

An archeologist shortage could stifle the climate law

By **Miranda Willson** | 11/01/2023 06:46 AM EDT



An archaeological survey is conducted in North Dakota. Photo courtesy of Cinder Miller

A nationwide shortage of archeologists could hamstring President Joe Biden’s clean energy agenda.

The experts are one cog in the machine of workers needed to conceive, develop, permit and construct major energy projects. But there may not be enough of them to keep up with soaring demand, as Biden’s signature climate law prompts a wave of solar, wind and clean energy proposals.

“There are so many job openings at the federal and state level, in the private sector and on the policy side,” said Shawn Patch, a senior archeologist at the Georgia-based cultural resources firm New South Associates. “But there is a short-term, acute shortage right now in that we’re all trying to find sufficient staff to do the work we need to do.”

It’s one unexpected workforce shortage among many, as the U.S. economy responds to last year’s Inflation Reduction Act and the 2021 bipartisan infrastructure law. The two laws offer billions of dollars in tax credits, loans and grants for a range of low- and zero-carbon technologies, incentivizing companies to build new projects and putting pressure on state and federal agencies to review them in a timely manner.

The archeologist shortage also has relevance to debates about bedrock environmental laws, including the National Environmental Policy Act. Republicans and some Democrats in Congress have proposed scaling back the sweeping 1970 law, which they deem too onerous for building major energy projects — an effort widely opposed by environmentalists.

But archeologists and some legal experts say the problem isn’t environmental laws. They instead point to insufficient staff at agencies and in the private sector, including individuals with knowledge of the cultural resources and historic preservation issues that must be considered as part of the NEPA process.

“We don’t want to be the speed bump in a project,” said Jeffrey Altschul, an archeologist who is president of the SRI Foundation, a nonprofit historic preservation group. “What we’re trying to do is streamline the process, while at the same time balancing historic preservation.”

Companies hire archeologists to study the potential impacts of energy projects on historic and cultural resources in order to comply with NEPA and the National Historic Preservation Act. It’s an example of the wide range of experts needed for a clean energy transition, in addition to those who build, design and install projects.

Communicating the link between those areas of expertise and climate change could be crucial for getting more people in those fields, said Cynthia Finley, vice president of workforce strategy and innovation at Interstate Renewable Energy Council. The nonprofit seeks to advance the transition to clean energy resources.

“I think there are some disconnects, for sure,” Finley said. “It’s going to be really important that we highlight those jobs and that we can make those connections to clean energy.”

Archeologists also find that their work in energy and climate often has relevance to historically disadvantaged communities, including the descendants of enslaved African Americans and Native American tribes. That’s because there tend to be few historical records about those communities, so finding archeological records can help fill in the gaps.

Federal regulators, for example, [have studied](#) whether installing wind turbines off the coast of New England and New York would affect underwater areas where Native American artifacts have [previously been found](#). People ventured to those areas when they were above sea level thousands of years ago, before shifting climate patterns submerged them and long before the arrival of European colonists.

“Native Americans believe their ancestors lived in those places,” said Cinder Miller, president of the American Cultural Resources Association, a professional group for the industry. “They want to learn more about their ancestors and want to understand what it is was like, so capturing all that data is super important to those stakeholders.”

Yet archeology programs at universities are more likely to shrink than grow, [according to a paper](#) published last year in the industry journal *Advances in Archaeological Practice*. Universities have also failed to train students for the types of hands-on archeology jobs now in highest demand, instead offering a “nearly exclusive emphasis on academic-oriented anthropology and archaeology, historic architecture, and history,” the study said.

A similar story may be playing out in some other fields, economists and energy developers say.

There are also not enough biologists, environmental justice experts and other specialists to get energy projects reviewed and approved quickly, said Erin Lieberman, executive vice president of environmental compliance and strategy at the Chicago-based electric power and energy company Invenergy. Environmental justice — or the effort to reduce pollution that disproportionately harms communities of color and low-income areas — must be considered under NEPA.

Eventually, worker shortages could jeopardize state and federal clean energy goals, Lieberman said.

“The agencies, environmental consulting firms and industry, we’re all in demand of experts needed to facilitate this clean energy transition,” she said.

‘No one to hire’

The looming archeologist shortage first became apparent in 2021, said Altschul, who co-authored the paper on workforce trends in *Advances in Archaeological Practice*.

That year, billions of dollars became available for energy and transportation projects following the passage of the infrastructure law. At the same time, construction work was starting to pick up after a pandemic slump, he said.

“I was calling my friends, and everybody needed people, and there was no one to hire,” said Altschul, who founded the cultural resources firm Statistical Research.

But even before it was transformed by recent climate and energy laws, archeology was never the easiest field to enter.

Becoming an archeologist typically requires a college education and a master’s degree. Entry-level jobs tend to pay low wages, creating a relatively high barrier to entry, according to several archeologists across the country.

“The pipeline coming out of universities has been shrinking over time,” said Terry Klein, executive director of the SRI Foundation, who co-authored the 2022 paper with Altschul. “It’s also a career problem. Cultural resource management archeology may not be a viable career, because of salaries, lack of benefits [and] the ups and downs of the seasonality of the work sometimes.”

Today, many who enter the profession are passionate about uncovering the past and understanding long-forgotten history, including as it pertains to marginalized groups. In addition, some archeologists are excited about the prospect of helping facilitate a clean energy transition.

Miller, of the American Cultural Resources Association, is president of the Ohio-based cultural resources firm Gray & Pape. Her firm has worked with numerous clean energy clients, including developers of solar farms, offshore wind projects and carbon capture pipelines.

When the firm reviews energy projects, it’s common to find no major cultural or historic resources that would be impacted, she said. If something significant is identified, she added, developers are typically able to avoid it.

In some cases, the discovery of archeological resources at an energy project site can benefit nearby communities by helping them understand the local history, Miller said.

“The most successful projects are ones where we find really amazing stuff and work with our clients to, at the same time, interpret them and make them a benefit to the project, as opposed to something everybody is afraid of,” she said.

Crucially, it’s not just archeology firms that are dealing with vacancies, but also archeology positions in government. One example is State Historic Preservation Offices, which handle reviews under the National Historic Preservation Act for any federally funded or federally permitted energy or electric transmission projects, as well as for projects that cross federal land.

About 30 percent of positions at historic preservation offices in some states are now vacant, said Erik Hein, executive director of the National Conference of State Historic Preservation Officers. In addition to archeologists, the offices employ anthropologists, architects, community outreach specialists and other individuals with specific expertise, Hein said.

“Certainly state salaries in many cases are not competitive with the private market, which is part of the problem,” he said in an email.

Vacancies also exist at the federal level, said Jamie Pleune, an associate professor of law at the University of Utah who has studied the root causes of energy permitting delays.

In 2021, Pleune co-authored a [paper on NEPA reviews](#) at the Forest Service. Drawing from over 41,000 NEPA decisions issued by the service between 2004 and 2020, the paper found that delays were “often caused by factors only tangentially related to [NEPA], like inadequate agency budgets, staff turnover, delays receiving information from permit applicants, and compliance with other laws.”

Archeologists were among the positions found to be in high demand, sometimes slowing down the review process, Pleune said.

“The problem I encountered was when you don’t have enough archeologists, you’re just waiting in line to get that one archeologist — waiting for them to be available,” she said.



An archaeological site in North Dakota is pictured. | Photo courtesy of Kimball Banks

For those who study the economic impacts of clean energy, the shortage of archeologists reflects a widespread need to include workforce development in energy policies.

The issue is one the Biden administration is keenly aware of. Maria Robinson, director of the Department of Energy’s Grid Deployment Office, pointed to staffing challenges at state and local agencies during a virtual event in September hosted by the right-leaning Citizens for Responsible Energy Solutions.

“Some of these permitting offices that are doing bridges and roads, in addition to transmission and solar, are really overworked and stretched thin,” she said. “So figuring out: Can we potentially be helpful in better coordinating with our state friends, and frankly, even to the local level? We’re going to try our best to pursue that.”

Clean energy is unusual compared to other growing economic sectors, said Josh Williams, president of BW Research Partnership, a California-based research firm. Individuals who build and oversee many types of energy projects often need to live near the project site, whereas many other growing industries lend themselves to remote work, he said.

That poses the challenge of getting workers to the locations where projects are being built. But it also can create opportunities for rural communities to bring more people to town and lower unemployment rates, Williams said.

“You need people to develop these transmission lines or these EV charging stations,” Williams said. “With offshore wind, the ports become really important. These are all local jobs, but we have people moving away from a lot of these areas where the work needs to be done.”

Community colleges can be an avenue for developing a local clean energy workforce, although many colleges are “reactionary” when it comes to offering programs for burgeoning industries, said Gilbert Michaud, an assistant professor at the School of Environmental Sustainability at Loyola University Chicago.

That’s why it’s necessary to address gaps in people’s understanding of the types of the jobs needed for the energy transition, Michaud said. Not only can communicating job opportunities help build a workforce to develop and review energy projects, but it can also increase acceptance of renewable energy, including in rural communities that may be skeptical of solar and wind, he said.

“It takes government intervention or leadership to be like, ‘Let’s understand this infrastructure, let’s look at these jobs, the skills, knowledge and ability that folks need, and let’s be a little more strategic about developing this workforce,’” Michaud said. “Because we’re going to need thousands of people.”

In the meantime, archeologists are trying to take matters into their own hands.

Leaders in the discipline are assessing ways to make the field more appealing, including by streamlining education requirements, Altschul said. He also wants to find ways to complete archeological reviews “more effectively and more efficiently.”

There are efforts to expand and improve archeology programs at universities as well. The American Cultural Resource Association, for example, has an academic collaboration committee that works with universities to get more people in the profession, said Miller, the association’s president.

Archeologists already working in the clean energy industry remain hopeful about their field’s future, pointing to how their work could help not just the energy transition but broader climate action.

Kimball Banks, a North Dakota-based archeologist in the private sector who previously worked at the Bureau of Reclamation and the Bureau of Indian Affairs, said he entered the field to understand both human history and humanity’s future. As he puts it: “To know where you’re going, you need to understand where you came from.”

For example, archeologists today are discovering ways that indigenous communities years ago managed their land, forests and fisheries. Those methods could be relevant for humans to live more sustainably, he said.

While his current role mostly involves surveying sites for wind projects and other infrastructure in the upper Midwest, Banks said he always has his eye on the big picture.

“You’re not going to get that insight from one wind project, but if you combine all that information and data together, then you may have something,” he said.