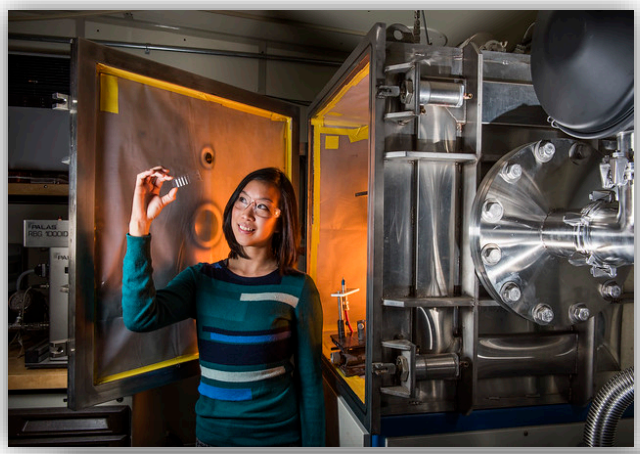
U.S. DEPARTMENT OF ENERGY | Office of Technology Transitions

University Toolkit & Resource Packet 2020-2021

Office of Technology Transitions (OTT)



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Introduction

There are many opportunities for universities to engage with the U.S. Department of Energy's national complex. This document should be used as an informational toolkit for university career services professionals, facility managers, educators, undergraduate and graduate students to access the resources that can inform:

1) University campus investments in energy efficient infrastructure and buildings

2) University focused DOE funding programs including prize competitions, challenges, and FOA'S

3) STEM efforts including internships, fellowships, and workforce development

4) Entrepreneurship and start-up business mentoring or support.

This toolkit is not intended to be an exhaustive list of all programs or resources available.

About the Office of Technology Transitions:

The mission of the Office of Technology Transitions (OTT) is to expand the commercial impact of the Department of Energy's research and development portfolio to advance the economic, energy, and national security interests of the Nation.

Crucial to the Office of Technology Transitions mission, is the sustenance of its relationships with multiple stakeholders including the national laboratories, legislators, the private sector, investors, and universities. OTT works to engage its stakeholders by developing programs and external facing activities that enable access to the DOE's labs and resources. Such activities may include stakeholder roundtables, workshops, and other meetings across the nation that help inform external partners of the DOE's R&D portfolio.

Questions about this Toolkit?

Contact OTT!

Email:

OTT@hq.doe.gov

Phone:

202-586-2000

Better Buildings

The Better Buildings is an initiative of the U.S. Department of Energy (DOE) designed to improve the lives of the American people by driving leadership in energy innovation. Through Better Buildings, DOE partners with leaders in the public and private sectors to make the nation's homes, commercial buildings and industrial plants more energy efficient by accelerating investment and sharing of successful best practices.

Learn more: https://betterbuildingsinitiative.energy.gov/

Better Buildings Higher Education Sector Team

The higher education sector spends over $6 billion on annual energy costs and totals about 5 billion square feet of floor space. Through the Better Buildings Alliance higher education group, 30 colleges and universities representing over 300 million square feet of space are sharing best practices and engaging with technical experts to advance their energy savings goals. Learn more: https://betterbuildingssolutioncenter.energy.gov/alliance/sector/higher-education

Better Buildings Alliance Technology Working Teams

The Better Buildings Alliance Technology Working Teams meet bi-annually or quarterly to share best practices and engage with technical experts from DOE's National Laboratories and industry. The Technology Working Teams include:

Building Envelope
Energy Management Information Systems
Lighting & Electrical
Plug & Process Loads
Refrigeration
Renewables Integration
Space Conditioning

High-Impact Technologies Demonstrations & Pilots

High-Impact Technologies High impact technologies (HITs) are cost-effective, underutilized energy-efficient building technologies. Through the High Impact Technology Catalyst program, the U.S. Department of Energy (DOE) identifies HITS and guides them through their early market introduction phases, ultimately deploying them to the broader market through partnerships with the commercial buildings industry.

Participate: Current Opportunities for Owners and Operators

Better Buildings Technology Campaigns

The Better Buildings technology campaigns support commercial building owners and operators as they seek to enhance the operations and energy performance of their buildings. Whether your organization is looking for efficient lighting solutions for every building in the portfolio, or how best to implement a state of the art energy management system in your first or thousandth building, each technology campaign is designed to pinpoint actionable information and generate resources that present the benefits and processes to getting more energy efficient.

Smart Energy Analytics Campaign

The Smart Energy Analytics Campaign is a recognition and guidance program designed to encourage the use of a wide variety of commercially available Energy Management and Information Systems (EMIS) technologies and ongoing monitoring practices to help uncover those energy-saving opportunities and improve building performance.

Interior Lighting Campaign

The Interior Lighting Campaign (ILC) is a recognition and guidance program designed to help facility owners and managers take advantage of savings opportunities from high efficiency interior lighting solutions. The campaign focus is on troffer, high-bay, low-bay, and suspended linear lighting systems and lighting controls.

Advanced RTU Campaign

The Advanced Rooftop Unit (RTU) Campaign is a recognition and guidance program designed to encourage building owners and operators to take advantage of savings opportunities from high efficiency RTUs. This effort is a collaboration between ASHRAE and RILA, with the U.S. Department of Energy providing technical support to Campaign participants (through the Better Buildings Alliance and the Federal Energy Management Program). Organizations that do not directly own or manage buildings are encouraged to join the Campaign as supporting partners.

Better Buildings Accelerators

Smart Labs Accelerator

Commit to reducing energy use in labs by at least 20% over the next 10 years and implement no- or low-cost measures in the shorter-term. DOE will help partners document model strategies that include operational changes, technological upgrades, and strategic energy management approaches.

Data Centers Accelerator

Organizations participating in the Data Center Accelerator commit to reducing the infrastructure energy intensity of one or more of their data centers by 25 percent over a period of five years. Federal agencies, national laboratories, higher education facilities, and private businesses will work with DOE to meter and track both their IT and infrastructure energy usage during the commitment period, aiming to develop creative and cost effective energy efficiency improvements to reach their energy savings goals.

Resources & Tools

ANL: Cyber Resilient Energy Delivery Consortium (CREDC)

CREDC was designed to support increasingly sophisticated and resilient common cyber security knowledge in a new generation of utility professionals. CREDC includes K-12 educational resources, a student board, and industry advisory board.

https://cred-c.org/

Higher Education Energy Financing Primer

This primer serves as an introduction to critical issues in energy finance for higher education. It provides case studies, market data, and other resources to help leaders in the sector take advantage of innovative financing strategies. The primer is part of the Better Buildings Financing Navigator, an online tool that helps public and private sector organizations find financing solutions for energy efficiency and renewable energy projects.

https://betterbuildingssolutioncenter.energy.gov/financing-navigator/option/higher-education-financing-primer

Better Buildings Financing Navigator

There are many ways to finance energy efficiency and renewable energy projects in buildings that you own or occupy. The Navigator helps you cut through this complexity to secure financing that works for you.

https://betterbuildingsinitiative.energy.gov/financing-navigator

Labs21 Benchmarking Tool

Use the Labs21 Benchmarking Tool to compare the energy use of your lab buildings with that of similar facilities in the US. The tool's peer-group database contains owner-submitted data from an ever-growing number of lab facilities.

https://labs21benchmarking.lbl.gov/

NREL Climate Neutral Research Campuses

Use NREL's climate action planning process and tool to reduce energy consumption and greenhouse gas emissions, and implement renewable energy systems at your research campus.

https://www.nrel.gov/climate-neutral/

NREL REopt Lite

The REopt™ Lite web tool helps commercial building managers: (1) Evaluate the economic viability of grid-connected PV, wind, and battery storage at a site; (2) Identify system sizes and battery dispatch strategies to minimize energy costs; and (3) Estimate how long a system can sustain critical load during a grid outage.

https://reopt.nrel.gov/tool

NREL HVAC Resource Map

The HVAC Resource Map is an intuitive graphical interface that provides quick access to a broad array of quality information on operations and maintenance best practices and energy and water efficiency measures. The resources cover the central plant, distribution systems, and zone systems. The primary audiences for this resource are facility managers, operations staff, and design engineers who want to improve central plant and distribution efficiency but don't have time to search for these resources.

https://hvacresourcemap.net/

Understanding Your ESPC Savings Guarantee

This guide summarizes some of the important aspects of savings guarantees in energy savings performance contracts (ESPCs) and includes links to reference documents for readers who want more detail.

https://www.energy.gov/sites/prod/files/2019/02/f59/understanding-espc-savings-guarantee.pdf

Energy Savings Performance Contracting (ESPC) Toolkit

The ESPC Toolkit is a collection of resources that will enable state and local communities to learn and benefit from the work of the Better Buildings ESPC Accelerator. Resources are grouped so that potential users of the mechanism can easily find the information they need at each stage of their ESPC decision-making process.

https://betterbuildingssolutioncenter.energy.gov/espc/home

Lab Efficiency Toolkit

This toolkit provides guidance and strategies for reducing energy consumption in laboratories. The Department of Energy has signed a Memorandum of Understanding with International Institute for Sustainable Laboratories (I2SL) to coordinate activities around better energy management practices and energy-efficient technologies in laboratories.

https://betterbuildingssolutioncenter.energy.gov/toolkits/reduce-laboratory-energy-use

Green Revolving Funds Toolkit

A Green Revolving Fund (GRF) is an internal capital pool that is dedicated to funding energy efficiency, renewable energy, and/or sustainability projects that generate cost savings. A portion of those savings are then used to replenish the fund (i.e. revolved) allowing for reinvestment in future projects of similar value. This establishes an ongoing funding vehicle that helps drive energy efficiency and sustainability over time, while

generating cost savings and ensuring capital is available for important projects. This toolkit provides cross-sector guidance on establishing this customizable solution to overcome the common barrier of dedicated funding.

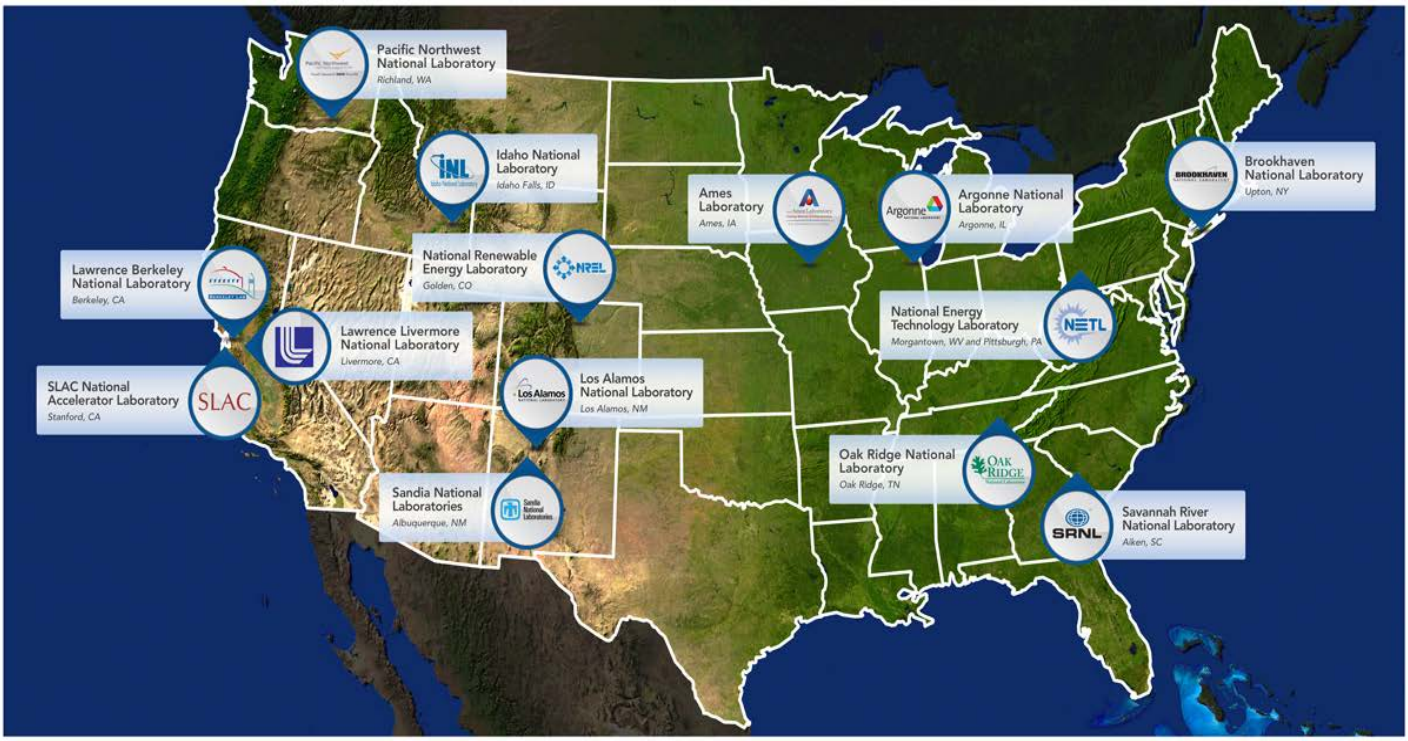
https://betterbuildingssolutioncenter.energy.gov/toolkits/green-revolving-funds

OSTI.GOV

This resource makes discoverable over 70 years of research results from DOE and its predecessor agencies. Research results include journal articles/accepted manuscripts and related metadata; technical reports; scientific research datasets and collections; scientific software; patents; conference and workshop papers; books and theses; and multimedia. OSTI.GOV contains over 3 million records, including citations to 1.5 million journal articles, 1 million of which have digital object identifiers (DOIs) linking to full-text articles on publishers' websites. OSTI.GOV provides access to this DOE STI by offering numerous easy-to-use search capabilities and customization options; and for the DOE community, additional citation information is available to help researchers evaluate article impact and find related research.

https://www.osti.gov/about

National Laboratory Map



Virtual Lab Tours

Idaho National Laboratory: https://inl.gov/article/take-a-virtual-field-trip-to-idaho-national-laboratory/

Jefferson Laboratory: https://www.jlab.org/virtual-tour

Pacific Northwest National Laboratory: https://www.pnnl.gov/about/tour.asp

Sandia National Laboratories: https://tours.sandia.gov/tours.html

ANL: Cyber Defense Competition

Argonne hosts the competition each year to highlight the advantages of a career in cyber security for students and to let them test their skills in real-world scenarios.

https://cyberdefense.anl.gov/

DOE Solar Decathlon

The U.S. Department of Energy Solar Decathlon is a collegiate competition, comprising 10 contests, that challenges student teams to design and build highly efficient and innovative buildings powered by renewable energy. The winners will be those teams that best blend design architectural and engineering excellence with innovation, market potential, building efficiency, and smart energy production.

The combined competition features two tracks, the Design Challenge and the Build Challenge. The Solar Decathlon provides a hands-on experience and unique training that prepares the competing students to enter the clean energy workforce. This international competition has been a driving force in raising awareness about clean energy since its

inception in 2002. Technologies and solutions used in Solar Decathlon homes have advanced the residential building industry both in the United States and abroad.

Solar Decathlon is more than a competition. It's an intensive learning experience for consumers and homeowners as they experience the latest technologies and materials in energy-efficient design, clean energy technologies, smart home solutions, water conservation measures, electric vehicles, and high-performance buildings.

Get the latest updates & opportunities in the OTT Newsletter!

energy.gov/technologytransitions

The first Solar Decathlon was held in 2002; the competition occurred biennially in 2005, 2007, 2009, 2011, 2013, 2015, and 2017. The next Solar Decathlon is planned for 2019-2020.

https://www.solardecathlon.gov/about.html

Collegiate Wind Competition

According to the U.S. Department of Energy's (DOE's) Wind Vision report, wind energy could supply 10% of the nation's electricity needs by 2020, 20% by 2030, and 35% by 2035. As the U.S. power generation mix incorporates more wind energy, workers who are better qualified will be needed to fill related jobs at all levels. To help facilitate filling these roles, DOE and the National Renewable Energy Laboratory (NREL) created the Collegiate Wind Competition in 2014. The competition aims to prepare students from multiple disciplines to enter the wind energy workforce by providing real-world technology experience.

https://www.energy.gov/eere/collegiatewindcompetition/about-collegiate-wind-competition

EcoCar Mobility Challenge

The EcoCAR Mobility Challenge (EcoCAR) is the latest U.S. Department of Energy (DOE) Advanced Vehicle Technology Competition (AVTC) series. The four-year competition will challenge 12 university teams to apply advanced propulsion systems, as well as connected and automated vehicle technology to improve the energy efficiency, safety and consumer appeal of the 2019 Chevrolet Blazer – Specifically for the carsharing market. Headline sponsored by DOE, General Motors (GM) and MathWorks, and managed by Argonne National Laboratory, EcoCAR is the heart of automotive ingenuity working towards future mobility solutions. EcoCAR puts the students in the driver's seat, providing a real-world training ground for students to gain hands-on experience following a multi-year vehicle development process to design, integrate and refine efficient mobility solutions.

https://avtcseries.org/ecocar-mobility-challenge/

Solar District Cup

The Solar District Cup is a new multidisciplinary collegiate competition that challenges student teams to design and model distributed solar energy systems for multiple buildings on a local electrical distribution network. These systems will integrate solar, storage, and other distributed technologies and capabilities across mixed-use districts, or groups of buildings served by a common electrical distribution feeder, such as a campus, a development, or an urban area. The competition engages students across the engineering, urban planning, finance, and business disciplines to reimagine how energy is generated, managed, and used in a district.

https://www.herox.com/SolarDistrictCup

STEM RISING
U.S. DEPARTMENT OF ENERGY

STEM Rising

DOE, NNSA, and our National Labs have a critical role in ensuring American competitiveness by helping to develop new generations of science and engineering leaders. Together, our 17 National Laboratories, our DOE headquarters and field sites, and the National Nuclear Security Administration tackle the toughest scientific and technological challenges out there.

Our workforce depends on STEM skills, requiring a highly technical and specialized expertise. Nearly 40 percent of our federal workforce are in STEM positions, and over 70 percent of our federal employees have a bachelor's degree or higher. We

must leave future generations a world that is safer, more secure, prosperous and clean. We are equally concerned with ensuring that those future generations are equipped with the skills and knowledge needed to resolve the big energy and security challenges they will face.

STEM grants, internships and other programs raise awareness among young scientists of the missions of DOE/NNSA, just as they are beginning their careers and looking for a burgeoning organization to join. At the undergraduate, graduate, and postdoc level students make up a large and valuable part of our workforce especially at the National Laboratories and our National Nuclear Security Administration. Students and teachers can immerse themselves in a lab, interact with scientists and engineers, and see what a career in STEM can look like day-to-day, providing priceless experiences. This next generation of scientists and engineers will drive discovery and innovation, and the world will be a safer and better place for it.

On the **STEM Rising** website – http://www.energy.gov/STEMRising – you can find information about all our STEM resources, programs, and events in one spot. In the "College & Continued Learning" section you'll find compiled information on the programs highlighted in this toolkit. We also have a STEM Rising blog to share stories and career profiles, and offer a monthly STEM Rising newsletter to keep up to date on our efforts across the DOE enterprise. Follow #STEMRising on Twitter and Facebook for the latest on our social media channels across DOE.

CCI, or Community College Internship

The CCI program, seeks to encourage community college students to enter technical careers relevant to the DOE mission by providing 10-week internships at one of 15 DOE laboratories. Applicants must be currently enrolled as a full-time student at a community college or accredited two-year college and have completed at least one semester at the time of application. Applicants also must have completed at least six credit hours in science, mathematics, engineering or technology course areas, and completed at least 12 credits hours towards a degree. *

https://science.osti.gov/wdts/cci

DOE Industrial Assessment Centers (IAC)

Teams located at 28 universities around the country provide eligible small- and medium-sized manufactures with no-cost energy audits that identify opportunities to improve productivity, reduce waste, and increase energy efficiency. Under the guidance of a faculty member, undergraduate and graduate engineering students at the universities hosting IACs conduct the audits, gaining hands-on training in energy systems analysis at operating

industrial facilities. IACs train the next-generation of energy savvy engineers, more than 60 percent of which pursue energy-related careers upon graduation.

https://www.energy.gov/eere/amo/industrial-assessment-centers-iacs

DOE Scholars Program

The DOE Scholars Program provides opportunities for college students and recent graduates to gain first-hand experience and training in the fields of science, engineering, technology, and related professions that support the mission of the DOE. These positions are typically short-term.

https://orise.orau.gov/doescholars/

DOE Computational Science Graduate Fellowship

Provides outstanding benefits and opportunities to students pursuing a PhD in scientific or engineering disciplines with an emphasis in high-performance computing.

https://www.krellinst.org/csgf/

EERE Student Volunteer Internship Program (SVIP)

Volunteer internships provide students opportunities to complement their academic endeavors through direct experience with EERE in the field of energy efficiency and renewable energy. Provides potential opportunities to network with experts within the energy community on a local, national, and international level.

https://www.energy.gov/eere/education/eere-student-volunteer-internship-program-svip

Law Student Intern Program

An opportunity for law students to gain firsthand exposure to the fast-moving and evolving practice of energy law. Program is designed for a select group of law students to become integrated components of our practice groups by working closely with attorneys in GC. Interns can expect demanding legal research and writing assignments concerning an array of energy-related practice areas, including: energy efficiency, nuclear security and non-proliferation, renewable technologies, alternate fuels vehicles, environmental compliance, intellectual property, alternative dispute resolution, and loan guarantee programs.

https://www.energy.gov/gc/general-counsel-law-student-intern-program

Lee Teng Undergraduate Fellowship in Accelerator Science

Established by the Illinois Accelerator Institute to attract undergraduate students into the exciting and challenging world of particle accelerator physics and technology.

Argonne National Laboratory (ANL), Fermi National Accelerator Laboratory (FNAL), the US Particle Accelerator School (USPAS)

https://www.illinoisacceleratorinstitute.org/index.html

Management of Stewardship Science Graduate Fellowship (SSGF) and Laboratory Residency Graduate Fellowship (LRGF) Programs

The DOE NNSA LRGF program's primary objective is to encourage the training of scientists by providing financial support to talented students whose study and research is accompanied by practical work experience at one or more of the following DOE NNSA facilities: Lawrence Livermore National Laboratory, Los Alamos National Laboratory or Sandia National Laboratories (New Mexico), or at the Nevada National Security Site.

https://www.krellinst.org/lrgf/

Mentorship for Environmental Science Program

A collaborative effort between Pre-College University and the U.S. Department of Energy to increase minority awareness and participation in the environmental science disciplines. The MES Program consists of a 10 - week paid summer internship at one of several participating Department of Energy sites. These sites include Savannah River Site, Aiken, SC; Savannah State University, Savannah, GA; Oak Ridge National Laboratory; Oak Ridge, TN; Sandia National Laboratory, Albuquerque, NM; Office of Legacy Management, Grand Junction, CO; and The Hanford Site, Richland, WA.

http://www.precollegeuniversity.com/mentorship-%20environmental-scholars.php

Mickey Leland Energy Fellowship (MLEF) Program

For more than 20 years, the Mickey Leland Energy Fellowship (MLEF) Program has provided students with fellowship opportunities to gain hands-on research experience with the Department of Energy's (DOE) Office of Fossil Energy. The MLEF program was created in 1995 with the goal of improving opportunities for under-represented students in the science, technology, engineering, and mathematics (STEM) fields; however, all eligible candidates are encouraged to apply.

https://orise.orau.gov/mlef/default.html

Minority Educational Institution Student Partnership Program (MEISPP)

This program encourages minority students to experience a summer internship at the Department of Energy in DC, national laboratories, or a field location. Benefits include paid roundtrip airfare, paid housing, a stipend, and a series of professional development seminars.

https://www.energy.gov/diversity/minority-educational-institution-student-partnership-program-meispp-internships

National Consortium for Graduate Degrees for Minorities, Inc. (GEM)

Administered by the Diversity Office, GEM is jointly sponsored by a consortium of university and employer members. This consortium offers a fellowship to under-represented minorities (Native American, African American, and Hispanic) who are pursuing degrees at the master's level in science and engineering through a program of paid summer internships. Job descriptions are developed by the principal investigator. Participants will be provided the opportunity to gain hands-on experience in various engineering areas while working under the guidance and support of professional staff members.

Brookhaven, Fermi, LBNL, LLNL, Los Alamos, NREL, ORNL, PNNL, Sandia

http://www.gemfellowship.org/students/gem-fellowship-program/

NEUP Fellowship and Scholarship Support

This program supports education and training for future nuclear scientists, engineers and policy-makers who are attending U.S. universities and colleges in nuclear-related graduate, undergraduate and two-year study programs. These are zero-dollar awards that will be funded as students apply through the Department of Energy, Office of Nuclear Energy.

https://neup.inl.gov/SitePages/Fellowship%20Information.aspx

NIF Student Internship Program

Provides undergraduate and graduate students research opportunities in lasers, plasma physics, electro-optics, software development, and optical, x-ray, and nuclear instrument development and testing. Students work alongside scientists at on-site laser and nuclear facilities in the areas of advanced laser development, laser–plasma interactions, hydrodynamics, material science, radiation physics, and various diagnostic systems.

https://lasers.llnl.gov/education/opportunities/student-internship

NNSA Graduate Fellowship Program

The National Nuclear Security Administration (NNSA) Graduate Fellowship Program (NGFP) is seeking highly motivated graduate-level students to grow as the next generation of nuclear security leaders.

https://ngp.pnnl.gov/

NNSA Minority Serving Institution Partnership Program (MSIPP)

NNSA strives to recruit and hire a highly skilled work-force representing America's rich diversity. Highly motivated and high-performing undergraduate or graduate student attending participating Minority Serving Institution (MSI). Students gain real-world work experience related to their academic background at world-class scientific facilities or Federal offices across the country.

https://www.energy.gov/nnsa/nnsa-minority-serving-institution-partnership-program

NNSA Minority Serving Institution (MSI) Internship Program

A great way to explore your future career. Combining your studies with on-the-job training and experience directly related to your academic program will enable you to make more informed career choices in the future. For 10 weeks during your summer break, you will have the opportunity to work on exciting projects at NNSA's laboratories, Federal field offices or with our small business partners. Many of our MSI interns with science, technology, engineering or mathematics backgrounds work in research environments with the nation's top scientists and engineers.

https://nnsa.energy.gov/federalemployment/ourjobs/studentsopportunities/msi

OPM/HC: Presidential Management Fellows

Designed to attract qualified candidates to the Federal service. This program is available to outstanding applicants that are pursuing a professional or graduate degree that have a clear interest in, and commitment to, excellence in the leadership of public policies and programs. The PMF Program inculcates a lasting bond as well as a spirit of public service, ultimately encouraging and leading to a career in the government. After completing the 2-year program, participants are eligible for conversion to full time permanent employees.

https://www.pmf.gov/

Science Graduate Fellowship

The DOE Office of Science Graduate Fellowship program (SCGF) has supported outstanding graduate students pursuing graduate training in basic research in areas of

physics, biology (non-medical), chemistry, mathematics, engineering, computational and computer sciences, and environmental sciences relevant to the Office of Science mission areas to encourage the development of the next generation of scientific and technical talent in the U.S.

https://science.energy.gov/wdts/scgf/

Science Graduate Research Program (SCGSR)

Provides graduate thesis research opportunities at DOE laboratories and to prepare graduate students for STEM careers critically important to the DOE Office of Science mission. The SCGSR program provides supplemental awards to outstanding U.S. graduate students to pursue part of their graduate thesis research at a DOE laboratory/facility in areas that address scientific challenges central to the Office of Science mission.

https://science.energy.gov/wdts/scgsr/

SULI, or Science Undergraduate Laboratory Internship

The SULI program, is a Department of Energy program to encourage undergraduates from two- and four-year colleges to pursue STEM careers by providing research internships at one of 16 DOE national laboratories. SULI provides internships in the summer, fall and spring.

https://education.lbl.gov/internships/suli/

Student Pathways Program

The Pathways Program offers federal internship and employment opportunities for current students, recent graduates and those with an advanced degree. There are three different paths available:

https://www.usajobs.gov/Help/working-in-government/unique-hiring-paths/students/

Tribal Internship Program

For current students familiar with Native American culture and tribal issues. Interns provide support on IE-funded tribal renewable energy projects and assist a cross-disciplinary team to perform specific technical tasks in the field and at DOE's Sandia National Laboratories. Interns will work with Sandia's renewable energy staff and American Indian Outreach Committee, along with Native American tribes interested in renewable systems. The internship program offers the opportunity for instant immersion in project planning and development activities working directly with experienced, internationally recognized energy experts. The work requires travel, including field visits to renewable energy project sites.

https://energy.gov/indianenergy/resources/education-and-training/college-student-internship-program

ANL: Clean Cities University Workforce CCUWDP

This program is run by Argonne National Lab, and the contact person is Amanda McAlpin. She can be reached at 630-252-2911 or amcalpin@anl.gov. She works with the nearly 100 Clean Cities coalitions across the country to determine their need for interns, and with numerous colleges and universities to find students that are interested. Student backgrounds and majors vary, depending on the coalition needs. The program is budget-dependent, but we've usually had programs for both semesters and the summer session. We're in the middle of reviewing coalition applications for Fall 2019, but hopefully there will be another round for the spring.

For more information on the Clean Cities program, go to https://cleancities.energy.gov and on the intern program, go to

https://cleancities.energy.gov/working-with-us/

ANL: Cooperative (Co-Op) Education Program

Combines academic study with employment. The employment is a practical application directed towards the student's academic course of study. The appointment is supervised and evaluated by both Argonne and the student's institution.

https://www.anl.gov/education/undergraduate-cooperative-education

ANL: Cybersecurity Internships

Advance your cybersecurity career at Argonne National Laboratory by working with Argonne's Cyber Operations, Analysis, and Research (COAR) team.

https://coar.risc.anl.gov/student-program/

ANL: Exotic Beam Summer School (EBSS)

Introduces students and young researchers to the science of exotic nuclei, including nuclear structure, nuclear astrophysics, fundamental interactions, and the application of nuclear science and technology.

https://www.anl.gov/education/graduates/exotic-beam-summer-school-0

ANL: Givens Associate Program

The Mathematics and Computer Science Division at Argonne is developing innovative techniques in numerical computing and computational mathematics. The Givens Associate positions are intended to encourage graduate students who are beginning careers in numerical analysis or computational mathematics.

https://www.anl.gov/mcs/givens-associates

ANL: Graduate Research Program

Available to qualified U.S. and non-U.S. university graduate students who wish to carry out their thesis research at Argonne National Laboratory under co-sponsorship of an Argonne staff member and a faculty member at the student's home institution.

https://www.anl.gov/education/graduate-programs

ANL: International Safeguards Summer Internship Opportunities

Participants will assist with safeguards policy studies, human capital development, knowledge management, and research into safeguards concepts and approaches.

http://www.anl.gov/education/graduates/summer-safeguards-internship-program

ANL: National School on Neutron & X-Ray Scattering

Educates graduate students in the use of major neutron and X-ray facilities. Lectures, presented by researchers from academia, industry and national laboratories, will include basic tutorials on the principles of scattering theory and the characteristics of the sources, as well as seminars on the application of scattering methods to a variety of scientific subjects. Program is also sponsored by Oak Ridge National Laboratory.

https://www.aps.anl.gov/Conferences-and-Workshops/2018/national-school-neutron-and-x-ray-scattering

https://neutrons.ornl.gov/nxs

ANL: Professional Career Internship Program

For undergraduate students in non-STEM fields, students perform their internship under the guidance of laboratory staff on projects supporting Argonne's mission.

https://www.anl.gov/education/undergraduates/internship-opportunities/professional-career-internship-program

ANL: Research Aide Program

College and university students work alongside scientific and engineering staff, providing technical assistance. Rather than designing their own research programs, students are assigned specific technical tasks. Unlike research internships, research aide appointments are considered jobs.

https://www.anl.gov/education/undergraduate-research-aide

ANL: Summer Strategic Trade Control Internship Program

Encourages graduate students who are beginning careers in export controls, nonproliferation, terrorism studies, or national security to explore practical analysis, engagement, and training opportunities at Argonne National Laboratory. Participants work actively with CSS employees to analyze, develop, and deliver export control and nonproliferation training with our partners worldwide in support of strategic trade control analysis and weapons of mass destruction (WMD) counter proliferation activities.

http://www.anl.gov/education/graduates/strategic-trade-control-internship

BNL: ESF Field Research Initiative (RSF-RFI)

Partnership between ESF and BNL where ESF graduate students and faculty can utilize BNL's campus and its environs as a NY downstate field station for research and outreach activities.

https://www.bnl.gov/education/program.asp?q=193

BNL: INCREASE Historically Black Colleges and Universities / National Synchrotron Light Source Consortium Program

The workshops, conducted over the course of two days, consist of introductory lectures on synchrotron science, techniques, and operations. Hands-on experimental activities will be offered to participants using a variety of beamlines. Additionally, there will be a writing tutorial focused on the development of competitive beamline proposals for independent research at the NSLS. Transportation, housing, and meals will be provided by Brookhaven National Laboratory.

https://www.bnl.gov/education/program.asp?q=125

BNL: Graduate Research Internship Program

Pairs graduate students with a Brookhaven National Laboratory scientist on a mutually agreed upon project, which will enhance the interns' research skills and may lead to multiple scientific publications and may support their graduate thesis or dissertation.

https://www.bnl.gov/education/program.asp?q=123

BNL: Mini-Semester Program

Students spend one week at BNL during the winter break and participate in a lab related research project.

https://www.bnl.gov/education/program.asp?q=117

BNL: New York State Collegiate Science & Technology Entry Program Mini-Course (C-STEP)

Students from New York State CSTEP Programs explore topics in biology, bioenergy, biofuels, chemistry, protein crystallography, 3-D visualization and other topics related to research being conducted at BNL. The objective is to introduce motivated participants to modern day science through science and technology exploration.

https://www.bnl.gov/education/program.asp?q=120

BNL: Nuclear Chemistry Summer School

Founded as an educational outreach and workforce development activity to promote expertise in nuclear science and to provide trained personnel to meet national needs in nuclear research, the nuclear power industry, and nuclear medicine. Participants will have the opportunity to visit research sites, attend a guest lecture series, and meet and interact with prominent research scientists working in nuclear and radiochemistry.

https://www.bnl.gov/ncss/

BNL: Nuclear Nonproliferation Safeguards and Security Summer Course

Designed to give graduate students a sound understanding of the framework created by the international community to address the threats of nuclear proliferation and nuclear terrorism. The focus is on the central element of this regime, the Nuclear Non-Proliferation Treaty (NPT) and its verification mechanism, the IAEA safeguards system.

https://www.bnl.gov/nnsscourse/

BNL: Gorman-Metz Scholarship

A competitive one-time annual scholarship awarded to a student who has a disability (as defined by the Americans with Disability Act) and who is matriculating toward a graduate or professional degree.

https://www.bnl.gov/diversity/programs.php

BNL: Science Communication Internship

For students interested in science writing and communication. Participants will learn to write science news and feature stories for a variety of audiences, including employees, scientists who come to Brookhaven to use our research facilities, and other readers of Brookhaven's website.

https://www.bnl.gov/education/program.asp?q=118

BNL: Science and Engineering Programs for Women and Minorities

Undergraduate women and minority students are employed for 10-12 weeks during the summer. Participants are mentored by members of the scientific, administrative, or technical staff in an educational training program developed to provide research experience in various areas of chemistry, physics, computer science, engineering, biology, nuclear medicine, applied mathematics, high and low energy particle accelerators, and scientific writing as well as non-scientific areas.

https://www.bnl.gov/diversity/programs.php

FERMI: International Partnerships Program

Research internships in science, engineering and technology for highly motivated Italian physics and engineering university students. Students work with scientists or engineers on projects related to Fermilab's research program or in similar programs at similar U.S. institutions. They also attend career planning and numerous training/informational sessions.

https://ed.fnal.gov/interns/programs/ital-sssa/index.shtml

FERMI: Summer Internships in Science & Technology

Opportunity to conduct research with Fermilab scientists and engineers at the nation's preeminent high energy physics laboratory. The internship consists of a work assignment, an academic lecture series and a final report presented orally to Fermilab staff and submitted to the laboratory in writing. There are no grades or quizzes.

http://diversity.fnal.gov/sist/

FERMI: Neutrino Physics Center Fellowship Program

Bringing the international neutrino community to Fermilab for short- to medium-term visits. Awards for experimentalists are made for work on hardware or software work, awards for theorists are made for neutrino theory or phenomenology related to the Fermilab neutrino program, interpreted in the broadest possible sense. Fellows who have a specific goal in mind for the duration of their stay will be given priority in funding.

http://npc.fnal.gov/neutrino-visiting-scholar-program/

FERMI: URA Visiting Schools Program

To support the work of faculty and students from the Universities Research Association, Inc. (URA) institutions doing research in areas such as high energy physics experiments, astrophysics, theory, accelerator physics, materials science, and computer science, related to the Fermilab mission. Visits can range from attendance at Fermilab conferences and summer schools to year-long stays at the Lab.

https://www.ura-hq.org/awards/visiting-scholars-program/

LANL: Los Alamos Dynamics Summer School

The Los Alamos Dynamics Summer School focuses a select group of students on the multi-disciplinary field of dynamics, spanning electrical, mechanical, structural and cyber-physical systems. The students' research will be applied to creating solutions to Los Alamos National Laboratory mission-relevant problems defined by Los Alamos National Laboratory R&D engineers. In addition to this research component, the LADSS also offers formal technical and career –development tutorials.

http://www.lanl.gov/projects/national-security-education-center/engineering/los-alamos-dynamic-summer-school/index.php

LANL: Los Alamos Co-Design Summer School

The Los Alamos ISTI/ASC Co-Design Summer School was created to train future scientists to work on the kinds of interdisciplinary teams that are demanded by today's scientific challenges. Launched in 2011, the summer school recruits top candidates in a range of fields spanning domain sciences, applied mathematics, computational and computer sciences, and computer architecture. Participants work together to solve a focused problem that is designed to build the skills needed to tackle the grand challenges of the future. Foremost among the skills on which we focus is the ability of students to work across disciplines with other team members, while employing their own unique expertise. This is the heart of Co-Design.

http://lanl.github.io/cdss/

LANL: Computer System Cluster and Networking Summer Institute

This is a focused technical enrichment program for students currently engaged in computer science, computer engineering, or similar major. The primary objective of the CSCNSI is to provide a thorough introduction to the techniques and practices of cluster computing. The program includes lecture, laboratory, and professional development components.

http://www.lanl.gov/projects/national-security-education-center/information-science-technology/summer-schools/cscnsi/index.php

LANL: Future Female Leaders In Engineering

The future Female Leaders in Engineering (FFLIE) Program inspires women to achieve their full potential as engineers and future leaders. It also supports and celebrates their many achievements and successes. LANL is seeking internal nominations for current female undergraduate and post-bachelor engineering students. They must have completed at least their sophomore year of course work prior to the start of the program. They must have an interest in a career at LANL as the program requires an employment commitment following completion of Master's program.

https://www.lanl.gov/careers/career-options/student-internships/LANL%20Summer%20Schools/FFLIE.php

LBNL: Research Summer Program

For students majoring in computational science, computer science, mathematics and related science and engineering fields, Berkeley Lab Computing Sciences hosts a 12-week

research summer program that provides students with the opportunity to gain research experience. Participants will work on projects in computational research, high performance computing, high speed networking or a collaboration of each, under the guidance of one or more staff members.

http://cs.lbl.gov/careers/summer-student-program

LBNL Sustainable Research Pathways (SRP)

SRP is a Computing Sciences program designed to bring professor-and-student teams to the lab to work on research projects. The program, developed in conjunction with Sustainable Horizons Institute, brings faculty members and students to national labs to build research collaborations and expand opportunities for emerging scientists. In early December, Computing Sciences sponsors a workshop to begin recruiting participants for the following summer.

http://shinstitute.org/

LBNL: SMASH Academy

SMASH Academy, our flagship program, is a FREE, 3 year, intensive STEM focused residential college prep program that empowers students to deepen their talents and pursue STEM careers. For 5 weeks every summer, scholars are immersed in tuition-free studies at leading universities throughout the country. During the academic year, scholars participate in monthly programming.

https://www.smash.org/programs/smash-academy/#

LLNL: Graduate Scholar Program

Top Ph.D. students are granted appointments of up to four years to conduct research of interest to the Laboratory while completing their thesis. Provides participants with a set of experiences that support their education and career goals.

https://lgsp.llnl.gov/

LLNL: Computational Chemistry and Materials Science Summer (CCMS)

Offers graduate students the opportunity to work directly with leading LLNL researchers on the development and application of cutting edge methods in computational materials science and chemistry and other related areas of computational science.

https://pls.llnl.gov/careers/internship-programs/computational-chemistry-and-materials-science-summer-institute

LLNL: Computation Scholars Program

Offers undergraduate and graduate students the opportunity to gain research experience and work with Laboratory science and engineering mentors through our internship program.

https://computation.llnl.gov/careers/internships

LLNL: Data Science Summer Institute (DSSI)

Offers data science graduate students and advanced undergraduate students the opportunity to work on real problems of national importance.

https://dssi.llnl.gov

LLNL, SNL: K-20 Cybersecurity Consortium Enabling Cybersecurity Opportunities & Research (CECOR)

Norfolk State University leads a collaborative effort among 30 colleges and universities, one public school district, two National Laboratories (LLNL and Sandia) and a DOD facility to develop a K-20 pipeline of the country's critical cybersecurity workforce. During the five-year performance period, we will focus on providing support at each stage of the k-20 pipeline. We will: Identify students at an early age and engage them in cybersecurity activities; provide scholarship support for undergraduate and graduate students; Provide summer internships to students to expose them to the work environment at SNL, LLNL, and SPAWAR; provide students year-round mentorship by SNL, LLNL, and SPAWAR personnel; establish a seamless hiring process at SNL, LLNL, and SPAWAR. In addition, we will provide support for early k-12 by providing awareness of cybersecurity to k-12 students and information to guidance counselors and teachers in CCSD and local school districts.

http://cset.nsu.edu/programs/k20cybersecurity/aboutus.php

NETL: Professional Career Internship Program

This program is designed to introduce undergraduate and graduate students to the challenges of conducting energy research. It is an opportunity to network with world-class scientists using state-of-the-art equipment and to expand students' knowledge in their field of study while exposing them to new areas of basic and applied research. Participants interact daily with assigned mentors who guide research activities during the internship.

https://www.orau.gov/netl/programs/pip.html

NETL: University Training and Research

The Crosscutting Research program supports two of the longest-running university training programs, the Historically Black Colleges and Universities (HBCU) and Other Minority Institutions (OMI), and the University Coal Research (UCR). These programs were designed to increase the competitiveness of universities in fossil energy research and discoveries. The student-led research programs advance energy technologies and allow for expansion of energy production while simultaneously facilitating energy sector job growth. The Outreach Initiative provides opportunities for qualified students and post-doctoral students and post-doctoral researchers to hone their research skills with NETL's in-house scientists.

https://www.netl.doe.gov/coal/university-training

NREL: Graduate and Undergraduate Internships

Full-time undergraduate or graduate students currently enrolled in a U.S. college or university who have successfully completed at least the sophomore year of school by June of the current year and plan to continue full-time enrollment during the following fall term are eligible for NREL's Research Participant Program internships.

https://www.nrel.gov/careers/nrel-internships.html

ORISE Compilation of Internships, Fellowships, & Scholarships

The Oak Ridge Institute for Science and Education (ORISE) connects the most talented and diverse students, recent graduates, faculty and educators to programs closely aligned with the interests of a variety of research facilities, including those managed for the U.S. Department of Energy (DOE) and more than a dozen other federal agencies.

ORISE administers a broad range of **internships, fellowships, and research experiences** available primarily to those pursuing **science, technology, engineering, and math (STEM)** disciplines, including undergraduate and graduate students, recent graduates, postdocs, and university faculty members. Programs are offered at DOE national laboratories and other federal agencies with research facilities located across the country as well as some locations outside the United States.

https://orise.orau.gov/stem/internships-fellowships-research-opportunities/index.html

ORNL: Oak Ridge Science Semester (ORSS)

Enables students to join ongoing investigations at the Oak Ridge National Laboratory (ORNL) in research areas as diverse as astrophysics, cell biology, DNA sequencing, genetic mutagenesis, parallel computing, robotics, toxicology, and much more. In their research,

ORSS student participants use the sophisticated resources available at the Laboratory, including supercomputers, state-of-the-art electron microscopes, lasers, and analytical instruments such as a fourier transform mass spectrometer and a scanning tunneling microscope.

https://denison.edu/academics/oak-ridge/about

PNNL: Summer Computer Science Workshops

With access to quality computing and cybersecurity education still limited or absent from many schools, PNNL aims to change that by providing teacher training and extracurricular student programming for computer science. We host summer camps for students in topics such as cybersecurity and app design.

http://externalaffairs.pnnl.gov/default.aspx?topic=STEM_Programs

SNL: Critical Skills Master's Program

Entry-level hiring program, which provides new or recent technical bachelor's degree candidates the opportunity to pursue a fully funded Masters of Science degree. The CSMP program is designed to attract talent pursuing key disciplines aligned with Sandia's national security mission, including Computer Science, Computer Engineering, Cybersecurity and Electrical Engineering.

https://www.sandia.gov/careers/special_programs/_assets/documents/CSMP_SandiaLabs_Flyer.pdf

SNL: Campus Executive Program

Sandia executives, acting as ambassadors, are paired with top university officials at schools that share research interests and capabilities. Universities must meet certain criteria and be aligned with Sandia's strategic needs. The program offers a way to partner with top universities to conduct leading-edge science, hire the most accomplished scientists and engineers, and develop collaborations in focused research areas. As part of these efforts, Sandia may fund student research projects to establish relationships with students, develop capabilities, and build long-term relationships with faculty.

https://www.sandia.gov/working_with_sandia/technology_partnerships/universities/index.html

SNL: Master's Fellowship Program (MFP)

Entry-level hiring program, which provides new or recent technical bachelor's degree candidates the opportunity to pursue a fully funded Masters of Science degree.

http://www.sandia.gov/careers/special_programs/masters_fellowships_program.html

SNL: Technical Institute Programs

In addition to offering technical and business internships in various departments, Sandia has established unique technical institutes at our New Mexico and California sites. These institutes provide opportunities to work on projects with Sandia scientists and engineers in specific technical areas, including cybersecurity, computer and computational science, predictive simulation, remote-sensing technologies, electrical and mechanical engineering, the physical sciences, and software engineering.

http://www.sandia.gov/careers/students_postdocs/internships/institutes/index.html

SNL: Student Intern and Technical Institute Programs

Intended to develop a pipeline of highly qualified individuals who have the potential and interest to fill future staffing needs at the Laboratories. Student internships may serve to enhance or strengthen Sandia's academic research or similar collaborations with universities or other organizations in areas of science, engineering, or related research aligned with Sandia's mission areas.

http://www.sandia.gov/careers/students_postdocs/internships/index.html

SNL: John von Neumann Postdoctoral Research Fellowship in Computational Science

The John von Neumann Postdoctoral Research Fellowship in Computational Science offers an exceptional opportunity to conduct innovative research in computational mathematics and scientific computing on advanced computing architectures. As members of either the Computing Research Center at Sandia/New Mexico or the Computer Sciences and Information Systems Center at Sandia/California, von Neumann Fellows apply their research findings to a broad range of science and engineering problems of national importance. Fellows are supported by the Applied Mathematics program, which is part of the U.S. Department of Energy's Office of Advanced Scientific Computing Research.

http://www.sandia.gov/careers/students_postdocs/fellowships/johnvonneumann_fellowship.html

Federal Funding Awards

Search for DOE Funding Awards

Search Online: https://www.grants.gov/web/grants/search-grants.html

Get the latest updates & opportunities in the OTT Newsletter!

energy.gov/technologytransitions

Resources for Entrepreneurs and Start-Ups

IncubateEnergy Network

The Incubatenergy Network accelerates the transition to a sustainable economy through multilateral coordination of incubator resources supporting entrepreneurs focused on clean energy innovation and deployment. This consortium of clean energy focused incubators has supported more than 500 companies to date and has a significant pipeline. Incubatenergy was launched in 2014 through a partnership among EPRI, the U.S. Department of Energy (DOE), and the National Renewable Energy Laboratory.

https://techportal.epri.com/incubate-energy

The following are the list of current clean-tech incubators/accelerators:

ACRE Type: Sub-Org of Urban Future Lab, Private company, Program costs start at	ABOUT: ACRE is a business incubator that supports the growth of high-impact, early-stage venture companies positively impacting climate change. ACRE incubator companies receive business advisory services, marketing and design support, PR support, investor meeting preparation and introductions, access to mentors and channel partners, and office space in Downtown Brooklyn, NY. ACRE is located within the Urban Future Lab, a

$450/month, no equity taken; funded by NYSERDA, NYU, and corporate partners.	part of NYU's Tandon School of Engineering. As of 2016, ACRE companies have raised over $100M in private investment, secured over $220M in project financing, and have created over 340 new green jobs. **Technology Sectors Supported:** Agriculture,Distributed Energy,Energy Efficiency,Energy Storage,Green Buildings,Information & Communication Tech,Power Generation,Smart Grid,Transportation & Mobility,Waste. ACRE is funded by NYSERDA, NYU, and our generous corporate partners. http://ufl.nyc/ourprograms/acre **Region: US, New York** **Duration: Variable (up to 2 years)**
## AMEREN ACCELERATOR **Type:** Innovative public-private partnership with the University of Missouri System, UMSL Accelerate and Capital Innovators,	**ABOUT:** Ameren Accelerator is an innovative partnership with the University of Missouri System, UMSL Accelerate and Capital Innovators, that will assess, mentor and invest in energy technology startup companies. http://ameren.mediaroom.com/2017-07-28-Startup-companies-selected-for-the-Ameren-Accelerator **Region: US, Missouri** **Duration: N/A**
## Austin Technology Incubator (ATI) **Type:** **Academic Incubator for University of Texas at Austin $10,000 per year plus 2% equity donation.**	**ABOUT:** The Austin Technology Incubator is the startup incubator of the University of Texas at Austin. A program of the University's IC2 Institute, ATI has a 25-year track record of helping founding teams achieve success. The Austin Technology Incubator is the deep tech incubator affiliated with The University of Texas at Austin. Founded in 1989, it is also the longest active technology incubator in the United States. ATI's mission is and has been, for over 30 years, to empower university and community entrepreneurs through a customized approach to effectively commercialize their breakthrough innovations and compete in the global marketplace. Through partnerships with investors, trusted professional, corporate and strategic partners as well as universities and other community affiliations, ATI is dedicated to supporting deep tech solutions that will become the future for today's global challenges. https://ati.utexas.edu/about/

	Region: **US, Texas (Austin)** Duration: Variable
Carbon Limiting Technologies (CLT) Type: Private Limited Company	ABOUT: CLT works with early stage companies, corporates, investors, and government organizations to support and grow businesses developing sustainable technology innovations in the UK and internationally. Located in London, we support 130 start up companies located across the UK, that are developing innovative solutions for clean growth. Annually CLT organizes a "Towards Successful Commercialization" Conference to share best practice and introduce investors, industry and government to the UKs leading entrepreneurs. https://www.carbonlimitingtechnologies.com/ Region: **UK & International** Duration: N/A
Chain Reaction Innovations Type: Program at ANL: No Equity for IP brought in / No Fees	ABOUT: Chain Reaction Innovations (CRI) is a two-year program for innovators focusing on energy and science technologies. Through an annual call for innovators, four to six teams will be selected to join CRI. Program participants will receive the financial and technical support needed to mature nascent technologies that face long development cycles to the proof-of-concept level, thus getting them to the point where they can access conventional sources of financial support to scale and launch into the marketplace. CRI will give teams of innovators a two-year runway to develop and scale their technologies while being supported through fellowship funding of up to $550,000 over two years that covers salary, benefits, and use of laboratory equipment and office space. Through a partnership with mentor organizations, CRI participants will get assistance developing business strategies, conducting market research, and finding long-term financing and potential commercial partners. No fee. CRI does not take any equity for IP brought into the program. If innovators decide to co-develop technology with Argonne National Laboratory staff while in the program that portion maybe considered jointly owned IP. https://chainreaction.anl.gov/ Region: **US, Chicago** Duration: **2 years**

Cleantech Open Type: Non-Profit; Cleantech Open is a program of Community Partners, a 501c3 nonprofit public benefit organization	ABOUT: CTO's one-of-a-kind innovation ecosystem built over the last 11 years of programming spans key cleantech innovation hubs in the U.S. and globally. As a non-profit organization run largely by volunteers, there are many ways to contribute. The oldest and largest cleantech startup accelerator program, with the mission to find, fund, and foster entrepreneurs with ideas to solve our greatest environmental and energy challenges. Through Cleantech Open's annual business competition and accelerator program, they connect cleantech startups with the people and resources that will accelerate their success, and provide a national platform for public visibility. *All awards are subject to change at Cleantech Open's sole discretion and may vary from region to region. The cash component of each award may be provided as a grant or as seed capital (investment). The grand prize is provided as a SAFE note. https://www.cleantechopen.org/en/page/mission-en Region: US, Nationwide Duration: 12 weeks
CLT Joules Type: Non-Profit; $0 Cost to Startups Joules Covers Domestic Travel Expenses No Equity Taken No Application Fees	ABOUT: Mission: Charlotte-based (NC), not-for-profit incubator providing entrepreneurs with key connections and tools to develop successful clean energy companies. Vision: Accelerate high-impact clean energy ventures that improve global sustainability and establish Charlotte as a first class destination for energy startups. Focus: Early stage innovative companies supporting renewable, efficient and clean energy technologies. https://www.joulesaccelerator.com/ Region: **US, SouthEast** **Duration: 3months/2 Cohorts/year**
Cyclotron Road Type: Program at LBNL, provides stipends for a fellowship program + Curriculum	ABOUT: Cyclotron Road is a new early-stage energy technology incubation program at Lawrence Berkeley National Laboratory. TWO YEARS OF FUNDING Fellows receive a yearly living stipend of $80,000 to $110,000 plus a health insurance stipend and travel allowance. This enables them to focus on their project full-time. Each project also receives $100,000 of research support from the host laboratory. https://www.cyclotronroad.org/fellowship Region: US, Westcoast Duration: 2 years
	ABOUT:

## EcoComplex Type: Academic Business Incubator for Rutgers; affordable space, pilot scale demonstration projects and can provide technology verification of innovative technologies	The Rutgers University EcoComplex is a leading "Clean Energy Innovation Center" that focuses on sustainable biomass and waste-based clean energy technologies and was one of the first in the nation to serve as a successful, university-based clean energy business incubator. The Center utilizes a successful combination of applied research and expertise from University researchers, outreach, education and business development through incubation. The Center was established in 2001 and currently houses 14 start-up companies, a majority from the clean energy sector. The 32,000 square foot facility is located at the Burlington County Resource Recovery Complex in Columbus, NJ, has approximately 4,700 square feet of wet lab, dry lab, and tech scale-up space, nine offices, three conference rooms, three classrooms, and a large auditorium that holds up to 180 people. An additional 46,000 square feet of sustainable greenhouse production space and 10,000 square feet of technology scale - up space, is also available for new businesses to develop and scale up purpose-grown energy crops. Its location at a large active landfill enables the Center to also provide easy access to feedstocks and facilities. The EcoComplex has become a model for biomass and waste-based clean energy business incubation and clean energy cluster development. The EcoComplex not only provides affordable and unique lab, office and scale-up space, but also it partners with the incubating companies on projects and grant proposals for testing and verification of emerging clean energy technologies. These integrated efforts reduce risks, break-down barriers to success and facilitate the transition of new technologies into the clean energy market. https://ecocomplex.rutgers.edu/ Region: **US, New Jersey** **Duration: N/A**
## Elemental Excelerator Type: Non-Profit; Elemental Excelerator funds each company up to $1M, companies contribute 1%-6% equity Elemental Excelerator is structured as a non-profit organization that awards grant funding, with an	About: Elemental Excelerator finds 12-15 companies that best fit its mission, and funds each company up to $1M to improve systems that impact people's lives: energy, water, agriculture, and transportation. Technology Sectors Supported Agriculture,Energy Efficiency,Green Buildings,Information & Communication Tech,Power Generation,Smart Grid,Transportation & Mobility,Waste,Water Requirements Elemental Excelerator takes a place-based approach to changing communities, with the belief that communities are the most impactful scale at which to effect change. Elemental Excelerator selects cohorts of complementary companies who, collectively, can transform communities across Hawaii, the Asia Pacific, and California. https://elementalexcelerator.com/ Region: US, Hawaii, the Asia Pacific, and California

associated venture fund called EEx Fund One.	Duration: 8 months for go-to market track ($75k); 12-18 months for the demonstration track (up to $1M for project deployment) with 50/50 project cost share required from customers or investors.
EPIcenter Energy Incubator and Accelerator (EEIA) Type: Non-Profit; Pre-Incubation/ One time fee; Incubator & Accelerator monthly membership fee, Small Equity Grant to Epicenter, small royalty paid	About: The EPIcenter Energy Incubator and Accelerator (EEIA) provides resources to emerging businesses focused on the advancement of energy innovation and technology. Five programs are supported by certified coaches, core and customized curricula, mentors, access to financing, as well as fabrication and technical resources. While based in San Antonio, the EEIA also supports startups virtually. https://www.epicenterus.org/powernetwork Region: US, Texas (San Antonio) Duration: Varies depending on membership
Greentown Labs, Inc. Type: Public Benefit Corporation	About: Greentown Labs is a community of bold, passionate entrepreneurs creating game-changing energy technologies that transform the way we live, work and play. Located just outside of Boston in Somerville, MA, Greentown Labs is the largest cleantech incubator in the United States, operating a 40,000 sq. ft. facility that is home to more than 50 startup companies. Its mission is to foster and support startups that are solving the world's biggest energy and environmental challenges. They support startups by providing access to the space, resources and funding they need to thrive. Greentown Labs is unique in a variety of ways but notably for its focus on hardware-focused startups and its affordable, rent-based model. Greentown Labs does not take equity in any of its member companies. Technology Sectors Supported Agriculture,Chemicals & Advanced Materials,Distributed Energy,Energy Efficiency,Green Buildings,Other,Transportation & Mobility,Waste https://www.greentownlabs.com/members/member-resources/

	Region: US, Massachusetts, Eastern U.S. and developing strong relationships to many cities throughout Europe Duration: 18-22 months
InnoEnergy Type: Private for Profit, VC, SEED-Early stage, also provide grants Entity Supported by European Institute of Innovation and Technology	**About:** InnoEnergy is the innovation engine for sustainable energy across Europe. Business Creation boosts the success rate of start-ups, powers the growth of SMEs, and helps corporates de-risk their open innovation strategies. With their global network of partners, they connect entrepreneurs, investors and industry, knowledge, businesses and markets. They help maximize their impact, accelerate the development of market-ready solutions, and create an environment in which innovation and entrepreneurship can succeed. InnoEnergy was established in 2010 and is supported by the European Institute of Innovation and Technology (EIT). https://www.innoenergy.com/ Region: EU Duration: 5 weeks/ accelerator program
Innosphere Type: Non-Profit; 501c(3); $5,000 annual fee	**About:** Colorado's leading technology incubator, Innosphere is a non-profit 501(c)(3) organization that supports high-tech companies in the industries of energy and advanced materials, digital health innovations, biosciences, and software/hardware, and works with them through validation, startup, and growth stages. Innosphere staff prides themselves on the work they do to understand each company's specific needs in order to better customize a high-performance plan for each company based on capital, talent and growth strategies. Companies learn from other founders and experienced advisors, and receive ongoing support to ensure they have the know-how to raise the right kind of capital, and have all the resources to exponentially grow. Headquartered in Fort Collins, CO, Innosphere has multiple office locations across the state to better serve entrepreneurs. At minimum a prototype that can be tested; match to the incubator's target industries; in validation,startup or growth; in Colorado; accepted via Innosphere admission process. https://innosphereventures.org/ **Region: US, Colorado** **Duration**: **22 Months**

## Innovation Crossroads **Type:** Program at ORNL, Fellowship, Public-Private Partnership w/ EERE AMO & TVA	**About:** Innovation Crossroads is a fellowship program based at Oak Ridge National Laboratory that matches aspiring energy entrepreneurs with the experts, mentors, and networks in technology-related fields to take their world-changing ideas from R&D to the marketplace. Through an annual call, up to seven entrepreneurs will be selected to transform their ideas into energy, advanced manufacturing, and integrated grid companies with financial support from the U.S. Department of Energy's Advanced Manufacturing Office and the Tennessee Valley Authority. Innovators will receive a fellowship that includes a personal living stipend, benefits, and travel allowance for up to two years, plus substantial funding to use on collaborative research and development at ORNL. Innovation Crossroads is a public-private partnership founded by Oak Ridge National Laboratory and supported by the DOE Office of Energy Efficiency and Renewable Energy's Advanced Manufacturing Office and the Tennessee Valley Authority. https://innosphereventures.org/ **Region: US, Tennessee** **Duration: 2 years**
## LACI (Los Angeles Cleantech Incubator) **Type:** Non-Profit; Venture Fund $5m; Incubation Program, launching in April 2020: up to $20,000 in funding for pilots up to $160,000 in business services LACI Impact Fund and Debt Fund. Cost: Free or 1.5% - 3% 0.5% - 1.5%	About: The Los Angeles Cleantech Incubator (LACI), a City of Los Angeles-established nonprofit organization, is creating an inclusive green economy by: unlocking innovation through working with startups to accelerate the commercialization of clean technologies, transforming markets through partnerships with policymakers, innovators and market leaders in transportation, energy and sustainable cities; and enhancing communities through workforce development, pilots and other programs. Founded as an economic development initiative by the City of Los Angeles and its Department of Water & Power (LADWP), LACI is recognized as one of the most innovative business incubators in the world by UBI. In the past seven years, LACI has helped 78 portfolio companies raise $221M in funding, $220M in revenue, create 1,750 jobs, and deliver more than $393M in long term economic value. Los Angeles Cleantech Incubator (LACI) has raised a single venture fund, Early-Stage Impact Investment Fund. This fund was announced on Jan 15, 2020 and raised a total of $5M. https://laincubator.org/ **Region: Los Angeles, CA** **Duration: N/A**

Launch Alaska **Type:** Non-Profit; w/ funds(Launch Alaska Fund II) early- stage	About: Launch Alaska is a business accelerator that invests in scalable startups in food, water, transportation, and energy. Harnessing Alaska's distinct mix of resources, markets, and opportunities, we work side by side with some of the world's brightest startups to help them scale solutions to the planet's hardest problems. On a mission—to accelerate the resource revolution. To change our relationship with carbon fueled energy. To liberate our food, water, transportation, and energy systems from the prison of what past generations thought possible. To work with dynamic startups innovating real-world solutions to important problems. To get out of the rut of production and consumption we've been in for decades, stepping forward into a brighter future of access, independence, and efficiency. http://www.launchalaska.com/team Region: US, Anchorage, Alaska Duration: N/A
NextEnergy **Type:** Non-Profit, No cost for accelerator services. Testing, lab equipment, and custom market research require fees to cover costs on an individual basis	About: NextEnergy works with the most promising energy and transportation technology startups, established small companies, and university researchers to accelerate their technology and business development. Primarily focused on supporting Michigan companies, the NextEnergy team assesses each company to identify their primary needs and constraints and match those with NextEnergy's services, resources, and staff expertise. In addition to business consulting, technology demonstration/testing, and fundraising services, NextEnergy has low-cost lab and office space available for lease to startups, as well as specific acceleration programs such as NextChallenge and I-Corps Energy and Transportation. In the past year, NextEnergy has helped its clients raise over $25 million in private, federal, and state investment. https://nextenergy.org/about/ Region: **US Michigan, Midwest** Duration: Ongoing
Potential Energy DC **Type:** Non-Profit	About: Potential Energy DC is an incubator and networking center for clean energy startups in the DC metro region https://www.potentialenergydc.org/

	Region: US, Washington D.C. **Duration: N/A**
Powerhouse **Type:** Co-Working Space, Venture Capital	About: Powerhouse is an innovation firm and venture fund. Powerhouse connects startups, corporations, and investors to build an energy and mobility system that is decarbonized, democratized, and digitized. Powerhouse Ventures invests in seed-stage startups changing the way we power our world.Powerhouse has 14,000 square feet of LEED certified office digs spanning the top three floors of our beautiful, century old building in the heart of Oakland's Uptown. Our collaborative work space hosts dozens of solar startups and over 100 entrepreneurs. Powerhouse Accelerator is a 6 month program to supercharge solar startups. If accepted, entrepreneurs receive cash investment, free office space in the Incubator, connections to our network of investors and introductions to the country's top industry leaders. By focusing exclusively on solar, we have attracted the best startups, investors, and corporate leaders in the country. We accept a small number of startups and curate the Accelerator to fit your team's needs. When you're in the Accelerator, we're on your team and we play to win. Please contact us to apply to the Incubator or Accelerator. https://www.powerhouse.fund/startups Region: US, California (Oakland) Duration: 6 months funding cycle. 2x a year
ProspectSV **Type:** Non-Profit; Basic support starts at $1,000 per month. ProspectSV does not require equity stake. Corporate Sponsors	About: ProspectSV is a non-profit "urbantech" innovation hub working with technology and government innovators to launch smarter, cleaner solutions in energy, transportation and the built environment. The organization advances urbantech — the intersection of urban infrastructure and emerging technology. ProspectSV brings together innovators from government, corporations and academia with start-ups, developers and product teams to accelerate commercialization and adoption of new technologies. With projects in over 50 cities, leveraging over $50 million in funding and financing and more than 25 corporate sponsors, ProspectSV is the only organization with the ability to both prove and apply urban solutions. Early on history, ProspectSV incorporated a long-respected program, the Bay Area Climate Collaborative, into their team to expand our reach and amplify our impact together. Since its inception, the team assembled has worked with more than half the local governments in the Bay Area, piloting advanced technology in transportation, energy and the built environment, resulting in more than 150 million lbs. of CO2 reductions committed over the next ten years. https://www.prospectsv.org/ Region: US, California Duration: 6-18 Months

VertueLab **Type:** Non-Profit; 501 c(3) with PRI Investments, Virtue Climate Impact-Fund for impact investments	About: One of the first organizations in the country to make direct, program-related investments in cleantech startups. VertueLab partners with funders and innovators in clean technologies to make a global environmental impact. Through a series of focused programs and funding opportunities, VertueLab advance promising technologies to market while helping innovators find the resources they need to move their vision forward. VertueLab merges innovation, technology, entrepreneurship, and impact investing to address and solve global environmental challenges. =Conduit between promising cleantech companies and the investors who empower their progress through support and access to capital. Innovating alongside portfolio companies by developing new impact investing models to fuel their growth and the tools to measure the environmental and social impact that their success brings. 10 year old 501(c)3 nonprofit that has been a pioneer in program-related investing in early stage clean technologies and has developed a national reputation for our work supporting environmental technology startups and connecting them to investment and other resources. https://vertuelab.org/ Region: US, Portland Oregon Duration: 15 weeks Accelerator program (Cascadia Accelerator Program)
WorcLab **Type:** Non-Profit; Pay for Membership/ office for team $950/Month, 24/7 desk $250, Lab $400, co-working desk $25	About: At WCTI, they are addressing the most pressing issues of their time to make your business succeed. They believe that entrepreneurship is both the lifeblood of innovation and the key to society's transition towards sustainability. WCTI provides both the physical and network resources that companies need to propel their ideas to market. Founded and operated by the Institute for Energy and Sustainability, they are a community in the heart of central Massachusetts dedicated to building change. The WCTI facility is located in the Printers Building at 44 Portland Street in Worcester. Over 10,000 square feet, consisting of private offices, co-working space, conference rooms, event space, and prototyping labs, offers startups the space they need to establish and grow. WCTI has partnered with Creative Hub Worcester, the Idea Lab, Massachusetts Biomedical Initiatives, Mass DiGI and Technocopia to highlight Worcester as a hub of innovation. Combining the efforts of individuals, startups and large corporations, they are creating a culture of innovation. https://worclab.org/becomemember Region: US, Massachusetts Duration: N/A

Look@Argonne: A Minorities STEM Conference

Diversity, inclusion and internships with premier researchers were the topics that attracted about 100 undergraduate students during the the U.S. Department of Energy's (DOE) Argonne National Laboratory's First Look@Argonne: A Minorities in STEM Conference.

This first daylong event on Nov. 22, 2019 was hosted by Argonne and provided STEM (science, technology, engineering and math) students an opportunity to explore Argonne facilities, meet researchers and learn about paid summer internships. The students were from 14 colleges and universities that belong to the Louis Stokes Alliances for Minority Participation (LSAMP) program, including the University of Illinois at Chicago, Northeastern Illinois University, Northwestern University, Moraine Valley Community College, Prairie State University, Benedictine University, Northern Illinois University, and Purdue University.

https://www.anl.gov/article/argonne-launches-first-lookargonne-a-minorities-stem-conference

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energy.gov/technologytransitions

Collegiate Wind Competition

JUNE 1, 2020 9:00AM EDT TO JUNE 4, 2020 4:00PM EDT

ORAU: Joint Science and Technology Institute, Albuquerque

JUNE 6, 2020 9:00AM EDT TO JUNE 19, 2020 4:00PM EDT

Educator Days at the Solar Decathlon

JUNE 24, 2020 9:00AM EDT TO JUNE 25, 2020 4:00PM EDT

Educator Days at the Solar Decathlon

JUNE 30, 2020 9:00AM EDT TO JULY 2, 2020 4:00PM EDT

LBNL Deep Learning for Science Summer School

JULY 20, 2020 9:00AM EDT TO JULY 24, 2020 4:00PM EDT

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