

RWFI E-NOTE MONTHLY

REGIONAL WORKFORCE INITIATIVE • FEBRUARY 2020

Welcome Message

Greetings NETL RWFI stakeholders,

In this month's E-note you will find registration information for the 6th Annual Carnegie Mellon University's (CMU) Energy Week, taking place at the CMU campus from March 23–27, 2020.

As always, 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

FUNDING SPOTLIGHT

Future of Work at the Human-Technology Frontier: Core Research

National Science Foundation, **Deadline, March 9, 2020**

The specific objectives of the Future of Work at the Human-Technology Frontier program are to (1) facilitate convergent research that employs the joint perspectives, methods, and knowledge of computer science, design, engineering, learning sciences, research on education and workforce training, and social, behavioral, and economic sciences; (2) encourage the development of a research community dedicated to designing intelligent technologies, work organization, and modes inspired by their positive impact on individual workers, the work at hand, the way people learn and adapt to technological change, creative and supportive workplaces (including remote locations, homes, classrooms, or virtual spaces), and benefits for social, economic, educational, and environmental systems at different scales; (3) promote deeper basic understanding of the interdependent human-technology partnership to advance societal needs by advancing design of intelligent work technologies that operate in harmony with human workers, including consideration of how adults learn the new skills needed to interact with these technologies in the workplace and by enabling broad workforce participation, including improving accessibility for those challenged by physical or cognitive impairment; and (4) understand, anticipate, and explore ways of mitigating potential risks arising from future work at the human-technology frontier.



National Science Foundation (NSF) Scholarships in STEM (S-STEM) Program

National Science Foundation, **Deadline, March 25, 2020**

Recognizing that financial aid alone cannot increase retention and graduation in STEM, the program provides awards to Institutions of Higher Education to fund scholarships and to advance the adaptation, implementation, and study of effective evidence-based curricular and co-curricular activities that support recruitment, retention, transfer (if appropriate), student success, academic/career pathways, and graduation in STEM. The S-STEM program encourages collaborations among different types of participating groups including but not limited to partnerships among different types of institutions; collaborations of STEM faculty and institutional, educational, and social science researchers; and partnerships among institutions of higher education and business, industry, local community organizations, national labs, or other federal or state government organizations, if appropriate.

National Ocean Sciences Competition for High School Students

Department of Commerce, **Deadline, April 21, 2020**

The goal of this funding opportunity is to expose high school students in the United States and its territories to the excitement of ocean sciences and related fields, as well as careers in those fields through an academic competition and related activities. Proposed projects must address at least one of the goals of the National Oceanic and Atmospheric Administration's (NOAA) Education Strategic Plan listed in section I.A.1 and incorporate relevant NOAA assets. To achieve project goals, applicants should partner with NOAA offices and programs; academic institutions; other nonprofit organizations (including free-choice learning venues and nongovernmental organizations); state, local, and Indian tribal governments in the United States; and other U.S. federal agencies. Although it is expected that the project's focal point will be a tiered academic competition with regional- and national-level events involving approximately 2000 students annually, it should also provide additional learning experiences for student participants, their peers, and their teachers (such as internships and field and/or laboratory research experiences).

Mid-Scale Innovations Program (MSIP) in Astronomical Sciences

National Science Foundation, **Deadline, May 6, 2020**

A vigorous MSIP was recommended by the 2010 Astronomy and Astrophysics Decadal Survey, citing “many highly promising projects for achieving diverse and timely science.” As described in this solicitation, the Division of Astronomical Sciences conducts a mid-scale program to support a variety of astronomical activities within a cost range up to \$30M. This program is formally divided into four subcategories: (1) limited term, self-contained science projects; (2) longer term mid-scale facilities; (3) development investments for future mid-scale and large-scale projects; and (4) community open access capabilities. The MSIP will emphasize both strong scientific merit and a well-developed plan for student training and involvement of a diverse workforce in instrumentation, facility development, or data management.

NETL News



Female Researchers at NETL Lead Next Generation of Innovators

As the world enters a new decade, change is on the horizon — especially in STEM. According to Forbes, women in the U.S. currently earn the majority of bachelor's degrees; however, they are underrepresented in fields such as computer science, engineering, and mathematics. Additionally, women who earn science and engineering degrees often do not go on to careers in those paths. Closing the gap and ensuring equal female representation in science careers are important in generating new solutions to the Nation's technology challenges. NETL is greatly benefited by the contributions of its many female employees who perform outstanding work and serve as role models for future female leaders in STEM. From managing a wide number of NETL projects to discovering the next breakthroughs in energy technology, read about three women who are making a difference in the science and engineering community.



NETL Celebrates 2019 Achievements

NETL researchers leverage the Lab's world-class capabilities and facilities each day to pursue innovative science and technology (S&T) advances that contribute to technological solutions for America's energy challenges. The Lab recently celebrated more than 30 notable 2019 S&T accomplishments with an interactive poster session focused on key research priorities that promote safe, reliable, and affordable energy nationwide. NETL welcomed congressional guests and some of its university partners to the February 20, 2020, event at the Pittsburgh site. “Fossil energy has supported our Nation's prosperity and economic advancement for generations. To continue to rely on clean, abundant energy requires innovative technology solutions that have a real impact on our energy security and, ultimately, on people's lives,” NETL Director Brian J. Anderson said. “Today, we're celebrating exceptional achievements that showcase the progress NETL is making in our important mission to discover, integrate, and mature technology solutions that enhance the Nation's energy foundation and protect the environment for future generations.”



Additional Pipeline Capacity and Baseload Power Generation Needed to Secure Electric Grid

A new NETL report and case study released today shows that additional natural gas pipeline capacity and baseload generation units — such as coal and nuclear generation — are critical to providing reliable and affordable electricity during extreme weather events. Both are vitally important to meeting U.S. energy needs as more intermittent electricity sources — such as wind and solar — come onto the U.S. electricity grid. The study, which is Volume II of NETL's “Reliability, Resilience and the Oncoming Wave of Retiring Baseload Units,” follows two previously published NETL reports that examined the performance of electricity generation units during the “bomb cyclone” of 2018 — a winter storm and cold weather event that primarily affected the Eastern Interconnection, one of the three major AC electricity grids responsible for the reliability of the U.S. power system.

Upcoming Workforce Conferences, Meetings, and Summits



2020 National Association of Development Organizations (NADO) and the Development District Association of Appalachia (DDAA) Washington Conference

The Crystal Gateway Marriott, Arlington, VA, March 15–18, 2020

Join NADO and DDAA for a series of workshops, meetings, and discussions focused on regional development, the federal landscape, and the programs and policies that matter most to Regional Development Organizations and their stakeholders.

Carnegie Mellon University (CMU) Energy Week

Carnegie Mellon University, Pittsburgh, PA, March 23–27, 2020

CMU Energy Week, now in its fifth year, draws CEOs, entrepreneurs, government leaders, academic experts, and students together to discuss ways to advance energy technologies and innovations around the world. Attendees trade expertise, connect to form partnerships, and rub elbows with nationally-recognized thought leaders. CMU Energy Week is hosted by CMU's *Wilton E. Scott Institute for Energy Innovation*.

American Association of Community Colleges Annual Conference

Gaylord National Resort & Convention Center, National Harbor, MD, March 28–30, 2020

The Nation's only gathering focused squarely on trends and issues facing America's community college system. With representatives from nearly all U.S. states every year, this conference is a unique opportunity to network and engage with community college staff and organizations focusing on community colleges from across the United States.

68th Annual National Conference on Science Education

Boston Convention & Exhibition Center, Boston, MA, April 2–5, 2020

National Science Teachers Association (NSTA) conferences offer the latest in science content, teaching strategy, and research to enhance and expand your professional growth. Take advantage of this unique opportunity to collaborate with science education leaders and your peers. Each year, NSTA hosts a national conference on science education (in the spring), three area conferences (in autumn), and a STEM Forum & Expo.

Partners for Education — Rural College Access & Success Summit

Talking Stick Resort, Scottsdale, AZ, April 26–28, 2020

As one of the few national convenings to focus on rural America, the summit brings together teachers, principals, superintendents, higher education leaders, legislators, and non-profit leaders to share ideas and strategies for ensuring that rural youth have the opportunity to successfully transition from high school to college and career. We hope you'll consider sharing your expertise and ideas with fellow professionals and submit a breakout session proposal.

Reports and Resources



LinkedIn January 2020

The LinkedIn Workforce Report is a monthly report on employment trends in the U.S. workforce. It is divided into two sections — a National section that provides insights into hiring, skills gaps, and migration trends across the country, and a City section that provides insights into localized employment trends in 20 of the largest U.S. metro areas.

Key January findings:

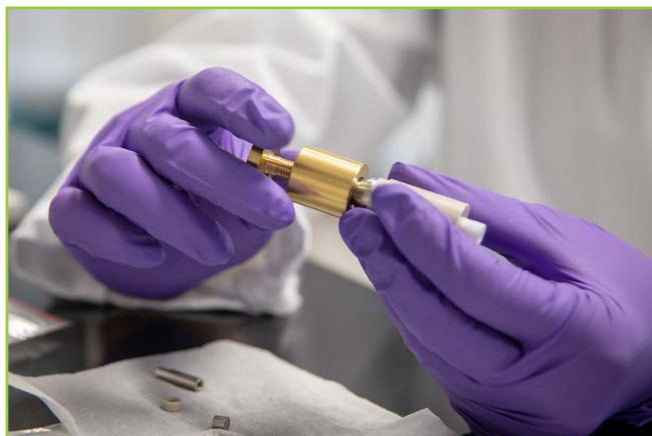
- Gross hiring in the U.S. was 9.3% higher than in December 2018, and seasonally-adjusted national hiring was 1.5% higher in December from November 2019.
- Industries with notable hiring gains month-to-month in December include: Public Administration (4.3% higher), Finance (4.1% higher), Corporate Services (3.9% higher), and Retail (3.4% higher). Agriculture posted a notable dip in hiring, down 2.5% y/y and 3.6% m/m.

Report: The Way We Were; The Changing Geography of US Manufacturing from 1940 to 2016

Center on Education and the Workforce, Georgetown University

Between 1940 and 2016, employment in manufacturing shifted across America from the Northeast to the Midwest and the Southeast. The industry lost ground in many places and is now the largest employer in only two states — Indiana and Wisconsin. In 1940, 23% of workers were employed in the manufacturing industry, and they were concentrated in 15 northeastern, mid-Atlantic, and Great Lakes states. As the economy shifted toward services at the beginning of the new millennium, the share of employment in manufacturing declined to less than 15%. In 2000, the industry was the largest employer in 18 primarily southeastern and central states. Increased foreign trade and offshoring contributed to continued industry job losses, and by 2016, the share of employment in manufacturing hovered at 10%.

DOE STEM Rising



In Her Element: Women Behind the Discoveries of the Periodic Table

In celebration of National Periodic Table Day on February 7, 2020, and of the upcoming Women's History Month in March, here's a look at some of the women who made key breakthroughs in the creation of the Periodic Table of Chemical Elements. 2019 was the "International Year of the Periodic Table," celebrating the 150 years since the 1869 discovery of the Periodic System by Dmitri Mendeleev, the father of the periodic table. As anyone who has taken a science class can attest, the Periodic Table of Chemical Elements has been one of the most significant breakthroughs in science, setting a chart of all the chemical building blocks of matter.



Students Focus on Sunny Futures During Mini-Semester

Four college students huddled around a table at the National Renewable Energy Laboratory's (NREL) Solar Energy Research Facility recently. They puzzled over the best design for a homemade solar concentrator as part of a challenge to all 21 attendees of NREL's Mini-Semester Program. Over three days during their winter break on the NREL campus in Golden, Colorado, undergraduates interacted with scientists and researchers, attended lectures on current projects, participated in hands-on science activities related to current research, and attended facility tours to experience work in progress.



STEM Students Compete to Design Cities in SRS-Managed Event

Forty-three teams of middle school students from across South Carolina built large, complex tabletop models of cities with clean, safe drinking water systems for the recent Future City Regional Competition, as part of an education outreach program managed by an [Environmental Management](#) contractor at the [Savannah River Site](#).

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.

1450 Queen Avenue SW
Albany, OR 97321-2198
541-967-5892

3610 Collins Ferry Road
P.O. Box 880
Morgantown, WV 26507-0880
304-285-4764

626 Cochran's Mill Road
P.O. Box 10940
Pittsburgh, PA 15236-0940
412-386-4687

Program staff are also located in
Houston, Texas and Anchorage, Alaska

WEBSITE: www.netl.doe.gov

CONTACTS

Anthony Armaly
NETL RWFI Federal
Coordinator
412-386-6040
Anthony.Armaly@netl.doe.gov

Kirk Gerdes
Regional Workforce Initiative Coordinator
304-285-4342
Kirk.Gerdes@netl.doe.gov

Mike Knaggs
Associate Director
of Partnerships
304-285-4926
Michael.Knaggs@netl.doe.gov

Matthew Garcia
Regional Workforce Initiative Consultant
956-314-0645
Matthew.Garcia@netl.doe.gov

