



Minnesota Public Utilities Commission



Public Information and Scoping Meeting

North Star Solar Project

Public Utilities Commission (PUC) Docket Number

- IP-6943/GS-15-33



Agenda

- ☐ Site and Route Permit Process
 - Public Utilities Commission
- ☐ Project Summary
 - North Star Solar PV LLC/Community Energy Solar
- ☐ Environmental Review
 - Department of Commerce
- ☐ **Citizen Comments and Questions**



Public Utilities Commission

☐ Regulates

- Permitting for power plants, pipelines, transmission lines
- Local and in-state long distance telephone companies
- Investor-owned electric and natural gas utilities – rates and services

☐ 5 Commissioners

- Appointed by the Governor
- Serve staggered terms
- Full time employment

☐ 50 staff



Large Electric Power Generating Plant

- 50,000 kilowatts or more

- Requires **Site Permit** from Minnesota Public Utilities Commission
 - Minnesota Statutes, Chapter [216E](#)
 - Minnesota Rules, Part [7850](#)



High Voltage Transmission Line

- Will operate at 100 kV or more *and*
- Greater than 1500 feet in length

- Requires **Route Permit** from Minnesota Public Utilities Commission
 - Minnesota Statutes, Chapter [216E](#)
 - Minnesota Rules, Part [7850](#)



Who's Who?

- **Applicant** – Company asking for Site Permit and Route Permit – *North Star Solar PV LLC*
- **Department of Commerce Energy Environmental Review and Analysis (EERA)** – State agency, conducts environmental review
- **Office of Administrative Hearings (OAH)** – State agency, Administrative Law Judge (ALJ) holds hearings, summarizes the facts in the record, writes report for Public Utilities Commission



Who's Who?

- **Public Utilities Commission (PUC) Energy Facilities Planner** – Assists in building the record. Informs Commissioners on impacts of different decisions. Neutral party, does not give legal advice, not an advocate.
- **Public Utilities Commission (PUC) Public Advisor** – Helps citizens participate in the certificate of need and route permit processes. Neutral party, does not give legal advice, not an advocate.



Factors considered in Public Utilities Commission's decision on the **site** and **route**

- Human settlement – displacement, noise, aesthetics, cultural values, recreation, public services
- Public health and safety
- Economy– agriculture, forestry, tourism, mining
- Archaeological and historic resources
- Natural environment – air, water, plants, animals

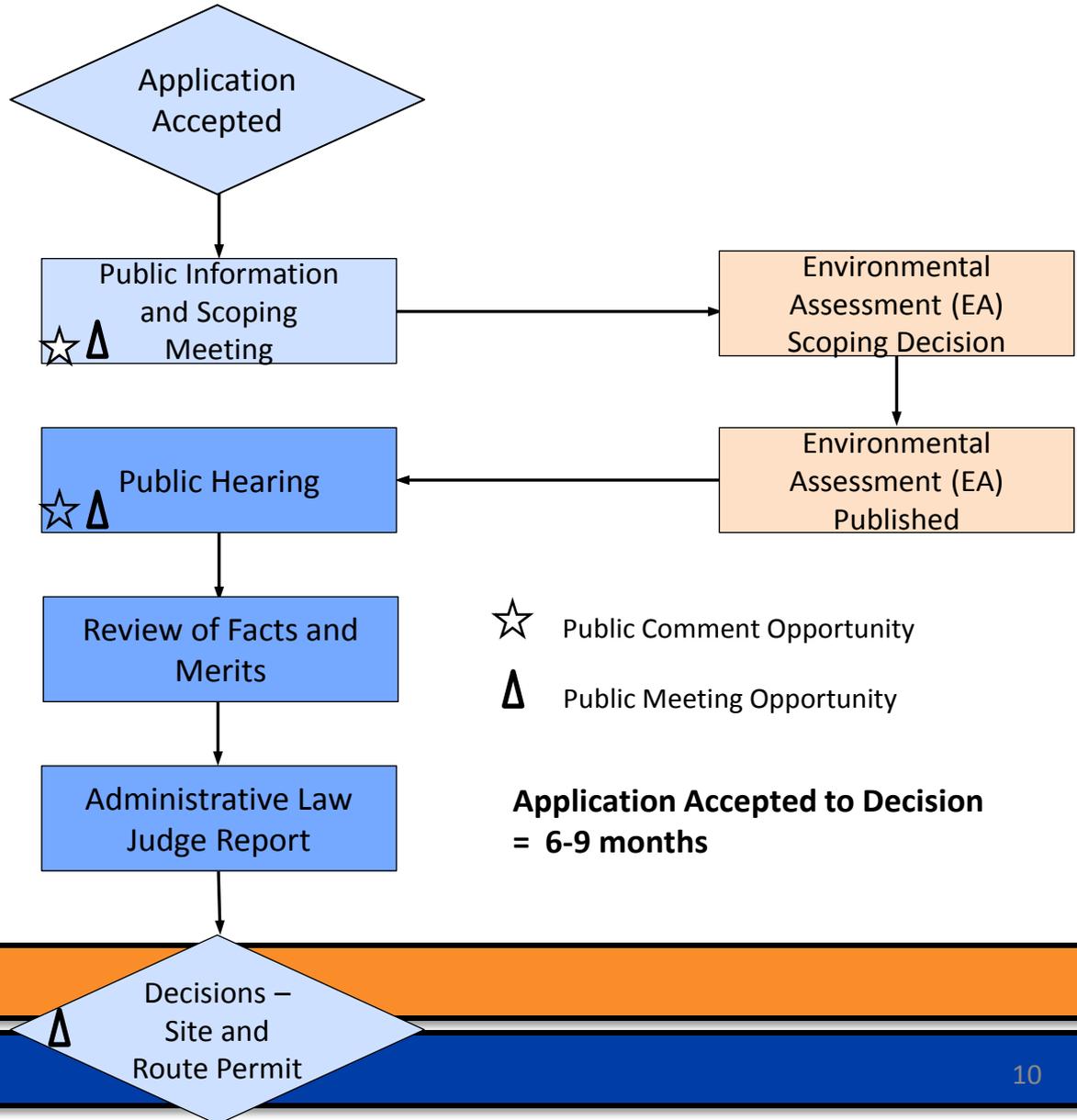


Factors considered (continued)

- Maximize efficiencies
- Allow for future expansion
- Use of existing power plant sites
- Use of existing rights-of way
- Use of natural boundaries - survey lines, field boundaries
- Electrical system reliability
- Costs to construct, operate, and maintain the power plant and transmission line



Power Plant Site Permit Process and Transmission Line Route Permit Process





Estimated Project Timeline

Site and Route Permit Application Filed	February 2015
Site and Route Permit Application Accepted	April 2015
*Public Information & Scoping Meeting	April 2015
Comment Period Closes	May 15, 2015
Environmental Assessment (EA) Scoping Decision	June 2015
Environmental Assessment (EA) Published	August 2015
Public Hearing	August 2015
Administrative Law Judge Report	September 2015
Site Permit and Route Permit Decisions	October 2015



STATE OF MINNESOTA PUBLIC UTILITIES COMMISSION

**NOTICE OF COMMENT PERIOD ON
COMPLETENESS OF COMBINED SITE AND ROUTE PERMIT APPLICATION**

Issued: February 18, 2015

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, Minnesota

→ **PUC Docket Number:** IP-6943/GS-15-33

→ **Comment Period:** Initial comment period closes March 4, 2015 at 4:30 p.m.
Reply comment period closes March 11, 2015 at 4:30 p.m.

Topics Open for Comment:

- Does the application contain the information required under Minnesota Rules, part 7850.1900?
- Are there any contested issues of fact with respect to the representations made in the application?
- Should the Commission appoint an advisory task force?



KEYS to sending comments

- Include the docket number (*15-33*)
- Stick to topics listed
- No need to submit comments more than once
- Oral and written comments carry the same weight
- Quality vs quantity
- Comments are public information
- Received at PUC by 4:30pm on end date



How do I get more information?

See all documents related to this project

- mn.gov/puc
- Select *Search eDockets*
- Enter the year and the Docket Number
 - **15** is the year and **33** is the number
 - Select *Search*
- The list of documents will appear on the next page



How do I get more information?

Project Mailing List

- Receive information about project milestones and opportunities for citizen participation
 - Email or US Mail
 - Complete and return *Project Mailing List* card
 - Contact the Public Utilities Commission
 - docketing.puc@state.mn.us
 - 651-201-2204 or 1-800-657-3782



How do I get more information?

Subscribe to receive email notification when new documents are added to the Docket

1. mn.gov/puc
2. Select green box *Subscribe to a Docket*
3. Type your email address
4. For *Type of Subscription*, select *Docket Number*
5. For *Docket Number*, select *15* in the first box, type *33* in the second box
6. Select *Add to List*

*Subscribing may result in a large number of emails



How do I get more information?

Subscribe to Dockets

Instructions

You may subscribe to receive electronic notification of documents filed before the M
You will receive electronic notification at the email address you provide below. You m

Email Address:

sample@abcmail.com *

Type of Subscription:

Docket Number ▾ *

Docket Number:

15 ▾ 33 *

Description:

Site Permit - 100 MW North Star Solar
Project in Chisago County MN

Add to List

Remove from List



PUC Project Contacts

Public Advisor

Public Utilities Commission

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Energy Facilities Planner

Public Utilities Commission

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North Star Solar Project

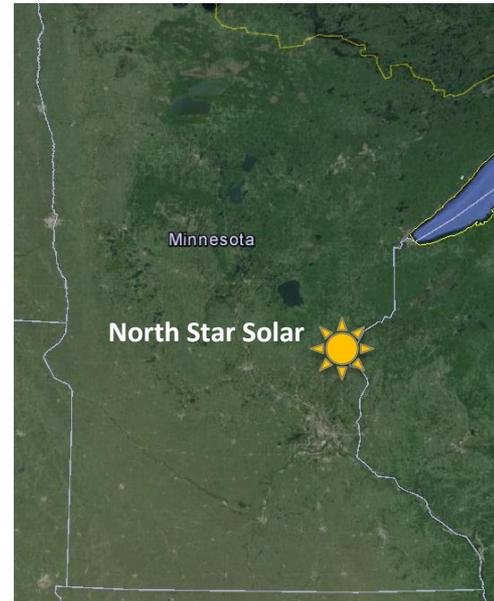


Public Scoping Meeting – Environmental Assessment

Minnesota Public Utilities Commission

Minnesota Department of Commerce: Energy, Environmental Review, & Analysis

MN PUC Docket Number 15-33



North Star Solar Project



Community Energy

- Pioneers in renewable energy development and marketing
- Developed more than 1000 megawatts of wind and solar capacity
- Solar portfolio includes projects completed or underway throughout the United States



North Star Solar Project



Project background

- Minnesota Solar Energy Standard
- Northern States Power – 2014 Solar Energy Solicitation
- 1 of 3 projects selected out of 111 competitive proposals
- Power purchase contract between North Star and Xcel Energy was approved by the MN PUC on 2/12/15

Project details

- 100 megawatts of solar photovoltaic capacity
- Approximately 800 acres of agricultural land
- Single axis tracking technology to maximize production
- Grid connection at the Chisago substation
- 25-year power purchase contract with Xcel Energy



North Star Solar Project



Why here?

- Chisago substation – infrastructure and strong ties to Xcel Energy customers
- Available land that supports cost-effective renewable energy
- Few environmental constraints
- Existing local ordinances

North Star Solar Project



Project economics

- \$180M total investment
- Approximately 300 local jobs associated with construction and installation
- More than 1,000 direct and indirect jobs

Operations

- \$2.5M in annual economic output
- Approximately \$350k in annual property taxes
- 6-12 full-time employees
- Annually generate enough electricity for 20,000 homes

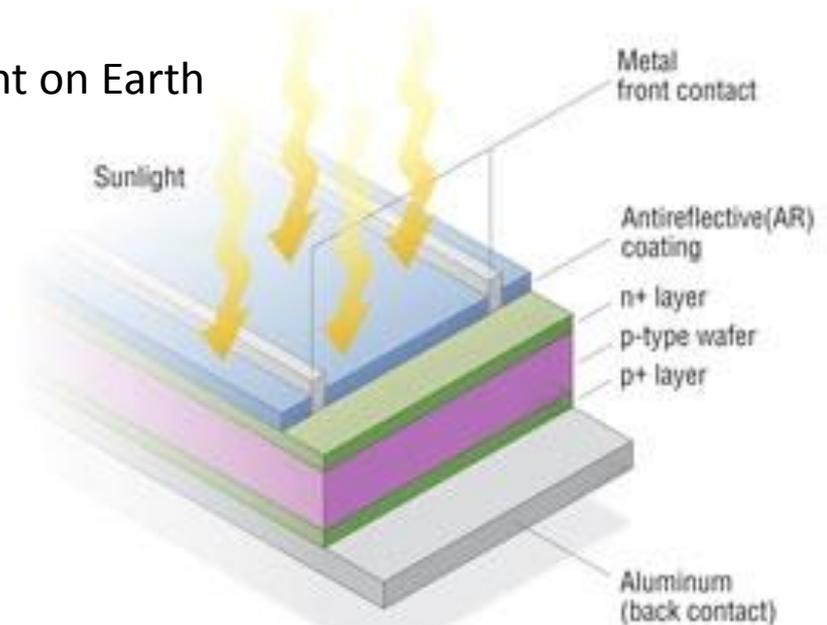


North Star Solar Project



Crystalline silicon solar photovoltaics

- Mature, reliable and abundant
- Most common solar cells used in commercially available panels
- Module lifetimes of 25+ years with minimal long-term degradation
- Silicon is the second most abundant element on Earth



<http://energy.gov/eere/sunshot/crystalline-silicon-photovoltaics-research>

North Star Solar Project



Project components

- Solar modules
- Racking system with tracking capability
- Electrical components
 - DC electrical collection
 - Inverters
 - Transformers
 - AC electrical collection
 - System controls
 - Grid connection
- Access roads
- Fencing
- Vegetation



North Star Solar Project



Construction, operation and decommissioning

Site prep – trenching – pile installation – racking and module installation

- Six- to nine-month process

Electrical connections – testing – commissioning

- Electrical wiring continuous through latter part of construction
- Construction of short transmission line to the Chisago substation
- Grid connection and facility commissioning

Operations

- Commercial operations Fall 2016
- Regular maintenance and inspections

Decommissioning



North Star Solar Project



Vegetation plan

Minnesota Department of Natural Resources

- Opportunity to manage vegetation at project sites as restored short-grass prairies or meadows
- Native plants and flowers that are beneficial to wildlife and pollinators

Anticipated benefits

- Improved water quality
- Reduced soil erosion
- Increased water retention
- Improved soil composition
- Less use of fertilizers and herbicides
- Critical habitat



North Star Solar Project



Landscaping and visual buffers

- A key development focus: residences and public corridors
- Professional landscape design using native vegetation
- Residential buffering - combination of set back, plant type, density and placement, and fencing



North Star Solar Project



Community outreach

- Committed to building responsible projects
- Cooperative review of project design and landscape buffering approaches
- Dedicated to being responsive and informing interested parties



North Star Solar Project
Public Information and Scoping Meeting

PUC Docket no. IP6943/GS-15-33

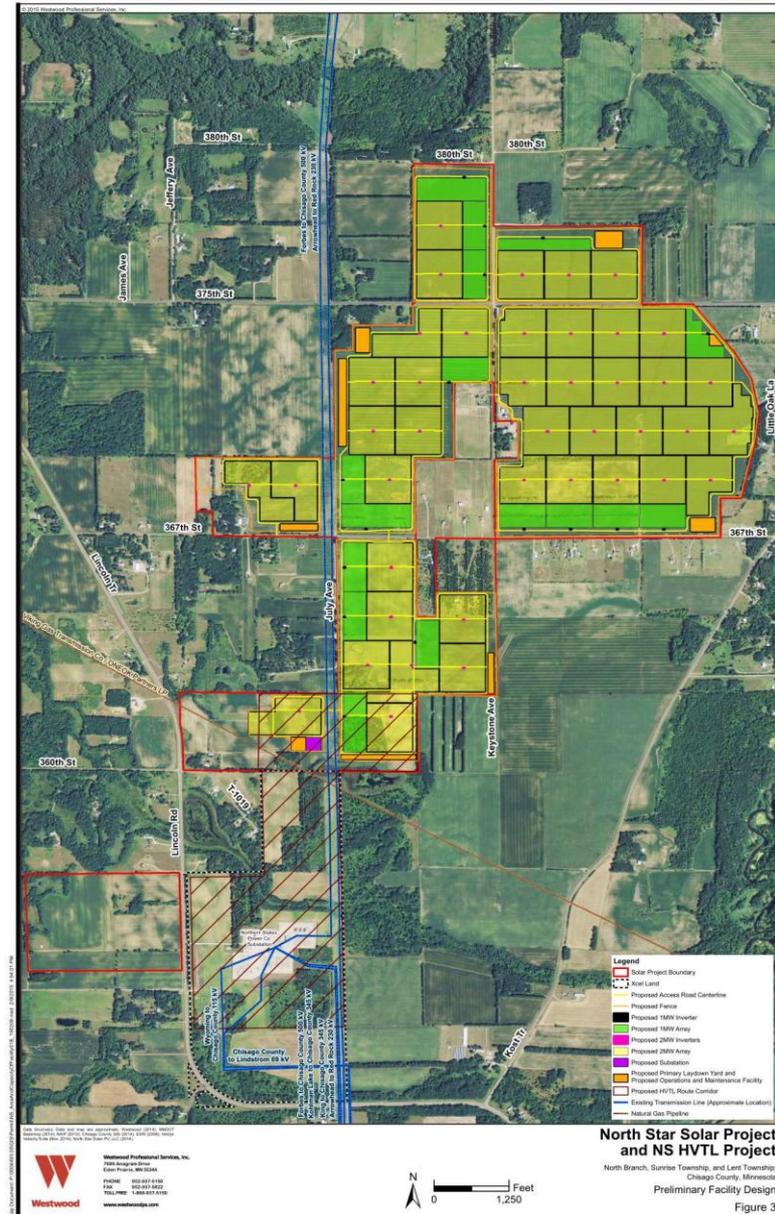
Stacy, Minnesota
April 30, 2015

North Star Solar Project

Photo-Voltaic Solar Generation and Transmission Project in Chisago County

Scoping the EA

David Birkholz, Environmental Review Manager
Energy Environmental Review and Analysis



Environmental Assessment (EA)

A tool for the public, agencies, and decision-makers to assist in siting and permitting of a proposed project:

- Discusses potential human and environmental impacts
- Identifies strategies for avoiding, minimizing, and mitigating potential impacts

EA Scope

Provides an outline for the EA developed for the project by identifying:

- Issues and Impacts to be addressed
- Alternative sites, if any, to be addressed
- Schedule for completion of the EA

EA Scoping Comments

- What potential human and environmental impacts of the proposed project should be studied in the EA?
- Are there any specific methods or potential changes to the proposed Project that could serve to avoid, reduce, or mitigate these impacts that should be studied in the EA?
- Are there specific alternative locations that should be addressed in the EA?

Scoping Comment: Impact

ENVIRONMENTAL ASSESSMENT

DRAFT SCOPING DOCUMENT

NORTH STAR SOLAR PV, LLC

NORTH STAR SOLAR PROJECT

PUC DOCKET #IP6943/GS-15-33

April 2015

Prepared by the Energy Environmental Review and Analysis Staff of the



Impact (General)

- Rare and Unique Natural Resource



Impact (Specific)

- Blandings Turtle

Scoping Comment: Site Alternatives

A person desiring that a particular alternative site be evaluated shall submit:

- An explanation of why the alternative site should be included in the EA, and
- All supporting information the person wants the Department to consider

Solar Siting Criteria

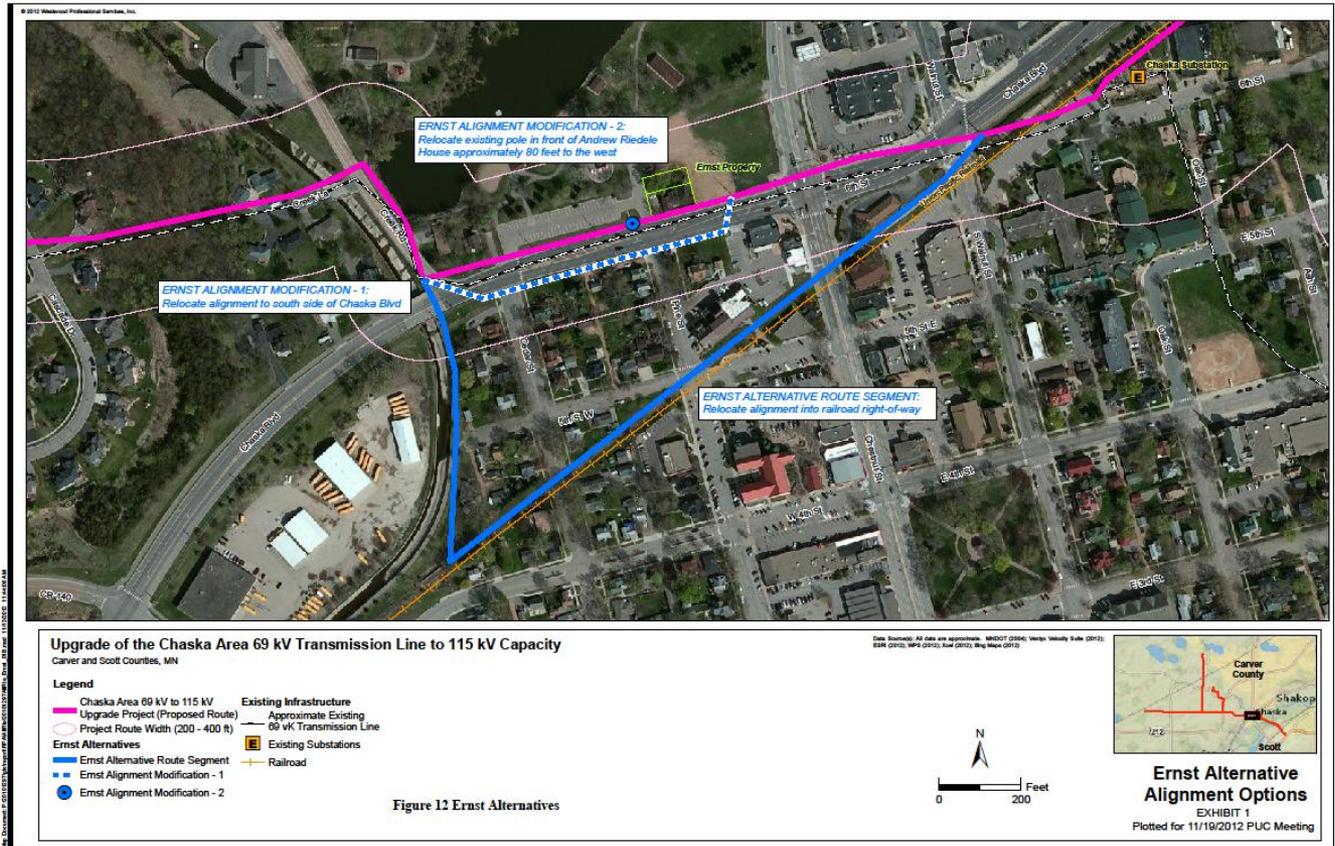
- Landowner willing to sell or lease the land
- Site Suitability:
 - Similar size to proposed project
 - Relatively flat and open with unimpeded views of the sun
 - Not in an area prohibited for power plants by Minn. Rule 7850.4400 (e.g. state and national parks, Scientific or Natural Area)
 - Access to transmission/distribution system

Project Modification

- Is there a modification to the proposed site that might address a concern?
- Is there something about the proposed design or construction process that could be modified to address a concern?

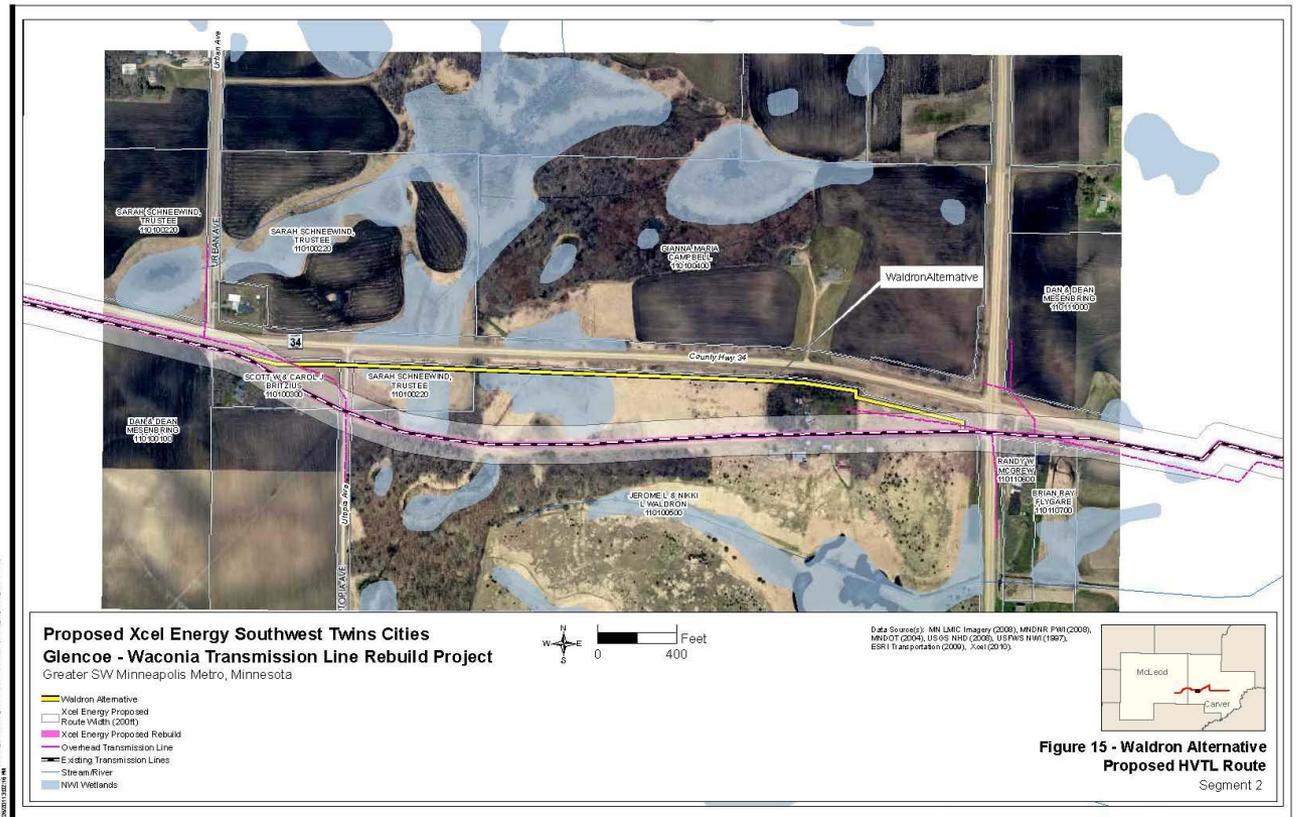
Scoping Comment: Route Alternative

Issue:
Avoid
Historic
Property

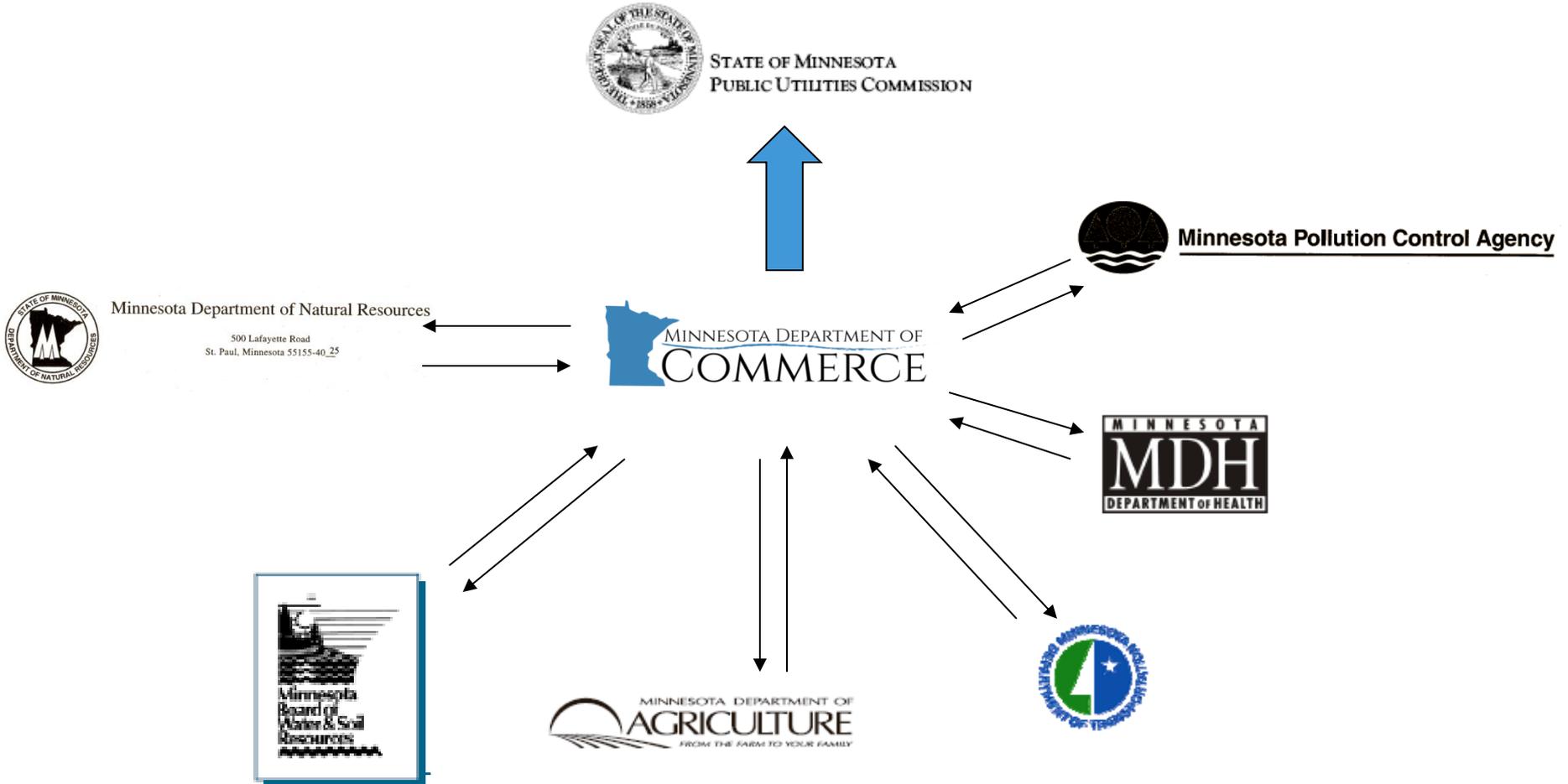


Scoping Comment: Route Alternative

Issue:
Re-align
closer to
road



Participating Agencies



Project Information

Department of Commerce
Energy Environmental Review and Analysis
Website for North Star Solar Project:

<http://mn.gov/commerce/energyfacilities/Docket.html?Id=34064>

Department Contact

David Birkholz, Environmental Review Manager

Phone: 651-539-1838

800-657-3794

Email: david.birkholz@state.mn.us

Scoping Comments

- Verbal Comments at Tonight's Meeting
- Complete and Submit a Comment Sheet
- Comment On-Line:
<http://mn.gov/commerce/energyfacilities/#comments>
- Mail, Fax, or Email a Comment:
 - David Birkholz
Minnesota Department of Commerce
85 7th Place East, Suite 500
St. Paul, MN 55101-2198
 - fax: 651-539-0109
 - david.birkholz@state.mn.us
- Comment Period Ends: **Friday, May 15, 2015**

Public Comments

- One Speaker at a Time
- Please Limit Comments to a Few Minutes
- Please State and Spell Your Name for the Court Reporter
- Maintain Respect for Others
- Direct Your Comments/Questions to the Scope of the EA