

Pollinator-friendly landscape takes root beneath solar panels in Minnesota

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Sheep graze through the tall prairie grass, their bleats breaking the quiet as butterflies and insects flit through the native flowers.

The pastoral setting is not a restored prairie. It's a solar installation in rural Chisago County—one of the 16 in Minnesota run by Enel Green Power, a global renewable energy company based in Rome that supplies Xcel Energy.

In Minnesota, at least, the [solar farms](#) are generating more than electricity. Instead of turf, bare ground or gravel, the land beneath Enel's Minnesota installations were all seeded with native pollinator-friendly grasses, sedges and wildflowers. They've matured into rich native habitats for bees, insects and butterflies—in a landscape desperately short of them.

Minnesota state agencies, such as the Public Utilities Commission, Department of Natural Resources and the Board of Soil and Water Resources all encourage such plantings at solar sites as a matter of policy.

"One of the fastest growing trends in solar, nationwide, is doing better than turf grass under and around the panels," said Rob Davis, director of the Center for Pollinators in Energy at the St. Paul nonprofit Fresh Energy. That could be food or other types of vegetation.

Minnesota pioneered standards for what constitutes pollinator-friendly vegetation at solar sites—similar to standards for organic products—following legislation in 2016 to prevent greenwashing, or false environment-friendly claims, Davis said.

The Monarch Joint Venture in St. Paul is among the groups studying the results.

Laura Lukens, the group's national monitoring coordinator, has been at several Enel sites with her clipboard this summer taking inventories of the quality and abundance of flowering plants and milkweed, and the

native pollinators using them. She's also tracking the difference between the habitats growing directly under the panels vs. the ones in between. Lukens said she's excited by what she's seen.

"We've been seeing great things in terms of the floral community and the pollinators using the habitat there," Lukens said. "I saw monarchs breeding at every site I visited."

On Wednesday, the air was thick with life at Enel's Chisago County site near Shafer. The black-eyed Susans were in bloom, for example, mixed in with Canada wild rye and fox sedge and other native plants.

The vegetation cools the solar panels, boosting [electrical output](#), as the long-rooted perennials help rebuild the soil, explained Enel regional manager Jacob Fehlen, walking the rows.

The array—one of the company's smaller sites—was built on 25 acres of converted farmland, with 16,632 panels that pivot to face the sun. They generate enough megawatts to power more than 600 nearby homes, Fehlen said.

Like all of Enel's Minnesota sites, it was seeded with a native pollinator-friendly mix by Otsego-based MNL, formerly known as Minnesota Native Landscapes. MNL has taken it further, adding sheep herds to manage the vegetation at many of the sites.

They are Katahdins, a hair sheep variety that doesn't require shearing like wool sheep, said Jake Janski, MNL's director of services. The "mob grazing" replicates both prescribed fires and bison herds, controlling dead material, lowering fire hazards and stimulating new growth, he said. The manure fertilizes.

"This is the next phase of land management that we're trying to

normalize so it's not this bizarre concept," Janski said. "We're trying to normalize using animals to do what animals did in nature. I'm sick of just putting Band-aids on. We're trying to fix the prairie."

Yes, the sheep draw some laughs in other states, said Enel's Fehlen. The company does it because they fit with "sustainability needs," he said. In Texas, he said, Enel is looking at possibly raising the height of its solar panels to graze cattle beneath them.

The sheep do come with a few challenges. As they sauntered around the rows of panels Wednesday, workers were repairing an electric fence that a few ornery rams had torn through.

Then there are coyotes, which sometimes scoot under the fence through the wildlife gap at the bottom. MNL sometimes brings in a mini donkey to protect the sheep from predators.

The entire model is spreading among solar operators, Janski said.

"What needs to be proven is cost competitiveness over the long term," he said. "The industry is trying to vet out the long term."

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