



June 17, 2026

Welcome

Robert M. Wagner
Associate Laboratory Director



U.S. DEPARTMENT
of **ENERGY**

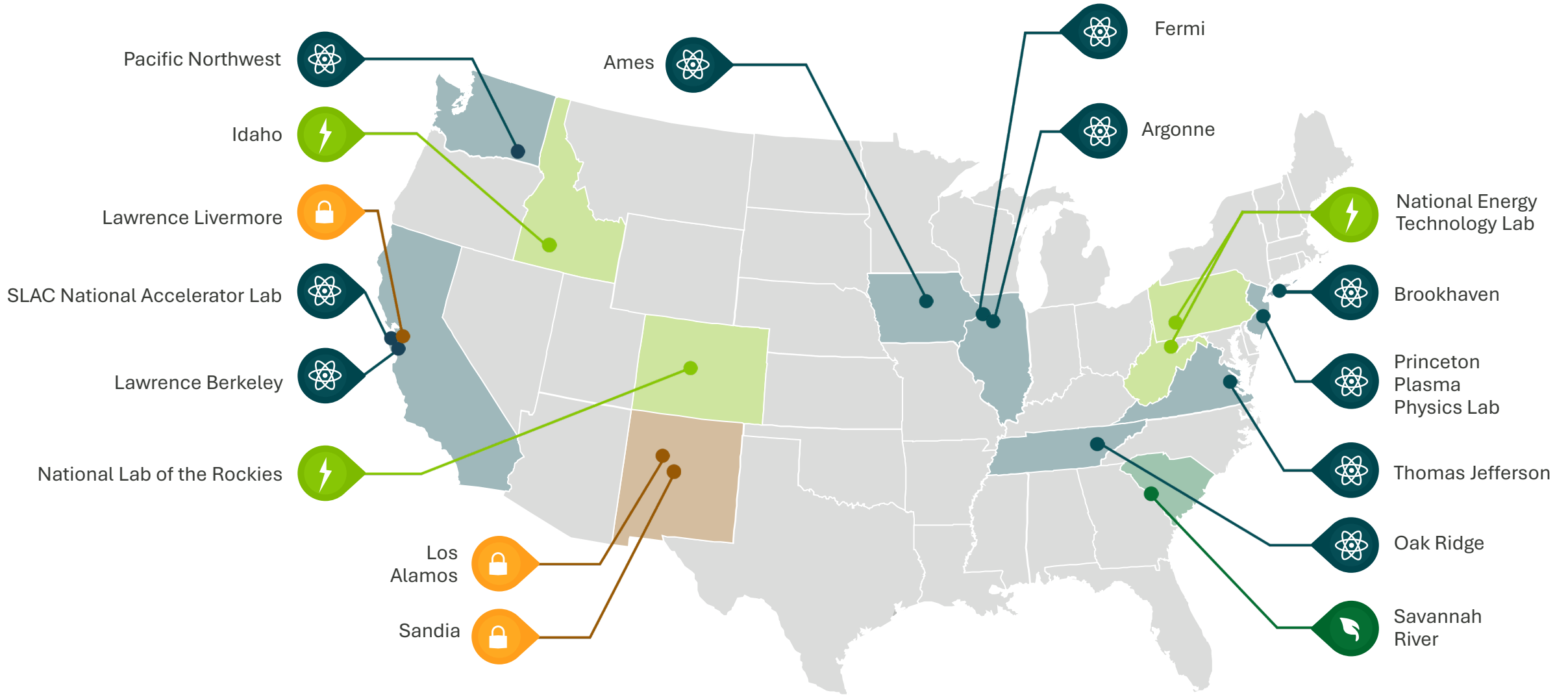
ORNL IS MANAGED BY UT-BATTELLE LLC
FOR THE US DEPARTMENT OF ENERGY

We support the mission of the Department of Energy

The mission of the Department of Energy is to **ensure America's security and prosperity** by addressing its energy, environmental and nuclear challenges through transformative science and technology solutions.



U.S. DEPARTMENT
of ENERGY



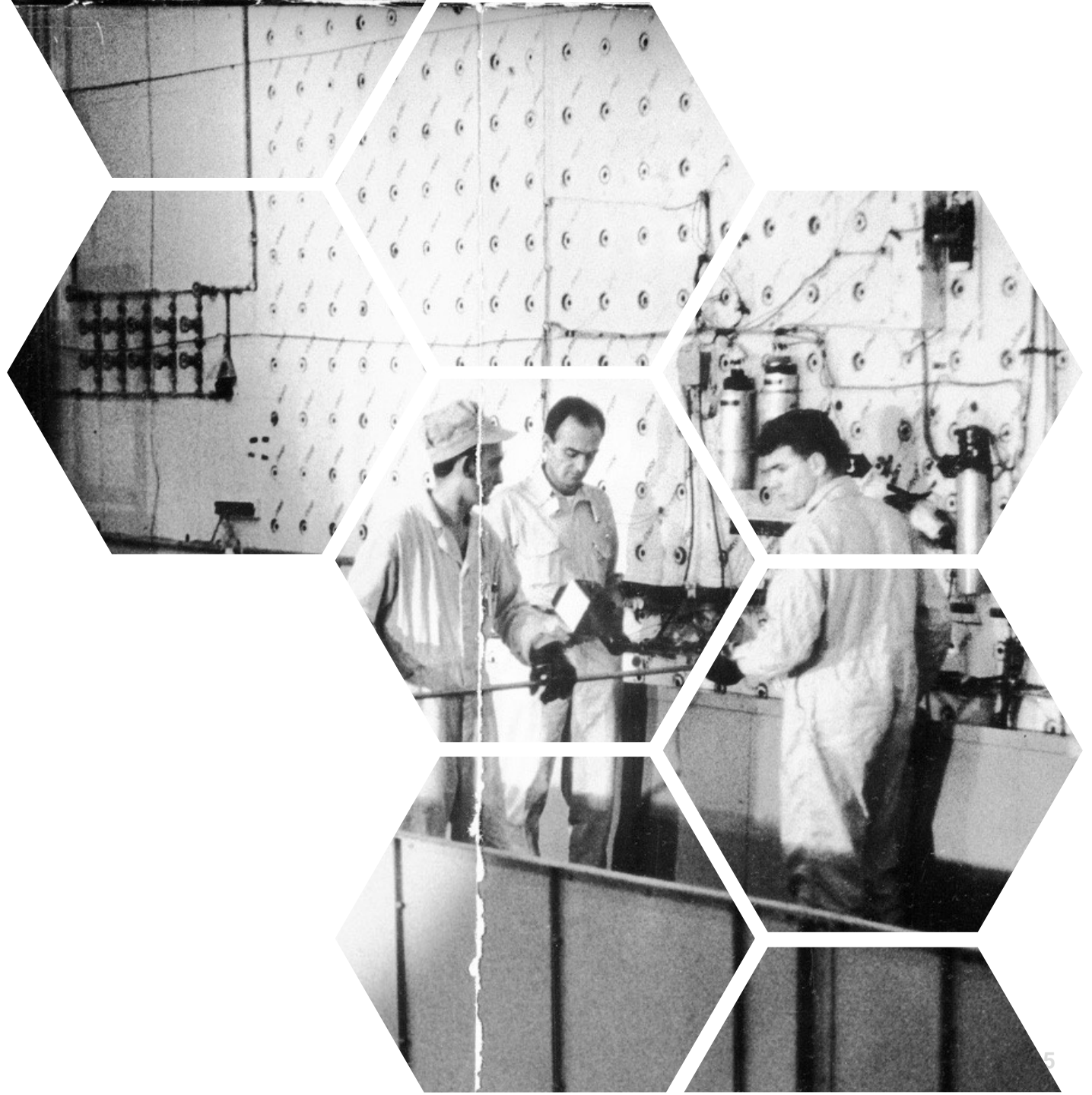
- 
 Science
- 
 Energy
- 
 National security
- 
 Environment

Oak Ridge National Laboratory

ORNL began in 1943 with the world's first continuously operating nuclear reactor

Demonstrated that gram quantities of plutonium could be chemically separated from irradiated uranium

Developed the processes and knowledge that enabled the scale-up of plutonium production



ORNL technology enabled the fast scale-up of plutonium production at Hanford

Hanford become the world's first full-scale plutonium production reactor

Thirteen months from start of construction to criticality

Produced 67 metric tons of plutonium before production ceased in 1987



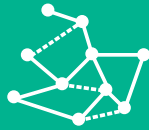
Hanford B Reactor, 1944 ([source](#))

ORNL's mission

Deliver scientific discoveries and technical breakthroughs that will accelerate the deployment of solutions in energy and national security and, in doing so, create economic opportunity for the nation.



Organized around four S&T strategic priorities



Future of computing

Create a smart post-exascale ecosystem integrating HPC, AI, and quantum for open science and national security



Atoms to applications

Ensure US leadership in the development, manufacturing, and deployment of materials, chemistries, and components for energy and security applications



Nuclear solutions for national priorities

Derisk demonstration and deployment of fusion and fission energy through scientific and technological innovation

Create end-to-end fuel cycles for next-gen fuels that enable reprocessing and extraction of valuable isotopes

Advance isotope science and processing for a healthy, secure, and reliable future



Secure, resilient systems for abundant energy

Design and deploy a cyber-secure, modular, and AI-driven grid

Advance energy system resilience to abrupt and gradual changes in natural systems

Develop technologies to address inefficiency and supply chain risk in end-use energy systems



NATIONAL SECURITY

Translate science to solutions to outpace our adversaries in secure computing and AI, nuclear nonproliferation, defense manufacturing, and grid resilience

ORNL delivers translational research for national priorities

Foundational expertise is crosscutting, ORNL operates as a team of 7000+ experts



Lead the world in **neutron sciences**



Deliver **exascale computing** from system to ecosystem



Discover and design next-gen **materials and chemical processes for energy**



Accelerate deployment of **fusion** and advanced **fission energy**

DISCOVERY SCIENCE



Transform integrated **energy systems** through science-based innovation



Unlock complexity in **biological and environmental systems**



Provide strategic **isotope R&D and production**



Address pressing **national security** challenges

DEVELOP AND DEPLOY

ORNL by the numbers

5,500+
center users
annually



Nation's
largest
materials
research
portfolio

World's
most intense
neutron
source



8
DOE user
facilities

294
invention
disclosures
in FY25

\$2.8B
FY25 budget
authority

Nation's
most diverse
energy
portfolio

World's first
exascale
computer

>2,700
journal articles
published
in FY25



7,400+
employees



Nation's
lead for
ITER fusion
project

73
patents
issued
in FY25

ORNL distinctive user facilities are unique and host thousands of R&D partners each year



Building Technologies Research and Integration Center



Manufacturing Demonstration Facility



Carbon Fiber Technology Facility



National Transportation Research Center



Center for Nanophase Materials Sciences



Oak Ridge Leadership Computing Facility



High Flux Isotope Reactor



Spallation Neutron Source

ORNL has a culture of partnership to move science into the marketplace and make real-world impact

Technical Collaboration

Programs in manufacturing, grid, and buildings provide lab access to businesses

ORNL Technology Innovation Program (TIP)

accelerates commercial investment in promising lab-developed technologies

Innovation Crossroads (IC) and Techstars programs

empowers entrepreneurs



SkyNano facility in Louisville, Tennessee

Fusion risk-reduction facility with Type One Energy and TVA

ORNL's most-licensed tech, Peregrine, is AI for smart manufacturing

Quantum partnership with EPB in Chattanooga

Trane investigates carbon capture from gas-fired equipment



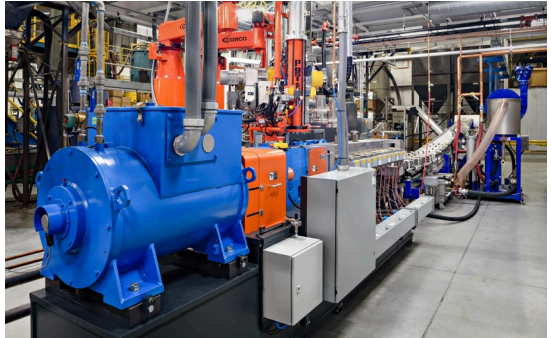
These partnerships have helped launch new industries and facilities across the nation



AES
Akron, OH



Lincoln Electric
80,000 sq ft
Cleveland, OH



Techmer PM AM Pellets
Clinton, TN



Beehive Industries
65,000 sq ft
Knoxville, TN



GKN Aerospace
110,000 sq ft
Ft. Worth, TX



Emrgy
Aurora, CO

For more, check out our *Science with Impact* series

SCIENCE with IMPACT



Driving Reliable, Affordable Domestic Fuel Options

Research from Oak Ridge National Laboratory's National Transportation Research Center paved the way for gasoline with 15% ethanol, or E15, to enter the market. Through six million miles of real-world testing, researchers proved E15 is safe, effective and compatible with conventional engines.

The 2011 study continues to drive consumer fuel savings, support farmers and strengthen U.S. energy independence as domestic ethanol use grows.

This research was supported by the U.S Department of Energy.

QUICK STATS

- 6 million miles** driven in testing
- 1.1 billion gallons** of E15 sold in 2023
- 7.5% average savings** per gallon
- 3,400 stations** in 33 states offer E15



U.S. DEPARTMENT of ENERGY | Office of Science | OAK RIDGE National Laboratory

SCIENCE with IMPACT



Component recovery tech brings supply chain benefits

OAK RIDGE National Laboratory



“The Energy Science and Technology Directorate at Oak Ridge National Laboratory has a rich history of pioneering innovative research that propels cutting-edge technologies from concept to deployment. From foundational discoveries to real-world impact, the work accelerates the development of secure, reliable, and affordable technologies for buildings, transportation, manufacturing, and the electrical grid.”

<https://www.ornl.gov/content/science-impact>

Manufactured Housing Workshop

June 17th and 18th, 2026



Have a great workshop, and may it
lead to new friends, new ideas,
and new opportunities.



OAK RIDGE

National Laboratory



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