

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

DATE: submitted on April 25, 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*: 4Q17

*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 project scope and schedule have been revised based on the latest funding profile guidance. The overall project completion date will be delayed by one year. In order to allocate sufficient level of contingency, one of beamlines, FXI, in its entirety and one of the two branches of the ESM beamline were removed from the current plan. However, we are exploring an option to deliver ~\$5M base scope via external contributions (Partner Users) in order to restore the FXI

beamline back into baseline scope. This scope restoration will happen only if we can secure firm commitments for these external contributions.

- 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) is planned to begin in May 2012.
 - The 6 beamline scientist positions have been posted, with the goal of filling them in the first half of FY13.
 - Engineering staff: Three mechanical engineering positions have been filled and are on board. Mechanical engineering for a fourth beamline is being accomplished via an MOU with BNL's Condensed Matter Physics and Materials Science Department. Interviews have been conducted for the fifth, and final, NEXT mechanical engineering position.

5. Issues and Risks:

- In order to restore FXI beamline back into baseline scope, we need to obtain firm commitments for sufficient external contributions in advance of the CD-2 review.
- 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 April 2012 and begin EVMS tracking.
- Staffing
 - Fill the remaining mechanical engineering position by the end of FY12.
- Generate and sign MOUs between the Photon Sciences directorate and identified Partner User institutions prior to CD-2.