MSI Community Webinar

Educational and Career Opportunities

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Energy Efficiency and Renewable Energy (EERE)

August 28, 2013

U.S. DEPARTMENT OF ENERGY | Energy Efficiency & Renewable Energy

Global Energy Challenge

Today's U.S. Energy System

Sustainable Energy System

TRANSFORMATION

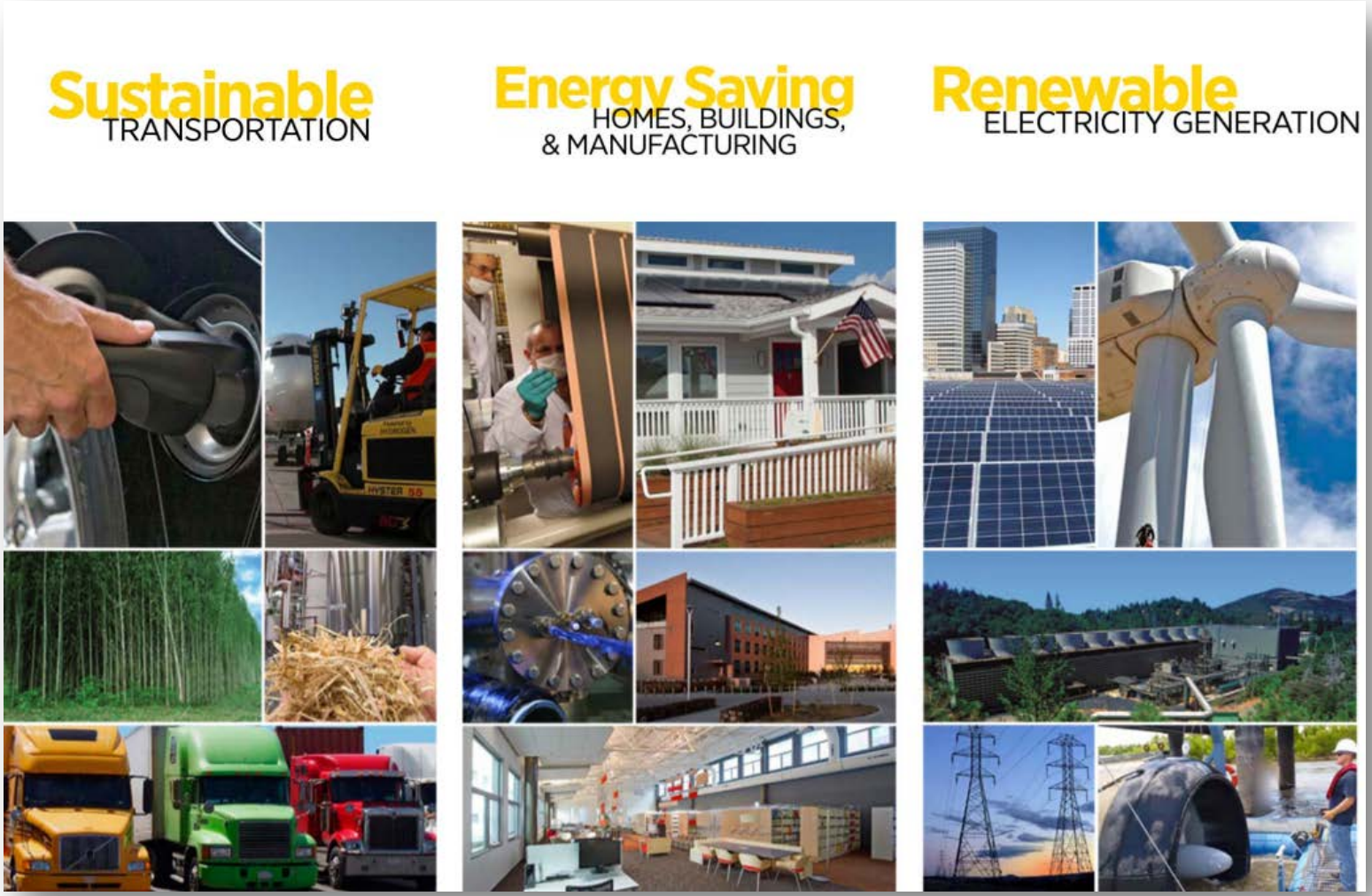
- Produces 25% of the world's carbon emissions;
- Dependent on foreign sources; subject to price volatility;
- Increasingly vulnerable energy delivery systems; and
- 2/3 of source energy is wasted.

- Carbon neutral;
- Diverse, homegrown supply options;
- Sustainable use of natural resources;
- Creates American jobs;
- Accessible, affordable and secure; and
- 20% more efficient by 2020.

Energy Efficiency and Renewable Energy

- The **Office of Energy Efficiency and Renewable Energy** (EERE) is the U.S. government's primary clean energy organization responsible for supporting high-impact research, development, demonstration, and deployment activities in the fields of sustainable transportation, renewable electricity, and end-use energy efficiency in homes, buildings, factories, and facilities.

EERE'S Mission



U.S. DEPARTMENT OF ENERGY | Energy Efficiency & Renewable Energy

Energy Efficiency Technology Offices

Building Technologies

- Funds research and development to help commercial builders, businesses, and homeowners reduce energy use through energy efficiency and renewable energy technologies.

Federal Energy Management

- Works with key individuals to accomplish energy related goals and to provide energy leadership to the country.

Advanced Manufacturing

- Partners with industry, small business, universities, and other stakeholders to identify and invest in emerging technologies with the potential to create high-quality domestic manufacturing jobs and enhance the global competitiveness of the United States.

Vehicle Technologies

- Develops and deploys efficient and environmentally friendly highway transportation technologies that will enable America to use less petroleum.

Weatherization and Intergovernmental Program

- provides grants, technical assistance, and information tools to states, local governments, Indian tribes, and overseas U.S. territories for their energy programs.

Renewable Energy Technology Offices

Bioenergy Technologies

- Helps transform the nation's renewable biomass resources into cost-competitive, high-performance biofuels, bioproducts, and biopower.

Fuel Cell Technologies

- conducts comprehensive efforts to overcome the technological, economic, and institutional barriers to the widespread commercialization of hydrogen and fuel cells.

Geothermal Technologies

- Works in partnership with industry, academia, and DOE's national laboratories to establish geothermal energy as an economically competitive contributor to the U.S. energy supply.

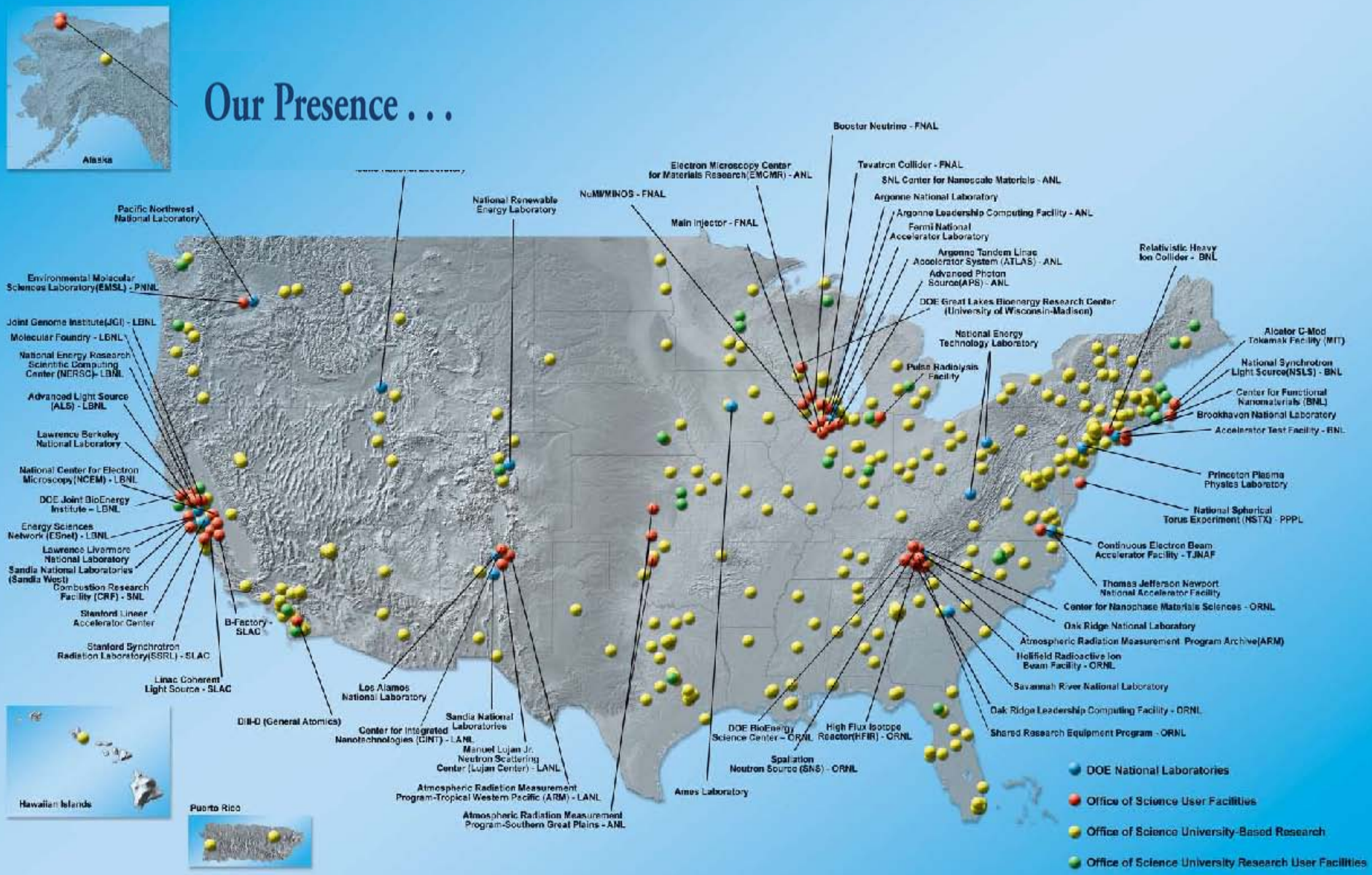
Solar Energy Technologies

- funds Research and development of solar energy technologies.

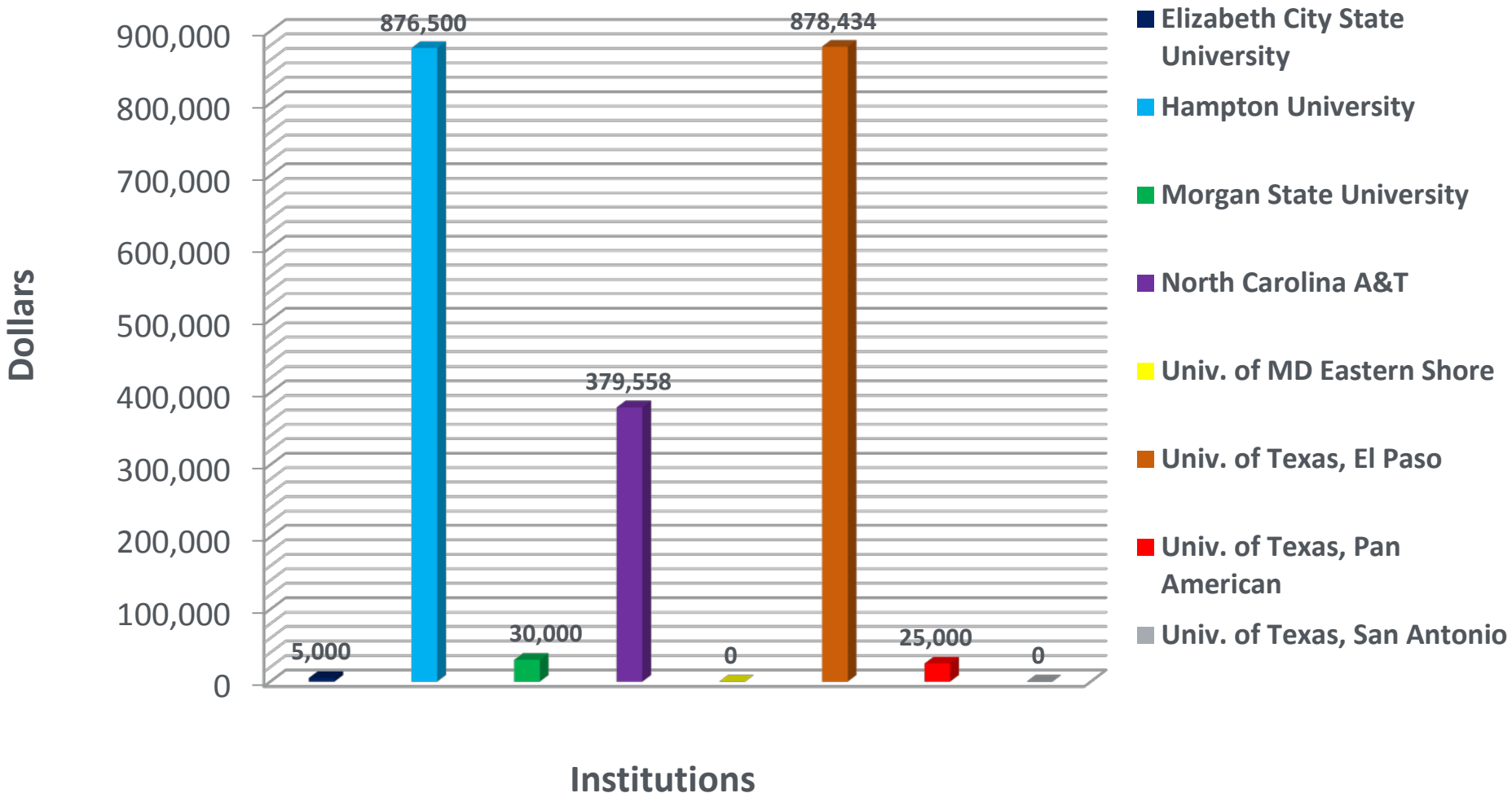
Wind & Hydropower

- leads the nation's efforts to improve the performance, lower the costs, and accelerate the deployment of wind power technologies.

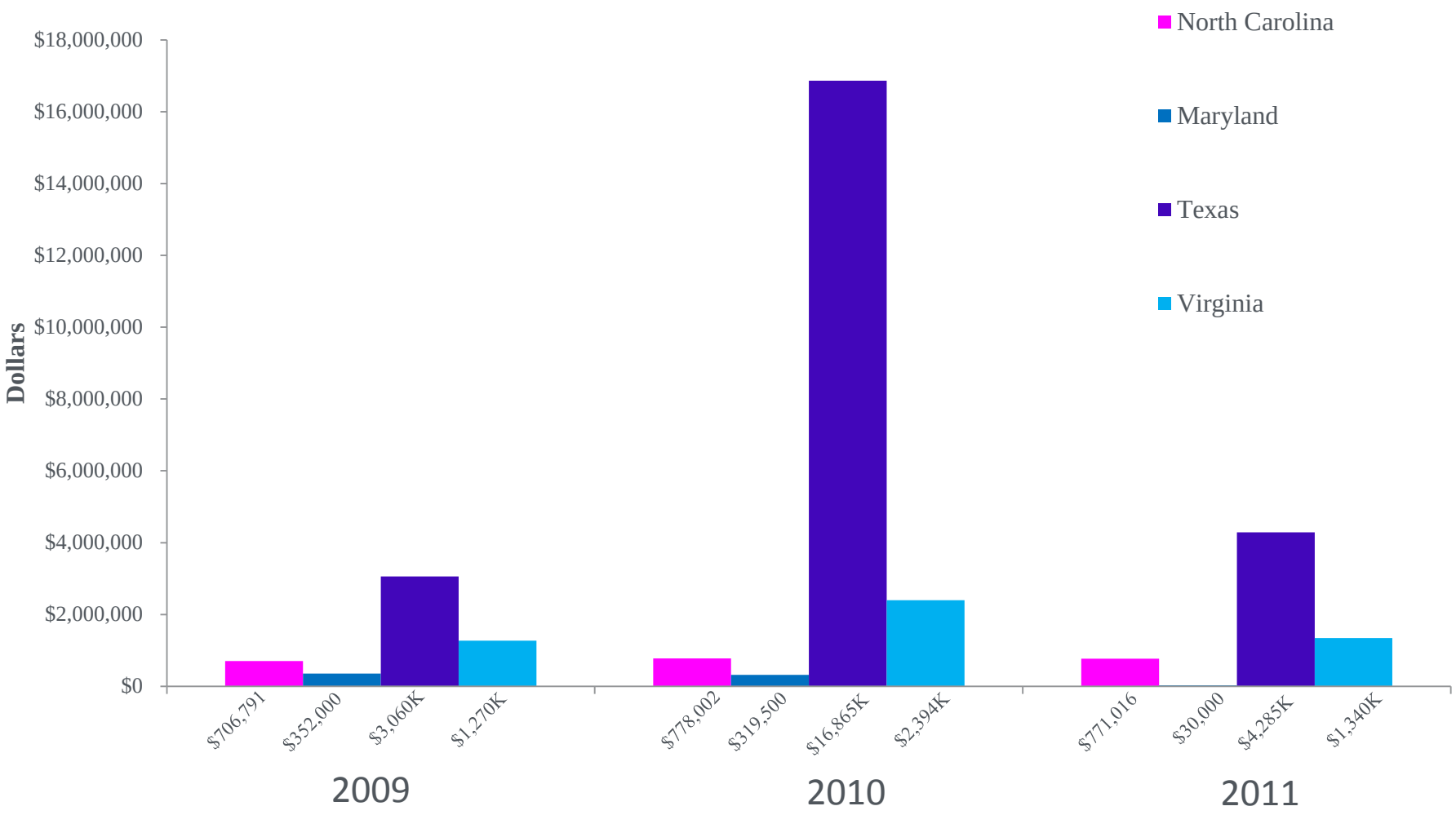
DOE Laboratories, Facilities & Universities



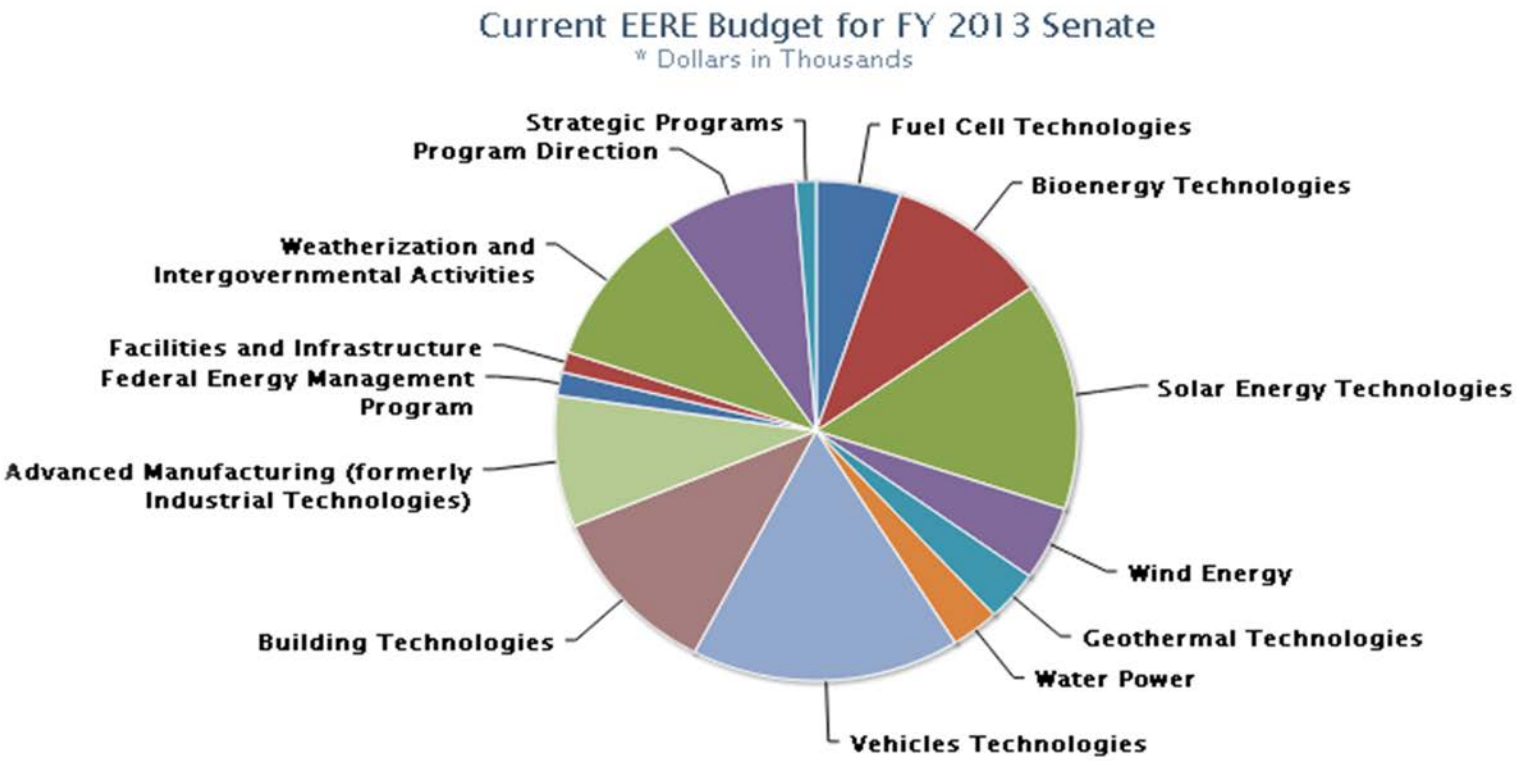
Fiscal Year 2011 DOE Funding for MSIs



Fiscal Years 2009 -2011 Funding to MSIs by State



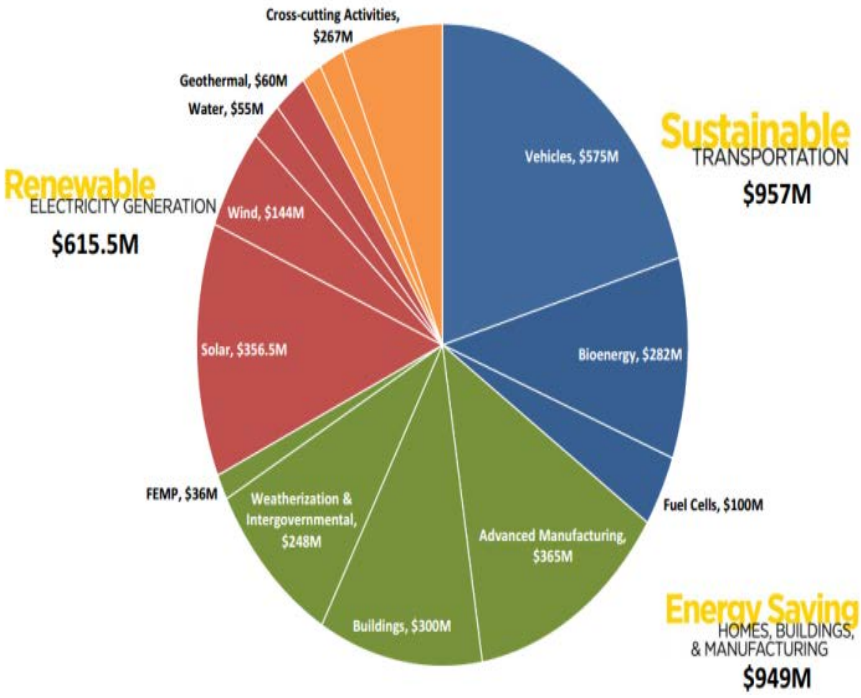
2013 Current Budget



$2.3 billion

2014 Budget Requested

- EERE is requesting **$2.775 billion** in its FY 2014 budget for research, development, demonstration, and deployment activities, including several cross-cutting initiatives, that support the accelerated growth of the nation's clean energy economy.



EERE's Education and Workforce Development Subprogram

- **Education**: ensure ongoing development of a workforce needed to carry out invention and scale-up of EERE technologies and processes.
- **Training**: Ensure development and execution of standardized, high-quality training programs for workers to meet current EERE needs in all sectors of the economy.
- **FOAs**: Competitive solicitations issued as Funding Opportunity Announcements (FOAs) are the principal mechanism used to contract for cost-shared research, development, and demonstration projects.
- **Career Development Opportunities:** Numerous DOE-funded opportunities for students, teachers, Ph.D. graduates, scientists, and engineers interested in clean energy, including EERE's own student internship program.
- **Competitions:** Energy competitions allows participants to apply their understanding of science. There are a wide range of energy-related contests available for all ages.

EERE workforce related activities 2013

- Competitions
- Curricula Update
- Wind for Schools
- Energy Literacy
- NEA priority schools program
- Curriculum
- AHEEC

K-12 Education

- National Education & Training Resource (NTER)
- Job Task Analyses, National Certifications and Standards Development
- Weatherization Training Centers
- Solar Instructor Training Network
- Superior Energy Performance (AMO)
- Solar Code Official Training
- Commercial Building Technician Training
- Electronic badges

Technical Training/ Community Colleges

- Solar Decathlon
- Wind for Schools Wind Application Centers
- Wind University Competition
- Fuel Cell Design Contest
- Geothermal Student Competition
- Industrial Assessment Centers
- Hydro Research Fellowships
- Tribal Internships
- Energy 101 Framework
- Advanced Vehicle Competition
- Building Challenge

Undergraduate Programs

- Graduate Automotive Tech (GATE) Fellowships
- Solar MURA/DISTANCE
- EERE Post Doc Research Awards
- SunShot Research Awards
- GEARED (Grid Integration)
- Tribal Internships
- Hydro Research Fellowships

Graduate/Post Doc Programs

EERE WFE activities in red

Cross-Cutting Efforts

Web Site Career Maps Interagency Coordination Strategic Partnerships Outreach Evaluation

Opportunities for Colleges & Universities

- **Apply to a DOE Program**

  Ex: Fossil Energy University Research Programs: http://www.fossil.energy.gov/programs/powersystems/advresearch/advresearch-university.html

  Ex: Nuclear Energy University Programs: www.neup.gov

  Ex: Visiting Faculty Program: http://science.energy.gov/wdts/vfp/

  Ex: Nuclear Physics: http://www.science.energy.gov/np/

- **Apply to a National Laboratory**

  Ex: Pacific Northwest National Laboratory: http://www.pnnl.gov/research/

- **Apply for an Internship**

  Ex: Minority Educational Institution Student Partnership Program: http://minorityinternships.energy.gov/

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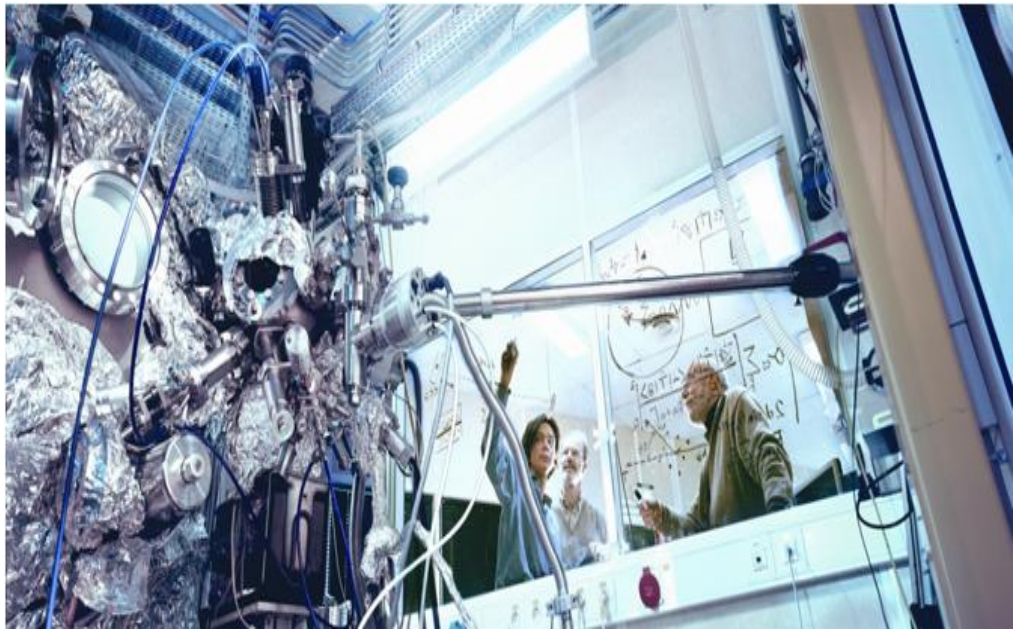
Opportunities to Engage

- Join an Advisory Committee
- Visit a program manager
- Volunteer to be a peer reviewer
- Become an IPA
- Seek a joint appointment at a DOE laboratory
- Participate in a “Lehman Review”
- Participate in a program review
- Participate in a Committee of Visitors

Five Reasons Why Universities Should Be Involved with DOE

1. Largest supporter of energy research in the world.
2. All research is competed and peer reviewed for quality and relevance.
3. A culture of discipline and planning that is sustained over decades.
4. Strong ties between “use inspired” basic research and its eventual application.
5. A history of partnerships with industry, academia, and other Federal agencies.

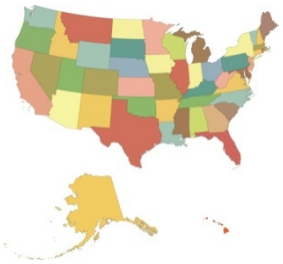


Energy 101

Energy 101

An interdisciplinary, general education energy course for community colleges and universities

- DOE EERE providing support for the development of an interdisciplinary energy course that can be used to meet different general education requirements across the country
- Energy 101 will also leverage the use of the National Training and Education Platform (NTER) as an open source tool for authoring and sharing course content using the latest web-based technology and interactivity
- Using NTER allows for the easy modification and customization of course to fit the needs of individual college or university



Energy Literacy

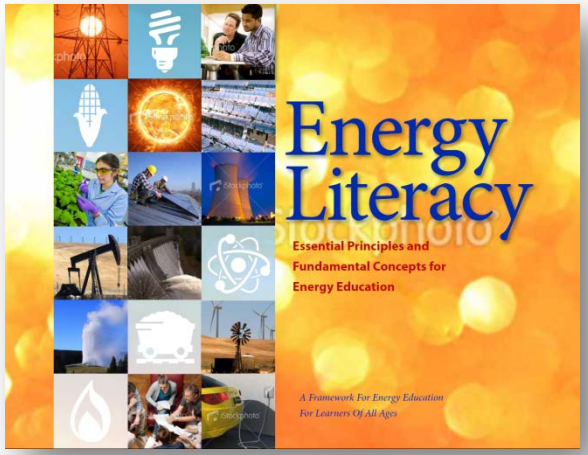
Energy Literacy: Essential Principles and Fundamental Concepts for Energy Education

Part of the DOE-wide push to improve public energy literacy. See the DOE, May 2011 Strategic Plan, page 21.

An effort to define what it means to be energy literate and to identify the essential understandings that underlie this literacy.

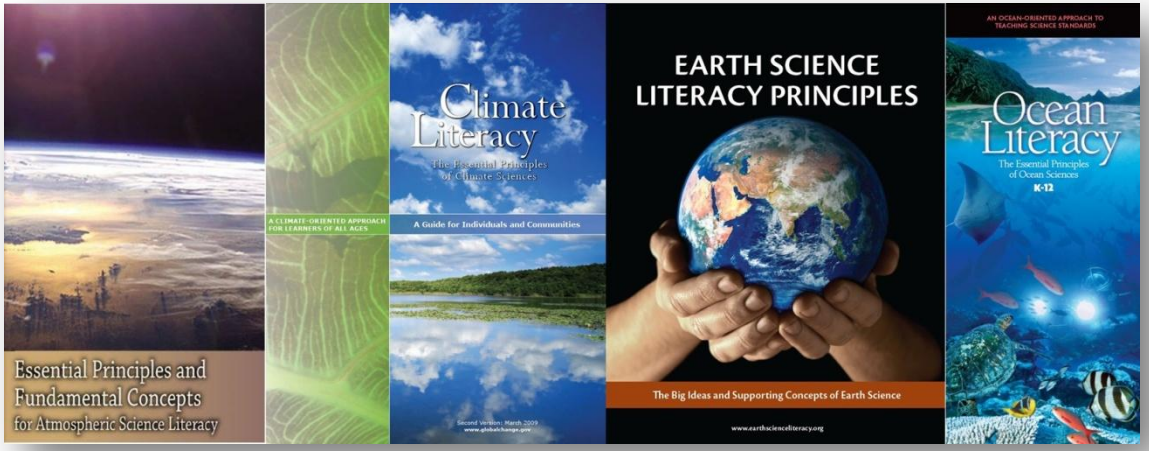
An effort to promote public energy literacy based on the above definition and understandings.

Centerpiece – A guiding document that provides context, background and definitions, along with identifying the Essential Principles and Fundamental Concepts that underlie Energy Literacy.



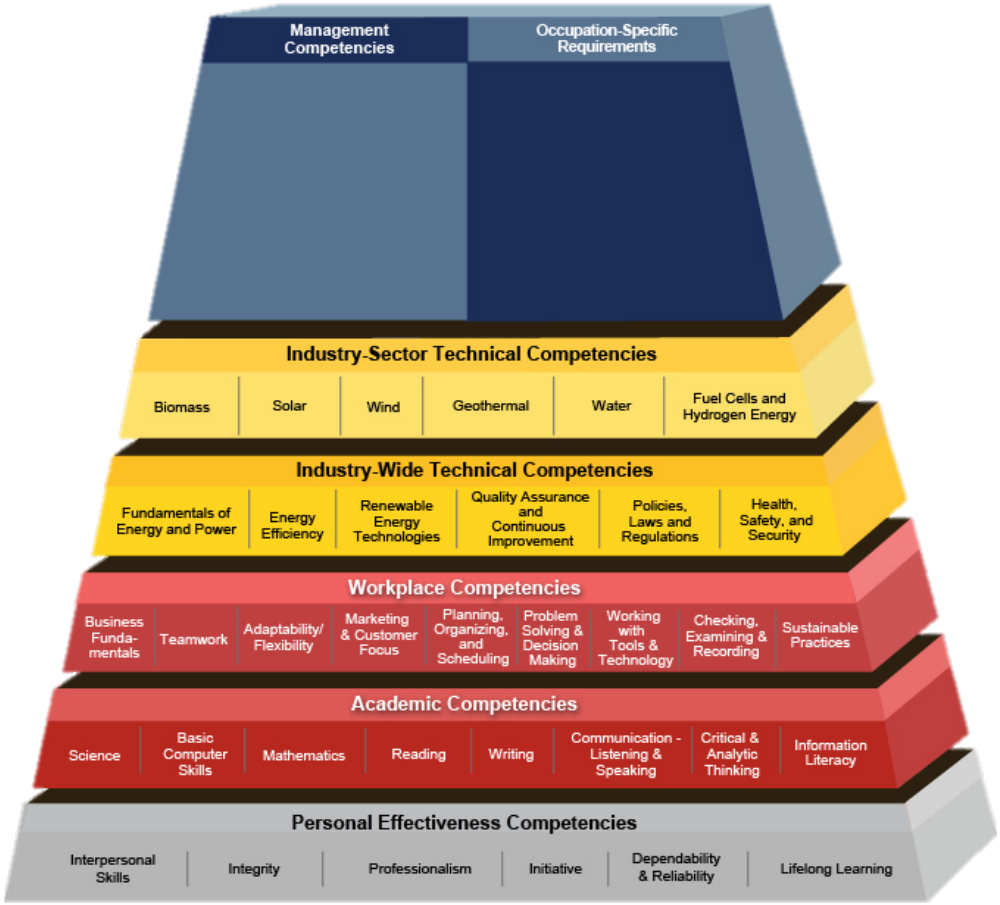
Two Initial Phases to this Energy Literacy Effort

Phase 1 - Develop and publish the guiding document (Spring 2012)
Phase 2 – Publicize and promote the guiding document. Assembly and dissemination of supporting educational materials, trainings, professional development and other energy education resources and opportunities. (ongoing)



Energy Literacy: Essential Principles and Fundamental Concepts for Energy Education, is building off of, and improving on, a model established previous literacy projects.

Renewable Energy Competency Model



http://www.careeronestop.org/competencymodel/pyramid.aspx?RE=Y

EERE Financial Opportunities

The majority of Office of Energy Efficiency and Renewable Energy (EERE) financial opportunities are for business, industry, and universities. http://www1.eere.energy.gov/financing/

- Official notices of solicitations can be found at Grants.gov. To view all current solicitations for DOE's Office of Energy Efficiency and Renewable Energy, see the Solicitations for Business, Industry and Universities page.

- Unsolicited Proposals are typically in response to a **Notice** of Program Interest (**NOPI**), unique and noncompetitive. The guide for submitting unsolicited proposals can be found at http://www.netl.doe.gov/business/usp/USPGuide.pdf.

EERE Financial Opportunities, cont.

EERE Direct Funding:

- Grants
- Cooperative Agreements
- Continuous Awards
- Renewal Awards

EERE Funding Stream:

- Sub-awards
- Laboratory Subcontracts
- Cooperative Research and Development Agreements (CRADAs)

DOE Financial Opportunities, cont.

DOE Programs:

- Advanced Research Project Agency-Energy (ARPA-E)
- Loan Guarantee Program
- Small Business Innovation Research (SBIR)
- Small Business Technology Transfer (STTR)

Career Development Opportunities

Internships

- Argonne National Laboratory Undergraduate Internships and Fellowships (DOE)
- Clean Cities University Workforce Development Program
- EERE Student Internships
- Minority Educational Institution Student Partnership Program
- National Renewable Energy Laboratory: Student Internships
- Sandia National Laboratory Tribal Energy Program Internships
- **Volunteer Internship Program**

Fellowships

- Albert Einstein Distinguished Educator Fellowship Program
- ARPA-E Fellows Program
- Energy Efficiency and Renewable Energy Science and Technology Policy (STP) Fellowships
- Graduate Automotive Technology Education
- Minority University Research Associates Program
- Office of Science: Graduate Fellowship Program
- **Presidential Management Fellowship**

Career Development Opportunities, cont.

Postdoctoral Research Awards

- The objective of the EERE Postdoctoral Research Awards is to create the next generation of scientific leaders in energy efficiency and renewable energy by attracting the best scientists and engineers to pursue breakthrough technologies in a highly prestigious postdoctoral research program.
- **The 2013 EERE Postdoctoral Research Awards are sponsored by the following EERE Programs:**
  - Fuel Cell Technologies
  - Solar
  - Water Power

Scholarships

- Scholarship Opportunities for American Indians and Alaska Natives
- UC Davis: Energy Efficiency Centera Natives

Competitions

Opportunities for K-12 Students:

Students can demonstrate their skills in a wide range of energy competitions that challenge them to build an electric car, design a school of the future, and much more.

DOE-Sponsored:

- America's Home Energy Education Challenge
- National Junior Solar Sprint/Hydrogen Fuel Cell Car Competitions
- National Science Bowl

Opportunities for University Students and Professors:

Adult competitors can immerse themselves in competitions such as designing a more energy-efficient paper industry and constructing a solar-powered house.

- Better Buildings Challenge
- EcoCar Challenge
- Georgetown University Energy Prize
- National Clean Energy Business Plan Competition
- Solar Decathlon

Points of Contact

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EERE Website:
www.eere.energy.gov

Apply for jobs at:
ww.USAJobs.gov

U.S. DEPARTMENT OF ENERGY | Energy Efficiency & Renewable Energy

U.S. DEPARTMENT OF ENERGY | Office of Science

Office of Science Sponsored Undergraduate and Faculty Research Experience Opportunities at DOE Laboratories

August 28, 2013

Dr. Jim Glownia
Senior Science and Technology Advisor
Office of the Deputy Director for Science Programs
Office of Science

Why are there Office of Science (SC) Sponsored (funded) internships?

In a word… **WORKFORCE**

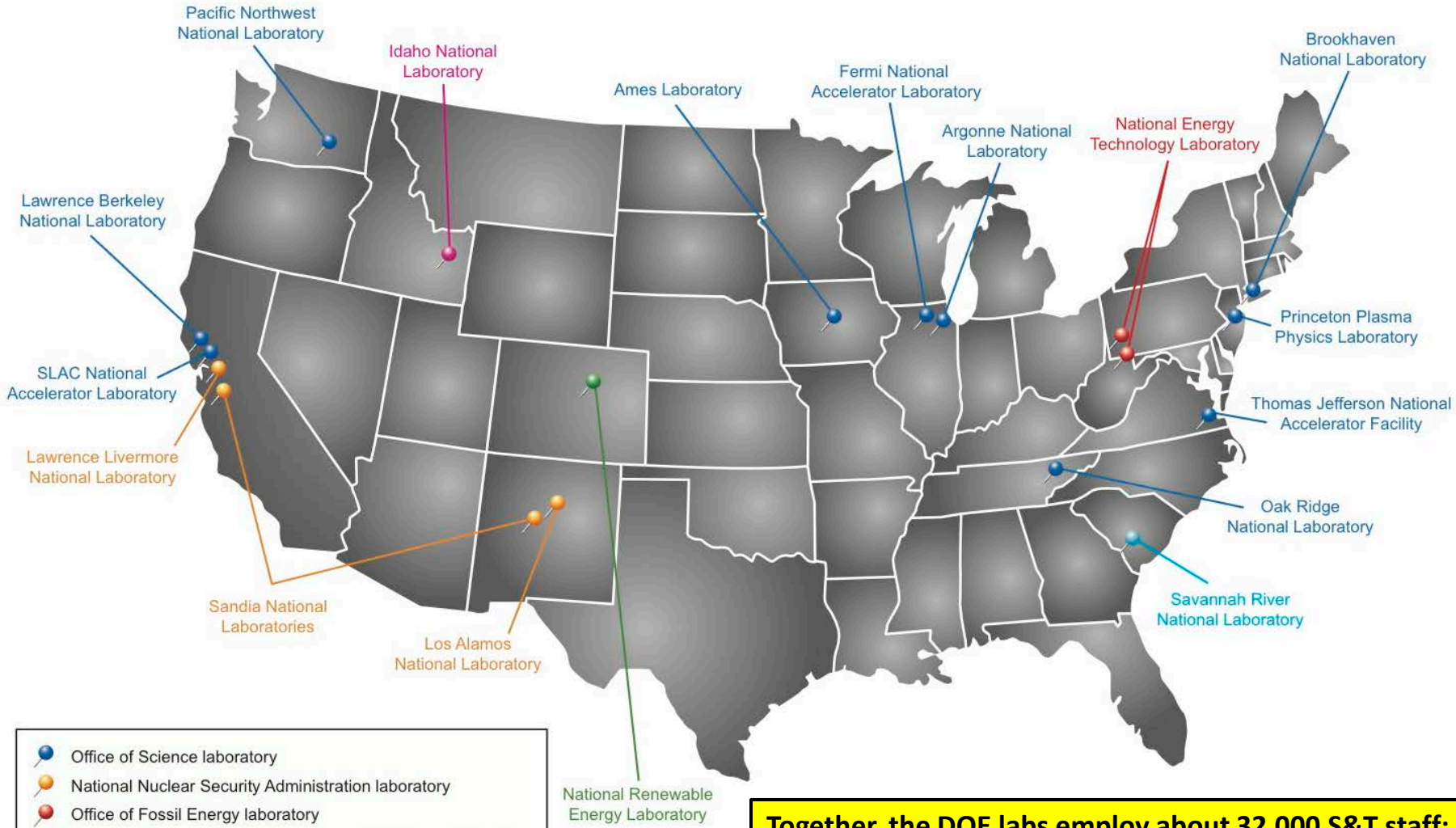
From the DOE Strategic Plan, May 2011:

SUSTAIN A WORLD-LEADING TECHNICAL WORKFORCE

"Excellent scientists, technologists, and engineers are the creative engine of the Department. The Department and its national laboratories must cooperate to create conditions that allow today's researchers to be as productive as possible, as well as to ensure an adequate supply of tomorrow's researchers. Investments will help develop the next generation of scientists and engineers to support Department missions, administer its programs, and conduct the research that will realize the nation's science and innovation agenda. These investments will enrich the diversity of the STEM pipeline so that it is more inclusive of women, minorities, and persons with disabilities while mentoring the next generation of scientists, technologists, and engineers. …"

SC funds these programs to help sustain the DOE's scientific and technical workforce pipeline

DOE Labs Employ >30,000 Scientists and Engineers



Together, the DOE labs employ about 32,000 S&T staff; SC labs employ about 14,000 S&T staff; many at the Ph.D. level.

U.S. DEPARTMENT OF ENERGY | Office of Science

Who manages these workforce development programs?

The Office of Workforce Development for Teachers and Scientists (WDTS)

Mission: WDTS program mission is to ensure that DOE has a sustained pipeline of highly skilled and diverse science, technology, engineering, and mathematics (STEM) workers.

Vision: To be the standard for workforce development programs in a mission agency where "Science and Technology lie at the heart of the mission."

Current WDTS programs:

- **At the DOE laboratories: Undergraduate student intern programs (one for 2/4-yr institutions and one for community colleges) and a visiting faculty program:**
  - **Science Undergraduate Laboratory Internship (SULI) - ~700/year**
  - **Community College Internship (CCI) - ~70/year**
  - **Visiting Faculty Program (VFP) - ~50/year**
- Office of Science Graduate Fellowship
- Albert Einstein Distinguished Educator Fellowship
- National Science Bowl

Challenges for the Office of Science

Energy
Leading Basic Research
for a Sustainable Future

Environment
Understanding Climate Change and
Improving the Environment

Innovation
Building Research Infrastructure and
Partnerships that Foster Innovation

Discovery
Unraveling Nature's
Deepest Mysteries

U.S. DEPARTMENT OF ENERGY | Office of Science

The DOE Office of Science (~$5B/year)

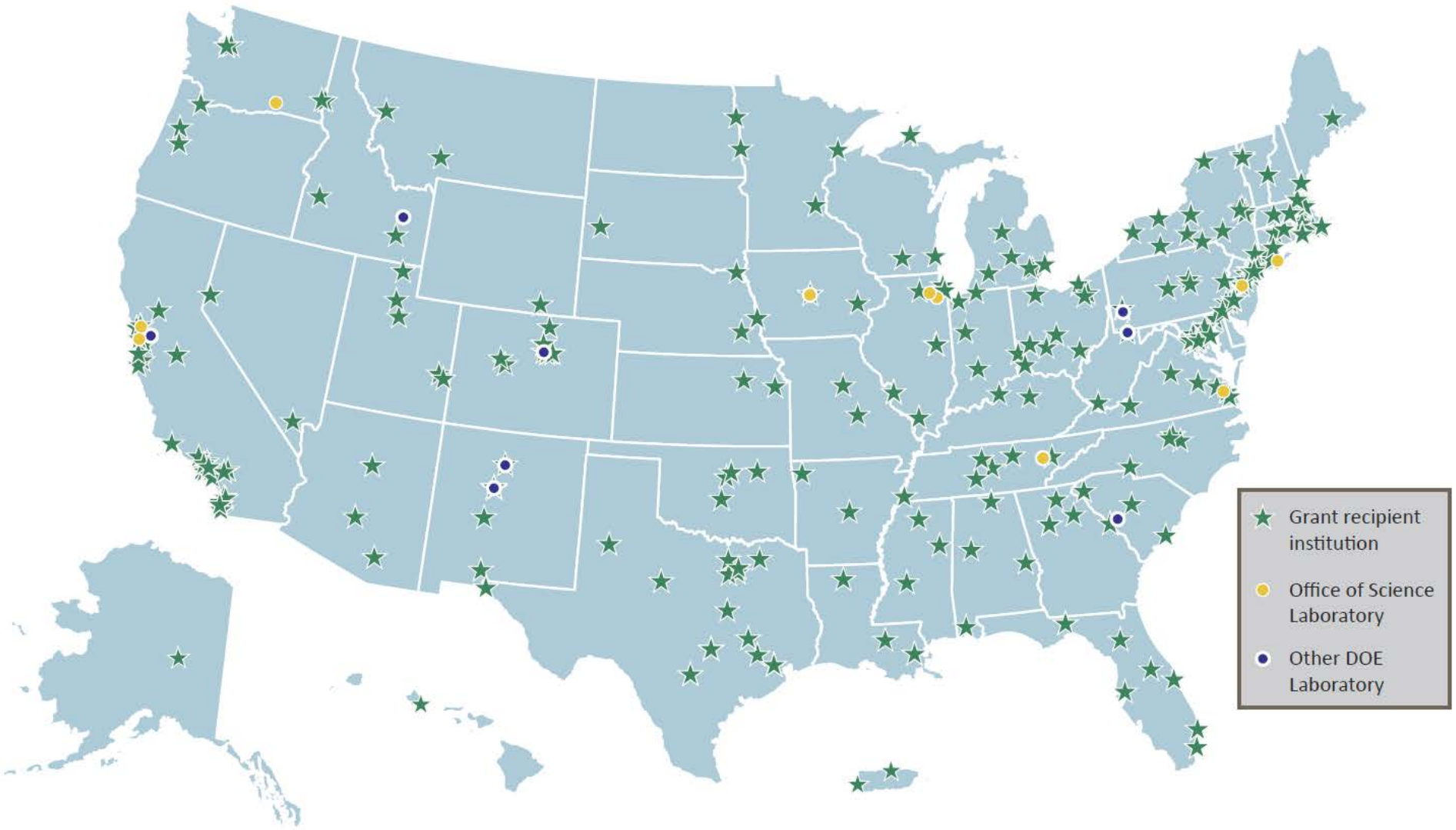
The undulator hall at the Linac Coherent Light Source (LCLS) , SLAC, 2011.

- The Office of Science (SC) is the single largest supporter of basic research in the physical sciences in the United States
- Funds 25,000 Ph.D. scientists, graduate students, undergraduates, engineers, and technical staff supported at more than 300 institutions in all 50 States and DC through competitive awards
- Operates 31 national user facilities serving more than 29,000 users each year
- Supported 100 Nobel Prizes during the past 6 decades, with more than 20 in the past 10 years

The Office of Science Research Portfolio

Advanced Scientific Computing Research	• **Delivering world leading computational and networking capabilities to extend the frontiers of science and technology**
Basic Energy Sciences	• **Understanding, predicting, and ultimately controlling matter and energy flow at the electronic, atomic, and molecular levels**
Biological and Environmental Research	• **Understanding complex biological, climatic, and environmental systems**
Fusion Energy Sciences	• **Building the scientific foundations for a fusion energy source**
High Energy Physics	• **Understanding how the universe works at its most fundamental level**
Nuclear Physics	• **Discovering, exploring, and understanding all forms of nuclear matter**

FY 2011 Funding Recipient Institutions



Where the user facilities are: DOE Laboratories (mostly)

★ SC is the steward of these ten DOE laboratories

Office of Science User Facilities –21st Century Science Tools

31 world-leading facilities serving over 29,000 researchers annually

- **supercomputers,**
- **high intensity x-ray, neutron, and electron sources,**
- **nanoscience facilities,**
- **genomic sequencing facilities,**
- **particle accelerators,**
- **fusion/plasma physics facilities, and**
- **atmospheric monitoring capabilities.**

- Open access; allocation determined through peer review of proposals

- Free for non-proprietary work published in the open literature

- Full cost recovery for proprietary work

Science Undergraduate Laboratory Internship (SULI) – Part I

Program Goal: Encourage undergraduate students to pursue **research** careers in science, technology, engineering, or mathematics (STEM) careers, especially relevant to the DOE mission, by providing research experiences at Department of Energy (DOE) Laboratories under the direction of laboratory scientific and technical staff, who serve as research advisors and mentors.

What is it:

- The SULI program places undergraduate students(from 2 or 4 year institutions) in paid internships in science and engineering research activities at DOE Laboratories. Students work with laboratory staff scientists or engineers on projects related to ongoing research programs.
- Appointments are for:
  - 10 weeks during the Summer Term (May through August) or
  - 16 weeks during the Fall Term (August through December) and Spring Term (January through May).
- All interns have defined research projects that must be within the DOE mission space.
- All interns have required deliverables: A research report, an oral or poster presentation, a peer review, and a general audience abstract.
- Interns are compensated as follows: $500 weekly stipend, travel to and from the laboratory, and housing assistance (varies with host lab).
- Laboratories also provide an array of seminars and professional development opportunities.

WDTS sponsors ~700 participants per year

Science Undergraduate Laboratory Internship (SULI) – Part II

Who is eligible to apply:

- Undergraduates from 2 or 4 year colleges, in their sophomore through senior year, or recently graduated (within one-year of beginning internship – see website for additional details).
- Must be at least 18 years old; and a U.S. citizen or PRA.
- Must have a minimum cumulative GPA of 3.0 for all courses taken as a matriculating student.
- May participate as an intern a maximum of two times; May apply a maximum of three times.

Application Process:

- All applicants apply online through the WDTS Application and Review System (WARS)
- Three solicitations for applications per year (for each of the three terms)
- Applicants make the host lab selection (1st and 2nd choices). 15 DOE laboratories participant.
- Applicants also select the research areas they are interested in.
- Applications require essays, transcripts, and two letters of recommendation.
- All completed applications are reviewed for application compliance and program eligibility by WDTS staff.
- Compliant and eligible applications are made viewable in WARS for the 1st and 2nd choice labs for review and placement.
- Laboratory Education Directors (LEDs) coordinate the review of applications by laboratory scientists (mentors) interested in hosting an intern. Labs attempt to best match the interests of the applicants to the interests and needs of the mentors.
- Mentors must clearly define a research project for their interns prior to issuing an offer.

Community College Internship (CCI) – Part I

Goal: Encourage community college students to pursue **technical** careers relevant to the DOE mission by providing technical training experiences at the DOE Laboratories under the direction of laboratory staff that serve as advisors and mentors.

What is it:

- The Community College Internship (CCI) places students from community colleges in paid internships in technologies supporting laboratory work under the supervision of a laboratory technician or researcher.
- The CCI Program addresses technical workforce needs at the DOE Laboratories to maintain the DOE's capacity.
- Is presently limited to a 10-week Summer Term (May through August) .
- All interns have defined technical projects that must be within the DOE mission space.
- All interns have required deliverables: A technical project report and an oral or poster presentation.
- Interns are compensated as follows: $500 weekly stipend, travel to and from the laboratory, and housing assistance (varies with host lab).

WDTS supports ~70 participants each Summer Term

Community College Internship (CCI) – Part II

Who is eligible to apply:

- Undergraduates from community colleges or accredited 2-year colleges
- Must be at least 18 years old; and a U.S. citizen or PRA.
- Must have a minimum cumulative GPA of 3.0 for all courses taken as a matriculating student.
- May participate as an intern a maximum of two times; May apply a maximum of three times.

Application Process (*identical to SULI process***):**

- All applicants apply online through the WDTS Application and Review System (WARS)
- Three solicitations for applications per year (for each of the three terms)
- Applicants make the host lab selection (1st and 2nd choices). 15 DOE laboratories participant.
- Applicants also select the technical areas they are interested in.
- Applications require essays, transcripts, and two letters of recommendation.
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- Laboratory Education Directors (LEDs) coordinate the review of applications by laboratory staff/scientists (mentors) interested in hosting an intern. Labs attempt to best match the interests of the applicants to the interests and needs of the mentors.
- Mentors must clearly define a technical project for their interns prior to issuing an offer.

Visiting Faculty Program – Part I

Goal: Increase the research competitiveness of faculty members and their students at institutions historically underrepresented in the research community in order to expand the workforce that addresses DOE mission areas.

What is it?

- Faculty from academic institutions that are typically underrepresented in the DOE research community (defined as not being rated VH or H for research activity by the Carnegie Foundation; except all faculty at HBCUs are eligible) have the opportunity to engage in a jointly developed research project to be conducted at a DOE laboratory during the Summer Term. The scope of the projects should be robustly connected to ongoing host lab research project activities.
- Faculty may invite up to two students to participate, one of whom may be a graduate student.
- Is presently limited to a 10-week Summer Term (May through August)
- **Faculty may participate up to three terms.**
- **DOE laboratories and WDTS are developing mechanisms to communicate research funding opportunities to faculty members to continue their research at their home institution.**
- Faculty receive stipend of $13,000 for 10 week term, with possible housing allowance.
- Undergraduates receive benefits similar to SULI: $500/week stipend.

WDTS supports ~ 50 faculty and ~25 students each Summer.

Visiting Faculty Program – Part II

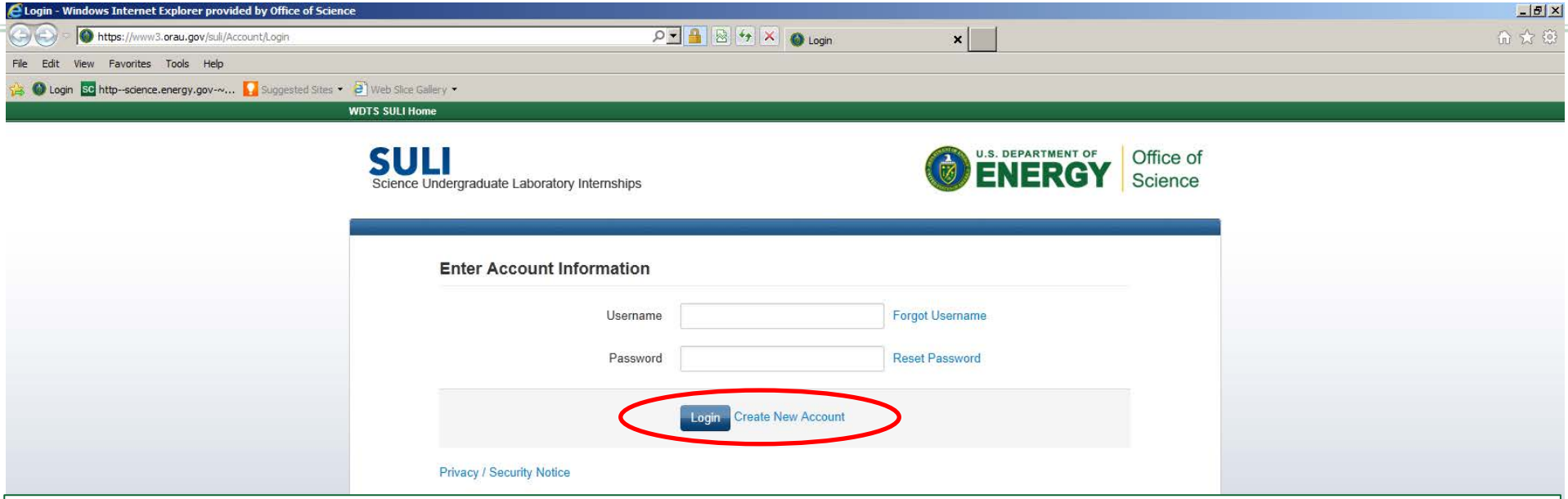
Who is eligible to apply:

- Must be a full-time faculty member at an accredited U.S. degree granting, postsecondary, institution of higher education historically underrepresented in the U.S. research community.
- Must be a full-time faculty member in an area of physics, chemistry, biology (non-medical), mathematics, engineering, environmental sciences, materials sciences, or computer or computational sciences.
- Must be a U.S. citizen or PRA.
- Students (optional, limited to two one of which may be a graduate student) must meet SULI requirements.

Application Process (*identical to SULI process***):**

- All applicants apply online through the WDTS Application and Review System (WARS) for the Summer Term
- Faculty must, through there own efforts, establish a collaboration with a laboratory scientist to co-develop a project proposal prior to applying to the program.
- Applicants submit their co-developed proposal with their CV in WARS. Faculty must invite any students to apply (if they choice to include students in the project); students apply separately.
- All completed applications are reviewed for application compliance and program eligibility by WDTS staff.
- Laboratory Education Directors (LEDs) coordinate a merit review of applications using SC's merit review criteria. Peer review must support the final decision to issue a formal offer to the faculty member. Offers to students are contingent upon accepted offers by the faculty member.

WARS Online Account Creation and Access



Step one is creation of an account for the program your are applying to (SULI shown here):

- Access to the application and follow-up actions are made using this account;
- One account per program, per term (*i.e.*, you can only apply to one program per term);
- This online system will guide and request all required information and materials in the form of radio buttons, text entry fields, pull down menu selections, or file uploads;
- The application system will automatically solicit recommendations using contact information you provide.
- Your application dashboard will allow you to monitor progress, alert you to missing information and approaching deadlines, and inform you regarding recommendation submissions.

WARS Online Account Creation and Access *(cont.)*

Step one is creation of an account for the program you are applying to:

- Access to the application and follow-up actions are made using this account;
- You can only apply to one program per term;
- This online system will guide and request all required information and materials;
- The application system will automatically solicit recommendations using contact information you provide;
- When a term is active, the WDTS program specific webpage will provide a link to its related WARS applicant/participant web portal.

Program specific WARS applicant portal URLs:

SULI: https://www3.orau.gov/suli/Account/Login

CCI: https://www3.orau.gov/cci/Account/Login

VFP – Faculty: https://www3.orau.gov/vfp-faculty/Account/Login

VFP – Student: https://www3.orau.gov/vfp-student/Account/Login

How to Apply - SULI & CCI

Visit and review your program of interest webpages, including FAQs!

- On the application , there are questions on your citizenship status, science/technical interests, studies, experience, and skills
- You will need an electronic (pdf) copy of your most recent transcript(s) for all institutions attended as a matriculating student
- You will need contact information for at least two, but no more than three, recommenders
- Please pay very careful attention to all required elements and allow ample time to meet the submission deadline (essentially, no exceptions granted)
- You select up to two possible host laboratories (carefully consider this selection as only these two labs will review your application, with any possible placement likewise restricted to these two labs.
- Access and submission of an application requires an online system account

Key Dates - SULI

SULI Internship Term:	**Spring 2014**	**Summer 2013***	**Fall 2013**
On-line Application Opens	August 6, 2013	October 9, 2012	May 1, 2013
Applications Due	**October, 1, 2013 5:00pm ET**	**January 10, 2013 11:59pm ET**	June 12, 2013 5:00pm ET
Offer Notification Period Begins on or around	October, 15, 2013	January 30, 2013	June 24, 2013
All DOE Offers and Notifications Complete	November 29, 2013	April 16, 2013	August 1, 2013

*Look for Summer 2014 application to open in early October 2013.

Key Dates - CCI

CCI Term:	Summer 2013*
On-line Application Opens	On or around October 9, 2012
Applications Due	**January 10, 2013 11:59pm ET**
All DOE Offers and Notifications Complete	April 16, 2013

*Look for Summer 2014 application to open in early October 2013

How to Apply VFP - Faculty

Visit and review VFP webpages, including FAQs!

- Step 1 (very important, and prior to applying) - Eligible faculty are strongly encouraged to reach out to scientific or engineering staff at the DOE Laboratory best aligned with their research interests, and work to co-develop a research project plan, which can help provide a basis for the required co-written project proposal.
- Project proposals (6-page limit) are required by all faculty applicants at the time of application, and are co-written by the faculty member and a member of the laboratory research staff, who are the project co-Principal Investigators. Proposal guidance and requirements are found at: *http://science.energy.gov/wdts/vfp/how-to-apply/submitting-a-proposal-to-doe/*

How to Apply VFP – Faculty (*cont.*)

Visit and review the VFP webpages, including FAQs!

- On the application , there are questions on your citizenship status, science/technical interests, studies, experience, and skills
- You will need an electronic (pdf) copy of your curriculum vitae
- Submission of a co-developed research proposal is required at the time of application (subject to peer review as part of placement basis)
- You will need contact information for at least two, but no more than three, recommenders
- Please pay very careful attention to all required elements and allow ample time to meet the submission deadline (essentially, no exceptions granted)
- Inclusion of any student(s) (optional, up to two) requires that you indicate this at the time of application; the system will invite indicated students, and enable them to access the application
- Access and submission of an application requires an online system account

How to Apply VFP- Student

Visit and review your program of interest webpages, including FAQs!

- Application is by invitation only (by the VFP-Faculty applicant) and cannot be “transferred” from SULI or CCI (wait for invitation)
- On the application , there are questions on your citizenship status, science/technical interests, studies, experience, and skills
- You will need an electronic (pdf) copy of your most recent transcript(s) for all institutions attended as a matriculating student
- You will need contact information for at least two, but no more than three, recommenders
- Please pay very careful attention to all required elements and allow ample time to meet the submission deadline (essentially, no exceptions granted)
- You will have no choice regarding the host lab (determined by faculty applicant)
- Access and submission of an application requires an online system account

Key Dates - VFP

VFP Term:	Summer 2013*
On-line Application Opens	On or around October 9, 2012
Applications Due	**January 10, 2013 11:59pm ET****
All DOE Offers and Notifications Complete	April 16, 2013

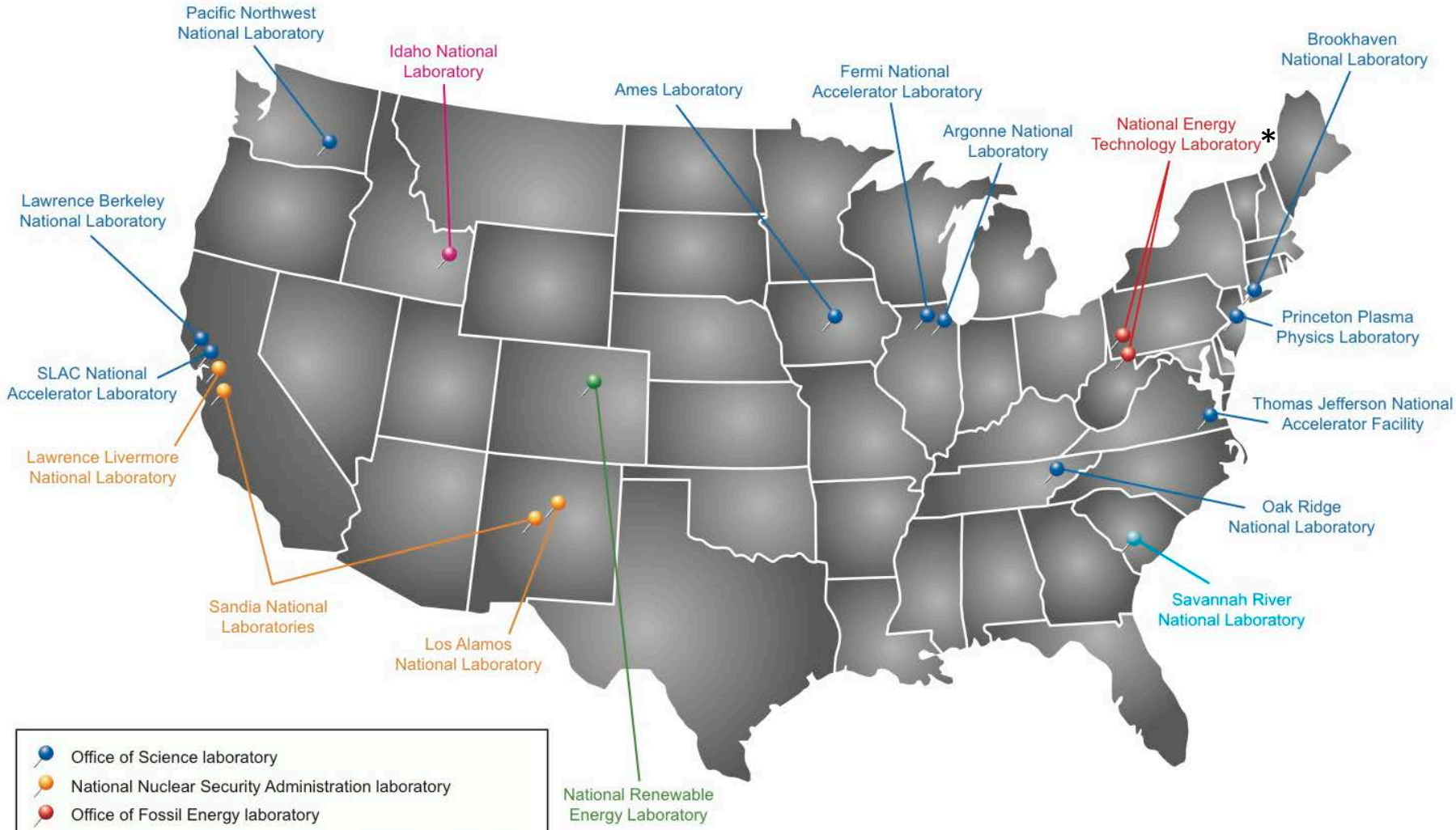
*Look for Summer 2014 application to open in early October 2013
**A research proposal co-developed with a DOE laboratory researcher must be electronically submitted by all faculty applicants as part of their application.

In the interim – Interested Faculty should consider identifying lab co-investigator(s) and initiating co-development of a required research proposal

Selecting a Host DOE Lab

- Applicants must identify their first and second choice laboratories indicating where they would like to do their research internship.
- Applicants must also select a research area(s) of interest matching one of those listed for a particular laboratory's ongoing research programs. This choice is made at the sole discretion of the applicant.
- Prior to selecting a host laboratory and research area, applicants should read carefully the research areas available at each DOE laboratory on WDTS webpages AND by reviewing the research information on the laboratory website.
- Not all DOE laboratories participate in the Fall & Spring Terms.
- Not all research areas are available at all DOE laboratory, so applicants should make this selection carefully after they have reviewed the available information.
- VFP-Faculty have a specific points-of-contact list to help identify possible co-investigators (http://science.energy.gov/wdts/vfp/how-to-apply/identifying-a-host-doe-laboratory/)

Where are interns/faculty currently placed?



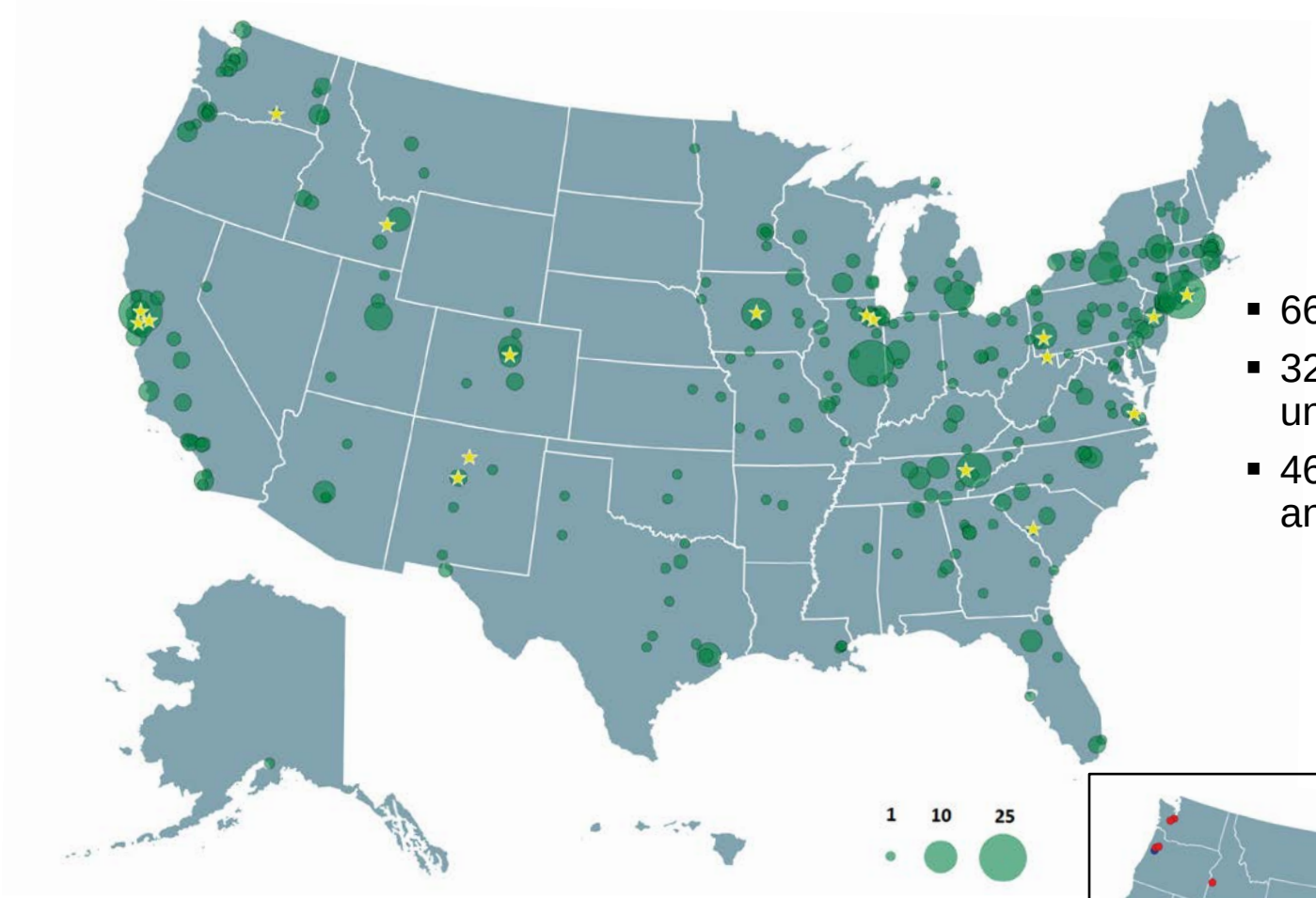
@ 16/17 DOE Laboratories

*(does not currently participate)

U.S. DEPARTMENT OF ENERGY | Office of Science

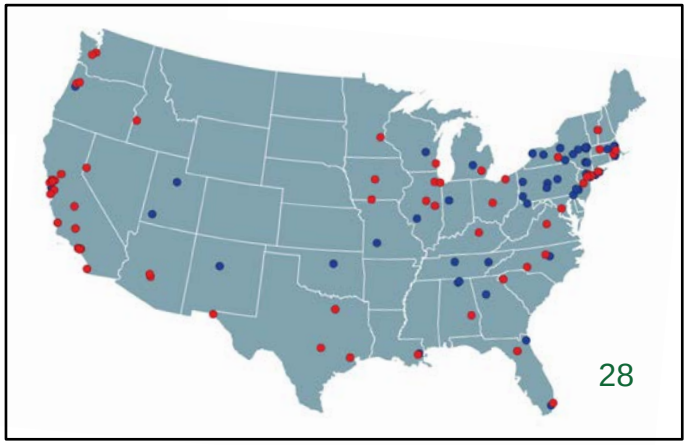
2012 SULI Participant Undergraduate Institutions

Students come from across the U.S.



- 665 students
- 321 colleges/ universities
- 46 states, Puerto Rico and U.S. Virgin Islands

Inset at right shows home institutions of students who interned at two of the DOE labs: Lawrence Berkeley National Lab (red dots) and Brookhaven National Lab (blue dots)



SULI Participant becomes Investigator on LCLS Experiment

Stephanie Mack, right, in the control room at LCLS, taking data for her experiment.

- Stephanie Mack, 20, a Nebraska native and now a senior at the University of Ottawa, is the youngest person to serve as an investigator in an experiment at the Linac Coherent Light Source (LCLS).
- Mack was a SULI participant for the past two summers at SLAC. Last summer she observed an LCLS experiment for the first time and helped write a proposal for an LCLS experiment, which was successful.
- She credits her SULI experience, the mentorship of LCLS instrument scientist Joshua Turner, and guidance from members of the Soft X-ray Materials Science (SXR) instrument team in preparing her for the LCLS experiment.
- As part of an international collaboration, she studied manganite, one of a class of complex manganese-oxide compounds that has many desirable electronic and magnetic properties and that could ultimately lead to extremely fast, low-energy, non-volatile computer memory chips or data-switching devices.

An Experience Like No Other

- Enrichment Activities - including career professional development workshops, technical writing skill development, safety training, laboratory tours, scientific lectures and seminars.

- Obligations/Deliverables – may include pre- and post- participation surveys, presentation of results, peer review, abstract, and/or written report (SULI, CCI, VFP-Student, and VFP-Faculty participants have differing specific requirements).

- Support - stipend of $500 per week (student) or $13,000/term (faculty); one round trip domestic travel to the host laboratory; housing options that vary with host laboratory.

- Experience - you observe and share the professional life of lab personnel, and hopefully learn valuable out-of-classroom professional skills, heightening your interest to continue in STEM studies and pursue related careers.

- Expectations - expect to work hard with formalized/normalized requirements well beyond that of typical research experience opportunities.

WDTS Activities at the DOE Labs – Program Contacts, Resources, and Information

Best web resources for Office of Science and WDTS information:

http://science.energy.gov

http://science.energy.gov/discovery-and-innovation/

http://science.energy.gov/wdts

Recent WDTS webinars (recorded content, with download):

http://orau.adobeconnect.com/p9t3cwcozm9/ ("Office of Science 101" Summer Term 2013 Interns)

http://orau.adobeconnect.com/p76g7f39qlh/ (Office of Science "Funding 101" for VFP-Faculty)

Email any questions:

Jim Glownia – james.glownia@science.doe.gov

or WDTS via the program specific contact links:

http://science.energy.gov/wdts/suli/contact/

http://science.energy.gov/wdts/cci/contact/

http://science.energy.gov/wdts/vfp/contact/