ELK CREEK SOLAR, LLC

MINNESOTA PUBLIC UTILITIES COMMISSION

COMMISSION DOCKET NO. IP-7009/GS-19-495
OAH DOCKET NO. 65-2500-39582

DIRECT TESTIMONY OF MARC MORANDI

FEBRUARY 9, 2024

I. INTRODUCTION AND QUALIFICATIONS

Q. Please state your name, employer and business address.

A. My name is Marc Morandi. I am a Sr. Permitting Specialist at National Grid Renewables Development, LLC ("NG Renewables"), located at 8400 Normandale Lake Boulevard, Suite 1200, Bloomington, Minnesota.

Q. Please briefly describe your educational background and experience.

A. I hold a Master of Science from the University of Toledo. I have 8 years of experience permitting various infrastructure at the local, state, and federal level. In my tenure at NG Renewables, I have permitted nearly 200 megawatts ("MWs") of wind and solar energy. A copy of my curriculum vitae is provided as Exhibit A.

Q. What is the relationship between NG Renewables and Elk Creek Solar, LLC ("Elk Creek" or "Applicant")?

A. Elk Creek, a wholly owned subsidiary of NG Renewables, was formed for the purpose of developing the Elk Creek Solar Project (the "Project"). Elk Creek will construct, own, and operate the Project.

NG Renewables is a utility-scale renewable energy development company headquartered in Bloomington, Minnesota. NG Renewables provides custom renewable energy development solutions for utilities, independent power purchasers, and corporations looking to harness renewable energy for business growth. NG Renewables has developed multiple operating wind farms and solar facilities throughout the United States and currently has approximately 545 MWs of wind and solar projects under construction and 1,300 MWs in operation. NG Renewables has a multi-gigawatt development pipeline of wind and solar projects in various stages of development throughout the United States.

Q. What is your role with respect to the Project?

A. I oversee all aspects of local, state, and federal permitting for the Project including retaining and managing environmental firms to conduct desktop and field analyses and prepare permit applications for the Project. I also coordinate with local, state, and federal agencies and entities, and provide input on ways that the Project's design can avoid or minimize potential impacts to environmental features.

II. OVERVIEW

Q. What is the purpose of your Direct Testimony?

A. The purpose of my Direct Testimony is to address the following topics:

- Elk Creek's request to increase the nameplate capacity of the Project to 160 MW and to increase the Project boundary by 546 acres;
- Application Updates;
- Supplemental Environmental Assessment comments; and
- The Draft Site Permit.

The information I reference regarding the Project is primarily described in Elk Creek's request for amendment and Site Permit Application submitted on August 29, 2023 (the "Application").

Q. What schedules are attached to your Direct Testimony?

A. The following exhibits are attached to my Direct Testimony:

- Exhibit A: Curriculum Vitae
- Exhibit B: Public Hearing PowerPoint Presentation
- Exhibit C: Modified Site Plan

Q. Are you also sponsoring the Application?

A. Yes, I am sponsoring the entire Application.

Q. Are you also sponsoring any portion of the Elk Creek public hearing presentation (attached to this Testimony as Exhibit B)?

A. Yes, I am sponsoring the entire presentation.

III. PROJECT DESCRIPTION & DEVELOPMENT HISTORY

Q. Please describe the Project and its development history.

A. The Project is currently proposed as an up to 160 MW solar photovoltaic (PV) facility located in Vienna and Magnolia Townships, Rock County, Minnesota. The Project will interconnect into the Magnolia Substation, which is adjacent to the Project.

In September 2019, Elk Creek filed applications with the Commission for a certificate of need and site permit for the Project, which was proposed as a solar energy conversion facility with an 80-MW alternating current ("AC") nameplate capacity located on 976 acres in Rock County, Minnesota. At that time, Elk Creek entered into a power purchase agreement ("PPA") with Xcel Energy for purchase of the facility's output. The Commission issued orders on December 31, 2020, approving the certificate of need and site permit for the Project (the "2020 Site Permit"). Repeated delays in approval of Elk Creek's Midcontinent Independent System Operator ("MISO") interconnection request led to subsequent delays in the target commercial operation date of the Project, which forced Elk Creek to pursue other options for satisfying the supply obligations under the PPA. To satisfy Elk Creek's supply obligations, NG Renewables acquired and substituted two other projects within the MISO territory that possessed full interconnection rights to replace the Project and serve the supply obligations under the PPA.

On February 15, 2023, Elk Creek filed a letter informing the Commission that delays associated with the MISO interconnection queue process forced Elk Creek to substitute two projects in place of the Project under the PPA. Because two other projects were substituted for the Project under the PPA, Elk Creek did not have a contract in place to sell power generated by the Project.

Elk Creek subsequently executed two 80-MW Generation Interconnection Agreements ("GIAs") with MISO, and requested amendments to the 2020 Site Permit that would allow Elk Creek to increase the approved Project boundary to 1,522 acres and the nameplate capacity of the Project to 160 MWs.

IV. AMENDMENT APPLICATION

Q. Please describe Elk Creek's proposed amendments to the 2020 Site Permit.

A. Elk Creek is requesting Commission approval to increase the Project boundary from 976 acres to 1,522 acres and to increase the nameplate capacity of the Project to 160 MWs to accommodate Elk Creek's two 80-MW GIAs with MISO.

The 2020 Site Permit authorized Elk Creek to construct the Project in Sections 27, 34, and 35, Township 103 North, Range 44 West, in Vienna Township, Rock County, Minnesota (the "2020 Land Control Area"). Elk Creek is proposing to amend the 2020 Site Permit to add approximately 545 acres of land under lease or easement primarily located in Section 3, Township 102 North, Range 44 West, in Magnolia Township, Rock County, Minnesota (the "Amendment Land Control Area"). The Amendment Land Control Area was chosen based on its proximity to the 2020 Land Control Area. In total, Elk Creek has obtained leases, easements, and purchase options for approximately 1,522 acres of privately-owned land that combines the 2020 Land Control Area and the Amendment Land Control Area, herein collectively referred to as the 2023 Land Control Area.

Within the 2023 Land Control Area, Elk Creek is proposing to build a solar facility with up to 160 MW AC nameplate capacity. Elk Creek considered developing two separate 80-MW projects and determined that it is more cost-effective to construct and interconnect 160 MW by allocating the required system upgrades across 160 MW instead of 80 MW originally approved in the 2020 Site Permit. By increasing the project boundary by approximately 546 acres, Elk Creek is able to design the up to 160 MW solar facility on less land than would be required if two separate 80-MW

projects were constructed in separate locations. The proposed amendments reflect Elk Creek's effort to maximize the energy production of the Project and follow applicable setbacks, while minimizing impacts to the land, environment, and surrounding community by reducing row spacing and including more efficient solar panels than those considered in the 2020 Site Permit.

Q. Do you have any updates for the Project since filing the Application?

A. Since filing the Application, Elk Creek has revised the Project Schedule and the location of the operations and maintenance building ("O&M Building") in the preliminary Project layout.

Q. Please explain the changes to the Project schedule.

A. Elk Creek initially planned that construction would begin as early as Q2 of 2024 and commercial operation of the Project would begin in Q4 of 2025. The Project schedule was based on Elk Creek's anticipated timeline for securing amendments to the 2020 Site Permit. However, on October 10, 2023, the Commission issued its order approving review of the Amendment Application through a modified permit amendment process which, among other things, will require more time to consider Elk Creek's proposed amendments than originally anticipated by Elk Creek. The current schedule for the permit amendment process anticipates Commission consideration of the site permit amendment in May of 2024. Securing an amended site permit in the early summer is not likely to allow sufficient time for construction to commence in the summer of 2024. Accordingly, Elk Creek currently anticipates that construction will begin as early as the second quarter of 2025. Following completion of construction and testing, commercial operation for the Project is scheduled to begin as early as the third quarter of 2026.

Q. Please explain the changes to the location of the Project O&M Building.

A. Elk Creek is updating the preliminary Project layout by relocating the O&M building. The location of the O&M Building identified in the Application was proposed to be in

the western portion of the central lobe, south of the substation. Elk Creek currently proposes to construct the O&M Building in the eastern portion of the central lobe.

The O&M Building location provided in the Application is located on land that will be leased from the underlying landowner. Elk Creek has since determined that the O&M Building should be located on land that will be owned by Elk Creek. Elk Creek has and intends to exercise its purchase option on property located on the eastern portion of the central lobe. Accordingly, Elk Creek has modified the preliminary site plan to relocate the O&M Building to this land that will be owned by Elk Creek (See Exhibit C). The area in which the O&M Building will be located was evaluated in the Supplemental EA dated January 29, 2024. It is within the Site Control Area and on land which was originally proposed to house solar panels in the 2020 Site Permit.

Q. Do you have any other updates or clarifications to the Amendment Application?

A. Yes. Elk Creek wishes to correct an inadvertent error in the Application which misstated the estimated annual production tax payments to Rock County.

On page 54 of the Application, Elk Creek stated that the "production tax payments to Rock County are estimated to total approximately $7.94M annually over 25 years. Additionally, Vienna and Magnolia Townships will receive approximately $1.985M annually over 25 years." Those production tax payments should have been expressed as the estimated total payments over the life of the Project with portions of which paid annually.

Elk Creek currently estimates that the the Project will pay an Energy Production Tax to the local units of government of approximately $380,000 annually or approximately $9.5 Million over 25 years. The production tax payments to the County would be approximately $7.6 million over 25 years or approximately $304,000 per year. The remaining amount of approximately $1.9 million or approximately $76,000 per year would be shared by the townships.

V. SUPPLEMENTAL ENVIRONMENTAL ASSESSMENT AND DRAFT SITE PERMIT

Q. Have you reviewed the Supplemental EA prepared by EERA for the Project?

A. Yes. EERA filed the Supplemental EA on January 29, 2024. The Supplemental EA included, as Appendix D.2, a draft site permit prepared by EERA for the Project (the "Draft Site Permit"). I have reviewed both the Supplemental EA and the Draft Site Permit.

Q. Do you have any information you would like to provide to clarify or further elaborate on topics covered by the Supplemental EA?

A. No. Elk Creek appreciates EERA's thorough review of the Project, and is satisfied that Supplemental EA generally captures the potential impacts of the Project. The Supplemental EA concluded that environmental impacts of the Project can be adequately mitigated by the Draft Site Permit.

Q. Do you have any comments you would like to provide on the Draft Site Permit?

A. No. Elk Creek concurs with EERA that the mitigation measures included in the Draft Site Permit are sufficient to adequately address potential Project impacts. Adoption of the Draft Site Permit will ensure the environment is adequately protected and the Project an efficient use of resources.

VI. CONCLUSION

Q. Does this conclude your Direct Testimony?

A. Yes.

Marc Morandi, *Sr. Permitting Specialist*

EDUCATION

Master of Science
Environmental Science
University of Toledo
Toledo, OH
2013

Bachelor of Science
Biology
University of Toledo
Toledo, OH
2010

PROFESSIONAL EXPERIENCE

2022-Present	Senior Permitting Specialist, National Grid Renewables Minneapolis, MN
2016-2022	Senior Environmental Specialist, Alliant Energy Madison, WI
2012-2016	Environmental Consultant, The Cadmus Group Madison, WI
2010-2012	Graduate Research Assistant, University of Toledo Toledo, OH

SUMMARY OF EXPERTISE

Senior Permitting Specialist - Mr. Morandi oversees the permitting lifecycle of renewable energy projects, including initial site assessments, regulatory compliance, application preparation, and stakeholder engagement. His experience includes leading permitting efforts on local, state, and federal levels, coordinating with regulatory groups and agencies, and collaborating with third-party contractors and consultants to align surveying and reporting obligations with permitting objectives. He has permitted 200 MW of solar energy products to date and is actively working to permit over 1,300 MW of other renewable projects across the Midwest.

AWARDS, PUBLICATIONS, AND RECOGNITIONS

Assessing the influence of different inland lake management strategies on human-mediated invasive species spread, Management of Biological Invasions, Volume 6, Issue 1:57-69.

Exhibit B

nationalgrid renewables

Elk Creek Solar Project

Exhibit B

National Grid Renewables

- Elk Creek Solar, LLC is a wholly owned subsidiary of National Grid Renewables.
- National Grid Renewables is a leading North American renewable energy company based in Minneapolis, Minnesota.
- National Grid Renewables is a farmer-friendly and community focused company.
- National Grid Renewables has 12 projects under construction or in operation.

Elk Creek Solar

160 MW Solar Facility

- Located in Vienna and Magnolia Townships within Rock County, north of Magnolia, MN
- Project area is ~1,500 acres
- Interconnect to the Magnolia Substation
- Commercial Operation Date as early as Q3 2026 with construction anticipated as early as Q2 2025

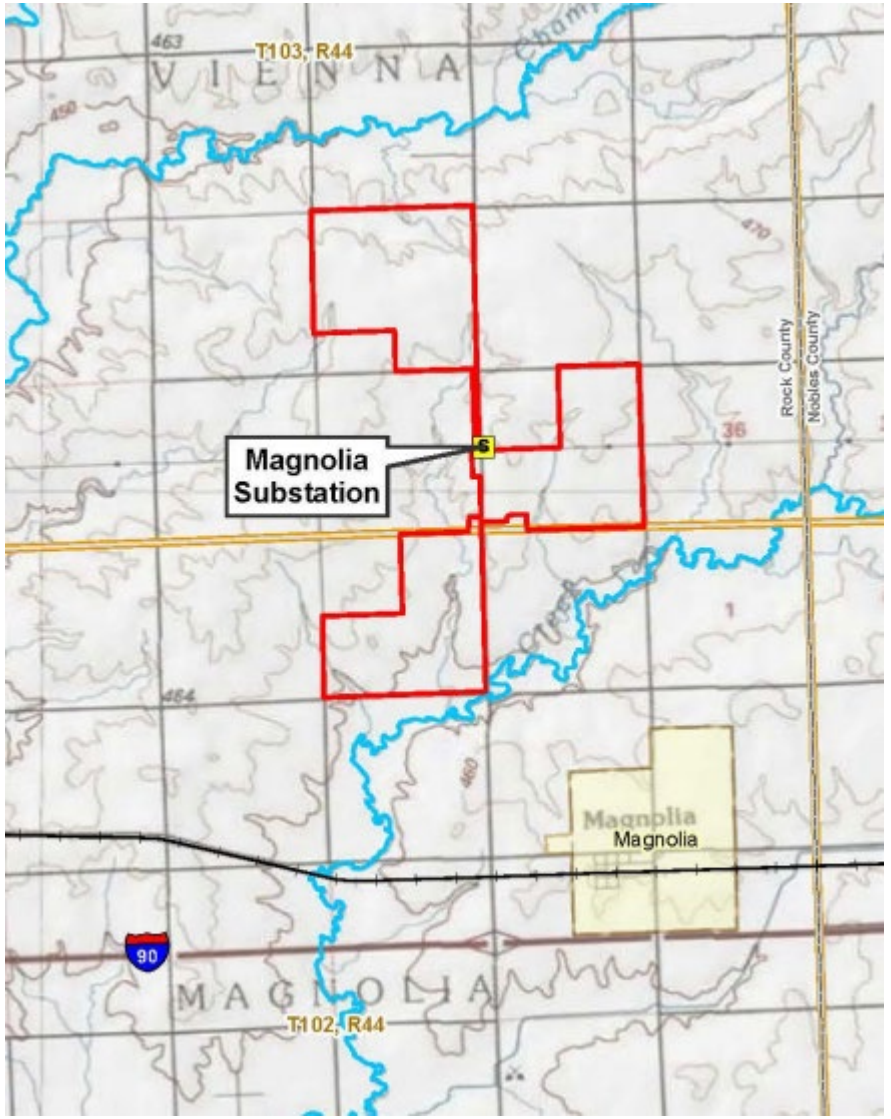


Exhibit B

Elk Creek Solar

Increased Project Capacity from 80 MW to 160 MW

- MN PUC approved site permit in 2020 for 80 MW
- Delays in Elk Creek's MISO interconnection request delayed commercial operation date
- Elk Creek has injection rights for 160 MW into the MISO system, so we've modified project design to take advantage of that full capacity

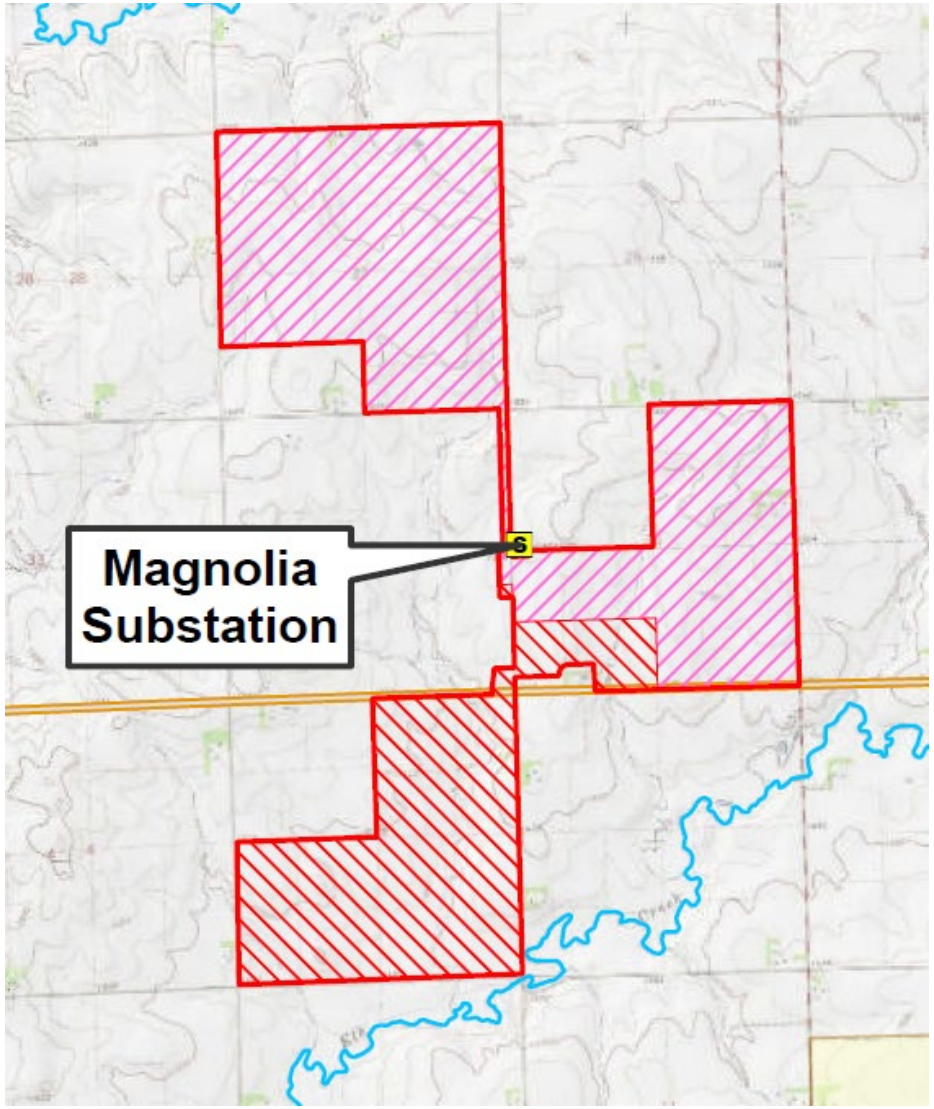
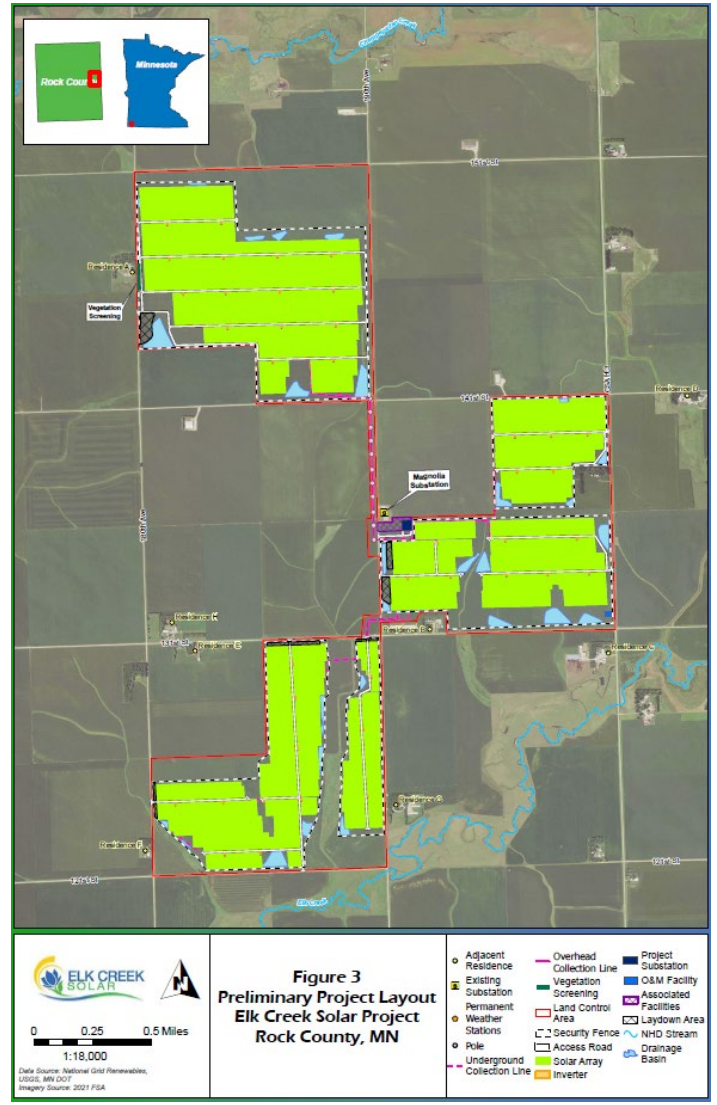


Exhibit B

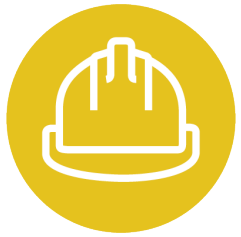
Project Updates

Goal: Maximize energy production and minimize impacts to land, environment, and surrounding community.

- Increase from 976 acres to 1,522
  - Privately-owned land with voluntary agreements
  - More panels that are higher efficiency for greater capacity
  - Reduced row spacing more efficient use of land
- Change in electrical collection system design
  - Previously considered all above-ground, now is above- and below ground hybrid system
  - Will reduce above ground wiring and potential visual impacts



Project Benefits – Jobs and Economic Activity



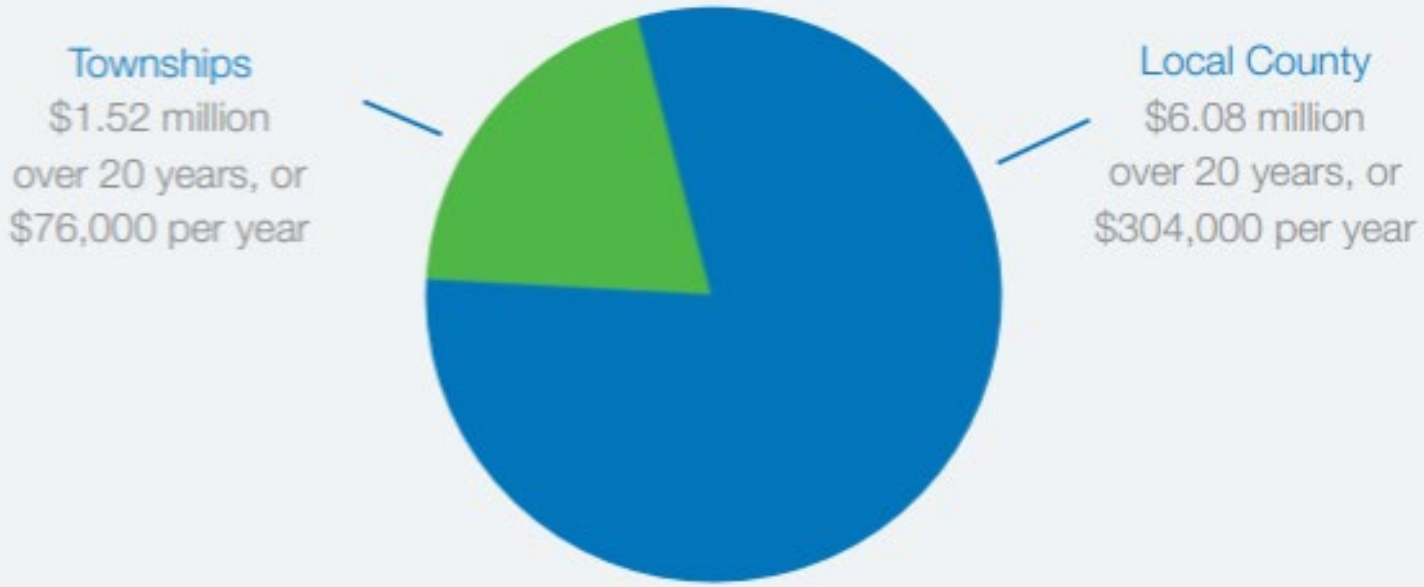
- **Benefits to Landowners & Future Agricultural Use**
  - Provides landowners economic benefits & diversification
  - Majority of land will be allowed to “rest”
    - Allows soil nutrients to be restored and improving land for agricultural use

- Local expenditures: lodging, food services, fuel transportation, general supplies
- ~225 temporary jobs during construction
- Up to 4-6 full-time jobs during operations

Community Benefits – Tax Revenue

~$7.6 million
Over 20 Years*
(~$380,000 annually)

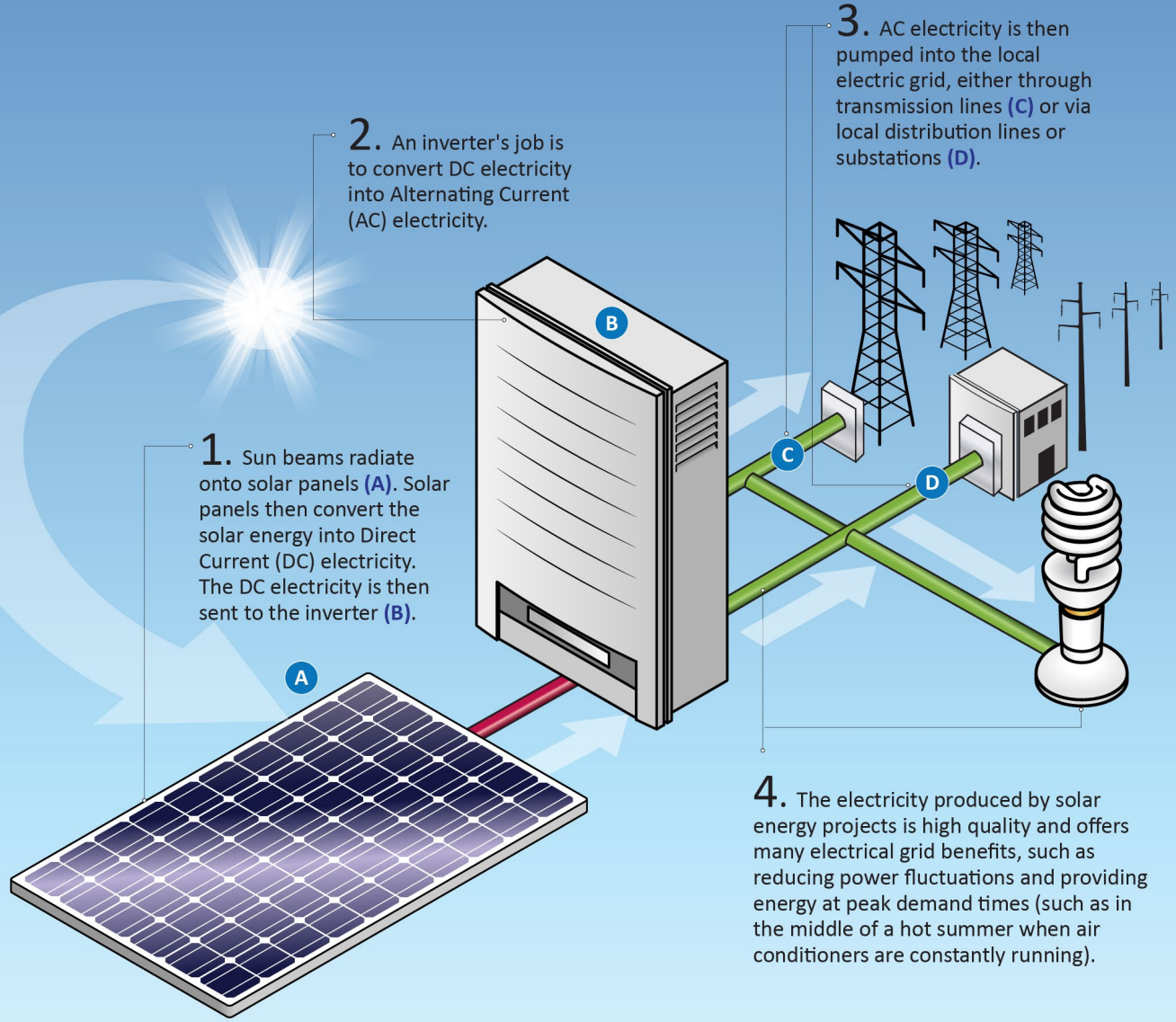
Tax Revenue distribution projections:



Public and Agency Outreach

- Vienna and Magnolia Townships
  - Resolutions that delegated Rock County to manage Development Agreement with Project
  - Project has entered into Development Agreement with Rock County, will update Agreement for additional 80 MW prior to construction
- Also consulted with state and federal agencies to confirm feasibility and avoid impacts

STUDY	STATUS
Wetland Delineations	Jurisdictional Determinations Received
Cultural Resource Surveys	SHPO Coordination Completed
Natural Resource Surveys	DNR NHIS Review Completed
Federal Aviation Administration	Determinations of No Hazard Obtained
Agricultural Impact Mitigation Plan	MN Dept. of Agriculture Coordination Completed


3. AC electricity is then pumped into the local electric grid, either through transmission lines (C) or via local distribution lines or substations (D).
2. An inverter's job is to convert DC electricity into Alternating Current (AC) electricity.
1. Sun beams radiate onto solar panels (A). Solar panels then convert the solar energy into Direct Current (DC) electricity. The DC electricity is then sent to the inverter (B).
A
B
C
D
4. The electricity produced by solar energy projects is high quality and offers many electrical grid benefits, such as reducing power fluctuations and providing energy at peak demand times (such as in the middle of a hot summer when air conditioners are constantly running).


Panels & Racking


Electrical Collection


Access Roads


Substation

Decommissioning

What happens at the end of the project?

- Decommissioning the project – Removing panels, racking, foundation posts, inverters, overhead cables and lines, all equipment
    - Recycled to the furthest extent practicable
- Site restoration – Decompaction and revegetation in line with future land use and NRCS and other agency recommendations

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Tom Karas
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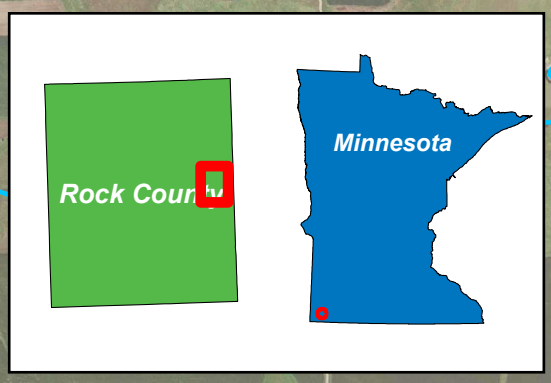
Exhibit C



Champepadan Creek
190th Ave
151st St
Residence A
Vegetation Screening
CSAH 3
141st St
Residence D
Magnolia Substation
S
180th Ave
Residence H
131st St
Residence E
Residence B
Residence C
Residence G
Residence F
121st St
121st St
Elk Creek

ELK CREEK SOLAR

0 0.25 0.5 Miles

1:18,000

Data Source: National Grid Renewables, USGS, MN DOT
Imagery Source: 2021 FSA

Figure 3
Preliminary Project Layout
Elk Creek Solar Project
Rock County, MN

- Adjacent Residence
- Existing Substation
- Permanent Weather Stations
- Pole
- Underground Collection Line
- Overhead Collection Line
- Vegetation Screening
- Land Control Area
- Security Fence
- Access Road
- Solar Array
- Inverter
- Project Substation
- O&M Facility
- Associated Facilities
- Laydown Area
- NHD Stream
- Drainage Basin

Date: 2/5/2024