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Portside Solar
Special Land Use Permit and Final Site Plan
Planning Commission Meeting

November 8, 2023

FOUNDED IN 2017

Ranger Power Experience

Led by an experienced team of developers with a **proven track record of community-supported renewable energy**, including operating clean energy products across the United States.

Ranger has successfully permitted over 2,400 MWs of projects and executed over 2,400 MW of utility-scale power agreements throughout the Midwest, including in Nebraska, Indiana, Wisconsin, Michigan, Illinois, and Missouri.

Many of these represented the largest utility-scale solar investments to be permitted in their respective states at the time.

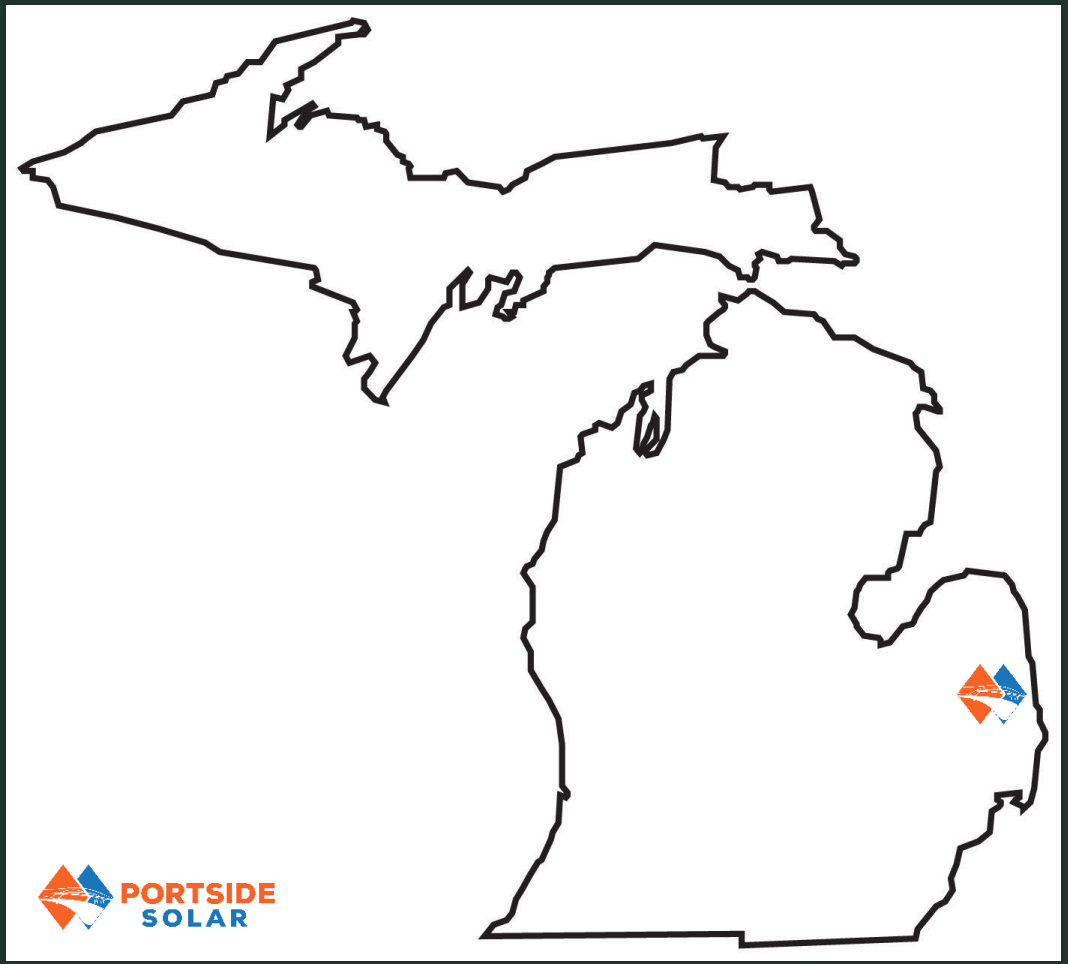
Ranger is currently developing a portfolio of approximately 10 GW of active development projects ranging in size from to 20-400 MW across the country, including in Michigan, Illinois, Indiana, Missouri, Oregon, and New York.

We pride ourselves on working closely with local communities to develop projects in a collaborative manner.

The Portside Solar Project is being developed by Ranger Power

Project Details:
Site Selection Process

- Portside Solar utilizes existing transmission infrastructure and resources
- The Project is compiled of voluntary agreements. **No eminent domain.**
- Close to large load centers like Port Huron and Detroit



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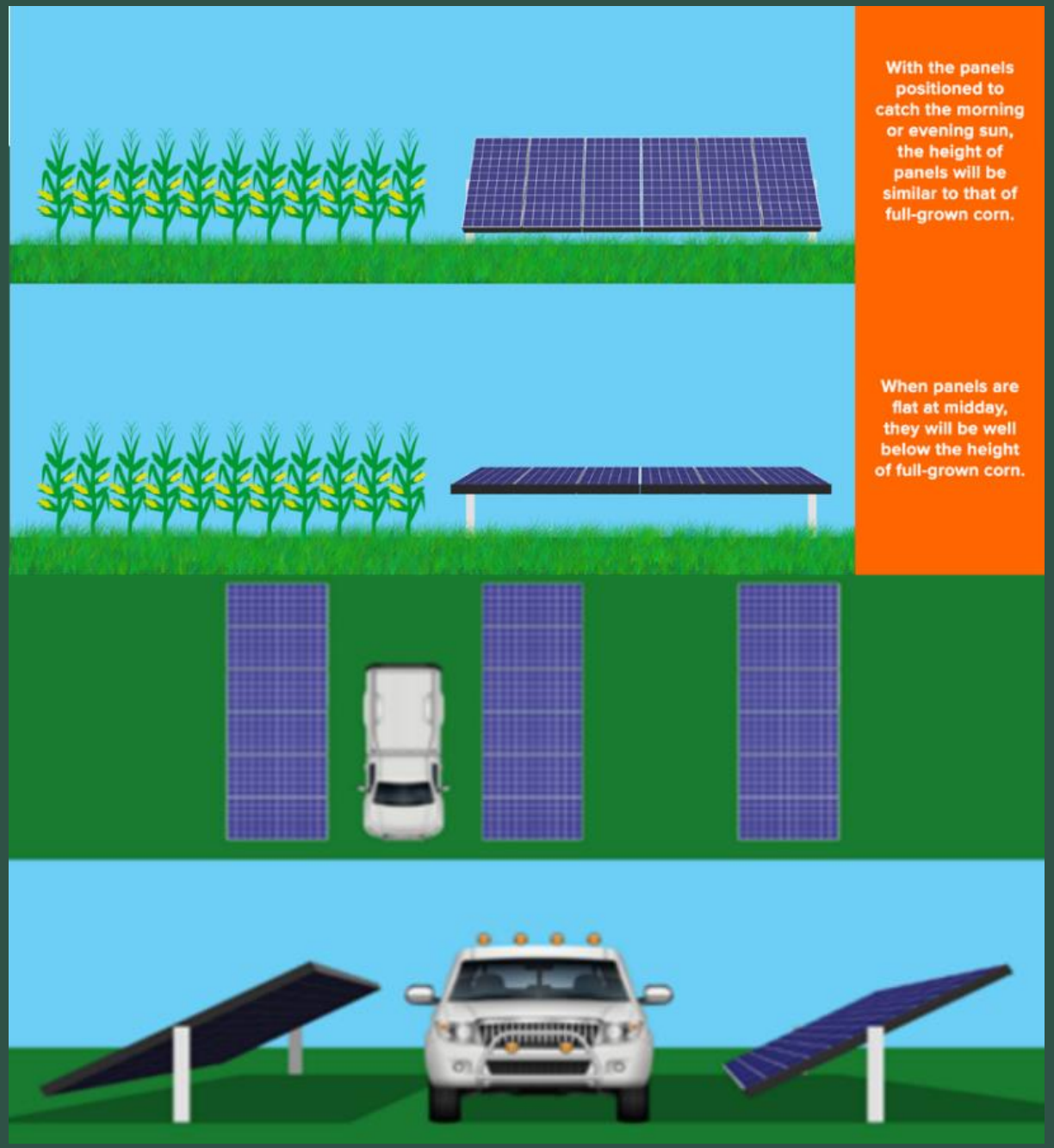
Solar Energy at a Glance

- Photovoltaic panel tracking systems ("PV trackers") are currently the most economical solar technology available
- PV trackers operate without producing air or ground pollution or greenhouse gases
- Major equipment includes solar panels, steel I-beam posts, racking, electrical collector lines, inverters, access roads, and fencing
- Solar panels contain no toxic elements or materials and all contents are naturally occurring



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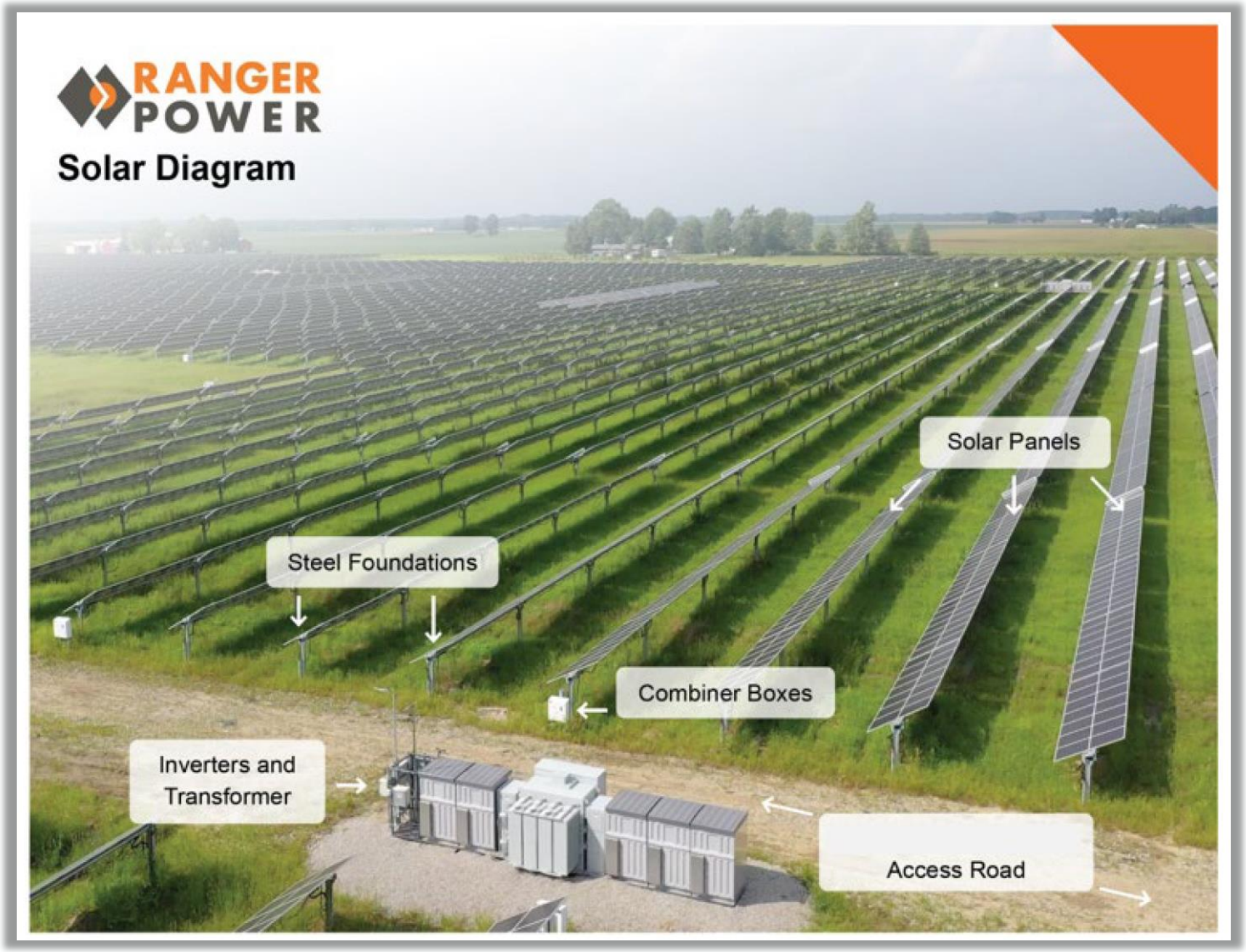
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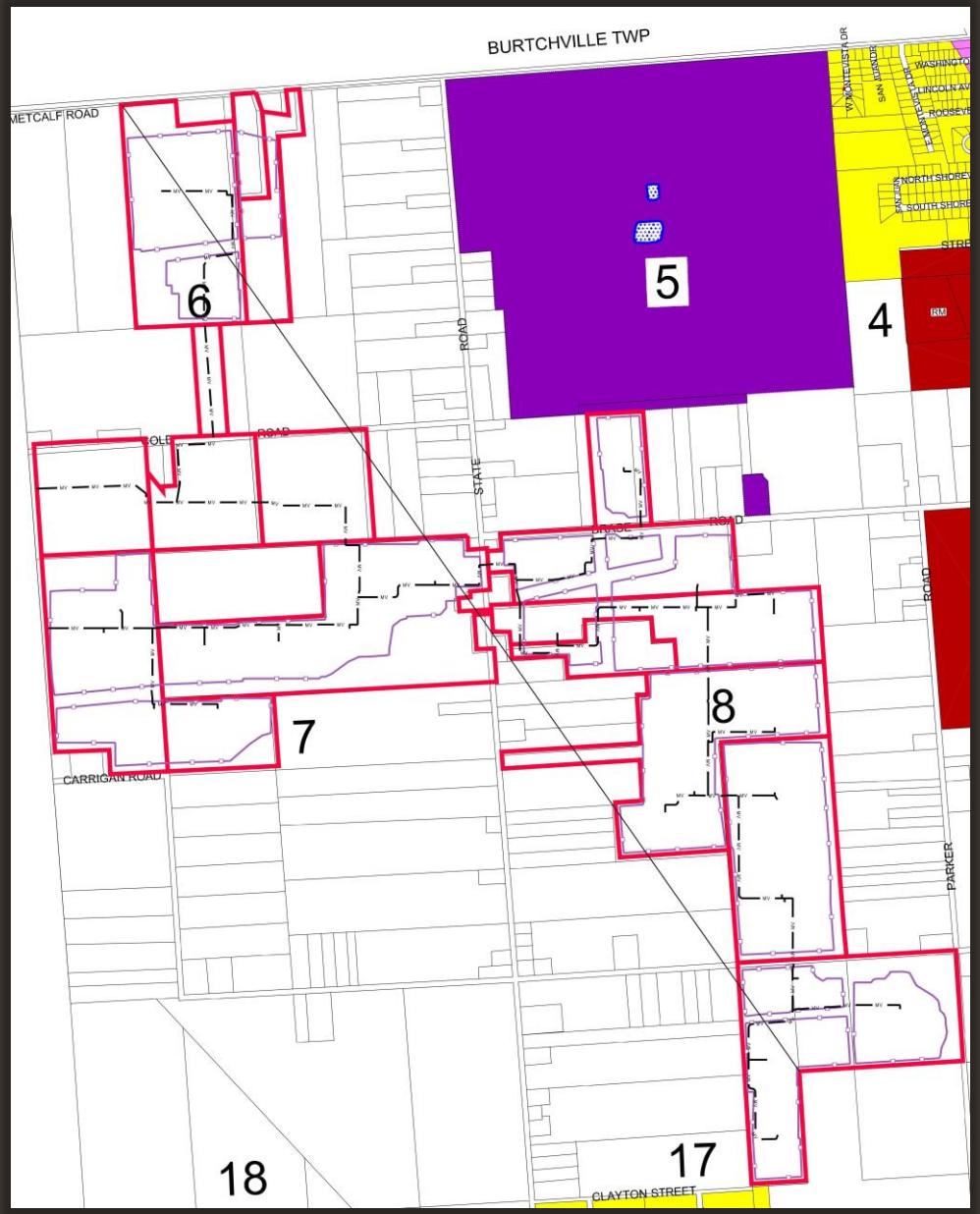
Solar Diagram
Solar Panels
Steel Foundations
Combiner Boxes
Inverters and Transformer
Access Road

Portside Solar Overview

- The Portside Solar Project is a 100MW solar project located in Fort Gratiot and Clyde townships sited on approximately 900 acres of privately owned land. Portside is proposing **approximately 527 acres** that include land with project panels in Fort Gratiot.
- The Portside Solar Project will interconnect into an existing substation located in Clyde Township.
- The Project will provide much needed **domestic** electricity to Michiganders
- The Project is sited on suitable land of interested participants.
- Portside Solar **keeps land agricultural** that is currently zoned as agricultural.



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Decommissioning

- Solar energy systems are passive land uses and easily decommissioned
- **Topsoil retained on site** during and after project construction **as required by ordinance**
- A Decommissioning Plan including a financial security **guaranteeing removal to be posted** **before construction** is included in the application in accordance with Chapter 38-639 (14) of the Fort Gratiot Solar Energy Systems Ordinance
- Michigan Department of Agriculture and Rural Development **requires a security** to be posted **before construction** for all participating land enrolled in PA 116
- All agreements between Portside Solar and landowners **require project decommissioning**
- The Project is responsible for **all costs of decommissioning**

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Environmental Benefits

- Project specific studies show **no sound, glare, or chemicals**
- Improves air quality by reducing regional reliance on fuel-burning generation
  - No air emissions
  - No water emissions
- Vegetation management
  - Plant pollinator habitat
  - Improve soil and water quality
  - Reduce storm water runoff
  - Reduce soil erosion
- **At the end of project life, land will be restored and available for agricultural use, as required by agreements between Portside Solar and participating landowners, local township, and Michigan Department of Ag and Rural Development**

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Wildlife Benefits

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Promotes Environmental Health and Safety

- Solar panels are made almost entirely of glass and aluminum
- As cited by the Michigan Department of Environment, Great Lakes, and Energy and research from Dr. Annick Anctil, Michigan State University: **"No studies have shown the presence or leaching of PFAS from PV panels – either while they are in active use or end of their life (e.g., in a landfill)"**
- Rainwater panel runoff testing at Assembly Solar project in Shiawassee County, MI showed **no risk of leaching.**
- Tier 1 solar panels, expected to be used by Portside Solar, are subject to highest testing standards.

- Pollinator vegetation has deeper roots
- **"Over the long run the pollinator habitat builds up the soil and allows for better infiltration and reduced runoff"** David Mulla, PhD, University of Minnesota, Larson Endowed Chair in Soil and Water Resources
- Solar panels are **recyclable**
- **"Solar energy does not in any way shape or form cause any harm to the soil or to groundwater"** – Jeff Lake, PhD, Plant Biologist, Adrian College
- **"According to the Department of Energy there is not a single instance of a solar farm ever polluting groundwater"** – Joshua Pearce, PhD, Michigan Tech University

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Portside Solar will provide:

1. Approx. $140mm of additional **investment in St. Clair County.**
2. Additional electricity to power approx. 25,000 homes.
3. Stable diversified income for more landowners while **protecting and preserving** agricultural land for future generations
4. Millions of dollars in additional tax revenue to help fund local schools, fire departments, and other infrastructure and services.
5. Clean, **domestic energy** generation and long-term **stable energy prices**
6. Local **well-paying jobs** during construction

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Community Focus

Jonesville Community Schools Grant Program

"We are grateful for Heartwoods' commitment to enriching the education of our students."

- Erik Weatherwax, JCS Superintendent

Ranger Power's Heartwood Solar Project partnered with the Hillsdale County Community Foundation to fund school programs & initiatives

- The grant program will receive **annual contributions of $12,000** until Heartwood reaches commercial operations, at which point the grant program will transition to a long-term endowment fund, beginning with a **$300,000 principal donation**.
    - 75% of funding will support Jonesville Schools' teachers & classrooms and 25% will support a local food pantry
- The new biannual grant program will be open to educators at all grade levels, and will aim to support and enrich educational programs and other projects to aimed at enhance creative and innovative opportunities within the district
    - The first batch of grants will go towards a new robotics program and meal preparation course at Jonesville High School
- Representing a **$150 million investment**, Heartwood Solar is projected to generate $17 million in tax revenue to Hillsdale County (including $2 million in its first year of operation) over the project's lifetime

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Hawkeye Solar Project Endowment Fund

"Ranger Power launches new charitable funds for Grand Mound, two school districts"

- Clinton Herald

The Hawkeye Solar Project Endowment Fund was voluntarily established after the project had been permitted, in partnership with the LincolnWay Community Foundation in Clinton County

- The endowment is permanently invested and a percentage of earnings will pay out annually to support projects that fit the mission of the fund, which consists of **annual contributions of $20,000** until the project's completion, at which time an additional **$500,000** will be invested into the fund.

- The fund will facilitate projects in and around Grand Mound, benefitting the local community and students in the Central DeWitt and Calamus-Wheatland school Districts

- Additionally, Ranger Power has set up a fund with cash resources that are immediately available to satisfy these needs before the endowment's annual payouts begin.

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Headland Solar Community Scholarship Fund

Ranger Power's Headland Solar Project established the Headland Solar Community Scholarship Fund for Fowlerville High School as part of the Community Foundation for Livingston County

- In 2023, the three recipients were awarded a one-time, $5,000 scholarship to study at various universities in Michigan
    - Similar scholarships will be awarded annually, and the Fund will become permanently endowed upon Headland Solar reaching COD.
- The Fund is intended to support students pursuing post-secondary educational programs focused on agricultural science, agricultural business management, natural resources management, environmental sustainability, renewable energy science, engineering, or construction.
- The Headland Solar Project is located within the boundaries of the Fowlerville School District in Livingston County, Michigan.

"The Community Foundation is honored to assist Headland Solar in making an impact in the future of Fowlerville's students."

- Randy Ross, Community Foundation VP of Donor Services

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Compliant with Regulations

Portside Solar has been designed to **meet or exceed** all of the township zoning requirements, including:

- Decommissioning
- Setbacks
- Sound and Glare
- Landscape Buffering
- Pollinator Planting
- General Aesthetics
- Master Plan Goals
- Future Land Use Plan Goals

Committed to Community

- Ranger is committed to working closely with landowners and communities to bring investment and clean energy
- Since beginning work in Fort Gratiot township in 2020, Ranger Power has held **over 200 meetings** with residents, stakeholders, and government officials sharing contact information and project details
- Ranger Power is committed to being **available and transparent** throughout the development process. This includes scheduling flexible **in-person meetings and answering any questions asked**

We thank you for your time!

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