

# Information Services Office Site Update

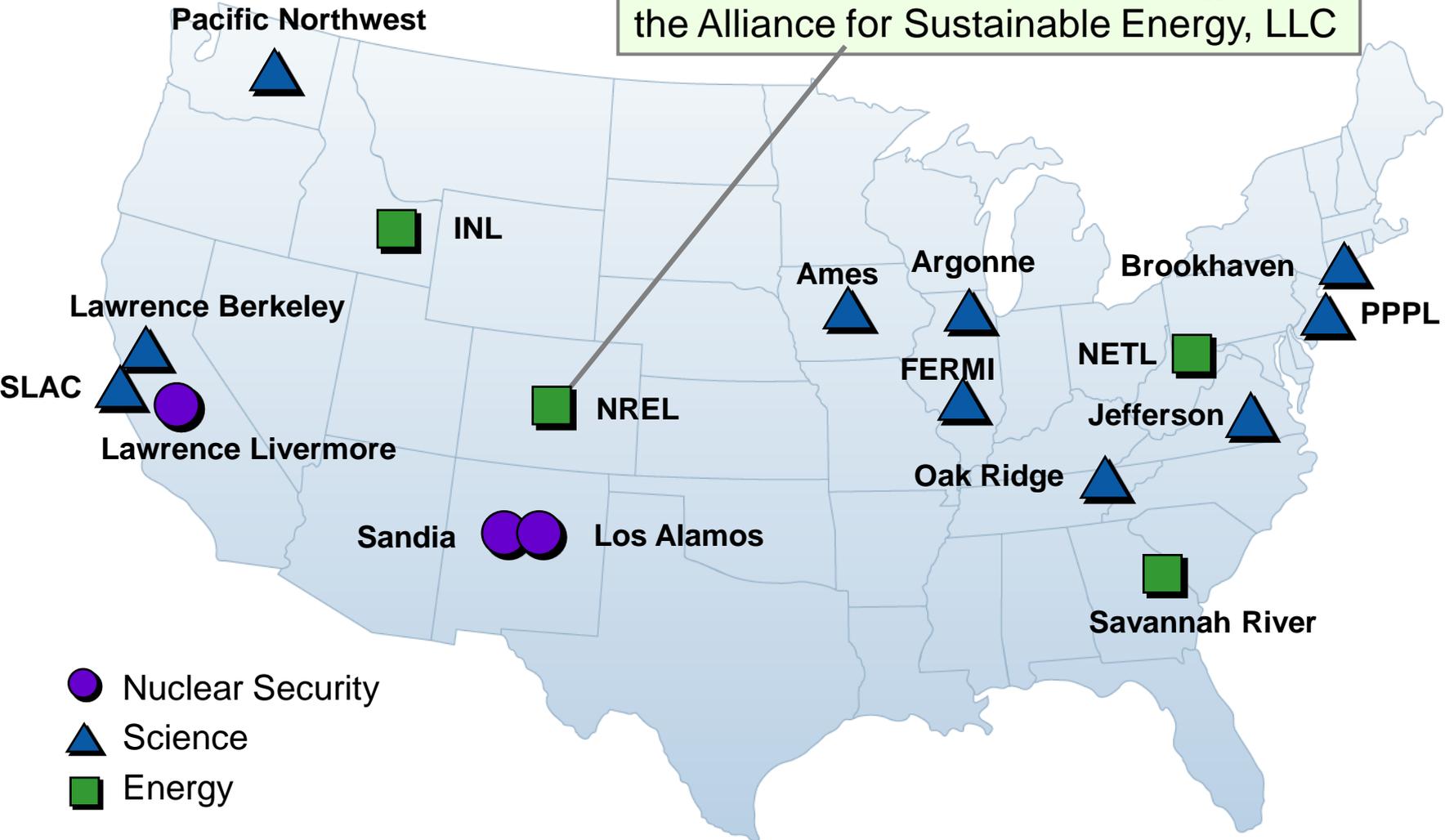


**JILL DEEM**  
**NLIT**

**June 1, 2009**

# Major DOE National Laboratories

Operated for the U.S. Department of Energy by the Alliance for Sustainable Energy, LLC



- Nuclear Security
- ▲ Science
- Energy

# What Makes NREL Unique?

Only national laboratory dedicated to renewable energy and energy efficiency R&D

Collaboration with industry and university partners is a hallmark

Ability to link scientific discovery and product development to accelerate commercialization



# Technology Development Programs



## Efficient Energy Use

- Vehicle Technologies
- Building Technologies
- Industrial Technologies



## Renewable Resources

- Wind and water
- Solar
- Biomass
- Geothermal

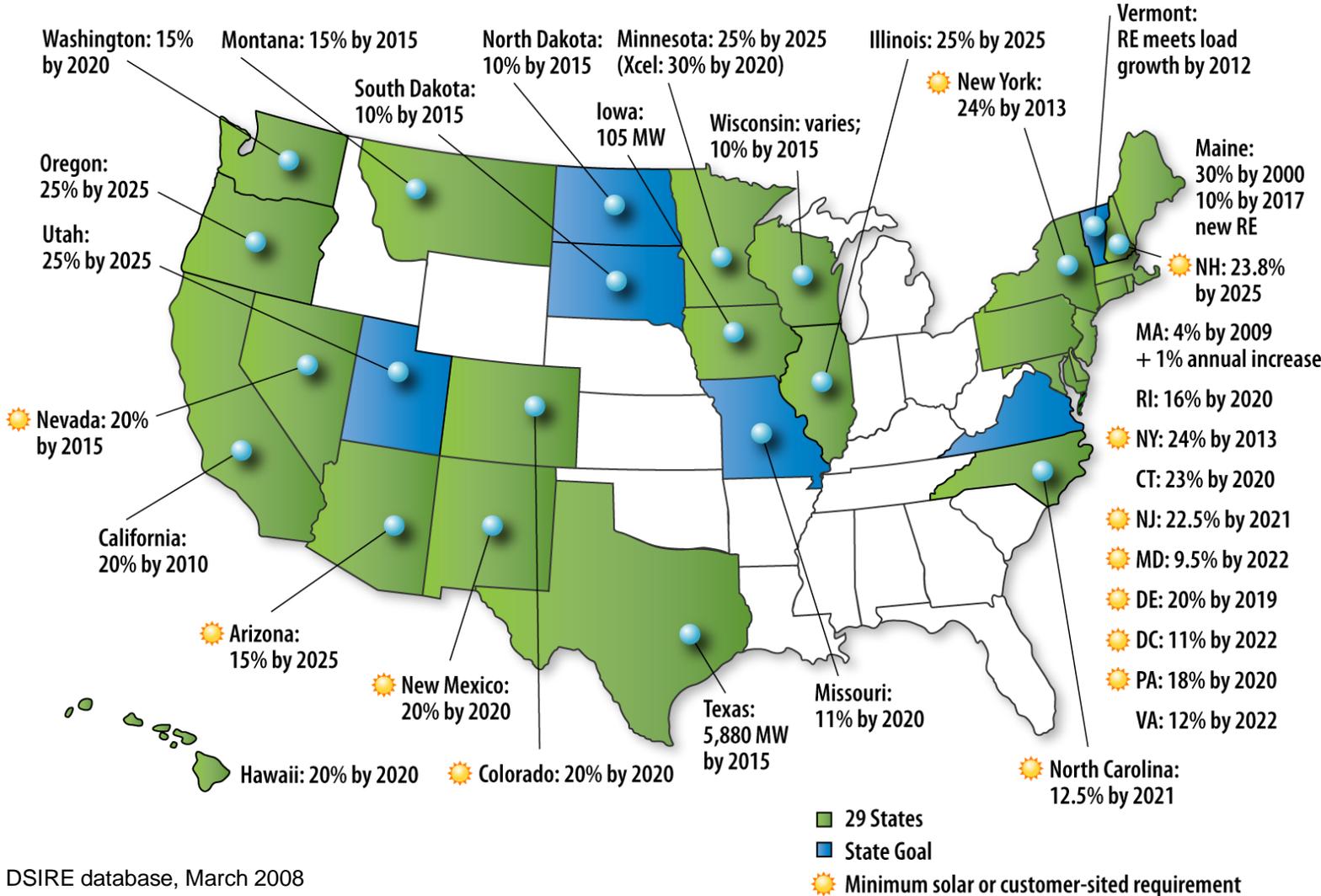


## Energy Delivery and Storage

- Electricity Transmission and Distribution
- Alternative Fuels
- Hydrogen Delivery and Storage

# State Policy Framework

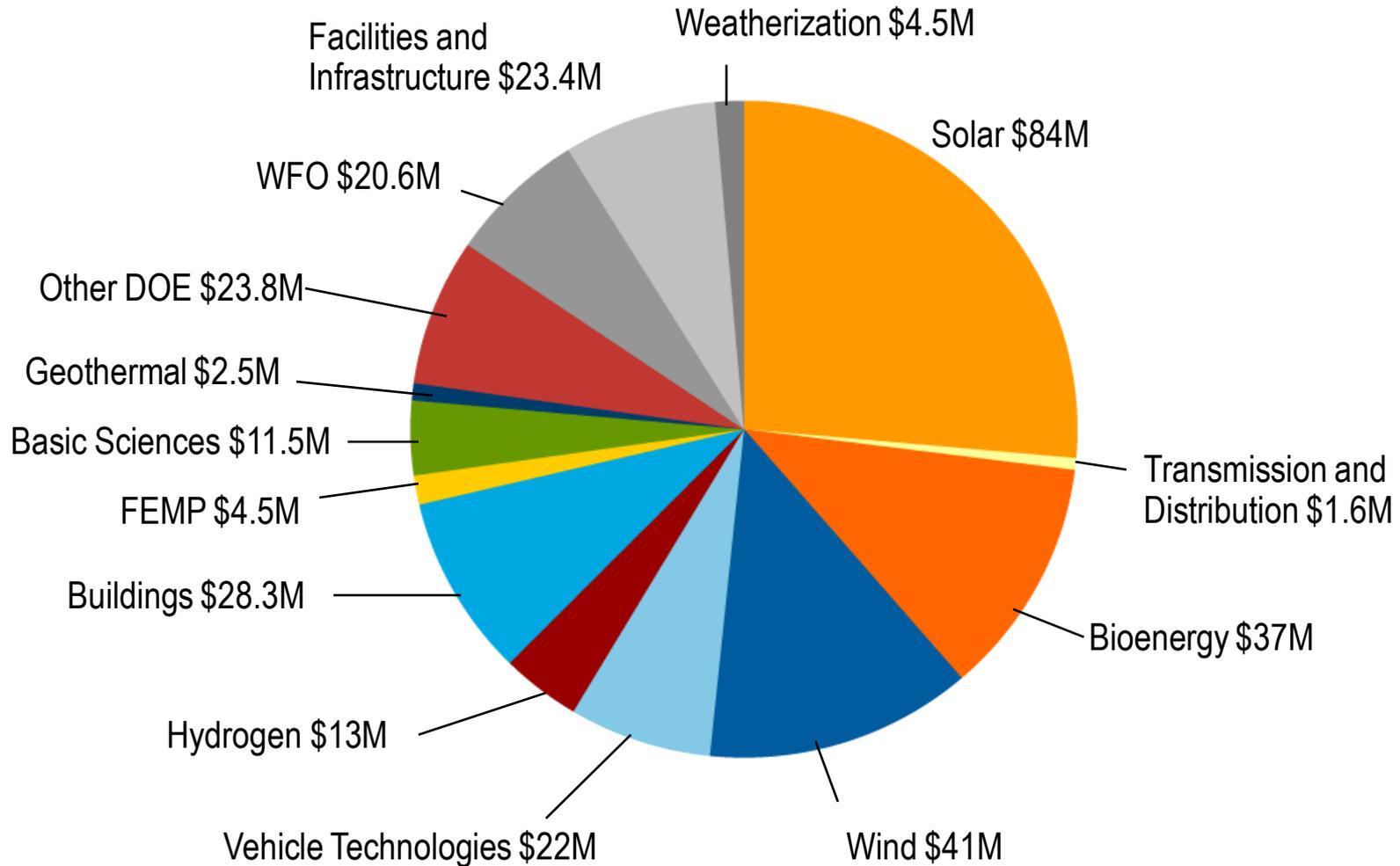
## Renewable Portfolio Standards



Source: DSIRE database, March 2008

# NREL FY2009 Program Portfolio

**\$318 M – add Stimulus \$433M**



Updated October 2008

# NREL Funding and Staffing



Updated December 2008

# NREL: A Model

- Science and Technology Facility achieved LEED Platinum (1<sup>st</sup> of 28 in the world, 1 of 3 Research Labs)
- NREL Site is Carbon Neutral
- Renewable Fuel Heating Plant
- Green IT
- LEED Platinum is standard for new buildings
- PV Array – 750kW



# The Research Support Facility (RSF)

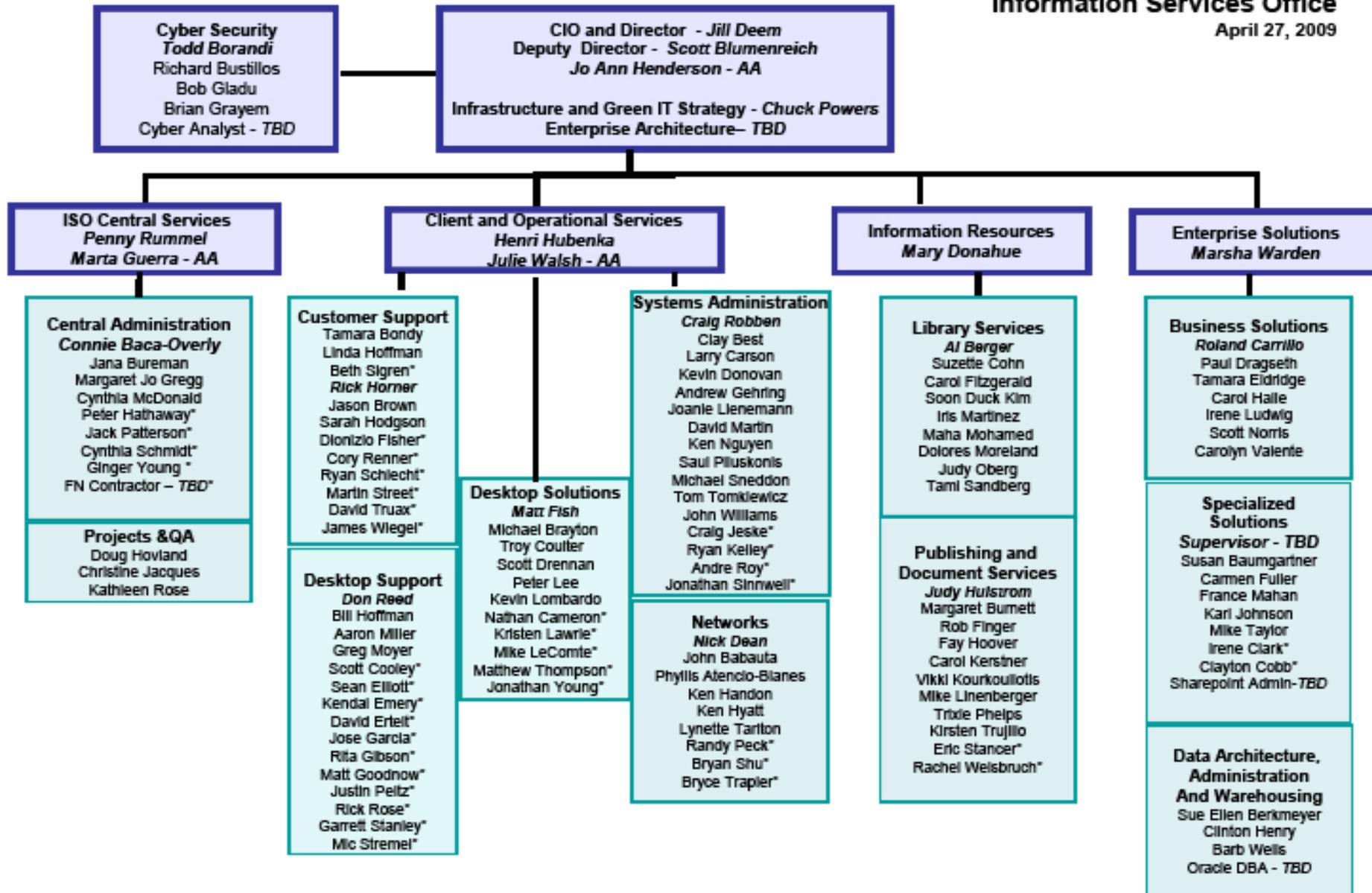


# Natural Cooling for RSF Building and New Data Center



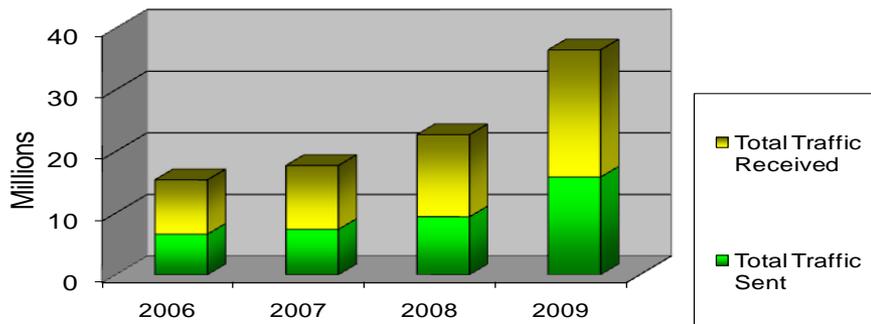
# Information Services Office

April 27, 2009

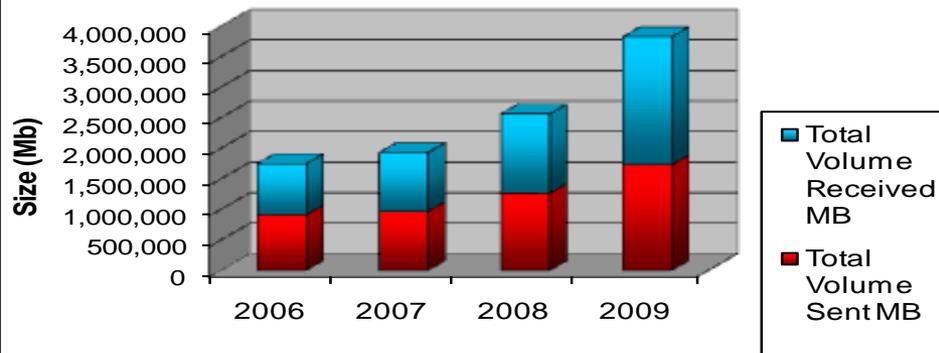


# Resource Utilization and Growth

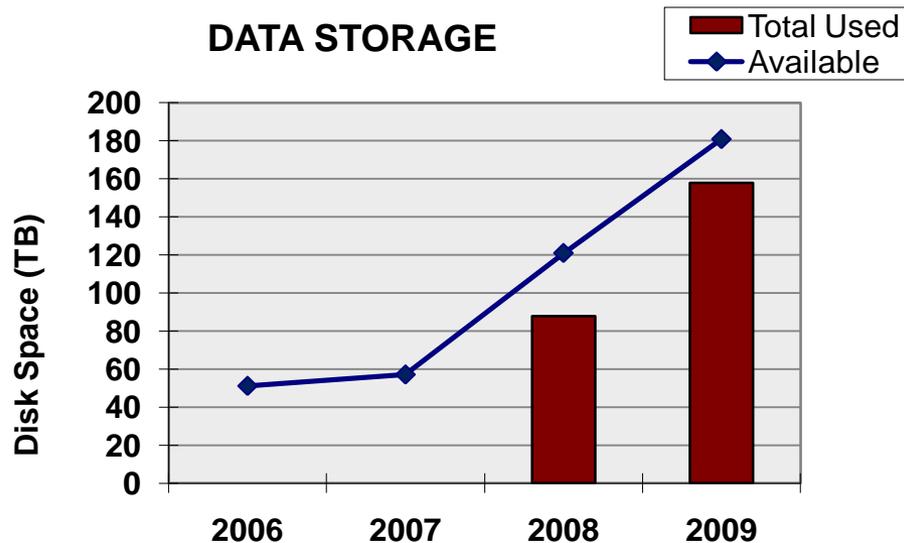
## E-MAIL TRAFFIC



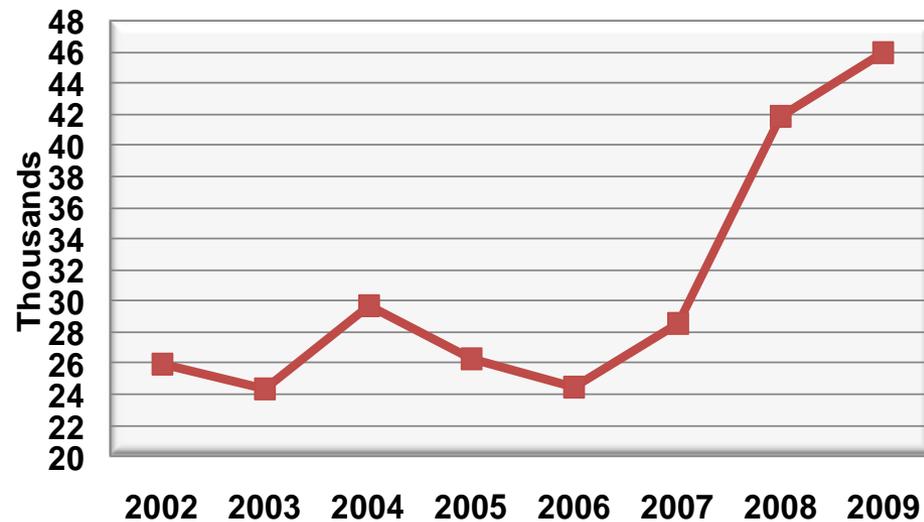
## E-MAIL VOLUME



## DATA STORAGE

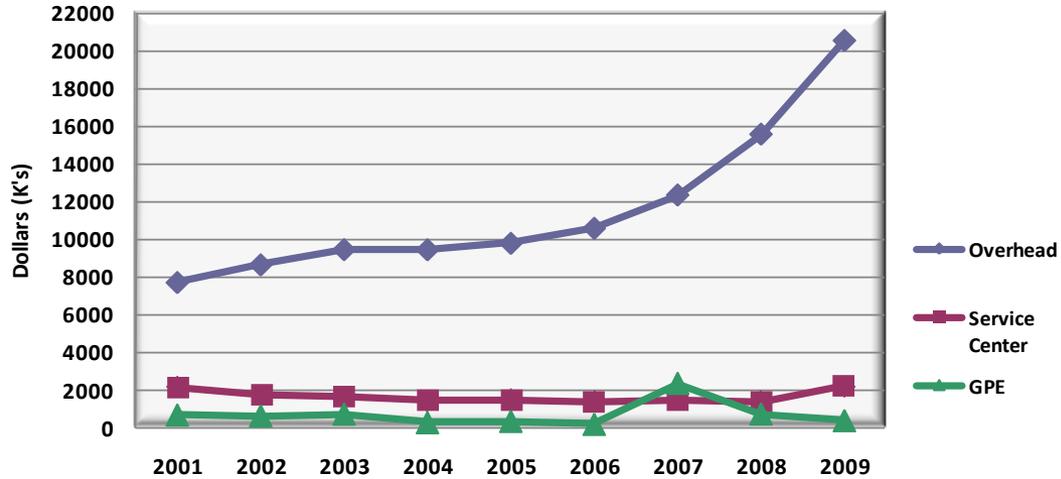


## CLIENT SERVICES TRANSACTIONS

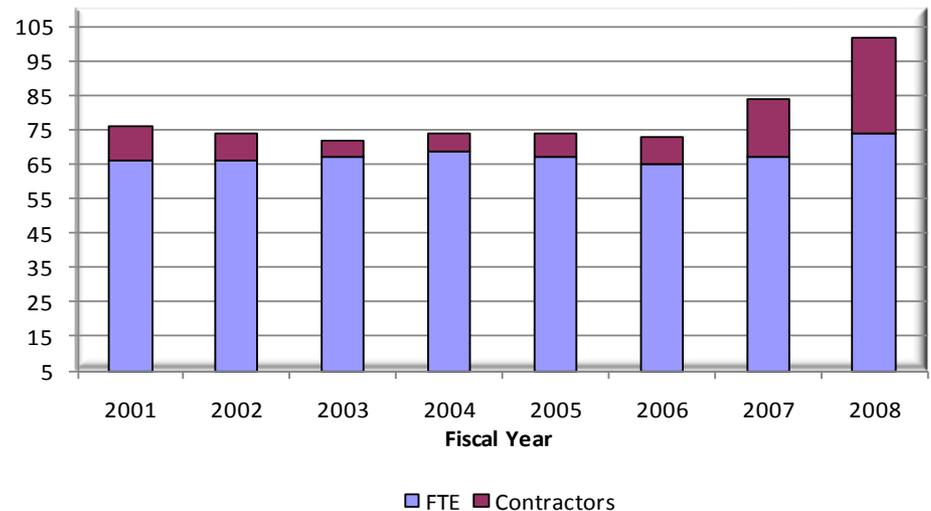


# IS Funding & Staff Through FY09

## IS Funding



## IS Staffing



# IT Environment

## Enterprise Applications

- Messaging—Exchange/OCS
- Collaboration—SharePoint
- ERP--Oracle
- MS Back Office
- SaaS Point Solutions

## End-User Devices

- Workstations—Windows/ Mac/Linux
- Thin Clients
- Blackberrys
- Telepresence—Tandberg

## Server/Storage

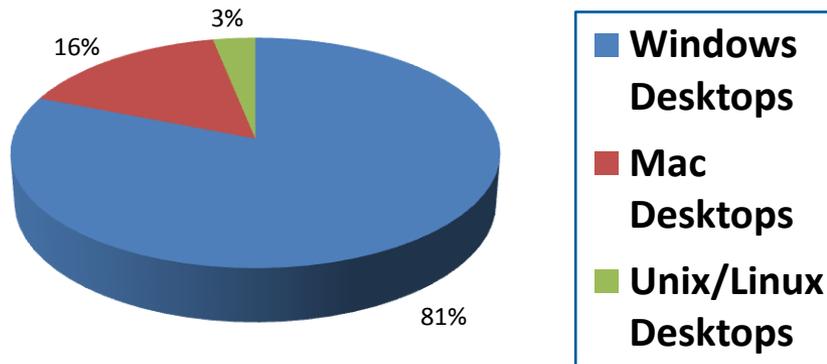
- Servers—Sun/HP Blades
- Cloud Computing (prototyping)
- Storage—Equallogic SAN
- Virtualization—Vmware/ Sun

## Network

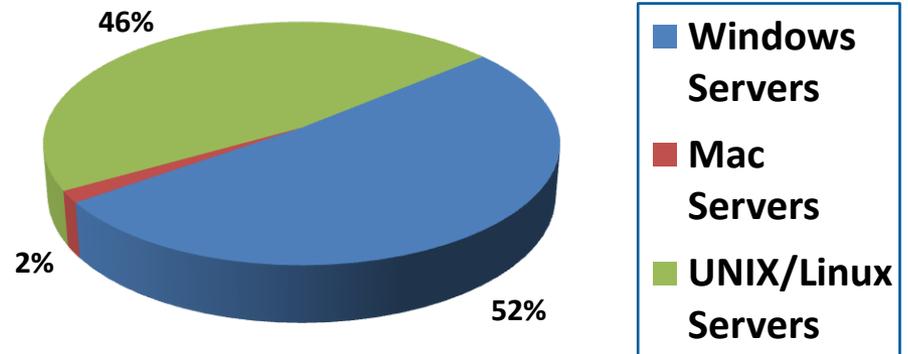
- Cisco routers/switches
- Telecommunications—Avaya -> Cisco VoIP (& soft phones)
- Bandwidth—100mb/sec -> 1gb/sec to desktop

# Operating Systems

## 2829 Workstations

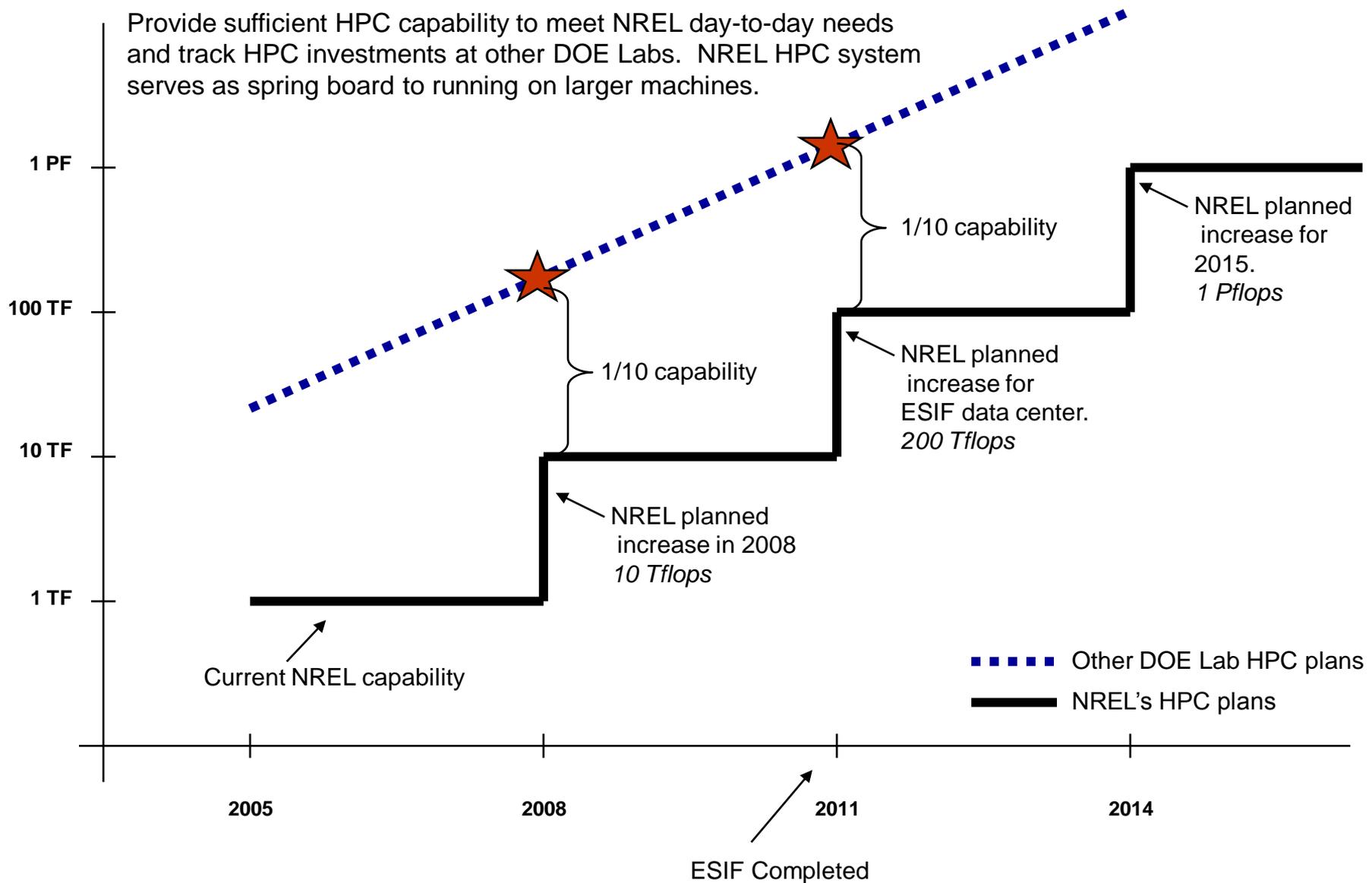


## 321 Servers



# Peak Compute Capability vs. Time for NREL and other DOE Labs

Provide sufficient HPC capability to meet NREL day-to-day needs and track HPC investments at other DOE Labs. NREL HPC system serves as spring board to running on larger machines.



Vista

Audits

# IS Project Activity

Define and Implement Standards & Baseline for Linux

Market Pay (Salary Survey)

Green Data Center

Hyperion

Web Redesign - C&BS

IE7

IP Manage

2-Factor Authentication

Intellectual Property (IP Manage)

Ceridian Upgrade

Electronic Medical Records

Business Governance

payroll upgrade

HR - Applicant Tracking

Defense In-Depth (Cyber Security Improvements)

Architecture Review Board

Science on a Sphere

STARS/STRIPES

Moves

Host Based Intrusion Prevention

Web Redesign - Staff Council

Network Access Control

2007 Exchange

Publications Review/Approval E-Process

Vibe

Web Redesign - Legal

>600 DOE Cyber Requirements

Review Laboratory Computer Requirements

PSTs

Passwords

CWI

Data Center Configuration

Prime Contract Transition

Encryption

Evaluate EE Desktops

Expand Wireless Capability

Energy Use Database (FAC)

Renovations

Storage Web Redesign - Site Operations

Laboratory Computer Review - Requirements

Evaluate CITRIX

New Worker Requirements

Telepresence

Web Redesign - Staff Awards

Blackberry Server

Web Redesign - HR

Visitor Badging System

Leopard Pilot - Mac OS

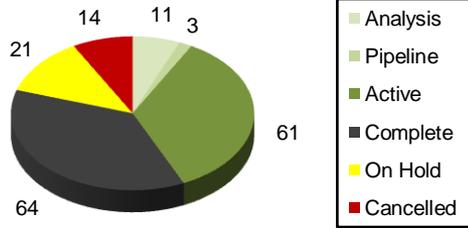
Desktops to Go

Email Monitoring

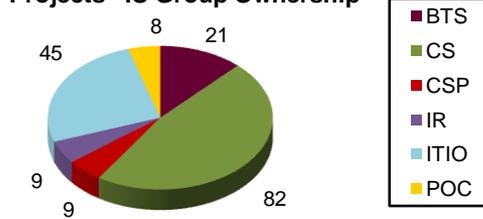
Sharepoint

**Total # of Projects: 174**  
**Total # of Projects in Process: 96**

**Projects - Current Status**

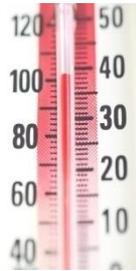


**Projects - IS Group Ownership**

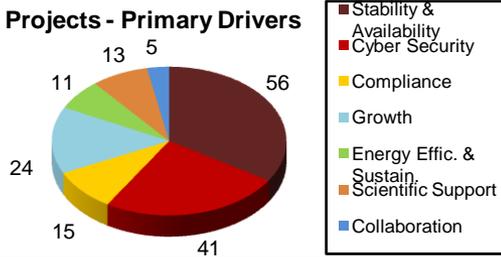


## Hot Topics

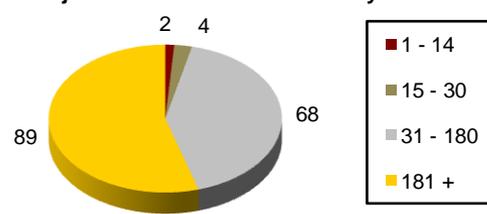
AD/External Collaboration Architecture Project	
SharePoint Implementation	
Resource Management	



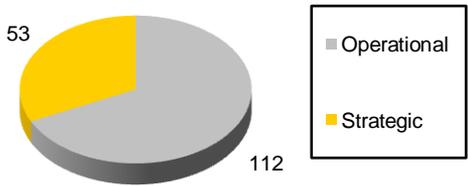
**Projects - Primary Drivers**



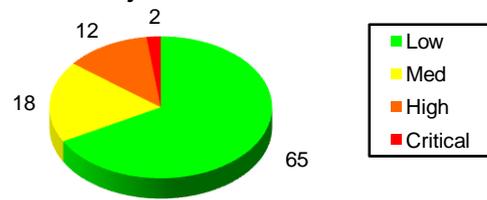
**Projects - Estimated Duration- Days**



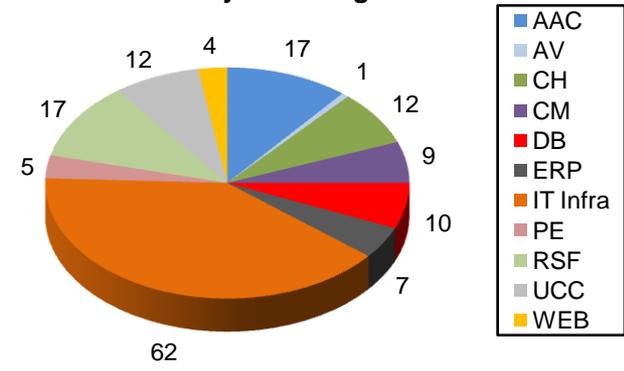
**Projects - Strategic vs Operational**



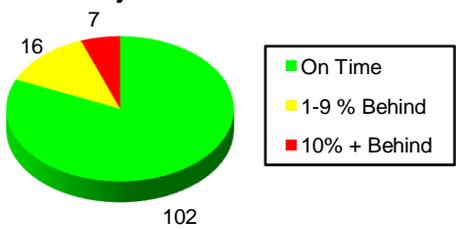
**Projects - Technical Risk**



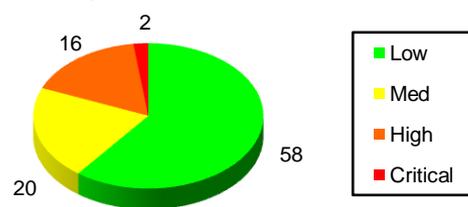
**Projects - Programs**



**Projects - Schedule**



**Projects - Business Risk**



## Recently Completed Milestones

- ❖ Project Management Library
- ❖ Cyber Security 90-day Program (10 of 12 Projects Completed)
- ❖ Oracle Security Patches
- ❖ Adobe Reader 9.1 Deployed

**\*64 Completed Projects in FY 09**

# Software as a Service (SaaS)

---

- Integrated Library System – SirsiDynix Horizon (implemented 2004)
- SPAM management – Postini (implemented 2004)
- Applicant Tracking - Kenexa Recruiting Brass Ring (implemented 2008)
- Library Document Delivery – ILLiad (implementing 2009)
- Employee Performance (evaluating)
- Timekeeping – Deltak through MRI (implemented 2007)
- Payroll – Ceridian (implemented 2007)

# Cyber Security

- Least User Privilege
  - Moved from ~30% to 87% without local admin rights
- Firewall Configurations
  - Closed 65,000+ open ports (now less than 20 open outbound ports)
- Phishing Testing / User Awareness
  - 1<sup>st</sup> test (Feb): 30% provided data
  - 2<sup>nd</sup> test (March): 15% clicked
  - Real Phishing hit the lab – 0% clicked
  - Security Awareness Screensavers
- VLAN's are in place for legacy systems and Foreign Nationals

# NREL NLIT Attendees

---

- Jill Deem - Chief Information Officer
- Scott Blumenreich - Deputy Director
- Chuck Powers - Infrastructure & Green IT Strategy
- Craig Robben - Manager, System Administration
- Andrew Gehring - Senior Unix Administrator
- Larry Carson - Windows System Engineer
- Michael Brayton – Senior Desktop Integrator
- Henri Hubenka - Manager, Client & Operational Services
- Connie Baca-Overly - Manager, Central Administration
- Don Reed - Manager, IT Desktop Integration and Support
- Marsha Warden - Manager, Enterprise Solutions
- Susan Baumgartner - Intranet Project Manager
- Witt Sparks – Transportation Technologies & Systems
- David Sickinger – Materials & Computational Science

# NREL - NLIT Presentations

---

## **Extensible Software Architecture for Web- based GIS apps**

*Monday, 11:00 am - Witt Sparks*

---

## **Least User Privilege and 1 Hour Admin**

*Monday, 3:30 pm - Don Reed*

---

## **Plans & Strategy for Building Green Data Centers**

*Monday, 4:15 pm - Chuck  
Powers and Henri Hubenka*

## **SharePoint Slide Library**

*Tuesday, 3:30 pm - Susan  
Baumgartner, Marsha  
Warden*

---

## **Managing Workstations with Group Policy Preferences**

*Tuesday, 4:15 pm - Michael  
Brayton*

---

## **Collaborative Web Development Architecture**

*Wednesday, 11:45 am - Andrew  
Gehring*

# CIO Survivor *Wednesday – 8:45 am*



# The U.S. Department of Energy's National Renewable Energy Laboratory

- LEED platinum goal for all new construction
- Onsite renewable power generation

