

Charge
for the
Director's CD-3b Cost & Schedule mini-Review of the NOvA Project

July 14, 2009

This charge is for the Committee to conduct a Director's CD-3b mini-Review of the NOvA Project. The purpose of this review is to evaluate the project's readiness for approval of Critical Decision 3b (Approval to Start Full Construction) and that the project is prepared for the DOE Independent Project Review for CD-3b scheduled for July 21-23, 2009.

On September 25, 2008, DOE approved CD-3a (Approve Limited Construction). With CD-3a, DOE approved long lead procurements and a limited set of other construction activities. A limited number of items beyond the CD-3a list have been approved by DOE for procurement in support of the 2009 recovery Act (RA). CD-3b will be an approval of the remaining items of construction necessary prior to CD-4.

The NOvA project will fabricate and install upgrades to the Fermilab proton source and NuMI facility to enhance the neutrino beam intensity, and will build two neutrino detectors to use this beam. (a smaller "near detector" on the Fermilab site and a larger "far detector" 810 kilometers away in Northern Minnesota).

The NOvA Project Acquisition Strategy calls for Northern Minnesota site preparation work, access road upgrade and far detector enclosure construction to be completed by the University of Minnesota under a financial assistance agreement. These construction costs are captured as part of the Other Project Costs and therefore part of the Total Project Costs. The project management team and the university are work together to ensure proper integration of the university's efforts into the overall project. CD-3a approval covered site preparation and access road construction, and a subsequent DOE approval was provided to start construction of the far detector enclosure building in support of the Recovery Act.

The first part of this review occurred on June 16-18, 2009 and focused on the technical scope of this project. The NOvA project presented the status of their final design work. The review Committee validated the progress on final design and assessed their plans to complete the remaining design work. This assessment included confirming that appropriate resources are available to complete the final design as planned. The final report for this part of the Director's Review may be found at

http://www.fnal.gov/directorate/OPMO/Projects/NOvA/DirRev/2009/06_16/FINAL-ReportDRCD3bNOVA06-16-09.pdf

In your review, please evaluate whether the project is prepared to enter the construction phase beyond the CD-3a and Recovery Act approved activities. NOvA's cost and schedule had not been updated by the time of the first part of the Director's Review, but need to be reviewed prior to DOE's Independent Project Review. The second part or mini-Review of the cost and schedule will occur on July 14, 2009. This cost and schedule mini-Review should specifically address only items number 2 and 3 below. Items 1,4 and 5 were fully addressed during the first part of the review.

1. Final Design: Is the design sufficiently mature so that the project can initiate procurement and construction? For those elements of the design that are still not finalized, has the project convincingly shown that there are no major issues that need to be addressed and that they are on a clear path to a final design?
2. Baseline Cost and Schedule: Is the approach in updating the cost and schedule appear to be sound and defensible? When the updates are completed should the following two questions be able to be answered by the DOE IPR (Are the current project cost and schedule projections consistent with the approved baseline cost and schedule? Is the contingency remaining adequate for the risks?)?
3. Management: Evaluate the management structure as to its adequacy to deliver the proposed final design within specifications, budget, and schedule. Has the project responded satisfactorily to the recommendations from the previous independent project review?
4. Construction: Has there been adequate progress on the construction activities approved under CD-3a? Have Fermilab and the project done the necessary preparations to execute the remaining construction activities?
5. Documentation: Is the documentation required by DOE Order 413.3A for CD-3b complete? Has the CD-2 documentation been updated to reflect any changes resulting from the final design?

Finally, the committee should present findings, comments, and conclusions at a closeout meeting with NOvA's and Fermilab's management and provide a written report soon after the review.