

**NSLS-II Experimental Tools (NEXT) Project
Monthly Report – February 2012**

DATE: submitted on March 15, 2012

1. Project Schedule

CD-0 (Mission Need):	Planned: 3Q10	Actual: May 27, 2010
CD-1 (Alternative Selection):	Planned: 4Q11	Actual: Dec. 19, 2011
CD-2 (Performance Baseline):	Planned: 1Q13	Previous: 4Q12
CD-3 (Start Construction):	Planned: 2Q13	Tentative*: 4Q13
Early Project Completion:	Planned: 4Q15	Tentative*: 4Q16
CD-4 (Project Completion):	Planned: 3Q16	Tentative*: 3Q17

*Pending re-planning to accommodate new funding profile

Short term schedule

• DOE CD-1 review	Planned: Aug. 30–Sept. 1	Actual: Aug. 31–Sept. 1
• CD-1 approval	Planned: Oct. 2011	Actual: Dec. 19, 2011
• ALD's CD-2 (PDR) review	Planned: Jul 17-19, 2012	Previous*: Apr 4-5, 2012
• DOE CD-2 review	Planned: Sep 11-13, 2012	Previous*: Jun 5-7, 2012

*Rescheduled to allow time for re-planning baseline

2. Technical Objectives: 6 beamlines installed and commissioned without X-ray beam

Planned NEXT beamlines

ESM -- Electron Spectro-Microscopy
 FXI -- Full-field X-ray Imaging
 ISS -- Inner Shell Spectroscopy
 ISR -- Integrated In-Situ & Resonant X-Ray Studies
 SIX -- Soft Inelastic X-ray Scattering
 SMI -- Soft Matter Interfaces

3. Assumed Funding Profile

(\$M)	FY11	FY12	FY13	FY14	FY15	FY16	Total (\$M)
OPC (CDR)	\$3						\$3
TEC (Design)		\$3	\$2				\$5
TEC (Fabrication)		\$9	\$10	\$25.9	\$21.6	\$15.5	\$82
Total Project Cost (\$M)	\$3	\$12	\$12	\$25.9	\$21.6	\$15.5	\$90

4. Progress:

- Preliminary design effort continues, including preparation of the required documents for CD-2.
- The resource loaded schedule is being revised based on the latest funding profile guidance, which will likely delay overall project completion date by about one year as shown in Section 1. Rather than delaying completions for all 6 beamlines, we are formulating a schedule with staggered beamline completion dates which will enable faster ramp-up of the early science program.

- Staffing
 - Scientific staff: All of the 6 permanent beamline Level 2 Manager positions have been filled. Level 2 Managers for ESM, FXI, ISR, ISS, and SMI are already on board, and the 6th (SIX) will begin in ~May 2012.
 - The 6 beamline scientist positions are being posted, with the goal of filling them in the first half of FY13.
 - Engineering staff: Three mechanical engineering positions have been filled. Two are in place and the 3rd will start in April 2012. Mechanical engineering for a fourth beamline is being accomplished via an MOU with BNL's Condensed Matter Physics and Materials Science Department. Owing to the revised funding profile guidance, we expect to fill only one more NEXT mechanical engineering position while maintaining the total estimated mechanical engineering effort.

5. Issues and Risks:

- The expected delay in project completion resulting from the latest funding profile guidance is likely to increase the cost of the currently planned scope.
- MOUs between the Photon Sciences directorate and identified Partner User institutions need to be finalized prior to CD-2.

6. Action Items and Decisions:

- Establish the CD-2 baseline cost and schedule for NEXT by the end of March 2012 and begin EVMS tracking.
- Staffing
 - Fill the remaining 1 mechanical engineering position by the end of FY12.
 - Post the 6 beamline scientist positions in March 2012.
- Generate and sign MOUs between the Photon Sciences directorate and identified Partner User institutions prior to CD-2.