

U.S. Department of Energy



Office of Science

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## **SC Facilities and Infrastructure Overview and Status**

June 6, 2007

FIMS Workshop

New Orleans, LA

John Yates

Director, Laboratory Infrastructure Division



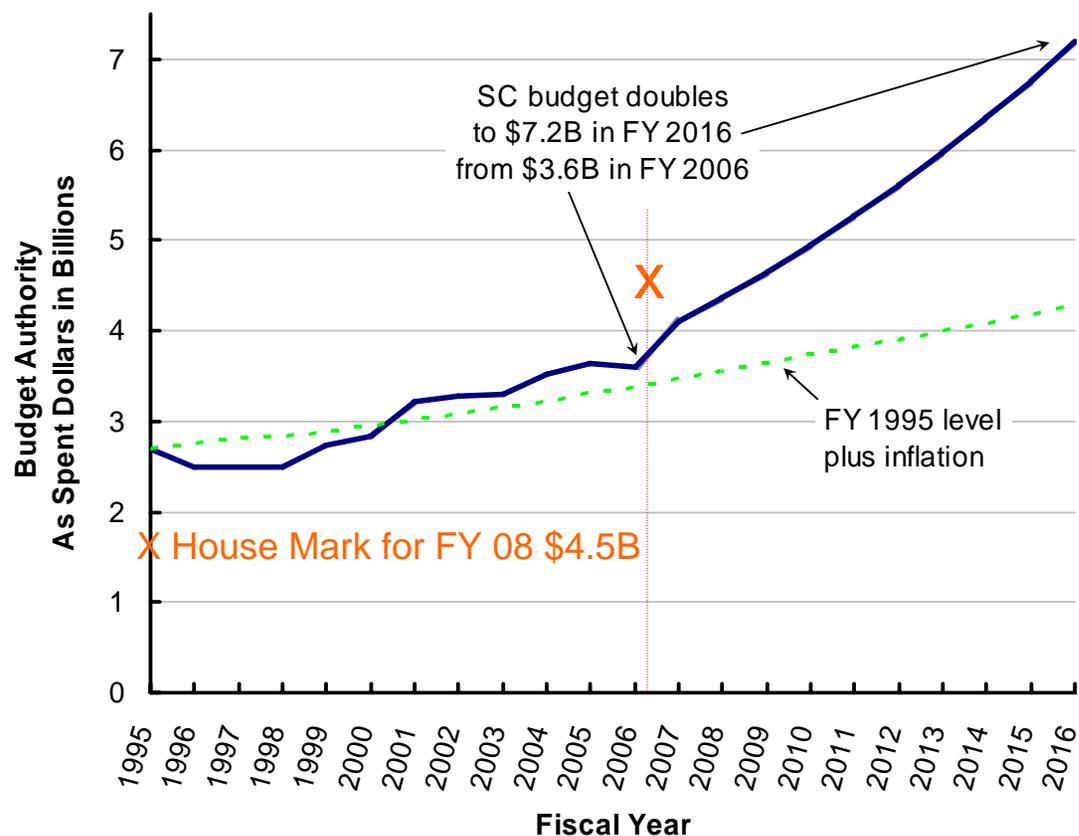
# The President's American Competitiveness Initiative

“This funding will support the work of America's most creative minds as they explore promising areas such as nanotechnology, supercomputing, and alternative energy sources.”

**President George W. Bush**  
**State of the Union Message**  
**January 31, 2006**

An historic opportunity for our country – a renaissance for U.S. science and continued global competitiveness.

## Office of Science Budget Doubling from FY 2006 to FY 2016





# SC Facilities Management

- SC is second biggest owner of research facilities in DOE
  - Operate 10 laboratories – 6 multiprogram and 4 program dedicated
  - Over 1,000 buildings; 20 Million sq. feet.
  - Replacement Plant Value of \$13B including \$5B for programmatic facilities and \$8B for the general purpose facilities
- Maintenance of the general purpose facilities is supported by laboratory overhead.
- Line item investment to replace, renovate and rehab existing space is supported by the SLI program which is under the SC Chief Operating Officer



# RPV of General Purpose Facilities up \$1B from FY 05

	FY 04 RPV	FY 05 RPV	Feb 2007 RPV
Ames	\$52,987,900	\$54,693,350	\$58,755,510
ANL	\$1,297,246,063	\$1,432,195,209	\$1,553,183,582
BNL	\$1,329,226,987	\$1,461,418,057	\$1,697,998,656
Fermi	\$557,360,165	\$598,364,040	\$676,109,623
LBNL	\$650,000,000	\$656,912,215	\$804,959,682
NDRL	\$11,051,136	\$11,051,136	\$14,347,193
ORISE	\$22,114,885	\$23,683,864	\$20,995,249
ORNL	\$1,333,887,498	\$1,379,178,119	\$1,618,775,935
ORO	\$77,720,988	\$79,790,677	67,190,080
PNNL	\$59,338,733	\$64,738,198	\$79,591,674
PPPL	\$252,250,827	\$275,483,768	\$297,785,065
SLAC	\$849,482,895	\$904,804,001	\$978,616,497
TJ	\$109,883,439	\$120,171,142	\$174,400,321
<b>Total SC</b>	<b>\$6,602,551,516</b>	<b>\$7,062,483,776</b>	<b>\$8,059,320,245</b>



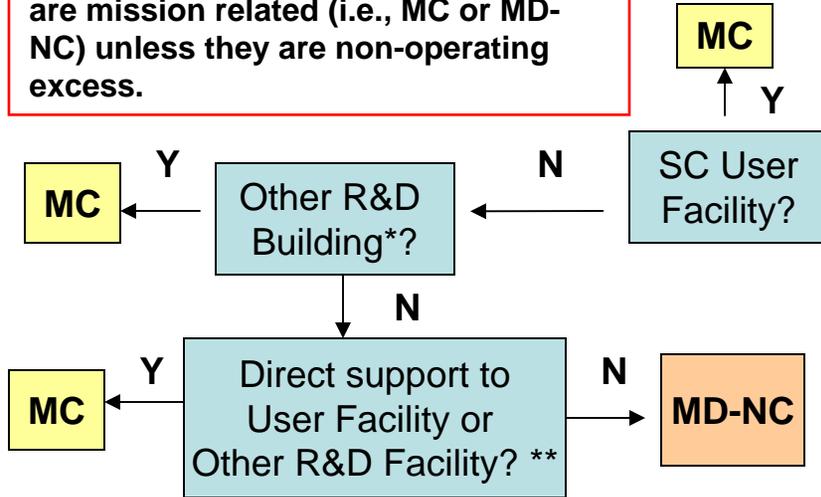
# Maintenance

- SC's goal is to fund maintenance so that deferred maintenance does not increase.
- SC's minimum maintenance investment goal is 2% of RPV. However, 2% at some sites will not be sufficient to keep deferred maintenance from increasing
- SC estimated maintenance for FY 07 is \$153M and exceeds the 2% Goal.



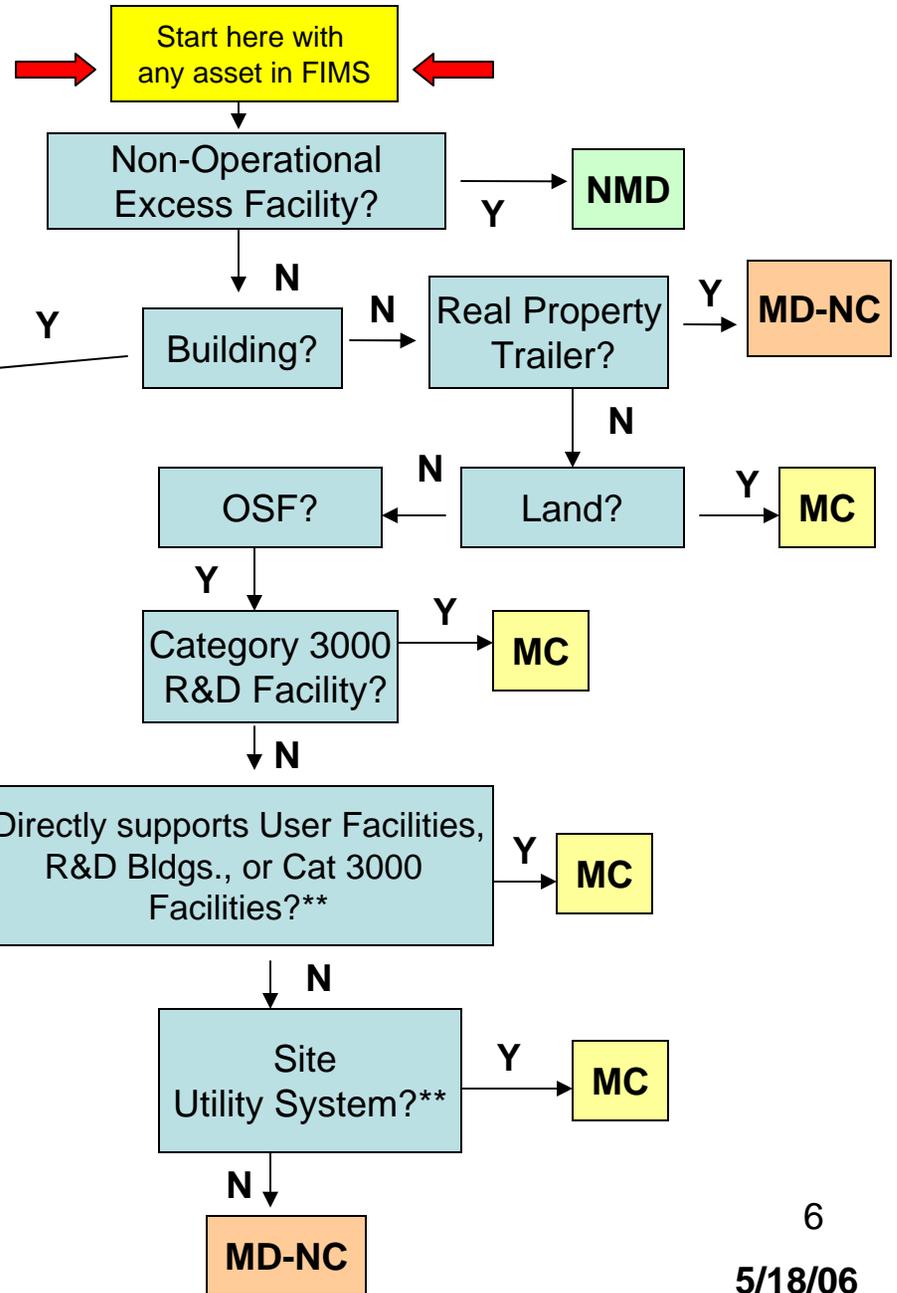
# Determining Mission Dependency of SC Assets

**General SC Philosophy: All facilities are mission related (i.e., MC or MD-NC) unless they are non-operating excess.**



**MC** – Mission Critical  
**MD-NC** – Mission Dependent, Not Critical  
**NMD** – Not Mission Dependent

\*Generally all Category 700 Series buildings  
 \*\* if this facility goes down, the User Facility or Other R&D Facility goes down (even if only for 5 minutes)





# SC Deferred Maintenance

- SC DM as of FY 06 EOY is \$500M
- \$225M is “bad” DM (above the goals)

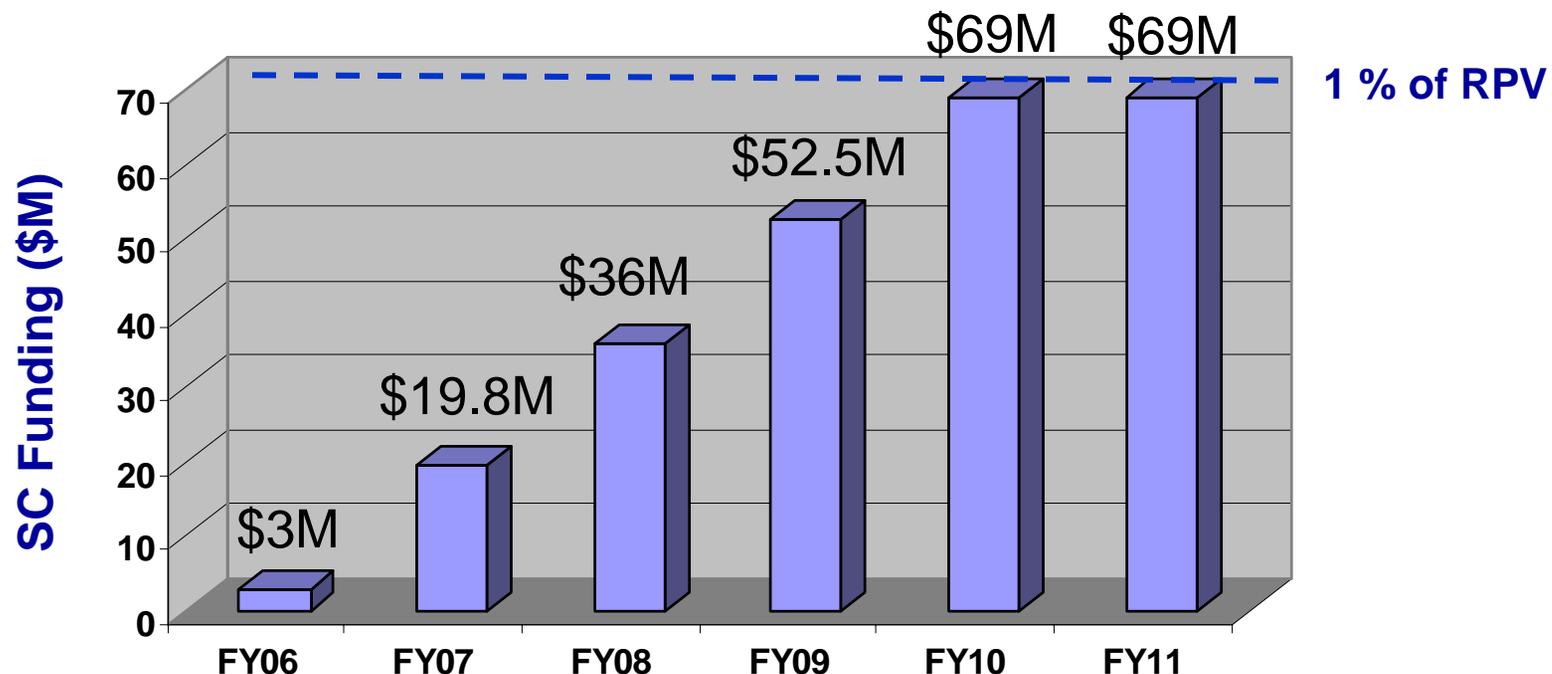
Site	FY 06 Deferred Maint.	Mission Dependency Code	FY 08 ACI Goals*	Actual ACI	DM Over Goal
AMES	\$1,263,883	Mission Critical	0.964	0.976	\$0
AMES	\$181,940	Mission Dependent	0.948	0.956	\$0
	<b>\$1,445,823</b>				\$0
ANL	\$52,573,930	Mission Critical	0.964	0.958	\$7,860,603
ANL	\$9,902,640	Mission Dependent	0.948	0.965	\$0
ANL	\$45,021	Not Mission Dependent	0.85	0.995	\$0
	<b>\$62,521,591</b>				\$7,860,603
BNL	\$59,919,604	Mission Critical	0.964	0.950	\$16,494,814
BNL	\$28,912,632	Mission Dependent	0.948	0.912	\$11,909,238
BNL	\$1,508,474	Not Mission Dependent	0.85	0.927	\$0
	<b>\$90,340,710</b>				\$28,404,053

\*FY 08 Goals from 2007 TYRT



# Deferred Maintenance Reduction Initiative

- Ramp up to 1% of RPV over 5 years
- Continue funding until DM is within goals
- DMR funded from overhead





# Total Requirements

- Deferred Maintenance (DM)
- Rehab and Improvement Costs (RIC)
  - ES&H
  - Mission Readiness
  - Sustainability
  - Cost Effectiveness
  - Productivity
  - Work Environment





# SLI Infrastructure Initiative

- To address the backlog of modernization needs, SC is proposing an Infrastructure Initiative starting in FY 09 to modernize the general purpose infrastructure at SC laboratories\*
- Line item construction will replace and rehab existing buildings and associated support infrastructure
- Funding increases from \$64M in FY 08 to about \$200M in FY 14
- GPP at multiprogram labs will be eliminated and labs will fund GPP needs via IGPP
- 2007 Ten Year Site Plans will reflect the initiative and AUI and Operating Costs/sf targets in the TYRT

\* SC's 20 Year Scientific Facilities Plan covers the large user facilities such as light sources and accelerators.



# SLI Infrastructure Initiative

- Over 1.5M sf of space will be replaced and 890,000 sf rehabbed
- By FY 2018, this Initiative will eliminate over \$1B in Rehab and Improvement Costs (RIC) as well as an estimated \$257M of deferred maintenance
- By FY 2018, the SC laboratories will have facilities and infrastructure that:
  - Offer a safer, healthier and more secure work environment for employees and visitors;
  - Have improved mission readiness;
  - Are more efficient to operate and maintain, with a minimal deferred maintenance backlog;
  - Meet or exceed DOE sustainability goals
  - Support worker productivity and facilitate effective interaction with colleagues; and
  - Provide a satisfactory work environment worthy of world-class scientific institutions and able to help attract and retain high quality scientific staff



# SC FIMS Validations

- NDRL – 12/28/06 – Green
- Lovelace – 2/6 – Red
- AMES - 3/6 – Green
- ANL – 3/13-3/14 - Green
- TJNAF – 3/13-3/14 - Green
- PNNL – 3/20 – Green
- BNL – 5/15-5/16 - Green
- ORNL – 5/21-5/22 - Green
- ORO – 5/23-5/24 - Red
- ORISE – 5/23 - Green
- OSTI – 5/22 – Green
- PPPL – 5/24-5/25 – Green
- SLAC – 6/12-6/13 - TBD
- Fermi – 6/13-6/14 - TBD
- LBNL – 6/26-6/27 - TBD

*SC Sites: Thank you for all your efforts!*



## Science Laboratory Infrastructure (SLI) Program

- **Overview:** The SLI program supports SC mission activities at SC laboratories by addressing needs related to:
  - General purpose infrastructure
  - Excess facilities disposition
  - Oak Ridge landlord
  - Payment-in-Lieu-of-Taxes (PILT)
- **On-going Line Item Projects:**
  - PNNL Physical Sciences Facility
  - LBNL Bldg 77 Rehab
  - SLAC Safety and Operational Reliability
  - ANL Building Electrical Service Upgrade, Phase II
  - BNL Renovate Science Laboratories, Phase I
  - ORNL Modernize Building 4500N, Wing 4, Phase I
  - LBNL Seismic Safety Upgrade of Buildings, Phase I
  - LBNL Bevatron D&D

*Info on these projects is in the back-up*



# New Buildings Recently Completed

BNL Research Support Building  
TEC \$18.2M, 65,000 sf



TJNAF CEBAF Center  
Addition, Phase I  
TEC \$13M, 45,000 sf



# Issues

- RPV calculations
- Need for better systems at the site level for updating DM databases as maintenance and other projects remove DM
- Suggest new FIMS field for Deferred Maint Reduction (DMR) funding to be updated annually
- Site Factors – why so many? Consistency across sites.



# Special Recognition

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Theresa Kelly

Thanks!

SC could not do it without you!