

August 10, 2017

Daniel Wolf
Executive Secretary
Minnesota Public Utilities Commission
121 7th Place East, Suite 350
St. Paul, MN 55101-2147

RE: In the Matter of the Aurora Distributed Solar, LLC Site Permit for the 100 MW Solar Energy Project
Located at Multiple Facilities in Minnesota
Docket No. E-6928/GS-14-515

Dear Mr. Wolf,

Attached are comments and recommendations of Department of Commerce, Energy Environmental Review and Analysis (EERA) staff in the above matter.

These comments are in response to the Commission's Notice of Comment Period issued July 13, 2017, in the above matter, and address the adequacy of the Agricultural Impact Mitigation Plan and whether the site permit should be amended.

Correspondence should be addressed to:

Adam Sotirakopoulos
Aurora Distributed Solar, LLC
Enel Green Power North America, Inc.
One Tech Drive, Suite 220,
Andover, MA 01810

These comments are based on EERA staff's review of the existing site permit and Agricultural Impact Mitigation Plan and the record to date. Staff is available to answer any questions the Commission may have.

14-515 – Permit Modification
August 10, 2017

Sincerely,

A handwritten signature in cursive script that reads "Suzanne Steinhauer". The signature is written in black ink and is positioned above the typed name and contact information.

Suzanne Steinhauer, Environmental Review Manager
Energy Environmental Review and Analysis
(651) 539-1843 | suzanne.steinhauer@state.mn.us

BEFORE THE MINNESOTA PUBLIC UTILITIES COMMISSION

COMMENTS AND RECOMMENDATIONS OF MINNESOTA DEPARTMENT OF COMMERCE ENERGY ENVIRONMENTAL REVIEW AND ANALYSIS

DOCKET No. E-6928/GS-14-515

Date: August 10, 2017

EERA Staff: Suzanne Steinhauer.....651-539-1843

In the Matter of the Site Permit Application for the 100 MW Aurora Distributed Solar Energy Project at Multiple Facilities in Minnesota

Issues Addressed: These comments address the adequacy of the Agricultural Impact Mitigation Plan and whether the site permit should be amended.

Additional documents and information can be found on eDockets:

<https://www.edockets.state.mn.us/EFiling/search.jsp> (14-515) and on the Department's website: <http://mn.gov/commerce/energyfacilities/Docket.html?Id=33924>.

This document can be made available in alternative formats (i.e. large print or audio) by calling 651-539-1530 (voice).

Introduction and Background

On June 30, 2015, the Commission issued a site permit to Aurora Distributed Solar, LLC (Aurora) to construct and operate distributed photovoltaic solar energy generating systems and associated facilities totaling up to 100 megawatts (MW) at up to 21 facilities in 15 counties (Project).¹ Construction activities started in earnest in May 2016. Aurora has constructed and is operating 16 sites.²

¹ Order Issuing a Site Permit As Amended, June 30, 2015; Site Permit for Construction and Operation of a Distributed Photovoltaic Solar Electric Generating System Consisting of Multiple Sites in Multiple Counties Issued to Aurora Distributed Solar, LLC, June 30, 2015, Docket No. E-6928/GS-14-515, eDockets Number [20156-111966-01](#) [hereinafter Site Permit].

² Aurora, Response to IR1-6, May 15, 2017, eDocket Number: [20175-131941-01](#)

Throughout the permitting process, Aurora characterized the development of solar facilities as a temporary land use of up to 25 years. Because most of the sites are located on agricultural land, the permit required Aurora to develop an Agricultural Impact Mitigation Plan (AIMP) identifying the measures used during construction and operation of the facility that would allow the site restoration to agricultural use following a retirement of the site. Although the permit did not require the retention of an independent third-party inspector, as did later permits for the Marshall and North Star solar projects, the AIMP required Aurora to hire an independent third-party Agricultural Monitor.

On July 13, 2017, the Commission issued a notice requesting comments on four issues:³

- Is the Agricultural Impact Mitigation Plan and Vegetation Management Plan sufficient or should it be modified?
- Should the Commission modify the site permit to contract for inspection services as part of the terms and conditions of the Site Permit in accordance with Minn. Rule 7854.1300 [sic]? If so, Staff proposes the following language:
 - Independent Inspector: The Permittee shall retain an independent third-party inspector. The selection of the inspector and scope of the inspection effort shall be approved by the Department of Commerce and Commission's Executive Secretary. The inspector shall monitor the construction and restoration process and ensure that the project conforms to the site permit terms, conditions, and the specifications outlined in the record. The inspector shall file reports at 30-day intervals with the Commission addressing compliance during construction and restoration.
- Should the Commission amend the permit to limit the sites to the 16 which proceeded with construction?
- Should the Commission take any other action in accordance with Minn. Rule 7854.1300 [sic], including other amendments or revocation of the Aurora Site Permit?

EERA Staff Analysis and Comments

Department of Commerce, Energy Environmental Review and Analysis (EERA) staff offers the following analysis and comments on the issues set forth in the Commission's notice of July 13, 2017.

AIMP Modifications

Section 6.4 of the site permit requires that Aurora develop an AIMP. The AIMP details measures to be taken during construction and operation of the facility to ensure that the site maintains viability as an agricultural site after decommissioning. The AIMP addresses many of the conditions of the site permit (e.g. topsoil preservation, maintenance of drain tile, reduction of soil compaction and rutting,

³ Notice of Comment Period on the Aurora Solar Project, July 13, 2017, eDocket ID: [20177-133843-01](#). On July 26, 2017, the Commission issued an errata, eDocket ID: [20177-134265-01](#), noting that the July 13, 2017, notice incorrectly referred Minn. Rule 7854.4900 and 7850.5100, and should instead reference Minn. Rule 7850.4900 and Minn. Rule 7850.5100.

and removal of construction debris), but provides additional detail about how impacts are to be minimized.

Following review of the AIMP, EERA staff believes that the enforcement and drain tile sections of the AIMP are areas where revisions are appropriate, either for the Aurora AIMP as the project moves into the restoration phase or for future AIMPs.

Enforcement Mechanism

As with other AIMPs, enforcement of the provisions of the Aurora AIMP is triggered by landowner complaints. In linear facilities, such as pipelines or transmission line, the permittee typically obtains easements along the length of the route from private property owners to use a strip of property for construction and maintenance of the facility. Private landowners continue to own the land and are allowed to use the easement for certain purposes that don't interfere with operation of the energy facility. Because the landowner continues to use the land, a violation of the provisions of the AIMP (e.g. failure to segregate topsoil and subsoil, uncorrected soil compaction, erosion, etc.) will often create a hardship for the landowner, and the landowner seeks redress for the violation through the AIMP.

In the case of Aurora, however, the sites are either owned by an Aurora affiliate or leased with the intent of using the entire area as a solar site. As Aurora, or an affiliate, either owns the parcel outright or has the use of the entire parcel, the trigger for action is less clear. Several provisions of the AIMP are either determined by the landowner (e.g. use of herbicides, reporting of damages, disposition of excess soil or rocks) or negotiated between Aurora and the landowner (e.g. drain tile repair, soil decompaction). Section 4.3 of the AIMP outlines procedures for determination of damages and compensation. Under this section the landowner must report damages and request redress.

Under the AIMP, overall environmental monitoring, including adherence to the AIMP, is provided through the Health, Safety, and Environmental Quality Program of Enel North America (Aurora's parent company).

To some degree, the Agricultural Monitor's reporting has initiated action by Aurora or its contractors to correct damage and change construction practices to prevent future damage. It is unclear how effective Aurora's internal environmental monitors were in ensuring adherence to the provisions of the AIMP.

EERA staff recommends that the AIMP be amended to include the role of an independent third-party inspector (addressed below) and address the relative responsibilities and reporting requirements for each inspector.

The AIMP requires that the Agricultural Monitor remain engaged through post-construction stabilization of the re-vegetated sites. EERA staff believes that the continued engagement of the Agricultural Monitor, and their coordination with an independent third-party inspector, through at least this season of restoration is important to ensuring that the provisions of the AIMP are followed.

For future permits, EERA staff recommends that the role of Environmental Monitor in the AIMP be designated as an independent third party. This could be the same party as the independent third-party inspector discussed below. Additionally, EERA staff recommends that ownership of the site be identified during the record and that future AIMPs be written to ensure an appropriate enforcement mechanism to ensure that the provisions of the AIMP are followed.

Drain Tile

The AIMP generally addressed the potential for drain tile damage during construction. The plan relied primarily on landowner identification of existing drain tile. Aurora made some attempt to identify drain tile, but the methods for identifying the location were not identified in the AIMP

In the permitting proceeding for the Marshall Solar Project, nearby landowners identified the potential for tile damage. Consequently, the AIMP for the Marshall Solar project provided relatively greater detail on identification of the existing tile system through use of a local agricultural drain tile contractor.⁴

It appears that given the drainage issues at several sites, Aurora has done additional work to understand the drainage of their sites. EERA staff believes that most of the impacts to site drainage were the result from construction activities, and it unlikely that restoration activities would result in additional damage. Given these factors, EERA does not believe that revision of the sections of the AIMP related to drain tile at this time for this project would be useful.

Looking forward, EERA staff recommends that future AIMPs provide detailed information on drain tile location and how the project design and construction will avoid impacts to drain tile to the extent possible.

Independent Inspector Permit Amendment

The Aurora site permit did not require an independent third-party inspector reporting to the Commission on all aspects of the project's construction and restoration. However, later issued site permits for the Marshall and North Star solar facilities require the permittee to retain an independent third-party inspector to ensure compliance with all aspects the site permit.⁵ As discussed above, the AIMP does provide for an independent third party Agricultural Environmental Monitor to provide third party review of the AIMP through construction and post-construction stabilization. Also outlined in the AIMP, Aurora designated staff from Enel's Health, Safety, and Environmental Quality Program as Environmental Monitors to ensure compliance with provisions of the AIMP. Although not officially delegated, it appears that Enel designated specific employees to be responsible for adherence to the conditions of the site permit and to other permits required for construction.

⁴ Marshall Solar, Agricultural Impact Mitigation Plan/Vegetation Management Plan, April 2016, eDocket ID: [20164-119991-04](#)

⁵ Marshall Solar Site Permit, May 5, 2016, eDocket ID: [20165-121073-01](#), see Section 5.3; Commission, Order Denying Reconsideration of Site Permit, April 6, 2016, eDocket ID: [20165-121073-01](#) North Star Solar Site Permit, February 16, 2016, [20162-118336-01](#)

Despite the various inspection and monitoring functions,⁶ the project appears have suffered from ongoing construction issues. Reports from the independent Agricultural Monitor and weekly tracking reports filed by Aurora indicate that although the independent Agricultural Monitor generally conducted their inspections with, and communicated the results to, project managers from Enel and the contractor, resolution of identified issues was inconsistent and often delayed.

EERA staff believes it appropriate to elevate the role of environmental inspection to a permit condition, and supports a permit amendment requiring Aurora to retain an independent third-party inspector. Staff from the Department of Commerce and the Commission's would review the inspector's qualifications to assure independence and appropriate experience. EERA staff believes that the text proposed in the notice is generally consistent with the requirement in other solar permits.

Although the text proposed in the notice is generally consistent with the requirements in other solar permits, EERA staff notes that both the Marshall and North Star permits direct the inspector to file monthly reports during construction and the first 60 days of operation, while the proposed text directs monthly reports during construction and restoration. Although Aurora plans to finish the final seeding this season, the native vegetation is likely to take several years to fully establish. Section 5.2 of the AIMP does require Aurora to provide an annual status report on the re-vegetation of all sites. EERA staff is unclear on the relative benefit of monthly status reports following the end of this growing season, and recommends that the requirement identify an appropriate termination of the monthly reporting requirement, perhaps at the point where Aurora files a Notice of Termination (NOT) for the National Pollutant Discharge Elimination System (NPDES) construction permit. EERA staff proposes the following amendment to Commission staff's text:

- Independent Inspector: The Permittee shall retain an independent third-party inspector. The selection of the inspector and scope of the inspection effort shall be approved by the Department of Commerce and Commission's Executive Secretary. The inspector shall monitor the construction and restoration process and ensure that the project conforms to the site permit terms, conditions, and the specifications outlined in the record. The inspector shall file reports at 30-day intervals with the Commission addressing compliance during construction and ~~restoration~~ through the Permittee's submission of the Notice of Termination of the National Pollutant Discharge Elimination System construction permit at all sites.

Based on Aurora's response to recent Information Requests, the NOT would not be filed until soil-disturbing activities are complete and soils are stabilized with a perennial cover of 70 percent of the expected final growth density, or some other equivalent means to prevent erosion.

Number of Sites

EERA staff supports amending the permit to cover only the 16 sites constructed by Aurora and currently in operation in order to clarify the extent of the Project. The record is clear that not all of

⁶ See Aurora's *Environmental Supplemental Information* filing, September 13, 2016, eDockets ID: [20169-124832-01](#)

the sites reviewed would be necessary to meet the requirements of the PPA between Aurora and Xcel. Aurora originally proposed 24 sites for consideration. Of the 21 sites identified in the site permit, Aurora developed sixteen sites (Albany, Annandale, Atwater, Chisago, Dodge Center, Eastwood, Hastings, Lake Emily, Lake Pulaski, Lawrence Creek, Montrose, Paynesville, Pine Island, Waseca, West Faribault, West Waconia). The Brooten, Fiesta City, Lester Prairie, Mayhew Lake, and Scandia sites were not developed.

EERA Staff proposes technical amendments to the Cover Sheet and Sections 1.0, 2.0, 2.1, and 3.0 of the site permit to clarify the extent of the Project. In instances where the amendments require the substitution of numbers, the text is shown below with strikeout and underline. Sections 2.1 and 3.0 include tables identifying specific sites, rather than including the entire table; rather than including the complete tables, the comments below identify which sites should be removed. EERA staff also recommends that the amendments to the permit include only current site maps of the 16 constructed sites.

Cover Sheet:

The Permittee is authorized by this site permit to construct and operate distributed photovoltaic solar energy generating systems and associated facilities totaling up to 100 megawatts alternating current nameplate capacity, to be located at up to ~~24~~ 16 facilities in ~~15~~ 12 counties.

1.0 SITE PERMIT

The Minnesota Public Utilities Commission (Commission) hereby issues this site permit to Aurora Distributed Solar, LLC (Permittee) pursuant to Minnesota Statutes Chapter 216E and Minnesota Rules Chapter 7850. This permit authorizes Permittee to construct distributed photovoltaic (PV) solar energy generating systems and associated facilities totaling up to 100 megawatts (MW) alternating current (AC) nameplate capacity, to be located at up to ~~24~~ 16 facilities (each a Facility, together, Facilities or the Project) on up to ~~24~~ 16 sites interconnected to Northern States Power Company d/b/a Xcel Energy (Xcel Energy) distribution systems, and as identified in the attached site permit maps, hereby incorporated into this document. The number, combination, and capacity of the individual Facilities which the Permittee selects for construction will depend on a number of factors, including site-specific conditions, engineering studies, environmental survey results, and interconnection details. The photovoltaic solar energy generating systems and associated facilities shall be built within the sites identified in this permit and as portrayed on the official site maps, and in compliance with the conditions specified in this permit.

2.0 PROJECT DESCRIPTION

The Project consists of distributed PV power plants to be located at up to ~~24~~ 16 Facilities on up to ~~24~~ 16 solar sites serving Xcel Energy loads. The distributed solar Facilities range in size from ~~1.5-4.0~~ 4.0 MW to 10.0 MW with a combined nominal nameplate capacity of approximately 100 MW alternating current. The Project's primary components include PV modules mounted on a linear axis tracking system and a centralized inverter(s). Associated facilities include electrical

cables, conduit, electrical cabinets, switchgears, step-up transformers, SCADA systems, metering equipment, operations and maintenance (O&M) areas and internal access roads. Each Facility will be fenced around the components and gated at the access point.

2.1 Project Ownership

The Permittee is expected to continue to own the Project after commercial operation. However, due to the distributed locations of the Project solar facilities and need to satisfy the requirements of the investment tax credit, a federal tax credit available to taxpayers pursuant to the Internal Revenue Code, the Permittee has organized a separate limited liability company (special purpose vehicle or SPV) for each solar facility, which will serve as the investment entity for the tax equity investor. Aurora Distributed Solar, LLC, acting on behalf of itself and each SPV, is the permittee for the Project. The SPVs and related solar sites are listed below.

Remove references in the table to the Brooten, Fiesta City, Lester Prairie, Mayhew Lake, and Scandia facilities.

3.0 DESIGNATED SITES

The Project includes construction of up to ~~21~~ 16 Facilities on up to ~~21~~ 16 sites within ~~15~~ 12 counties across Minnesota, as set forth in more detail below:

Remove references in the table to the Brooten, Fiesta City, Lester Prairie, Mayhew Lake, and Scandia facilities.

Additionally. EERA staff recommends that the maps attached to the site permit be updated to include existing site plans for only the 16 constructed sites.

EERA Staff Recommendation

EERA staff recommends that:

- The Commission amend the site permit to require the retention of an independent third-party inspector,
- The Commission amend the permit to include only the 16 constructed sites, and.
- The AIMP for the Aurora project be revised to include the role of an independent third-party inspector.