



# Integrating Environmental Literacy into Career and Technical Education Programming

Session Organizer: Judd Pittman, Pennsylvania Department of Education

1:50 pm - 2:40 pm

Session Padlet: <https://ncboestc.padlet.org/estcworkshops2/cikumwoyiprk0zax>

Green, climate-focused jobs represent a growing sector of our region's economic future. Career and Technical Education (CTE) programs in high schools and technical programs in community colleges along with traditional university programs provide in-demand, skill-based opportunities for students to enter the local and regional workforce. These programs support students pursuing the knowledge, skills, and competencies needed by industries ranging from agriculture to information technology.

## Discussion Questions

- What opportunities exist to build connections and raise awareness across the educational continuum in support of developing environmentally focused skills and competencies, and constructing career pathways for learners to access jobs in the Green Economy?
- How do we ensure education and workforce training to access green related jobs is done equitably both within districts, across state agencies, and in supporting students to develop the (transferable / stackable) skills that will enable them to grow and be dynamic in a future economy
- How can we meaningfully advance career and technical education programs that build the skills and competencies in the Green Economy using existing COVID-19 Economic Relief funding, and the potential for additional funding for pandemic recovery, infrastructure, and/or climate change efforts?

## Three Things You Must Know:

- Career and Technical Education integrates academic skills, employability skills and job / technical specific skills making a learner career and college ready.<sup>1</sup>
- Green jobs and careers integrate skills and competencies from [existing 16 career clusters](#), making visible the transferability of these skills into Green Careers will be critical for securing a talented workforce.
- To meet the growing demands it will be necessary to [understand CTE program approval procedures](#) and ways to systematize innovative or emerging programs like those in solar, water, and wind related careers<sup>2</sup>.

## Background & Key Resources

- To accelerate innovations and solve the world's environmental challenges the United States must attract more diverse talent to STEM including racial and ethnic minorities, women, and rural Americans. For example minorities represent 15% of the U.S. science and engineering workforce while accounting for more than 28 percent of the working populations ( 21 and up)<sup>3</sup>
- Sustainability has been permanently placed on the management agendas of 70% of organizations, while 78% of businesses say that environmental literacy and sustainability knowledge are an important consideration when hiring<sup>4</sup>.
- The United States is projected to need at least 10 million new skilled workers, the current federal administration has proposed invest in infrastructure including to upgrade 4 million buildings, weatherize 2 million homes, build 1.5 million sustainable homes , invest 111 billion in wasterwate, drinking water, and stormwater infrastructure<sup>5</sup>.

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<sup>1</sup> [What is Career and Technical Education](#)

<sup>2</sup> [Central Pennsylvania Institute of Science and Technology Emerging Energy and Infrastructure Program](#).

<sup>3</sup> Report by the American Physical Society, [Building America's STEM Workforce: Eliminating Barriers and Unlocking Advantages](#).

<sup>4</sup> Report by the MIT Sloan School and the [National Environmental Education Foundation](#)

<sup>5</sup> [Fact Sheet American Jobs Plan](#) and SkillsUSA [Facts](#)

while the average age of the skilled workforce is 56 years, with at least one-third of this workforce ready to retire within the next 5 years.

- It is critical for stakeholders to have a [common language around green careers](#), view the [Bureau of Labor Statistics Green Jobs definition](#).
- Diversifying opportunities at the post - secondary level, National Science Foundation for the Future Act. <sup>6</sup>
- [Ten Strands](#) is a California based non-profit leading state level work to integrate environmental literacy into the Career and Technical Education ecosystem and [Project Drawdown](#) is a leading organization on global climate solutions.

### Session Speakers

- Allison Diehl, Director of the Clean Energy Center, [Pennsylvania College of Technology](#), [aad1@pct.edu](mailto:aad1@pct.edu)
- Dr. Joe Fullerton, Principal, [Pickering Technical College High School](#), [JoeFul@cciu.org](mailto:JoeFul@cciu.org)
- Judd Pittman, Special Consultant to the Secretary for STEM, [Pennsylvania Department of Education](#)

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<sup>6</sup> H.R. 2225, [The National Science Foundation For the Future Act](#)