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FY 2013 Site Sustainability Plan

Monica Witt

LANL SITE SUSTAINABILITY

FY 2013 Site Sustainability Plan Director's message…

MESSAGE FROM THE DIRECTOR

In 2013, Los Alamos National Laboratory will celebrate its 70th year of service to the nation.

Our people, facilities, and missions have stood the test of time because our predecessors took the actions necessary to sustain the intellectual and scientific vitality of the institution. With this Plan, we continue those actions.

We are making sustainability a way of doing business at the Laboratory, and it starts with individual choices. For example, saving energy equals saving money. Preventing pollution means protecting the environment for our workers and the community. Building sustainability into purchasing choices builds a more efficient operation.

The actions within the Site Sustainability Plan are part of the Laboratory's Long Term Strategy for Environmental Stewardship & Sustainability to create a sustainable future. By supporting sustainability and this plan, I'm challenging all Laboratory employees to reduce our environmental impact and keep us on the right path for mission growth.

Put simply, sustainability is the right thing to do to enable another 70 years of service.

Charles F. McMillan

Laboratory Director

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Sustainability Goals

DOE/NNSA Goal
28% Direct and Purchased Electricity (Scope 1 & 2) GHG reduction from 2008 baseline by FY20
13% Indirect (Scope 3) GHG reductions by FY20 from FY08 baseline
26% water intensity reduction by 2020 from FY07 baseline
30% Energy Intensity Reduction by 2015 from FY03 baseline
15 % of existing buildings meet HPSB principles of FY15
Procurements meet sustainability requirements and include sustainable acquisition
Power Utilization Effectiveness (PUE) of 1.4 by FY15

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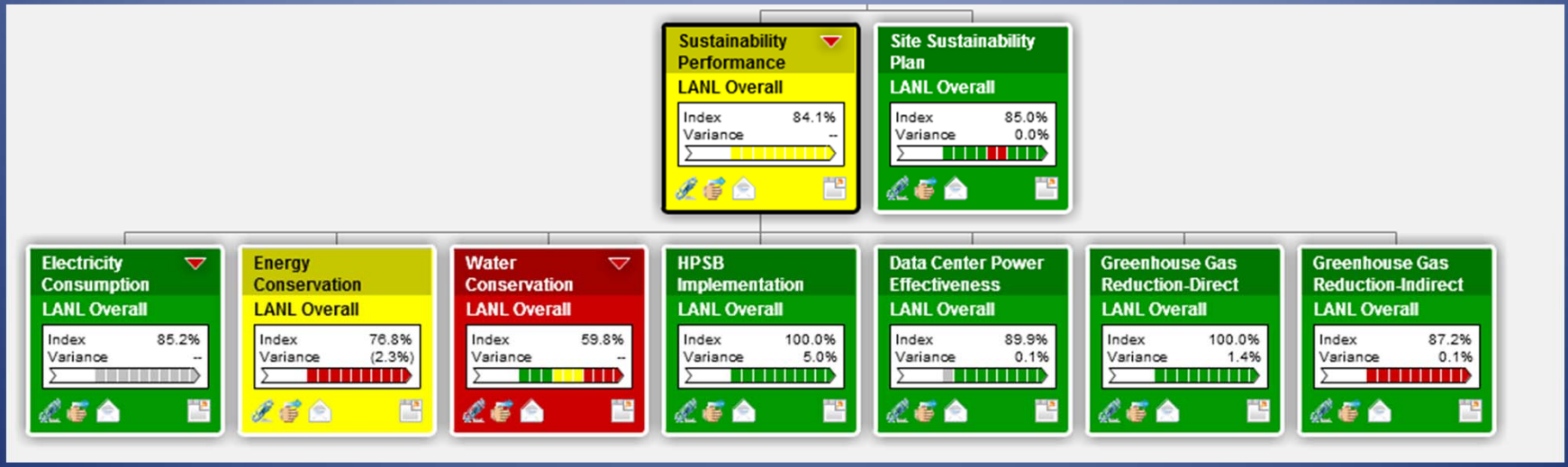
GOAL 1: Greenhouse Gas (GHG) Reduction and Comprehensive GHG Inventory

- Develop a plan to reduce employee commuting through telecommuting, work schedule changes, etc.
- Purchase Renewable Energy Credits



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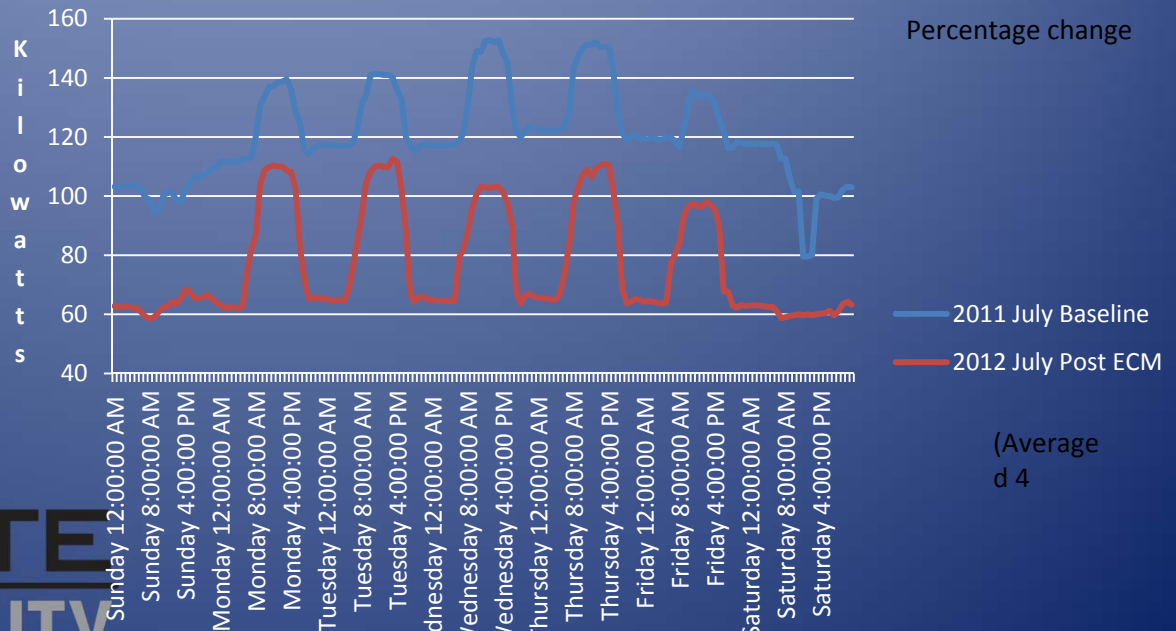
GOAL 2: Buildings, ESPC Initiative Schedule, and Regional & Local Planning

Sustainability Program funding is projected to reduce energy intensity by 3% this year by implementing the following projects:

- Design & install Building Automation Systems modification and night setback in large exhaust buildings
- Conduct steam trap survey and system maintenance
- Complete Recommissioning on 4 existing buildings



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GOAL 3: Fleet Management. All NNSA sites are expected to maintain current progress in support of established goals.

- Determine the feasibility of establishing on-site alternative fueling capability
- Fuel maintenance vehicles from on-site mobile fuel truck to increase E-85 usage.
- Develop a multi-year plan to reduce non-mission critical fleet by net of 35% for non-mission critical vehicles

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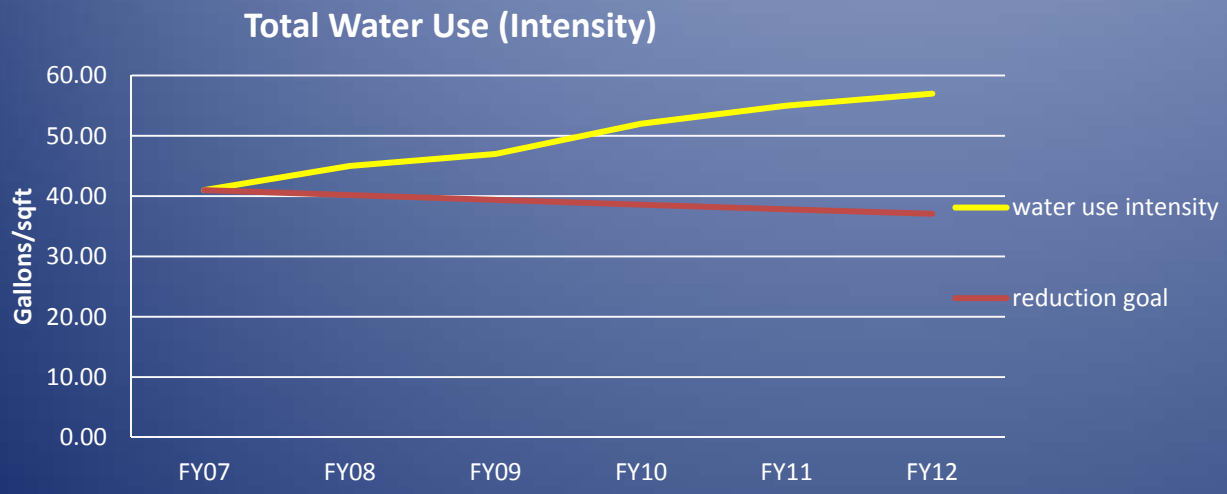
GOAL 4: Water Use Efficiency and Management

- Increase Cooling Tower Cycles of Concentration--implement silica inhibitors and automatic control and detection equipment in 3 cooling towers to reduce water usage by 40% in those CTs (target: 2 by the end of May, 3rd by the end of August)
- Replace once-through bearing cooling at steam plant
- Operate SERF to reuse 33 million gallons



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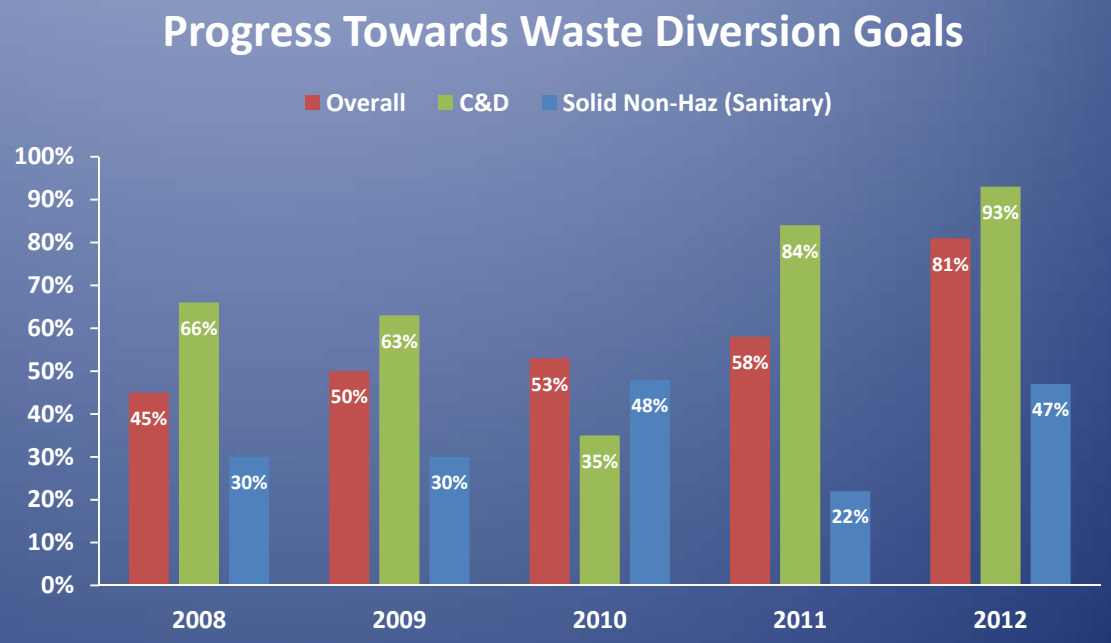
GOAL 5: Pollution Prevention and Waste Reduction. *All NNSA sites are expected to maintain or exceed current progress in support of established goals.*

- Conduct office recycling communications campaign



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GOAL 6: Sustainable Acquisition

- Modify subcontracts as practicable to ensure that they require the supply or use of environmentally preferable products or services.
- Identify energy affecting subcontracts such as service subcontracts that include electrical repair parts and modify as practicable to ensure that they require the supply or use of environmentally preferable products or services.

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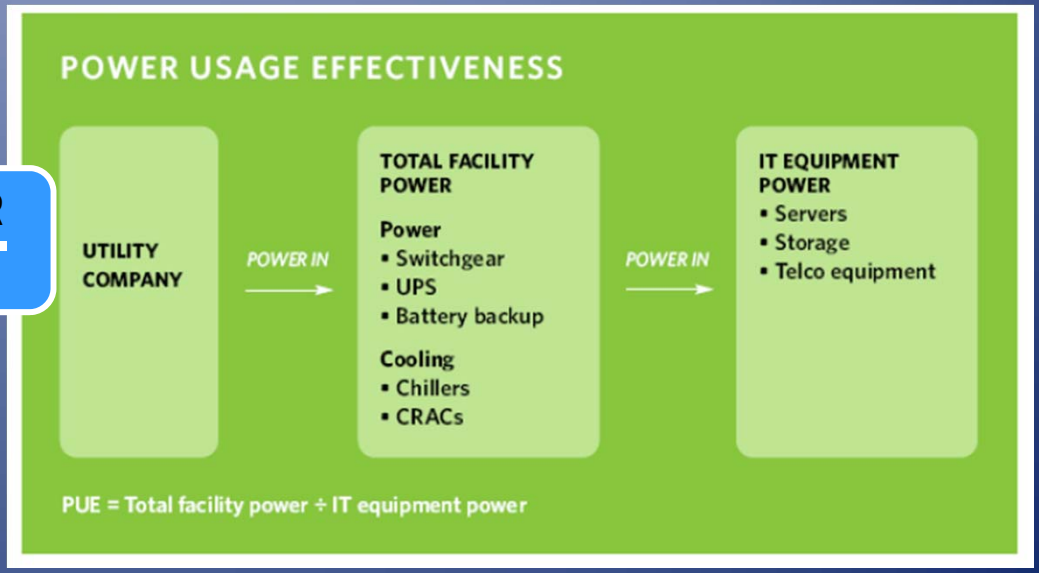
GOAL 7: Electronic Stewardship and Data Centers

- Data Center Evaluation Team to identify and evaluate the extent of metering required using an “economically practicable” determination
- Measure IT power within the CCF to calculate PUE
- Upgrade to Configuration Manager 2012 to implement power management on all eligible computers

$$PUE = \frac{\text{TOTAL FACILITY POWER}}{\text{IT EQUIPMENT POWER}}$$



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GOAL 8: Innovation & Government-Wide Support

- LANL is working to demonstrate control of multiple facilities on-site for up to 1 MW of load that can be controlled to smooth grid fluctuations as part of a research effort to stabilize PV resources with different storage devices.

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