Yellow Wood Solar Energy Center

Virtual Public Information Meeting

December 17, 2020

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Agenda

- Invenergy Introduction
- Description of Project
- Project Schedule
- Project Components and Facilities
- Current Project Conceptual Map
- Project Studies
- Community Engagement & Impacts
- Ohio Power Siting Board Process
- Contact Information
- Q & A

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Invenergy Introduction

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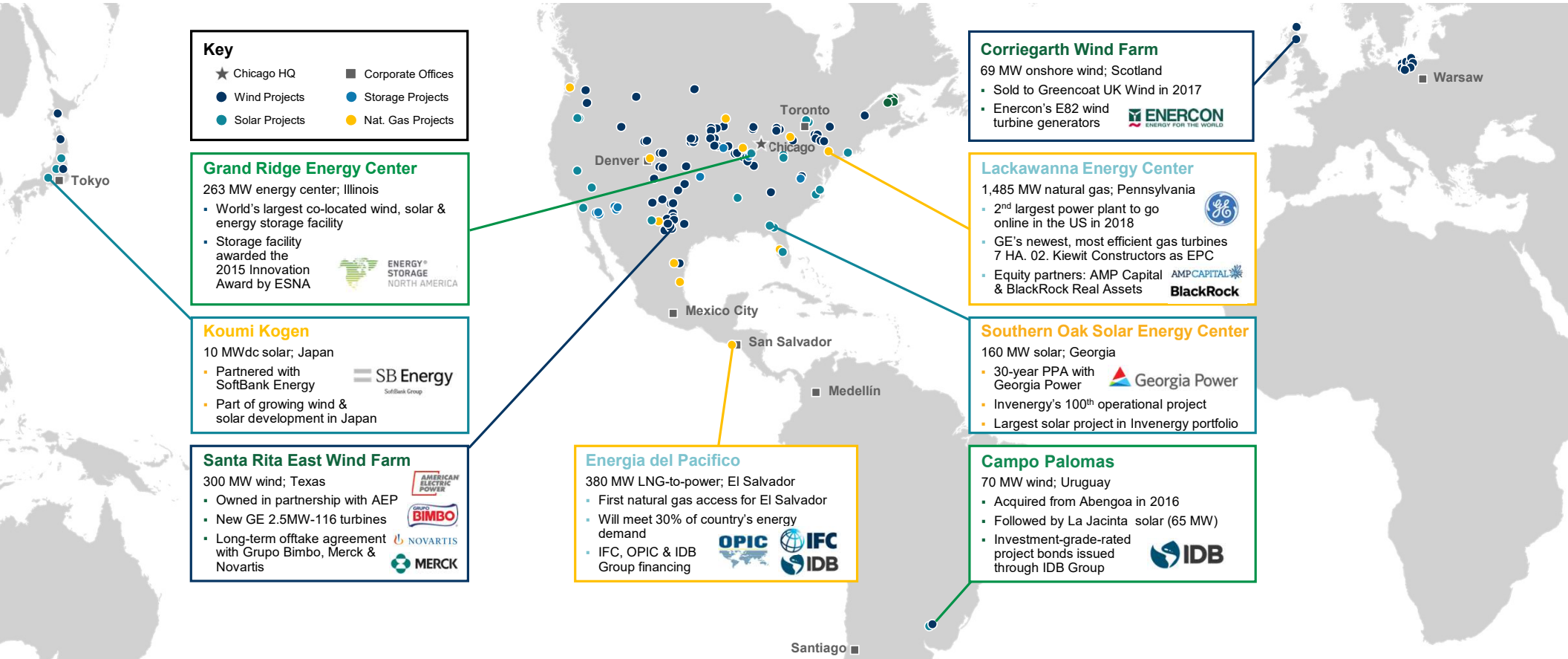
Team Introduction

- **Development**
  - Michael Kaplan – Vice President; Renewable Development
  - Ryan Van Portfliet - Renewable Development Manager; Ohio Lead
  - Josh Hreha – Renewable Development Manager; Project Lead

- **Environmental Compliance and Strategy**
  - Brad Romano – Senior Manager; Environmental Compliance and Strategy
  - John Wojcikiewicz – Senior Associate; Environmental Compliance and Strategy

- **Engineering**
  - Emily Paice – Senior Manager; Renewable Engineering
  - Lesley Fisher – Senior Staff Engineer; Renewable Engineering



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165
Projects Developed

25GW
Capacity Developed

$37Bil+
Completed Transactions

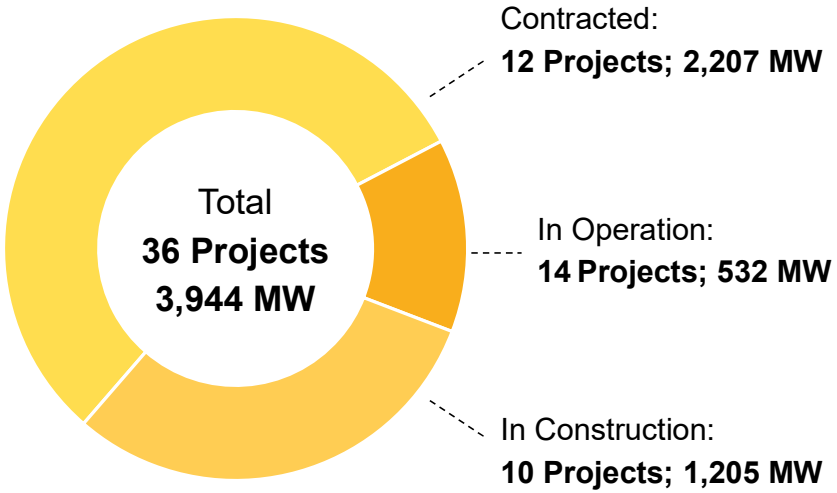
7.8Mil
Homes Powered

8.2Mil
Cars off the Road Equivalent

Invenergy Solar
Experience

- **Harnessing the sun since 2012 to deliver low-cost renewable energy**
- **Experience including**
  - Serving utility, public power, and corporate customers
  - Structures including PPAs and build/development-transfer
- **Meeting growing demand for solar with:**
  - Technology innovation
  - Relationships with Tier 1 suppliers
  - Unparallel project execution
  - Safe & reliable operations

Invenergy Solar Portfolio



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Invenergy's Experience In Ohio

11+ Years of Experience Developing Renewable Energy Projects in the Buckeye State

- **Hardin Solar I**
  - 150 MW Project located in Hardin County, OH
  - Approved OPSB Certificate - February 15, 2018
  - Nearing completion of construction
    - Logged 3,000,000+ Construction Manhours from Ohio residents
  - Commercial Operations by no later than 12/31/2020
- **Hardin Solar II**
  - Proposed 170 MW Project located in Hardin County, OH
  - Approved OPSB Certificate - May 16, 2019
- **Vinton Solar**
  - Proposed 125 MW Project located in Vinton County, OH
  - Approved OPSB Certificate - September 20, 2018

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COLUMBUS BUSINESS FIRST

State approves projects that will create Ohio's two largest solar farms

RECOMMENDED

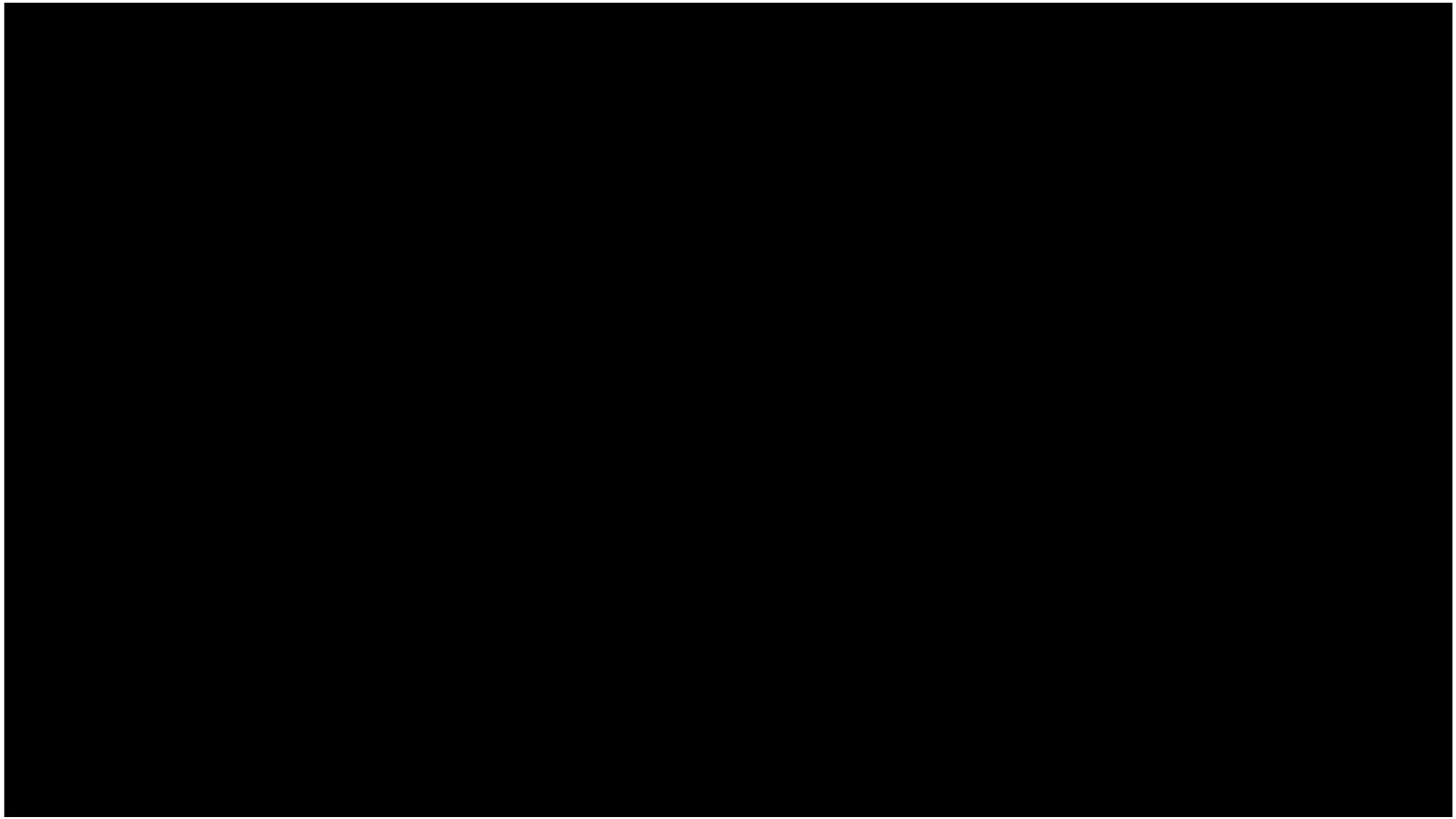
"State approves projects that will create Ohio's two largest solar farms" - Columbus Business First, February 15, 2018


The Columbus Dispatch

Vinton County optimistic about proposed solar-energy project

"Vinton County optimistic about proposed solar-energy project" - Columbus Dispatch, September 11, 2017

Sponsorship at the Vinton County Fair, July 2017



Beginnings – Yellow Wood Solar Energy LLC

- **Yellow Wood Solar Energy LLC is a wholly-owned subsidiary of Invenergy Solar Development North America LLC (Invenergy).**
- **Began preliminary due diligence: February 2019**
  - Available Transmission Capacity and robustness of certain components of the transmission grid
  - Targeted large agricultural tracts of land with minimal topography
- **Entered into PJM Queue: March 2019**
- **Actively began negotiating land agreements: April 2019**

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Description of Project

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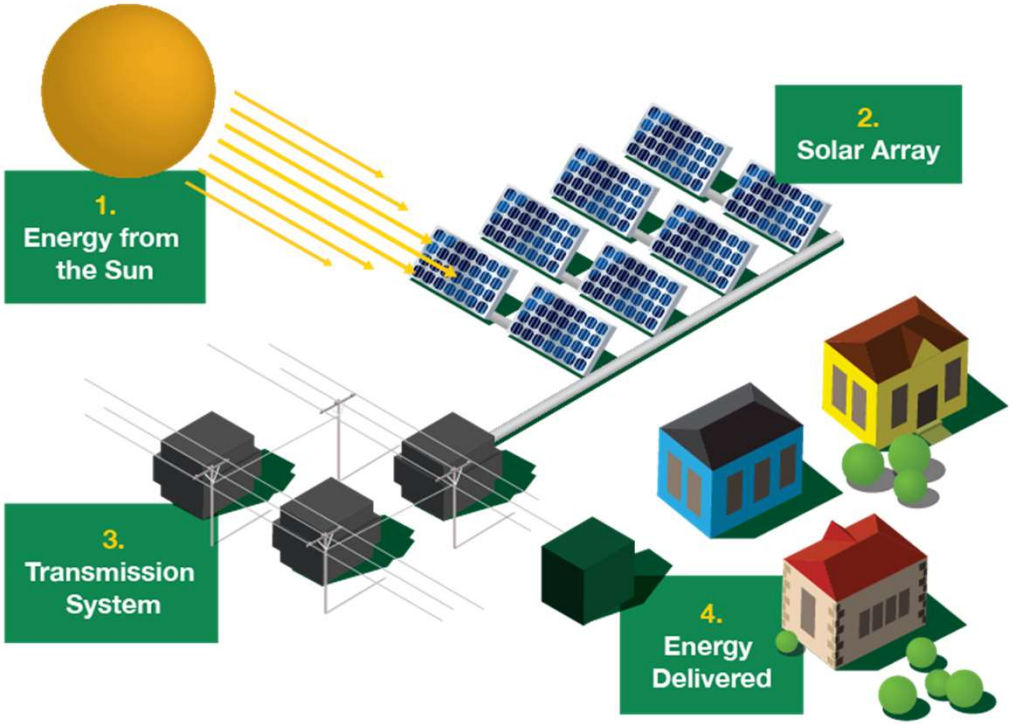
Yellow Wood Solar

Proven Technology

Innovative Design

Year-Round Sunlight



Invenergy uses **state-of-the-art photovoltaic (PV) panels to** harness the sun's energy. Nearby transmission infrastructure will deliver energy to the grid.

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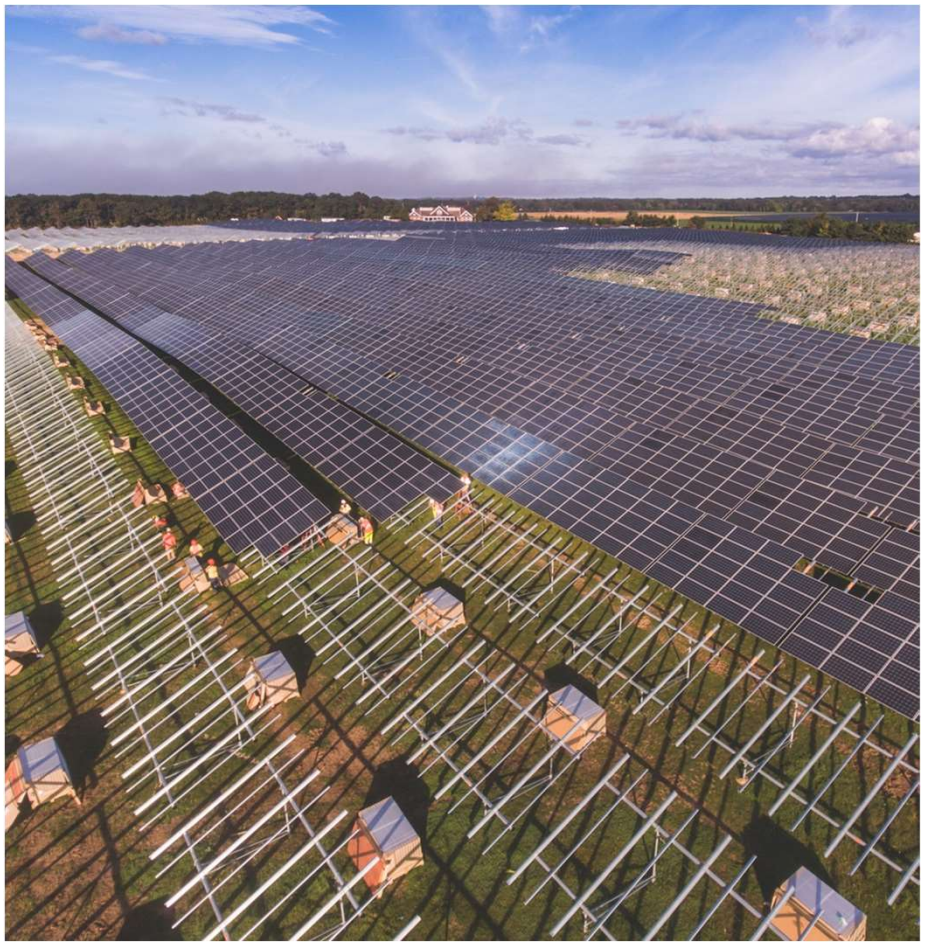
Description of Project

- **The Yellow Wood Solar Energy Center (Project) is a 300 MW solar-powered electric generation facility located in Clark and Jefferson Townships, Clinton County, OH.**
  - Generally, the project is sited between Lynchburg and Westboro
- **The Project will be connecting into the 'Clinton to Stuart' existing transmission lines at 345kV via the AE2-221 PJM queue position.**
- **The Project represents Invenergy's commitment to continued investment in Ohio utility scale solar generation projects.**



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Why Ohio?

- **Cost Competitive Technology**
  - Solar technology is simple and scalable; its flexible and reliable. With costs that have decreased by nearly 90% in less than a decade, solar is now one of the least expensive and fastest growing sources of new energy generation in the world.
- **Commercial and Municipal Demand**
  - City of Columbus – Proposed Electric Service Aggregation Program (Ballot Issue 1)
  - Smart Columbus Energy- Aggregation for local large corporate and industrial organizations that consume approximately 5,000MWh or more per year.
  - Nationwide Commercial & Industrial Users
- **Decarbonization goals from utilities like American Electric Power (AEP)**
  - Renewable projects and relationship to carbon emission free energy generation. Cleaner air/water.

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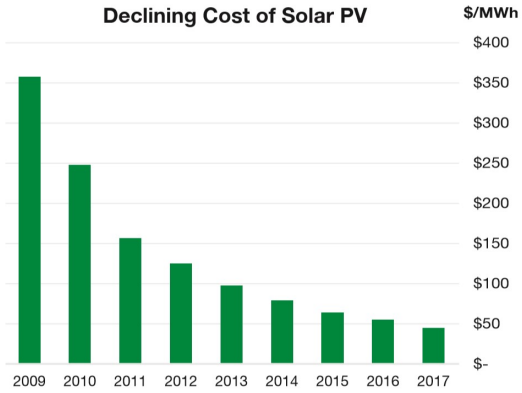
Smart Columbus Introduces Renewable Energy Procurement for Large Columbus Region Energy Buyers

Cardinal Health, Huntington and AEP sign on as first customers to buy Ohio-based clean energy from Smart Columbus Energy, powered by AEP Energy

SMART COLUMBUS



Source: Lazard Report, 2017

GOVERNMENT

Columbus voters approve green-energy aggregation plan

Bill Bush

Published 10:48 p.m. ET Nov. 3, 2020 | Updated 11:28 a.m. ET Nov. 4, 2020

The Columbus Dispatch

AEP's Carbon Emission Reduction Goals

70% by 2030

80% by 2050

(both from a 2000 baseline)

Project Schedule

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Schedule

Development Timeline

2020 - 2022	2022 / 2023	Q4 2023
Development Activities include permitting, environmental and interconnection studies, and public feedback	**Construction** Groundbreaking, construction, inspections and QAQC, Final commissioning and certification	**Operations** Operations and continuous Maintenance of equipment and the land.

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Operations / Decommissioning

- **From current land agreements, the project can operate for approximately 50 years.**
  - Landscape and vegetative management, equipment monitoring and inspections, project area security.
- **The owner of the facility will be responsible for removing the facility at the end of its useful life, as required by the operational conditions put forth by the Ohio Power Siting Board.**
  - This decommissioning process is secured and protected via bonds or other financial security obligations as required by Ohio Power and Siting Board prior to commencement of construction.
  - Project components will be removed and recycled from the project area and the land will be returned to its current use and functionality.

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Project Components and Facilities

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Bi-facial Solar Modules

- Innovative design of proven technology
- Solar panels are made of glass, aluminum, copper and other common materials.
- Solar panels are safe to touch, attach to your home or install in your neighborhood. Solar panels have been attached to houses, hospitals and airports for decades.
- While there are different kinds of solar panels, the most common are made of silica – the second most abundant element on earth after oxygen. The faces of silica panels are similar in substance to standard household glass.
- Committed to utilizing panels that will pass the EPA's Toxicity Characteristic Leaching Procedure (TCLP) testing

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Single-axis Tracking Systems

- Follows the sun throughout the day to harness energy at the optimal angle
- The Project will likely utilize a ‘2 in portrait’ configuration
- Accommodates variation in ground cover planting species and allows for additional agricultural features
- Up to approximately 15’ total height profile at times of most extreme tracking positions.

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Other Components & Design

- **The Project will also include associated support facilities such as access roads, meteorological stations, buried electrical collection lines, inverters, and a collection substation.**
    - These support facilities serve the project through monitoring and maintenance means as well as allowing for the collection of electricity, the conversion of the electricity to a useful form, and transportation of that electricity to the grid to be put to work at a load.
- **Conceptual engineering designs are underway and more detailed designs will be developed by professional engineers prior to construction.**

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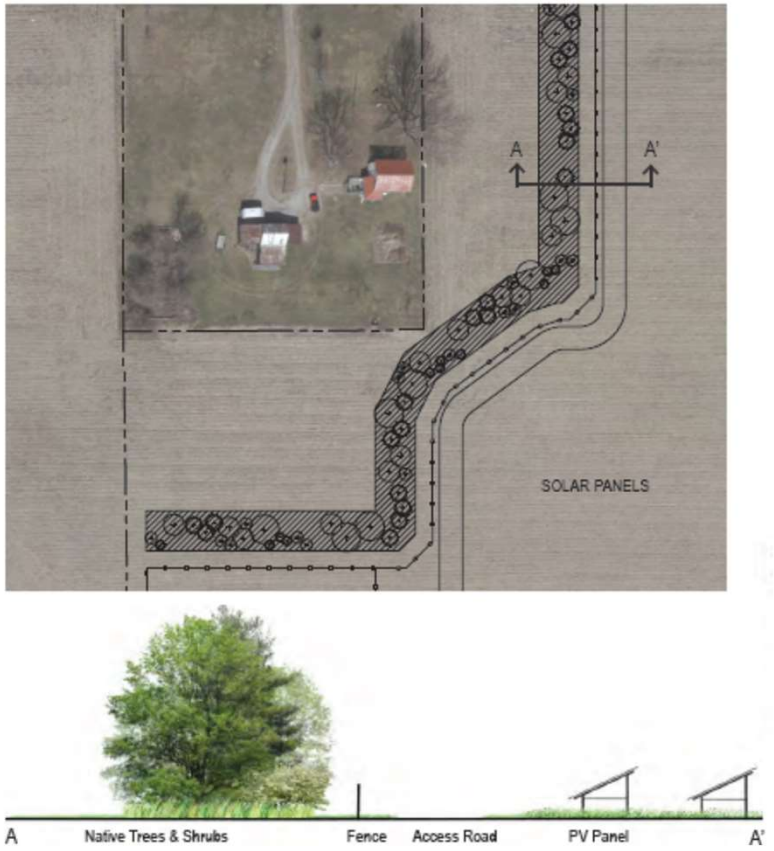
Project Components and Facilities

- **The project is undergoing local analysis, review, and design of both a landscape plan along with a vegetative management plan.**
  - The landscape plan dictates how/where/what aesthetic plantings will be placed near and around the project area. There are typically multiple configurations of planting ‘treatments’ that can be utilized to achieve appropriate viewsheds of the project and project area.
  - The Project vegetative management plan will dictate how/where/what plantings will be placed under the solar panels, as well as how those plantings are to be monitored and maintained to ensure there are no project issues with drainage, invasive species, and mowings or clearings.



EXAMPLE CONDITION

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Current Project Conceptual Map

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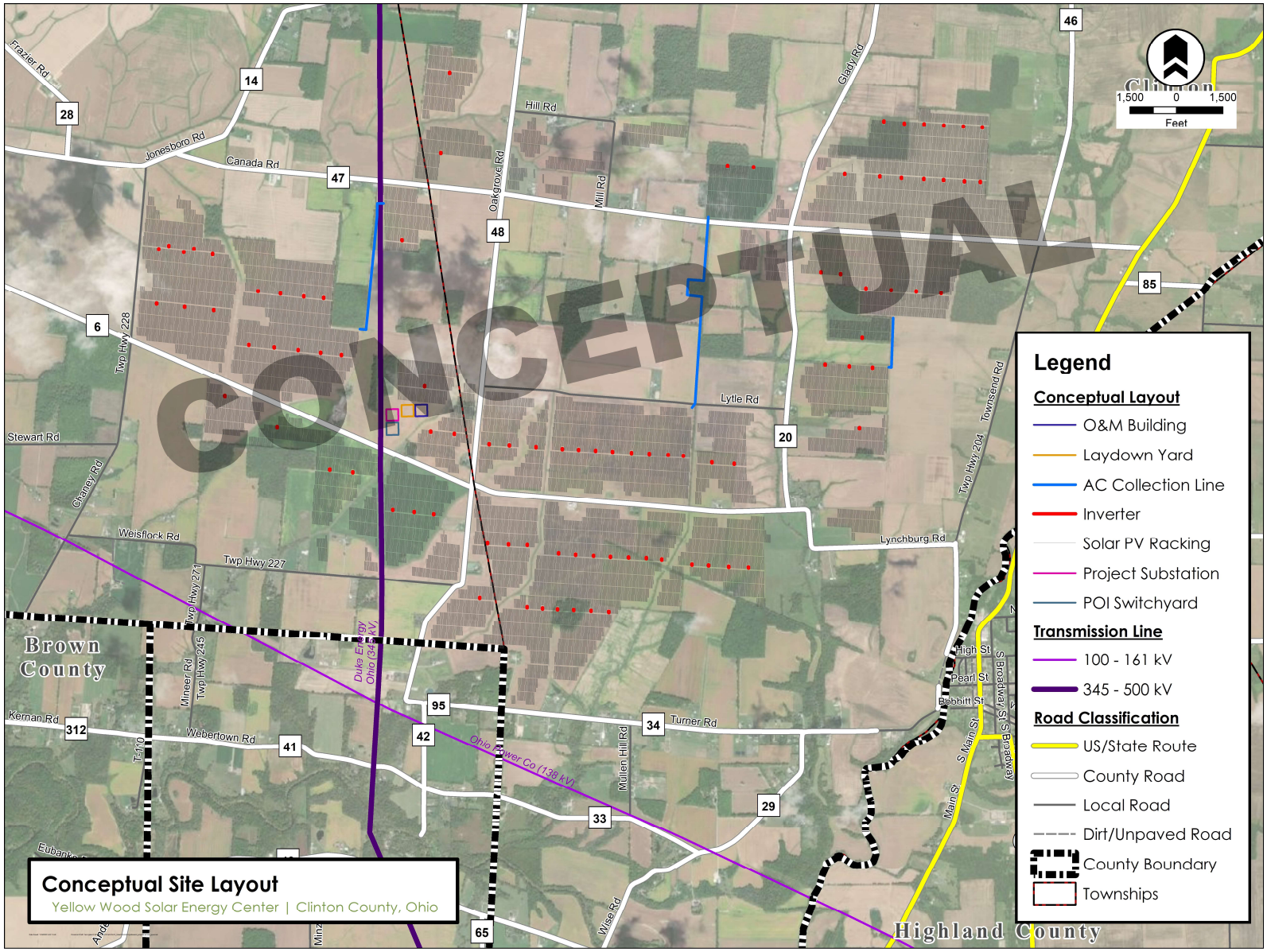
CONCEPTUAL
Legend
Conceptual Layout
O&M Building
Laydown Yard
AC Collection Line
Inverter
Solar PV Racking
Project Substation
POI Switchyard
Transmission Line
100 - 161 kV
345 - 500 kV
Road Classification
US/State Route
County Road
Local Road
Dirt/Unpaved Road
County Boundary
Townships
1,500 0 1,500
Feet
Conceptual Site Layout
Yellow Wood Solar Energy Center | Clinton County, Ohio
Brown County
Highland County
Clinton
Frazier Rd
Jonesboro Rd
Canada Rd
Hill Rd
Oakgrove Rd
Mill Rd
Gladys Rd
Lytle Rd
Stewart Rd
Cheney Rd
Weisflock Rd
Twp Hwy 227
Twp Hwy 228
Twp Hwy 271
Twp Hwy 245
Mineer Rd
Kernan Rd
Webertown Rd
Turner Rd
Mullen Hill Rd
Wise Rd
Lynchburg Rd
Twp Hwy 204
Townsend Rd
Pearl St
Babbitt St
S Main St
Main St
S Broadway St
Duke Energy Ohio (345 kV)
Ohio Power Co (138 kV)
14
28
47
48
46
85
6
20
95
42
41
312
34
33
29
65

Project Studies

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Project Studies

The below listed studies help inform and advance Project design, incorporate avoidance of sensitive environmental resources, and ensure a high degree of environmental stewardship for the Project area.

- Ecological Site Characterization Study
- Wetlands and Waterbodies Delineation
- Landscape Plan
- Vegetative Management Plan
- Applicable wildlife surveys based on consultations from ODNR and USFW
- Phase I Environmental Site Assessment

Project Studies- Continued

The following studies inform on the design of the project from a Land Use and Socioeconomic perspective. These studies can help create value for the project area community.

- Phase I Cultural Resources Investigation
- Viewshed Analysis, Aesthetic Resources Inventory, and Glare Analysis
- Road Survey and Conceptual Traffic Plan
- Decommissioning Plan
- Economic Impact Analysis
- Drain Tile Mapping Investigation and findings
- Noise Impact Study
- Property Value Study

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Project Studies – Continued

The below listed studies mostly help inform and advance the project design from an Engineering perspective.

- Full Geotechnical Testing (pile load tests and cone penetration tests)
- Hydrology Study
- Drain Tile Mapping Investigation and findings
- Topography and aerial imaging

Community Engagement & Impacts

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Our Invenergy Impact

$216 million
Total 2018 local economic investment in wages & benefits, lease payments, and state & local taxes

$1.2 million
Given to different cause-based organizations in 2019, focusing on veterans, education, emergency services & environmental stewardship

10% veterans
Percent of Invenergy's U.S.-based workforce who are military veterans or reservists

ORACLE

Sustainability Innovation Award
Awarded by Oracle to Invenergy in 2017 for sustainability leadership

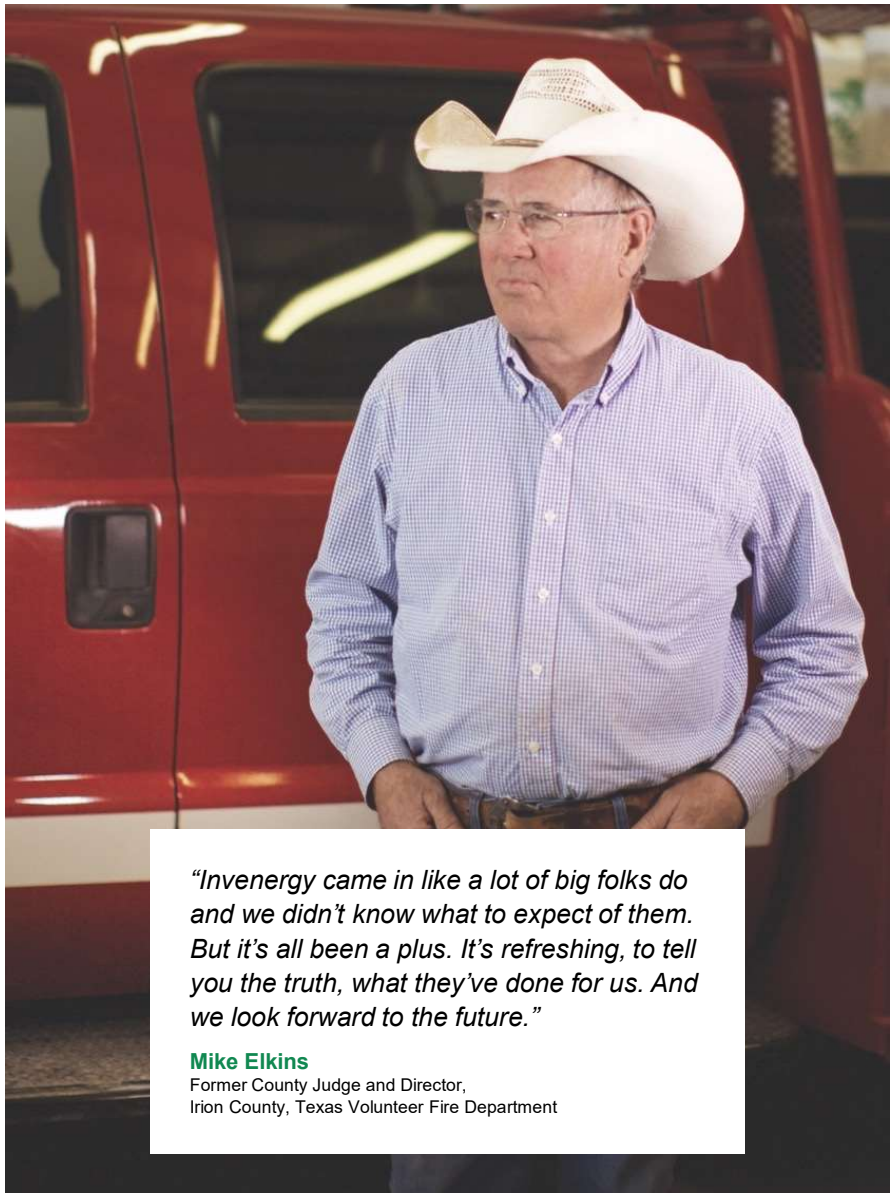
Proud to Support

Four Star Sponsor
First sustainable power developer & operator to sponsor National FFA (Future Farmers of America formerly)

TAMARINDO
strategic communications advisory

#1 Renewables Reputation
Top brand reputation among 1,500 companies active in the North American renewables market

HIRE Vets Gold Medallion
Recognized in 2019 by the US Department of Labor for commitment to hiring veterans



"Invenergy came in like a lot of big folks do and we didn't know what to expect of them. But it's all been a plus. It's refreshing, to tell you the truth, what they've done for us. And we look forward to the future."

Mike Elkins
Former County Judge and Director,
Irion County, Texas Volunteer Fire Department

Measuring the Economic Impacts of Utility Scale Solar in Ohio

Conducted by the George V. Voinovich School of Leadership and Public Affairs at Ohio University

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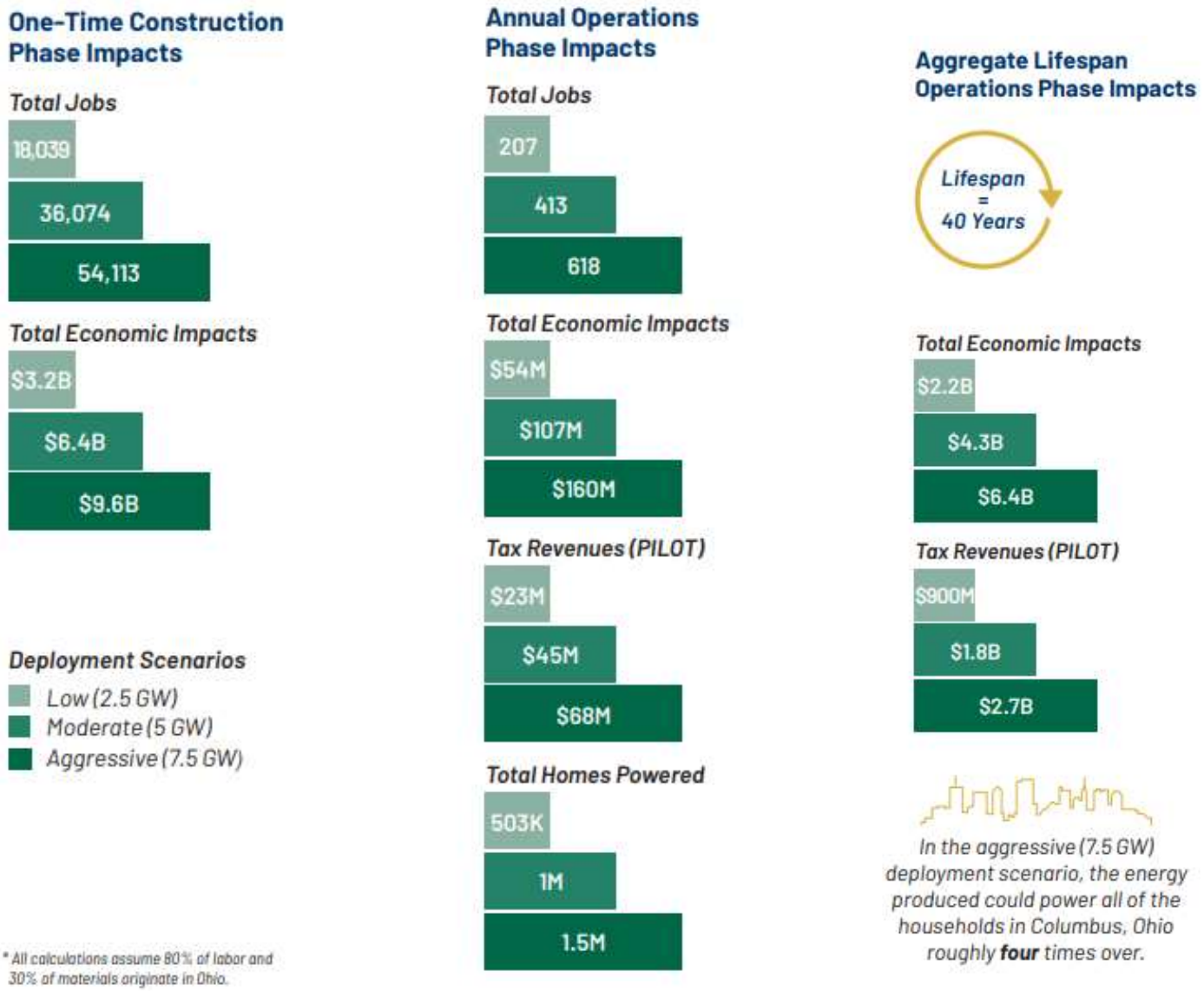

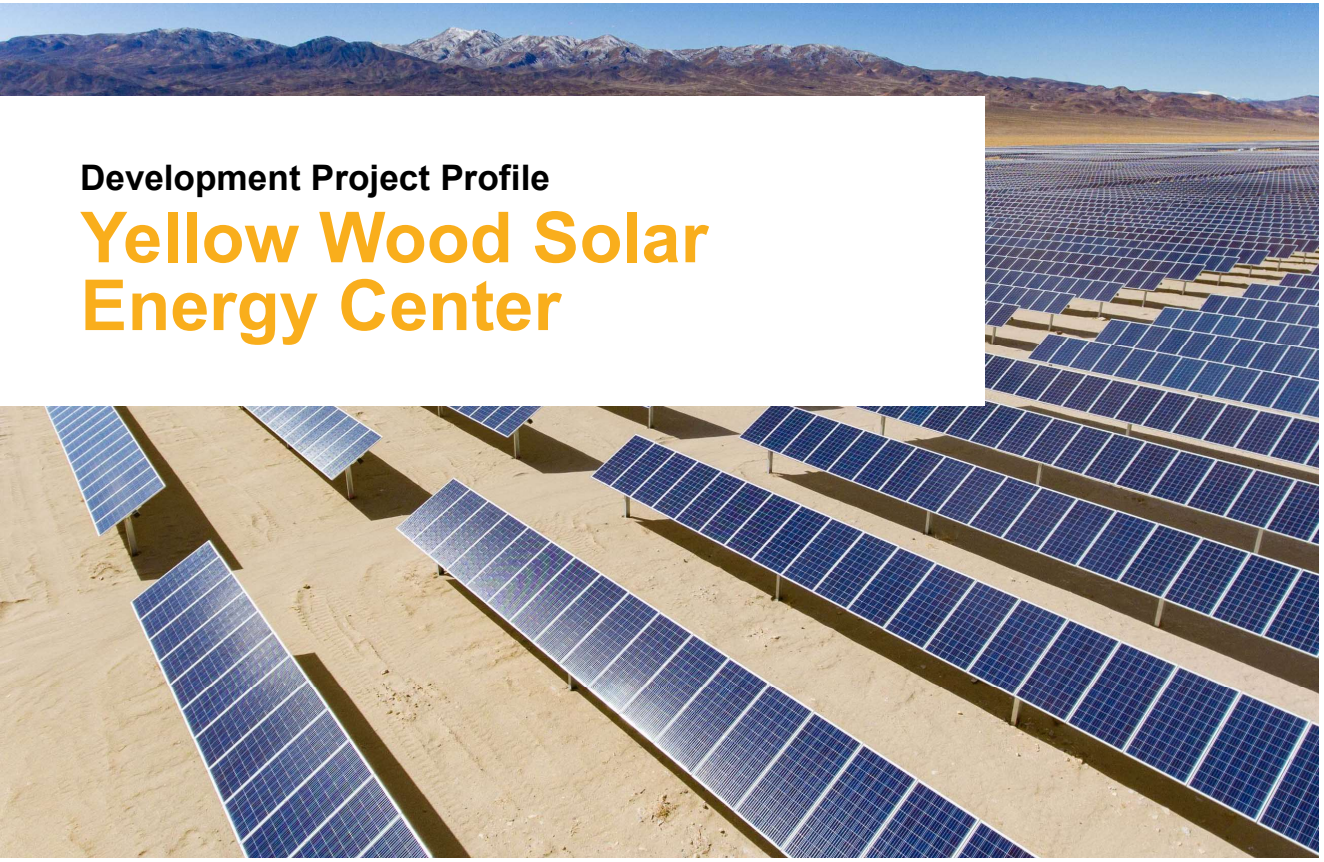

Development Project Profile

Yellow Wood Solar Energy Center

Enough electricity to power more than **59,512 American homes**

An estimated **$4.5 million** invested in Clinton County **per year** through new taxes and landowners' payments over the life of the project

Will support an estimated **800 jobs** during peak construction

Up to **4 full-time** operations and maintenance jobs once operational

Emissions reductions equivalent to taking **65,230** cars off the road

Invenergy supports local education, emergency & veteran services and environmental stewardship

Uses the most up-to-date, innovative technology

Up to **300 megawatts** of sustainable energy

Development Timeline

2019–2022	2022-2023	Q4 2023
Development	**Construction**	**Operation**
Activities include wind assessment, environmental studies, interconnection studies, etc.		

Municipal / County Conceptual Annual Payment Distributions

- **Based on current conceptual design and county tax levy rates, this table shows a baseline approximation/minimum of the annual municipal and county payments that could be made with regards to the project.**
- **Other and/or additional payments are possible as this is just an initial baseline approximation.**
- **Physically, at this conceptual design level, about 60% of the project is located in Clark Township, thus the split in payments**

	Clark Township	Jefferson Township	Project Totals
Clinton County General	$790,422.97	$384,249.91	**$1,174,672.88**
Local School District	$743,980.04	$350,197.13	**$1,094,177.17**
Township	$117,223.75	$97,849.20	**$215,072.94**
Vocational Schools	$84,401.10	$39,728.25	**$124,129.34**
Recovery Services	$31,259.67	$14,714.17	**$45,973.83**
Library	$31,259.67	$14,714.17	**$45,973.83**
		Grand Total	**$2,700,000.00**

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Benefits of Vegetation Management Approach

- Soil/planting diversity and health
- Can improve area stormwater drainage properties through diversified plantings and long rooted systems that can reduce soil erosion issues
- Project area will likely see a reduction or elimination of annual soil tilling
- Should improve downstream stormwater quality through the area reduction of fertilizer use
- Can help increase area pollinator habitats

From left to right, the plants depicted are turf grass, corn, soybeans, a selection of native prairie grasses and forbs, and a solar racking system depicted in a 2x1 portrait configuration. Scale is in feet. The racking system foundation will go below grade, but a final depth has not yet been determined so it is omitted from this illustrative figure.

Figure 2: Selected Native Plant Rooting Depths and Growth Heights

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Involvement in Clinton County

- **Local Outreach**
  - Mailings with project information
  - Minor Door-to-Door Efforts (w/social distancing protocol) to see specific concerns in and around the project area
    - 100+ doors knocked
  - Online Engagement for information about solar and specific project details
  - Phone outreach and follow up
    - 3,000+ calls completed

- **Community Engagement**
  - Clinton County Commissioners
  - Clinton County Engineer and Planning Office;
  - Clinton County Road Engineer / Soil and Water Quality Administrator
  - Clinton County Trails Coalition
  - Jefferson Township Trustees
  - Clark Township Trustees

OPSB Process

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OPSB Process

- **Under Ohio law, electric generating facilities capable of generating more than 50 megawatts must apply for a Certificate of Environmental Compatibility and Public Need (Certificate) from the Ohio Power Siting Board (OPSB).**
- **Per the Ohio Revised Code, the OPSB is entity that reviews and approves projects from a siting, land use, and entitlement perspective.**
- **Yellow Wood Solar Energy LLC anticipates filing with the OPSB in Q1 2021.**
- **Further information from the OPSB follows this slide.**

Ohio | Power Siting Board

Ohio | Public Utilities Commission

OhioEPA Ohio Environmental Protection Agency

Ohio Department of Agriculture

Ohio | Development Services Agency

Ohio Department of Health

STATE OF OHIO PLACE NAME HERE E-66765 REGISTERED PROFESSIONAL ENGINEER

THE OHIO SENATE

THE OHIO HOUSE OF REPRESENTATIVES

Ohio | Power Siting Board

OPSB role

- Before any company can build a “major utility facility,” the OPSB assures that it benefits Ohio’s citizens, promotes the state’s economic interests, and protects the environment and land use.

- Public and local government participation are strongly encouraged, but decision-making authority rests with the OPSB.

- If approved, the OPSB issues a certificate for the construction, operation, and maintenance of the facility.

Ohio | Power Siting Board

OPSB jurisdiction

Electric Generation

Solar farms
50 MW and greater

Wind farms
5 MW and greater

Fossil fuel plants
50 MW and greater

Electric Transmission

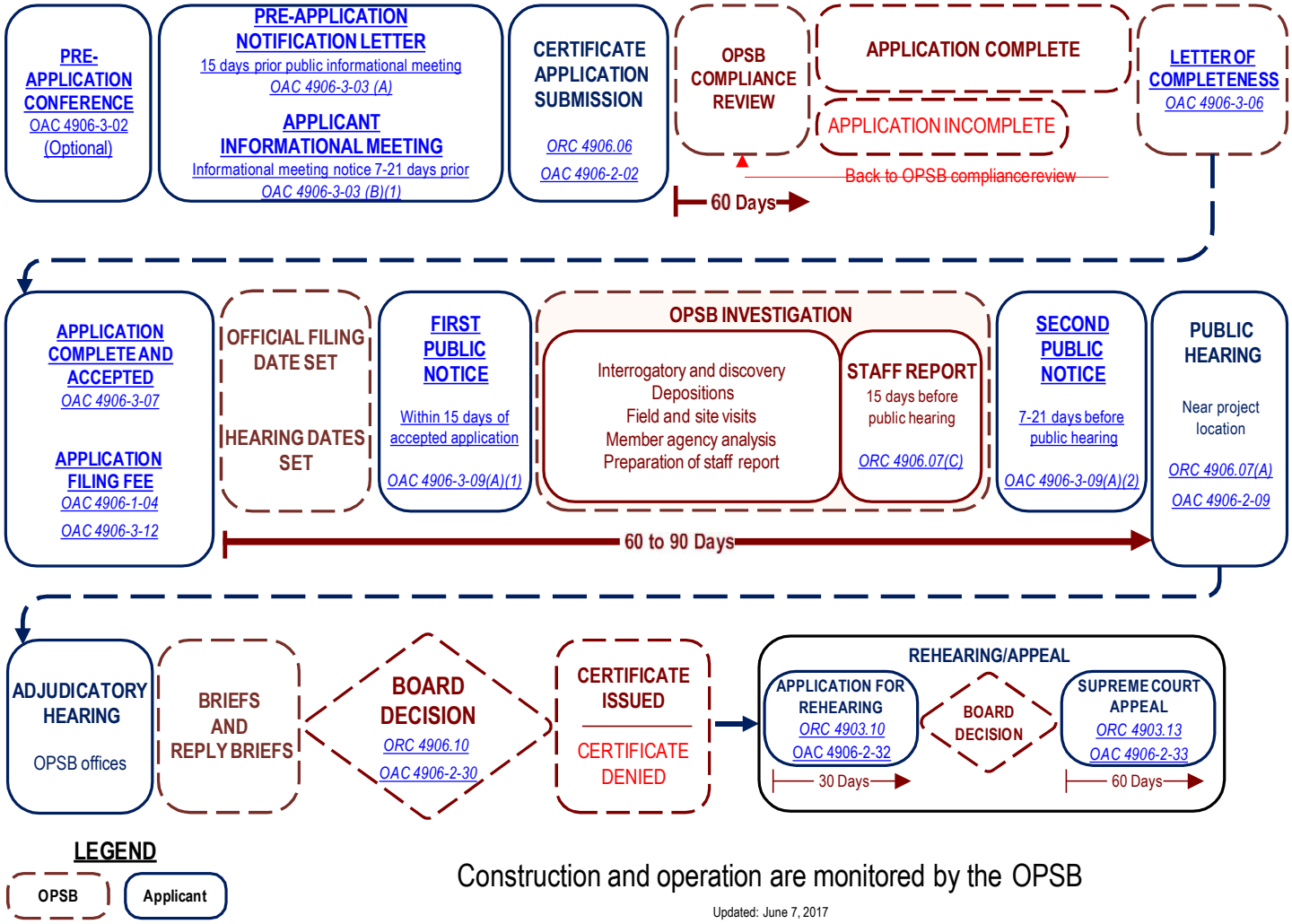
Lines and associated facilities 100 kV and greater

Natural Gas Transmission

Pipelines greater than 500 feet in length and 9 inches in diameter

Maximum operating pressure greater than 125 psi

Ohio | Power Siting Board



Construction and operation are monitored by the OPSB

Updated: June 7, 2017

Ohio | Power Siting Board

How to participate

Public informational meeting

Developer educates community about project and gathers input to consider in developing its application. OPSB representatives provide info about siting process and public participation.

Public comments

Written comments are filed in the case where they inform the Board members and staff. Comments are accepted at any time after a case number is established.

Online: OPSB.ohio.gov

Email: contactOPSB@puco.ohio.gov

Mail:

Ohio Power Siting Board

180 E. Broad Street

Columbus, Ohio 43215

Local public hearing

Board obtains sworn statements from the public which are transcribed and become part of the official record that the Board considers before making its decision.

Held at least 15 days after staff publishes its report of investigation. Notification letters sent to property owners and local officials. Newspaper notice 7-21 before the hearing.

Adjudicatory hearing

The developer, OPSB staff, and parties to the case present testimony and evidence regarding the facility and cross examine each other. Intervention grants individuals and local governments the right to participate as a party in the adjudicatory hearing, file for rehearing, or appeal to the Supreme Court of Ohio.

Held approximately 2 weeks after the local public hearing. Property owners and local officials receive letters advising them of right to intervene.

Ohio | Power Siting Board

Construction & operation

- If a project is approved, the OPSB monitors construction and operation to ensure compliance with the certificate and any conditions.
- The developer must notify landowners prior to start of construction.
- The developer must establish a complaint resolution process to address concerns resulting from project construction and operation.
- OPSB can assist individuals who feel they are not obtaining a resolution from the developer.

Ohio | Power Siting Board

Stay in touch

OPSB Website

OPSB.ohio.gov

- Case summary page
- Process information
- Calendar of events

Docketing information system

dis.puc.state.oh.us

- View case documents and public comments
- Subscribe for case notifications

contactOPSB@puco.ohio.gov

866-270-6772

The Ohio Power Siting Board
180 East Broad Street
Columbus, Ohio 43215

Applicant Contact Information

Invenergy

Applicant Contact Information

For further information about the Yellow Wood Solar Energy Center, please contact us at:

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https://yellowwoodsolar.com

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We're building a sustainable world.

Join us.