

Minnesota Public Utilities Commission
Staff Briefing Papers

Meeting Date: May 28, 2015Agenda Item * 3

Company: Aurora Distributed Solar, LLC

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

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

- Issues:
1. Should the Commission find that the environmental assessment is complete?
 2. Should the Commission adopt the administrative law judge’s Findings of Fact, Conclusions of Law, and Recommendation?
 3. Should the Commission grant a site permit for the 100 MW Aurora Distributed Solar Energy Project?

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Relevant Documents

Minn. Stat. § 216E – Electric Power Facility Permits
Minn. R. 7850 – Site or Route Permit; Power Plant or Line

Aurora Distributed Solar, LLC – Aurora Site Permit Application	July 9, 2014
Aurora Distributed Solar, LLC – Facility Fact Sheets No. 1 of 2	August 6, 2014
Aurora Distributed Solar, LLC – Facility Fact Sheets No. 2 of 2	August 6, 2014
Aurora Distributed Solar, LLC – Supplemental Information	August 21, 2014
Commission Order Finding Application Complete	September 24, 2014
OAH Notice and Order for Hearing.....	November 17, 2014
EA Scoping Decision.....	December 5, 2014
Final EA	January 30, 2015
Administrative Law Judge Report	April 9, 2015
DOC EERA Exceptions to ALJ Report.....	April 23, 2015
Aurora Solar, LLC Exceptions to ALJ Report.....	April 23, 2015

Attached Documents

This document can be made available in alternative formats (i.e., large print or audio) by calling 651-296-0406 (voice). Persons with hearing or speech disabilities may call us through their preferred Telecommunications Relay Service.

Attachment A – Exceptions Table
Attachment 1 – Preliminary Site Plans
Table 1 – List of Project Locations

The attached materials are work papers of the Minnesota Public Utilities Commission (Commission) staff. They are intended for use by the Commission and are based upon information already in the record unless noted otherwise.

I. STATEMENT OF THE ISSUES

- Should the Commission find that the environmental assessment is complete?
- Should the Commission adopt the administrative law judge's Findings of Fact, Conclusions of Law, and Recommendation?
- Should the Commission grant a site permit for the 100 MW Aurora Distributed Solar Energy Project?

II. PROJECT OVERVIEW

Aurora Distributed Solar, LLC (Aurora) has proposed to construct a distributed solar project to provide solar energy to meet Xcel Energy's needs for additional capacity in the 2017 to 2019 timeframe. As a result of a competitive resource acquisition process to select resources to meet Xcel Energy's identified need, the Commission approved a power purchase agreement for the project.

The project, as proposed, would include installation of photovoltaic (PV) modules mounted on a linear axis tracking system and a centralized inverter or inverters at each facility. Other components required to construct and operate the facilities include electrical cables, conduit, electrical cabinets, switchgears, step-up transformers, SCADA systems and metering equipment.

Each facility would connect to a separate Xcel Energy substation at the distribution level which is intended to increase reliability, minimize generation losses associated with longer transmission interconnections, and minimize lead-times and interconnection costs compared to transmission interconnections.

Aurora has identified 24 facility locations, shown in Table 1, where the necessary PV equipment and associated facilities would potentially be installed:

The total nameplate capacity of all of the proposed facilities is 130.5 megawatts (MW). Aurora stated that it does not anticipate constructing at all 24 locations, but will determine the final number and combination of facilities, up to 100 MW, to be constructed during the final design of the project. Final design will be informed by site-specific conditions determined through engineering studies, environmental survey results, and interconnections details. Preliminary Design Site Plans were submitted with the original application as Appendix D – Part 1¹ and Part 2.²

The Aurora Project is scheduled to be placed in service by the end of 2016 with the flexibility to bring a portion online in 2015 to meet demand and construction schedules.

The Project will provide 71 MW of MISO-accredited capacity and supply Xcel Energy with approximately 200,000 megawatt hours (MWh) of renewable energy annually.

¹ Appendix D, Preliminary Design, Part 1, Document ID [20147-101312-08](#).

² Appendix D, Preliminary Design, Part 2, Document ID [20147-101312-09](#).

III. STATUTES AND RULES

Statutes

Minnesota Statute 216E.03, subd. 1 provides that no person may construct a large electric generating plant without a Site Permit from the Commission. A large electric power generating plant is defined as electric power generating equipment and associated facilities designed for or capable of operation at a capacity of 50,000 kilowatts or more (Minnesota Statute 216E.01, subd. 5).

In the 2014 legislative session, the legislature amended Minnesota Statutes Chapter 216E to provide a process to determine whether a combination of solar energy generating systems meets the definition of a large electric power generating plant. On June 27, 2014, Aurora submitted information to the Department requesting a size determination for the proposed project. On July 29, 2014, the Department informed Aurora that, based on the information supplied, the proposed project was a 100 MW large electric power generating plant and was subject to the Commission's siting authority under Minnesota Statute 216E. As a large electric power generating plant, a Site Permit is required prior to construction.

The Application was submitted pursuant to the provisions of the Alternative Permitting Process outlined in Minn. Rules 7850.2800-3900.³

While the proposed project meets the definition of a large energy facility requiring a Certificate of Need under Minnesota Statute Section 216B.2421, subd. 2, the project is exempt from Certificate of Need requirement because it was selected by the Commission through a competitive resource acquisition process to meet Xcel Energy's electricity generation needs, as provided for under Minnesota Statute Section 216B.2422 subd. 5(b).⁴

Rules

Minn. Rules, Chapter 7850, Site or Route Permit; Power Plant or Line - establish the requirements for the processing of permit applications by the Public Utilities Commission for large electric power generating plants and high voltage transmission lines.

³ The legislature also amended the types of projects that qualify for review under the alternative permitting process under Minnesota Statute 216E.04 to include large electric power generating plants powered by solar energy. As a large electric power generating plant powered by solar energy, the Aurora Distributed Solar Project qualifies for review under the alternative permitting process. Under Minnesota Statute 216E.04, subd. 1, the Applicant has the option of selecting review under the alternative process outlined in Minnesota Statute 216E.04 rather than the procedures for a full process under Minnesota Statute 216E.03. Aurora has chosen to follow the alternative permitting process.

⁴ Order Directing Xcel to Negotiate Draft Agreements, Docket# E002/CN-12-1240, Document ID [20145-99797-01](#).

IV. PROCEDURAL HISTORY

A. Site Permit Application

On July 9, 2014, Aurora submitted a site permit application under the alternative permitting process for the proposed 100 MW Aurora Distributed Solar Project.

On August 6 and 21, 2014, Aurora filed supplemental information to the site permit application.

On September 24, 2014, the Commission issued an Order Finding Application Complete, Extending Time for Final Decision, Referring Application to the Office of Administrative Hearings, and Initiating the Alternative Review Process.⁵

On January 30, 2015, the Department of Commerce, EERA issued its Environmental Assessment prepared for this project.⁶

On April 9, 2015, the Administrative Law Judge issued a Report containing Findings of Fact, Conclusions of Law, and Recommendations.⁷

B. Environmental Assessment and Public Meetings

The Department of Commerce (Department) is responsible for preparing an environmental assessment (EA) for large power generating projects being reviewed under the alternative permitting process. The EA is a written document that describes the human and environmental impacts of the power plant project (and selected alternative sites) and methods to mitigate such impacts.

The Deputy Commissioner of the Department of Commerce determines the scope of the EA. The EA must be completed and made available prior to the public hearing.

Commission staff and EERA staff jointly held six public information and scoping meetings at locations proximate to the 24 potential facility locations identified by Aurora. The meetings were conducted between September 9 and 17, 2014 in Montrose, Lindstrom, Marshall, St. Paul, Paynesville and Faribault. A comment period on the EA scope was open until September 30, 2014.

⁵ Commission Order, eDocket Document ID: [201410-103827-01](#).

⁶ DOC EERA Environmental Assessment, eDocket ID: [20151-106909-01](#).

⁷ ALJ Report, eDocket ID: [20154-109110-01](#).

On January 30th, 2015 the EERA filed the Environmental Assessment for the Project. EERA issued the required notices of availability of the EA pursuant to Minn. R. 7850.2500, subp. 9.

C. Office of Administrative Hearings - Public Hearing

Administrative Law Judge Barbara J. Case presided over the following public hearings: February 9, 2015, in Chisago City, Minnesota; February 10, 2015, in Pipestone and Montevideo, Minnesota; February 11, 2015, in Faribault, Minnesota; February 12, 2015, in Montrose and Paynesville, Minnesota. At each hearing, the Administrative Law Judge provided an opportunity for members of the public to ask questions or comment on the Project verbally, or to submit questions and comments in writing. Public comments on the Project were accepted by the Administrative Law Judge until February 24, 2015.

The hearing procedures included a brief presentation of the proposed Project; an explanation of the process to be followed; introduction of documents to be included in the record; and an opportunity for any person to present and to ask questions of the applicant, EERA staff, and commission staff. Approximately 160 members of the public attended the public hearings. Each hearing continued until all persons had the opportunity to offer testimony and ask questions. A court reporter was present to transcribe the public hearings.

Individuals who testified in support of the Project generally focused their comments on the benefits of renewable energy and distributed energy, including the minimal environmental impacts. Some individuals noted the efforts of Aurora to work with and address the concerns of local governments. Landowners who may be compensated for the sale or lease of their land for the Project also offered positive testimony regarding Aurora.

Individuals who testified in opposition to the Project generally focused their comments on the visual aesthetics of the Project, the potential impact on nearby property values, and the potential impact on native wildlife and vegetation.

Some individuals in attendance at the public hearings asked questions of the panel without taking a specific position on the Project.

Six written comments were offered and received as exhibits at the public hearings. The written comments covered similar topics as the oral comments, both in support and opposition of the Project.

V. REPORT OF THE ADMINISTRATIVE LAW JUDGE

On April 9, 2015, the Administrative Law Judge (ALJ) filed her Findings of Fact, Conclusions of Law and Recommendations (ALJ Report).⁸

The ALJ Report addressed the application for a site permit by Aurora Distributed Solar, LLC to construct multiple PV solar-energy generating systems and associated facilities totaling 100 MW at up to 24 individual solar facilities ranging in size from 1.5 MW to 10 MW in 16 counties throughout southern and central Minnesota.

The ALJ Report included 265 findings of fact, including a summary of the public comments and government agency participation (Findings 60-113); 21 conclusions of law; and 4 recommendations.

The ALJ Report documented that the procedural requirements were followed, and presented findings of each of the decision criteria under Minnesota Statute 216E.03, subd. 7 and Minn. R. 7850.4100 (2013). The finding of facts included identification of the applicant and other parties to the proceeding; procedural requirements that were conducted; a description of the proposed Project; the position of the parties and participants; facts related to the certificate of need exemption; facts related to the site permit proceeding including discussion of alternative sites considered; the identification of public and government agency participation in the proceedings; and the facts related to the adequacy of the EA.

The ALJ made the following recommendations:

1. That the Commission conclude that all relevant statutory and rule criteria necessary to obtain a Site Permit have been satisfied, and there are no statutory or other requirements that preclude granting a Site Permit based on the record.
2. The Commission should grant Aurora a Site Permit for the 100 MW LEPGP for the Aurora Distributed Solar Project in multiple counties in Minnesota.
3. The Site Permit template conditions should be incorporated into the Site Permit, unless modified herein.
4. Aurora should be required to take those actions necessary to implement the Commission's orders in this proceeding.

VI. EXCEPTIONS AND COMMENTS

Consistent with Minn. R. 7829.2700, exceptions to the ALJ Report were filed by the Applicant and the Department of Commerce, Energy Environmental Review and Analysis (EERA) within 15 days of the filing of the report.

⁸ ALJ Report, Document ID [20154-109110-01](#).

A. Aurora Distributed Solar, LLC Exceptions

Aurora agreed with the ALJ's Report and recommended the Commission adopt the report, subject to two exceptions related to siting within shoreland areas and the timing of certain pre-construction compliance filings.

1. Siting within Shoreland Areas

Aurora took exception to the ALJ's Report finding that required the Project to follow local shoreland ordinances as adopted by the ALJ with a provision in the Site Permit for potential exceptions on a location-by-location basis. Aurora appreciated the ALJ's conclusion that a blanket prohibition of construction in shoreland areas is not supported by the record and that the Project is an allowable use within shoreland areas. The Applicant doesn't agree that the Project should be subject to any local ordinances because that would impede the Project development and potentially prohibit some site from being completely developed. Aurora contested that compliance with local ordinances would impede the efficient use of resources. Having the ability to request an exception is not a viable solution because the local permitting authority might deem the Project incompatible with local ordinances.

Following the issuance of the ALJ's Report, Aurora and DOC-EERA staff reached an agreement on a revised permit condition that acknowledges that the Project is an allowable use within a shoreland, but that the Project should abide by state-level setbacks and vegetative clearing restrictions typically required for development activities within shorelands.

Aurora and EERA have agreed that application of the State's model Shoreland Ordinance provides a reasonable compromise.

Aurora proposed that the Commission require the use of MDNR's minimum shoreland standards⁹; and that Aurora demonstrate compliance with those standards for the Annandale, Chisago, Lake Emily, Lake Pulaski, Pine Island, West Waconia and Zumbrota facilities when it submits its site plans in accordance with Section 6.1 of the site permit.

2. Agricultural Impact Mitigation Plan and Vegetation Management Plan Compliance Filings

In response to DOC-EERA's recommendation of the addition of Sections 6.4 and 6.5 to the Site Permit, Aurora proposed certain changes to the compliance filing deadline for these two requirements.

⁹ Minn. R. 6120.3300

Section 6.4 titled Agricultural Impact Mitigation Plan requires the Applicant to develop in cooperation with Minnesota Department of Agriculture an Agricultural Impact Mitigation Plan (AIMP) to identify measures required in order to minimize potential impacts to agricultural uses of the land upon decommissioning of the Project.

Section 6.5 titled Vegetation Management Plan (VMP) requires joint development by the Applicant in cooperation with the DNR of a Vegetation Management Plan to minimize the clearing of trees, prevent the introduction of noxious weeds and invasive species and re-vegetate disturbed areas at each facility with appropriate vegetation species and maintain that vegetation throughout the operating life of the Project.

Aurora discovered a discrepancy between the compliance timing requirement to file the Vegetation Management Plan, as proposed by EERA and offered a correction and proposed to file both plans (AIMP and VMP) with the Commission fourteen (14) days prior to submitting the first site plan for any portion of the Project.

B. Department of Commerce Energy Environmental Review and Analysis

On April 23, 2015, DOC EERA filed exceptions to the ALJ Report.¹⁰ Overall, the EERA concluded that the ALJ Report provides a comprehensive analysis of the record evidence and EERA stated their support of the ALJ's recommendation to issue a Site Permit to Aurora.

Most of the EERA's exceptions are minor clarifications with two substantive exceptions related to the Project's compliance with Minnesota's shoreland development regulations and perimeter security fencing.

DOC EERA exceptions provided 1) edits it believed necessary to the ALJ's findings to clarify the record, 2) a discussion of Project compliance with shoreland regulation, and 3) a summary of proposed changes to the site permit. Complete list of EERA exceptions and Site Permit amendments and a staff response to each exception is included as Attachment A to these briefing papers.

1. EERA Comments to OAH

EERA provided comments to the OAH, prior to issuance of the ALJ Report, consistent with the Prehearing Order in this matter¹¹. EERA responded to the comments received during the public comment period, provided comments on the Aurora's proposed Findings of Fact, Conclusion and Order, and provided recommendations on permit conditions and facility locations.

¹⁰ Exceptions to ALJ Report, Document ID [20154-109604-01](#).

¹¹ Exhibit 18 (Office of Administrative Hearings, Prehearing Order).

a) Response to Hearing Comments

The EERA received numerous oral comments during the Public Hearings and also received several written comments from members of the public as well as from state and local government units. Ten persons also submitted comments on the Project through the Commission's Speak Up! Forum. The comments expressed either general statements of support or opposition to the Project.

EERA addressed each of the comments received and provided answers, where appropriate, on a location-by-location basis.¹² The comments included discussions related to the screening of the solar facilities, temporary and permanent equipment storage, decommissioning plans, concerns about the local ordinances and zone control, setbacks, site access, the highest and best use value for some of the proposed sites, planned urban development versus large solar development, city infrastructure investments already made in areas of some proposed sites, agricultural mitigation, vegetation management, wildlife impacts, rare species, and siting within shoreland zones.

b) Recommendations on Facility Locations

The prehearing order requested that EERA's comments include conclusions on the most appropriate locations for the proposed facilities. Aurora proposed the facilities be located at up to 24 sites. The combined capacity of all 24 sites would amount to 130.5 MW (Alternating Current), while Aurora seeks a site permit for a distributed solar facility of up to 100 MW. In other words, not all of the proposed facilities need to be developed to meet the intended purpose of the Project.

The overall goal established in Minnesota Statutes 216E.02, subdivision 1, is to locate large electric power facility in an orderly manner compatible with environmental preservation and efficient use of resources. EERA provided site-specific comments and recommendations regarding each of the 24 sites proposed.

After reviewing the record, EERA came up with a ranking of the 24 sites proposed, and grouped them into three categories: sites where impacts can be addressed with standard mitigation; sites where impacts can be addressed through additional mitigation measures; and sites with additional siting challenges that cannot be mitigated.

1. Sites Where Impacts Can be Addressed with Standard Mitigation

EERA asserted that the record demonstrated that standard mitigation measures would only be needed at 15 locations identified as Category 1 that can be developed in a manner that minimizes adverse human and environmental impacts for the following sites: **Albany, Atwater, Brooten, Eastwood, Fiesta City, Hastings, Lake Emily, Lake Pulaski, Lawrence Creek, Lester Prairie, Montrose, Scandia, Waseca, West Faribault, and West Waconia.** Together these sites total **76.5 MW.**

¹² EERA Comments, Document ID [20153-108079-01](#).

2. Sites Where Impacts Require Additional Mitigation Measures

EERA stated that the record demonstrated that the following four facilities, with a combined proposed generating capacity of **28 MW**, can be constructed and operated with design changes or additional mitigation measures. These Category 2 sites may require additional mitigation measures or may result in a somewhat smaller facility, with a somewhat smaller generating capacity.

- **Chisago**
- **Dodge Center**
- **Paynesville**
- **Pine Island**

3. Sites with Additional Siting Challenges

Finally, EERA indicated that five facilities, representing **22.5 MW**, present even more challenges to successful siting and may have features that cannot be mitigated. For example, in the case of two proposed sites, **Mayhew Lake and Pipestone**, mitigation measures have yet to be determined and may not be able to be adequately mitigated. And four of the proposed facilities, **Annandale, Mayhew Lake, Wyoming, and Zumbrota**, are located in areas that conflict with local planning efforts and zoning requirements and appear to be in conflict with public infrastructure investment to guide growth in these areas.

4. Permit Process

EERA provided a discussion of Minnesota Statutes, section 216E.10 that establishes the preemption of all zoning and land use rules for the purpose of a site or route permit. The Department also discussed Minnesota Statute 216E.03, subd. 7 (a) that directs the commission's site and route determinations be guided by a number of factors:

The commission's site and route permit determinations must be guided by the state's goals to conserve resources, minimize environmental impacts, minimize human settlement and other land use conflicts, and ensure the state's electric energy security through efficient, cost-effective power supply and electric transmission infrastructure.

The final conclusion that EERA reached on Category 3 is that these five locations conflict with the state goal of locating large electric power facilities in an orderly manner compatible with environmental preservation and efficient use of resources and as a result, EERA concluded that these sites should be eliminated from the final selection of sites permitted.

C. Department of Natural Resources Comments

The Minnesota Department of Natural Resources filed comments during the comment period.

1. Wetlands

DNR stated that impacts to wetlands should be minimized at the Atwater and Eastwood sites.

- Atwater – Kandiyohi County: The DNR recommended further minimizing impacts by shifting the graded area out of the wetland and maintaining an upland buffer around the wetland.
- Eastwood – Blue Earth County: The DNR recommended avoiding the “flooded swamp forest” by shifting arrays to the eastern portion of the preliminary development area.

Prior to permitting, the record should clearly identify the site specific wetland impacts based on the current design; and include a discussion of how they will be mitigated.

2. **Vegetation Management**

The DNR commented on the opportunity to manage vegetation at the project sites as restored short-grass prairie or meadows and encouraged the solar developer to plant native seed that contains grasses and flowering forbs that are beneficial to wildlife, including pollinators.

The DNR supported the development of a Vegetation Management Plan in order to formalize measures to minimize disturbance of existing vegetation, control invasive species, and establish beneficial grasses and forbs. The DNR would like to review the VMP and would support a permit condition requiring DNR coordination.

3. **Wildlife Impacts**

The DNR proposed elimination of the barbed wire section of the security fence and instead suggested the use of monofilament cables or barbless wires for the top section of the fence. A barbed wire section at the top could present a danger to deer that could become entangled if they attempt to jump over the fence.

DNR recommended a 25-50 foot setback from highway rights-of-way in order to encourage wildlife to follow the fence line instead of being diverted toward traffic. The DNR recommended implementing the setback at the Lake Emily, Paynesville, Wyoming and Zumbrota facilities because they abut roads with high speeds and volumes of traffic.

The DNR supported a permit condition requiring incidental monitoring and periodic reporting of any wildlife concerns that may arise from the operation of the solar facility so that adaptive management can be discussed with state agencies. Sites in proximity of the federal wildlife lands

(WMAs and WPAs), State Scientific and Natural Areas (SNA) and a Goose Refuge may exhibit greater encounters with wildlife.

4. **Rare Species**

Potential impacts to rare species are identified in the record, along with measures that will be implemented to avoid or minimize disturbance.

The Chisago Site and Wyoming Site are within areas of statewide importance to the Blanding's Turtle, a state-listed threatened species. Blanding's turtles have also been reported in the vicinity of the Scandia Site.

5. **Siting within Shoreland Zones**

The DNR is responsible for establishing, updating and implementing the shoreland zoning, regulated under the Shoreland Management Act. State shoreland rules are implemented through county and city shoreland ordinances, usually through shoreland overlay districts. A shoreland includes the land within 1000 feet of the ordinary high water level (OHWL) for public waters basins and within 300 feet (or outer extent of the floodplain) for public waterways.

The DNR recommended that the Site Permit for the Aurora Project include provisions requiring compliance with all county and city shoreland ordinances because shoreland zoning protects both human settlement and natural resources.

D. Minnesota Department of Agriculture

Minnesota Department of Agriculture identified two concerns related to the environmental impacts of the Aurora Distributed Solar Project: the conversion of productive agricultural land to non-agricultural land use, and damage to the productive capacity of the agricultural land.

Potential impacts to agricultural soils include the mixing together of topsoil and subsoil, and soil compaction, both potentially resulting from construction activities. Of particular concern in this project is the proposed grading of sites discussed in responses to questions 14 and 15 in Appendix C of the Environmental Assessment, which could cause extensive soil mixing and compaction.

MDA indicated that an Agricultural Mitigation Plans (AMP) should be included as a permit condition in order to establish proper mitigation measures for the project.

E. Minnesota Department of Transportation

In their scoping comments, the MnDOT indicated that the Permittee is required to obtain all relevant permits or authorizations from road authorities relating to any electric cables and/or feeder lines that may be proposed to be placed in a public road right-of-way.

MnDOT noted that it does not consider a solar generating project to be a public utility for transportation purposes.

MnDOT allows private parties to place connecting lines across trunk highway rights of way, but does not allow private parties to place such facilities longitudinally along trunk highways. Compliance with MnDOT's Utility Accommodation Policy, and similar policies of other road authorities, should be included as a condition of the site permit.

VII. STAFF DISCUSSION

Based on information from Aurora's application for a site permit; the analysis provided in the EA; public comments, testimony, briefs, and exceptions received in this matter; the ALJ Report; and other evidence in the record, staff provides the following discussion and recommendations.

A. Completeness of the Environmental Assessment

Staff has reviewed the EA and agrees with the ALJ that EERA: (1) conducted an appropriate environmental analysis of the Project for purposes of this Site Permit proceeding; (2) addressed the issues and alternatives raised in scoping; (3) provided responses to the timely and substantive comments received during the Draft EA review process; and (4) prepared the EA in compliance with the procedures in Minn. R. 7850.3700. Staff recommends that the Commission find the Environmental Assessment complete.

B. Administrative Law Judge Report

Based on its review, staff recommends that the Commission adopts the ALJ Report with the exceptions and clarifications proposed by EERA. These exceptions are set out in Attachment A to this paper.

Staff believes the ALJ Report is well reasoned, comprehensive, and thorough. The report documented that the procedural requirements were followed, and presented findings of fact for each of the decision criteria that must be considered for a site permit.¹³

¹³ Minn. Stat. Ch. 216E and Minn. R. Ch. 7850.

The ALJ concluded that Aurora Distributed Solar LLC has satisfied the criteria set forth in all relevant Minnesota statutory and rule criteria for a site permit for the 100 MW Distributed Solar Energy Project and that the Commission should grant a Site Permit.

Staff agrees with the ALJ that the Commission should grant Aurora Distributed Solar LLC a Site Permit to construct the project in multiple counties in Minnesota.

C. Site Permit

Staff has reviewed the record regarding suitability for solar sites development among the 24 proposed sites and agrees with the conclusions and recommendations provided by the Department in its analysis. Commission staff concurs with the EERA proposed ranking of the solar sites and selection for the purpose of choosing sites most suitable for solar development from among the 24 proposed sites, in the order of less impacts created and eliminating the sites that require significant mitigation.

Staff recommends the Commission selects all the sites from category 1. Sites from category 2 should also be selected, with the necessary modifications to mitigate impacts and also by reducing the physical footprint of these four sites, the combined output should be reduced such as the final combined nameplate capacity of the entire project be limited to the 100 MW approved by the Commission in the PPA agreement.¹⁴

If during the final design for the project, unforeseen conditions preclude the development of any particular site that may require selecting another alternate site, that change would constitute a change in the suitability ranking of the sites.

D. Permit Language

Staff agrees with EERA's suggested modifications to the findings of fact, conclusions, and the permit language as proposed by EERA in its Exceptions to the ALJ Report.¹⁵ In addition, staff proposes the deletion of Permit Condition 7.3 (b) that requires daily energy production reporting for each facility. Staff believes this condition would be an excessive burden for the Permittee. Monthly and yearly energy production data should be satisfactory and would match reporting requirements for recent Site Permits issued for wind projects

Staff Note: - The Aurora project is the first solar generation facility to be reviewed and permitted by the Commission under the Power Plant Siting Act and Minnesota Rules 7850. The Aurora

¹⁴ Commission Order Approving Geronimo Wind Energy, LLC PPA with Xcel Energy, Document ID [20152-107070-03](#).

¹⁵ Exceptions to ALJ Report, Document ID [20154-109604-01](#).

project is also a new type of generation facility in the sense of the dispersed nature of the facilities that make up the project. Staff would simply note future solar site permits may have a different structure or design.

COMMISSION DECISION ALTERNATIVES

A. Environmental Assessment

1. Find that the EA meets the requirements of Minn. R. 7850.3700, in that it:
 - Addresses the issues and alternatives raised in scoping;
 - Provides responses to the timely substantive comments received during the draft environmental impact statement review process; and
 - Was prepared in compliance with the procedures in Minn. R. 7850.3700.
2. Take some other action deemed appropriate.

B. Findings of Fact, Conclusions of Law and Recommendations

1. Approve and adopt the ALJ's Findings of Fact, Conclusions of Law and Recommendation for the 100 MW Aurora Distributed Solar Energy Project.
2. Approve and adopt the ALJ's Findings of Fact, Conclusions of Law and Recommendation for the 100 MW Aurora Distributed Solar Energy Project with modifications to Findings of Fact, Conclusions and to permit conditions as proposed by EERA in its Exceptions to the ALJ's Report. Include revisions to findings 37, 38, 39, 43, 102, 135, 140 and 206, delete finding 207 and adopt conclusion 13. Include Site Permit changes to Sections 5.2, 8.7, 14.3 and 14.4.
3. Approve and adopt the ALJ's Findings of Fact, Conclusions of Law and Recommendation for the 100 MW Aurora Distributed Solar Energy Project with modifications proposed by the Applicant. Include revisions to findings 206 and 207, conclusion 13¹⁶, and Site Permit revisions to Sections 5.2, 6.4, 6.5, and 14.3.
4. Approve and adopt the ALJ's Findings of Fact, Conclusions of Law and

¹⁶ Aurora incorrectly identified this conclusion as #14 in its Exceptions filing.

Recommendation for the 100 MW Aurora Distributed Solar Energy Project with modifications to Findings of Fact, Conclusions and to permit conditions as proposed below:

- i. Include EERA's revisions to findings 37, 38, 39, 43, 102, 135, 140 and 206, delete finding 207. Include Site Permit revisions to Sections 5.2, 8,7, 14.3, and 14.4
- ii. Include Aurora's proposed revisions to conclusion 13 and to Site Permit Sections 6.4 and 6.5.
- iii. Delete Permit Condition 7.3 (b) as originally proposed by Commission staff.

C. Large Electric Power Generating Plant Site Permit (LEPGP)

1. Grant Aurora a Site Permit for the 100 MW LEPPG for the Aurora Distributed Solar Project to be constructed at the following Facilities as follows:
 - a. Albany, Atwater, Brooten, Eastwood, Fiesta City, Hastings, Lake Emily, Lake Pulaski, Lawrence Creek, Lester Prairie, Montrose, Scandia, Waseca, West Faribault, and West Waconia to be developed as per the Site Plans submitted in the application.
 - b. Chisago, Dodge Center, Paynesville, and Pine Island with the additional mitigation measures recommended by EERA.
2. Grant Aurora a Site Permit for the 100 MW LEPPG for the Aurora Distributed Solar Project to be constructed at Facilities selected individually by the Commission from among all the 24 proposed sites.
3. Grant Aurora a Site Permit for the 100 MW LEPPG for the Aurora Distributed Solar Project to be constructed at Facilities selected by the Applicant at its choice based on the initial application and the record developed during this proceeding.
4. Do not issue a Site Permit for the 100 MW Aurora Distributed Solar Project.
5. Take some other action deemed appropriate.

D. Authorize staff to modify the proposed Findings of Fact, Site Permit, and other documents as necessary to be consistent with the decisions made by the Commission on this matter.

Staff Recommendation: A1, B4 (i, ii, iii), C1 (a, b), and D.

Attachment A: Staff Recommended Changes to ALJ Report (4/9/15) and Draft Site Permit (3/10/15):

The Site Permit Language used below for editing purposes is from the March 10, 2015 version of the permit as proposed by EERA. There are occasional non-substantive numbering irregularities, like footnotes in various documents that may require correction by the Order writer.

Findings of Fact, Conclusions of Law Modification Table

Finding of Fact (FoF), Conclusion of Law, or Permit Section Number	Entity Requesting Change and Filing Date	Proposed Language	Incorporated by Staff	Staff's Reason for Including or Rejecting
FoF #37	EERA 4/23/15	<p>Findings of Fact:</p> <p>37. The Scoping Decision for the EA was signed by the <u>Deputy Commissioner of the</u> Department of Commerce on December 4, 2014, and filed with the Commission and made available to the public as provided in Minn. R. 7850.3700, subp. 3, on December 5, 2014.⁴⁸</p>	Yes, as modified by EERA	Staff agrees with this clarification, as the Deputy Commissioner of the Department of Commerce is tasked with making the Scoping Decision for the Environmental Assessment as per Minn. R. 7850.2700.
FoF #38	EERA 4/23/15	<p>38. The scope of the EA evaluation is identified as the 24 facility locations proposed by Aurora in the application; no other locations are included. The EA scope also includes <u>anticipates</u> an analysis of the potential development area within 2.5 <u>two</u> miles of each interconnection substation to which the 24 facility locations would interconnect. The scope of the EA for the Project does not include a no-build alternative; issues related to the Project need, size, type or timing; any site alternative not specifically identified in the Scoping Decision; or the manner in which land owners are compensated for the sites.⁴⁹</p>	Yes, as modified by EERA	Staff agrees with this correction, as the EA Scoping Decision on page 4 describes the 2-mile analysis of potential development around each substation.

FoF #39	EERA 4/23/15	39. The EA was filed with the Commission and made available on February 2 <u>January 30</u> , 2015.50 The EA was prepared in accordance with Minn. R. 7850.3700 and the Scoping Decision.	Yes, as corrected by EERA	The date that EERA filed the EA in eDockets was January 30 th , 2015, not February 2.
FoF #43	EERA 4/23/15	43. On February 3, 2015, the DOC-EERA sent copies of the Notice of Environmental Assessment <u>EA</u> to public libraries.54	Yes	Staff takes notice of this correction that copies of the actual EA were distributed to public libraries, not just notice of EA availability.
FoF # 102	EERA 4/23/15	102. The Scoping Decision required the EA to review the relative merits of the facility locations. <u>In response to the request in the Administrative Law Judge’s First Prehearing Order that DOC-EERA provide conclusions on the most appropriate facilities,1</u> The the DOC-EERA grouped the 24 sites proposed in the Site Permit application into three categories: sites where impacts can be addressed with standard mitigation; sites where impacts can be addressed through additional mitigation measures; and sites with additional siting challenges.125 According to the DOC-EERA, additional mitigation measures are necessary at the Chisago site to address issues of public traffic safety. The mitigation measures may minimally impact the design of the facility and its generating capacity.126	Yes	Staff agrees with the clarification. The Department provided a ranking of the facilities suitability for solar development in response to the Prehearing Order. Analysis of the merits of each facility in relation to the siting factors was also performed in Section 7 of the EA, but the ranking of the sites and analysis of the merits of each facility are distinct concepts.
FoF #135	EERA 4/23/15	135. The primary components of a PV solar facility that alter the landscape are solar arrays and perimeter fencing. When PV panels are at a zero degree angle, the panels will be approximately four to six feet off the ground. When panels are at their maximum tilt of 45 degrees, the tops of the panels will be approximately eight to ten feet off the ground. <u>As proposed by Aurora, each</u> Each facility will be enclosed by an eight-foot safety and security fence made up of a seven-foot chain link fence topped by another foot of barbed wire.160	Yes	The final design recommended by the DOC EERA (and incorporated into the permit conditions) does not include barbed wire. This clarifies that the barbed wire design was what was <i>proposed</i> by Aurora (and not what will be required by the permit).

FoF #140	EERA 4/23/15	140. In response to concerns raised by adjacent residents Aurora has proposed landscaping plans for the Atwater, Lake Pulaski, Lawrence Creek, Lester Prairie, Montrose, Pipestone, Wyoming and Zumbrota facilities, which are all proposed sites near existing residential homes.165 Aesthetic impacts for neighboring homeowners will be largely mitigated by the site-specific landscaping plans developed by Aurora for the Atwater, Lake Pulaski, Lawrence Creek, Lester Prairie, Montrose, Wyoming and Zumbrota facilities. <u>A site permit condition requiring that site-specific landscaping plans be developed for each facility is a reasonable method of mitigating visual impact to neighboring homes.</u>	Yes	Staff agrees with EERA’s clarification, as the preliminary landscaping plans filed by Aurora may need further development, in order to mitigate the visual impact to neighboring homes.
FoF #206	EERA 4/23/15	206. As recommended by the MnDNR, a A Site Permit condition requiring compliance with local MnDNR’s <u>minimum standards for development of the shorelands of public waters</u> shoreland ordinances is a reasonable method of assuring the consideration of shorelands. 244	Yes	Staff agrees with the proposed change because of the reasons provided by EERA in its Exceptions comments. Requiring compliance with statewide shoreland development requirements administered by DNR, instead of compliance with local ordinances and allowing the applicant to file for an exception from the local ordinances on a site-specific basis, in cases where compliance with local shoreland ordinances would be impracticable, is a reasonable approach.
FoF #207	EERA 4/23/15	207. [DELETE] The permit should also include a condition providing that if compliance with any specific local shoreland ordinances will be impracticable due to the impact on the Project and Aurora believes there is no feasible and prudent alternative, Aurora may apply to the Commission for an exception to the permit requirement governing shorelands on a location by location basis.	Yes, if 206 is adopted.	Staff agrees that finding 207 becomes superfluous, if modified finding 206 is adopted by the Commission and agrees that no further variance from the basic DNR shoreland regulations should be given to the applicant.

<p>Conclusion # 13</p>	<p>EERA 4/23/15</p>	<p>13. It is reasonable and appropriate for the Site Permit to require compliance with local shoreland ordinances with a provision for potential exceptions to the permit requirement governing shorelands on a location-by-location basis MnDNR's minimum standards for development of the shorelands of public waters.</p>	<p>No</p>	<p>Staff agrees that modified finding #206 and conclusion #13 are interdependent and if finding #206 is adopted, that triggers the proposed change for conclusion #13, but proposes to reject this change and instead to adopt the Applicant's proposed language for conclusion 13 as detailed further down in this document. Aurora's language is more complete because it goes on to cite the specific Minn. Rule 6120.3300 that governs the shoreland development.</p>
<p>FoF #206</p>	<p>Aurora 4/23/15</p>	<p>206. <u>The Project is an allowable use in shorelands. Requiring compliance with a numerous and differing local shoreland regulations will be an inefficient use of resources due to the complexity and difficulty of implementation and oversight of the Project's compliance with the local ordinances. Local shoreland permitting should not be required for the Project.</u> As recommended by the MnDNR, A Site Permit condition <u>providing that</u> requiring compliance with local <u>the MnDNR's minimum structure setback, vegetation clearing and stormwater standards for development of shorelands of public waters</u> ordinances is a reasonable method of assuring the consideration of shorelands. <u>A consistent application of state standards for solar large electric power generating plants will lead to consistent preservation and efficient use of resources.</u></p>	<p>No</p>	<p>The language in this finding attempts to reach the conclusion that compliance with local ordinances for this kind of project in general is an inefficient use of resources, which may not be true in all cases.</p> <p>Staff recommends rejecting this change, because revised finding #206 proposed by the Department is more concise and factual.</p>
<p>FoF #207</p>	<p>Aurora 4/23/15</p>	<p>207. The permit should also include a condition providing that if <u>Aurora demonstrate</u> compliance with any specific local <u>the MnDNR's minimum structure setback, vegetation clearing and stormwater standards for development of shorelands of public waters</u> ordinances will be impracticable due to the impact on the Project and Aurora believes there is no feasible and prudent</p>	<p>No</p>	<p>Staff proposes rejecting this change because if EERA modified finding #206 is adopted, then finding #207 is not needed. A site permit condition requiring compliance with Minn. Rule 6120.3300 (DNR minimum standards for development of the shorelands of public waters) will be</p>

		<p>alternative, Aurora may apply to the Commission for an exception to the permit requirement governing shorelands on a location-by-location basis <u>for the Annandale, Chisago, Lake Emily, Lake Pulaski, Pine Island, West Waconia, and Zumbrota Facilities due to the location of portions of the facilities within areas mapped as shoreland.</u></p>		<p>incorporated into the Site Permit (Section 14.3) as a permit condition and having this additional verification of compliance statement as a finding of fact is not needed.</p>
<p>Conclusion #13¹</p>	<p>Aurora 4/23/15</p>	<p>14. It is reasonable and appropriate for the Site Permit to require compliance with <u>the MnDNR's minimum standards for development of local shorelands of public waters as outlined in Minnesota Rules 6120.3300</u> ordinances with a provision for potential exceptions to the permit requirement governing shorelands on a location-by-location basis <u>and to require demonstration of such compliance for those facilities that appear to be partially located within mapped shoreland areas.</u></p>	<p>Yes</p>	<p>Staff agrees that between the Department's and the Applicant's proposed changes for this conclusion, the Applicant's proposed language is better and as a result, recommends adopting this version of conclusion #13.</p>

¹ The applicant erroneously identified this conclusion as #14.

Site Permit Modification Table

Change # and Permit Section Number(s)	Entity Requesting Change and Filing Date	Changes to Draft Site Permit Language	Incorporated by Staff	Staff's Reason for Including or Rejecting
Section 5.2	EERA and Aurora 4/23/15	<p>Section 5.2 Wetlands and Shoreland</p> <p>Solar panels and associated facilities including foundations, access roads, underground cable and transformers, shall not be placed in public waters wetlands as shown on the public water inventory maps prescribed by Minnesota Statute 103G except that electric collector or feeder lines may cross or be placed in public waters or public waters wetlands subject to permits and approvals by the Minnesota Department of Natural Resources (DNR) and the United States Army Corps of Engineers (USACE), and local units of government as implementers of the Minnesota Wetlands Conservation Act. Solar panels and associated facilities including foundations, access roads, underground cable and transformers, shall not be placed in shoreland as defined in Minnesota Statutes, section 103F.205, subdivision 4 except that that electric collector or feeder lines may cross shoreland. <u>be located in compliance with the minimum standards for development of the shorelands of public waters as identified in Minnesota Rules 6120.3300.2</u></p>	Yes	Staff agrees with this revision of the Site Permit in order to match the revised language in the ALJ's Report that addresses the topic of allowing solar development within the shoreland areas, but with the required compliance to the shoreland rules.
Section 8.7	EERA and	Section 8.7 Equipment Storage	Yes	Similar with comments above, staff agrees with this proposed change.

	Aurora 4/23/15	The Permittee shall not locate temporary equipment staging areas on lands not under its control unless negotiated with affected landowner. Temporary equipment staging areas shall not be located in wetlands, shoreland , or native prairie as defined in Sections 5.2 and 5.3. <u>Temporary equipment staging areas shall be sited to comply with minimum standards for development of the shorelands of public waters as identified in Section 5.2.</u>		
Section 14.3	EERA 4/23/15	Section 14.3 Demonstration of Compliance with Shoreland Standards <u>The Permittee shall demonstrate compliance with the minimum standards for development of shoreland areas as specified in section 5.2 of this permit, in the site plans filed in accordance with Section 6,1 of this permit, for the following facilities: Annandale, Chisago, Lake Emily, Lake Pulaski, Pine Island, West Waconia, and Zumbrota.</u>	Yes	This is a proposed new permit condition to require verification of compliance with the Shoreland requirements and staff agrees this new permit condition is necessary as a verification measure. Both EERA and Aurora used similar language, but EERA's heading is more complete and is reflected here.
Section 14.4	EERA 4/23/15	Section 14.4 Security Fence Design <u>The security fence surrounding each Facility shall be comprised of a chain link fence of up to seven (7) feet, topped by a 1- to 2-foot extension, tilted 45 degrees outward from the vertical plane of the chain link portion, carrying monofilament cables or barbless wire.</u>	Yes	This is another new proposed site permit condition as a result of ALJ's Conclusion 17, which addresses the security fence design. Staff is in agreement this proposed permit condition be adopted.
Section 6.4	Aurora 4/23/15	Section 6.4 Agricultural Impact Mitigation Plan The Permittee shall, with the cooperation of the Minnesota Department of Agriculture, develop an Agricultural Impact Mitigation Plan (AIMP). The purpose of the AIMP shall be to identify measures to minimize potential impacts to agricultural uses of the land upon the decommissioning of the Project. The Permittee shall submit the AIMP to the	Yes	Consistent with the Department's proposed Compliance Filing Table, the proposed 14 days requirement prior to submitting the first site plan should be adopted both for the AIMP and VMP submittals. Staff agrees with this change.

		<p>Commission fourteen (14) days prior to submitting the first preconstruction meeting site plan for any portion of the Project. The AIMP shall include:</p> <p>(a) Measures that will be taken to segregate topsoil from subsoil during grading activities and the removal of topsoil during construction of the Project to the extent that such actions do not violate sound engineering principles or system reliability criteria.</p> <p>(b). Measures that will be taken to minimize impacts to and repair drainage tiles damaged during construction of the Project.</p> <p>(c). Measures that will be taken to prevent the introduction of non-native and invasive species.</p> <p>(d). Measures that will be taken to re-vegetate disturbed areas with appropriate low-growing vegetation to the extent that such actions do not violate sound engineering principles or system reliability criteria.</p> <p>(e) Measures that will be taken to maintain established vegetation at the facilities throughout the operational life of the facility.</p>		
Section 6.5	Aurora 4/23/15	<p>Section 6.5 Vegetation Management Plan</p> <p>The Permittee shall, in cooperation with the Minnesota Department of Commerce and the Minnesota Department of Natural Resources, develop a Vegetation Management Plan for the Project and submit it to the Commission fourteen (14) days prior to submitting the first Site Plan required by Section 6.1 of this permit. The purpose of the Vegetation Management Plan is to minimize tree clearing, prevent the introduction of noxious weeds and invasive species, re-vegetate disturbed areas at each Facility with appropriate low-growing species, and maintain appropriate vegetation at each Facility throughout the operating life of</p>	Yes	Staff agrees with this minor clarification.

		<p>the Project. The Vegetation Management Plan shall:</p> <ul style="list-style-type: none">(a) Identify measures taken to minimize tree removal and minimize ground disturbance.(b) Identify a comprehensive re-vegetation plan for disturbed areas.(c) Identify methods to maintain appropriate vegetation throughout the operating life of the Project.(d) Identify vegetation control methods to be used during the operation and maintenance of the Project.(fe) Identify measures to prevent the introduction of noxious weeds and invasive species on lands disturbed by construction activities.		
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Table 1: Project Locations

Facility	County	Township/Range/ Section	Facility Land Control (acres)	Preliminary Development Area (acres)	Anticipated MW-AC
Albany	Stearns	Sections 8 & 17, T 125N, R 31W 31W	230.6	107.4	10.0
Annandale	Wright	Section 32, T 121N, R 27W	70.6	70.6	6.0
Atwater	Kandiyohi	Section 1, T 119N, R 33W	40.1	36.3	4.0
Brooten	Stearns	Section 31, T 124N, R 35W	13.0	13.0	1.5
Chisago	Chisago	Section 12, T 34N, R 21W	62.4	60.6	7.5
Dodge Center	Dodge	Section 32, T 107N, R 17W	68.5	60.0	6.5
Eastwood	Blue Earth	Section 14, T 108N, R 66W	49.7	49.7	5.5
Fiesta City	Chippewa	Section 9, T 117N, R 40 W	25.6	25.6	2.5
Hastings	Washington	Section 8, T 26N, R 20W	40.6	40.6	5.0
Lake Emily	Le Sueur	Section 24, T 110N, R 26W	46.9	42.4	5.0
Lake Pulaski	Wright	Section 15, T 120N, R 25W	75.8	63.2	8.5
Lawrence Creek	Chisago	Section 27, T 34N, R 19W	74.3	39.4	4.0
Lester Prairie	McLeod	Section 25, T 117N, R 27W	29.9	26.0	3.5
Mayhew Lake	Benton	Section 12, T 36N, R 31W	36.0	21.8	4.0
Montrose	Wright	Section 2, T 118N, R 26W	37.7	34.8	4.0
Paynesville	Stearns	Section 4, 8 & 9, T 122N, R 32W	223.6	108.4	10.0
Pine Island	Goodhue	Section 31, T109N, R 15W	46.9	42.2	4.0
Pipestone	Pipestone	Section 11, T106N, R 46W	15.8	14.7	2.0
Scandia	Chisago	Section 35, T 33N, R 20W	24.4	23.3	2.5
Waseca	Waseca	Section 12, T 17N, R 23W	89.2	85.2	10.0
West Faribault	Rice	Section 2, T 109N, R 21W	85.5	59.4	5.5
West Waconia*	Carver	Section 1, T 115N, R 26W	75.7	78.1	8.5

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Wyoming	Chisago	Section 32, T 33N, R 21W	67.3	62.0	7.0
Zumbrota	Goodhue	Section 25, T 110N, R 16W	35.6	31.9	3.5
Total Under Development			1565	1196	130.5
* Preliminary Development Area boundary is larger than the Facility Land Control boundary in this particular instance to accommodate possible interconnection in the public right-of-way on the north side of Highway 5/25.					