LAB AT A GLANCE
LAWRENCE LIVERMORE NATIONAL LABORATORY

Science and technology on a mission is the hallmark of Lawrence Livermore National Laboratory (LLNL). In service to the Department of Energy/National Nuclear Security Administration and other federal agencies, LLNL develops and applies world-class science and technology (S&T) to ensure the safety, security, and reliability of the nation's nuclear deterrent. LLNL also applies S&T to confront dangers ranging from nuclear proliferation and terrorism to energy shortages and vulnerable infrastructure that threaten national security and global stability.

As a national security laboratory, LLNL harnesses operational excellence and strategic partnerships to meet its mission and applies the talents of our multidisciplinary staff, premier facilities, and core competencies to the nation's pressing issues. Through strategic support of S&T, LLNL translates innovations into national security and global stability.

FACTS

- **Location:** Livermore, California
- **Type:** Multidisciplinary national security laboratory
- **Year Founded:** 1952
- **Director:** Kimberly S. Budil
- **Contractor:** Lawrence Livermore National Security, LLC (LLNS)
- **Responsible Site Office:** Livermore Field Office
- **Website:** www.llnl.gov

CORE COMPETENCIES

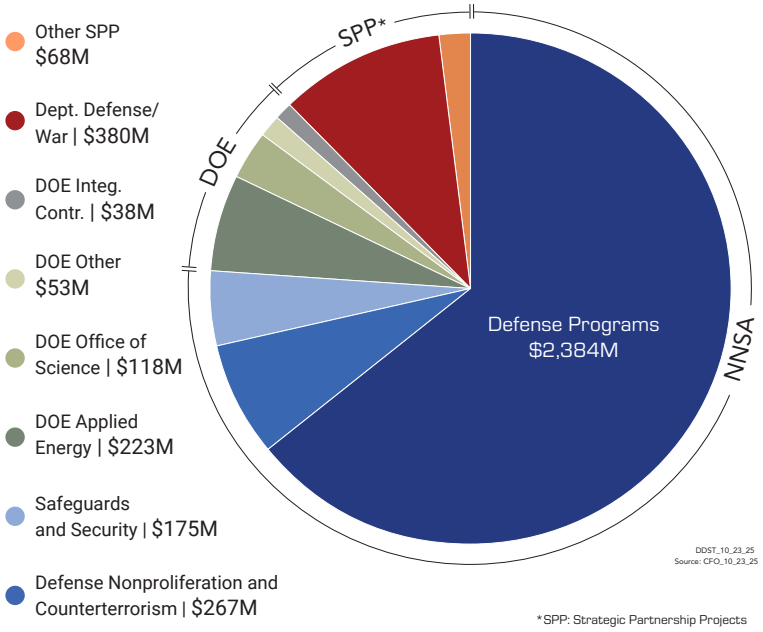
- Advanced Materials and Manufacturing
- Bioscience and Bioengineering
- Earth and Atmospheric Science
- High Energy Density Science
- High-Performance Computing, Simulation, and Data Science
- Lasers and Optical Science and Technology
- Nuclear, Chemical, and Isotopic Science and Technology

MISSION-SPECIFIC FACILITIES

- Advanced Manufacturing Laboratory
- Center for Micro-and Nanotechnology
- Center for Accelerator Mass Spectrometry
- Contained Firing Facility
- Electron Beam Ion Trap
- Forensic Science Center
- High Explosives Applications Facility
- Livermore Computing
- Polymer Enclave
- National Atmospheric Release Advisory Center
- National Ignition Facility
- Select Agent Center

FY2025 FUNDING BY SOURCE

(Total: $3,705,763,760)



*SPP: Strategic Partnership Projects

FY2025 COSTS

- FY25 LLNL operating costs: $3.45 billion
- FY25 DOE/NNSA costs (includes DOE/IC): $3.0 billion
- FY25 SPP costs (includes DHS): $472 million
- FY25 SPP as a % of operating costs: 13.7%

PHYSICAL ASSETS (FY25)

- 7,617 acres (DOE owned) and 502 buildings/trailers
- 6.6 million GSF* in active, operational buildings
- 52 non-operational buildings/trailers with 0.65 million GSF
- 48,457 GSF leased
- Replacement plant value: $37.9 billion

HUMAN CAPITAL (FY25)

- 9,340 LLNL employees as of 10/1/25, including:
  - 18 joint faculty (total for FY25)
  - 307 postdoctoral researchers (highest count FY25)
  - 553 undergraduate interns (total for FY25)
  - 657 graduate students (total for FY25)
- 417 contractors (non-LLNS employees)

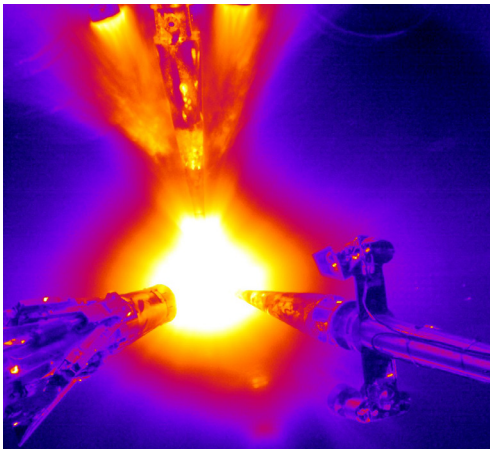
*Gross Square Feet

LABORATORY HIGHLIGHTS

UNIQUE FACILITIES

One of the World's Premier High-Performance Computing Facilities

Lawrence Livermore is home to Livermore Computing (LC), a premier high-performance computing facility. LC boasts more than 3 exaflops of peak computing power and numerous TOP500 systems, including the #1-ranked, 2.79-exaflop El Capitan system and the 294-petaflop Tuolumne system. These flagship supercomputers are GPU-enabled and produce multiphysics simulations in 3D at never-before-seen resolutions for a variety of mission-critical needs. LLNL also has several cutting-edge artificial intelligence (AI) powerhouses: three standalone SambaNova systems and the Cerebras wafer-scale engine to improve the fidelity of models and manage the growing volumes of data for speed, performance, and productivity gains. LC platforms are supported by our LEED-certified, innovative facilities for infrastructure, power, and cooling; a storage infrastructure including three varieties of file systems and the world's largest data storage archive of its kind; and highest-quality customer service. Our award-winning and specialized software stack optimizes the management of the compute and storage platforms. It spans programming models, development tools, mathematical libraries, productivity technologies, and workflow scheduling.



CUTTING-EDGE RESEARCH

Achieving Fusion Ignition

LLNL is home to the National Ignition Facility (NIF), the world's highest-energy laser system. NIF's 192 lasers fire up to 2.2 megajoules (MJ) of ultraviolet energy into a hohlraum—a cylinder the size of a pencil eraser—compressing and heating a tiny hydrogen-filled capsule until the atoms fuse and release immense energy. On Dec. 5, 2022, NIF achieved fusion ignition in a laboratory, generating 3.15 MJ of fusion energy from 2.05 MJ of laser input. LLNL has since set a new record fusion yield of 8.6 MJ in 2025. As a cornerstone of the nuclear security enterprise, NIF provides experimental data to validate 3D weapon simulation codes, deepen understanding of critical weapon physics, and address unresolved questions from underground nuclear tests.

A Path to Fusion Energy

Fusion has the potential to deliver a safe, reliable, and virtually limitless energy source. By producing more fusion energy than the laser energy required to initiate the reaction, NIF experiments are demonstrating the physics basis for inertial fusion energy. Through the Livermore Institute of Fusion Technology, LLNL scientists are now applying the lessons of ignition to accelerate public-private partnerships to make fusion energy a reality.

TECHNOLOGY TO MARKET

BridgeBio Oncology: Pioneering Cancer Treatment with LLNL Technology

In a substantial milestone for supercomputing-aided drug design, Lawrence Livermore National Laboratory (LLNL) and Theras, a subsidiary of BridgeBio now spun out as BridgeBio Oncology Therapeutics (BBOT), announced Phase I clinical trials for two first-in-class drug candidates — BBO-8520 and BBO-11818 — that target specific genetic mutations implicated in many types of cancer. A third drug candidate, BBO-10203, also in Phase I clinical trials, disrupts a key interaction between two cancer-driving proteins — RAS and PI3Kα — without causing hyperglycemia (high blood-sugar levels), which has historically hindered similar treatments.

The development of the new drug candidates is the result of collaboration among LLNL, BBOT, and the National Cancer Institute (NCI)'s RAS Initiative at the Frederick National Laboratory for Cancer Research (FNL). In a first for a Department of Energy (DOE) National Laboratory, the drugs were discovered through DOE's leadership in high-performance computing for mission applications, combined with an LLNL-developed platform integrating AI and traditional physics-based drug discovery, and effective partnership with BBOT and FNL.

This work performed under the auspices of the U.S. Department of Energy by Lawrence Livermore National Laboratory under Contract DE-AC52-07NA27344. ° November 1, 2025 ° LLNL-MI-2000874