



Associate Laboratory Director Energy Science & Technology



Oak Ridge National Laboratory



AT A GLANCE

Established in
as part of the Manhattan Project

1943

\$2.2B annual budget

9 national
user facilities

5,400 employees

3,200 visiting
scientists

221 R&D 100 Awards

2 Nobel Prize winners

46 National Academy
members

17 UT-ORNL Governor's Chairs

9 university core
research partners

9 new elements discovered

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Big Science. Big Opportunities.

Oak Ridge National Laboratory (ORNL) was created to help win a war and change the world. We have always adapted to meet national needs, developing expertise, tools, and even entirely new fields to solve the most difficult scientific and technical challenges.

- **We pioneered nuclear energy, science, and engineering**, developing techniques, technologies, and training programs that led to commercialization of nuclear power and creation of the nuclear navy.
- **We produce life-saving medical isotopes** and operate the National Isotope Development Center for the Department of Energy (DOE).
- **We developed neutron diffraction**, a scientific technique available to researchers who use two of the world's most powerful neutron sources at ORNL for studies of materials, medicines, disease progression, and more.
- **We create new materials** including alloys with billion-dollar impacts on industry and unique properties that enable NASA to explore outer space.
- **We build some of the world's most powerful supercomputers**, with three No. 1 systems since 2009 and one of the world's first exascale systems, Frontier, due in 2021.
- **We printed a car** (and a house, jeep, boat ...) to study methods for improving the efficiency and productivity of manufacturing processes that give American industry a competitive edge.
- **We secure the nation** with expertise from across our research portfolio, sending teams worldwide to keep nuclear materials safe, pursuing cybersecurity for the power grid, and more.
- **We discovered the sex-determining role of the Y chromosome** and make breakthroughs in biology from genes to ecosystems, providing insights benefiting biotechnology, biosecurity, and biofuels.
- **We invented radioecology** and lead large-scale experiments in the Arctic and other remote locations.

*Join us on
our quest to
deliver scientific
impact that
changes the
world.*

We always ask, "What's next?" We stand ready for the unexpected. Today, we are applying our expertise in several areas in the global fight against COVID-19, and we are looking to the future.



Building the World's Premier Research Institution

National labs are distinguished by their ability to assemble large teams of experts from a variety of scientific and technical disciplines to tackle compelling national problems. They also design, build, and operate powerful scientific facilities that are available to the international research community.

From the start, ORNL has applied scientific discoveries and new technologies to address pressing challenges in the areas of clean energy and global security and to create economic opportunity for the nation. Today, Oak Ridge is the most diverse of the Department of Energy's 17 national laboratories, providing leadership in energy research and technology, advanced materials, nuclear science and engineering, neutron science, isotope production, national security, environmental and biological sciences, and high-performance computing.

Resources like these enable the U.S. to compete in what former ORNL Director Alvin Weinberg called the arena of "Big Science" and they empower our researchers to pursue knowledge that's fundamental to solving some of our world's greatest challenges.



Advanced Materials

We developed a new class of affordable, lightweight superalloys that can withstand temperatures almost 100 degrees Celsius hotter than existing commercial alloys in complex engine parts.



Clean Energy

Our magnetic coils and power electronics enable the extreme fast charging of electric vehicles—wirelessly. ORNL's expertise also supports industry and has set standards for energy efficiency.



National Security

The Mobile Uranium Facility equips ORNL staff members to characterize, process, package, and transport uranium materials anywhere in the world. We are using our scientific capabilities to counter enduring and emerging threats to national security.



Neutron Science

We use neutrons to directly observe battery behavior in pursuit of safer, more reliable energy storage and extended battery life, to study the behavior of drugs in combating disease, and much more.



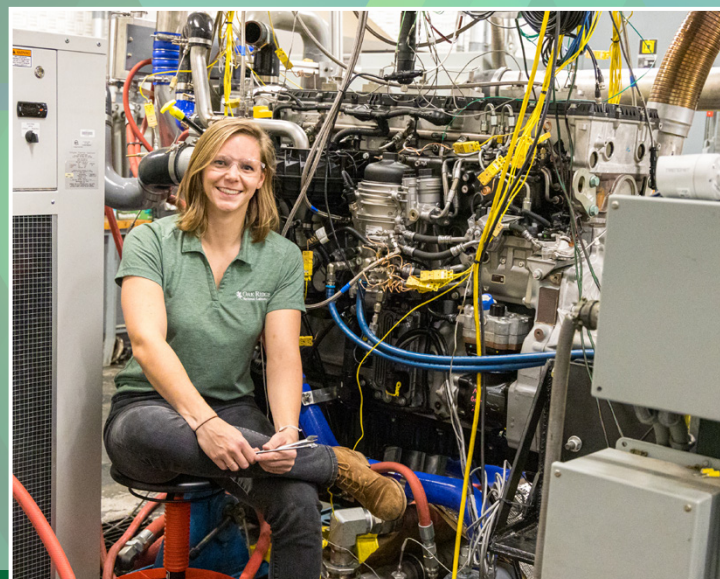
Nuclear Science

A multidisciplinary team is printing a microreactor to help industry address high costs and lengthy deployment timelines that threaten the future of nuclear energy—the nation's largest carbon-free energy source.



Supercomputing

Our scientists are cracking the code on opioid addiction using Summit, one of the world's fastest supercomputers, to perform immense calculations on genomic data. Summit provides unique multi-precision computing capabilities that are ideal for artificial intelligence and machine learning applications.



About the Energy Science and Technology Directorate

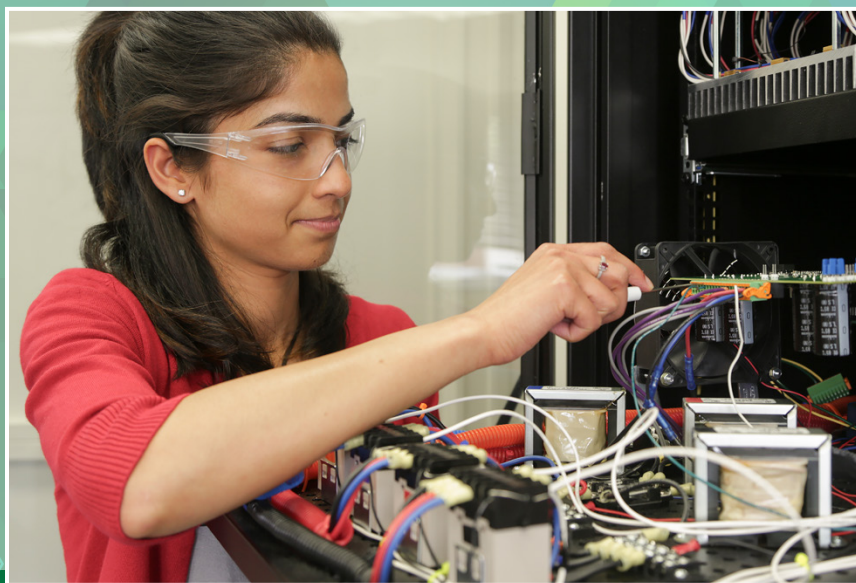
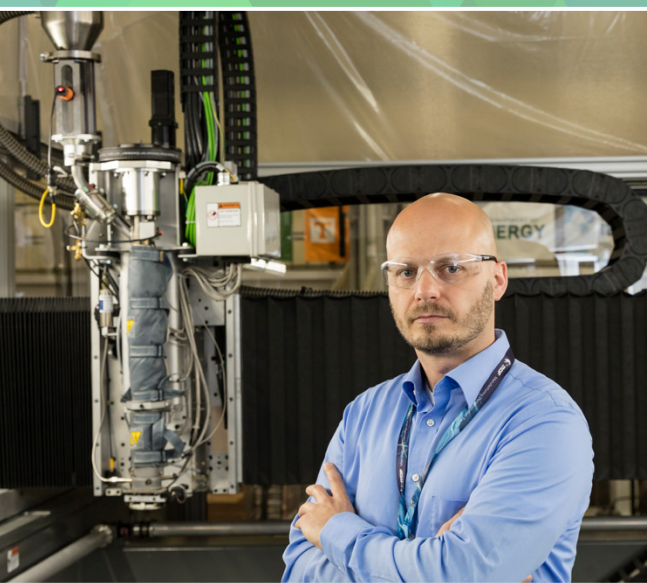
The Energy Science and Technology Directorate (ESTD) plays a pivotal role in America's energy transition to a clean, efficient, flexible, and secure energy future. Our researchers deliver breakthroughs in energy from generation to distribution and storage to end use in support of Department of Energy missions. ESTD offers a unique culture of entrepreneurship for translating science into solutions for the most critical problems facing society at the nexus of energy and security.

Our scientists and engineers work with many of America's best innovators and businesses to research, develop, and deploy cutting-edge technologies and to break down market barriers in sustainable transportation, smart power systems, and energy efficiency for homes, buildings, and manufacturing. Accelerating the development-to-deployment cycle of clean energy technologies will help provide affordable and reliable energy to support a thriving economy.

We bring a multidisciplinary focus to increasing the understanding of integrated and complex energy systems and to resolving some of the biggest challenges in energy. We are developing new materials for automobiles, buildings, and wind turbines; innovating manufacturing processes to drive U.S. economic competitiveness; and devising controls for a secure and resilient power grid.

INNOVATIVE SOLUTIONS FOR CLEAN ENERGY

ESTD is home to four DOE national user facilities dedicated to delivering clean energy innovations. The Building Technologies Research and Integration Center and the National Transportation Research Center develop breakthroughs to improve the energy efficiency of the buildings and transportation sectors. The Carbon Fiber Technology Facility supports technology development and commercial deployment of carbon fiber. The Manufacturing Demonstration Facility focuses on early stage technologies improving the energy and material efficiency, productivity, and competitiveness of American manufacturers. In addition, ORNL's Grid Research Integration and Deployment Center drives the development of advanced components to enable a secure and resilient power grid.



The research portfolio for ESTD spans three research divisions to advance science, engineering, and technology that help provide affordable, reliable energy in support of a thriving economy.

- The **Buildings and Transportation Science Division** delivers scientific discoveries and technological breakthroughs to accelerate transformative building- and transportation-related technical solutions to ensure a safe, secure, and sustainable energy future. This approach includes the integration of multidisciplinary science and technology with state-of-the-art ORNL leadership facilities for high performance computing, material science, neutron science, and manufacturing. The division is also home to the only DOE-designated user facilities for building technologies and transportation science.
- The **Manufacturing Science Division** focuses on the development and implementation of next generation advanced manufacturing technologies through research and scale-up of new processes and technical capabilities enabling new materials, systems and products. The division consists of personnel from a broad spectrum of manufacturing technology backgrounds integrated with world-class manufacturing facilities enabling “place-based innovation.”
- The **Electrification and Energy Infrastructures Division** focuses on developing innovative capabilities for electric energy devices and systems to improve the reliability, sustainability, and efficiencies of energy storage systems, electric grid protections and controls, and advancements in power electronics. The division comprises internationally recognized staff who possess expertise encompassing nearly all areas of applied science and engineering.

AT A GLANCE



328 scientists and engineers



\$296 million
R&D budget (FY 2019)



37 research groups



1,098 journal publications



501 invention disclosures



130 patent applications



129 issued patents



39 patent licenses



93 cooperative research & development agreements



84 strategic partnerships

2015–2019

ENERGY SCIENCE

Associate Laboratory

The Associate Laboratory Director (ALD) for Energy Science and Technology serves as an executive member supporting the Laboratory Director in accomplishing Oak Ridge National Laboratory's mission. In this capacity, the ALD leads the science and technology programs in energy science and technology with leadership responsibilities in three integrating roles to (1) establish a compelling future vision complemented with a strategic execution plan, (2) strengthen stakeholder engagement and relationship management with major sponsors, and (3) drive staff professional growth and development while creating organizational momentum that enhances our facilities and capabilities.

Emphasis is placed on research and development and operational capabilities to serve a wide variety of Department of Energy sponsors that include the Offices of Energy Efficiency and Renewable Energy (EERE); Electricity (OE); Cybersecurity, Energy Security, and Emergency Response (CESER); and Fossil Energy (FE), and other customers. In this role, you will lead advances in science and technology to enable flexible, secure, and more autonomous energy systems of the future, providing power and fuel originating from a variety of sources in a seamless manner. You will also ensure industry and academia have access to unique facilities and infrastructure for enabling world-class research.

Strategic thinking and leadership will be critical for implementing management systems, operations, safety, security, compliance, and performance assessments across the entire directorate, and serving on the Laboratory Leadership Team.



& TECHNOLOGY Director at Oak Ridge National Laboratory

Roles and Responsibilities

- Lead energy science and technology research for the Laboratory, including the development and implementation of scientific strategy to sustain national and international prominence.
- Serve as primary liaison with EERE, OE, CESER, and FE ensuring the science and technology research programs are meeting client needs in coordination with division and program management.
- Develop research programs and strategic partnerships with other national laboratories, colleges and universities, other research institutions, and public and private corporations.
- Drive strategic initiatives in buildings and transportation science, manufacturing science, and electrification and energy infrastructures research.
- Work with the Laboratory Director's office to position the laboratory through strategically Laboratory Directed Research and Development opportunities.
- Establish new capabilities, and provide sustainability and growth for applied user facilities that are foundational to the enduring missions of ORNL.
- Manage programmatic funds and discretionary investments for research and program development.
- Act as a steward for laboratory operations, facilities, capital, and equipment. Direct line management responsibilities for the Buildings and Transportation Science Division, the Manufacturing Science Division, and the Electrification and Energy Infrastructures Division.
- Maintain compliance with Laboratory policies, standards, and procedures. Implement operational standards to meet the expectations of the Laboratory Agenda.
- Advise leadership of research activities, program development, strategic initiatives, and associated operational risks and hazards.
- Develop and manage self-assessment programs ensuring alignment with the Laboratory Critical Outcomes, the Laboratory Agenda, and other internal or DOE performance metrics.
- Act as the primary directorate contact, representing the directorate on lab-level committees, task forces, and working groups with a shared responsibility for the overall lab-wide science and technology strategy.
- Drive commercialization activities through directorate business plans and strategies, as well as collaboration with industries locally and throughout the region.
- Identify staffing and other resource requirements. Support recruiting initiatives in diversity, in fellowships, and in university relations.
- Foster initiatives for employee development through mentoring, performance, and succession planning.
- Create and nurture an environment that promotes and embraces a diverse workforce.
- Promote a culture of scientific excellence, while performing work in a safe and secure manner.



Qualifications

- PhD in field related to research conducted in a large division or directorate with a minimum of 3–10 years of demonstrated executive management experience, including leading large complex and interdisciplinary research programs and organizations.
- An nationally recognized research stature in one of the disciplines within Energy Science and Technology Directorate, and experience in managing large multidisciplinary science programs.
- Experience communicating with key stakeholders, clients, program sponsors, and internal staff, and recognition as a leading expert and visionary in the field of energy or engineering sciences.
- Demonstrated experience of successfully developing, implementing, and executing scientific strategy with engagement from critical stakeholders.
- Experience with the DOE Offices of Energy Efficiency and Renewable Energy; Electricity; Cybersecurity, Energy Security, and Emergency Response; and Fossil Energy is preferred.

Requirements

This position requires the ability to obtain and maintain a security clearance from the Department of Energy. This position therefore is designated for Workplace Substance Abuse Program (WSAP) testing. WSAP positions require passing a pre-placement drug test and participation in an ongoing random drug testing program.

*We're seeking
passionate leaders who
will help us become the
world's premier
research institution.*



Community and Culture

The strong partnership between DOE and ORNL contractor UT-Battelle, LLC, has created a national resource that draws outstanding researchers in a wide range of disciplines to world-class facilities where they tackle fundamental scientific challenges, couple discoveries with applied research, and work with industry to translate results into commercial applications. The work of the laboratory is being performed safely and efficiently in a modern campus setting. Throughout the region, ORNL is regarded as a high-value asset for innovation, education, and economic development.

Discover East Tennessee

East Tennessee offers a variety of resources and experiences ranging from mountains, rivers, lakes, and a full menu of outdoor adventures to championship college teams and minor-league baseball to the arts and culture of Knoxville, including the internationally recognized [Big Ears Festival](#). The city is recognized as one of the country's best places to live, in part thanks to its [Urban Wilderness](#) system linking residential and commercial areas with the great outdoors. ORNL is within a day's drive of 50 percent of the nation's population and all of the East Coast's major cities.

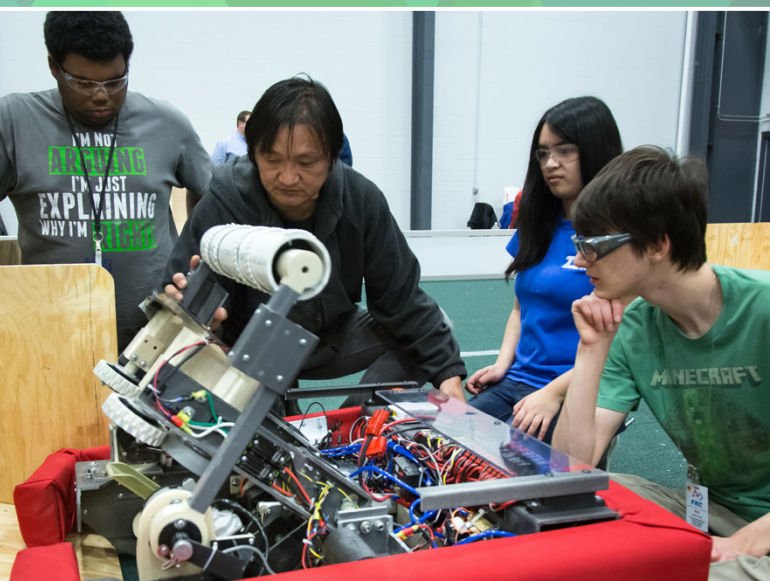
Our Workforce

ORNL is a great place to chart your own research course, work with like-minded colleagues, and build an extraordinary career. With more than 5,400 employees representing more than 60 countries, we assemble teams of experts from diverse backgrounds, equip them with powerful instruments and research facilities, and address compelling national problems.

In addition, ORNL offers professional development training at no cost to employees, provides professional networking opportunities, and sponsors employee resource groups that support diversity and inclusion efforts across the lab.

Diversity and Inclusion

ORNL's ability to build and sustain a highly skilled workforce in a rapidly changing competitive environment for talent is greatly influenced by our ability to plan and forecast workforce needs and promote diversity. Maintaining an inclusive environment is a business imperative that focuses on people in all areas of the laboratory and on maximizing the unique talents of individuals, teams, and business partners to pursue world-leading scientific impact.



We Welcome Your Application

Our challenge now is to sustain our leadership and build on our success. Thank you for your interest in ORNL and how we are helping to address some of the big science challenges facing our nation and the world.

Apply Today

Apply at jobs.ornl.gov

Equal Employment Opportunity

ORNL is an equal opportunity employer committed to a diverse and inclusive workplace that fosters collaborative scientific discovery and innovation. All qualified applicants, including individuals with disabilities and protected veterans, are encouraged to apply.



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**U.S. DEPARTMENT OF
ENERGY**

ORNL 2020-G00931/aas