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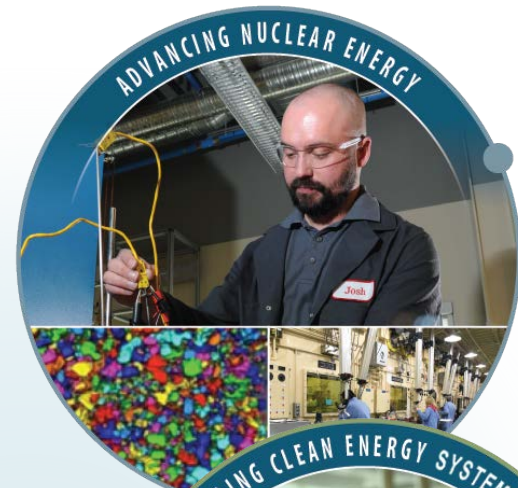


Economic Outlook and Revenue Assessment Committee

Mark Peters

*Director
Idaho National Laboratory*

*President
Battelle Energy Alliance, LLC (BEA)*



EORAC
January 5, 2018

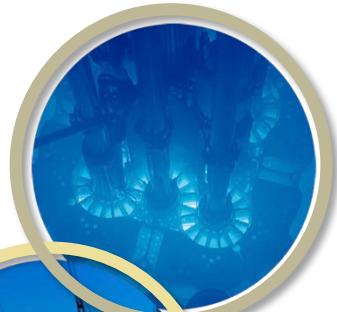
Our Vision and Mission Positions INL to be Relevant to Tomorrow's Energy Future

INL Vision

INL will change the world's energy future and secure our critical infrastructure.

INL Mission

Discover, demonstrate and secure innovative nuclear energy solutions, clean energy options and critical infrastructure.



Three Pillars of Simultaneous Excellence Shape the Future of INL as a Research, Development, Demonstration, and Deployment (RDD&D) National Laboratory



The Idaho National Laboratory Site

Geography

- 890 square miles
- 1,350 miles of roads
- 21 miles of railroad lines
- 112 miles of electrical transmission and distribution lines

Infrastructure / Mission

- 4 reactors
- Nuclear and radiological facilities
- 2 spent fuel pools
- 400+ buildings
- 3 fire stations
- Mass transit system
- Explosive range
- Landfill
- Museum
- Significant security profile



4,256 Employees

**FY17 Business Volume
\$1,001 M**

...the Nation's Nuclear Laboratory

We are Focused on Four Critical Initiatives to Meet Energy, Competitiveness, and National Security Goals

Enhance core capabilities, talent, S&T infrastructure, programs, and partnerships

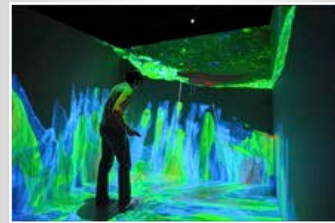
Nuclear energy competitiveness and leadership



Integrated nuclear fuel cycle solutions



Advanced hybrid energy systems

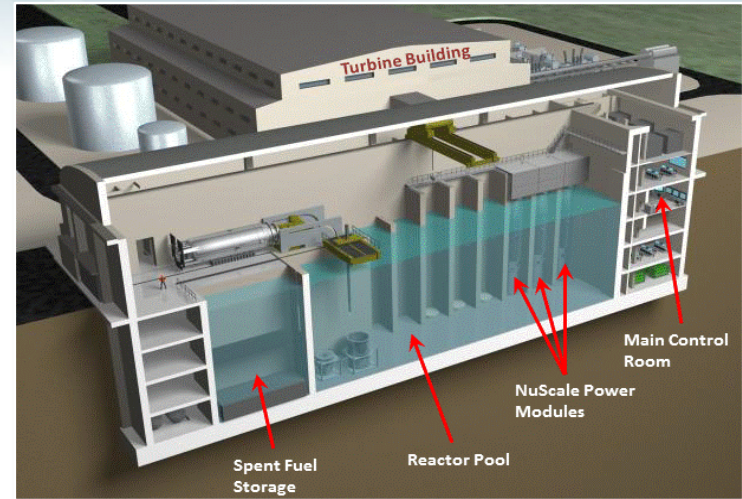


Cyber and physical security

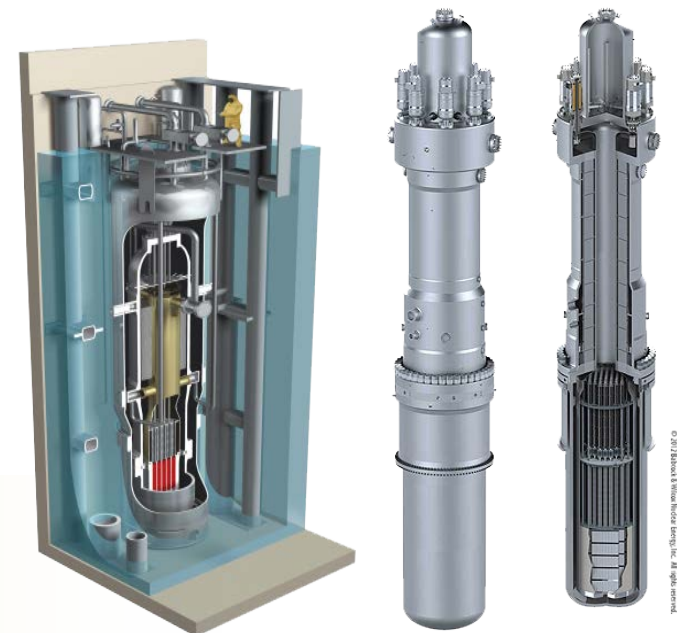


Small Modular Reactors (SMR)

- INL supports site characterization, RD&D, and regulatory support for the first SMR anywhere in the world.
- DOE granted a site use permit to Utah Associated Municipal Power Systems (UAMPS) Carbon Free Power Project (CFPP) in February 2016 that enables UAMPS to study, license and locate a NuScale-designed SMR at INL.
- The Joint Use Module Plant (JUMP) concept is being developed to commercially demonstrate Hybrid Energy Systems (HES) and Secure Reliable Microgrid (SRM) applications.



3-D view of Six NuScale Modules



Other advanced reactor companies also interested in siting in Idaho

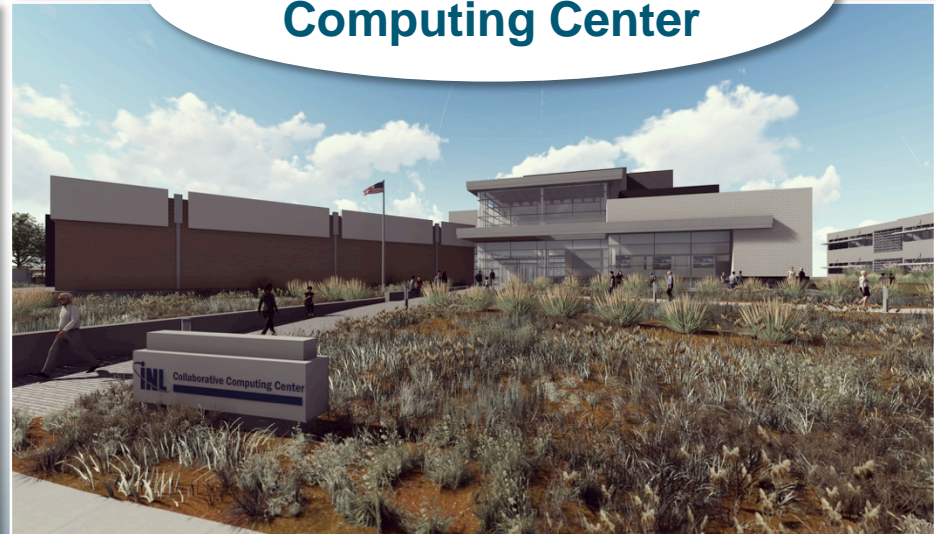
Cybercore Integration Center and Collaborative Computing Center Status



**Cybercore
Integration Center**



**Collaborative
Computing Center**

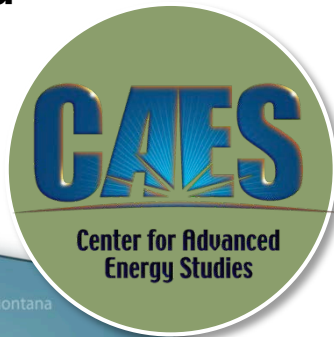


Center for Advanced Energy Studies (CAES)

CAES is a research and education consortium where collaboration inspires innovation that fuels energy transitions and economic growth.

Our value to Idaho

- **Idaho students receive:**
 - technical laboratory training
 - access to professional network
 - career opportunities after graduation
- **Idaho university faculty receive:**
 - experience that shapes instruction
 - unique research opportunities, collaboration
 - joint appointments with national laboratory
- **INL receives:**
 - access to skilled graduates
 - access to non-traditional funding
 - access to educational opportunities



CAES Idaho Falls Facility

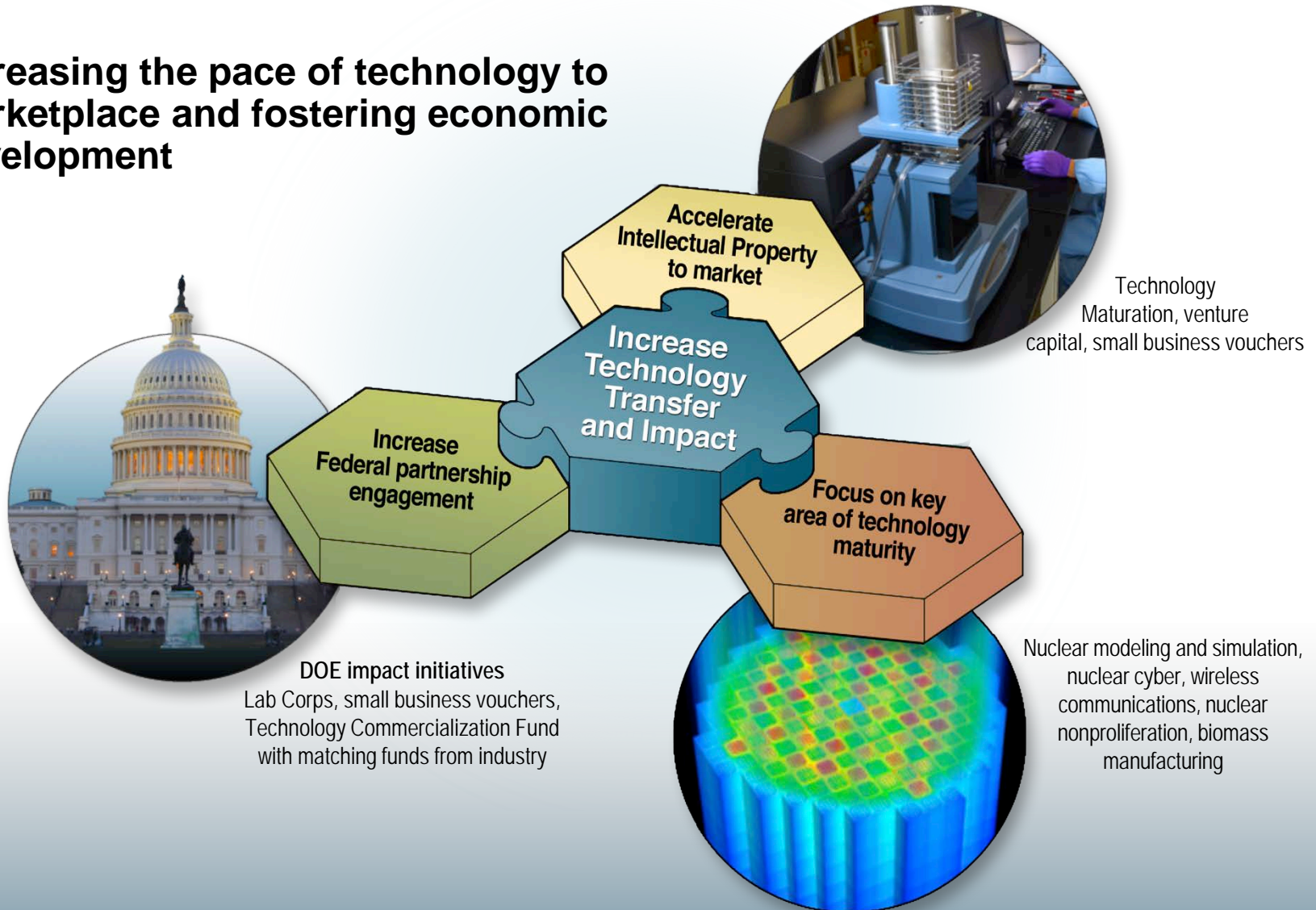
- 55,000 square feet LEED Gold
- 8 labs (4 with radiological capabilities)
- 150+ shared office spaces



State's investment = **Millions in public/private funding**
 State's investment = **Encourages students to "Go-On"**
 State's investment = **Foster's economic development**

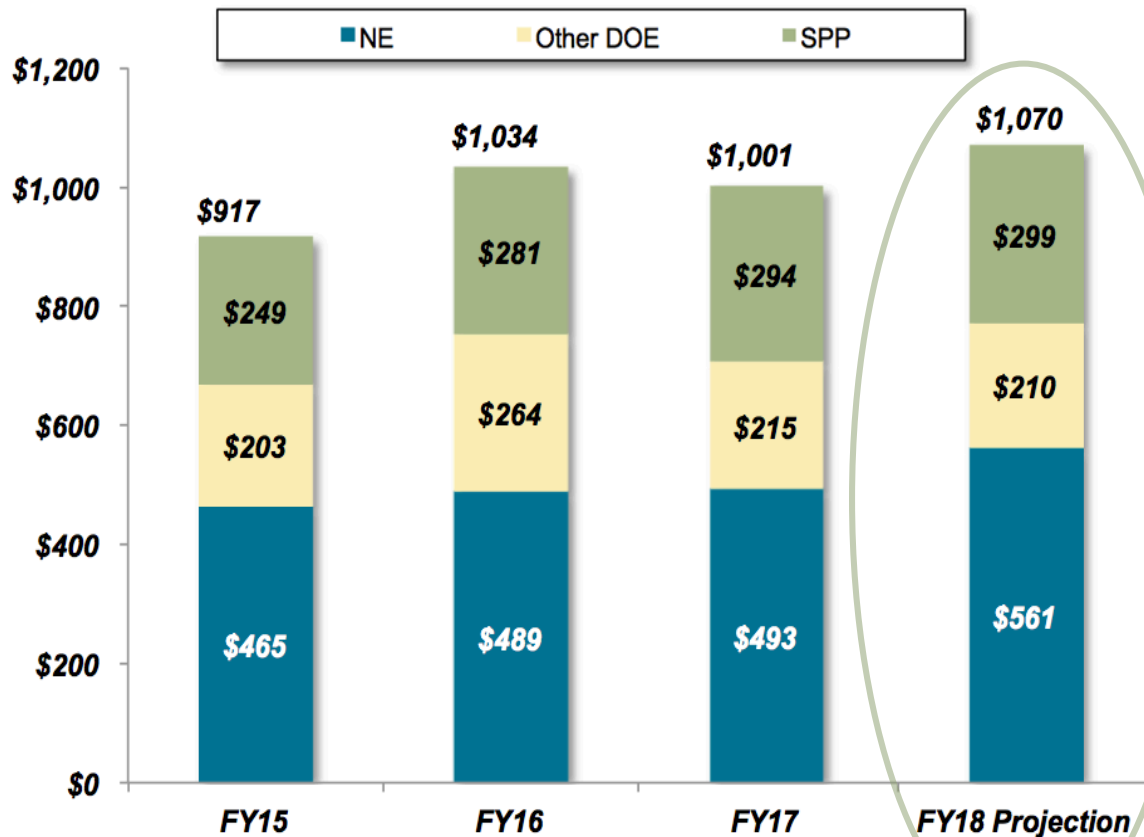
Working Hand-in-hand with Industry

Increasing the pace of technology to marketplace and fostering economic development



FY18 Business Volume Projections

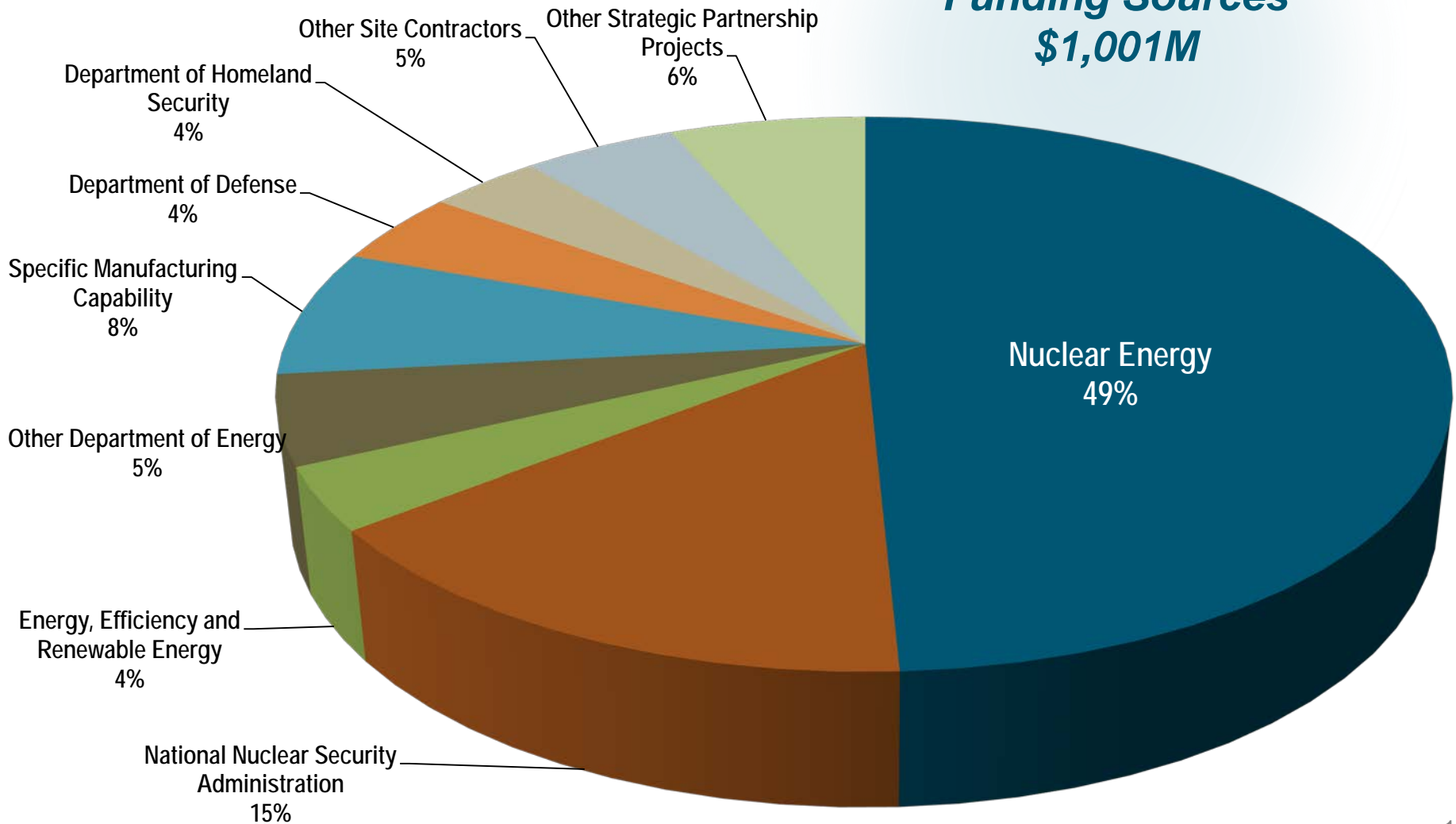
Business Volume - YTD (\$M)



- **Business volume finished at \$1,001M, \$33M below FY16** (*due to a decrease in 3rd party costs*)
- **FY18 BV:**
 - Estimate \$69M higher than FY17
 - Though projecting growth in FY18, much uncertainty remains

INL Business Volume

**FY17
Funding Sources
\$1,001M**



Excellence in Operations, Stakeholder Engagement, and Community Service are Fundamental to Our S&T Strategy

Operations Excellence

Transform INL's infrastructure, capabilities, systems, and processes to enable modern science

KEY INITIATIVES

Strong safety culture

Cost optimization

Management systems transformation

Revitalized infrastructure –
New facility acquisitions

Great place to work –
Viable talent pipeline

Community Excellence

Establish INL as high value, nationally, and in the community, state, and region

KEY INITIATIVES

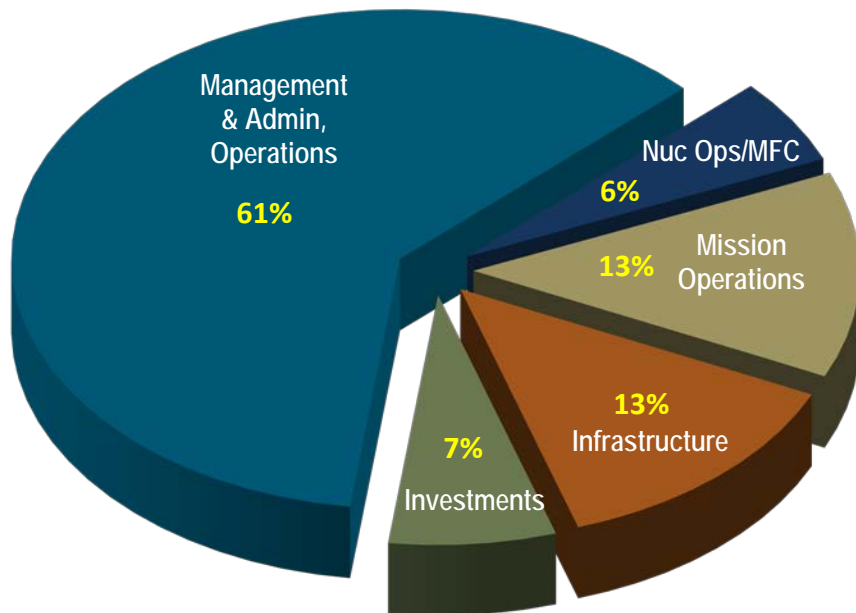
Outreach – outcomes and impacts

Stronger academic partnerships

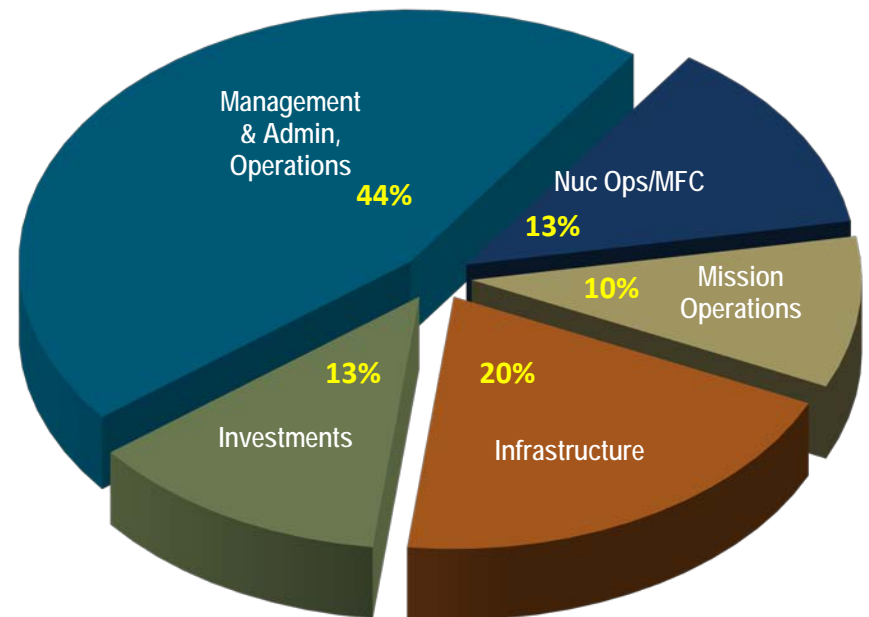
Entrepreneurial culture –
translating research to innovation

We are Using the Taxpayers Dollars Wisely

FY07 Actual



FY17 Actual



Indirect budgets reflect two primary drivers: market forces influencing fringe benefit costs, and the need to build intellectual and physical mission-related capability

Planned Campus/Complex Modifications

REC



CyberCore Integration Center (CIC)



Collaborative Computational Center (C3)



Idaho Falls Greenbelt and University Campus Connectivity

ATR



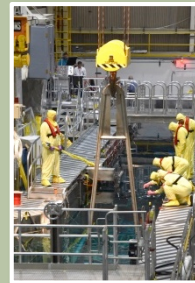
Maintenance Support Building



Utility Corridor Modernization



ATR Strategic Plan



30-Ton and 40-Ton Crane Replacements

MFC



Research Collaboration Facility



MFC Strategic Plan



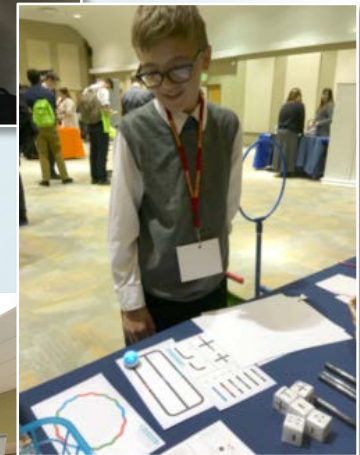
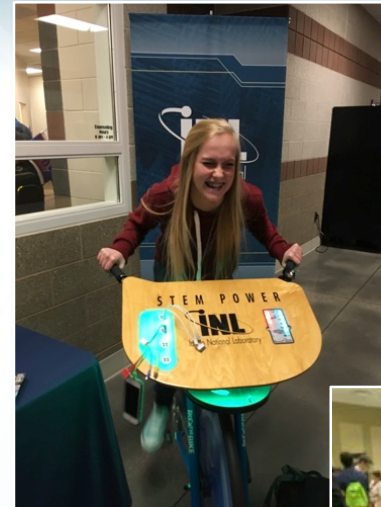
Utility Corridor Modernization



Sample Preparation Laboratory

Initiatives to Increase Talent Attraction and Engagement

- Partnering with universities, community colleges, and technical colleges for talent and research collaboration
 - Investing INL resources to match STEM Action Center goals
 - Empowering teachers through professional development – **Reached 1,600 teachers in 95% of Idaho’s school districts**
 - Motivating students through STEM outreach – **Benefited 56,000 students in FY17**
 - Collaborating with families and communities to explore STEM careers and develop STEM Literacy
 - Providing STEM grants – **Grants over \$300,000 on annual basis**
 - Targeting rural and underrepresented, underserved, first generation populations



Idaho's National Laboratory – 2018 INL Technology-based Economic Development Grants

University of Idaho, Apple Swift coding
Coeur D Alene

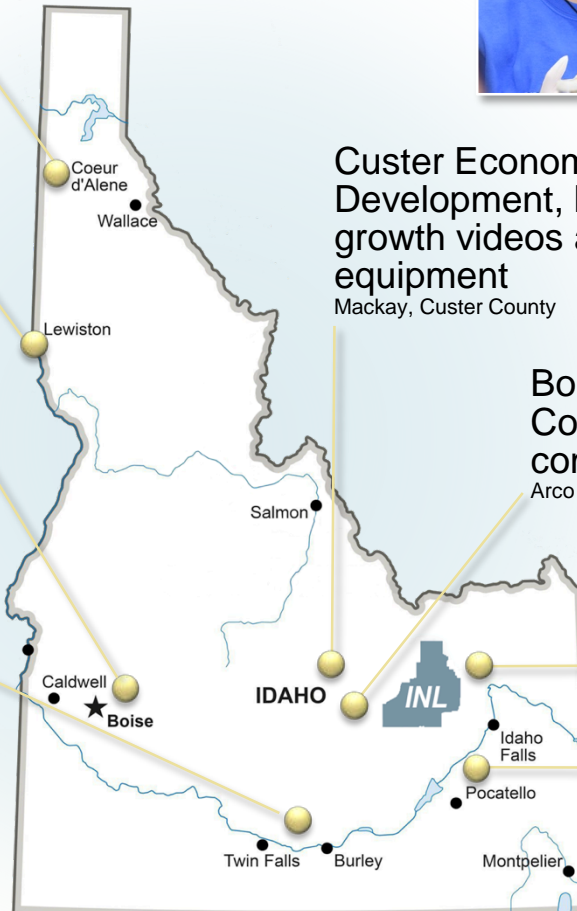
Clearwater Economic Development, igniting innovation and equipment
Lewiston

Trailhead, Women in entrepreneurship training program
Boise, Treasure Valley

College of Southern Idaho Foundation, military veterans to workforce
12 cities in Southern Idaho

Idaho Technology Council, Idaho State of Industry Report

Idaho Rural Partnership, turning ideas into action program



Custer Economic Development, business growth videos and equipment
Mackay, Custer County

Boise State University, Butte County economic development community guide
Arco and Butte County, Boise

REDI Science Technology and Research cluster
14 counties, Eastern Idaho

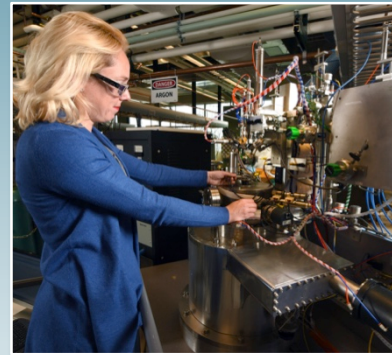
Shoshone-Bannock Tribes, business plan and feasibility study
Shoshone-Bannock Tribe



INL by the Numbers

- Average base salary of an INL employee in **FY17** was **\$95,768 annually**, up from \$92,660 in FY16
- **INL directly employed 4,256 workers in Idaho**; secondary effects in Idaho accounted for an additional 7,771 jobs for a total of 12,027 jobs – a **6.7% increase from FY16**
- **179 new employees (FY17)**
- **344 interns and 42 post docs (FY17)**
- **18,471 visitors to INL (FY17)**
- BEA subcontracted nearly **\$140M to Idaho subcontractors**
- BEA corporate office contributed more than **\$610,000 to charitable giving**

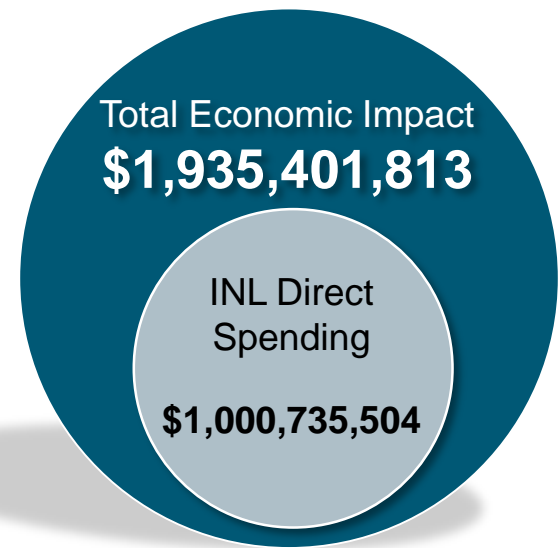
INL is the 6th largest private employer in Idaho – providing high-tech, high paying jobs





INL FY17 Economic Summary

- When combined with indirect and induced impacts, INL operations add **\$1.94 billion** to Idaho's total output.
- INL's total output impact **increased by nearly \$27.6 million** between FY16 and FY17 – a **1.4% increase**.
- The total employment impact of INL operations accounts for **2.1% of Idaho's employment**.
- INL brought money into Idaho and generated **value-added output** of more than **\$1.2 billion**.
- INL accounted for more than **2.9% of statewide economic output**.
- More than **\$935 million of economic output** was generated through INL suppliers and employee household spending.
- INL **increased personal income** in the state by **\$862 million**.
- INL economic impacts accounted for **1.3% of all personal income** in the state.
- INL impacts resulted in an estimated **\$69 million in state and local tax revenues**.
- Taxes generated by INL operations account for **1.7% of total state and local tax revenue** (*based on FY16 state tax revenues*).



INL has an Important Mission and a Grand Vision – We Made Outstanding Progress Realizing the Vision for INL and had Demonstrable Impact on DOE and the Nation

- **Focus on grand challenges to meet energy, competitiveness, and national security goals**
- **Steward world-class RD&D infrastructure, making it available to national laboratories, universities and industries**
- **Build world-class scientific and engineering talent pool**
- **Build and sustain global strategic partnerships**



