

'Evolution in people's thinking': Solar arrives in W.Va.

Miranda Willson, E&E News reporter Published: Thursday, August 27, 2020



An aerial view of the former Hobet coal mine in Boone County, W.Va., is shown May 12, 2016. West Virginia lawmakers passed a bill earlier this year that will allow for solar power to be developed on former mining and industrial sites in the state. Jonathan Ernst/Reuters/Newscom

Renewable energy has historically faced opposition in coal-rich West Virginia. Coal powered 92% of the state's electricity in 2018, while renewables accounted for just 5% of the state's electricity mix.

But this spring, the West Virginia Legislature passed with bipartisan support a bill that would allow utility-scale solar for the first time. The bill, S.B. 583, could increase solar capacity statewide from 9.9 megawatts to 400 MW. In June, one of the state's utility companies, Appalachian Power, released a request for proposals for its first 50-MW solar project in the Mountain State.

"In terms of the politics, three, four or five years ago, this bill would never have passed," said Evan Hansen, a Democratic member of the West Virginia House of Delegates who supported the bill. "But there's been an evolution in people's thinking."

Hansen and other supporters of renewable energy in the state say S.B. 583 passed in part because it calls for the development of solar specifically on sites that were used for "electric generation, industrial, manufacturing or mining operations ... and former mining sites." West Virginia has hundreds of thousands of acres of these lands, sometimes referred to as brownfields. Many of them are abandoned coal mines.

"It has been very difficult to find any kind of productive economic use for a lot of those sites," Hansen said. "The best thing we can do, not just for those sites but for the nearby communities that used to have jobs on those sites, is find a way to make them productive again."

The state has been losing coal jobs for decades. Last year, there were about half as many underground coal miners in the state as there were 10 years earlier, according to the West Virginia Office of Miners' Health, Safety and Training.

As coal has declined, West Virginians have warmed up to the development of renewables on contaminated lands to help revive coal communities, said James Van Nostrand, director of the Center for Energy and Sustainable Development at West Virginia University.

Tying solar energy to coal mines could also facilitate the cleanup of mines without having taxpayers foot the bill, Van Nostrand said. Utility solar developers in West Virginia would be responsible for any cleanup costs at future solar farms, according to Appalachian Power's request for proposals.

"This does make [renewables] more palatable. For one thing, these facilities are taxable, and this offers improvements to the properties," Van Nostrand said.

Conservationists see similar value in repurposing brownfields for renewable energy. They favor these sites for solar or wind as a way to clean up contaminated areas and preserve undisturbed land. But these sites can benefit developers as well, since brownfields might already have access to transmission lines and other infrastructure needed for renewable energy projects, said Gail Mosey, senior energy analyst at the National Renewable Energy Laboratory (NREL).

"In many cases, the sites just lend themselves to some sort of application like renewable energy," Mosey said.

Renewable energy projects can make up for some, but not all, of the jobs lost in the coal industry, noted Karl Cates, transition policy analyst at the Cleveland-based Institute for Energy Economics and Financial Analysis. The institute advocates for transitioning to a "diverse, sustainable and profitable energy economy."

For example, renewable energy company Photosol U.S. has proposed a new 372-MW solar farm and battery storage facility to be built adjacent to the San Juan Generating Station, a coal-fired power plant in New Mexico's Four Corners region that is set to retire in 2022 ([*Climatewire*](#), Jan. 3).

Known as the Shiprock Solar project, the solar farm will benefit from the transmission lines associated with the coal-fired plant and could replace some of the coal jobs lost in that region as its once-extensive coal fleet fades away.

"Will a project like Shiprock replace all the jobs lost at San Juan? No, but it will replace some of them," Cates said.

Is Wyoming next?

In Wyoming, which produces the most coal in the nation, concerns about impacts to hunting and wildlife have surrounded conversations around renewable energy, said Stephanie Kessler, program director for the Wyoming Outdoor Council.

Last year, the presence of a solar farm in southwestern Wyoming forced migrating pronghorn antelope onto a highway in an incident that became the "poster child" for renewables built at inappropriate locations, she said.

But building renewables on brownfields and former mines could reduce impacts to wildlife and big game, since these sites are already disturbed, according to Kessler. That thinking led the Wyoming Outdoor Council to ask the Legislature this year to study ways to encourage solar and wind at "industrial facilities" rather than undisturbed lands.

"I think appropriate siting is one of the biggest barriers to public acceptance of large-scale renewable projects," she said. "Our emphasis has been trying to get the state to be more proactive in terms of incentivizing or guiding where these types of large-scale developments should go so that we can protect Wyoming values."

Groups supporting renewables in Wyoming note that there is precedent for building renewables on brownfields. More than a decade ago, the utility company PacifiCorp built a wind farm at the former Dave Johnston mine in Glenrock, Wyo., after the coal mine ceased operations, said Hesid Brandow of the Powder River Basin Resource Council, a landowner and conservation group.

"The Glenrock wind farm is widely thought to be the first renewable energy site in the nation that is sited on a former coal mine. So it's not just been discussed here, it's even been done," said Brandow, an organizer at the group.

While the Glenrock project demonstrates the viability of repurposing abandoned coal mines for renewables, each site comes with its own sets of considerations and challenges, said Robert Godby, director of the University of Wyoming's Center for Energy Economics and Public Policy. Renewable energy companies might be wary of developing on these sites because of liabilities associated with them, especially if the former mine owner has gone bankrupt, he added.

"Very often, brownfields have some sort of liability. It could be some sort of toxicity in the soil or remediation that needs to be done, and who is going to take over that?" Godby said.

In addition, former mines must have enough wind or solar resources to make them attractive to developers. In West Virginia, former mountaintop-removal mines make good candidates for solar because the land has been flattened, a relative rarity in the hilly state, said Mosey of NREL. But in Wyoming, wind resources are strongest in the southwest part of the state, which has fewer mines compared with the Powder River Basin in northwest Wyoming, Godby said.

Another barrier in Wyoming is political opposition to renewables, which many lawmakers perceive as threats to coal, oil and natural gas, Brandow said. These industries provide extensive revenue for the state as well.

But more renewables could come to Wyoming soon regardless of support from elected officials, as PacifiCorp intends to increase solar and wind capacity in the state ([*Climatewire*](#), Oct. 4, 2019). That presents a "window of opportunity" for leaders to consider whether they want to prioritize former mining sites for these projects to try to reduce land use conflicts, Godby said.

"The time has potentially come to consider this in more detail," he said.