

# **Pacific Northwest National Laboratory - Overview & Collaborative Opportunities**

EPSCoR Program Review Workshop  
July 23-25, 2007

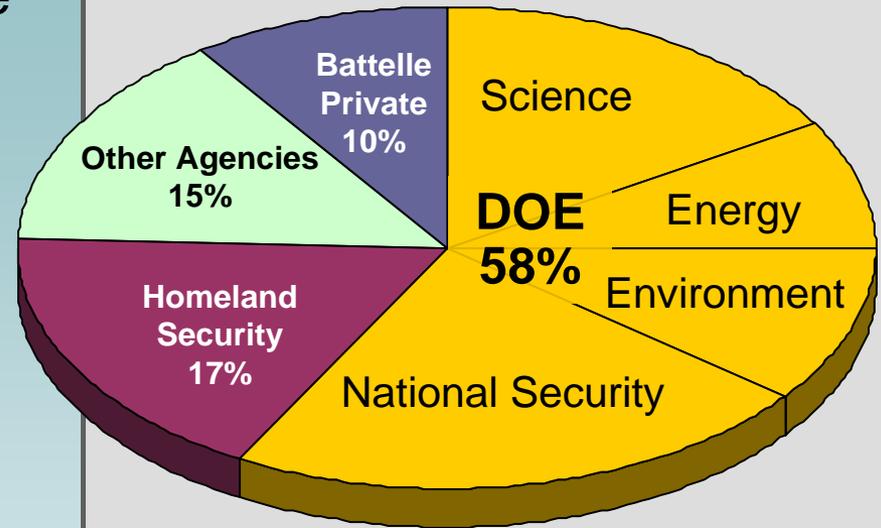
**Presented by:**

Dr. David Koppenaal  
Chief Research Officer (Interim)  
Pacific Northwest National Laboratory



# Pacific Northwest National Laboratory

- Reports to DOE's Office of Science
- A multi-program laboratory
- \$750 million in business volume
- 4,100 staff
- **Unique feature: fundamental strengths in chemistry**
- More than 1,400 patents and 250 active licenses with industrial partners



# PNNL is part of a unique S&T resource managed by Battelle



Pacific Northwest

Idaho National Laboratory



Brookhaven



Battelle  
Columbus,  
OH



National  
Renewable  
Energy Lab

Oak Ridge



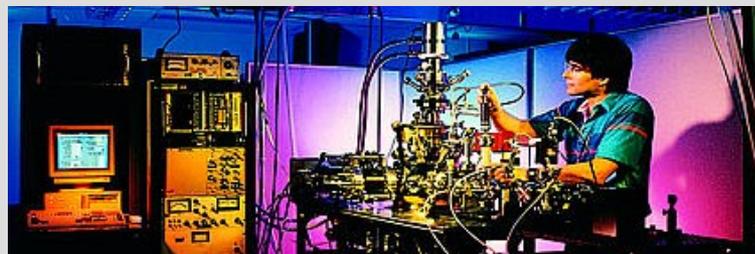
Battelle:

- Worldwide S&T enterprise
- \$2.9 billion annual expenditures
- 19,000 staff
- 32 scientific user facilities

# Environmental Molecular Sciences Laboratory (EMSL)

*A world-class national user facility at PNNL*

- ▶ Outstanding resources for molecular science research
  - 100+ major instrument systems
  - One of the world's fastest supercomputers (11.8 teraflops)
- ▶ More than 7,500 visiting scientists, professors and others have used EMSL resources since 1997



# Lab Strategy: Delivering science, technologies, and leadership to . . .

## Mission Outcomes

**Strengthen U.S. scientific foundations for innovation**

**Prevent and counter acts of terrorism and the proliferation of weapons of mass destruction**

**Increase U.S. energy capacity and reduce dependence on imported oil**

**Reduce environmental effects of human activity and create sustainable systems**

## S&T Capabilities

**Microbial and Cellular Biology**

**Environmental Sciences**

**Analytical & Interfacial Chemical Sciences**

**Radiological Sciences**

**Information Analytics**

**Sensing and Measurement Technologies**

## Capability Development Investments

**Aerosol Climate (ACI)**

**Biomolecular Systems (BSI)**

**Catalysis (CI)**

**Data-Intensive Computing (DICI)**

**Electricity Infrastructure Operations (EIO)**

**Energy Conversions (ECI)**

**Environmental Biomarkers (EBI)**

**Explosives Detection (IED)**

**Information Infrastructure Integrity (I4)**

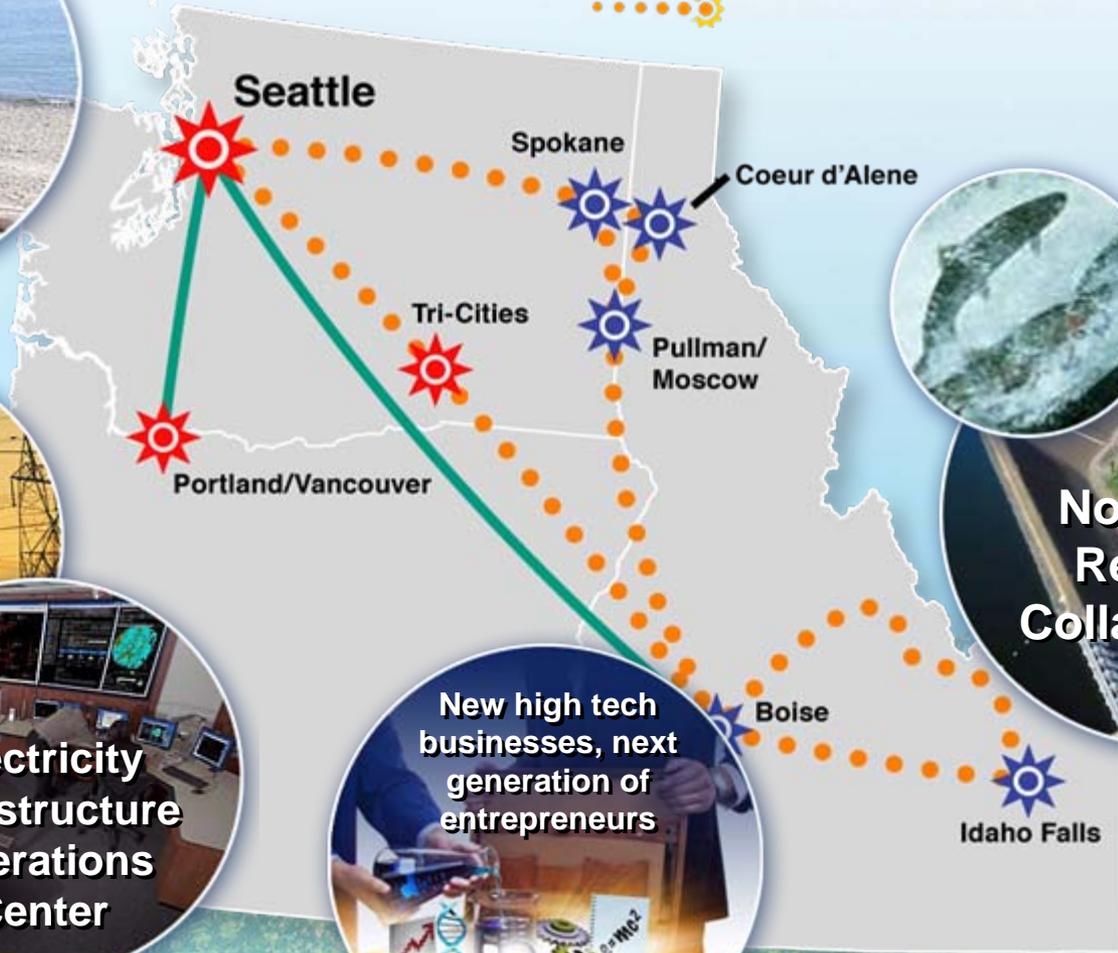
**Radiation Detection Materials Discovery (RDMD)**

**Sustainable Nuclear Power**

*Science to Solutions*



# PNNL: Northwest impact



# Recent collaborative activities

- ▶ PNNL and Chinese institutes form International Consortium for Clean Energy
- ▶ Federal collaborative agreement established to protect Puget Sound, WA, ecosystem
- ▶ Bioproducts, Sciences, Engineering Laboratory (BSEL), a \$24M joint venture between PNNL and WSU (WA state adds add'n \$13.1M)



QuickTime™ and a  
TIFF (Uncompressed) decompressor  
are needed to see this picture.

# Collaborations and partnerships are important - more & better ideas!



**“The best way to have a good idea is to have a lot of ideas”**

**- Linus Pauling**

# Questions?

Dr. David W. Koppenaal  
Chief Research Officer (Interim)  
509-375-3607  
[david.koppenaal@pnl.gov](mailto:david.koppenaal@pnl.gov)

Dr. Kelly Sullivan  
Institutional Partnerships  
509-375-2923  
[kelly.sullivan@pnl.gov](mailto:kelly.sullivan@pnl.gov)



**Pacific Northwest  
National Laboratory**

Operated by Battelle for the  
U.S. Department of Energy