

**Testimony for the House Energy and Water Appropriations Subcommittee
Energy Workforce Development Opportunities and Challenges
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On behalf of the Center for Energy Workforce Development (CEWD)**

Introduction

Chairwoman Kaptur, Ranking Member Simpson, and Members of the Subcommittee, thank you for inviting me to testify. My name is Sloane Evans, and I am Senior Vice President of Human Resources for Southern Company. I am testifying today on behalf of the Center for Energy Workforce Development (CEWD).

Economic Business Case:

The energy industry is the foundation of our economy and covers a broad diversity of generation and delivery. The electric power industry alone contributes about 5 percent of our nation's GDP, and we like to think of it as the first 5 percent because electricity helps power our entire economy. Our industry supports more than 7 million jobs across the country—about 1 out of every 20 jobs. Our industry not only is critical to today's economy, we expect it will be even more critical to the future as we transition to cleaner energy resources, build smarter energy infrastructure, support greater transportation electrification, and deliver innovative energy solutions that our customers want. We offer quality jobs that provide individuals security and serve as anchors in communities. Our jobs pay well – 2 times the national median wage at \$73,000 per year.

Industry and Workforce Landscape:

Our industry is experiencing transformational change, and we see the potential for significant shifts in size, skills and knowledge requirements of the current and future energy workforce. All of these changes can impact a company's ability to create and maintain a talent pipeline of qualified and diverse workers and to deliver on the company's business plan. Industry changes include:

- Infrastructure Modernization
- Energy Generation Transformation
- Regulation / Policy Changes
- Physical / Cyber Security
- Customer Expectations
- Enabling Technologies
- Transitioning Workforce
- Business Restructuring

- Affordability / Cost Containment

The industry changes indicate a shift to an industry that is more rapidly transforming, with technology playing an increasingly important role. The energy workforce is also changing with a younger and more diverse workforce that is increasingly digitally literate. This transitioning workforce, along with advances in education technology, can position the industry to meet the challenges of the future.

The industry must continue to develop a workforce with skills for traditional energy production and delivery as well as developing capabilities for the future. As an industry, we are focused on career awareness, developing education strategies, recruitment, and retention efforts. We believe we can accomplish more together than we can separately.

I want to commend this Subcommittee for examining energy workforce development issues. As the energy industry undergoes a transformation in our country's energy mix, maintaining a skilled workforce is vitally important for the entire industry.

Center for Energy Workforce Development – Industry Consortium

CEWD is a non-profit national organization that brings together the energy industry, energy associations, contractors, labor, educators, government, and communities to build the alliances, processes, and tools to develop a diverse, qualified workforce for the energy industry. Originally formed in 2006 to address concerns about an aging skilled workforce, CEWD members today include more than 100 electric and natural gas companies, six trade associations (Edison Electric Institute, American Gas Association, Nuclear Energy Institute, National Rural Electric Cooperative Association, American Public Power Association, and Distribution Contractors Association), large supplemental labor contractors, and unions (the International Brotherhood of Electrical Workers and Utility Workers Union of America). CEWD focuses on delivering proven workforce development solutions, curriculum, tools, and data that improve the rate and quality of hiring into industry jobs.

CEWD Goals:

- Identify critical workforce needs and measure the success of workforce development solutions.
- Build awareness of high skilled, well-paying jobs in the energy industry
- Partner with members to implement education solutions to build a pipeline of skilled workers
- Serve our member and share best practices

CEWD Focus Areas

Career Awareness—In a series of CEWD surveys with member companies and state consortia in 2018, career awareness continued to be one of the most important priorities in building a diverse,

qualified energy workforce. CEWD launched its national career awareness brand, Get Into Energy (GIE), in 2006 and has since launched a family of brands and career awareness resources.

CEWD and its members engage in a wide variety of career awareness activities. Career awareness activities are aimed at five key demographics: youth, low-income young adults, women, veterans, and transitioning workers. The overall intent of these activities is to make it easier for students and jobseekers to find us, understand our jobs, and understand what education pathways will lead to an energy job.

The Get Into Energy website (getintoenergy.com) was created to raise awareness of jobs in the energy industry. Energy jobs offer competitive pay and benefits, are widely available and generally immune from outsourcing, and provide a valuable service to the community.

CEWD energy career websites are targeted to key demographic populations:

- **Get Into Energy:** CEWD's national website, getintoenergy.com, provides resources for each key demographic to understand the pathways for critical jobs, where to find training, and a jobs site that lists all jobs currently posted by CEWD members.
- **Get Into Energy/Get Into STEM** was launched at stem.getintoenergy.com. The web site positions all energy careers as STEM careers and has a teacher's section as well as pages with energy and STEM-related competitions and contests and scholarships.
- **Troops to Energy Jobs:** The veteran-focused site for Troops to Energy Jobs, troopstoenergyjobs.com, includes a roadmap for veterans seeking jobs in the industry, a unique-to-CEWD military occupation code translator that ties military jobs more specifically to energy jobs, a registration site that allows veterans to enter basic information about themselves (such as military occupation, field of expertise, resumes, and geographical area they would like to work in) and see information about companies located in their region. Veterans now make up 11 percent of our workforce, and in Nuclear Operations that number is 22.5 percent. Companies from across the industry are reaching out to veterans for their training, leadership, and service mentality to fill these critical positions.

National Energy Education Network—Over the past several years, CEWD has worked to create the National Energy Education Network (NEEN), a national consortium of educational institutions sponsored by CEWD industry members. Members of NEEN include community colleges and other educational institutions that have active partnerships with CEWD member companies, have relevant programs of study for our four critical job categories (lineworkers, technicians, operators, and engineers), and are producing quality candidates who are being hired into industry jobs. These partnerships and programs provide the baseline for documenting what works, sharing curriculum and best practices, and identifying the potential supply of candidates from high schools, technical and community colleges, and universities. NEEN partnerships currently include over 200 educational institutions representing more than 350 energy programs.

Energy Competency Model—CEWD, in partnership with the U.S. Department of Labor, developed the Energy Competency Model that defines basic competencies, industry fundamentals, industry technical competencies, and job-specific competencies in eight separate tiers. The Energy Competency Model is designed to provide a consistent definition of the competencies required to work in the industry. The CEWD Energy Competency Model has proven to be a valuable tool for educators, workforce investment professionals, and businesses to articulate the skills required to perform successfully in various jobs in the energy industry.

Energy Career Clusters—Career Clusters are groupings of occupations/career specialties used as an organizing tool for curriculum design and instruction. Career Clusters identify pathways from secondary school to two- and four-year colleges, graduate school, and the workplace. But there is not a national Career Cluster for energy education that links to industry jobs. Since 2006, CEWD has encouraged states to develop an Energy Career Cluster and Energy Pathways in the secondary and post-secondary education systems to build awareness of how energy careers fit within this system, and to give industry an opportunity to provide input into curriculum and provide context to what students are learning. Several states now have state Energy Career Clusters.

State Energy Workforce Consortia—Each state differs in its education systems, as do the energy companies operating in a state. That means that the workforce development solutions must be tailored to the individual needs of the companies and the demographics of the talent pool available.

Today, nearly 30 states are represented by State Energy Workforce Consortia, each of which is led by CEWD industry members. The purpose of each state consortium is to identify and develop programmatic solutions that consortium members use to meet the current and future workforce needs of the energy industry in their state. Each consortium is encouraged and supported in developing a strategic workforce plan that takes into account specific challenges of the industry in the state. CEWD provides assistance in organizing and starting a consortium and has a state consortium page on the CEWD Members Implementation Wizard with resources and tools for starting and maintaining a state consortium.

CEWD Communities of Practice—These communities have grown in number and importance over the past two years and have evolved into true “think tanks” for CEWD and its members. The communities encompass areas such as Diversity and Inclusion, State Energy Workforce Consortia, Troops to Energy Jobs Employers, Contractors, High School implementation and others.

Partnership with Organized Labor—***Energy*** companies have a long history of partnering with organized labor as evidenced by the National and Regional LAMPAC (labor / management) meetings held each year. As an industry, we have also employed the apprenticeship model for decades to train many of our skilled technical positions. Many of the apprenticeships have been built in partnership with organized labor.

Southern Company Overview

Southern Company is a leading U.S. energy company with more than 29,000 employees, serving 9 million customers through electric operating companies in three states, natural gas distribution companies in four states, a competitive generation company serving wholesale customers across the nation, a leading distributed generation infrastructure company, a fibers optics network and telecommunications services.

Southern Company Workforce Challenges

- Increase representation of minorities and females across all jobs.
- Identify talent with the aptitude and capabilities to work in our industry with a focus on STEM; specifically, math, reading comprehension and mechanical concepts for skilled labor positions.
- Increase the awareness and knowledge of current and future workforce needs with a keen sense of innovative and progressive techniques across our industry and careers.

Southern Company's Response

- Partnering with the Center for Energy Workforce Development, which is a national organization that plays a key leadership role in addressing utility work force issues.
*Founding Member Company
- Participation with other national organizations that help build a cohesive strategy and partnership opportunities for the energy industry at the national level - Edison Electric Institute, Nuclear Energy Institute, American Gas Association, National Building Trades and others.
- A Southern Company enterprise-wide Workforce Development Council that coordinates our approach across our system to increase awareness of energy careers, build talent pipelines and leverage strategic partnerships.
- Workforce development professionals are engaged in local, regional, and national organizations in the energy industry, government, and education in addressing utility work force issues (e.g., State Energy Consortia, Workforce Boards, Technical College System Boards, Department of Education, School Boards and government appointed committees).
- Business Units have implemented workforce planning and development committees that focus on their local and specific workforce challenges. Many have established workforce planning tools that predict and identify key retirements and attrition and then build recruiting plans to address the needs.
- Southern Company partners with organized labor (IBEW) and our contractors in executing workforce development activities for construction skilled trades. To address the skilled labor shortage in construction, these partners invest in training programs and career awareness activities.

Southern Company's Workforce Development Strategy

Our Workforce Development strategy is made up of three major components coordinated by our Talent Acquisition Function:

- Workforce Planning – forecasting the future workforce needs
- Career Awareness – building awareness of the careers that are available in energy
- Workforce Development – partnering to build sustainable pipeline programs that address the needs
- **Comprehensive Talent Acquisition Function.** Southern Company has a best-in-class Talent Acquisition structure that encompasses field recruiting teams, campus recruiting teams, military recruiting teams, diversity recruiting, skills testing services teams, and relocation program management.
- **Co-op and Intern programs.** Our Co-op program is designed to give hands-on experience to talented undergraduates in the areas of Engineering, Business, Finance, and Computer Science. This is an excellent opportunity to put classroom theory into actual practice. Our program provides students with an opportunity to build on their experiences through increased responsibility each returning semester. Our goal through this program is to train students to become a full-time employee with Southern Company. Unlike other employers, we offer internships positions throughout the year to better accommodate student schedules. Our goal is to provide students with exposure to our company and challenge them with exciting work assignments.
- **Military Hiring.** From all branches of the service, 11% of our hires in 2018 have military experience. Southern Company has been recognized nationally as a military friendly employer (named top military friendly employer by GI Jobs and ranked #3 on the Diversity Inc. Top 10 Companies for Veterans). Southern Company continues to partner with military installations in recruiting transitioning service members into roles across all subsidiaries. Also, Southern Company recently joined industry partners with the Department of Energy Joining Forces initiative. We made a commitment to support the hiring and education of veterans and military families. Southern is also an inaugural partner with Troops to Energy Jobs and Veterans in Energy.
- **Skilled-Craft Labor.** Southern is continuing the development of talent pipelines with high schools and technical colleges that will serve as recruiting pools for key jobs. We partner with technical colleges to prepare apprentice line workers and with technical colleges that offer an associate degree and other certification programs to prepare a highly skilled technical workforce.

Examples of System Wide Workforce Development Programs:

Programs at Southern Company that focus on education and workforce development span from Pre-K literacy initiatives to very targeted associate degrees programs. We believe that to develop the next generation of workforce we must have a very proactive and holistic approach.

Georgia Power – FIRST Robotics

- *FIRST* (**F**or Inspiration and **R**ecognition of Science and **T**echnology) was founded in 1989 to inspire young people's interest and participation in science and technology. These innovative programs motivate young people to pursue education and career opportunities in science, technology, engineering, and math, while building self-confidence, knowledge, and life skills.

Georgia Power – Electrical Lineworker Apprentice Certificate

- The Electrical Lineworker Apprentice Certificate is an educational partnership between Georgia Power and North Georgia Technical College, South Georgia Technical College, Coastal Pines Technical College, and Georgia Piedmont Technical College, focused on the attraction and preparation for a career in the electrical lineworker field.
- The Certificate is an eight to ten-week certificate program (classroom instruction and hands-on training) that prepares students for success in the trade across the state of Georgia. The program focuses on electrical theory, mathematics, and construction concepts, as well as the technical skills required such as climbing poles, safety requirements, electrical assembly, etc.
- Upon successful completion of the program, students are prepared for apprentice level employment in the lineworker trades.

Generation - Instrumentation and Controls (I&C) Academy

- The Instrumentation & Controls Academy is an educational partnership between Southern Company and Georgia Northwestern Technical College (GNTC), Central Georgia Technical College (CGTC) and Mississippi Gulf Coast Community College (MGCCC).
- The Academy is a two-year associate degree program (classroom instruction and lab experience) that prepares students for success in the industry with a foundation to perform I&C maintenance functions including: troubleshooting, repair, installation and maintenance of instruments, control devices, and electronic equipment. Upon successful completion of the program, students are prepared for entry-level employment as an Instrumentation and Control Technician/Specialist.

Alabama Power - iCan Boosts Middle School Girls into High School Engineering Programs

- Middle-school girls who feed into the region's engineering academies take part in four hands-on projects per year, an annual field trip, and an annual Girls Engineering Conference, designed to expose them to the different types of engineering as well as the high-paying careers that could be available to them in this field.
- Each activity is led by a female engineer from Alabama Power in one of four disciplines: civil, electrical, mechanical, and chemical engineering.
- At the annual Girls Engineering Conference, the women engineers hold parent workshops—condensed versions of their hands-on classroom activities—and teach parents, students, and teachers about engineering job opportunities.
- Members of a pool of more than 100 Alabama Power and Southern Company volunteers—all of them women in STEM—lead the iCan activities.

Southern Nuclear - College Nuclear Uniform Curriculum Programs

- Southern Nuclear is partnering with Augusta Technical College for an Associate degree in Nuclear Engineering Technology.
- The program aligns to the nuclear industry's training requirements from INPO's Uniform Curriculum Guide for Nuclear Power Plant Technician, Maintenance, and Non-licensed Operations Personnel Associate Degree Programs.
- Representatives from Southern Nuclear worked with the college president and vice president of academic affairs along with deans and instructors to evaluate the current

course offering and ensure that the learning objectives from the INPO Uniform Curriculum were addressed and continue to support the program in many areas.

- Southern Nuclear and Augusta Tech's collaboration with the NET program is a part of a larger, national Uniform Curriculum Project supported by NEI and INPO.
- With more than 100 graduates from the Augusta GA program in the last six years, close to 90% are working in the nuclear industry.

Southern Company Gas - Summer Internship Program

- Interns representing every major functional area and geographic location of Southern Company Gas showcased their talents during the summer by engaging in meaningful work assignments within their respective departments.
- The summer program kicked off with an orientation that provided the students with foundational knowledge of the Southern Company Gas, Southern Company, and the energy industry.
- The interns also participated in a group project centered around the business imperative of attracting and retaining millennial talent, which was presented to the executive leadership team at the end of the summer semester.
- As a fundamental element of Southern Company Gas' overall workforce development strategy, the intern program is designed to promote our careers by providing interns energy industry exposure and, more importantly, exposure into the natural gas industry with the goal of making Southern Company Gas and its' subsidiaries an employer of choice.

Mississippi Power - Energy Exploration Summer Camp

- Each year, Mississippi Power hosts an Energy Exploration Summer Camp with Mississippi Gulf Coast Community College.
- This camp is for rising fifth and sixth graders to introduce them to energy and STEM activities.
- The campers learn about energy careers along with understanding the concepts of energy and enjoy a plant tour.

LAMPAC Partnerships

- Alabama Power has a long history of partnering with organized labor as evidenced by the National and Regional LAMPAC (labor / management) meetings held each year.
- Through a training partnership with National Utility Industry Training Fund, IBEW and Alabama Power, we have established an industry training standard with a best practice learning curriculum and built a regional state-of-the-art training facility.

Conclusion

Again, I want to thank this Subcommittee for its interest in energy workforce development issues. I look forward to answering any questions you may have.