



## Get Into Energy Innovation Challenge



The [Virginia Energy Workforce Consortium \(VEWC\)](#) engages energy companies and utilities to ensure a skilled, qualified, and diverse workforce to meet future industry needs throughout the Commonwealth. VEWC members include representatives from electric, natural gas, renewable energy, and utility companies; contractors; labor unions; industry associations; secondary and postsecondary educational institutions; public workforce system; and local, regional, and state government agencies.



**Our Mission:** Create an organized approach to leverage the resources of government, industry, education, and labor to develop the best skilled workers for all stakeholders in the energy sector in the Commonwealth of Virginia.

**Our Vision:** Ensure a sustainable, qualified workforce in order to support the energy needs of the Commonwealth of Virginia.

### What is a self-healing energy grid?

A self-healing grid uses digital components and real-time communications technologies to monitor its own electrical characteristics at all times and can provide a number of benefits that support a more stable and efficient system. <http://theinstitute.ieee.org/ieee-roundup/members/achievements/the-selfhealing-power-grid>

### What is renewable energy?

Renewable energy (sources) or RES capture their energy from existing flows of energy, from on-going natural processes, such as sunshine, wind, flowing water, biological processes, and geothermal heat flows. [https://www.sciencedaily.com/terms/renewable\\_energy.htm](https://www.sciencedaily.com/terms/renewable_energy.htm)



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### Predicted Problem Statement:

The Virginia energy grid requires modernization to become more sustainable, reliable, and flexible. The current grid is limited by pre-existing technology and infrastructure. The Virginia Grid Transformation and Security Act of 2018 provides a road map to prioritize and strengthen Virginia's renewable energy and harden the energy grid for security and reliability. What innovative, renewable energy or sustainability solutions do you recommend to create Virginia's "self-healing" energy grid?

### Suggested Resources:

- Virginia Energy Workforce Consortium (VEWC) including links to energy industry partners <http://consortia.getintoenergy.com/virginia/>
- Get Into Energy - Get into STEM <http://stem.getintoenergy.com/>
- Center for Energy Workforce Development (CEWD) <http://cewd.org/>  
<http://www.cewd.org/curriculum/>
- What's Next: Virginia's Energy Future <https://www.dominionenergy.com/next>
- <https://carrington.edu/blog/student-tips/health/a-newbies-guide-to-renewable-energy/>