

RWFI E-NOTE MONTHLY

REGIONAL WORKFORCE INITIATIVE • AUGUST 2018

Welcome Message

Greetings NETL RWFI stakeholders,

This month's E-Note contains information on the recently released Advanced Technological Education (ATE) program funding announcement from the National Science Foundation. The ATE program focuses on technological education at the 2-year level and encourages collaborations with organizations such as the manufacturing extension partnerships and the national manufacturing initiatives, both of which are significantly represented in the region.

You will also find a brief on the Future of Energy and Advanced Manufacturing Workforce Webinar hosted by the RWFI on August 8, 2018, which provided data on energy and manufacturing jobs and workforce relative to the Appalachian region. Presentation materials can be found at the [RWFI website](#) and by visiting our [RWFI Resources page here](#).

Finally, if you would like to know more about the research and development mission of NETL, you can visit a recently released NETL Research Brief, [Meeting America's Energy Challenges](#), to learn more about the cutting edge technologies the lab is developing.

Feel free to reach out to us at NETL.RWFI@netl.doe.gov if you have any suggestions for information to present in future E-notes.

– Sincerely, The NETL Regional Workforce Initiative Team

Workforce Funding Announcements



Advanced Technological Education Program

National Science Foundation, **Deadline: October 15, 2018**

With an emphasis on two-year Institutions of Higher Education (IHEs), the ATE program focuses on the education of technicians for the high-technology fields that drive our nation's economy. The program involves partnerships between academic institutions

(grades 7-12, IHEs) and industry to promote improvement in the education of science and engineering technicians at the undergraduate and secondary institution school levels. The ATE program supports curriculum development, professional development of college faculty and secondary school teachers, career pathways, and other activities. The program invites research proposals that advance the knowledge base related to technician education. It is expected that projects will be faculty driven and that courses and programs will be credit bearing, although materials developed may also be used for incumbent worker education. The ATE program encourages partnerships with other entities that may impact technician education.

For example,

- The National Institute of Standards and Technology (NIST) Manufacturing Extension Partnerships (MEPs) (<http://www.nist.gov/mep/index.cfm>) as applicable to support technician education programs and the industries they serve;
- Manufacturing USA Institutes (<https://manufacturing.gov/>) and Investing in Manufacturing Communities of Practice (IMCPs) (<https://www.eda.gov/imcp>) addressing workforce development issues (also see DCL [NSF 16-007](#)); and
- NSF Industry University Cooperative Research Centers Program (I/UCRC) awardees (<http://www.nsf.gov/eng/iip/iucrc/>).

The ATE program encourages proposals from Minority Serving Institutions and other institutions that support the recruitment, retention, and completion (certificate, degree, program) of students underrepresented in STEM in technician education programs that award associate degrees. The ATE program is particularly interested in proposals from all types of Minority Serving Institutions (including Hispanic Serving Institutions, Historically Black Colleges and Universities, Tribal Colleges and Universities, and Alaska Native and Native Hawaiian Serving Institutions) where the proportion of underrepresented students interested in advanced technology careers is growing.

EHR Core Research

National Science Foundation, **Deadline: September 13, 2018**

The EHR Core Research (ECR) program of fundamental research in STEM education provides funding in critical research areas that are essential, broad, and enduring. EHR seeks proposals that will help synthesize, build and/or expand research foundations in the following focal areas: STEM learning, STEM learning environments, STEM workforce development, and broadening participation in STEM. The ECR program is distinguished by its emphasis on the accumulation of robust evidence to inform efforts to (a) understand, (b) build theory to explain, and (c) suggest interventions (and innovations) to address persistent challenges in STEM interest, education, learning, and participation. The program supports advances in fundamental research on STEM learning and education by fostering efforts to develop foundational knowledge in STEM learning and learning contexts — both formal and informal — from childhood through adulthood (for all groups) and from the earliest developmental stages of life through participation in the workforce, resulting in increased public understanding of science and engineering. The ECR program will fund fundamental research on human learning in STEM, learning in STEM learning environments, STEM workforce development, and research on broadening participation in STEM.

YouthBuild Program

U.S. Department of Labor, Employment and Training Administration, **Deadline: September 18, 2018**

The Employment and Training Administration (ETA), U.S. Department of Labor (DOL), announces the availability of approximately \$85 million in grant funds authorized by the Workforce Innovation and Opportunity Act (Pub. L. 113-128) for YouthBuild. Under this Funding Opportunity Announcement, DOL will award grants through a competitive process to organizations providing pre-apprenticeship services that support education, occupational skills training, and employment services to at-risk youth, ages 16 to 24, while performing meaningful work and service to their communities. In addition to construction skills training, YouthBuild applicants may include occupational skills training in other in-demand industries. This expansion into additional in-demand industries is the Construction Plus component, a priority in this grant competition.

USDA Small Business Administration Phase One Grants

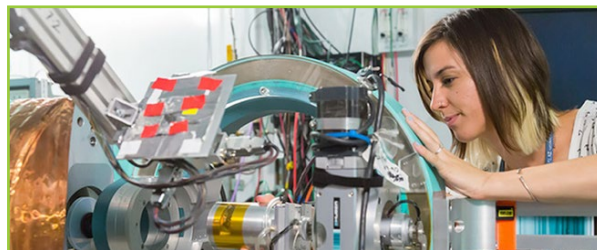
U.S. Department of Agriculture, **Deadline, October 25 ,2018**

The Small Business Innovation Research (SBIR) program at the U.S. Department of Agriculture (USDA) offers competitively awarded grants to qualified small businesses to support high quality research related to important scientific problems and opportunities in agriculture that could lead to significant public benefits. The program stimulates technological innovations in the private sector and strengthens the role of federal research and development in support of small businesses. The SBIR program also fosters and encourages participation by women-owned and socially or economically disadvantaged small businesses.

USDA SBIR Topics

- Forests and Related Resources
- Plant Production and Protection — Biology
- Animal Production and Protection
- Air, Water, and Soils
- Food Science and Nutrition
- Rural Development
- Aquaculture
- Biofuels and Biobased Products
- Small and Mid-Size Farms
- Plant Production and Protection — Engineering

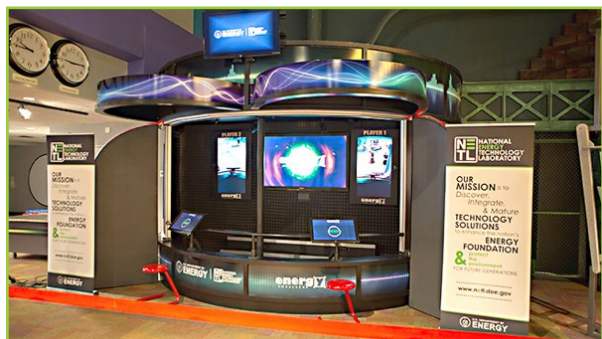
Recap of Recent NETL Meetings and Regional Events



NETL Webinar Outlines Gains and Struggles in Energy Workforce

Employment in energy fields, including oil and natural gas sectors, continued to increase in 2017, but employers are facing challenges when seeking qualified workers to fill open positions, according to data presented during the Future Energy and Manufacturing Jobs webinar sponsored by the NETL RWFI. The online event on August 8, 2018, brought together subject matter experts from NETL, RAND Corporation, and the Energy Futures Initiative to discuss energy and manufacturing jobs and workforce data. Nearly 100 registrants representing more than 40 different organizations across the Appalachian region and the nation participated in the event. Presentation materials from the event can be found on the NETL RWFI website by [clicking here](#).

NETL News



NETL and the Carnegie Science Center Renew Energy Zone Alliance with Major Exhibit Improvements

There's an old proverb: "if you are planning for a year, sow rice; if you are planning for a decade, plant trees; if you are planning for a lifetime, educate people." NETL and the Carnegie Science Center are planning for a lifetime with an updated version of a popular Science Center fixture known as the NETL Energy Zone exhibit.



NETL Researchers Pinpointing New Domestic Sources of Rare Earth Elements

To help protect our nation, researchers at NETL are working to secure a low-cost domestic supply of rare earth elements by identifying promising sources using a combination of big data analysis, advanced microscopy, and development of innovative exploration and recovery processes.



NETL Explores Subsurface Data Using Cutting Edge 3D Imaging Technology

Without ever leaving the Lab, NETL researchers are exploring the microscopic spaces in rocks, called pores, to take measurements as they seek a better understanding of how liquids and gases interact. These measurements are expanding scientific knowledge of the subsurface environment to ensure safe and effective carbon storage, enhanced resource recovery, and basic scientific understanding of subsurface phenomena.

Upcoming Workforce Conferences, Meetings, and Summits



2018 Women and Technology Conference

Embassy Suites Hotel, Charleston, West Virginia, **September 10, 2018**

This year's Women & Technology Conference, to be held on September 10, 2018, will feature inspiring women speakers discussing the cutting edge of technology, value-added educational sessions, quality networking, and the 2018 Spirit of Innovation Awards. Technology touches all aspects of life, and the information shared at the conference will be relevant to all industry sectors and educational institutions.

2018 Appalachian Regional Commission (ARC) Annual Conference

Bancorp South Arena and Conference Center, Tupelo, Mississippi, **September 12-14, 2018**

This year's summit, Appalachia Works: Expanding Opportunities for Our Region's Future, is hosted by the state of Mississippi. The program will highlight best practices, emerging ideas, and lasting strategies for economic development across Appalachia. It will also be covering hot topics in the Region such as capital access, the opioid crisis, and land reclamation. Plus, new to this year's agenda are focused technical assistance offerings such as skill building workshops and strategy labs with ARC experts.

National Brownfields Leadership Summit

The Hill Center, Washington, DC, **September 25-26, 2018**

The summit will bring together top leaders from across the redevelopment industry with key decision makers in Washington, D.C. Hear the latest in redevelopment policies, programs, and funding opportunities and interact directly with leading federal agency personnel.

**National Council for Workforce Education (NCWE)
2018 Annual Conference**

Clearwater Hilton Hotel - Clearwater Beach, Florida, **September 26-27, 2018**

As an affiliate council of the American Association of Community Colleges, NCWE provides a national forum for administrators and faculty in workforce education and basic skills — as well as representatives of business, labor, military, and government — to affect and direct the future role of two-year and other post-secondary institutions in workforce education and economic development. NCWE provides the link between policy and workforce education and economic development practice by providing support, research, and critical information to members on current and future trends and policies.

EntreEd National Summit on Entrepreneurship Education

Hyatt Regency Pittsburgh International Airport, Pittsburgh, Pennsylvania, **September 28-30, 2018**

The Consortium for Entrepreneurship Education presents the 2018 EntreEd Forum in Pittsburgh, Pennsylvania. This forum provides attendees with a unique opportunity to learn about entrepreneurship education via hands-on workshops, engaging activities, and an interactive agenda.

The STEM Report

Georgetown University Center on Education and the Workforce

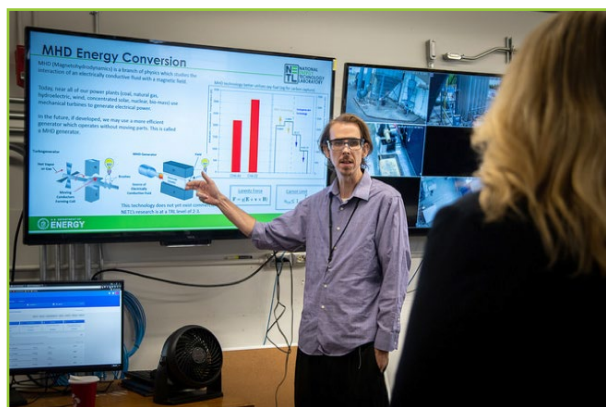
STEM occupations are critical to our continued economic competitiveness because of their direct ties to innovation, economic growth, and productivity, even though they will only be 5 percent of all jobs in the U.S. economy by 2018. The disproportionate influence of STEM raises a persistent concern that we are not producing enough STEM workers to compete successfully in the global economy. The report finds that this concern is warranted — but not for the reasons traditionally claimed.

July 2018 LinkedIn Workforce Report

LinkedIn

The LinkedIn Workforce Report is a monthly report on employment trends in the U.S. workforce. It is divided into two sections: The first National section that provides insights into hiring, skills gaps, and migration trends across the country, and the second is a City section that provides insights into localized employment trends in 20 of the largest U.S. metro areas. Nationally, across all industries, gross hiring in the U.S. was 10.5% higher than in June 2017. Seasonally-adjusted national hiring was down 7.9% in June from May 2018 but was still very robust by the standards of the current economic expansion. The industries with the biggest year-over-year hiring increases in June were aerospace, automotive, and transportation (15.6% higher); architecture and engineering (12.5% higher); and manufacturing and industrial (10.9% higher).

Reports and Resources



Meeting America's Energy Challenges

NETL

NETL is developing innovative technology solutions to the nation's energy challenges through effective resource development, efficient energy conversion and responsible stewardship of the environment. [Click here](#) to learn more about how NETL is exercising its world-class capabilities in fossil energy science and engineering to enhance America's energy future.

DOE STEM Rising



Sandia Gears Up for Annual Computer Donation Event

Students from more than 40 New Mexico schools are expected to benefit from Sandia National Laboratories' annual K-12 Computer Donation Event next week, where more than 1,000 computers and related accessories will be distributed. Representatives from schools around the state will collect the computers for students, along with printers, power cords, keyboards, mice, headphones, monitors, and speakers. Last year, tablets were distributed to schools for the first time, and Sandia plans to donate more this year.

After School Program for Teachers Now Accepting Applications

The U.S. DOE's Thomas Jefferson National Accelerator Facility is accepting applications for its 2018-19 science enrichment program for fifth-, sixth- and eighth-grade teachers of science. The Jefferson Lab Science Activities for Teachers program is designed to increase teachers' knowledge of the physical sciences and to strengthen their teaching skills. The JLab Science Activities for Teachers after-school program starts in September 2018 and continues through May 2019. It offers interactive activities to enhance physical science instruction at the upper-elementary and middle school levels. A wide range of topics will be addressed, including matter, atomic structure, energy transfer, force and motion, magnetism and electricity, waves and sound, simple machines, optics, and the watershed cycle.

New Fellowship Brings Ph.D. students into National Laboratories for Career-Launching Opportunity

The new Laboratory Residency Graduate Fellowship program places highly-motivated students in Department of Energy/ National Nuclear Security Administration National Laboratories for long-term study in fields of science relevant to the stewardship of our nation's nuclear stockpile such as nuclear astrophysics, magneto-hydrodynamics, and particle accelerator design. Fellows are paid to conduct research in residence at one or more of four approved facilities for a minimum of two 12-week periods. These collaborations, combined with unique facility exposure, are expected to lead to employment opportunities and advancement within the labs.

Approximately 250 students and professors from STEM programs at universities in 33 U.S. states arrived at Brookhaven Lab on June 4, 2018. Hosted by the Lab's Office of Educational Programs, the participants are now with mentors "in the field" — some in labs and offices, others literally in fields on site, studying tick populations, small mammals, box turtles, pollinators, and their habitats.

ABOUT NETL



NETL, owned and operated by DOE, is one of the Department's 17 National Laboratories. NETL supports DOE's mission to advance the national, economic, and energy security of the United States.

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