



Our mission is to expand the commercial impact of the Department of Energy's research and development portfolio in the short, medium, and long term to advance the economic, energy, and national security interests of the country.

Our Role

The Department of Energy (DOE) is one of the largest supporters of technology transfer in the federal government. The Office of Technology Transitions (OTT) was established in 2015 to enhance DOE's efforts in this area, nurturing the innovation ecosystem, strengthening national security and improving U.S. economic competitiveness.

OTT develops the Department's policy and vision for expanding the commercial impact of its research investments, and it streamlines information and access to DOE's national labs and sites to foster partnerships that will move innovations from the labs into the marketplace. OTT is directed by the statutory Technology Transfer Coordinator, who serves as the principal advisor to the Secretary on all technology transfer and commercialization matters.

What is Technology Transitions?

It is the dynamic process, with numerous and varying handoffs between scientists and innovators and entrepreneurs, one that begins with an idea that is ultimately transitioned to a commercialized technology by the private sector. Every technology follows its own unique path and requires a variety of exchanges, feedback loops, and partnerships to advance it along the developmental spectrum. OTT provides support in each step of this process.

Possibilities through Partnerships

DOE is the government's largest funder of physical scientific research and development. This research results in technologies that make our nation safer, healthier, and more energy efficient. Our optimism about the possibilities through partnerships isn't speculative; it's grounded in countless success stories.



Founders of Blue Current

A collaboration with researchers from the University of North Carolina and DOE's Berkeley Lab resulted in the startup company Blue Current. The company is working to improve batteries that can be used in electric vehicles. Their research has already created a non-flammable lithium ion battery prototype. They replaced the liquid electrolyte with a safer liquid-solid hybrid that avoids leaks while making the battery more conductive and more resistant to damage. Ultimately, this research is working toward developing a battery with all solid components that would perform better, last longer, and be safer.

Nanosys partnered with DOE, 3M, and LG to develop Quantum Dot Enhancement Film, an electronic display offering 50% wider color spectrum than a standard LCD at a comparable price without requiring additional power. The technology is being used in the Kindle Fire HD 7, and it is being demonstrated in new HD TVs.



Electronic display being demonstrated in new HD TVs

Using DOE's synchrotron light source technology, scientists at DOE's Brookhaven National Lab are working with Best Medical International to develop a new cancer therapy device that generates high quantities of finely-tuned particle beams to destroy tumors. This new treatment has the distinct potential to strike each layer of a cancerous tumor in a single treatment cycle without damaging the surrounding healthy tissue.



DOE has national labs from coast to coast, from Long Island to the Bay Area. (Pictured: Lawrence Berkeley National Laboratory)

Our Responsibilities

OTT collects data on DOE’s technology transitions efforts, evaluates the impacts of those efforts, and engages with stakeholders to improve those efforts for commercial impact. These activities help OTT as it develops Department-wide services and activities including the Clean Energy Investment Center (CEIC) and the statutorily mandated Technology Commercialization Fund (TCF).

In January 2016, OTT launched the CEIC to inform and support investors as they make investment decisions. The center serves as a single point of contact for investors to access technical experts, acquire the latest reports, and identify promising energy projects. Its goal is to advance private, mission-oriented investments that address the present gap in the U.S. clean tech market.

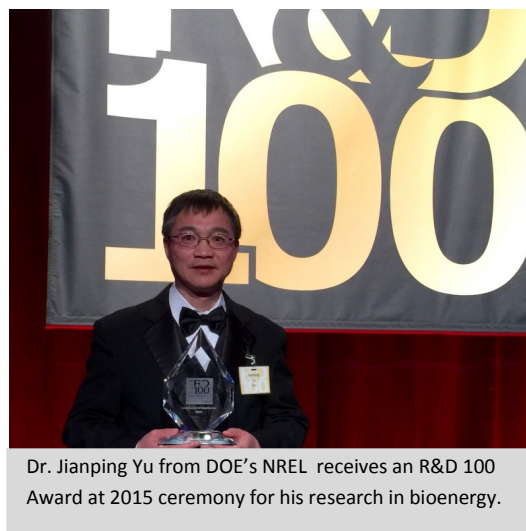
Through the TCF, OTT supports innovators and entrepreneurs to develop, mature and ultimately commercialize promising energy technologies developed in the national laboratories. TCF funds are to be matched with funds from the private sector to accelerate the development of energy products and increase their impact.

Three Pillars of OTT

Data Collection and Analysis: OTT develops statutorily mandated technology transfer-related reports annually. These reports consist of data collected from across the DOE enterprise. DOE collects more than 70 technology transfer-related data points for these reports. The information is used to continually improve the delivery of DOE’s missions, and it is also used to encourage laboratory planning, evaluation, and professional development.

Stakeholder Engagement: OTT conducts roundtables, workshops, and other meetings across the country to exchange information. The office also engages with and connects DOE laboratories and stakeholders to promote rapid technology transfer to U.S. commercial sectors.

Evidence-Based Impact Evaluations: OTT analyzes and evaluates programs and collects technology transition metrics Department-wide. The office helps analyze evaluation metrics, outputs and outcomes, and other information from national laboratories and DOE grantees to understand the Department’s impact on the commercial sector.



Dr. Jianping Yu from DOE’s NREL receives an R&D 100 Award at 2015 ceremony for his research in bioenergy.

A Leader in Innovation

A 2015 report by the U.S. Department of Commerce lists DOE as one of the largest contributors to technology transfer, and in many cases, it is by a sizable margin. DOE reported the largest number of invention disclosures, patent applications, and patents. It also has the largest number of licenses, invention licenses, and income-bearing licenses. DOE is responsible for almost 90 percent of the total number of active licenses, and it has supported the most start-ups of any agency.

R&D 100 Awards – the “Oscars of Innovation” awarded to DOE-supported researchers:

- 33 R&D 100 Awards in 2015
- More than 500 R&D 100 Awards since 2000