



Pacific Northwest
NATIONAL LABORATORY

Proudly Operated by **Battelle** Since 1965

Pacific Northwest National Laboratory Addressing US Pacific Command Challenges

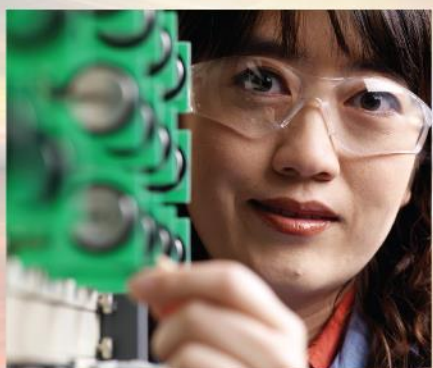
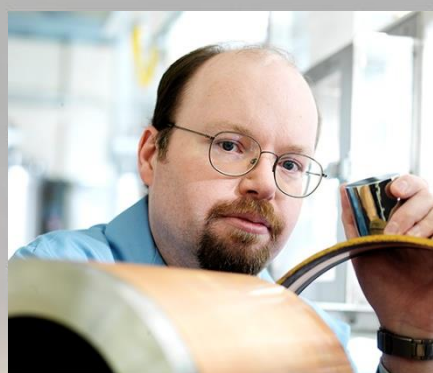


Pacific Operational Science & Technology Conference

Dr. Steven Ashby, Laboratory Director
March 3, 2016

DISCOVERY

in Action



PNNL is a National Lab with global impact



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PNNL leverages a strong science base to provide national leadership



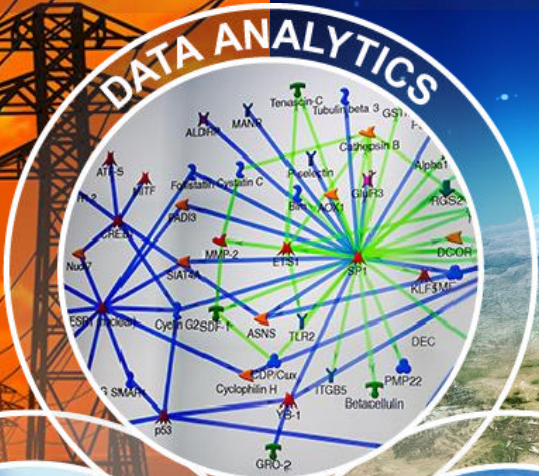
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Grid

Climate



Nonproliferation

Remediation

PNNL strives to understand, predict and control complex adaptive systems



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EARTH

- ▶ Clouds and Aerosols
- ▶ Water Cycle
- ▶ Microbial Communities

ENERGY

- ▶ Energy Storage
- ▶ Energy Conversions
- ▶ Control and Security

SECURITY

- ▶ Ultra-Trace Detection
- ▶ Novel Signatures
- ▶ Data-Driven Discovery

Addressing PACOM Challenges by Leveraging PNNL's *Earth Systems Capabilities*



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**Climate/Extreme
Weather**

**Climate Science and
Integrated Assessments**

**Continuity of
Operations**

**Infrastructure
Resilience**

HA/DR

**Disease Detection
and Decontamination**

**Restoration/
Remediation**

**Contaminant Fate
and Transport**



Addressing PACOM Challenges by Leveraging PNNL's *Energy Systems Capabilities*



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Operational Energy



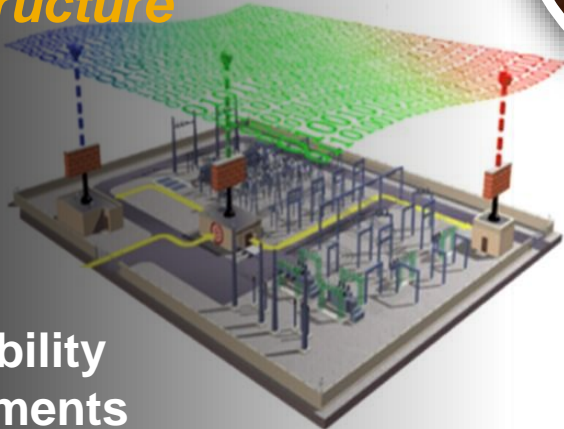
Energy Management Systems

Diversified Fuels



In Situ Biofuels

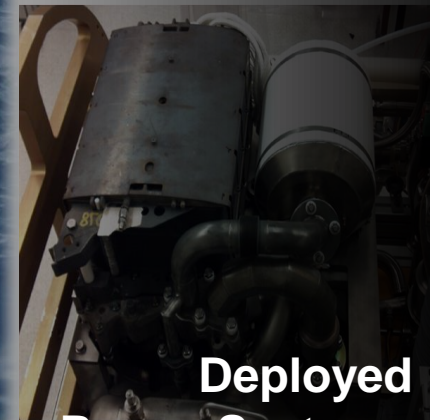
Secure Energy Infrastructure



Vulnerability Assessments



Energy Storage



Deployed Power Systems

Addressing PACOM Challenges by Leveraging PNNL's Security Systems Capabilities



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**Nuclear
Non-proliferation**

**Ultra-trace Analysis
and Treaty Verification**

Cybersecurity

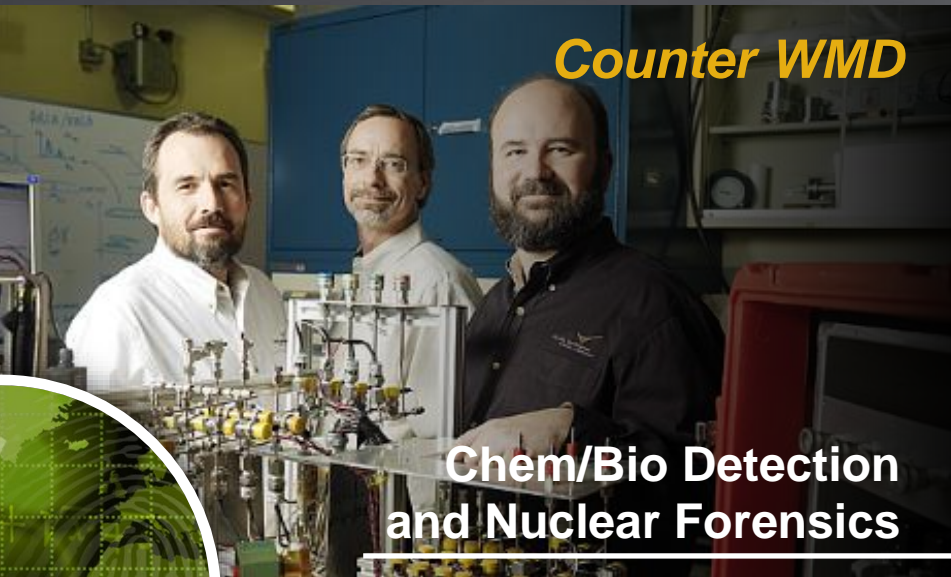
**Asymmetric
Resilient Cybersecurity**

Counter WMD

**Chem/Bio Detection
and Nuclear Forensics**

**Mission
Assurance**

**Multimedia
Analytics**



DOE National Laboratories are committed to delivering national and global impact



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Mission-focused

Relevant capabilities

Proven track record

Eager to team

Strength in Partnership



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