

Case Study: Stearns County, Minnesota

An early leader in incorporating solar development into local plans and regulations, Stearns County is in a desirable location for solar farm development. Much of the eastern portion of the County served by Xcel Energy, and has a mix of urban development in the St. Cloud metropolitan area and rural landscapes that can accommodate solar farm development, and has transmission connections to the Minneapolis/Saint Paul metro region. The County has processed a number of solar garden development applications (currently at 24 MW of approved projects) through its land use processes, and is the location for an additional 30 MW of solar farm capacity associated with the 100 MW Aurora solar project. But the continuing evolution of the solar garden market, changes in regulatory standards, and solar development controversy in nearby counties raised concerns that the County's existing solar regulation needed to be re-evaluated. Some counties issued moratoriums on new solar development. Instead, Stearns County initiated a solar workgroup, composed of stakeholders representing a variety of perspectives, to consider and propose new county standards that addressed the evolving market and community concerns.

Community Background

Stearns County is a central Minnesota County that with a population of 150,000, most of which live in the eastern urban area in and around St. Cloud. The County is approximately 45 miles northeast of the Minneapolis/Saint Paul metropolitan area. While the eastern side of the County is quite urban, most of the County is rural, and includes some of the most productive agricultural areas of the State.



The County recognized, in its 2008 Comprehensive Plan, the value of sustainable development initiatives, including renewable energy development, as an economic opportunity. Economic Development Objective 5.4 states:

Encourage the appropriate development and use of electricity from wind energy as a means of substituting underutilized local renewable resources for non-renewable, non-local, energy sources.

The Plan also supports solar energy as a valuable resource, and County actions to reduce environmental impacts. Natural Resources Objective 2.4 states:

Encourage use of renewable energy systems, including wind energy and solar energy, which reduce the footprint of development on local and global natural systems.

To implement these provisions, Stearns County adopted a solar energy ordinance, including the first solar farm provisions in the Midwest. The solar farm ordinance enabled a small (400-KW) solar farm proposal on the grounds of St. Johns University in Collegeville that was not permitted under the existing ordinance. The final ordinance made solar farms of any size a conditional use in specific districts (including agricultural districts, which is most of the County's land), clarified how solar farms fit into the



County's agricultural protection standards, and set performance standards and submittal requirements for developers.

Timeline

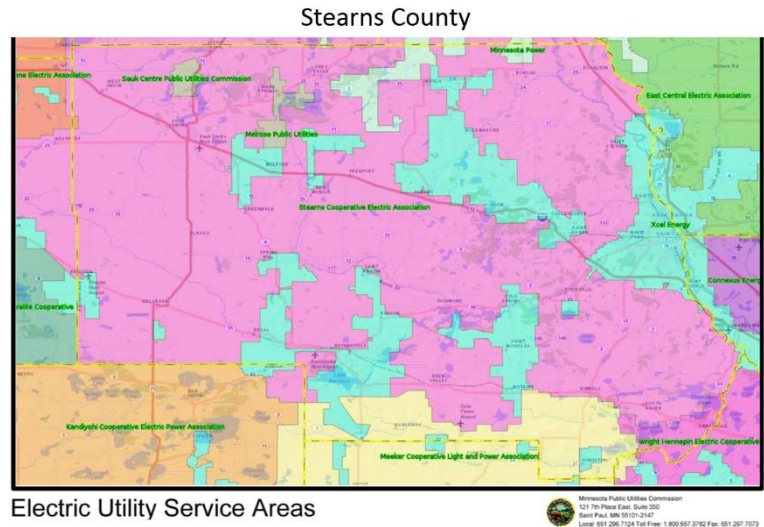
- **March 2008** – Stearns County adopts a Comprehensive supporting development of solar and other renewable energy resources.
- **March 2010** – The County revises its zoning ordinance to implement the Comprehensive Plan, including a solar ordinance that enables both distributed and solar farm development.
- **2013** – The 100-MW Aurora solar project is proposed, across 16 sites, several of which are located in Stearns County.
- **Summer 2014** – The County revises its distributed solar ordinance provisions to address changing market conditions and new solar development questions.
- **Spring 2015** – Solar garden developers begin making inquiries for developing multiple sites in Stearns County.
- **Fall 2015** – Several proposed solar garden projects are evaluated and approved, one is denied a permit. The Aurora Solar projects, exempt from local regulation, wins final approval from regulators and begins environmental and siting review by the State of Minnesota.
- **January 2016** – Proposed developments in Stearns County and surrounding counties become controversial, including proposals that would require rezoning inconsistent with local comprehensive plans and some creating land use conflicts with surrounding properties or other natural resources.
- **Spring & summer 2016** – County Board evaluates a moratorium, instead creates a solar workgroup to investigate and recommend ordinance changes that respond to current and likely future market conditions.
- **August 2016** – Solar Workgroup begins meeting.
- **November 2016** – Planning Commission and County Board approve revised solar ordinance language, including first in the Midwest provisions to require solar farm development to capture pollinator habitat co-benefits.

The Solar Ordinance

Since passing its solar ordinance in 2010, the County's solar market has evolved, most specifically with the passage of 2013 legislation that required Minnesota's largest utility (Xcel Energy) to develop a community solar garden tariff. While most of the County's non-incorporated areas are served by electric co-ops, Xcel has significant service territory in areas near Stearns County cities (approximate areas shown in blue on the map). By early 2015, the County had received a number of development inquiries, ranging from ten acres to over 40 acres. In addition, the County was seeing development of two solar farm locations as part of the statewide Aurora solar project. The Aurora project was under State regulatory jurisdiction rather than County jurisdiction, but added to local concerns about how solar development affected the community.

The nine-person Solar Workgroup included County Board and Planning Commission members, agricultural representatives, solar developers, and landowners (one of whom lived next to a proposed solar farm). The workgroup met six times over five months. Issues discussed included:

- which zoning districts were appropriate for allowing solar farms,
- what type of regulatory permit was appropriate,
- stormwater management and risks,
- agricultural protection,
- conflicts with other land uses (particularly residential),
- conflicts or synergies with natural resources (woodland, wetland, shoreland),
- financial guarantees, and
- development standards (screening, setbacks, location of equipment, fencing), and other topics.



The Workgroup's careful review outside the context of a specific proposal allowed them to assess what was working, what needed change, and how to achieve the change. In many instances, the workgroup determined that the County had sufficient processes or standards in place to allow the Planning Commission and County Board to set appropriate conditional use permit standards. For instance, the County already had standards that addressed fencing, setbacks, screening, and noxious weeds (in ordinance sections separate from the solar ordinance).

The Workgroup recommended expanding the areas where solar farms are allowed to include solar farms as a conditional use in the "urban expansion" district, the areas around cities reserved for annexation and urban development. Such areas are both well suited for solar development (located near electric loads on the grid) and have significant potential conflicts (displacing housing or commercial development and making infrastructure extensions more difficult).

In a groundbreaking recommendation, the Workgroup recommended that the County require all solar farms and gardens to meet Minnesota's "beneficial habitat" standard, legislatively created in 2014. The standard defines how a solar development project can be certified as pollinator habitat by using appropriate seed mixes and maintenance practices for ground cover under and around the solar arrays. Stearns acknowledged that such perennial habitat improves water quality through increased infiltration, determining the solar arrays would not count as impervious surface for stormwater management.

Lessons Learned

The stakeholder driven process, conducted outside the context of a specific development proposal, allowed measured evaluation and discussion of issues, and emphasized the County's adopted policy goals rather than trying to move forward (or block) a specific proposal. Moreover, conducting the discussion outside the regulatory process offered the opportunity for frank discussion and consideration of alternatives that might be off the table in a specific development proposal. Finally, stakeholders were able to explore how the County's existing regulatory standards worked, and frequently discovered that existing standards were sufficient to address many of the concerns that had been raised by stakeholders.

Advice from Stearns County's Land Use Division Supervisor:

It is important to understand the political climate in your local government as it relates to green energy. To make the issue more concrete, offer a solar field day for local officials and visit a solar farm near your community. Remember that laws and technology will continue to change, so be open to amending your ordinance. For the application process, you should require a complete application and detailed site plan, while also ensuring that your forms and procedures are easy for developers to utilize.

Evolving markets require evolving regulations: Stearns

County developed the first solar farm ordinance in the upper Midwest, and was already well positioned for appropriate solar development when the solar garden legislation passed in 2013. However, both solar farm designs and public reaction to solar farms changed over the next few years, and the County found that it needed to modify its regulations to meet new concerns and issues.

Importance of integration with existing standards: Stearns County's existing ordinance already had provisions regarding screening, fencing, setbacks, township/county collaboration, noxious weeds, and farmland protection. A careful examination of these existing standards by the workgroup determined that some existing standards were adequate, and that solar development posed few new risks or concerns that justified changes. Some changes were made, such as setbacks from the property line and from dwelling units. Explicit ties between the solar standards and other sections of the ordinance were warranted to alert the users (staff, developers, Commission, Board) of the full set of applicable regulations.

Treat solar development as development: A new type of development may raise concerns that are just as likely to be found with existing development forms, but that community members have adapted to. Some of the objections to solar farm projects, such as trees being removed, are consequences of most forms of development. The question evaluated by the workgroup was; is there something about solar development that justifies a different standard than already used for housing or commercial development?

Regulation should ensure capture of co-benefits: The Stearns County Workgroup discussed the issue of water quality risks of solar development (stormwater) and the opportunities of using solar farm development to create pollinator habitat in agricultural areas. The County had been including pollinator habitat as a condition for a solar farm CUP, and determined that this was likely to continue to be a routine component of solar development. The County also recognized that a farm field developed as a solar farm would have a net positive impact on water quality from the site. Thus the new ordinance



adopted both a “beneficial habitat” requirement and a standard that removed solar collectors from the impervious surface calculation of the county’s stormwater ordinance.

Benefits and Outlook

As noted above, Stearns County made a unique decision to include a pollinator habitat requirement in their solar ordinance. The co-benefits of this policy include water filtration and management, and supporting pollinators that are integral to the ecosystem. As solar development continues to increase in Stearns County, so will the amount of beneficial habitat.

Stearns County is continuing its commitment to increasing solar development by being part of the SolSmart program. SolSmart is a national technical assistance program funded by the U.S. Department of Energy SunShot Initiative. Communities submit a letter of intention, or “solar statement” to join, then they complete a set of solar best practices to receive recognition at a bronze, silver, or gold level. Stearns County is well on its way to becoming recognized at the silver level; less than ten counties in the nation have currently earned this designation.