Department of Energy National Labs: Drivers of Innovation

"Inside these labs you're teaching American business how to manufacture, how to take the lead in building new industries of the 21st century. And just as important, you are leading the way to a clean environment." – George H.W. Bush

Lawrence Berkeley National Lab – Berkeley, California | Founded 1931 | 4,000 employees

Lawrence Berkeley National Lab (LBNL) is managed by the University of California and is charged with conducting unclassified research across a wide range of scientific disciplines. Its work in energy sciences and technologies has made significant strides in designing and deploying demand response, grid resiliency, energy storage, microgrid, and vehicle to grid technologies.

National Renewable Energy Lab – Golden, Colorado | Founded 1977 | 2,500 employees

National Renewable Energy Lab (NREL) is DOE's primary national laboratory for renewable energy and energy efficiency research. The laboratory is home to three national research centers—for solar, wind, and bioenergy—and several programs that advance cutting-edge research in areas such as strategic energy analysis and energy systems integration. NREL's most recent economic impact study estimated the lab's impact to reach $872.3 million nationwide for FY2014 alone.

Pacific Northwest National Lab – Richland, Washington | Founded 1965 | 4,500 employees

Pacific Northwest National Lab (PNNL) is operated by Battelle and focuses primarily on fundamental and applied research to address critical national issues including national security, reducing U.S. dependence on foreign oil, and protecting natural resources. Its energy research covers five core areas: electric infrastructure, clean fossil energy, energy efficiency and renewable energy, environmental health and remediation, and nuclear energy.

Oak Ridge National Lab – Oak Ridge, Tennessee | Founded 1943 | 4,400 employees

Oak Ridge National Lab (ORNL) is the largest DOE science and energy laboratory, conducting basic and applied research to deliver transformative solutions to compelling problems in energy and security. Its three main areas of focus are scientific discovery; clean energy, including energy-efficiency buildings, transportation, and manufacturing; and its "first-of-a-kind" science-based security technologies. ORNL support those missions through leadership in four main areas of science and technology: neutrons, computing, materials, and nuclear.

National Energy Technology Lab – Albany, OR, Morgantown, WV, and Pittsburgh, PA | Founded 1910 | 1,500 employees

National Energy Technology Lab (NETL) is owned and operated by DOE and supports DOE's mission to advance the energy security of the United States. The lab implements a broad spectrum of energy and environmental research and development programs that will return benefits for generations to come. NETL has expertise in coal, natural gas, and oil technologies; contract and project management; analysis of energy systems; and international energy issues.

Brookhaven National Lab – Upton, New York | Founded 1947 | 3,000 employees

Brookhaven National Lab is operated by Battelle and Brookhaven Science Associates, which was founded by the Research Foundation for the State University of New York. Its core competencies include energy security, photon sciences, QCD matter, physics of the cosmos, and climate bioscience. Over its history, Brookhaven Lab has housed three research reactors, numerous one-of-a-kind particle accelerators, and other cutting-edge research facilities responsible for discoveries leading to many advances for science and society as well as seven Nobel Prizes.

Princeton Plasma Physics Lab – Plainsboro, New Jersey | Founded 1951 | 450 employees

Princeton Plasma Physics Lab (PPPL) is operated by Princeton University and advances the coupled fields of fusion energy and plasma physics research, and, with collaborators, is developing the scientific understanding and key innovations needed to realize fusion as an energy source for the world. It is a world-class fusion energy research laboratory dedicated to developing the scientific and technological knowledge base for fusion energy as a safe, economical and environmentally attractive energy source for the world's long-term energy requirements.

SLAC National Accelerator Lab – Menlo Park, California | Founded 1962 | 2,000 employees

SLAC is operated by Stanford University on behalf of the Department of Energy (DOE). The lab built the world's longest particle accelerator, discovered some of the fundamental building blocks of matter, and created the first website in North America. Its focuses include discovering new drugs for healing, new materials for electronics, and new methods to produce clean energy and clean up the environment.

Lawrence Livermore National Lab – Livermore, California | Founded 1952 | 6,500 employees

Lawrence Livermore National Lab (LLNL) is a government-owned, contractor-operated (GOCO) facility managed through a contract between the LLNS Board of Governors and DOE's National Nuclear Security Administration. The GOCO approach originated with the Atomic Energy Commission, which was created to provide civilian control over the design and development of U.S. nuclear weapons as well as nuclear energy research.

Sandia National Labs – Livermore, CA and Albuquerque, NM | Founded 1945 | 10,000 employees

Sandia National Labs (SNL) is a federally funded research and development center for the National Nuclear Security Administration (NNSA) and focuses on addressing emerging national security challenges, innovating new technologies to strengthen the nation's technological superiority,
creating value through products and services that solve national security challenges,
and informing the national debate where technology policy is critical to preserving security throughout the world.

Idaho National Lab – Idaho Falls, Idaho | Founded 1949 | 3,500 employees

Idaho National Lab (INL) is managed by Battelle and conducts vital research to sustain and develop nuclear energy technologies, scale other clean energy technologies, protect critical infrastructure, support national defense and homeland security, bolster cyber security, and make ensure the security of nuclear materials. INL designed and constructed the first 52 nuclear reactors, including the first reactor to generate usable amounts of electricity.

Los Alamos National Lab – Los Alamos, New Mexico | Founded 1943 | 10,000 employees

Los Alamos National Lab is operated by Los Alamos National Security and is also part of the NNSA lab network. Its mission is to develop and apply science and technology to ensure the safety, security, and reliability of the U.S. nuclear deterrent; reduce global threats; and solve other emerging national security and energy challenges. Los Alamos focuses on integrating research and development solutions to achieve the maximum impact on strategic national security priorities.

Ames Lab – Ames, Iowa | Founded 1947 | 450 employees

Ames Lab is operated by Iowa State University and specializes in materials design, synthesis and processing; analytical instrumentation design and development; materials characterization; catalysis; computational chemistry; condensed matter theory; and computational materials science and materials theory. It leads the Critical Materials Institute, a DOE Energy Innovation Hub, that brings together leading researchers from other DOE national laboratories, academia and industry to develop solutions to domestic shortages of rare-earth materials and other materials critical to U.S. energy security.

Fermi National Accelerator Lab – Batavia, Illinois | Founded 1967 | 1,700 employees

Fermi National Accelerator Lab is America's particle physics and accelerator laboratory and focuses on neutrino science with particle accelerators; the development of particle colliders and their use for scientific discovery; and particle physics through measurements of the cosmos. It helps drive American industrial competitiveness by developing new technologies and pioneering research.

Argonne National Lab – Lemont, Illinois | Founded 1946 | 3,350 employees

Argonne National Lab is a multidisciplinary science and engineering research center born out of the University of Chicago's work on the Manhattan Project. Its core competencies include large-scale national user facilities and advanced instrumentation; applied mathematics; advanced computer science, visualization and data; chemical and molecular science; applied materials science and engineering; nuclear physics; accelerator science and technology; and systems engineering and integration, among others.

Savannah River National Lab – Aiken, South Carolina | Founded 1951 | 825 employees

Savannah River National Lab (SRNL) works in nuclear materials procession and disposition as well as environmental remediation and risk reduction. Its innovation over the past five years have resulted in over $5 billion in savings for the U.S. waste cleanup program – a fifteen-fold return on investment for American taxpayers. It has a vested commitment to solving a range of complex problems such as the detection of weapons of mass destruction, the cleanup of contaminated groundwater and soils, the development of hydrogen as an energy source, the need for a viable national defense, and the safe management of hazardous materials.

Thomas Jefferson National Accelerator Facility – Newport News, VA | Founded 1987 | 800 employees

Thomas Jefferson National Accelerator Facility is operated by Jefferson Science Associates, a company created by the Southeastern Universities Research Association and PAE Applied Technologies. Its primary mission is to conduct basic research of the atom's nucleus using the lab's unique particle accelerator, known as the Continuous Electron Beam Accelerator Facility (CEBAF). It also conducts a variety of research using its Free-Electron Laser, which is based on the same electron-accelerating technology used in CEBAF.