



U.S. DEPARTMENT OF
ENERGY

Office of
Science

DOE Long Term Commitment to NERSC

NUG Business Meeting of Feb 12th, 2013

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Advanced Scientific Computing Research (ASCR)

ASCR 10 Year Plan

- **Replace 2007 ASCR Strategic Plan (on ASCR homepage; science.energy.gov/ascr).**
- **Only constraint: 30 Megawatts (\$30 million per year per HPC Center - OLCF “proposal”). Also 17 MW NEPA limit and HPC Center transients.**
- **January 30th presentations by the Directors from NERSC, ALCF, OLCF, and ESnet.**
- **NERSC included thru NERSC-10.**
- **FY13 President’s Budget would increase annual funding from \$57.8 million to \$65.6 million.**



Office of Science (SC) 10 Year Plan

- **Government Performance and Results Modernization Act of 2010.**
- **By Sept 30th, prioritization across SC based on world-leading science, readiness, and costs.**
- **ASCR included thru NERSC-10.**
- **ASCAC Charge.**



NERSC-7, NERSC-8, and NERSC-9

- **NERSC-7 under construction, > \$50 million (including Lease To Own).**
- **NERSC-8 under design, > \$50 million (including Lease To Own).**
- **Program Requirements Reviews being held for NERSC-9 Mission Need Statement (BER and HEP held, Fusion next month, BES in Sept, and ASCR and NP in FY14).**



CRT and NRP

- **Computational Research and Theory Facility (CRT) under construction at gate, will house NERSC-7, NERSC-8, NERSC-9, and NERSC-10.**
- **DOE to fund bond payoff.**
- **NERSC Relocation Project (NRP) under construction to provide power and cooling for NERSC-7 and NERSC-8 at CRT, initial power cables for NERSC-9/NERSC-10, \$20 million.**



Allocations – ERCAP (1 of 2)

- **Allocations at the PI level made by the SC Program Offices (ASCR Research Division, BES, BER, Fusion, HEP, and NP).**
- **SC Program Offices provided with 80% to 85% of ERCAP capacity as Target, based on the prior year approvals by the SC Deputy Director for Science (Dehmer).**
- **Dehmer annually approves 15% to 20% of ERCAP capacity as Over Target allocations at the SC Program Office level.**



Allocations – ERCAP (2 of 2)

- **SC Program Office prepare justifications for Over Target based on your proposals.**
- **ASCR Director provides recommendations by NERSC Program Manager; e.g., based on usage.**
- **First 2 years of new HPC, Over Target at 20%.**
- **SC Program Offices provided briefing on INCITE and ALCC awards.**
- **ASCR Research Division < 5.6% of ERCAP.**



HPC Center Director's Discretionary

- **10% of capacity.**
- **NISE at NERSC.**
- **Similar programs at ALCF and OLCF' i.e., 6 allocation opportunities.**
- **Request For Proposals (RFP) includes new research area, new use of HPC HW, or new HPC SW.**
- **Only DOE involvement is the review of the awards during annual Operation Assessments of the HPC Centers.**



INCITE

- **60% (or more) of ALCF and OLCF capacity.**
- **Awards made by ALCF and OLCF; i.e., not ASCR or other SC Program Offices.**
- **Only DOE involvement is the biennial review of the awards during Operation Assessments of the HPC Centers.**
- **RFP staggered with ERCAP and ALCC.**
- **RFP goes beyond DOE mission.**



ALCC

- **10% of NESRC capacity (i.e., ERCAP 80% of NERSC capacity).**
- **Up to 30% of ALCF and OLCF capacity.**
- **Email peer reviews, followed by Panel review (with ALCC Program Manager recommendations), with award decisions by ASCR Director.**
- **RFP includes DOE mission; i.e., beyond SC mission (beyond ERCAP RFP).**
- **Program Manager is Dr. Carolyn Lauzon.**

