Idaho National Laboratory

Idaho National Laboratory

Meeting the Energy Challenges of Today and Tomorrow

John Grossenbacher

Director, Idaho National Laboratory

Idaho National Laboratory: *Advancing the Nuclear Renaissance*

It's in our vital interest to diversify America's energy supply -- the way forward is through technology. We must continue changing the way America generates electric power, by even greater use of clean coal technology, solar and wind energy, and clean, safe nuclear power.

President George Bush
State of the Union
January 23, 2007

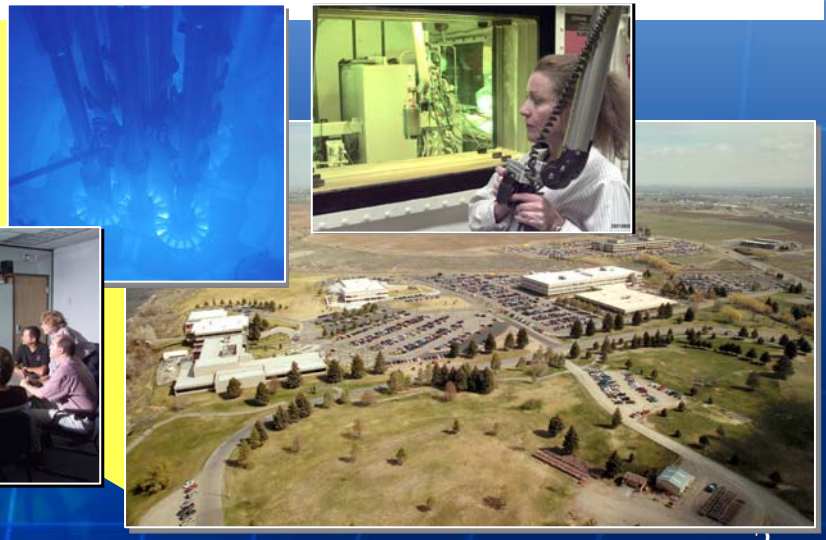
… nuclear power - touted as an emissions-free way to generate electricity — is gaining traction as a way to improve the environment while meeting the nation's growing demands for power… I think it has to be on the table."

Honorable Nancy Pelosi
House Science & Technology Hearing
February 8, 2007

Building on a Solid Foundation

- **Grounded in scientific and engineering capability**
- **Focused on mission**
- **Transforming the culture**

- ***Challenges and opportunities***



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Idaho National Laboratory: *Advancing the Nuclear Renaissance*

"We must ask ourselves how we will be able to influence the future in a way that generations to come will be able to secure the benefits of nuclear energy, yet avoid global spread of nuclear weapons. One approach is to establish a framework within which nations do not have to have enrichment or reprocessing technology – the two proven paths to military nuclear material – in order to enjoy the benefits of civilian nuclear power."

Honorable Dennis Spurgeon
Assistant Secretary for Nuclear Energy
ANS Winter Meeting - November 13, 2006

Building on a Solid Foundation

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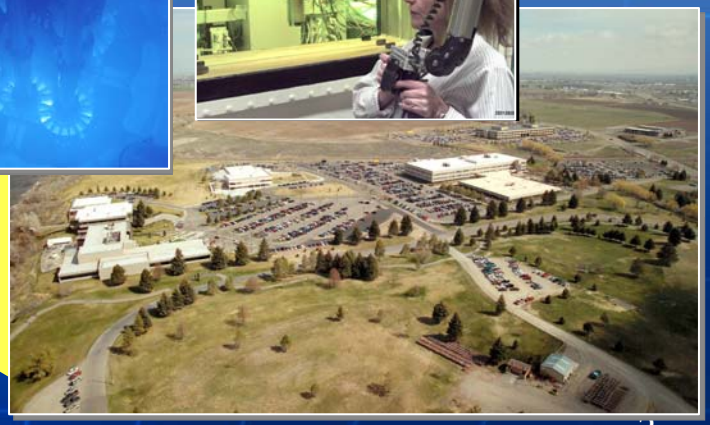

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The Vision for INL

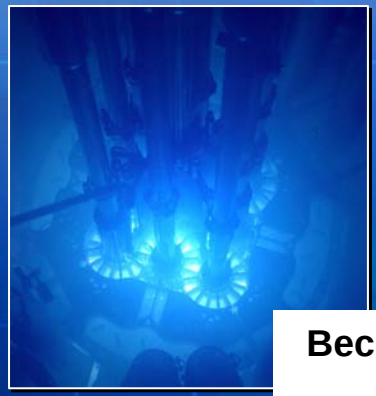
Become a leading clean energy RD&D laboratory and a regional resource

Foster education, research, industry, government and international collaborations to produce the needed investment, programs and expertise

CAES
Center for Advanced Energy Studies

Become the preeminent internationally-recognized nuclear energy RD&D laboratory

Become a major center for national and homeland security technology development and demonstration



Become a multi-program national laboratory with world-class nuclear capabilities

Idaho National Laboratory

Focused on Mission

Nuclear Programs

- INL assisting in integrating GNEP
- R&D focus on issues relevant to 2008 decision
- Support international collaborative framework
- Continued progress on NGNP R&D and industrialization

National & Homeland Security

- Build business in critical infrastructure protection, cybersecurity, nuclear nonproliferation, and defense technologies
- Assist NNSA in detecting and analyzing elicit and declared fuel cycle activities
- Critical infrastructure protection is the core of our business
- Grid Reliability Center of Excellence

Science & Technology

- Support the nuclear energy mission through five signature science capabilities
- Position INL as a regional energy center optimizing energy resources in the western inland energy corridor
- Build on leadership in biofuels and synfuels technology capabilities

Center for Advance Energy Studies (CAES)

- Major investment and integration with the Idaho universities
- Building collaborations with National University Consortium (NUC)
- New ISU Technician Training Associates Degree Program

INL's Business Growth Key to Regional Prosperity

Business Growth

- *FY-2006 Business volume of $686M*
  - *Represents growth of 28% from previous year with an expanded customer base*
- *Payroll of ~$260M*

Employment Opportunities

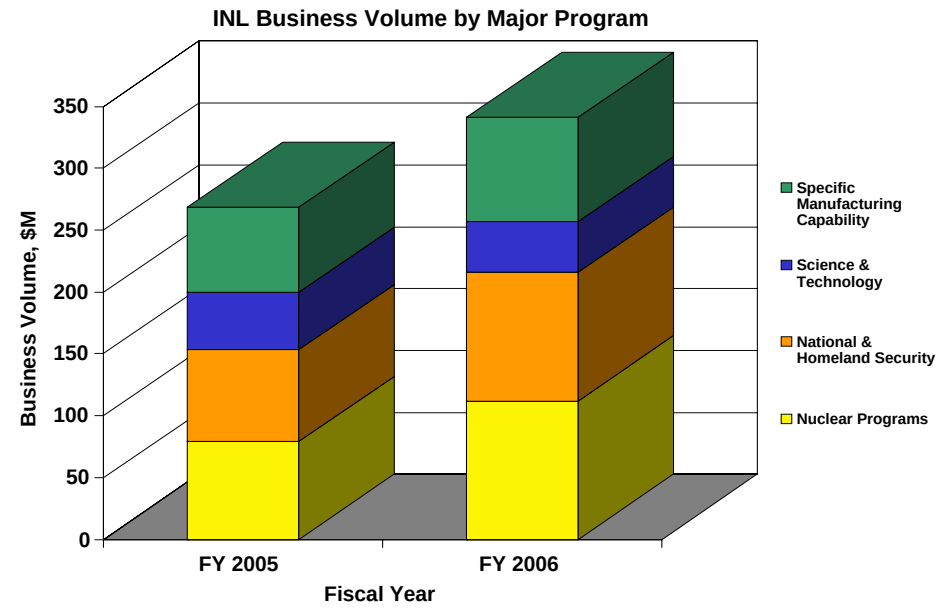
- *Eastern Idaho's largest employer*
- *One of the state's top five employers*
- *Highest average annual wage among large businesses in Idaho*

Local Investment

- *Purchased more than $117M worth of goods & services from Idaho large and small businesses in FY-2006*

INL Business Volume ($M)

Business Sector	FY 2005	FY 2006
Nuclear Programs	79.2	112.0
National & Homeland Security	74.0	104.0
Science & Technology	46.7	41.0
Specific Manufacturing Capability	68.5	84.0
R&D SubTotal	268.4	341.0
Nuclear Ops	61.6	65.0
Infrastructure	46.7	83
Facilities & Site Services	54.0	70.0
Other	68.9	32.0
CWI	35.4	95.0
INL Total	535.0	686.0



INL's Greatest Asset is Our People

3,673 Scientists, Engineers and Support Staff

Strategic Recruitments …

Computation & Modeling


Rich Martineau


Dana Knoll


Vincent Mousseau


Robert Nourgaliev


Paul Meakin


Michael Pernice


Sergey Rushkeev


Kim Mousseau

"…congratulations on an 'instant' world-class group at INL."
–David Keyes, Columbia University

Leadership


Dave Hill


Phillip Finck


Kathy McCarthy


Kemal Pasamehmetoglu


Ronaldo Szilard
Nuclear Science & Engineering


Andy Klein
Education, Training & Research


KP Ananth
National & Homeland Security


Bill Rogers
Science & Technology


Phil Hildebrandt
PM NGNP

National & Homeland Security


Michael Assante
Critical Infrastructure Protection


Aaron Turner
Cyber Security


John Garnier
Armor Programs


Brandon Blackburn
Nuclear Nonproliferation


Derek Hesse
Navy Relationship Manager


Barry Kuehnle
Critical Infrastructure Program


David Chicester
Nuclear Nonproliferation

4 R&D 100 Awards in 2006

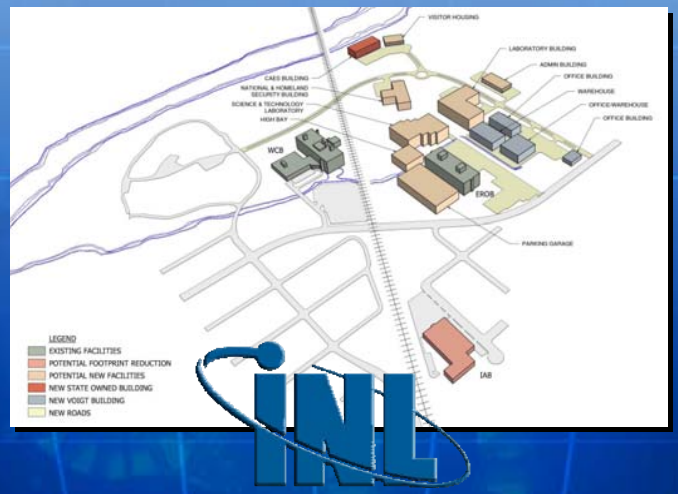
A record 61 patent applications in 2006

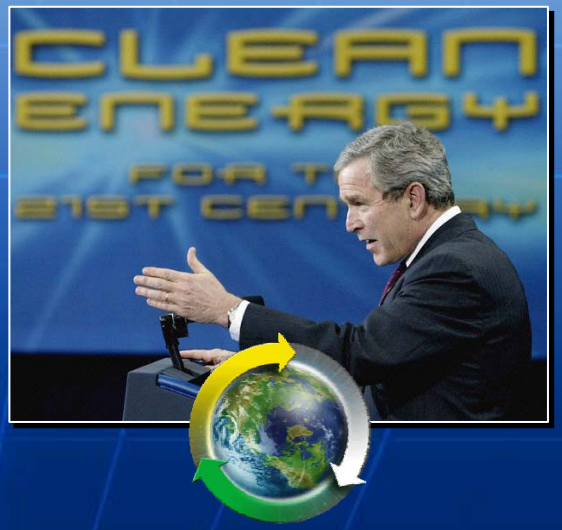
…and More are in the Pipeline

Retention, recruitment and development of a highly-skilled workforce is critical to implementing the laboratory's mission

Idaho National Laboratory

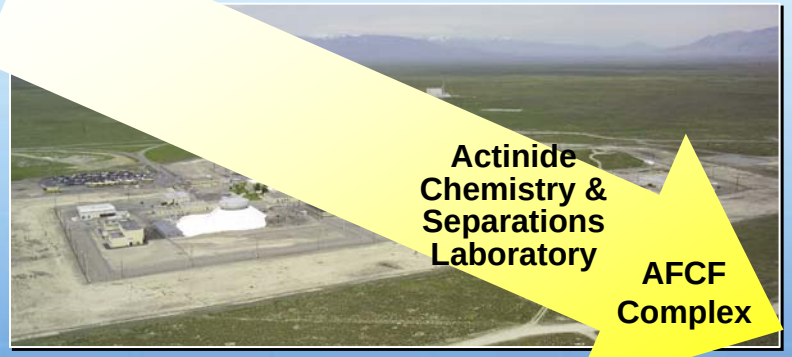
The Way Ahead…



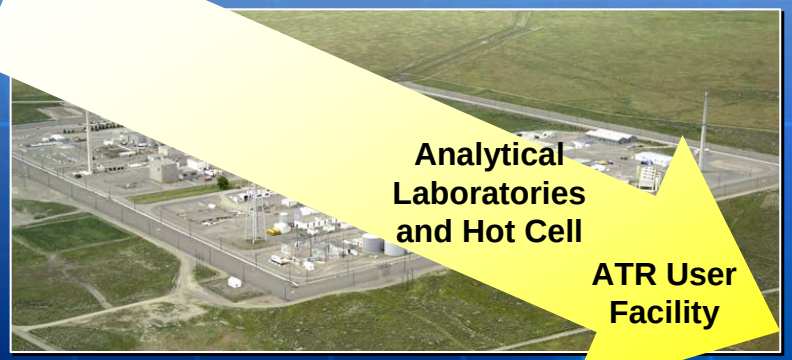


What it Takes For INL to Succeed…

Materials and Fuels Complex (MFC)



Science & Technology Campus (STC)



Reactor Technology Complex (RTC)

Idaho Nuclear Technology & Engineering Center (INTEC)

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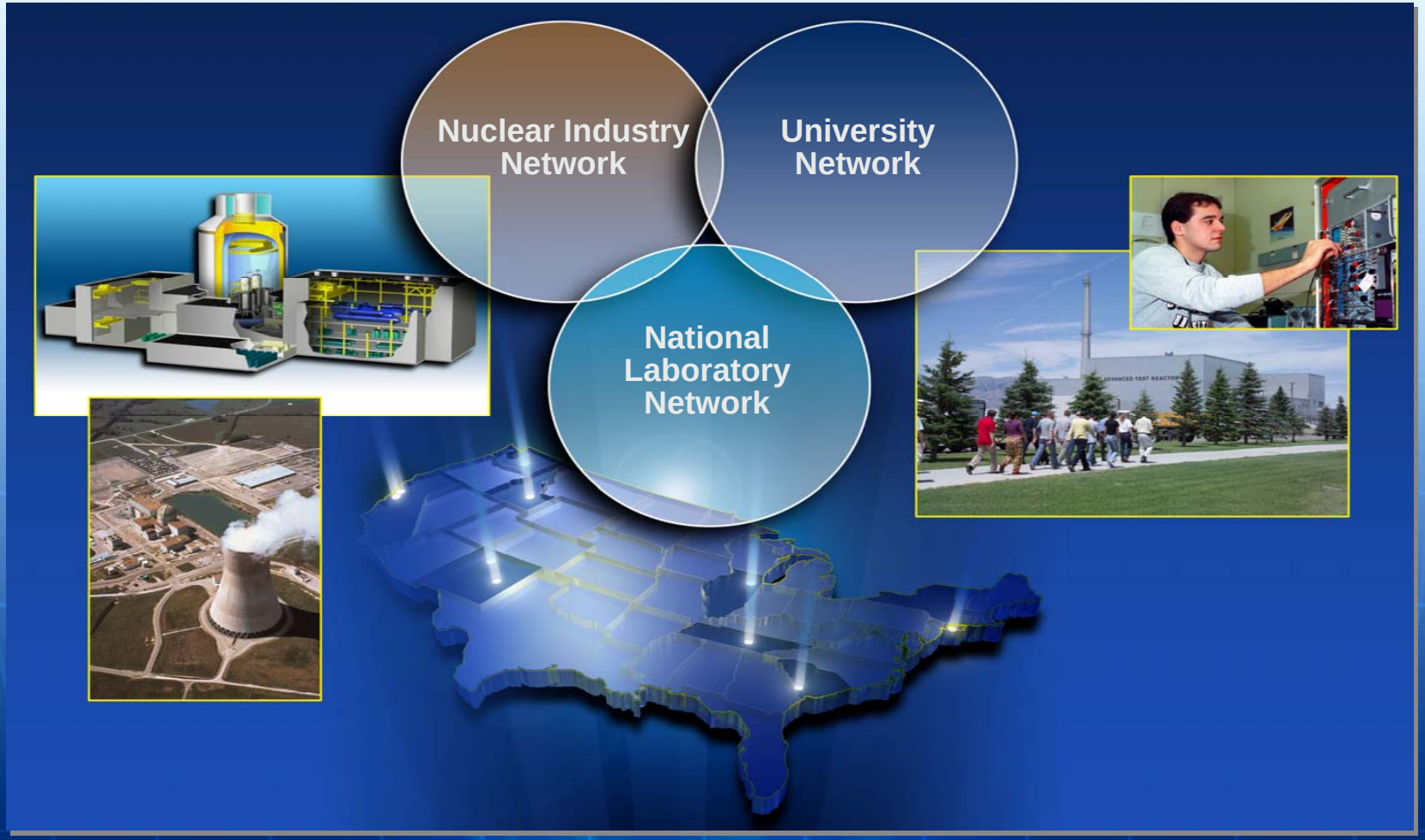
Facilitating Success

A Collaborative Model to Deliver Capability



Challenges and Opportunities Ahead

- GNEP provides the opportunity for the U.S. to lead the global nuclear expansion and to site significant facilities at INL
- The President's 2008 budget moves nuclear agenda forward significantly
- The challenge is to secure nuclear energy support and funding

- INL Physical infrastructure is a challenge
- Establishing ATR as a user facility is vital

DOE, State, Laboratory mutual support and cooperation will be critical to making progress on our mission