

Is this Michigan forest the key to reducing the state's carbon?

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One of Michigan's well-known forests is taking on a new, controversial role.

The Pigeon River Country State Forest provides habitat for Michigan's elk herd, timber that pays for forestry services and public natural space for hiking, hunting and camping. Starting next year, the forest in

northern Michigan's lower peninsula will be charged with another task: sucking tons of additional [carbon](#) from the atmosphere, creating [carbon offset credits](#) the state can sell to companies.

The theory behind carbon offset credits is on display in nature. Plants consume carbon dioxide while they are alive and release it when they die and decompose, cycling the gas in and out of the atmosphere at a steady pace.

Burning [fossil fuels](#) like petroleum, coal and natural gas adds [carbon dioxide](#) to the atmosphere without creating a mechanism to take it back out, which scientists say is helping to cause climate change. By planting trees or letting trees live longer, carbon offset [credit](#) programs are supposed to balance that pollution back to neutral.

Michigan last year announced it would begin selling carbon credits. The state Department of Natural Resources contracted with Utah-based Bluesource Corp. to develop a plan to increase the amount of carbon stored in the Pigeon River Country near Gaylord. Each ton of additional carbon stored would be worth one credit the DNR could sell.

The [pilot program](#) is relatively small, taking place on about 110,000 acres of Michigan's roughly 4 million acres of state forestland, said Scott Whitcomb, DNR senior adviser for wildlife and public lands.

"We manage the state forest system for wildlife habitat, we manage it for forest recreation and we think we can layer on carbon credits as well and have that be complementary," Whitcomb said.

The carbon credit program will boost revenue for the department and could inspire other landowners to turn fallow land into forests so they can sell offsets, too, he said.

The state recently announced its first customer: DTE Energy, which agreed to buy all the credits produced at Pigeon River Country. The company will sell those credits to industrial natural gas clients who want to cancel out carbon they emit with carbon stored in trees.

Some Michigan [environmental groups](#) have criticized the state's entrance into the carbon offset credit market, arguing the program sacrifices the health of poor communities in the name of climate action, if it works at all.

"That's just a complete no for us," said Juan Jhong Chung, Michigan Environmental Justice Coalition policy associate. "It's a false illusion. It's a corporate scheme, and we're worried it's going to become the norm."

'A sacrifice zone'

Offset programs allow companies to appear eco-friendly while continuing to use fossil fuels, often at industrial sites in low-income areas, which make them loathe to some environmental justice advocates.

Fossil fuels, including natural gas, don't just emit carbon. They also emit pollutants including volatile organic compounds, which can contribute to aggravating asthma, and benzene, which can cause cancer, according to the U.S. Environmental Protection Agency.

The pollutants are still released when companies purchase carbon credits. One community gets pollution, another gets trees.

"For us, that is totally unconscionable," Jhong Chung said. "You're basically creating a sacrifice zone where low-income communities and people of color will continue to be poisoned."

Emissions from local manufacturing and power plants caused an

estimated 140 hospitalizations for respiratory and cardiovascular diseases and 29 deaths a year in Detroit, University of Michigan public health researchers said in 2016. They noted the city is "notable for its numerous and large industrial pollution sources."

Both the DNR and DTE Energy acknowledged there are environmental justice concerns related to carbon credit programs.

Reducing overall greenhouse gas levels can help address environmental inequities because all communities benefit, DTE spokeswoman Anne Santori said.

Anthony Muzzin, DTE Energy manager of business development, said the company's long-term environmental strategy leans more on programs that increase energy efficiency and capture carbon, which have a greater impact in industrial zones and communities that surround them. DTE has its own carbon offset program for residential customers as well as its recent purchase of the state's credits.

Carbon credits are just a piece of the state's climate strategy, Whitcomb said. The department also is installing solar panels in power parks, customer service centers, offices and a fish hatchery.

"DNR is very concerned with environmental justice," Whitcomb said, adding it has identified diversity, equity and inclusion as a statewide land strategy. "... We think that DNR programs can be part of the solution and should be part of the solution, but we also think that carbon credits can play a role."

Do carbon offsets work?

The DNR is meeting with the Sierra Club Michigan Chapter and other groups this week to talk about their concerns with the carbon offset

credit program.

Chief among their concerns is whether it works.

Marvin Roberson, Sierra Club Michigan Chapter forest ecologist, is not convinced. He pointed to the state project's frequently asked questions page, which states "it is not anticipated that the carbon project will adversely affect management and timber harvest levels from the forest."

To sink additional carbon in the Pigeon River forest, the DNR would have to change the shape of that forest, he said, either by harvesting fewer trees, allowing them to grow older before harvesting them or planting trees on open space.

"They're managing the forest in question exactly as they had managed it before," Roberson said. "There's going to be no carbon benefit. The DNR is going to get money to keep doing what they did and DTE is going to pay money to keep doing what they're doing and nobody's going to get any carbon sequestered anywhere."

But state officials argue the pilot project does have benefits.

Under the carbon credit program, the DNR took "the most aggressive harvest options" off the table for 40 years, Whitcomb said. Pigeon River Country trees spared from the sawmill will pull carbon from the atmosphere, thus absorbing additional carbon and creating carbon credits to sell.

DNR will continue to harvest the Pigeon River Country forest.

The way wood is used when it is harvested makes a difference in its climate impact, said Douglas Jester, managing partner of 5 Lakes Energy, a clean energy consultancy group.

A tree that is used for something long-lasting, like a building, doesn't decompose for a long time, which keeps carbon out of the atmosphere for potentially hundreds of years, Jester said. A tree used for paper will release that carbon sooner.

That's something Bluesource, the company DNR hired to administer the program, also takes into account when determining how much carbon will be sequestered at Pigeon River, Whitcomb said. The company also will account for the average rate of timber harvest in the forest and the DNR's future harvesting plans.

Bluesource also is charged with marketing carbon credits, brokering sales and hiring a third party to ensure the program meets industry standards set by the American Carbon Registry, according to the company's contract with the state.

There is no federal oversight of offset programs or official standard for what constitutes a credit.

Depending on the size of the sale, the DNR will pay Bluesource 10%-17% of the price.

If the DNR considers the Pigeon River Country program a success, Bluesource would "have exclusive rights for developing additional carbon credit projects in other areas of the Michigan state forest, state or game areas, or state parks," the contract says.

Revenue from [carbon credits](#) would help fund forest management, Whitcomb said. The state earns between \$30 million and \$50 million annually from selling timber and wood products. It expects to earn \$10 million from 2022-32 from the offset credits sale to DTE and would put that money toward natural resources management costs.

The Pigeon River Country isn't absorbing any additional carbon yet by planting trees or letting trees live longer, Whitcomb said. When it does, he predicted the effects will not be visible.

The climate might not notice a difference either. The amount of overall carbon sucked from the atmosphere because of a carbon offset plan hinges on its neighbors, energy consultant Jester said.

If DNR officials decided to reduce logging on state forests, another landowner might decide to log more. The state land would absorb more carbon in that scenario, the private land would sink less, and the amount of carbon in the atmosphere would be unchanged.

"If the total amount of wood that we're using stays the same, reducing wood harvest from one place just means it has to be harvested from another," Jester said. "The only ways to accumulate more wood on the earth, and thereby sequester carbon, are to use wood more efficiently and extend the life of the wood that we use."

At best, carbon offsets have a limited role to play in slowing climate change, he said.

"There's certainly the possibility of sequestering carbon and reducing climate change, but I think at best it's a minor role," Jester said. "There really isn't a way to stabilize climate without radically reducing carbon emissions from essentially all sources."

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