

June 4, 2015

Daniel P. Wolf, Executive Secretary
Minnesota Public Utilities Commission
127 7th Place East, Suite 350
St. Paul, MN 55101-2147

Re: EERA Comments on EA Scoping
North Star Solar PV Project
Docket No. IP6943/GS-15-33

Dear Mr. Wolf:

Attached are the review and comments of the Minnesota Department of Commerce Energy Environmental Review and Analysis (EERA) staff in the following matter:

In the Matter of the Combined Application of North Star Solar PV LLC for a Site Permit and Route Permit for the North Star Solar Electric Power Generating Plant and Associated 115 kV High-Voltage Transmission Line in Chisago County

EERA staff herein provides a summary of the EA scoping process and informs the Commission that it intends to recommend one site alternative, as described in the attached comments, to the Deputy Commissioner of Commerce for the Scoping Decision for the Environmental Assessment.

EERA staff is available to answer any questions the Commission may have.

Sincerely,



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BEFORE THE MINNESOTA PUBLIC UTILITIES COMMISSION

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

DOCKET No. IP6943/GS-15-33

DateJune 4, 2015
EERA Staff: David Birkholz.....(651) 539-1838

In the Matter of the Combined Application of North Star Solar PV LLC for a Site Permit and Route Permit for the North Star Solar Electric Power Generating Plant and Associated 115 kV High-Voltage Transmission Line in Chisago County

Issues Addressed: Summary of the scoping process for the Environmental Assessment including a summary of comments and potential alternatives.

Attachments: Project Overview Map; Lent Alternative Map

Additional documents and information can be found on
<http://mn.gov/commerce/energyfacilities/Docket.html?Id=34064> or on eDockets
<http://www.edockets.state.mn.us/EFilin/search.jsp> (15-33).

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

Introduction and Background

On February 11, 2015, North Star Solar PV, LLC (North Star) submitted a joint site and route permit application (Application)¹ to the Public Utilities Commission (Commission) for the proposed 100 megawatt (MW) North Star Solar Project (Project) in Chisago County, which includes a one-half mile connecting 115 kilovolt (kV) transmission line.

¹ Joint Site and Route Permit Application, North Star Solar PV, LLC, February 11, 2015,
<http://mn.gov/commerce/energyfacilities/resource.html?Id=34078>

North Star proposes to construct 100 MW of photovoltaic (PV) solar generation in North Branch and in Lent and Sunrise townships. The Project would generate electricity from solar energy and is therefore eligible under 2014 Minnesota Session Laws, Chapter 254, Section 19 for review under the Alternative Permitting Process (Minn. Rule 7850.2800-3900). The Project would be operational by the end of 2016.

Project Description and Purpose

The Project was proposed in response to Xcel Energy's Solar Request for Proposals (RFP) to help fulfill the Minnesota Solar Energy Standard which requires the company to serve 1.5 percent of its retail load with solar energy by the end of 2020. As a result of the RFP, Xcel Energy negotiated Power Purchase Agreements (PPA) with three of the competing proposals for a total of 187 MW. The three solar projects are (1) Marshall Solar, a 62.25 MW project located near Marshall; (2) MN Solar I, a 24.75 MW project located near Tracy; and (3) the North Star 100 MW Project near North Branch. Xcel Energy's "Solar Portfolio" (see eDocket no. E002/M-14-162) was approved by the Commission in its March 24, 2015, Order.

North Star has secured rights for 1,112 acres of agricultural land north of the Chisago Substation (see attached Project Boundary map). The final Project design is expected to occupy approximately 800 acres within that boundary. The Project's primary components include PV modules mounted on a linear axis tracking system and solar inverters. The racking system foundations will utilize driven posts that for the most part would not require concrete. Other Project components include electrical cables, conduit, electrical cabinets, switchgears, step-up transformers, SCADA systems and metering equipment. The solar facility would be fenced and seeded in a low growth seed mix to reduce stormwater runoff and erosion.

North Star expects to interconnect 100 MW of solar generation (accredited capacity of approximately 68 percent) at the 115 kV bus of the Chisago Substation in Lent Township (inside the southernmost portion of the Project boundary). This would require building approximately one-half mile of 115 kV line from the Project substation, across property owned by Xcel Energy to the Chisago Substation.

Since its initial Application, North Star has submitted an addendum to its Application making a minor modification to its Project by adding 10 acres as described and depicted in its filing (see attached Project map).²

Regulatory Process and Scoping Procedure

² Addendum to Application, April 29, 2015, <http://mn.gov/commerce/energyfacilities/resource.html?Id=34132>

Applications for site or route permits under the alternative permitting process are subject to environmental review, which is conducted by Department of Commerce (Department) Energy Environmental Review and Analysis (EERA) staff under Minn. Rule 7850.3700. The Department is responsible for developing a Scope and producing an Environmental Assessment (EA). The Commission is responsible for selecting the site and route, and issuing the site and route permit(s).

Environmental review under the alternative permitting process includes a public information/scoping meeting and the preparation of an EA. The Environmental Assessment is a written document that describes the human and environmental impacts of the project (and any selected alternative sites) and methods to mitigate such impacts. The EA must be completed and made available prior to the public hearing.

An important component of the scoping process is to provide the public with an opportunity to participate in the development of the scope of the EA. This occurs through a public meeting and comment period, through which public comment is solicited. Once the comment period on the scope of the environmental review document expires, applicants are given an opportunity, per Minnesota Rule 7850.3700, subp. 2.B, to respond to each request that an alternative be included in the environmental assessment.

Minn. Statute 216E.04, subd. 5, anticipates the Commission may also identify alternatives in addition to the applicant's proposed facility location for inclusion in the environmental review of a project.

Scoping Summary

On April 10, 2015, Commission and EERA staff sent notice of the place, date and time of the Public Information and Scoping meeting to local government units and those persons on the Project contact list.³ Notice of the public meeting was also published in the Chisago County Press newspaper on April 16, 2015.⁴ Commission staff and EERA staff jointly held a public information and scoping meeting in Lent Township on April 30, 2015, proximate to the facility location identified by North Star. The purpose of the meeting was to provide information to the public about the proposed Project, to answer questions, and to allow the public an opportunity to suggest alternatives and impacts (i.e., scope) that should be considered during preparation of the environmental review document. A court reporter was present at the meeting to document oral statements.⁵

³ Notice of Public Information/Scoping Meeting, April 10, 2015, eDocket no. [20154-109178-01](#)

⁴ Affidavit of Publication, April 16, 2015, eDocket no. [20154-109599-02](#)

⁵ Oral Comments Received During Scoping Meeting, eDocket no. [20155-110394-01](#)

Scoping Comments

Twenty-two individuals contributed comments at the scoping meeting. Eighteen written comments were received from the public by the end of the scoping comment period on May 15, 2015. Six letters came in from federal, state and local governments.⁶

Public comments addressed a variety of concerns, including: compliance with local ordinances; appearance and methods to mitigate the visual impact of the facilities; concern over possible health impacts from EMF; impacts of the proposed facilities on property values of adjacent properties; impacts of the facilities on the local economy; potential wildlife dislocation; the overall appearance of the solar installations and the potential for glare; and impacts of noise during construction and potentially during operation of the facilities. Other letters included comments on personal property rights, support for building in this area of lower yield agricultural lands, and general support for solar energy generation.

The Minnesota Department of Transportation (MnDOT) noted that the Project does not abut a state trunk highway. However, MnDOT requests that any site or route construction work or delivery of materials that may affect MnDOT right-of-way (ROW) should be coordinated with the agency.

The U.S. Fish and Wildlife Service (USFWS) provided a list of species that may occur in the Project vicinity. USFWS did not identify records of any federally listed species or proposed critical habitat in the Project area. They did recommend construction restrictions to protect the Northern Long-eared Bat and migratory birds.

Site and Route Alternatives

North Star and similar solar generation projects are unique in several ways that potentially limit the consideration of alternative sites for those proposed projects:

1. North Star does not have the right of eminent domain and must reach agreement with willing landowners to host the Project;
2. North Star has proposed the use of PV installations that follow the movement of the sun through the day by using a tracking system. These types of installations require an amount of land that is relatively large compared to thermal energy generation;
3. North Star has an agreement with Xcel Energy to interconnect to the grid at their Chisago Substation.

⁶ Written Comments through May 15, 2015 Close of Comment Period (Written Comments)
<http://mn.gov/commerce/energyfacilities/resource.html?Id=34144>

Given the particular requirements of the North Star Project, EERA staff tried to solicit information on potential alternative sites by providing guidance to commenters in the public notice as follows:

"In proposing an alternative site, please bear in mind that North Star does not have the right of eminent domain, and that the landowner would need to be willing to sell or lease the site. In addition, alternative sites should be of similar size to the proposed site, relatively flat and open with unimpeded views of the sun."

The process for individuals to request that specific alternative sites be evaluated, and considerations in identifying alternative sites, was also discussed at the public meeting.

Alternatives Submitted During the Comment Period

A site alternative was proposed during the EA scoping comment period by the Lent Township Planning and Zoning Commission (see attached "Alternate Site Proposal"). The Lent proposal would remove certain portions of the Project and co-locate Geronimo Energy's "Sunrise" and "Aurora" projects with the North Star Project as a consolidated, single solar generation project area. The Township contends this site change would positively affect 45 home sites and reduce required perimeter fencing.⁷

Pursuant to Minn. Rule 7850.3700, subpart 2(B), EERA staff notified North Star of the proposed site alternative and provided them with an opportunity to respond. North Star submitted a response on May 28, 2015,⁸ stating in part, "The positive effects it claims to deliver largely come from relocating portions of the Aurora Distributed Solar," and noted that "the proposal includes parcels over which North Star has no control." For those reasons, North Star does not consider the proposed alternative to be feasible and recommends against the inclusion of the additional site for review in the EA.

In addition, references were made during the scoping meeting about the possibility of alternatively siting the Project in the Carlos Avery Wildlife Management Area (WMA) and the possibility of using rooftop installations.

There were no route alternatives to the Applicant's proposed route submitted for the 115 kV line between the Project's step-up substation and the Chisago Substation.

EERA Staff Analysis and Comments

The scoping process for environmental review in Minnesota is designed to identify and analyze "only those potentially significant issues relevant to the proposed project" and

⁷ Written Comments: Local Governments

⁸ North Star Response to the Lent Proposal, May 28, 2015, eDocket no. [20156-111139-01](#)

alternatives to the project.⁹ With respect to route and site alternatives, the Department is charged with including those alternatives which will "assist in the [Commission's] ultimate decision on the permit application."¹⁰

In assessing which route and site alternatives proposed during the scoping process should be carried forward for evaluation in the environmental review document for a project, EERA staff considers five criteria:

- Was the alternative submitted within the scoping period, i.e., prior to the end of the public comment period for scoping?
- Does the alternative contain the information required in Minnesota Rule 7850.3700, including "an explanation of why the site or route should be included in the environmental assessment?" EERA staff interprets this text to require that a commenter not only identify the route or site alternatives to be included in the scope of the environmental review document, but also identify the potential impacts of the proposed project the alternative is intended to address. The commenter need not provide extensive supporting data for their alternative, but must provide enough explanation such that the potential impact addressed by the site alternative is clear and understandable.
- Is the alternative outside of areas prohibited in Minnesota Rule 7850.4300, e.g., wilderness areas, state and national parks, scientific and natural areas?
- Does the alternative meet the applicant's stated need for the project?
- Is the alternative feasible?

Finally, EERA staff analyzes any alternative advancing through this review process to determine if its evaluation in the EA would aid the Commission in making its determination on the Application. This includes comparing the alternative with the proposed Project to determine the comparative impacts on the routing factors in Minn. Rule 7850.4100.

Site Alternatives

EERA applied the above criteria to analyze the following alternatives. Each of the proposed alternatives was received prior to the close of the scoping period, and none of the proposed alternatives are located in an area that is prohibited by Minnesota Rule 7850.4300.

⁹ Minnesota Rule 4410.2100, Subp. 1.

¹⁰ Minnesota Rule 7850.3700, Subp. 2.

A comment at the scoping meeting made reference to relocating the Project to the Carlos Avery Wildlife Management Area. EERA staff does not believe this is a feasible alternate. Use of the Carlos Avery WMA was suggested during review of the Aurora Solar Project as well. The Department of Natural Resources (DNR) commented at that time that the use of the Carlos Avery WMA as an alternate to the Project conflicted with its intended uses, including hunting, wildlife habitat protection and availability for public access to the area.

Rooftop solar installations were also mentioned in comments; however, no one made a specific alternative proposal. Rooftop solar is not a feasible alternative to the proposed Project and does not meet the Applicant's stated need. The facility location proposed by North Star is 800 acres in size, or eight acres/MW. Each MW would require 348,480 square feet of rooftop space (for comparison, the average size of a Walmart Supercenter is 197,000 square feet). There is simply not enough rooftop space available for a locational match between a utility-scale solar project and the identified interconnection substation.

The Lent Proposal. Lent Township proposed a hybrid project area (see attached map) that excludes sections of the North Star proposal and incorporates the combined development of several other solar facilities near the proposed facility location with the North Star Project.

North Star's response to the Lent Township proposal noted that most of the claimed benefit comes from excluding parts of the Project Boundary that are not anticipated to house project facilities. "The positive effects it claims to deliver largely come from relocating portions of the Aurora Distributed Solar Project - not by making any measurable or viable changes to the proposed North Star Solar Project."¹¹

EERA notes that relocating portions of the Aurora Project cannot be considered in this docket, as the Commission has already issued a site permit for the Aurora Project in PUC Docket no. E6928/GS-14-515 (at its Agenda Meeting on May 28, 2015). The Lent Alternative Site Proposal is self-described as combining portions of North Star, Aurora and Sunrise. To be considered as a possible alternative, the Lent Proposal needs to be redefined as combining portions of North Star and Sunrise.

As for locating part of the Project in the "Sunrise" section (see labeled section in attached map), North Star finds that alternative "unlikely." An active competitor would need to release its rights and control of the parcels in question to North Star.

¹¹ North Star Response

EERA notes that the possibility of future negotiations between the competing parties would not necessarily be precluded. Depending on the development status of other projects, some or all of those property rights may become available.

As the record on the project develops through the environmental review and the hearing, it is conceivable that the record may demonstrate that impacts associated with the proposed facility or portions of the facility are sufficient to either preclude development, or constrain the development of particular sections in such a way that the actual installed generation is less than what is anticipated in the Application. In such a case, North Star may be incentivized to add additional parcels or expand its boundary to include part of the indicated area.

If an alternative area has not been evaluated in the record, any area not part of the original Application could not be considered for a permit. North Star would likely need to reapply with a restructured Project area.

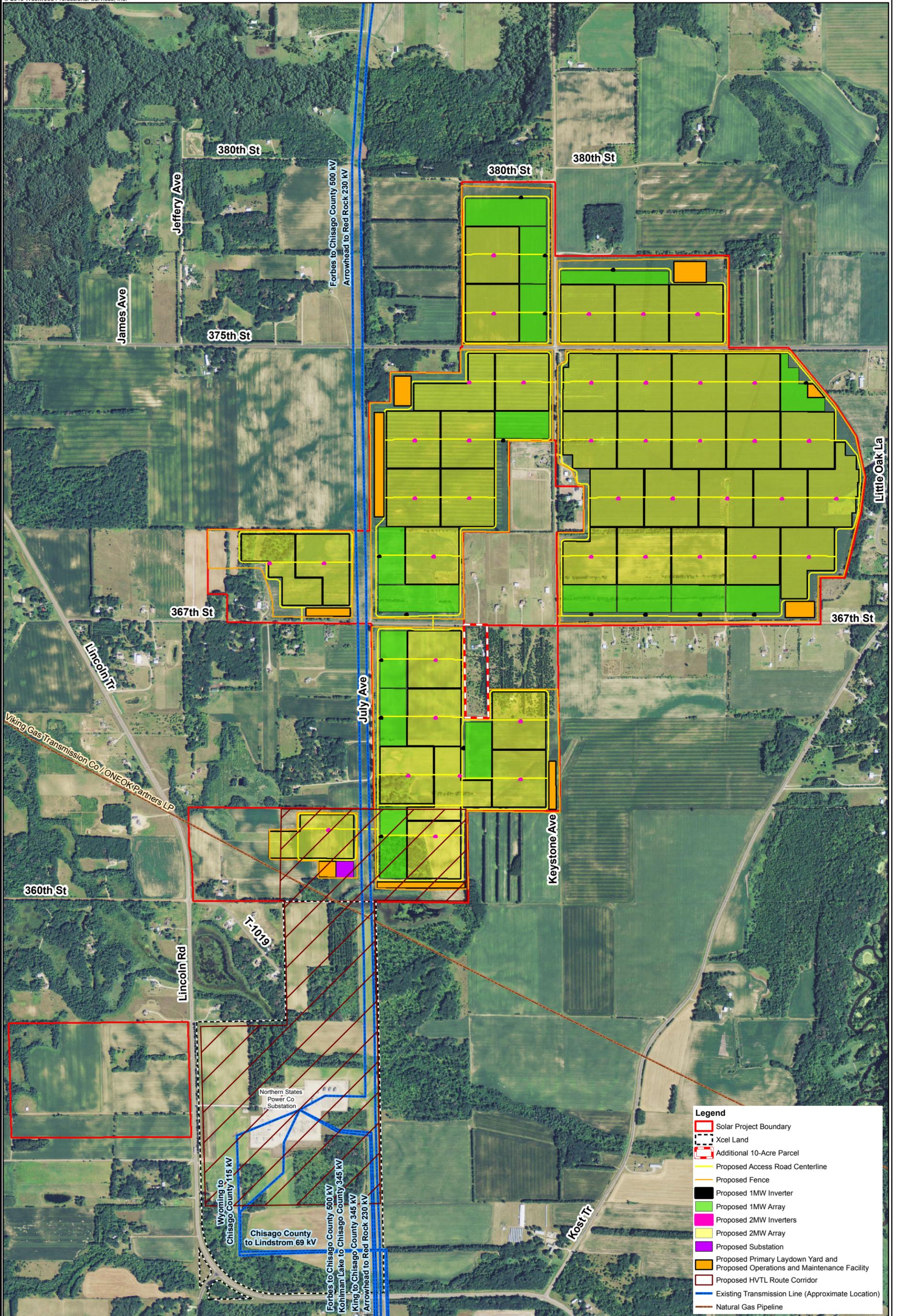
EERA staff anticipates analysis of the redefined Lent Proposal would inform the record as to how the proposed Project and the alternative compare as potential sites. It would also allow for the Commission to consider a hybrid area in the event any adjustments to the Project layout are necessary to accommodate potentially unsuitable segments of the proposed Project.

EERA staff believes that an analysis of the Project and the redefined Lent Proposal will provide the Commission with the necessary information to develop findings that satisfy the intent of Minnesota Statutes 216E.04.

Transmission Alternatives

The proposed transmission route is short (1/2 mile), on one owner's property (Xcel Energy) and unopposed. No alternatives were suggested by the public. As the entire route length is within the proposed Project boundary, EERA will include its review within the analysis of the overall development area.

EERA staff plans to recommend to the Deputy Commissioner of the Department that the EA Scoping Decision include review of the facility location proposed by North Star in its Joint Site and Route Permit Application and the redefined Lent Proposal. EERA does not intend to recommend any transmission route alternatives.



Legend

- Solar Project Boundary
- Xcel Land
- Additional 10-Acre Parcel
- Proposed Access Road Centerline
- Proposed Fence
- Proposed 1MW Inverter
- Proposed 1MW Array
- Proposed 2MW Array
- Proposed 2MW Inverters
- Proposed Substation
- Proposed Primary Laydown Yard and Proposed Operations and Maintenance Facility
- Proposed HVTL Route Corridor
- Existing Transmission Line (Approximate Location)
- Natural Gas Pipeline

Data Source(s): Data and map are approximate. Westwood (2014); MNDOT Basemap (2014); NAIP (2013); Chisago County GIS (2014); ESRI (2008); Ventyx Velocity Suite (Nov. 2014); North Star Solar PV, LLC (2014).



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North Star Solar Project and NS HVTL Project

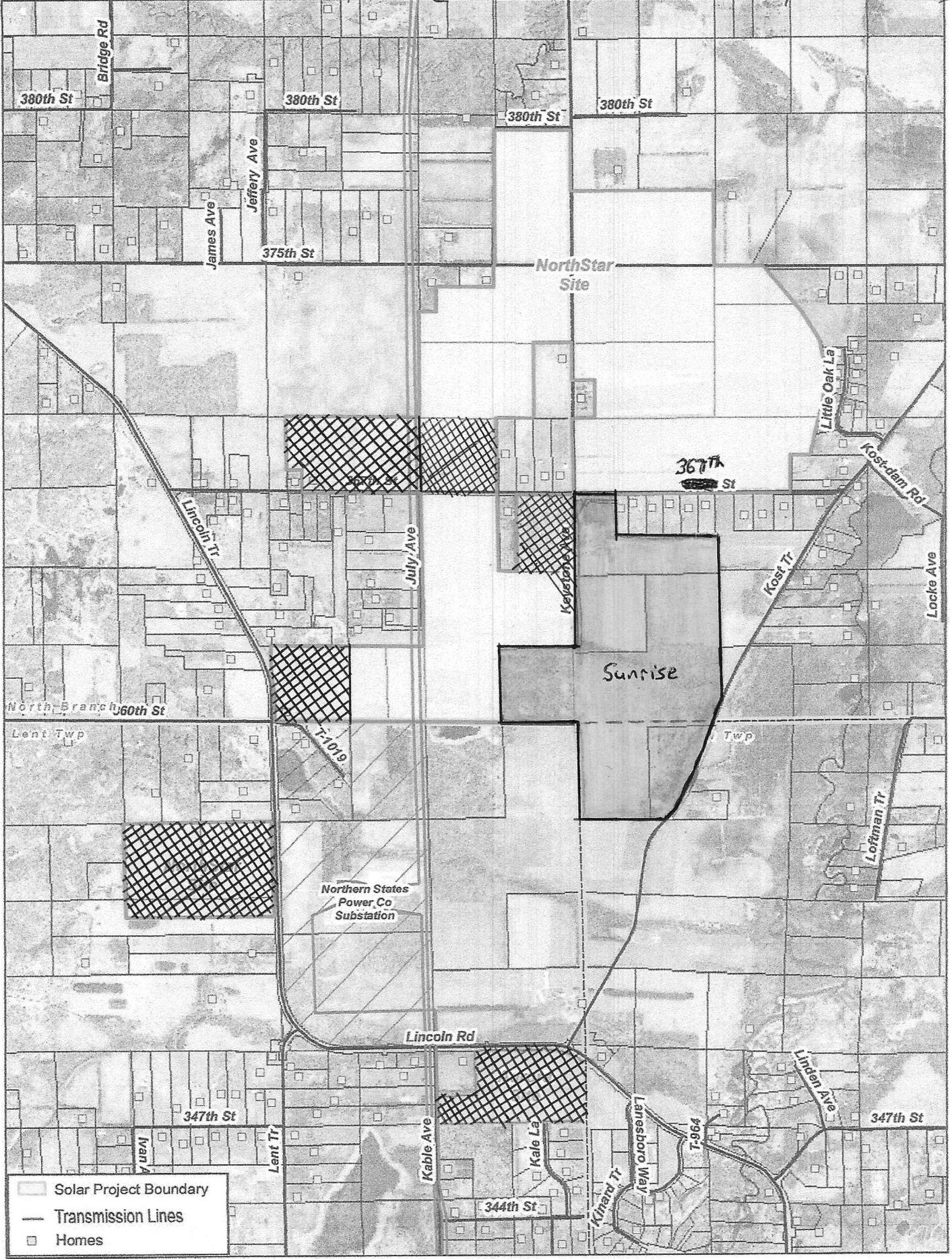
North Branch, Sunrise Township, and Lent Township;
 Chisago County, Minnesota

Preliminary Facility Design

Figure 3

Map Document: P:\0004493.00\GIS\Permit\NS_AreaAndCapacity\Facility01B_150421.mxd 4/21/2015 4:35:55 PM

Alternate site Proposal (Combine Portions of North Star, Aurora + Sunrise)



-  Solar Project Boundary
-  Transmission Lines
-  Homes