

WORKFORCE



HIGHER ED
CLIMATE ACTION
◆ aspen institute

America’s colleges and universities have extensive influence over workforce preparation, training, and retraining. As the clean energy transition fundamentally alters our economy, creating new jobs and changing existing roles, higher education must respond to meet society’s needs.

Higher education institutions play a central role in training and preparing American workers. More than six in 10 high school graduates enroll in some form of higher education shortly after leaving school.¹ Colleges and universities also frequently enroll returning adult students seeking to finish a two- or four-year degree or garner additional skills to adjust to the changing job market needs. Nearly a third of college students — more than 6.4 million — are over the age of 25.² Graduate and professional schools offer advanced training for researchers and specialized jobs.

A combination of major policy investments in the United States, the European Union, and China along with energy price increases triggered by Russia’s invasion of Ukraine have sped up the global economy’s transition to renewable energy.³ Some independent estimates expect that the United States’ recent clean energy policy changes alone will create nearly 9 million jobs from public and private investments over the next decade.⁴ However, across a wide range of clean energy sectors, the transition will require many more trained workers in fields, including electrical work, heat pumps, clean energy construction, advanced manufacturing, and STEM. Beyond these specific areas of training, numerous other fields will need to adjust to a changing climate, including business, architecture, supply chain management, and more. Yet, LinkedIn’s Global Green Skills report estimates that the supply of workers with green skills will increasingly fall short of labor market needs in just a few years.⁵

Workforce in Action

Higher education will need to play a critical role in preparing learners to succeed in the clean energy economy of the 21st century by both integrating climate solutions and sustainability into existing curricula and creating new learning opportunities. Curriculum ranging from courses in HVAC installations to advanced manufacturing and engineering will need updates to cover the latest advances in energy production, energy storage, and electrification. In other cases, institutions will need to create entirely new programs for growing sectors like wind turbine maintenance and battery manufacturing. Moreover, fields across campus from business and data science to health and education will need to provide students with knowledge and skills to lead a decarbonized, sustainable, adaptable, and equitable society.



State Policy Opportunities

State policymakers have a range of potential levers to support public higher education systems to meet these economic imperatives. Statewide goals such as climate action plans and higher education attainment objectives can help coordinate and mobilize government leaders toward preparing state workers for the clean energy transition. States can play a critical role in funding higher education programs that prepare workers for the 21st century workforce both through creating programs at institutions and partnerships with state economic development agencies.



BRIGHT SPOT: NORTH CAROLINA

In 2010, North Carolina's Community College System launched "Code Green," a revamp of 82 programs across all 58 of the system's community colleges to better prepare North Carolina students for the transitioning economy. The changes impacted five sectors of study: energy efficiency and sustainability, building, transportation, engineering technologies, and environment and energy all received an update. The updated programs provide workers with a broad foundation of skills, helping them stand out in fields such as car maintenance where graduates are able to service all vehicles, including electric vehicles and hybrids.⁶



BRIGHT SPOT: ALASKA

Alaska's statewide higher education attainment goals set specific targets for the production of degrees in the health field and industries with strong job market demand in the state. For instance, the state board of education seeks to graduate 9,700 students annually in higher demand majors, as defined by the state department of Labor, by 2027.⁷ It expects 2,800 of those graduates to come in health fields. A similar strategy could align state higher education systems with economic goals to grow clean energy industries.



BRIGHT SPOT: FLORIDA

Florida's performance funding program provides financial incentives to state universities for producing bachelor's degree graduates in strategic fields such as education, health, and STEM.⁸ Financial incentives to train workers in green skills could encourage students and colleges to meet future needs.



References

1. National Center for Education Statistics. n.d. "Fast Facts: Immediate Transition to College (51)." <https://nces.ed.gov/fastfacts/display.asp?id=51>.
2. "Student Enrollment — How Many Students Ages 25 and over Enroll in Postsecondary Institutions in the Fall?" n.d. <https://nces.ed.gov/ipeds/TrendGenerator/app/answer/2/8>.
3. "War and Subsidies Have Turbocharged the Green Transition." 2023. The Economist. February 16, 2023. <https://www.economist.com/finance-and-economics/2023/02/13/war-and-subsidies-have-turbocharged-the-green-transition>.
4. "BlueGreen Alliance | 9 Million Jobs from Climate Action: The Inflation Reduction Act." n.d. <https://www.bluegreenalliance.org/site/9-million-good-jobs-from-climate-action-the-inflation-reduction-act/>.
5. "LinkedIn's Global Green Skills Report." n.d. <https://linkedin.github.io/global-green-report-2022/>.
6. Beth. 2023. "Postsecondary Career and Technical Education: A Training Ground for a." MDRC. March 28, 2023. <https://www.mdrc.org/publication/postsecondary-career-and-technical-education-training-ground-greener-future>.
7. <https://www.alaska.edu/pres/goals-metrics/>
8. State University System of Florida. 2022. "Programs of Strategic Emphasis — State University System of Florida." February 22, 2022. <https://www.flbog.edu/resources/academic/programs-of-strategic-emphasis/>.