BWSR guidance makes solar projects more wetland-friendly



Solar energy development is seeing continued growth in Minnesota as the state strives to meet its renewable energy goals. Minnesota Department of Commerce data show the state derived 3.2% of its electricity from solar power in 2021. That compares with 2.8% nationwide. Minnesota solar installations in 2021 produced enough energy to power more than 200,000 households. Because of this growth, the Minnesota Board of Water and Soil Resources (BWSR) and other state agencies continue to update guidance related to habitat friendly solar development, solar facility siting, and wetland regulatory programs.

BWSR continues to develop its Habitat Friendly Solar Program, which supports establishment of habitat for species including pollinators and songbirds, in addition to project benefits such as water management, grazing and soil health. In 2020, BWSR updated its project assessment forms to ensure projects meet the program objectives and to recognize the highest-quality projects with a "gold standard" designation. Solar projects that meet and maintain the standard requirements are listed on BWSR's website as a "Habitat Friendly Solar" project.

The Minnesota Department of Natural Resources (DNR) has issued updated commercial solar siting guidance to help energy developers make informed decisions on siting solar farms as it relates to environmental concerns, including wetland resources. Generally, the DNR states, project proposals should avoid siting solar farms in wetlands. Nevertheless, the proliferation of solar projects has resulted in more instances of project areas that contain wetlands being selected as locations where solar energy facilities are developed.

Solar projects differ from many other types of development projects in that they typically involve installing extensive solar panel arrays on posts and pilings, instead of large areas of impact such as buildings or parking lots. Because of their unique construction methods, solar projects are evaluated for wetland regulatory compliance on an individual basis.

As is the case for any project proposing

Scenes from a September 2020 tour of the Aurora Solar Power Plant's Eastwood site near Mankato illustrate how solar panels are mounted on posts, and how vegetation growing underneath the panels can augment habitat. **Photo Credits:** Paul Erdmann, BWSR

The Aurora Solar Power Plant's Eastwood site near Mankato, seen during a September 2020 tour, illustrates how solar panels are mounted on posts, and how vegetation growing underneath the panels can augment habitat.

wetland impacts, a solar farm proposing to impact a wetland must meet the regulatory obligations of the Wetland Conservation Act (WCA): avoid wetland impacts, minimize impacts when unavoidable, and replace lost wetland functions and values of impacted wetlands. In certain instances, however, the installation of solar panels can have less direct impacts on wetlands because the panels are built on elevated posts and pilings that allow wetlands to function to a certain degree. That makes solar projects different from road or building projects that propose to fill and eliminate wetlands.

BWSR's guidance on reviewing solar panel installations for compliance with the WCA provides a suggested approach for evaluating projects for WCA compliance when they involve the installation of solar panels in wetlands. Rather than simply treat all solar panel installations on posts/pilings that encroach into wetlands as a wetland impact, the WCA program can evaluate whether the panel arrays result in a significant alteration of a wetland's function and value. This approach recognizes that not all solar projects affect wetlands in the same way.

In cases where solar panels are proposed in highly degraded wetlands — such as wetlands that are regularly row cropped or heavily grazed — having the right kind of vegetation establishment and management plan can sometimes compensate, at least partially, for losses in wetland functions due to the panel installation.

The amount of compensation for functional losses would depend upon the specifics of the project — such as overall panel coverage and height. To help evaluate vegetation plans in conjunction with wetland regulatory compliance measures for solar projects, the WCA program is encouraging solar developers to consider the Habitat Friendly Solar designation as a potential means to partially offset impacts and subsequent mitigation requirements for solar projects.

By utilizing BWSR's Habitat Friendly Solar Program in degraded wetlands that are used for solar panels, some of the wetland functions could be maintained by revegetating the historically degraded wetland with native vegetation. This practice could help the project meet its regulatory obligations to ensure compliance with the WCA.

By integrating the WCA regulatory program with the Habitat Friendly Solar Program, solar energy projects could simultaneously meet renewable energy goals and wetland regulatory requirements by restoring native habitat in previously degraded wetlands.