



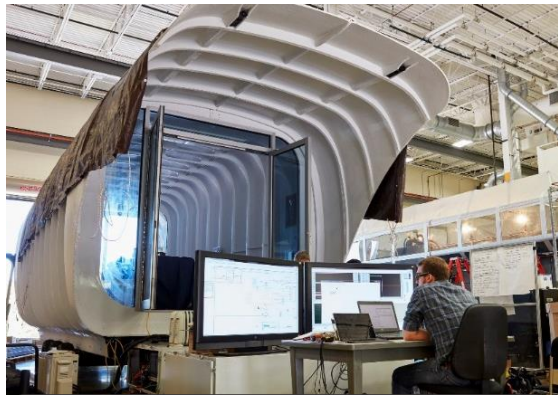
U.S. DEPARTMENT OF
ENERGY

Office of
Technology
Transitions

FY 2017 Budget Request

Jetta Wong, Director

Our mission is to expand the commercial impact of DOE's portfolio of RDD&D activities over the short, medium, and long term. Through these efforts, we work to increase the return-on-investment from federally-funded scientific and energy research.



3-D printed house in Oak Ridge highlights the possibilities of new manufacturing technologies.



Nanosys partnered with DOE's Lawrence Berkeley National Laboratory, 3M, and LG to develop Quantum Dot Enhancement Film that offers displays with 50% wider color spectrum at a comparable price without using more energy. This tech is being used in the new Kindle Fire 7 and demonstrated in new HD TVs.



Blue Current is a early-stage battery materials company based on technology out of Lawrence Berkeley National Laboratory and UNC Chapel Hill. They are developing a new class of safe lithium-ion batteries.

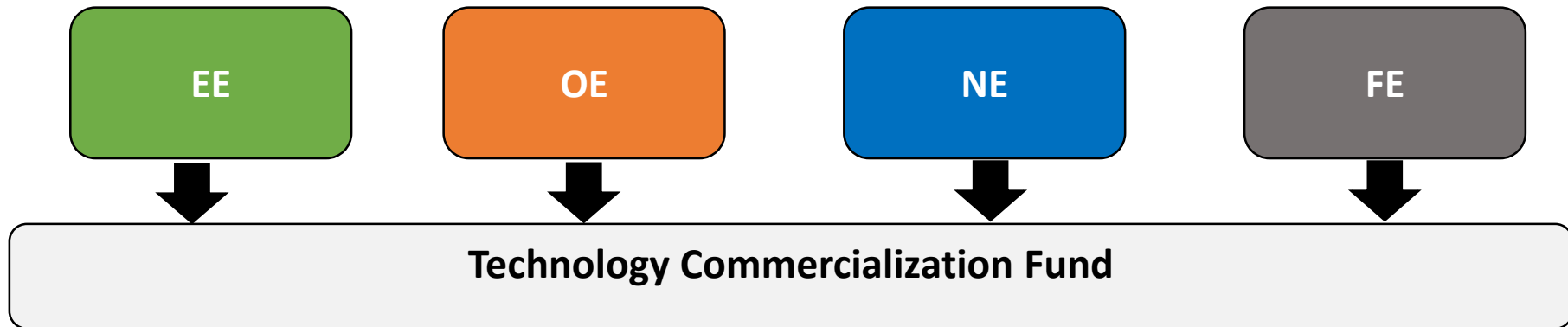
Technology Commercialization Fund (TCF)

Departmental Elements	TCF Allocation Estimate (.9% enacted) (\$ in thousands)
Energy Efficiency and Renewable Energy	\$9,082
Fossil Energy	\$5,045
Nuclear Energy	\$4,333
Electricity Delivery and Energy Reliability	\$1,199
Total:	\$19,659

Energy Policy Act of 2005 (42 U.S. Code § 16391(e))

“The Secretary shall establish an Energy Technology Commercialization Fund, using 0.9 percent of the amount made available to the Department for applied energy research, development, demonstration, and commercial application for each fiscal year based on future planned activities and the amount of the appropriations for the fiscal year, to be used to provide matching funds with private partners to promote promising energy technologies for commercial purposes.”

Technology Commercialization Fund (TCF)



- OTT oversees the TCF, which for FY 2017 is a nearly \$20 million fund that will leverage the R&D funding in the applied energy programs to mature promising energy technologies at the DOE national laboratories.
- The fund has two goals:
 1. Increase the number of energy technologies developed at DOE's national labs that graduate to commercial development and achieve commercial impact.
 2. Enhance the Department's technology transitions system with a proactive and competitive approach to lab-industry partnerships.

OTT FY 2017 Budget Request

	FY 2017 (\$ in thousands)
Salaries and Benefits	\$1,974
Travel	\$120
Technology Transitions Activities including:	\$5,786
Clean Energy Investment Center	\$1,380
Stakeholder Engagement	\$3,100
Data Collection and Analysis	\$485
Evidence-Based Evaluations	\$500
Support Services including: Contractor Support, Subscriptions and Office Requirements	\$321
Other Related Expenses	\$520
Total:	\$8,400



Meeting with Sen. Martin Heinrich (N.M.), Sen. Tom Udall, (N.M.), and Sen. Barbara Mikulski (Md.) at Sandia National Lab

Stakeholder Engagement: 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 through innovative programs.



Discovering the impact of DOE-funded technologies, such as advances in supercomputing

Evidence-Based Evaluations and Impact Studies: Assesses the effectiveness of technology transition pilot programs through peer reviewed, rigorous, evidence-based reports. Also, develops short white papers to examine, develop best practices, and communicate the broad impact of DOE-funded technology.



OTT collects data from DOE's labs and facilities nationwide

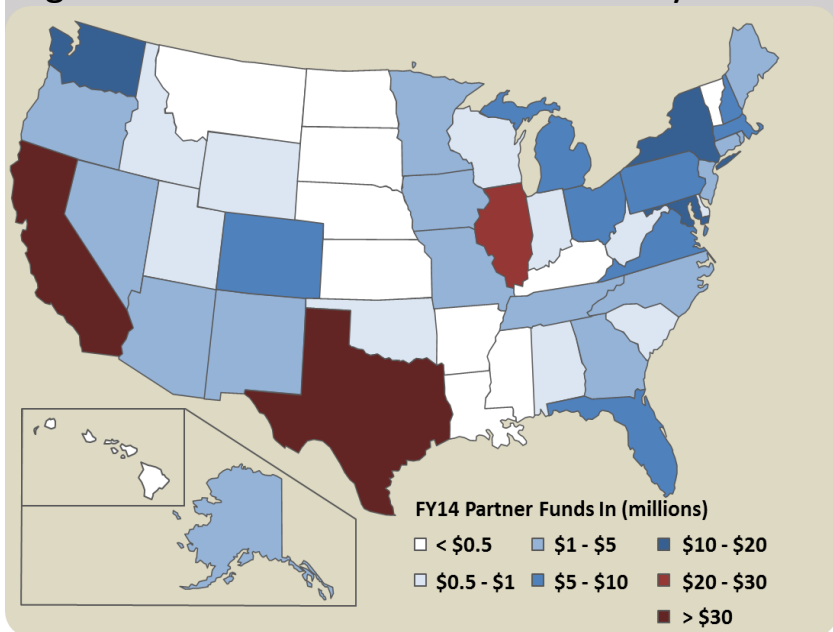
Data Collection and Analysis: DOE collects more than 70 technology transfer-related data points from across the DOE enterprise to evaluate and improve the delivery of DOE's missions. Annually develops two statutorily mandated technology transfer-related reports to Congress.

1. Technology Transitions Execution Plan
2. Report on Technology Transfer and Related Technology Partnering Activities at the National Laboratories and Other Facilities

Data Collection: Lab Agreements, Analysis and Visualization

- **2,792 Total Non-Fed Agreements (\$339 M Partner Funds In (PFI))**
 - 2021 SPP (\$240M PFI)
 - 704 CRADA (\$70 M PFI)
 - 67 ACT (\$29 M PFI)
- **DOE contributed \$38.0M to 233 CRADAs across 38 states**

Sum of partner contributed funds to TT agreements with U.S. National Labs by State



- **NATIONAL Impact: 70% of agreements are with entities > 200 miles away from a lab**

DOE tech transfer efforts can be measured and tracked by key comparison variables

Partner Types

- Large Business – Industry
- Small Business
- Academic/ University
- Not-for-Profit
- State/ Local Government
- Foreign

DOE Taxonomy Categories

- 23 taxonomies
- >300 subcategories provide additional granularity
- Categories being refined based on FY14 results

National Labs

- Improve understanding of lab core competencies
- Provide quantitative info to support success stories
- Analyze partner type and contract preferences

Regional Influence

- Identify regional hotspots of research focus areas
- Visualize global distribution and clustering of partners

The FY14 lab data call delivers the first complete set of non-federal government agreements (SPPs, CRADAs and ACTs) for all labs and facilities

Sampling DOE Technology Transition Efforts



Lab-Corps (EERE): Accelerates the transfer of new clean energy technologies from national labs into the commercial marketplace by training scientists how to successfully shift their breakthrough discoveries into high-impact, real-world technologies in the private sector.



Gateway for Accelerated Innovation in Nuclear (NE): Provides the nuclear energy community with access to the technical, regulatory, and financial support necessary to move new or advanced nuclear reactor designs toward commercialization.



Center for Collaboration and Commercialization (NNSA): Serves as a public face for Sandia National Laboratories, providing access to the Labs, and building linkages with the community. It will be a place where industrial, academic, and government partners can interact easily and freely, outside the gates.

OTT's Relationship with Program Offices

OTT serves as a DOE-wide functional unit that coordinates, sets policy, and strengthens the commercial development of DOE's research outputs by working with and learning from existing and new commercialization activities being conducted by DOE's programs.

- DOE's programs develop and implement technology transfer initiatives that advance areas relevant to their program.
- OTT connects and integrates the various technology transfer and commercialization initiatives happening across DOE's programs to achieve the maximum impact.
- OTT works to elevate these initiatives and find ways that other programs may adopt/collaborate with successful pilots, practices, or strategies.



OTT works with groups such as the Tech Transfer Working Group and the Tech Transfer Policy Board to coordinate with DOE's programs and sites.

Problem: Uncertainty, due to a lack of information, has led to fewer investments in the U.S. clean tech market.

Solution: We assist and support investors by providing a single location to access technical experts, acquire the latest reports, and identify promising energy projects.

Purpose: To catalyze private, mission-oriented investment in energy technologies to address the significant gap in U.S. cleantech investment.



Researchers at Berkeley Lab helped develop the first energy-efficient dual-paned windows, now used in buildings and homes world-wide for billions of dollars in energy savings.

The primary functions of the CEIC include:

- **Single Point of Access for Information**
- **Partnering Service**
- **Technical Assistance/Analysis**
- **Information on Early Stage Projects and Companies**

CEIC's Partnering Service will connect investors to subject matter experts nationwide.



Investor Queries:

- Information calls
- Scientist Work
- Strategic Partnership Projects
- Cooperative Agreements
- Technical Assistance Programs



Battery scientists at Lawrence Berkeley National Laboratory

For more information:

Jetta Wong

Director

Office of Technology Transitions

Department of Energy

Email: OTT@HQ.DOE.GOV



U.S. DEPARTMENT OF
ENERGY

Office of
Technology
Transitions