

The public meeting will begin shortly

Thank you for your patience

- If you are hearing music, you are in the right place. Please continue to hold and the meeting will begin shortly.
- Upon entry attendees are muted and will remain muted throughout the presentation.
- After the presentation has completed, there will be an opportunity to get into a queue to make a comment or ask a question.

Public Information & Environmental Assessment Scoping Meeting

Big Bend Wind Project
IP7013/CN-19-408, WS-19-619, TL-19-621

Red Rock Solar Project
IP7014/CN-19-486, GS-19-620

April 1, 2020



To join the meeting by telephone to listen or provide verbal comments; dial (866) 609-6127 and use Conference # 5195488.

Meeting Purpose

1. Overview of Meeting and Permit Processes

Minnesota Public Utilities Commission

2. Project Information

Big Bend Wind, LLC
Red Rock Solar, LLC

3. Environmental Review Process

Department of Commerce – Energy Environmental Review and Analysis

4. Citizen Comments and Questions

To join the meeting by telephone to listen or provide verbal comments; dial (866) 609-6127 and use Conference # 5195488.

Our Role

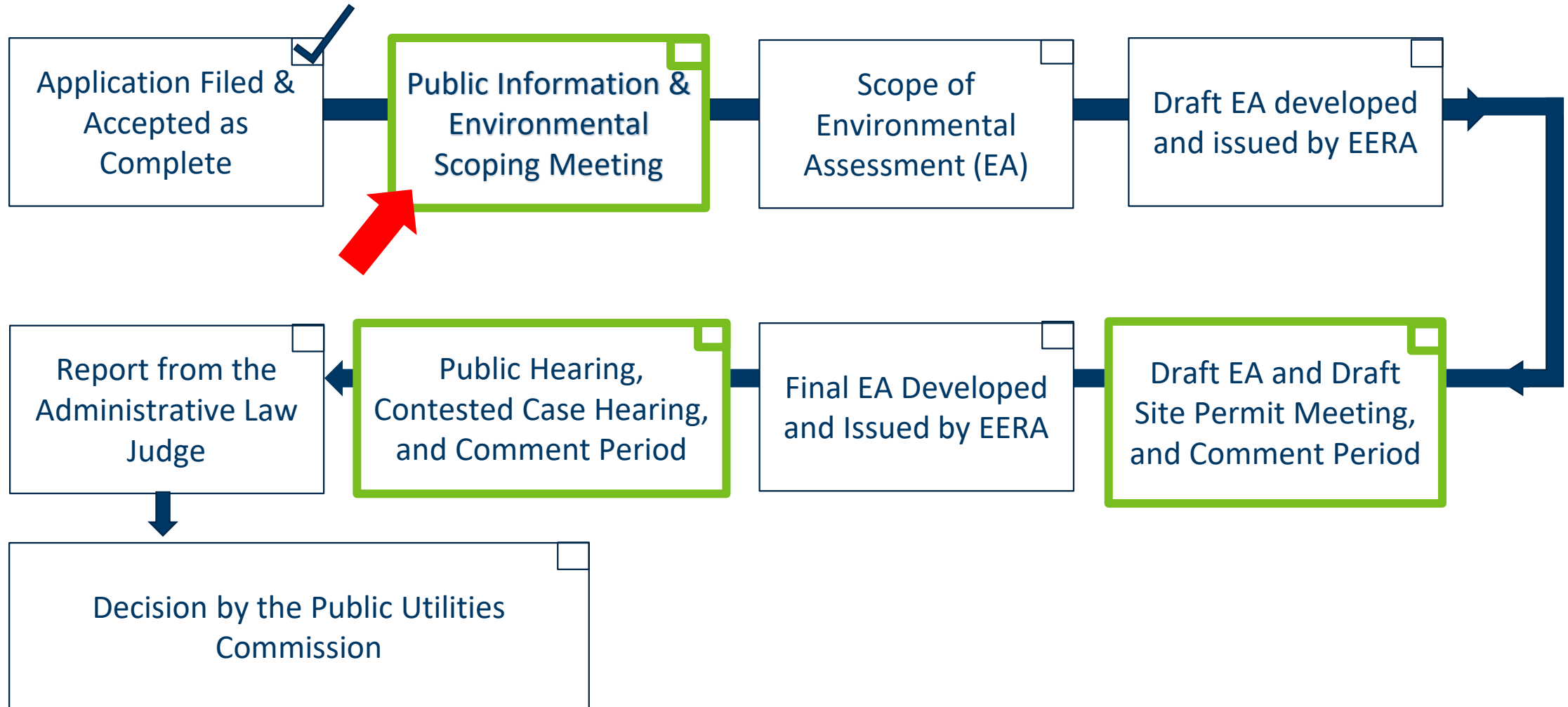
- The Commission regulates investor-owned utilities to ensure Minnesotans are charged reasonable rates for power.
- Regulates Telecommunications carriers in the state.
- The Commission permits energy generation facilities and transmission lines for construction.
- Regulates the routing of petroleum and gas pipelines in the state.

Permitting

- Commission staff review evidence, build a record of information, analyze the information, and make recommendations to the five Commissioners who have final say about a given permit decision.
- The Commissioners, after conducting a public process including a public hearing, make the final decision about a project, which carries the weight of law.

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Big Bend Wind CN/Site Permit/Route Permit



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Big Bend Wind Project

In making a *certificate of need* decision, the Commission considers factors listed in rule and statute.

Generally, factors include:

- Relationship of the proposed line to regional energy needs;
- Evaluation of possible alternatives for satisfying transmission needs;
- Benefits of enhanced reliability, access, or deliverability and the extent these factors increase the robustness of the transmission system or lower costs to Minnesotans and the region.

Minn. R. 7849.0120 and Minn. Stat. 216B.243, Subd. 3

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Big Bend Wind Project

The Commission has authority to issue site permits for projects of 5 MW or greater

In making a Large Wind Energy Conversion System *siting* decision, the Commission considers factors listed in rule and statute.

Generally, factors include:

- The Commission also must determine that a project is compatible with environmental preservation, sustainable development, and the efficient use of resources;

Minn. Rules Chpt. 7854

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Big Bend Wind Project

In making a HVTL *routing* decision, the Commission considers factors listed in rule and statute.

- The Commission's determinations are guided by the goal of conserving resources, minimizing environmental impacts, minimizing human settlement and other land use conflicts, and ensuring the state's electric energy security through efficient, cost-effective power supply and electric transmission infrastructure.

Generally, the statutory considerations include:

- Effects on the natural environment;
- Public health and welfare;
- Vegetation, wildlife, aesthetic values, future expansion, economic impact, and irretrievable commitment of resources.

Minn. R. 7850.4100 and Minn. Stat. 216E.03, Subd. 7

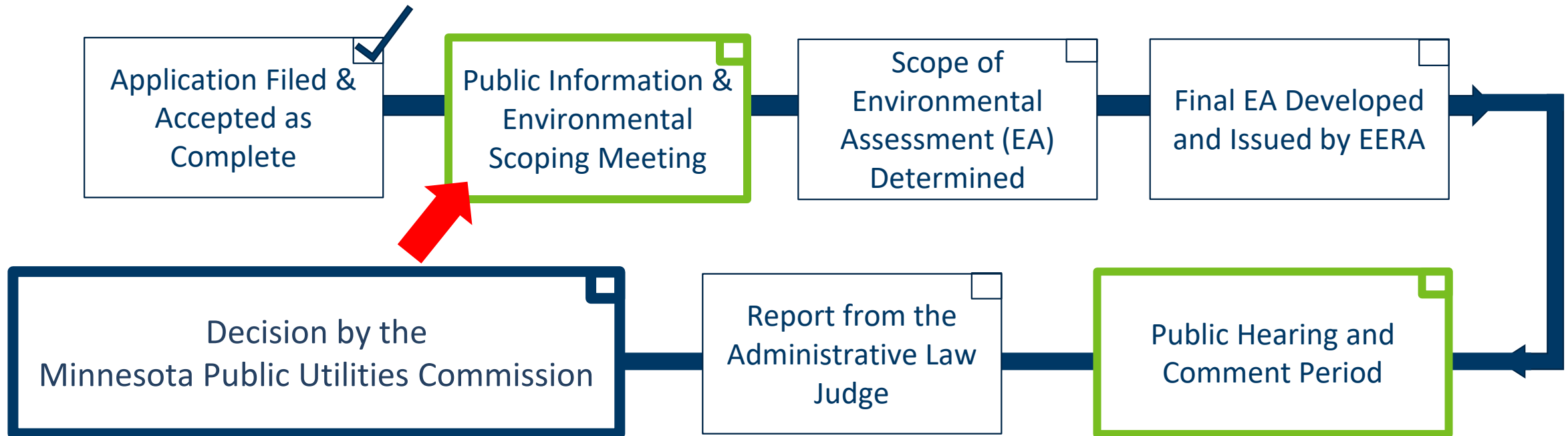
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Big Bend Wind Project

Action	Date
Certificate of Need, Site Permit, and Route Permit Applications Filed	Nov. 9, 2020
Application Accepted	March 11, 2021
Public Info. and EA Scoping Meeting	April 1, 2021
Scope of EA Determined	May 2021
Commission Decision on EA/ Draft Site Permit Issued	June 2021
Public Meeting on Draft EA/Draft Site Permit	July-August 2021
Final EA Issued	October 2021
Contested Case Hearing before ALJ	November 2021
ALJ Report Issued	January 2022
Final Decision from PUC	February-March 2022

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Red Rock Solar CN and Site Permit - Alternative Process



Six (6) month process from date of application acceptance to final permit decision. The time may be extended by three (3) months for just cause.

Minn. Rules 7850.2800

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Red Rock Solar Project CN

In making a *certificate of need* decision, the Commission considers factors listed in rule and statute.

Generally, factors include:

- Benefits of this facility, including its uses to protect or enhance environmental quality, and to increase reliability of energy supply in Minnesota and the region;
- Evaluation of possible alternatives for satisfying energy demand including but not limited to potential for increased efficiency and upgrading of existing energy generation;
- And other factors listed in rules and statute.

Minn. R. 7849.0120 and Minn. Stat. 216B.243, Subd. 3

To join the meeting by telephone to listen or provide verbal comments; dial (866) 609-6127 and use Conference # 5195488.

Red Rock Solar Project Site Permit

In making a *Site Permit* decision, the Commission considers factors listed in rule and statute.

Generally, factors include:

- Conserve resources and minimize environmental impacts
- Minimize human settlement and other land use conflicts
- Ensure an efficient, cost-effective, and secure power supply and electric transmission infrastructure.

Minn. Rules Chpt. 7850

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Red Rock Solar Project

Action	Date
Certificate of Need and Site Permit Applications Filed	Nov. 9-10, 2020
Application Accepted	March 11, 2021
Public Info. and EA Scoping Meeting	April 1, 2021
Scope of EA Determined	May 2021
EA Issued	October 2021
Public Hearing before ALJ	November 2021
ALJ Report Issued	January 2022
Final Decision from PUC	February-March 2022

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Additional Information

Department of Commerce Website:

Big Bend Wind Project - <https://mn.gov/eera/web/project/14153/>

Big Bend Wind Project HVTL - <https://mn.gov/eera/web/project/14156/>

Red Rock Solar Project - <https://mn.gov/eera/web/project/14155/>

Full Case Record: See all documents filed in this docket via the Commission's website - mn.gov/puc, select *eDockets*, enter the year and docket number, select *Search*.

Project Mailing List: Sign up to receive notices about project milestones and opportunities to participate (meetings, comment periods, etc.). Contact docketing.puc@state.mn.us or 651-201-2246 with the docket numbers (19-408, 19-619, or 19-621) for the Big Bend Wind Project or (19-486 or 19-620) for the Red Rock Solar Project, your name, mailing address, and email address.

Subscribe to the Docket: Receive email notification when new documents are filed in this matter at eFiling.com, or go to mn.gov/puc, select *Comment*, and follow the prompts. *Note - subscribing may result in a large number of emails.

To join the meeting by telephone to listen or provide verbal comments; dial (866) 609-6127 and use Conference # 5195488.

Thank You!

Energy Facilities Planners

Charley Bruce, charley.bruce@state.mn.us or 651-201-2251

Cezar Panait, cezar.panait@state.mn.us or 651-201-2207

Public Advisor

Bret Eknes, Bret.Eknes@state.mn.us or 651-201-2236



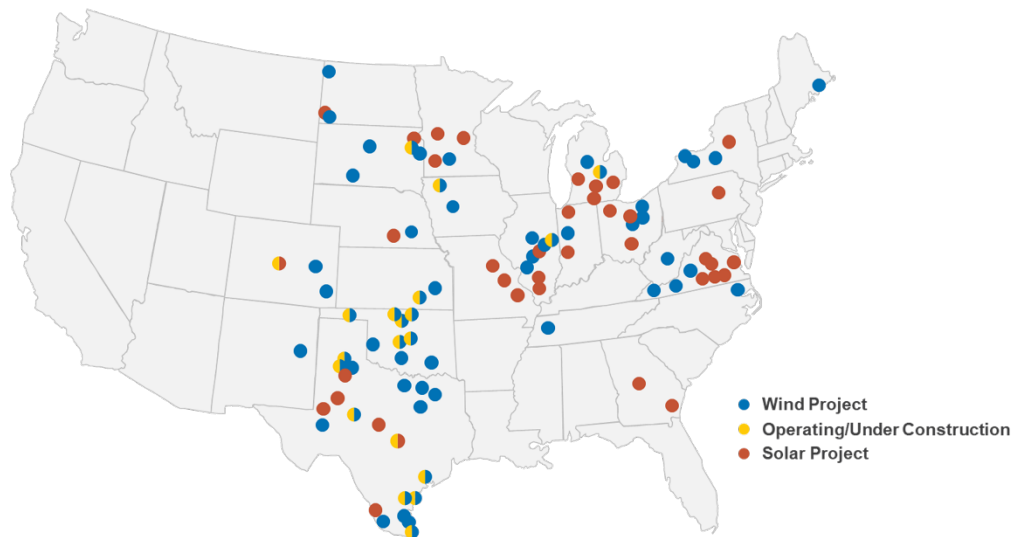
- **Big Bend Wind**
- **and Red Rock Solar**

- **April 1, 2021**



About Apex Clean Energy

Project Portfolio



Our Core Values

Safety
Professionalism
Integrity
Sustainability
Entrepreneurship

By the Numbers



Why Hybrid?

- Solar is a good capacity resource, whereas wind is a good energy resource.
- On average, wind and solar production profiles complement each other given the inverse nature of high wind and bright sun.
- Hybrid generation model can raise the renewable energy penetration level more than solar or wind generation alone.
- Costs are significantly offset by the shared balance of plant facilities on a hybrid project relative to a standalone solar project.

Big Bend Wind: Project Overview

A clean economic opportunity for Cottonwood and Watonwan Counties, benefiting local farmers and the entire community.

Why Big Bend?

- ✓ Local **familiarity with wind energy**
- ✓ Expansive **agricultural land**
- ✓ Economical **wind resource**
- ✓ Existing high-voltage **transmission** lines

Project Summary

- Up to **308MW** project
- Supportive local governments and landowners
- Enough energy to power close to **114,000** homes per year.

Project Schedule

- Goal for project completion and commercial operation is **2023**.



Completed Environmental / Cultural Studies

Environmental Study Type	Study Period
Avian Use Surveys – Year 1	November 2017- October 2018
Avian Wetland Use Surveys	March 15 – June 15, 2018
Raptor Nest Survey	April 2018
Eagle Nest Monitoring Survey	May 2018 - July 2018
General Acoustic Bat Survey	May 2018 – August 2018
Avian Use Surveys – Year 2	November 2018 – February 2020
Aerial Eagle Nest Survey	May 2019
Northern Long-eared Bat Habitat Assessment	May 2019 – May 2020
Raptor Nest Surveys	March 2020
Eagle Nest Monitoring Survey	March 2020 – August 2020
Avian Wetland Use Surveys (Watonwan County)	March 2020 – June 2020
Native Prairie Habitat Assessment	June 2020
Avian Use Surveys (Watonwan County)	March 2020 – February 2021

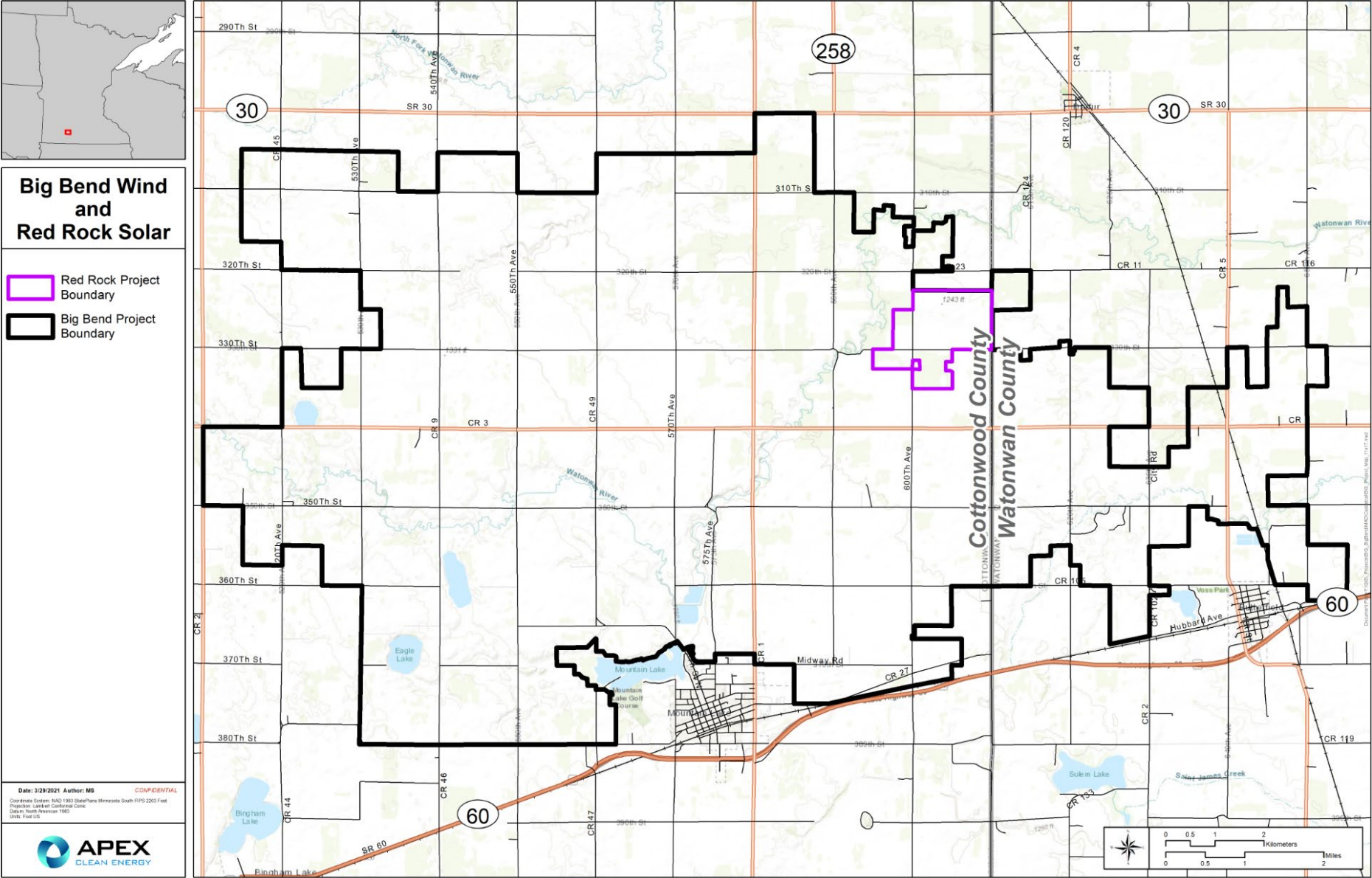
Cultural Study Type	Study Period
Cultural Desktop/Regulatory Review – Big Bend Wind	November 2017 – March 2020
Cultural Desktop/Regulatory Review – Transmission Route	November 2017 – March 2020
Visual Assessment of Tribal Resources	June 2019 - June 2020
Phase 1 Archaeological Field Surveys – Big Bend Wind	October 25, 2019 - November 20, 2020
Phase 1 Archaeological Field Surveys – Red Rock Solar	May 6-8, 2020
Architectural Field Surveys	September – October 2020
Phase 1 Archaeological Field Surveys – Transmission Route	October 15 – November 4, 2020

Wind Turbine Characteristics

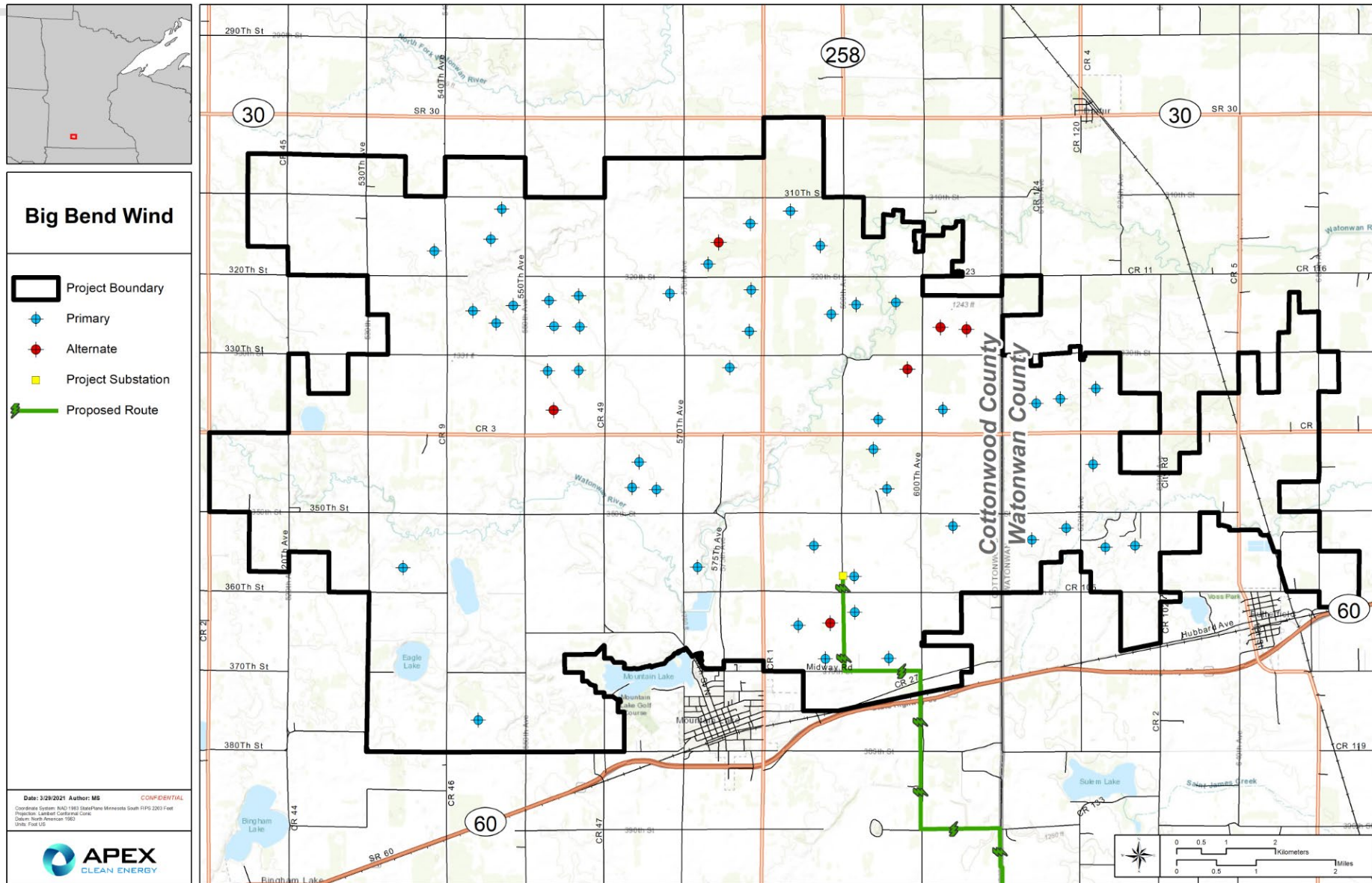
- Up to 55 turbines ranging from 5.5 MW to 5.7 MW
- All three turbine models would utilize the same turbine layout
- Turbine models being considered:
 - Nordex N-163
 - Vestas V162

Table 8.5-1 Rotor Diameter and Number of Turbines			
Turbine Model	Rotor Diameter	Rotor Tip Height – Top/Bottom of Rotor Diameter	Maximum Number of Turbines
Nordex N-163	163 m	189.5/27m or 199.5/36.5 m ¹	54
Vestas V162	162 m	200/38 m	55
GE-158	158 m	186.4/28.4 m	55
¹ The Nordex N-163 has two hub heights under consideration: 108 or 118 m			

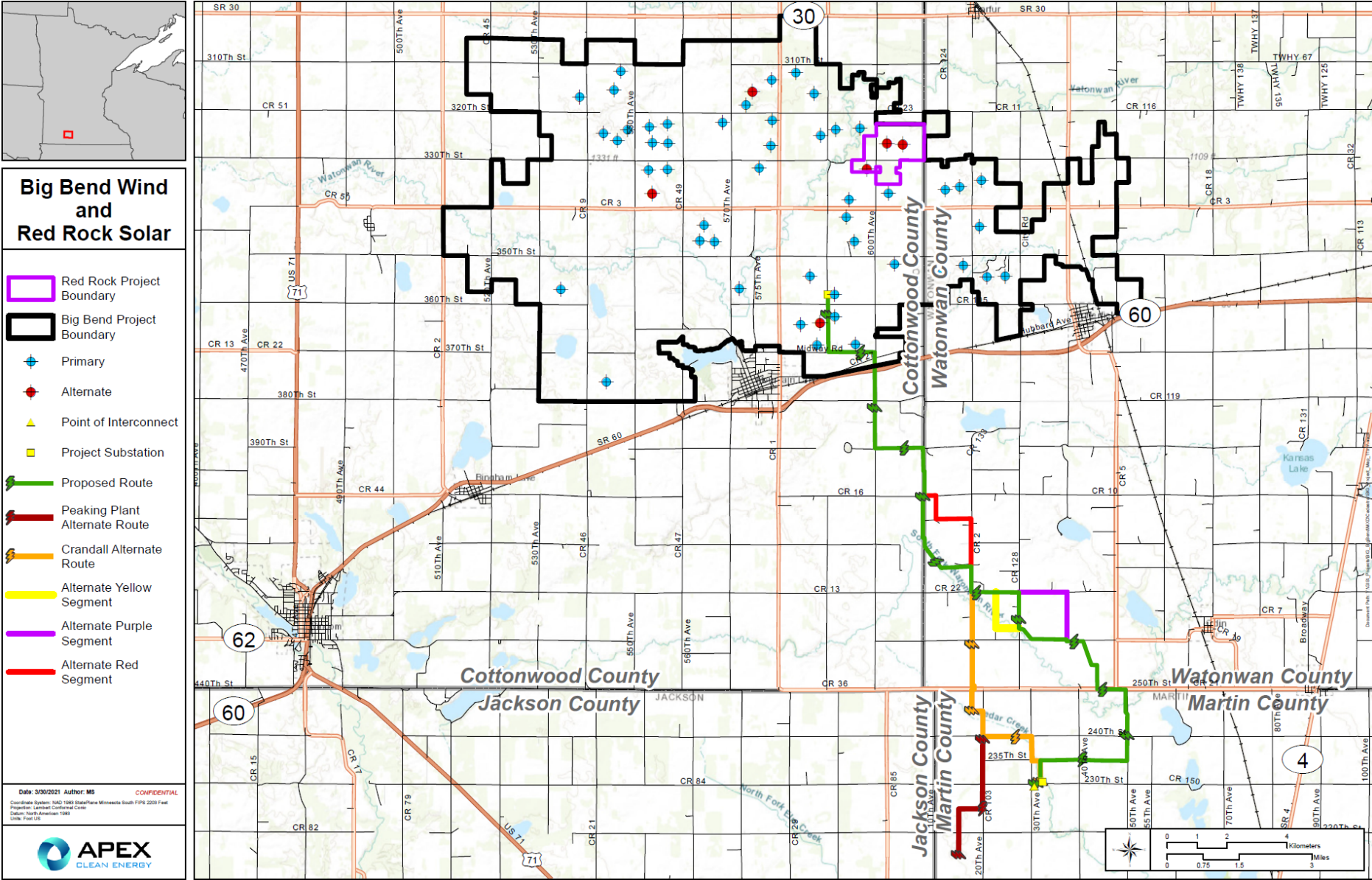
Big Bend / Red Rock Location



Big Bend Turbine Layout



Transmission Route and Alternates



Red Rock Solar: Project Overview

A clean economic opportunity for Cottonwood County, benefiting local farmers and the entire community.

Why Big Bend?

- ✓ Local **familiarity with renewable energy**
- ✓ Expansive **agricultural land**
- ✓ Interested **landowners**
- ✓ Existing high-voltage **transmission** lines

Project Summary

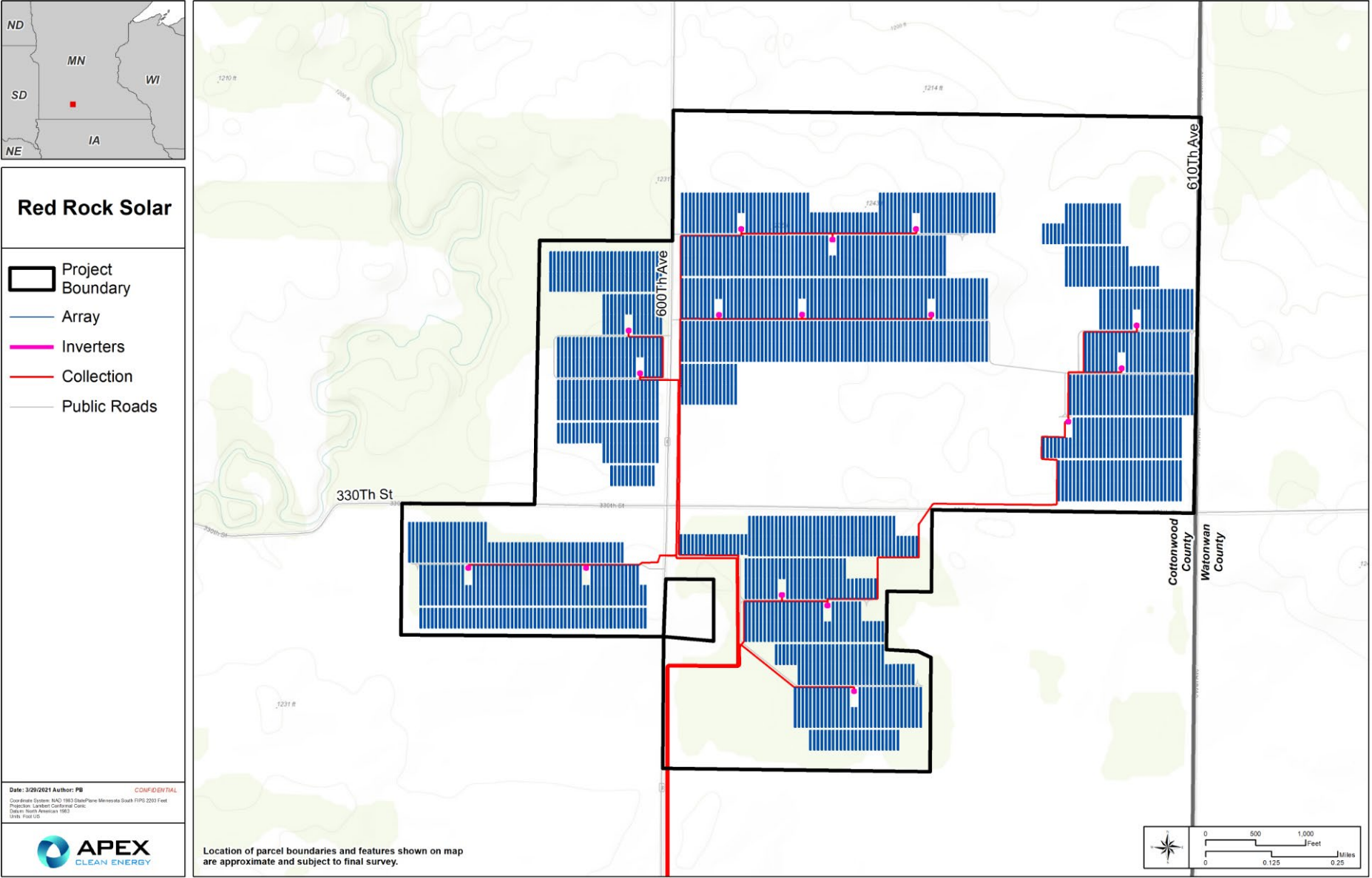
- **60 MW** project
- Supportive local governments and landowners
- Enough energy to power close to **10,000** homes per year.

Project Schedule

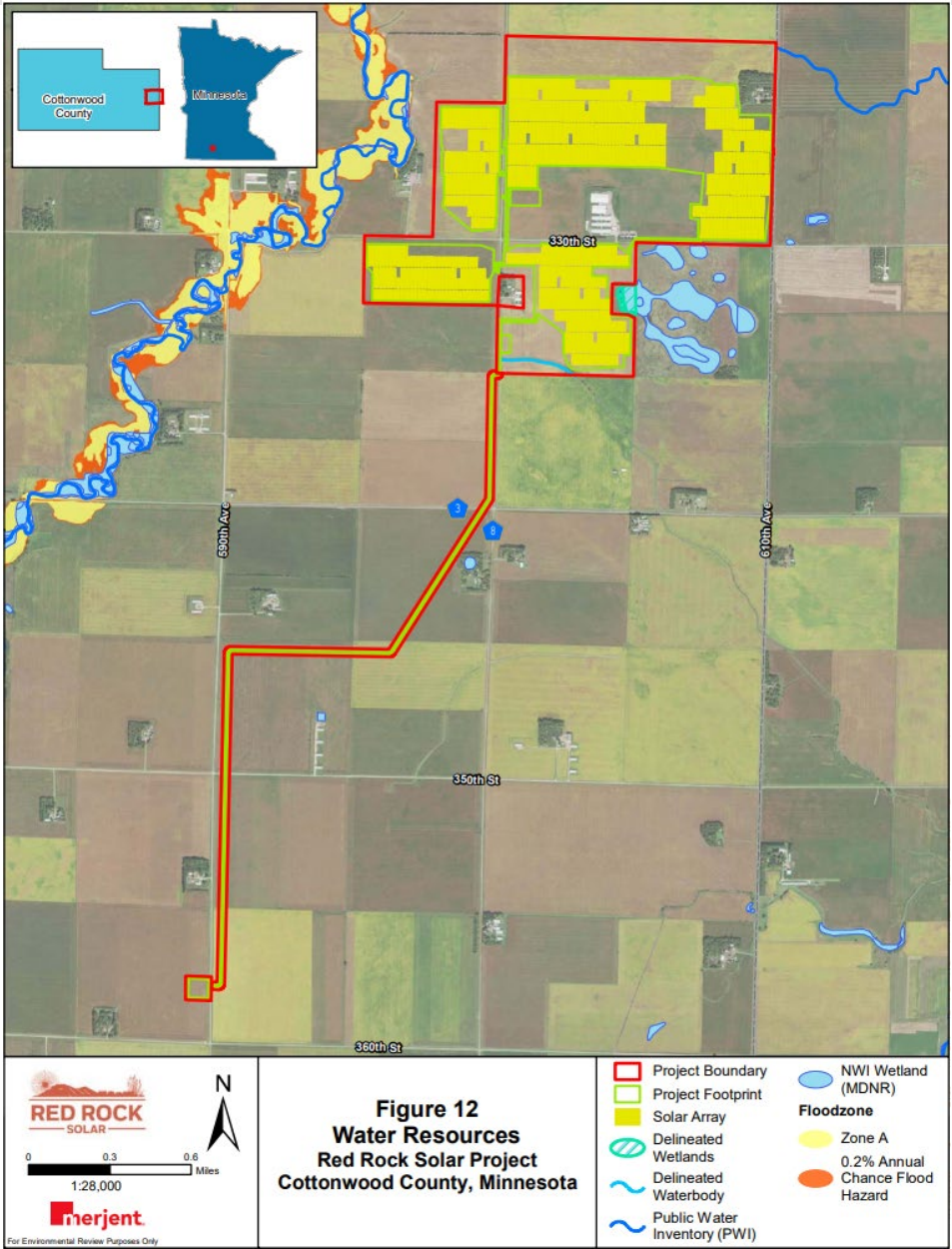
- Goal for project completion and commercial operation is **2023**.



Red Rock Layout



Red Rock Underground Collection



Local Benefits

- About 400 full-time-equivalent jobs will be created during construction.
- Approximately 14 permanent jobs at a local operations and maintenance facility
- Private investment of around \$450 million in the local community
- Significant revenue for townships, counties, landowners, and local businesses



Thank You



Please contact us for more information.



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Brenna Gunderson (Director) (434) 326-2929 |

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Big Bend Wind Farm, Big Bend HVTL, and Red Rock Solar Project Cottonwood, Martin and Watonwan Counties

Public Information and Scoping Meeting

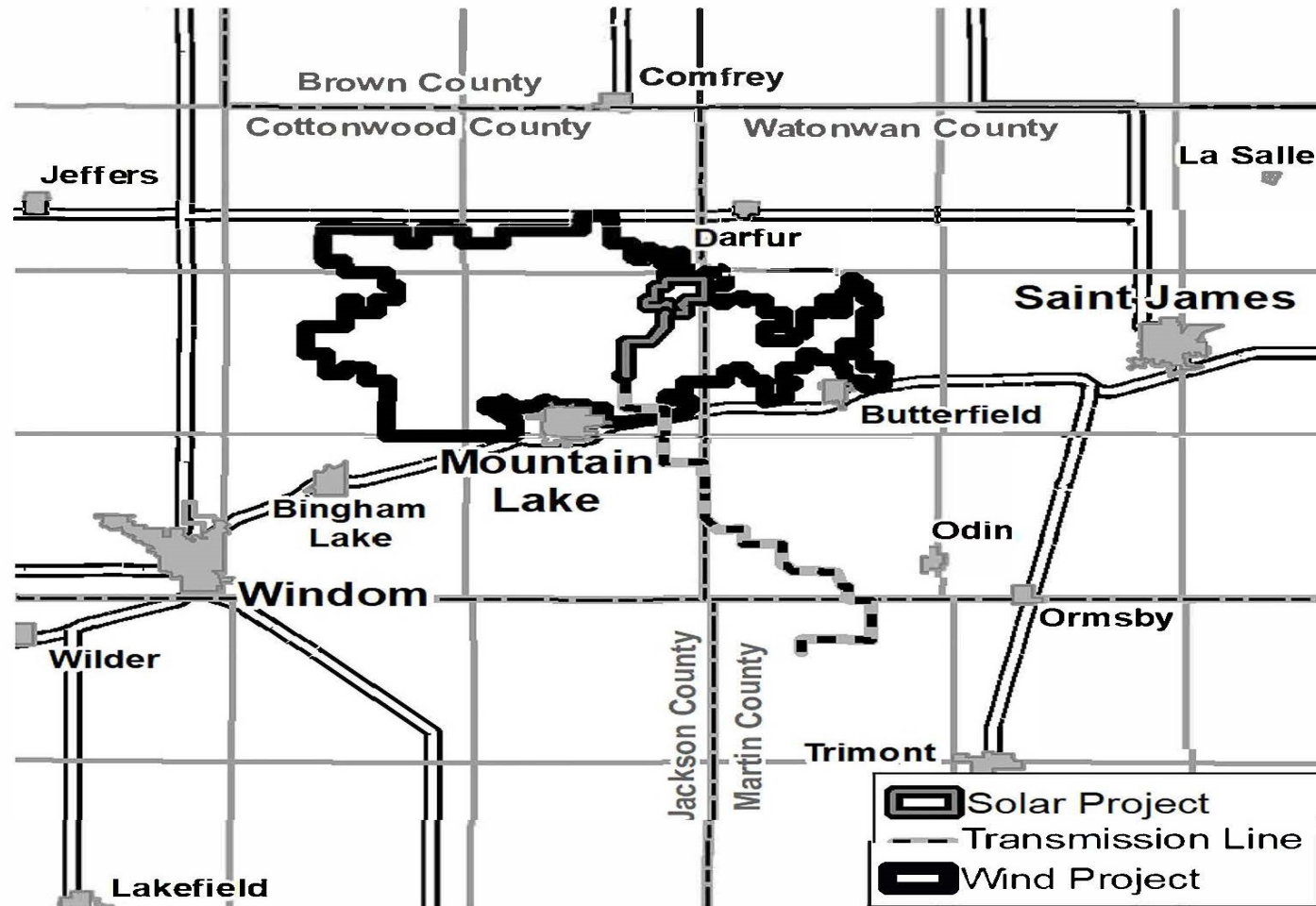
Richard Davis | Environmental Review Manager

Energy Environmental Review and Analysis (EERA)

Energy Environmental Review and Analysis (EERA)

- Technical Advisors to the Commission
- Administer the necessary environmental review processes
- Objective analysis of the proposed projects and their potential human and environmental impacts
 - We do not advocate
- Primary goal is to assist the Commission with their informed decision-making process

Big Bend Wind Farm/Big Bend Wind HVTL/ Red Rock Solar Facility



Project Details and Components

Big Bend Wind Farm

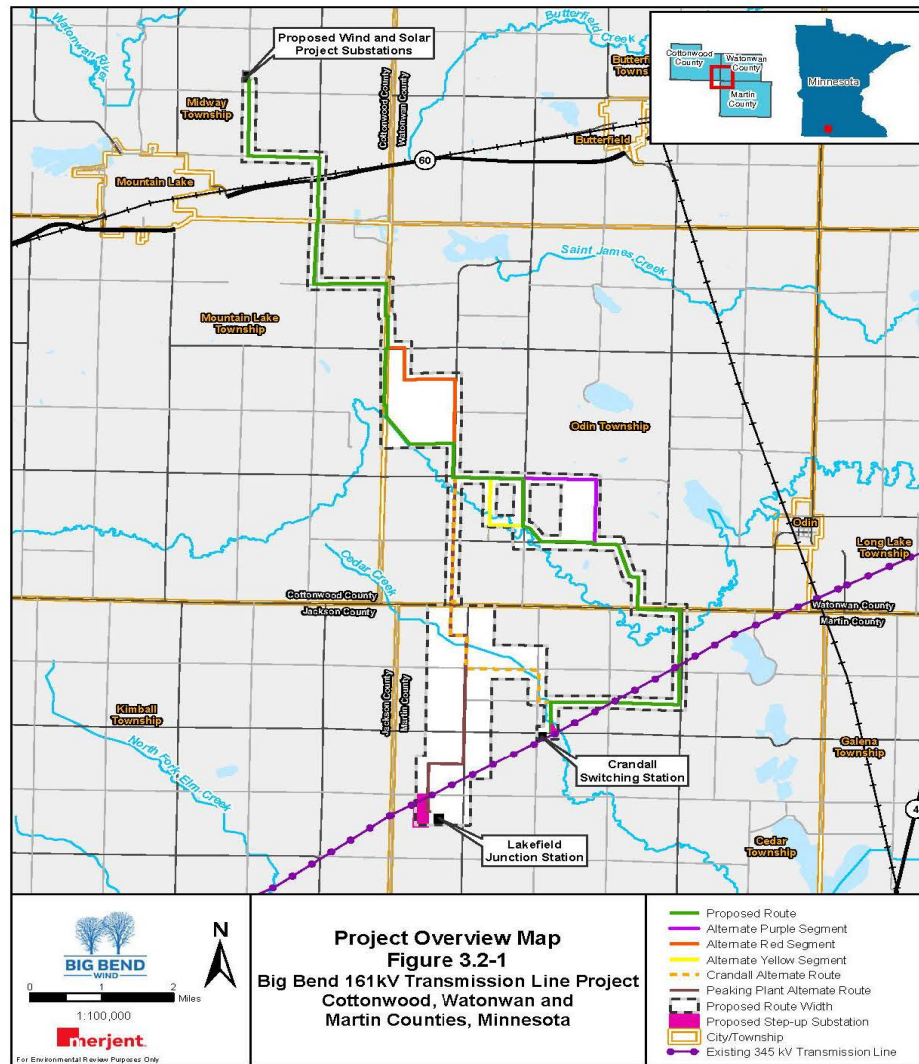
- Up to 308 MW nameplate capacity
- 54 to 55 turbines (5.7 MW – 5.5 MW)
- Associated Facilities
 - Access Roads
 - Operation and Maintenance (O&M) Facility
 - Temporary Construction laydown yard and concrete batch plant
 - Collector Lines
 - Project Substation
 - ADLS (up to 4 radars)
 - 300 foot 345 kV transmission line
 - Switchyard/Interconnection Site

Big Bend Wind HVTL

- 161 kilovolt (kV) transmission line
- Right-of-Way - 18 miles long, 150 feet wide
- Three Route Segment Alternatives
- Step-up Substation
- Two Points of Interconnection (POI)
 - Proposed Route - Crandall Switching Station POI
 - Alternate Peaking Plant Route – Lakefield Junction POI

Red Rock Solar Facility

- Up to 60 MW nameplate capacity
- Approximately 483 acres of land
- Photovoltaic Panels on tracking rack system
- Electrical Inverters
- Associated Facilities
 - Electrical Collection System
 - Fencing
 - Access Roads
 - Up to three weather stations
 - Project Substation
 - O & M Building
 - 10 stormwater drainage basins
 - Temporary Construction laydown yard and concrete batch plant



Big Bend Wind HVTL

Application Availability – EERA Website

Big Bend Wind Farm

- <https://mn.gov/eera/web/project/14153/>

Big Bend Wind HVTL

- <https://mn.gov/eera/web/project/14156/>

Red Rock Solar Facility

- <https://mn.gov/eera/web/project/14155/>

Application Availability - eDockets

- Commission's Website <https://mn.gov/puc/>
 - Click on eDockets
 - Search for:

Big Bend Wind Farm

- Certificate of Need 19-408
- Site Permit 19-619

Big Bend Wind HVTL

- Certificate of Need 19-408
- Route Permit 19-621

Red Rock Solar Facility

- Certificate of Need 19-486
- Site Permit 19-620

Application Availability – Hard Copy

- Mountain Lake Public Library
1054 Fourth Avenue, Mountain Lake, MN 56159
- Butterfield Library
111 Second Street North, Butterfield, MN 56120
- Martin County Library
190 West Main Street, Trimont, MN 56176

Certificate of Need and Permitting

- Big Bend Wind Farm
 - CN and LWECS Site Permit
- Big Bend Wind HVTL
 - CN and Route Permit
- Red Rock Solar Facility
 - CN and Site Permit

Environmental Review – Wind Facility CN and Site Permit

- Environmental Report (ER)
 - Looks at the proposed project's impacts
 - Impact mitigation measures
 - Alternatives to the proposed project
 - System Alternatives
 - Must mitigate an impact and meet the identified need of the project
 - Size, Type, and Timing
- LWECS Site Permit Application
 - Primary Environmental Review Document
 - Identifies and evaluates potential resource impacts of the proposed project
 - Identifies impact mitigation measures

Environmental Review – HVTL CN and Route Permit

➤ Environmental Assessment (EA)

- Identifies and evaluates the potential resources impacts of the proposed project
- Includes alternative routes and alternative route segments identified in the EA Scoping Decision
 - Evaluation and comparison of impacts between proposed routes, alternative routes, and alternative route segments
- Includes and evaluates potential impact mitigation measures
- The EA will be available for review prior to the Public Hearing, and there will be a comment period associated with the Public Hearing which will allow for the submittal of comments on the EA.

Environmental Review - Solar Facility CN and Site Permit

- Environmental Assessment (EA)
 - Identifies and evaluates the potential resources impacts of the proposed project
 - Includes alternative site locations identified in the EA Scoping Decision
 - Evaluation and comparison of impacts between proposed site location and alternative site locations
 - Includes and evaluates potential impact mitigation measures
 - The EA will be available for review prior to the Public Hearing, and there will be a comment period associated with the Public Hearing which will allow for the submittal of comments on the EA.

What do we do with what you provide us during the comment period?

- Environmental Assessment Scoping Decision (Includes ER and EA)
 - Potential resource impacts caused by the proposed projects
 - Consider proposed system alternatives
 - Consider proposed HVTL route alternatives and route segment alternatives
 - Consider proposed site alternatives for the solar facility
- Development of a Preliminary Draft Site Permit for the proposed wind facility
 - “Permit-ability”
 - Potential resources or impacts to be included in the Preliminary Draft Site Permit
 - Local interests and concerns
 - EERA Comments and Recommendation, Preliminary Draft Site Permit Development
- Public Hearing (Contested Case Process) – Intervene by the end of the Comment Period, April 30, 2021
 - Evaluation of the issued Draft Site Permit
 - Public comments on the Draft Site Permit
 - Evidentiary Hearing Proceedings (Expert Testimony)

What is an alternative?

- System Alternative
 - Identify potential impacts to be mitigated by the system alternative
 - Must meet the applicant's stated need
- Alternative Routes and Alternative Route Segments Considered for Inclusion
 - Explanation of what potential impacts will be avoided or minimized by using the proposed alternative route or proposed alternative route segment
 - Provide as much supporting information as you would like the Commission to consider.
- Alternative Site Locations to Considered for Inclusion
 - Explanation of what potential impacts will be avoided or minimized by using the proposed alternative site location.
 - Provide as much supporting information as you would like the Commission to consider.
 - Alternative location options must be submitted during the public scoping period, they must be located outside of prohibited areas, must meet the Applicant's stated need, and it must be feasible.

Public Participation

- Public Participation
 - Provide Comments Tonight
 - Submit Comments in Writing
 - Online <https://mn.gov/commerce/energyfacilities/#comment>
 - Email richard.davis@state.mn.us
 - Mail Rich Davis, Environmental Review Manager

Minnesota Department of Commerce

85 7th Place East, Suite 500

St. Paul MN 55101
 - Fax 651-539-0109

COMMENT PERIOD DEADLINE

Friday, April 30, 2021

Big Bend Wind - Topics to Address with Comments

- What potential human and environmental impacts of the proposed project should be assessed in the environmental assessment (EA), and/or draft site permit?
- What are the possible methods to minimize, mitigate, or avoid potential impacts of the proposed project?
- Are there any alternative routes or route segments that should be considered to address potential impacts associated with the 161 kV transmission line?
- Are there any unique characteristics of the proposed site or the project that should be considered?
- Are there other ways to meet the stated need for the project, for example, a different size project or a different type of facility? If so, what alternatives to the project should be studied in the EA?
- Are there any items missing or mischaracterized in any of the applications or issues that need further development?

Red Rock Solar - Topics to Address with Comments

- What potential human and environmental impacts of the proposed project should be assessed in the environmental assessment (EA)?
- What are the possible methods to minimize, mitigate, or avoid potential impacts of the proposed project?
- Are there any unique characteristics of the proposed project site that should be considered?
- Are there other ways to meet the stated need for the project, for example, a different size project or a different type of facility?
- Are there any items missing or mischaracterized in any of the applications or issues that need further development?

Tonight's Procedure and Speaker Guidelines

- One speaker at a time
- Five (5) minutes per speaker (opportunity for more at the end if time allows)
- State & spell your name before you make your comments.
- Please maintain respect for others
- Focus comments
 - Certificate of Need Issues
 - Draft Site Permit issues
 - Environmental Assessment Scoping Issues

Thank You!

Richard Davis

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507-380-6859

651-539-1846