

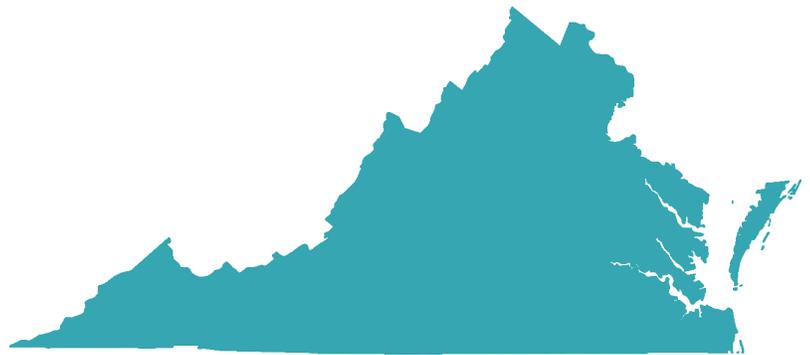
# ENERGY WORKFORCE AND EDUCATION PATHWAYS

Presented by:



## SOLUTIONS TO SUPPORT ENERGY IN THE NEW VIRGINIA ECONOMY: *RECOMMENDATIONS FROM THE MARCH 3, 2017 ENERGY WORKFORCE AND EDUCATION PATHWAYS MEETING*

Virginia's changing energy economy presents both opportunities and challenges that the Commonwealth has worked to address. The four themes laid out in the 2014 Virginia Energy Plan include: Strategic Growth in the Energy Sector, Best-in-Class Infrastructure, Alternative Fuels and Advanced Vehicle Technology, and Talent Development in the Energy Sector. Much has been accomplished in these areas. However, there are still opportunities to build upon what has been achieved, especially in the area of talent development for the Energy Sector.



Since the Virginia Energy Workforce Consortium (VEWC) and the Virginia Nuclear Energy Consortium (VNEC) were formed in 2007 and 2013, respectively, energy companies across Virginia have made significant strides in understanding, adapting to, and planning for the ongoing attrition of a majority of the state's skilled energy workforce. In 2015, the VEWC and VNEC agreed to work together to address the industry's workforce and talent pipeline demand challenges in Virginia.

On March 3, 2017, over 100 educators, government officials and energy industry representatives met to discuss energy workforce and education needs. The event began to lay the groundwork for a comprehensive talent pipeline and workforce development plan that aligns with and would support the Commonwealth's talent development objectives for the Energy Sector.

The meeting identified five key elements and recommendations for next steps that will drive the ongoing discussion of information sharing processes; coordination between industry, education, and policymakers; and enactment of recommended programs and procedures to facilitate development of the next generation of energy workers.

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## FIVE KEY ELEMENTS

**COMMUNICATIONS:** Coordinate discussions and activities between human resources personnel, operators, engineers, managers, and educators to raise industry awareness and promote best practices.

**SKILLS:** Tailor training programs and align skills taught by academic institutions to address regional job demand with an understanding of statewide opportunities.

**DEMAND & ENGAGEMENT:** Gather and utilize statewide and regional workforce supply and demand data to support industry and education collaboration and to identify better funding mechanisms for educational pathways and programs.

**DEGREE & CERTIFICATION PROGRAMS:** Ensure credentials and curricula are aligned with industry-wide and occupation specific competencies, are sustainable and transferable, and are clearly identified as energy education pathways.

**RESOURCES:** Establish necessary funding and support for education institutions to properly staff and deliver energy education pathways and for a state-wide database where individuals may go to learn how to pursue opportunities across Virginia's energy industry.

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## NEXT STEPS

Next steps and recommendations coming out of the Energy Workforce and Education Pathways meeting include identifying stakeholders to serve as advisors representing each of these key areas, having access to workforce data and resources, development of specific goals and plans to address the talent development needs, and recommendations for state level departments, organizations and elected officials to facilitate policy changes necessary to support workforce development.

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## RECOMMENDATIONS

### 1. STATE ENERGY WORKFORCE COALITION

Partnerships between employers and their associations, educators, policy makers and those who provide relevant support services are critical to the development of a skilled labor force. These stakeholders must work together to implement energy and utility specific educational pathways and offer exciting educational and career awareness opportunities.

**RECOMMENDATION:** It is recommended that a coalition made up of representatives from Virginia's energy alliances, associations and organizations representing the various sectors of the industry, workforce and talent pipeline development. The coalition may include, but not be limited to: Virginia Energy Workforce Consortium, Virginia Nuclear Energy Consortium, Virginia Coal & Energy Alliance, Inc., Virginia Oil & Gas Association, Virginia Petroleum Council, Virginia Renewable Energy Alliance, Virginia Solar Energy Association, Association of Electric Cooperatives and Virginia Chamber of Commerce. State level representatives for secondary and post secondary education and workforce may be invited to participate as appropriate.

### 2. 17th ENERGY CAREER CLUSTER

Energy jobs tend to get hidden in other career and technical education clusters, such as Architecture & Construction and Manufacturing. With the importance of a clean energy future, advancing technologies and impending retirements, it's important to have a cluster that focuses on the jobs needed. By integrating an Energy career cluster in the current system, there will be an increased awareness among secondary students of the knowledge and skill sets required for energy jobs, allowing those students adequate time to utilize the recommended program of study.

**RECOMMENDATION:** It is recommended that the Virginia Department of Education add a 17th Energy Career Cluster focused on the industry's critical and most in demand careers – Engineers, Line Work / Construction, Operators, Technicians and Welders – ensuring common core curriculum and leveraging existing curriculum from like career clusters.

### 3. ENERGY CAREER PATHWAYS

To meet energy employer demands, collaboration between K-12, community colleges, and senior higher education institutions is a must to build robust career pathways. Pathways will be created to provide the necessary knowledge and skills required for energy jobs in a variety of short term and long term plans of study. Pathways will be developed starting in High School and continue throughout all higher education institutions.

**RECOMMENDATION:** It is recommended that the Commonwealth of Virginia provide the necessary resources to build energy career pathways between K-12, community colleges and senior higher education institutions.

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## 4. WORKFORCE SUPPLY AND DEMAND DATA

Gathering accurate and all inclusive workforce demand and talent supply data is challenging for any one organization to do on its own. Often times, the data gathered is as good as the organizations members who took the time to provide the data and often does not accurately reflect the demand and supply.

**RECOMMENDATION:** It is recommended that the Commonwealth of Virginia provide the necessary resources to ensure the accurate gathering of and access to state-wide and regional data reflecting energy industry demand, workforce projections and talent supply data from educators and other training and service providers.