### **OFES Perspective**

Presentation at the Fusion Power Associates Meeting December 4, 2008

Curt Bolton, Acting Director Research Division for Fusion Energy Sciences Curt.Bolton@science.doe.gov 301-903-4914





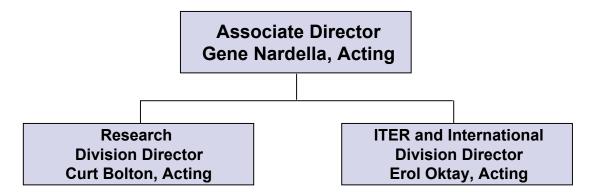
#### **Outline**

- OFES Staffing Issues
- FY 2009 Budget
- ITER
- Strategic Planning Activities



#### Staffing Issues

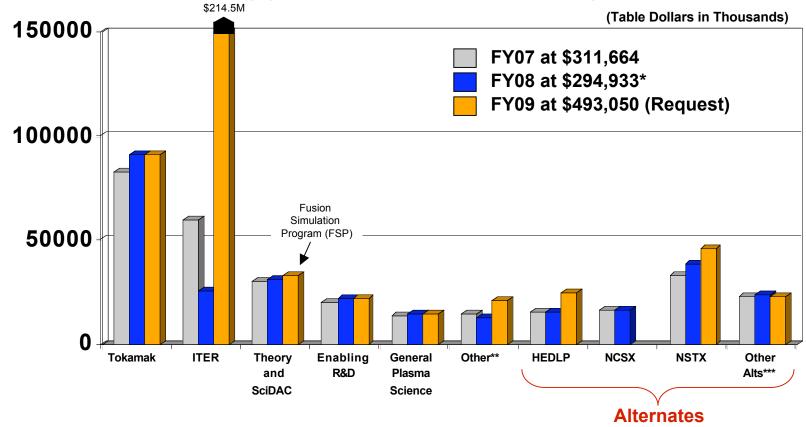
- Management and Division Structure remain unchanged.
- Management roles continue to be filled with Acting Associate Director (AD) and Division Directors (DD).



- Announcement for New AD position closed on October 22, 2008.
- Postings for DD positions and OFES reorganization are delayed until New AD is selected and on board.
- Hutch Neilson (PPPL) is serving as detailee to assist with strategic planning and MFE-related Research Needs Workshop. Effective October 2008.
- Appointment of an IPA is expected in January 2009 to assist with strategic planning for basic plasma science area including High Energy Density Laboratory Plasmas (HEDLP), as a follow-up to NRC 2010 Decadal Study and FESAC HEDLP Panel.

# M

# **Fusion Energy Sciences Budget**



- FY 2008 National Compact Stellarator Experiment (NCSX) Terminated.
- FY 2009 Request for NCSX reallocated; FY 2009 details include:
  - Full funding for ITER
  - Increase in facilities operations including planning for proposed upgrades for NSTX
  - Increase for two initiatives -- FSP and HEDLP
  - Continuing Resolution (CR) in place until March 6, 2009



<sup>\*</sup>Includes \$15.4M in Supplemental funding for ITER

<sup>\*\*</sup>Includes: International, HBCU, Education, IPA/Detailees, SBIR/STTR, GPP/GPE, Env. Monitoring

<sup>\*\*\*</sup>Includes: Experimental Plasma Research and Madison Symmetrical Torus



### ITER from a Program Perspective

- In January 2008, DOE approved Critical Decision 1 (Approve Alternative Selection and Cost Range) which sets the Total Project Cost (TPC) range at \$1.45 to \$2.2 billion (as spent) and the schedule range for U.S. ITER Project completion (Critical Decision 4) at FY 2014 2017.
  - CD-1 approval preceded the significant funding cut contained in the FY 2008 Omnibus Appropriation; impacts on the cost and schedule ranges are likely.
  - The FY 2009 Appropriation will determine the extent that the project can resume fulfilling its commitments to design and R&D, long-lead procurements, and funding contributions to the ITER Organization. A yearlong CR could be problematic depending on specific guidance.
- Despite the funding problems, the U.S. has remained fully engaged in ITER activities at the international level, including those subsidiary bodies associated with its governance. The Export Control Working Group is the newest, established in FY 2008.
- The most urgent tasks at present are to complete work on the overall ITER design and systems engineering and establish realistic schedule and cost baselines.

### OFES Strategic Planning

(Near-Term & Long-Range Activities)

#### Why?

- OFES Program is entering into the ITER/Burning Plasma era.
- Congress directed DOE to provide a report that describes a credible plan for a world-leading U.S. fusion program by March 1, 2009.



#### How?

- OFES is developing a Strategic Plan Overview for the entire fusion program to respond to the Congressional Request.
- Draw upon recent and soon-to-be-completed reports and studies.
- The National Research Council (NRC) report, "Plasma Science Advancing Knowledge in the National Interest", May 2007
- FY 08 √ "Priorities, Gaps and Opportunities", October 2007 (Greenwald Panel)
- Toroidal Alternates Panel, November 2008 (Hill Panel)
  HEDLP Panel, January 2009 (Betti Panel)

  - Conduct a series of Research Needs Workshops (ReNeWs) to obtain input for the detailed Strategic Plan(s).



Long-



#### **Completing the Near-Term Activity**

- Presented Outline to FESAC, and DOE is currently completing draft.
- FESAC will receive a draft of the Strategic Plan Overview in the late November/early December 2008 timeframe for review and comment.
- FESAC should present a single set of comments at the January 13-14, 2009 FESAC Meeting, with the final set to DOE by January 20, 2009.
- DOE will consider the FESAC input in developing the final version of the Strategic Plan Overview.





# Random Observations

- Broadening the fusion program research key element to new strategic vision
- Advanced state of our capabilities core transport standard model confirmation in JET
- Could mirror confinement play a role in the fusion program?
- Could fusion-fission play a role? workshop next year