

CLIMATE RESEARCH & INNOVATION



HIGHER ED
CLIMATE ACTION
aspen institute

American universities are global leaders in researching, documenting, and analyzing our changing climate. They are ideally suited to drive the innovative solutions necessary — from new technologies to policy ideas — to address the challenges of the new climate reality.

American research universities are well-regarded for contributing cutting edge innovation, knowledge, and awareness to our broader societal understandings. According to the U.S. News and World Report global rankings, 15 of the top 20 research universities are located in the United States.¹ Decades of government investment coupled with an entrepreneurial higher education sector have made universities not only major knowledge centers, but also leaders in innovation.² Many of the United States' most innovative urban areas, from Silicon Valley in the Bay Area to Boston, coalesce around universities where new ideas on campus find their way into start-up enterprises.

Research and Innovation in Action

Consistent with these trends, much of the research detailing the impacts of climate change and potential solutions to the problem have flowed from research universities. As the economy undergoes a transition to clean energy, companies will need to draw on continued research and innovation from America's college campuses. Beyond the economic imperative, our ability to address issues from climate mitigation and adaptation to sharing information and environmental justice all rest on higher education's continued ability to create and share knowledge about climate change.



BRIGHT SPOT: NEW YORK

Binghamton University's New Energy New York initiative has been awarded over \$113 million³ to create a battery technology hub in upstate New York. This endeavor, supported by both federal and state funds, aims to turn the Southern Tier and Finger Lakes regions into a national center for battery innovation and manufacturing. The project is anticipated to generate a \$2 billion economic impact, promoting domestic battery production and high-paying jobs.



State Policy Opportunities

State policymakers frequently support local industry hubs and can continue to support and expand this role by aligning state economic development plans with state climate action plans. Frequently, states will try to develop innovation hub strategies that bring together educators and businesses in leading state industries. State policymakers can do the same with clean energy and related fields by supporting university research and innovation on public campuses linked to clean economic development goals.



BRIGHT SPOT: MONTANA

Montana's climate action plan seeks to establish multiple regional innovation clusters to develop clean energy industries in partnership with local state universities and community colleges. For example, Montana State University Bozeman, Montana Tech, and University of Montana Western are pegged to develop a cluster around renewable hydrogen technology and advanced energy storage. The state plan envisions six total clusters in industries ranging from biofuels to net-zero manufacturing.⁴



BRIGHT SPOT: NEW JERSEY

The New Jersey's state economic development agency (NJEDA) created the New Jersey Wind Institute in partnership with local community colleges to train workers for the offshore wind farms and to establish the state as an industry leader in research and innovation.

References

1. "The Best Universities in the World, Ranked." n.d. <https://www.usnews.com/education/best-global-universities/rankings>.
2. Labaree, David F. A perfect mess: The unlikely ascendancy of American higher education. University of Chicago Press, 2020.
3. Binghamton wins \$113 million to bolster battery initiatives - Binghamton News. (n.d.). News - Binghamton University. <https://www.binghamton.edu/news/story/3806/inghamton-university-led-battery-initiative-wins-113-million-to-bolster-domestic-battery-manufacturing-and-supply-chain-reinvigorate-region>
4. State of Montana. 2020. "Montana Climate Solutions Plan." Montana Climate Solutions Council. https://deq.mt.gov/files/DEQAdmin/Climate/2020-09-09_MontanaClimateSolutions_Final.pdf.



Photo by Allison Shelley for American Education: Images of Teachers and Students in Action.