Evaluating the completeness of the DUNE scope necessary to deliver the whole program, the complete mapping onto the DUNE partners, and verifying there are no scientific, technical, operational, or resource scope gaps;
- Evaluating the technical development and overall progress of the entire international DUNE endeavor towards the technical design provided in the approved Technical Design Reports. Specifically, reviewing the execution and management of the construction plan, including scope, schedule, interfaces with LBNF, and key technical risks and effectiveness of plans to mitigate these risks;
- Providing review and recommendations on interface and performance issues with LBNF or PIP-II, which could impact DUNE. The DPC scope does include the neutrino beamline downstream of the beam window, but does not include review of LBNF or PIP-II beyond these relevant interfaces impacting DUNE, as these projects are reviewed through the U.S. project management processes;
- Making recommendations concerning the top level Conceptual and Technical Design Reports for DUNE to the Director. The top level reports include the far detector vertical drift, the far detector horizontal drift, the beamline, and the near detector;
- Assessing the feasibility of the schedule for DUNE, major milestones, and coordination with the schedules of all partners;
- Assessing the appropriateness of the estimate of available resources, including staffing resources and materials and services funding for the DUNE experiment, including computing;
- Reviewing non-technical risks for DUNE, such as supply-chain issues, including proposed levels of cost realism and schedule contingency to address identified strategies for mitigation of those risks;
- Evaluating scope or other changes to DUNE and proposed solutions by the DUNE collaboration management and providing recommendations from scientific and technical perspectives, in order to reach an overall optimal solution. These recommendations shall be presented to the RRB for discussion and approval by the funding agencies;
- Evaluating possible upgrades to DUNE, their scientific motivation and merit and technical feasibility.

Operations

The Chair of the DPC is appointed by, and reports to, the Fermilab Director. The Chair of the DPC also serves as an ex officio member of the Fermilab Physics Advisory Committee.

The membership of the DPC is determined by the Fermilab Director.

The DPC meets with the management of DUNE as needed to monitor progress.

The DPC may provide guidance to the DUNE experiment on the submission of TDRs or other matters, including the submission of any confidential cost information.

The DPC report is made available to the DUNE spokespeople, Fermilab leadership, and the RRB.

In regular meetings, the DPC will provide ongoing monitoring of DUNE performance against the approved TDRs and schedule and risk data.

DPC meetings are organized in four types of sessions: in camera sessions with the DPC members only; executive sessions with the Fermilab Directorate, invite-only sessions with the invite coming from the DUNE spokespeople or Fermilab Directorate only; and plenary sessions, which are open to all participants, including DOE and other funding agencies.

The DPC should meet at least twice a year with ad hoc meetings of the whole committee or of subcommittees arranged as needed.

Coordination of the DPC is the responsibility of the Fermilab DUNE Coordination Office with the assistance of a scientific secretary. Ensuring that recommendations are acted upon is the responsibility of the DUNE spokespeople, who will also report in each DPC meeting on the progress and closure of recommendations.

Subcommittees

The DPC may utilize sub-committees. Those sub-committees may be supplemented by external membership. Any external membership, proposed by the DPC Chair, will be reviewed in advance with the Fermilab Director.