U.S. DEPARTMENT OF ENERGY

OFFICE OF SCIENCE

# DOE/SC CD-4 Review

of the

# National Spherical Torus Experiment (NSTX) Upgrade Project

## Princeton Plasma Physics Laboratory

**September 2, 2015**


**Kin Chao**

**Committee Chair**

**Office of Science, U.S. Department of Energy**

http://www.science.doe.gov/opa/

# Deliverables – Due Dates



- **Closeout report (prepared in PowerPoint)**
  - Presented Wednesday, September 2
  - Instructions—slide 11
  - Template—slide 13
- **Final report draft (prepared in MS Word)**
  - Due Tuesday, September 8 to Casey (casey.clark@science.doe.gov)
  - Instructions—slide 12

# DOE EXECUTIVE SESSION AGENDA

**Wednesday, September 2, 2015—Site C Lyman Spitzer Building (LSB), Room B318**

| | | |
|---|---|---|
| 8:00 a.m. | DOE Executive Session | K. Chao |
| 8:10 a.m. | Program Perspective | B. Sullivan |
| 8:15 a.m. | Federal Project Director Perspective | T. Indelicato |
| 8:25 a.m. | Questions | |
| 8:30 a.m. | Adjourn | |

**Project and review information is available at:**

**http://nstx-upgrade.pppl.gov/NSTX%20CD4%20CLOSEOUT%20REVIEW/**

# Review Committee Participants

## Kin Chao, DOE/SC, Chairperson

**Review Committee**

***Subcommittee 1: Technical***
*Arnie Kellman, General Atomics
Tom McManamy, retired ORNL

***Subcommittee 2: Cost and Schedule***
* David Arakawa, DOE/ORSO
Tim Maier, DOE/SC

***Subcommittee 3: Management***
*Stephen Meador, DOE/SC

*Lead

**Observers**

Ed Synakowski, DOE/SC
Joe May, DOE/SC
Barry Sullivan, DOE/SC
Tony Indelicato, DOE/PSO
Joseph Eng, DOE/BHSO
Frank Crescenzo, DOE/BHSO

U.S. DEPARTMENT OF ENERGY

# DOE Organization

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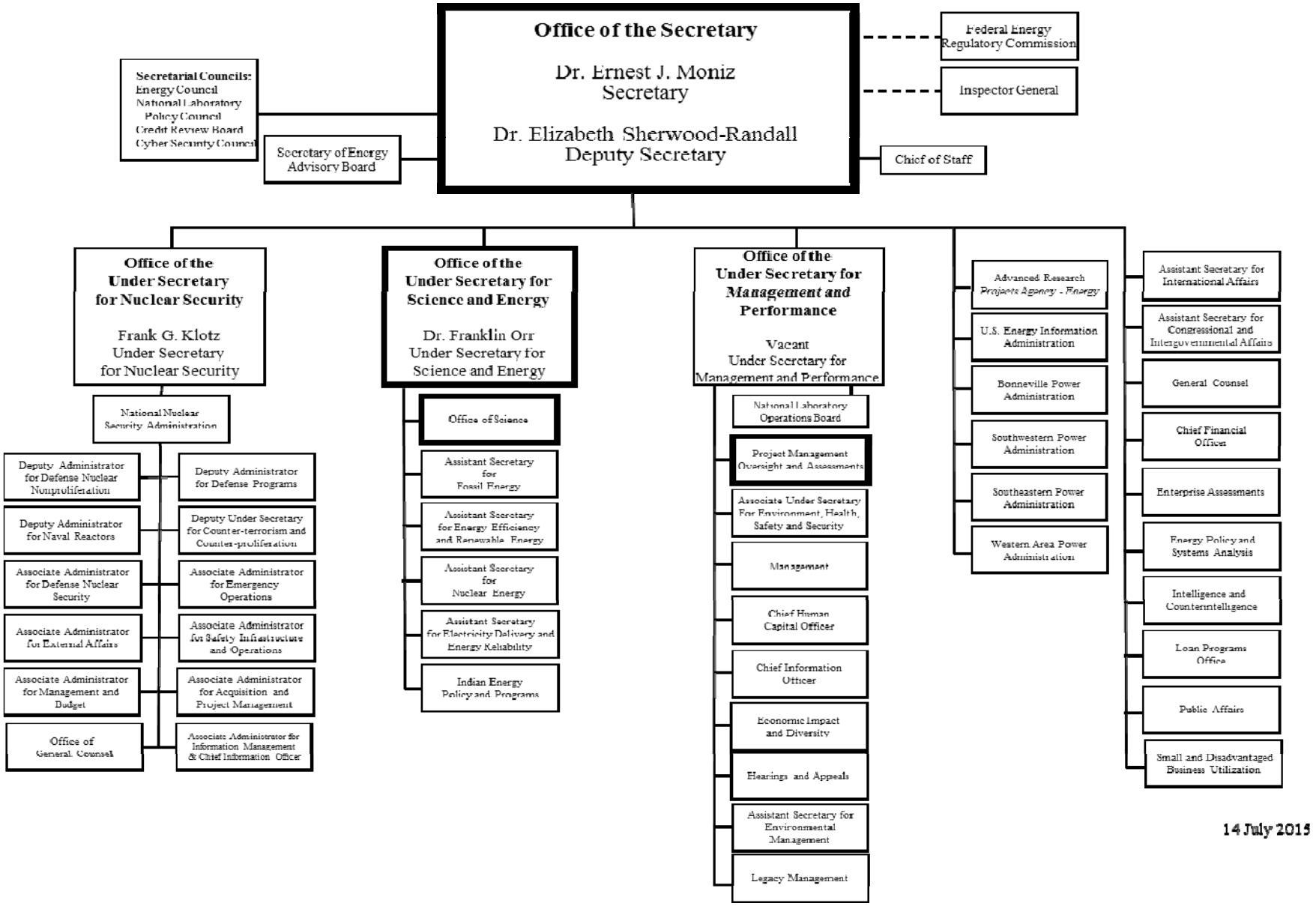


14 July 2015

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# SC Organization

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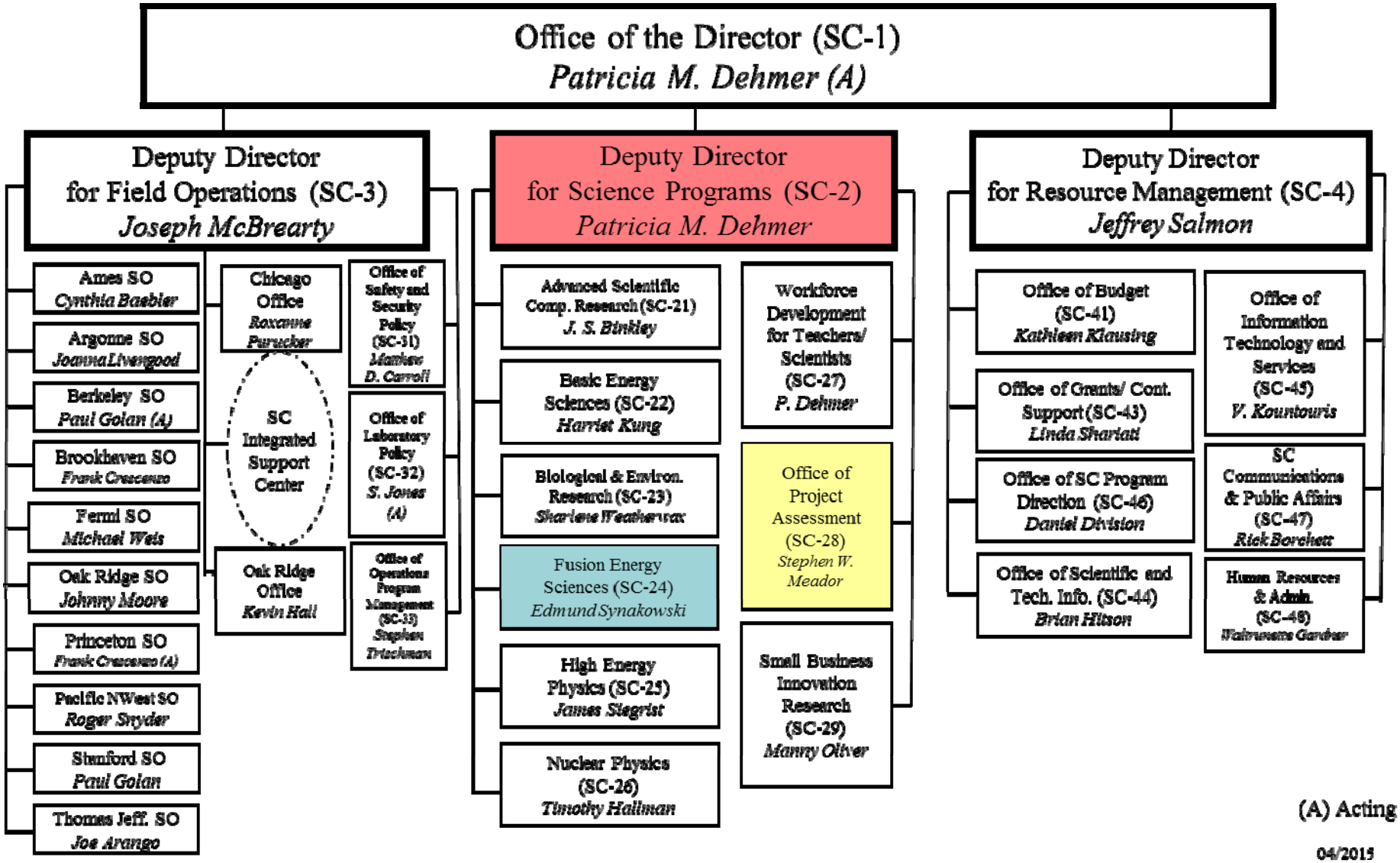


(A) Acting

04/2015

# Charge Questions



1. Has the NSTX-U project met all CD-4 requirements, which includes: completing the technical scope and achieving the Key Performance Parameters as defined in the Project Execution Plan?

2. Is the transition to operations plan adequate to transition the NSTX-U project to research operations?

3. Is the draft project closeout report adequate and have the lessons learned from the project been identified and captured in a draft document?

4. Is the NSTX-U project ready for approval of CD-4, Project Completion?

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# Agenda

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**Wednesday, September 2, 2015—Site-C Lyman Spitzer Building (LSB), Room B318**

| | |
|---|---|
| 8:00 am | DOE Executive Session (DOE and Review Committee Only) ..... K. Chao |
| | • Charge to Committee .....B. Sullivan |
| | • Federal Project Director's Perspective.....A. Indelicato |
| 8:30 am | Welcome and Introductions ..... S. Prager |
| 8:35 am | Project Overview, Closeout Activities, Lesson Learned .....R. Strykowsky |
| 9:50 am | Transition to Operations ..... S. Gerhart |
| 10:20 am | Questions and Discussion .....R. Strykowsky |
| 10:35 am | Break |
| 10:45 am | Tour |
| 11:15 am | Breakout Sessions .....R. Strykowsky |
| 12:15 pm | Lunch for Committee |
| 1:00 pm | Breakout Sessions .....R. Strykowsky |
| 2:45 pm | DOE Executive Session .....DOE, Committee |
| 4:00 pm | Closeout ..... DOE, Committee, PPPL |
| 4:30 pm | Adjourn |

# Report Outline/Writing Assignments

Executive Summary/2-page Summary Review Report ..... Maier*

1. Introduction ..... Sullivan*
2. Technical Status **(Charge Questions 1, 2, 4)** ..... Kellman*/McManamy
   - 2.1 Findings
   - 2.2 Comments
   - 2.3 Recommendations
3. Cost and Schedule **(Charge Questions 3, 4)** ..... Arakawa*/Maier
4. Management and ES&H **(Charge Questions 3, 4)** ..... Meador*

*Lead

# Closeout Presentation

# and Final Report

# Procedures

# Format: Closeout Presentation



**(Use PowerPoint / No Smaller than 18 pt Font)**

**2.1 Use Section Number/Title corresponding to writing assignment list.**

**List Review Subcommittee Members**

**List Assigned Charge Questions and Review Committee Answers**

**2.1.1 Findings – What the project told us**

- In bullet form, include your account of factual technical, cost, schedule, and management. Information provided/presented by the Project

**2.1.2 Comments – What we think about what the project told us**

- In bullet form, include your assessment of project status (observations, concerns, feedback, suggestions, etc.) based on the findings. This section carries more emphasis than the Findings, but does not require an action as do the Recommendations. Do not number your comments.

**2.1.3 Recommendations – What we think the project needs to do**

**1. Beginning with an action verb, provide a brief, concise, and clear statement with a due date.**

**For Critical Decision reviews, include a specific recommendation addressing how the Committee judged the readiness for the CD, *i.e.*:**

- **The project is ready to proceed to CD-2; *or***
- **The project is ready to proceed to CD-2, after addressing the following recommendations**

# Format: Final Report

**(Use MS Word / 12pt Font)**

## 2.1 Use Section Number/Title corresponding to writing assignment list.

### 2.1.1 Findings – What the project told us

Include a brief narrative description of technical, cost, schedule, management information provided by the project. Each subcommittee will emphasize their area of responsibility.

**Cost and schedule subcommittee should provide attachments for approved project cost breakdown and schedule. Management subcommittee should provide attachment for approved project organization and names of personnel.**

### 2.1.2 Comments – What we think about what the project told us

Descriptive material assessing the findings and making observations and conclusions based on the findings. **The committee's answer to the charge questions should be contained within the text of the Comments Section.** Do not number your comments.

### 2.1.3 Recommendations – What we think the project needs to do

**1. Beginning with an action verb, provide a brief, concise, and clear statement with a due date.**

**2.**

**Please Note: Recommendations are approved by the full committee and presented at the review closeout briefing. Recommendations SHOULD NOT be changed or altered from the closeout report to the Final Report.**

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# Closeout Report on the DOE/SC CD-4 Review of the

# National Spherical Torus Experiment (NSTX) Upgrade Project

## Princeton Plasma Physics Laboratory

**September 2, 2015**

**Kin Chao**

**Committee Chair**

**Office of Science, U.S. Department of Energy**

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4. Is the NSTX-U project ready for approval of CD-4, Project Completion?

- **Findings**
- **Comments**
- **Recommendations**

3. Is the draft project closeout report adequate and have the lessons learned from the project been identified and captured in a draft document?

4. Is the NSTX-U project ready for approval of CD-4, Project Completion?

- **Findings**
- **Comments**
- **Recommendations**

| PROJECT STATUS | | |
|---|---|---|
| Project Type | MIE / Line Item / Cooperative Agreement | |
| CD-1 | Planned: | Actual: |
| CD-2 | Planned: | Actual: |
| CD-3 | Planned: | Actual: |
| CD-4 | Planned: | Actual: |
| TPC Percent Complete | Planned: _____% | Actual: _____% |
| TPC Cost to Date | | |
| TPC Committed to Date | | |
| TPC | | |
| TEC | | |
| Contingency Cost (w/Mgmt Reserve) | $ | _____% to go |
| Contingency Schedule on CD-4b | _____months | _____% |
| CPI Cumulative | | |
| SPI Cumulative | | |

3. Is the draft project closeout report adequate and have the lessons learned from the project been identified and captured in a draft document?

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- **Findings**
- **Comments**
- **Recommendations**