

# RWFI E-NOTE MONTHLY

REGIONAL WORKFORCE INITIATIVE • SEPTEMBER 2020

## Welcome Message

Greetings NETL RWFI stakeholders,

In this month's funding in focus is a funding announcement for the Advanced Welding Workforce Initiative, jointly funded by the Department of Energy and the Appalachian Regional Commission. The deadline to apply is November 13, 2020. In our reports and resources section are two reports which focus on the energy sector workforce and the current and future effects of the pandemic on the energy industry. Finally, the NETL RWFI will host an *online dialogue* and panel discussion with the *TEAM consortium on Tuesday, October 20<sup>th</sup>* on regional and national activities in energy and advanced manufacturing workforce in response to the COVID pandemic. More information can be found about registration in the events section of this month's E-Note.

As always, feel free to reach out to us at [NETL.RWFI@netl.doe.gov](mailto: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



### Advanced Welding Workforce (AWWI) Initiative

Appalachian Regional Commission and the U.S. Department of Energy, Deadline, November 13, 2020

The AWWI is a partnership between the Appalachian Regional Commission (ARC) and DOE's NETL to increase education and training for advanced technical workers in Appalachia. Launched in 2020, AWWI supports training facilities and programs to develop and implement specialized curricula and learning modules in welding and other advanced manufacturing skills such as robotics and process control. This one-million-dollar investment will prepare workers for in-demand jobs in the region's growing automotive, aerospace, aviation, and petrochemical industries.

### Strengthening Community Colleges (SCC) Training Grants

Department of Labor, Employment, Labor and Training, Deadline, October 8, 2020

The SCC Training Grants program will build the capacity of community colleges to collaborate with employers and the public workforce development system to meet local and regional labor market demand for a skilled workforce. The purpose of this grant is (1) to increase the capacity and responsiveness of community colleges to address the skill development needs of employers and dislocated and unemployed workers, incumbent workers, and new entrants to the workforce; (2) to offer this spectrum of workers and other individuals accelerated career pathways that enable them to gain skills and transition from unemployment to (re)employment quickly; and (3) to address the new challenges associated with the COVID-19 health crisis that necessitate social distancing practices and expanding online and technology-enabled learning and migrating services to a virtual environment.

### FY20 Funding Opportunity Announcement (FOA) for the Department of Navy STEM Education and Workforce Program administered by the Office of Naval Research (ONR)

Department of the Navy, Deadline, October 16, 2020

As the capacity of the Department of Defense Science and Technology (S&T) workforce is interconnected with the basic research enterprise and STEM education system, ONR recognizes the need to support efforts that can jointly improve STEM student outcomes and align educational efforts with Naval S&T current and future workforce needs. This announcement explicitly encourages projects that improve the capacity of education systems and communities to create impactful STEM educational experiences for students and workers. Submissions are encouraged to consider including active learning approaches and incorporating 21<sup>st</sup> century skill development. Projects must aim to increase student and worker engagement in STEM and enhance people with needed Naval STEM capabilities. ONR encourages applications to utilize current STEM educational research for informing project design and advancing our understanding of how and why people choose STEM careers and opportunities of Naval relevance.

*FY21 Small Business Innovation Research (SBIR) Phase I***U.S. Department of Agriculture, Deadline, October 22, 2020**

Funds may be awarded up to \$100,000 for a Phase I project or \$106,500 with Technical and Business Assistance. Proposed Phase I projects should prove the scientific or technical feasibility of the approach or concept. Projects dealing with agriculturally related manufacturing and alternative and renewable energy technologies are encouraged across all SBIR topic areas. The United States Department of Agriculture (USDA) SBIR's flexible research areas ensure innovative projects consistent with USDA's vision of a healthy and productive nation in harmony with the land, air, and water. The USDA SBIR Program has awarded over 2000 research and development projects since 1983, allowing hundreds of small businesses to explore their technological potential, and providing an incentive to profit from the commercialization of innovative ideas.

*Request for Information (RFI) DE-FOA-00002413:  
Understanding Workforce-Development Assets  
and Gaps for Technical and Non-Technical  
Bioenergy Workforce Preparation*

**U.S. Department of Energy, Deadline, November 2, 2020**

The DOE has released an RFI to solicit feedback from industry, academia, research laboratories, government agencies, career counselors, educators, and other biofuels and bioproducts stakeholders. Specifically, Bioenergy Technologies seeks to provide evidence-based workforce development data to help individuals link to existing and new bioenergy workforce development tools. This evidence-based workforce development data will also assist in preparing the nation's current and future workforce for the rapidly and continually changing workforce demands to reskill and upskill in the bioenergy industry. Please see the full text of the RFI DE-FOA-0002413 [here](#). Responses to this RFI must be submitted electronically to [bioenergizeme@ee.doe.gov](mailto:bioenergizeme@ee.doe.gov) no later than 5:00 p.m. ET on November 2, 2020.

*Carbon Ore, Rare Earths and Critical Minerals Initiative  
for U.S. Basins Notice of Intent*

**U.S. Department of Energy, Deadline, November 9, 2020**

This Notice of Intent (NOI) is for informational purposes only. The DOE is not seeking comments on the information contained in the notice. This is a NOI to issue FOA DE-FOA-0002364 titled "Carbon Ore, Rare Earths and Critical Minerals (CORE-CM) Initiative for U.S. Basins." The anticipated objectives of the FOA are to develop and implement basin strategies that will prepare and enable the basin to realize the full economic potential of producing Rare Earth Elements (REEs), Critical Minerals (CMs) and high-value, nonfuel, carbon-based products. Projects stemming from the FOA are anticipated to provide a foundation for educating the next generation of technicians, skilled workers and STEM professionals needed to implement each basin's strategy.

*Louis Stokes Alliances for Minority Participation (LSAMP)***National Science Foundation, Deadline, November 20, 2020**

The LSAMP program also supports knowledge generation, knowledge utilization, assessment of program impacts and dissemination activities. The program seeks new learning and immediate diffusion of scholarly research into the field. Under this program, funding for STEM educational and broadening participation research activities could include research to develop new models in STEM engagement, recruitment and retention practices for all critical pathways to STEM careers or research on interventions such as mentoring, successful learning practices and environments, STEM efficacy studies, and use of technology to improve learning or student engagement.

**NETL News**

*NETL Invests in Job-Training Program for High-Tech  
Welders in Appalachia*

A program supported by NETL will prepare a new generation of welders in the use of advanced alloys that will enable electric generating stations to run with greater efficiency, produce fewer greenhouse gas emissions and supply affordable electricity using the Nation's abundant fossil energy resources. ARC, NETL's partner in the AWWI, issued a request for proposals inviting states, counties and cities, institutions of higher education, unions and other organizations to develop training programs to teach high-tech welding skills that can be used in the energy sector. These skills will also be broadly applicable for positions in the emerging aerospace, aviation, automotive and petrochemical industries, which will need welders and other employees with expertise in working with high-performance materials.



**U.S. Department of Energy Announces \$2M to Develop Hydrogen Technologies**

The DOE's Office of Fossil Energy and NETL have announced up to \$2 million in federal funding for cost-shared research and development projects under the FOA DE-FOA-0002376, Enabling Gasification of Blended Coal, Biomass, and Plastic Wastes to Produce Hydrogen with Potential for Net-Negative Carbon Dioxide Emissions. This FOA seeks applications for the research and development of the co-gasification of coal with biomass and plastic wastes. The aim is to advance net-negative carbon technologies that can produce hydrogen or other high-value fuels, either as the sole product or as a co-product. Like coal, waste plastics are ideal feedstocks to blend with biomass due to their extremely high volatile matter and low moisture and ash content. As a result, the development of co-gasification technologies sought in this FOA will help alleviate concerns over potential feedstock availability and other operational issues.



**NETL Looks to Expand Success of MOU in Pittsburgh**

Building on five years of success, NETL and its partners will meet to chart the next steps in their ongoing efforts to shape Pittsburgh into a "Clean Energy City of the Future." NETL will host the meeting on Wednesday, September 23, 2020, with representatives from the City of Pittsburgh, University of Pittsburgh, Carnegie Mellon University, Duquesne Light Company, RAND Corporation, and other stakeholders in attendance. Due to COVID-19, a virtual meeting is planned. The NETL-City of Pittsburgh Memorandum of Understanding (MOU) Partnership was launched in 2015 to transform the city's energy system and aging infrastructure. The MOU provides an opportunity for NETL to demonstrate how fossil energy is a part of the clean energy future, and to show how technologies invented at NETL can support safe and efficient energy use.

**NETL-Supported Collaboration Develops Flexible Rare Earth Element Extraction Method From Low-Rank Coal Ash**

With support from NETL, researchers from the University of North Dakota (UND) and Pacific Northwest National Laboratory (PNNL) identified unique pathways and pretreatments to extract REEs from low-rank coal (LRC) ash in a more economical and environmentally sustainable manner that can be adjusted to meet variable conditions. LRCs, such as lignites, are one of the most abundant fossil fuel sources in the world. NETL-supported project with UND and PNNL researchers has shown that the ash from LRCs can be a potentially viable source of REEs. The research team conducted an extensive characterization effort to understand the form, associations and partitioning of the REEs along with other relevant elements and minerals in the fly ash samples, as well as the ash chemistry, mineralogy and morphology. Understanding these intricacies was a vital step in developing the method for extraction and recovery of the contained LCR REEs.

**Events**



**NETL RWFI – TEAM / Tri-State Shale Workforce Panel Webinar**

Webinar, October 20, 1-2:30 PM

The NETL RWFI will be hosting the Tri State Energy and Advanced Manufacturing Consortium (TEAM) along with the Tri State Shale Coalition on an NETL RWFI hosted multi-panel online discussion on workforce issues related to energy and advanced manufacturing and different activities, including discussion on activities in response to the COVID-19 pandemic with respect to job recovery. A tentative panel will be a discussion on these topics regionally through presenters from PA, OH and WV government from the Tri State Shale Coalition and may include: Matt Cybulski, Jobs Ohio, Director of Energy & Chemicals Sector, Denise Brinley, Executive Director, PA Office of Energy and either Michael Graney, Executive Director of WV Development Office or Wesley White, Deputy Cabinet Secretary, WV Dept. of Commerce. The second panel will contain a more national level discussion. [Registration info can be found here.](#)

Reports and Resources



*Energy Workforce Survey*

University of Houston, UH Energy

The global COVID-19 pandemic and the rapid drop in oil prices have combined to create unprecedented challenges for the energy industry. A University of Houston-led survey of workers found that workers give their employers high marks for how they have handled the crisis but are far less optimistic about their job security and the future of the industry as a whole. More than half (53%) said the pandemic had caused them to worry about job security, almost four out of ten are worried about paying their mortgages and other bills, and only 47% said they are optimistic about the long-term health of the energy industry.

*COVID-19: What it means for the power and utilities industry*

Price Waterhouse Cooper

Power and utility companies have a strong track record when it comes to preparing for emergencies. As a provider of critical infrastructure, the industry should plan for — and be prepared to respond to — many foreseeable hazards, including health emergencies. But, even the best thought-out and thoroughly tested business continuity plans should be adaptable to fully address the fast-moving and unknown variables of an outbreak like COVID-19.

*Tracking COVID-19 Unemployment and Job Losses*

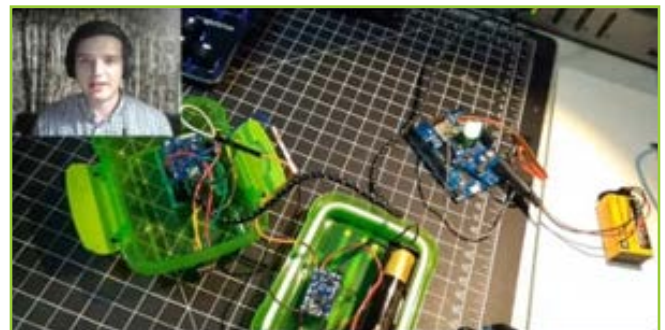
The COVID-19 pandemic caused a sudden recession, leaving millions of workers unemployed. Explore unemployment rates and job loss numbers by education level, age, race, gender, industry, and occupation. Workers across the country have been devastated by the economic downturn caused by the coronavirus pandemic. After business closures and other restrictions began in March, unemployment began to rise sharply, peaking in April before starting to fall slowly. Cumulative job losses reached 23 million in May.

DOE STEM Rising



*Request for Proposals Released for 2022 U.S. Department of Energy Collegiate Wind Competition*

The DOE's National Renewable Energy Laboratory released a *request for proposals* for student teams interested in competing in the 2022 *Collegiate Wind Competition* (CWC). The CWC prepares college students from a variety of academic backgrounds for the wind energy workforce by providing real-world technology and planning experience. The 2022 competition will challenge college teams to design, build, and test a model wind turbine and to plan, financially analyze, and present research on a hypothetical wind plant. By February 2021, organizers will select the teams of students to compete in the event, which will be co-located with the American Wind Energy Association's CLEANPOWER Conference in San Antonio, Texas, in May 2022.



*Environmental Management (EM) Supports 'Virtual STEM Camp' for Ohio Youth*

A virtual STEM camp supported by a grant from EM was conducted recently by Ohio University to educate youth in the region that includes the *Portsmouth Site*. From watersheds to renewable energy to smart technologies, students participated in four days of free online sessions funded by the university's Voinovich School of Leadership and Public Affairs, an EM *Portsmouth/Paducah Project Office* PORTSfuture grant, and the American Electric Power Foundation.

*CWC Alum Goes Far with Passion for Renewable Energy*

Jayne Sandoval has a bit of a travel bug. Originally from Ute Pass Valley on the Navajo reservation in northern Arizona, she completed internships all over the U.S. as an undergrad at Northern Arizona University (NAU) and even spent a year studying at Shantou University, in China's Guangdong province. Sandoval graduated from NAU in May with a double major in mechanical engineering and comparative cultural studies. This fall, she'll begin a Master of Science in energy engineering at National Cheng Kung University in Taiwan through the Fulbright Scholar Program. Sandoval enters her master's program with two important advantages: One, thanks to her year in China, she speaks some Chinese, and two, she already has several years of energy experience under her belt, including her work in the DOE's CWC.



*All in STEM - a New Digital Resource*

The STEM workforce produces at its highest level when Americans from all races, backgrounds, and walks of life are working in STEM careers. Regardless of your background, zip code, race, gender, or income level, all talent is needed to tackle the STEM challenges of today (and tomorrow) in the ever-expanding STEM workforce. The new *All in STEM website*, a project of STEM Rising, showcases the long list of programs and resources designed to ensure that the best and the brightest from every community in America enter the STEM workforce.

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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