



Global
Company,
Local Partner.

r.e. think energy

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Bluebird Solar

February, 2021



Meet Our Team

Whitney Rubin
Sr. Development Manager

SF Bay Area, CA

Nicole Norquist
Director, Land

Minneapolis, MN

Martin Nascimento
Development Associate

Irvine, CA

Mike Stanton
VP, Development

Charlottesville, VA





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Overview

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What is Solar
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Phases of
Development

BayWa r.e.



One company, comprehensive experience.

At BayWa r.e. we
r.e. think energy.
Our mission is to
make renewable
energy even better.

We are a leading
global renewable
energy developer,
service supplier,
wholesaler and
energy solutions
provider.

Founded

2009

Gathering our combined
market experience under the
BayWa r.e. umbrella of a stable parent
company

Company

100% Wholly owned subsidiary

**of BayWa AG, which was
founded in 1923**

Serving the Needs of Farmers & Ranchers – then and now



Since 1923, our mission remains unwavering: to serve the basic needs of growers, processors, distributors, and related stakeholders.



BayWa r.e. is the renewable energy arm of BayWa, a global company **focused on agriculture, energy & building materials.**



In Germany, BayWa r.e built the largest Agricultural Photovoltaic (PV) system, allowing the farmer to continue to utilize their land for farming, while generating enough energy to run their farm.

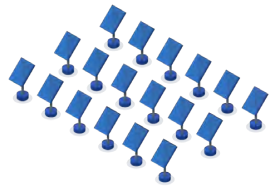


We foster deep partnerships with farmers and support them in all stages of production, from sowing, to crop protection, to harvest time.





Every year, the sun supplies us with 1,500,000,000,000,000 kWh of free clean energy. A standard household uses 11,000 kWh of energy each year.



When sunlight is absorbed by a solar panel, photons from the sun cause electrons within the solar panel to move, creating electricity.

This low voltage direct current (DC) electricity flows through wires into an inverter, which converts the current DC to alternating current (AC electricity).



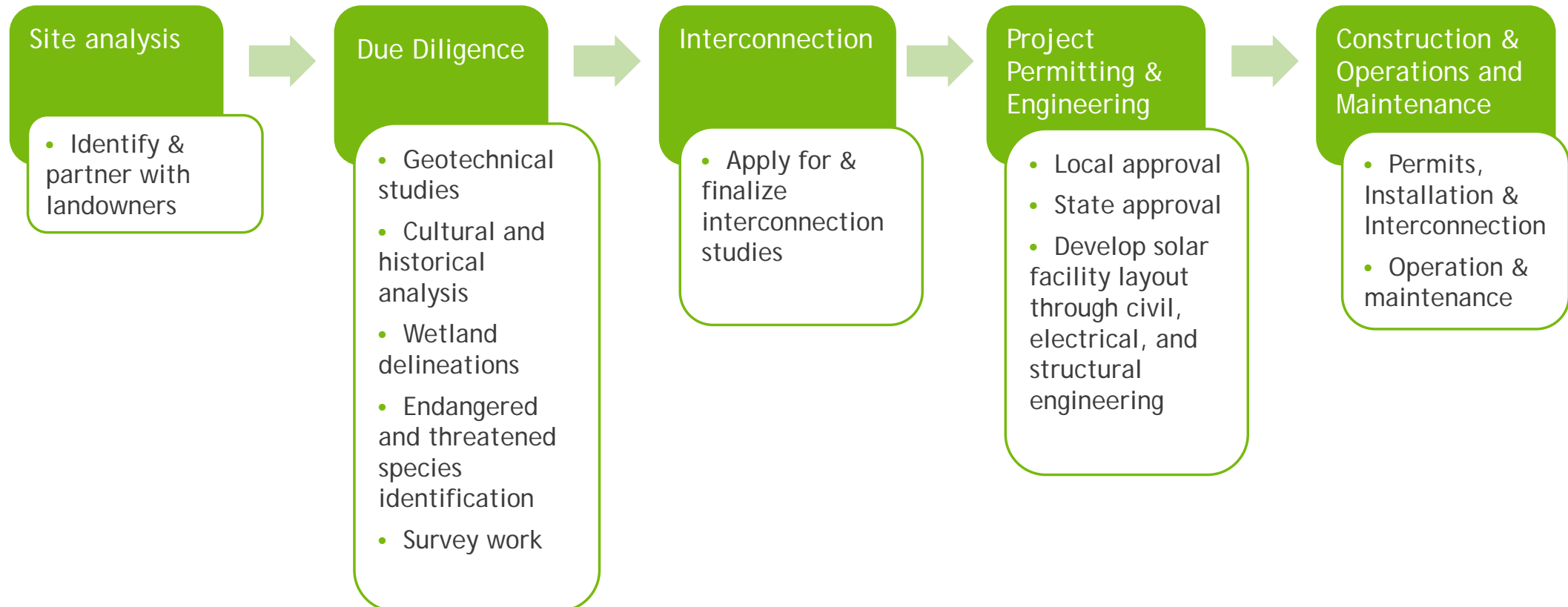
This AC electricity is then stepped up to a higher voltage so it can be sent through transmission and then distribution lines to homes and businesses



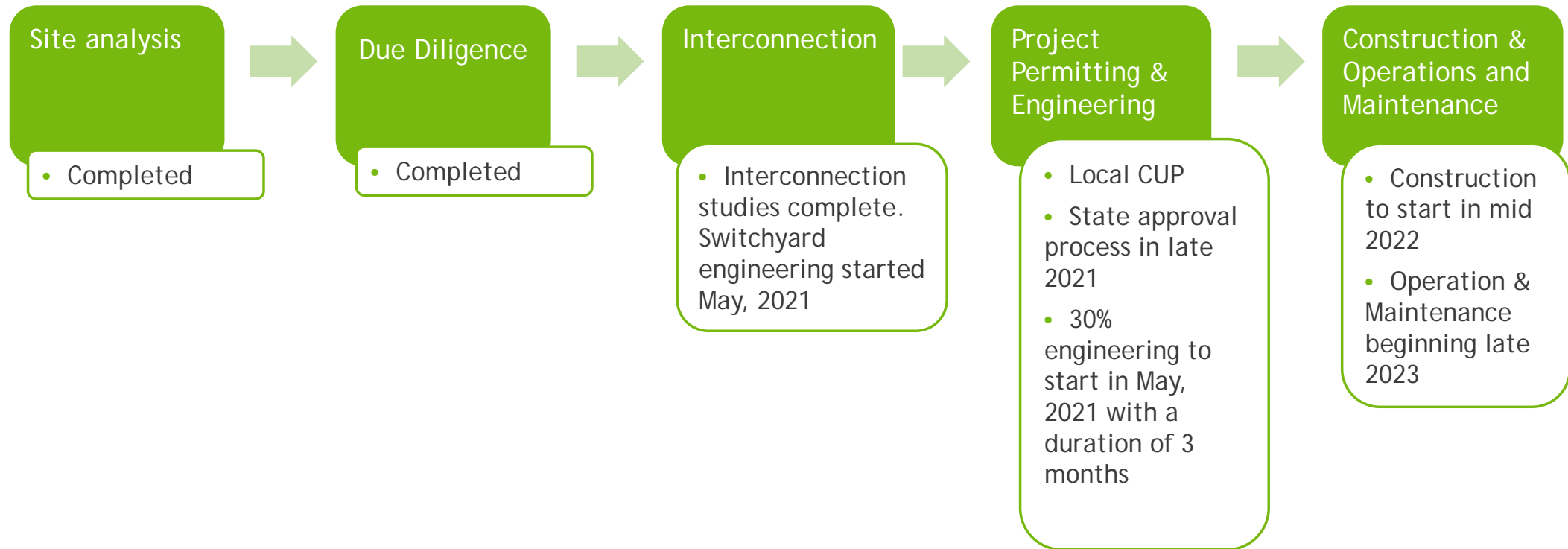
The useful life of a solar facility is typically between 30-40 years, and once it reached that point, the solar facility can be decommissioned to return the land to its original use.

How It Works

Phases of Development



Project Status





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Environmental and
Cultural Studies



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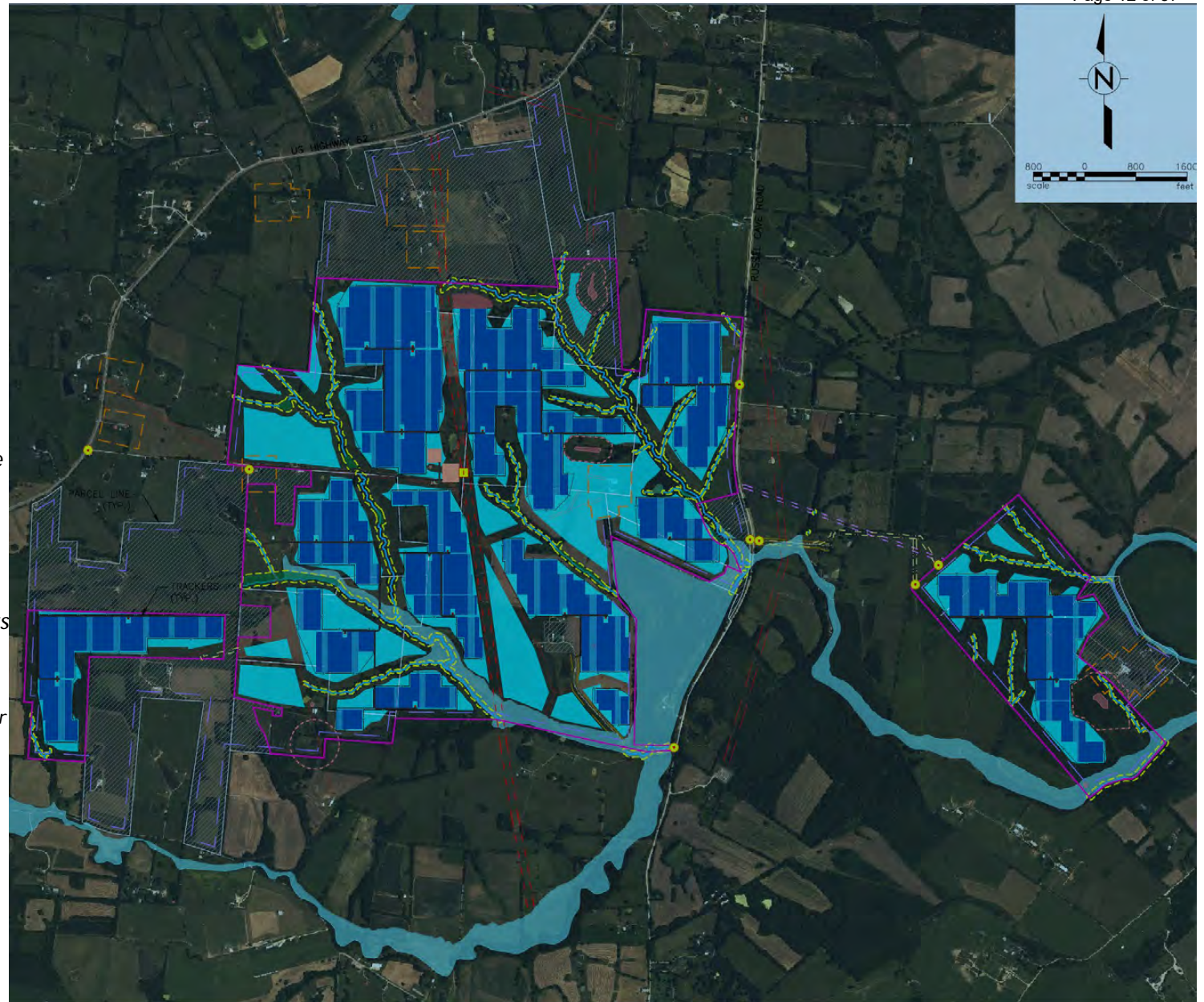
Project Overview

Site analysis and due diligence



Site Plan

- ▶ Road frontage only on KY 353 / Russell Pike Road
- ▶ 90MWac - 100 Mwac
- ▶ 1000 permitted acres with approximately 544 discrete "blocks" of fenced acres
- ▶ Anticipated construction start would be mid-2022
- ▶ Existing 138 kV Transmission Line runs through the middle of the project.
 - ▶ As a result the project is not adding high voltage Transmission Lines
- ▶ This is a conceptual site plan which is a preliminary layout based on known site constraints such as wetlands, streams, or setbacks from property lines
 - ▶ The project will move into it's engineering phase, for civil, electrical, and structural engineering
 - ▶ The final site plan will get reviewed by the Planning Commission and then the Building Inspector before construction permits can be obtained



Why Harrison County?

- ▶ *The State has a high demand for renewable energy from corporations*
- ▶ *There is a transmission line with available capacity running through the middle of where the project was sited*
- ▶ *Local landowners are interested in diversifying their income and protecting their real estate assets*
- ▶ *The community has a well-defined Solar Ordinance*



Bluebird Solar FAQ

Who is developing this project?

BayWa r.e. is developing the Bluebird Solar project. BayWa r.e.'s solar development expertise includes its work on 29 solar projects in the US.

When is the project expected to be operational?

The project is expected to be operational in mid-to-late 2023. Construction typically takes 18 months to complete and is set to begin in mid-2022.

How many entrances will the project have?

The Bluebird solar project will have 6 entrances, one on Leesburg Pike (Route 61), one on Leesburg Pike (Route 61) to Allen Pike and four on Route 353 (three to the west and one to the east).



Bluebird Solar FAQ

How large is the project?

- The project is sized to be between 90 MWac and 100 MWac.
- The total parcel land available for the project is approximately 1,345 acres.
- The permitted area will be 1000 acres, which includes setbacks for wetlands, cultural buffers, landscape buffers, and collection lines between the fenced acres.
- Thus, the fenced area of the project will be approximately 544 acres of which approximately 180 acres will consist of trackers.
- A picture of trackers is shown which is made up of piles that go into the ground with the solar panels on top. One tracker is in the foreground and one is in the background with spacing in between. The approximate 180 acres measures solely that land that is under the trackers, not between the trackers, and demonstrates how minimal impact there actually is to the ground. The impervious area would still be far less as it takes into account only what touches the ground, such as the piles.





Bluebird Solar FAQ

How long will the project be in operation?

We expect this project to be in operation for 40 years.

Will the entire site be fenced?

Fencing will not be around the whole site but around discrete solar blocks. While the conceptual site plan shows only 544 fenced acres, additional acres may be needed for internal roads between the fenced acres, for cables running between the blocks of solar panels, and for landscaping.

Will additional Transmission Lines be built?

As the project uses the existing Transmission Line, no additional Transmission Lines are needed for the project. Thus, no additional Transmission Lines will be built in the vicinity surrounding the project as a result of this project.



Bluebird Solar FAQ

Where does this energy go? Do we benefit from this energy?

We all need and use energy. Like traditional forms of energy generation, solar facilities produce power that is sent across transmission lines, converted to lower voltage, and transmitted across distribution lines to buildings and homes. Just like a molecule of water in your faucet, it is not possible to track the flow of each electron of energy. However, as the energy from Bluebird Solar is new energy being generated and added to the grid, Renewable Energy Credits (RECs) do track each megawatt of energy and who purchases this renewable energy in a “virtual” sense. The project allows for a local source of energy generation.

The project would add the energy generated to the [PJM grid](#), acting as a wholesale electricity provider.



Environmental and Cultural Studies

1

Bat Surveys

2

Wetland Delineations

3

Threatened and
Endangered Species
Studies

4

Cultural Studies

Bat Surveys

- ▶ No endangered species found



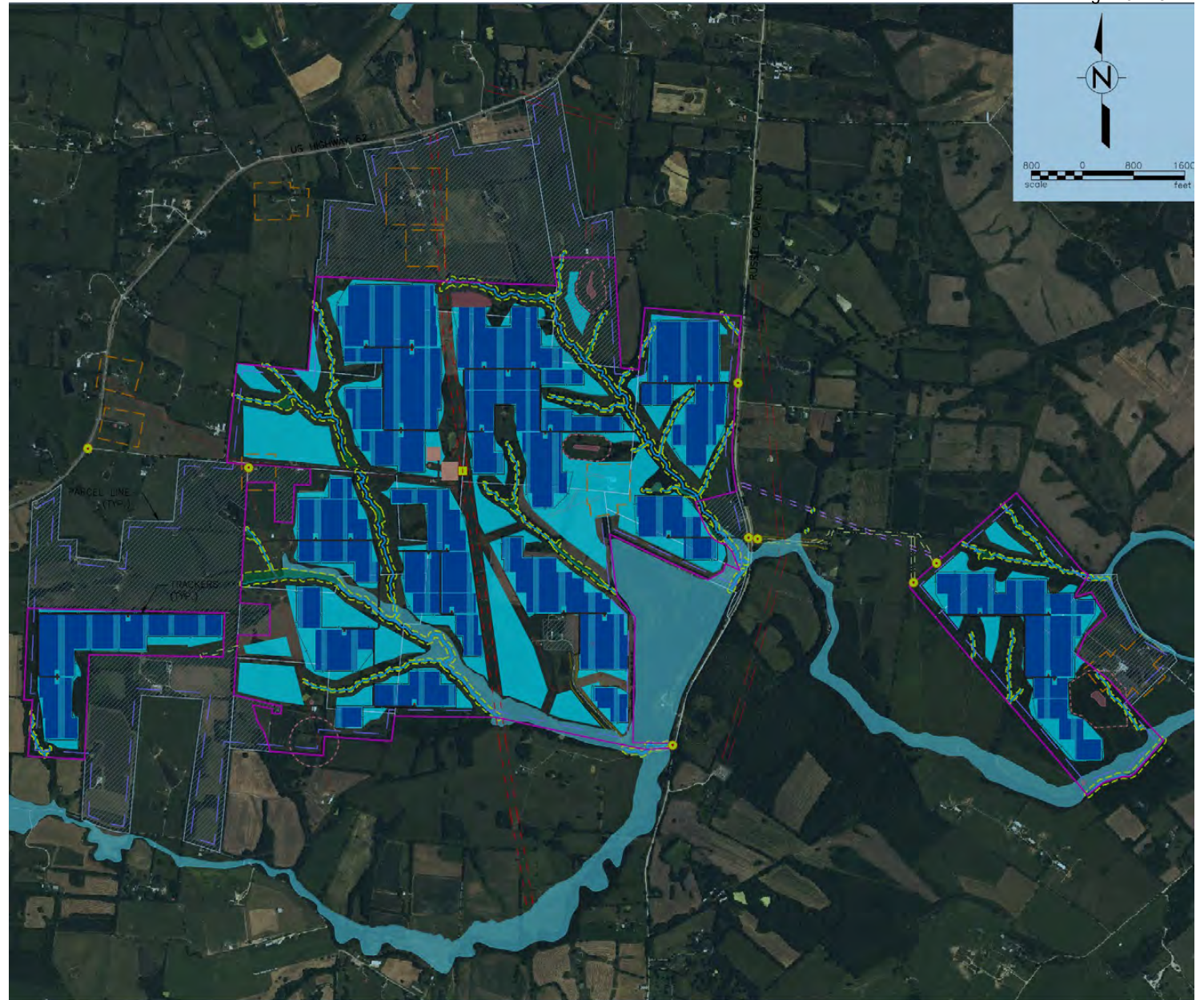
Eastern Red Bat (*Lasiurus borealis*)



Big Brown Bat (*Eptesicus fuscus*)

Wetlands

- ▶ Wetlands avoided
 - ▶ Wetland and stream buffer of 25 to 50 feet



Threatened and Endangered Species

- ▶ No endangered species found
- ▶ Survey's conducted for Shorts Goldenrod, Short's Bladderpod, and Running Buffalo Clover



Common Goldenrod



White Clover

Environment

- ▶ Solar is clean, quiet (after construction), and safe with no adverse health effects.
 - ▶ If damaged, a panel will cause no contamination to the soil or ground water.
- ▶ Solar is an unobtrusive neighbor with minimal traffic except during construction.
- ▶ The land can return to agricultural use after the lifetime of the project.



1

Local Benefits

2

Road Trips

3

Land Value &
Decommissioning



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Project Overview



Local Benefits

- ▶ **Land remains Zoned Agricultural**
 - ▶ One of the few land uses after which the land can be used for agriculture (if landowners so desire)
 - ▶ No pressure on land for housing or other type of development
 - ▶ The land can return to agriculture after the lifetime of the project

- ▶ **Low impact land use**
 - ▶ No cost to taxpayers for Infrastructure or Services. County will not have to:
 - ▶ Build new schools or hire new teachers
 - ▶ Build new roads
 - ▶ Build water/sewer lines or expand facilities

Local Benefits

Local Benefits

- ▶ Increase in property tax revenues over current use
- ▶ Approximately 200 construction jobs, hired locally when possible, during installation phase
- ▶ Full-time construction jobs for 12 - 18 months
- ▶ Increased business for local restaurants, supply stores, gas stations, accommodations, and contractors during time of construction

- ▶ **Local positions in**
 - ▶ Landscaping and grounds-keeping
 - ▶ Grading
 - ▶ Fencing
 - ▶ Electricians
 - ▶ Pile drivers
 - ▶ Surveyors

- ▶ **Ongoing contracts with local businesses wherever possible**
 - ▶ Landscaping and grounds-keeping
 - ▶ Site operations and maintenance
 - ▶ Inverter and substation maintenance

Generation of tax revenue

- ▶ The economic development study for the project, estimated that there will be 213 construction jobs over one year.
 - ▶ Additionally, the project is anticipated to have 2 on-site operations and maintenance technicians full-time.
- ▶ Non full-time positions would be in landscape maintenance and inverter and project substation maintenance.
- ▶ The project is estimated to generate an additional \$273,000 in occupational taxes while the project is being constructed.
- ▶ The project's annual operations would also be subject to the County net profits tax, assuming the Project earns a profit.
- ▶ In addition, Harrison County and the Applicant have negotiated an Industrial Revenue Bond ("IRB") and a Payment in Lieu of Taxes ("PILOT") agreement, whereby the company makes annual payments to the County jurisdictions.
 - ▶ The projected new property taxes plus the PILOT amount to over \$1.5 million over the next thirty years. These payments, averaging around \$50,000 per year, can be compared to the \$16,000 per year currently paid by landowners of the site (almost all of which is assessed at its agricultural use value). In other words, the new property taxes and PILOT payments will average approximately three times more than what the landowners currently pay in taxes.

Truck Road Trips

Truck Road Trips

- ▶ The traffic impact study analyzes four roadways in the area that will be impacted by entrances to the solar farm or the trips generated by the development. These roadways include the following:
 - ▶ Leesburg Pike (US 62)
 - ▶ Russell Cave Road (KY 353)
 - ▶ Silas Pike
 - ▶ Allen Pike
- ▶ Townsend Valley Road was not included in the analysis as the road is not being used for construction trips.
- ▶ When comparing the no build analysis to the build analysis it was determined that the roadways in the study area will continue to operate at a level of service (LOS) similar to existing conditions.

Truck Road Trips

Truck Road Trips

- ▶ Next to 0 car trips during project operation.
- ▶ Based on the analyses performed, no changes to the roadway network are recommended within the study area in order for traffic conditions to operate within acceptable conditions.
- ▶ The turn lane analysis determined that no additional turn lanes are warranted for any roadways based on the traffic volumes on the road.
- ▶ The sight distance analysis determined that traffic entering US 62 at Allen Pike and the proposed entrances to KY 353 and Allen Pike meet all sight distance requirements.
 - ▶ Some clearing along right of way may be required at these entrances to ensure proper sight distance is provided.

Land Value

- ▶ The criteria that typically correlates with downward adjustments on property values such as noise, odor, and traffic all indicate that a solar facility is a compatible use for rural/residential areas and that it would function in a harmonious manner.
 - ▶ Solar facilities offer protection from light pollution at night
 - ▶ They are quiet after construction
 - ▶ There is minimal if close to 0 traffic after construction

- ▶ Data from university studies, broker commentary, and other appraisal studies support a finding of no impact on property value adjoining a solar farm with setbacks and landscaped buffers.

- ▶ Very similar solar farms in very similar areas have been found by hundreds of towns and counties not to have a substantial negative effect to abutting or adjoining properties, and many of those findings of no impact have been upheld by appellate courts. Similar solar farms have been approved with adjoining agricultural uses, schools, churches, and residential developments.



Other Common Questions

1

Viewshed & Environment

2

Top 5 Myths about Solar

3

Common Questions

4

Safety



Viewshed

Pictures taken on an iPhone

- ▶ *Images are the view from the major road*
- ▶ *5 gallon at planting, pictures taken at year three.*

Top 5 Myths about Solar

► Myth #1: Solar farms are like factories

Local officials and planners often [prohibit] solar farms in residential, commercial, and sometimes agricultural zoning districts, limiting their location to industrial districts. Industrial zoning is primarily intended to separate intense land uses, such as factories and distribution centers and their associated pollution, noise, and traffic, from residential areas. However, after construction, solar farms are quiet, clean facilities that generally have no on-site employees.

► Myth #2: Glare

Residents and community officials often cite glare or blinding from solar facilities as a primary concern. While concentrating solar technologies do use mirrors which can cause glare, most solar farms use PV modules to generate electricity. PV modules use non-reflective glass and are designed to absorb rather than reflect the light that hits the panels in order to convert solar energy into electricity. PV modules are generally less reflective than windows^[1] and are installed at numerous airports.^[2]

► Myth #3: Noise

The noisiest components in a solar farm are the inverters, which generate a low buzzing sound as they convert electricity from the direct current (DC) generated by PV modules to alternating current (AC) used by the electric grid. Tracking equipment allowing PV modules to face the sun over the course of the day can also generate a low level of noise. However, the noise generated by solar farms is generally not audible above ambient noise outside of the facility fence.^[3]



Top 5 Myths about Solar

Myth #4: Property values

While the impacts of a solar farm on neighboring property values have not been studied in-depth, numerous studies found the impact of wind energy generation on neighboring property values to be negligible.^[4] As solar farms do not have the same impacts as wind farms (i.e., PV facilities do not cast a shadow on neighboring properties, cause light flicker, or have the same visual impact as wind farms), the impacts on property values caused by solar farms are anticipated to be less than the impacts of wind farms. Some communities have opted for mitigation measures to reduce visual impacts of solar farms through the use of vegetative screening or decorative fencing, since PV modules are usually mounted close to the ground (less than seven feet high).

Myth #5: Electro-magnetic fields

Solar facilities generate electro-magnetic fields similar to household appliances within close proximity, which dissipate with increasing distance and pose no health risk to neighboring residents.^[5]

Concerns about proposed solar farms are often offset by local benefits such as significant local employment and spending during construction, increased property tax revenues with minimal drain on public services, and low water use, emission-free electricity generation.



Common Questions

How will solar panels effect my land?

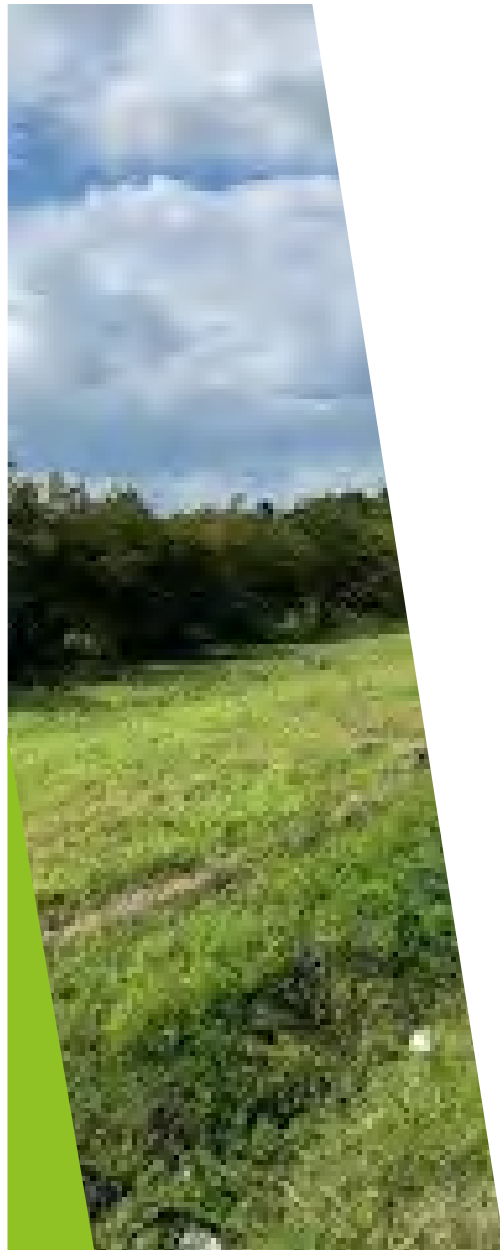
- ▶ “Soil can improve by planting native grasses/pollinators and effectively letting the soil rest. In the future, when a solar project is decommissioned, farming can once again resume on that land.” - National Renewable Energy Laboratory

Are solar panels safe?

- ▶ “In the solar industry, product standards serve to ensure safety and reliability of all components of a solar electric system. Product standards, plus conformity assessment procedures, ensure all products meet a minimum threshold of safety, performance, and reliability.” - Solar Energy Industries Association

Will panels be visible from surrounding areas?

- ▶ Solar farms, by nature of their design, have a low profile, and BayWa makes every effort to keep as much of the existing vegetation around the perimeter as possible. We also commit to seeking community input on how best to integrate the solar farm into the surrounding landscape. Once the solar farm is decommissioned at the end of a lease, we will leave the land clear for any future use determined by the landowner.



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BayWa r.e. Company Presentation 2020

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Safety is Our Priority

As a trusted global leader in solar energy for more than 90 years, BayWa has developed safe operational standards to ensure the safety of every community we serve.

- ✓ BayWa works with businesses, installers, developers, utility providers, investors and governments throughout the world, and we are helping them to realize their renewable energy goals through our depth of knowledge and expertise.
- ✓ Fires caused by solar equipment are extremely rare, and BayWa complies with the National Electrical Code safety provisions to prevent such accidents.
- ✓ BayWa adheres to all manufacturers installation standards and obeys all local safety codes adopted by the communities we invest in.
- ✓ Firefighter safety has been addressed by several organizations including Underwriters Laboratories (UL), the Interstate Renewable Council (IREC) and the International Association of Firefighters (IAFF). Standards and training have been developed for all fire departments in responding to calls on or near solar installations.



Thank you.



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Meet Our Team - here for Questions

Rich Kirkland
*Certified General
Appraiser & MAI*

Raleigh, NC

Paul Coomes
*Consulting Economist
Emeritus Professor of Economics,
University of Louisville*

Louisville, KY

Steven Powell
*Palmer Engineering / Traffic
Engineering consultant*

Kentucky





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Successful Projects Speak for Themselves



Sunflower Solar
Halifax, North Carolina

In 2017, BayWa r.e. partnered with Geenex Solar to develop this 21-MW project.



Fern Solar
Edgecombe County, NC

In 2020 BayWa r.e completed this 133 MWac project. BayWa r.e. partnered with the Center for Energy Education on a solar job training program.



Camden Solar
Elizabeth City, NC

In 2021, BayWa r.e. and Hershey partnered on a 15 year Power Purchase Agreement for this 20 MWac project.

Experienced Developer

- ▶ With a presence in more than 30 locations across Europe, Japan, Southeast Asia, and North America, the group has developed and constructed over 2.5 GWs and actively provides O&M and asset management for over 7 GWs.
- ▶ BayWa r.e. Solar Projects, LLC is responsible for the group's North American activities in the solar and storage sectors and has installed over 500 MW of solar and has over 400 MW under management in the United States.
- ▶ BayWa r.e Solar Projects, LLC has been active in the North America since 2014.
- ▶ BayWa will stay involved with Bluebird throughout the life of the project by finalizing the development of the project, managing construction, and operating & maintaining the project.
- ▶ BayWa currently intends to own Bluebird throughout the life of the project.
- ▶ Wherever BayWa operates, the company is dedicated to being an asset to the local community.

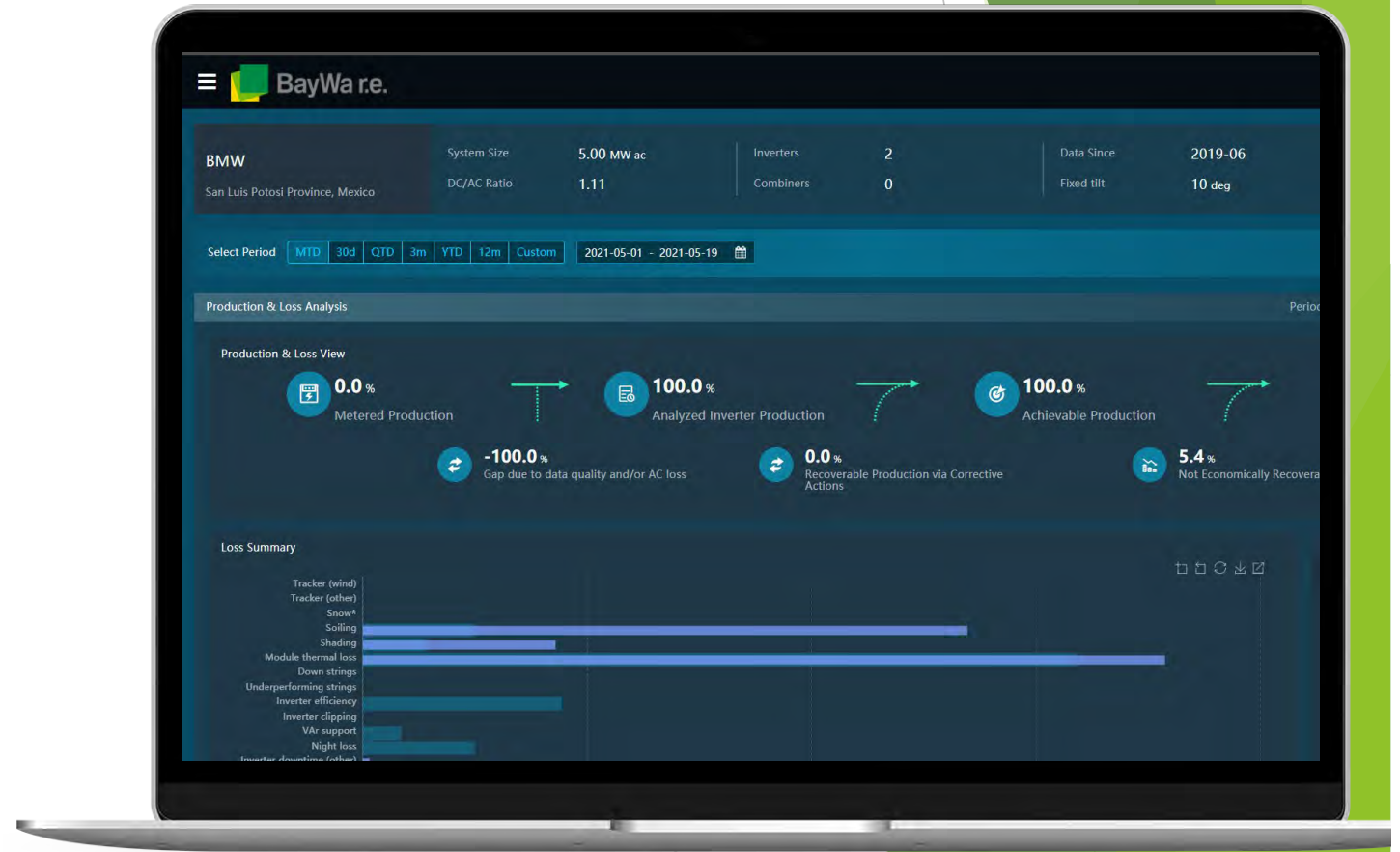
BayWa r.e. Solar Projects – primary developer

Name	Location	Size (MWac)	Current Status	BayWa Role
SEV Portfolio	Various Counties, NC	9	Operating, Completed in 2015	Development, EPC, O&M
Major Entertainment Studio	Los Angeles County, CA	1	Operating, Completed in 2015	Development, EPC, O&M
Morgan Solar	Lancaster, CA	1.5	Operating, Completed in 2015	Development, EPC, O&M
Delano Solar	Kern County, CA	1	Operating, Completed in 2016	Development, EPC, O&M
Valley Center	San Diego County, CA	3	Operating, Completed in 2016	Development, EPC, O&M
Granger	San Diego County, CA	3	Operating, Completed in 2016	Development, EPC, O&M
Hemlock	Halifax County, NC	5	Operating, Completed in 2016	Development, EPC, O&M
Jacumba Solar	San Diego County, CA	20	Operating, Completed in 2017	Development, EPC, O&M
Sunflower	Halifax County, NC	16	Operating, Completed in 2017	Development, EPC, O&M
Cork Oak	Halifax County, NC	20	Operating, Completed in 2017	Development, EPC, O&M
Northern Cardinal	Halifax County, NC	2	Operating, Completed in 2018	Development, EPC, O&M
HXNAIR	Halifax County, NC	5	Operating, Completed in 2018	Development, EPC, O&M
Gauss	Halifax County, NC	5	Operating, Completed in 2018	Development, EPC, O&M
Prudential Solar	Santa Clara County, CA	1	Operating, Completed in 2018	Development, EPC, O&M
Five Forks	Warren County, NC	20	Operating, Completed in 2019	Development, EPC, O&M
North 301	Halifax County, NC	20	Operating, Completed in 2019	Development, EPC, O&M
Fern Solar	Edgecombe County, NC	100	Operating, Completed in 2020	Development, EPC, O&M
Chestnut Solar	Halifax County, NC	75	Operating, Completed in 2020	Development
Grasshopper Solar	Mecklenburg County, VA	80	Operating, Completed in 2020	Development
Cuervos Solar	Mexico	200	Operating, Completed in 2020	Development, EPC, O&M
Corazon Phase I	Webb County, TX	200	In Construction, COD in 2021	Development, EPC, O&M
Camden Solar	Camden County, NC	20	In Construction, COD in 2021	Development, EPC, O&M

Efficiency in Services Business using Data - Advanced Analytics

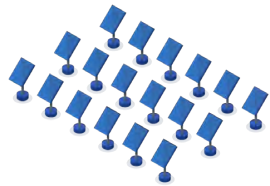
- ▶ We operate using analytic tools that automatically break down system losses into several categories to provide accurate insight
 - ▶ We can measure significant losses in real-time and provide recommended actions for the field team to perform...
 - ▶ Potential equipment reliability issues such as Weather Sensors
 - ▶ Underperforming strings, inverters, trackers, etc.
 - ▶ Recommended Wash Dates for PV Modules

Best-in-Class Advanced Analytics for Operational and Asset Management





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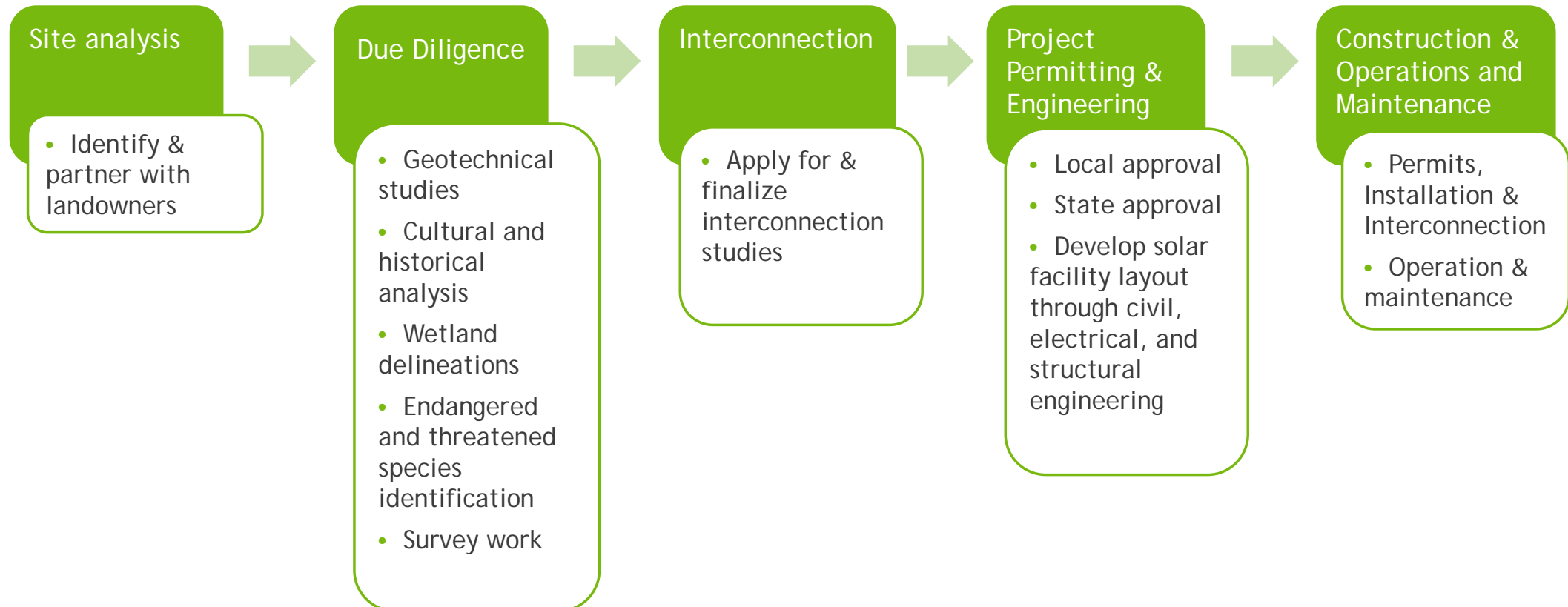
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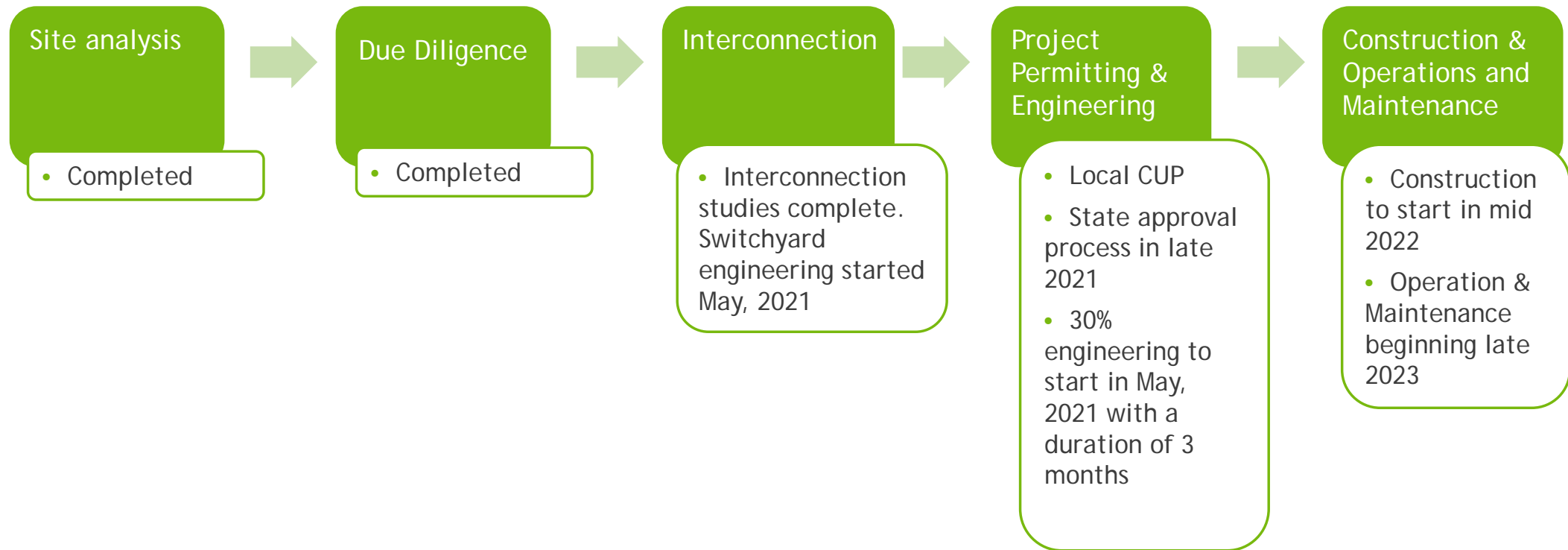
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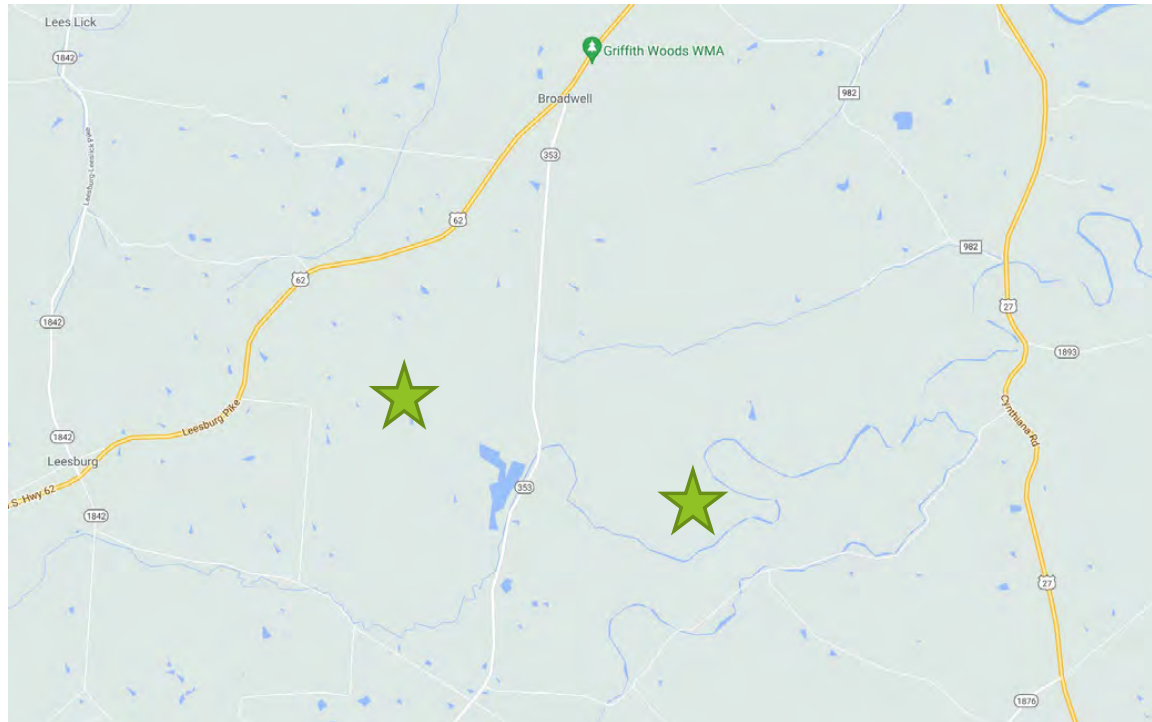
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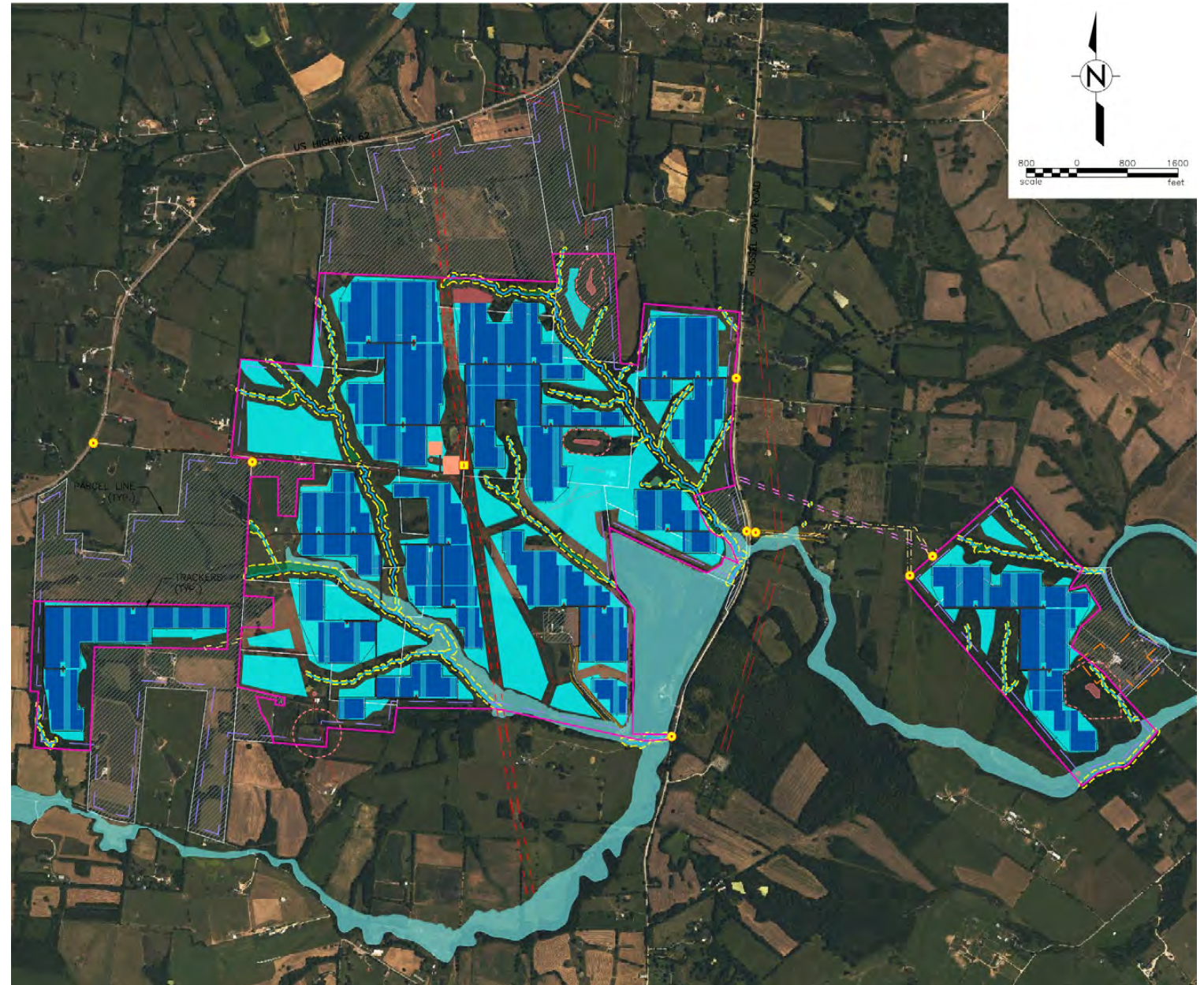
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Site Plan

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Bluebird Solar

Bluebird Solar (make slide 13)

The majority of the project lies between Russell Cave Road (KY 353) and Leesburg Pike (US 62) in southern Harrison County. The project is north of the South Fork Licking River.

Property Details

There are 11 project participating landowners. The Agnes McDowell Trust is swapping 126 acres in Harrison County for 362 acres in Bourbon County.

Lifetime

The project is expected to be in operation for 30 to 40 years



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When is the project expected to be operational?

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Bluebird Solar FAQ

How long will the project be in operation?

We expect this project to be in operation for 30-40 years.

Will the entire site be fenced?

Fencing will not be around the whole site but around discrete solar blocks. While the conceptual site plan shows only 544 fenced acres, additional acres may be needed for internal roads between the fenced acres, for cables running between the blocks of solar panels, and for landscaping. There may be additional areas needed for laydown areas and for stormwater management, if required.

Will additional Transmission Lines be built?

As the project uses the existing Transmission Line, no additional Transmission Lines are needed for the project. Thus, no additional Transmission Lines will be built in the vicinity surrounding the project as a result of this project.



Bluebird Solar FAQ

Where does this energy go? Do we benefit from this energy?

We all need and use energy. Like traditional forms of energy generation, solar facilities produce power that is sent across transmission lines, converted to lower voltage, and transmitted across distribution lines to buildings and homes. Just like a molecule of water in your faucet, it is not possible to track the flow of each electron of energy. However, as the energy from Bluebird Solar is new energy being generated and added to the grid, Renewable Energy Credits (RECs) do track each megawatt of energy and who purchases this renewable energy in a “virtual” sense. The project allows for a local source of additional energy generation.

The project would add the energy generated to the PJM grid, acting as a wholesale electricity provider.



Environmental and Cultural Studies



1

Bat Surveys

2

Wetland Delineations

3

Threatened and
Endangered Species
Studies

4

Cultural Studies

Bat Surveys

- ▶ No endangered species found



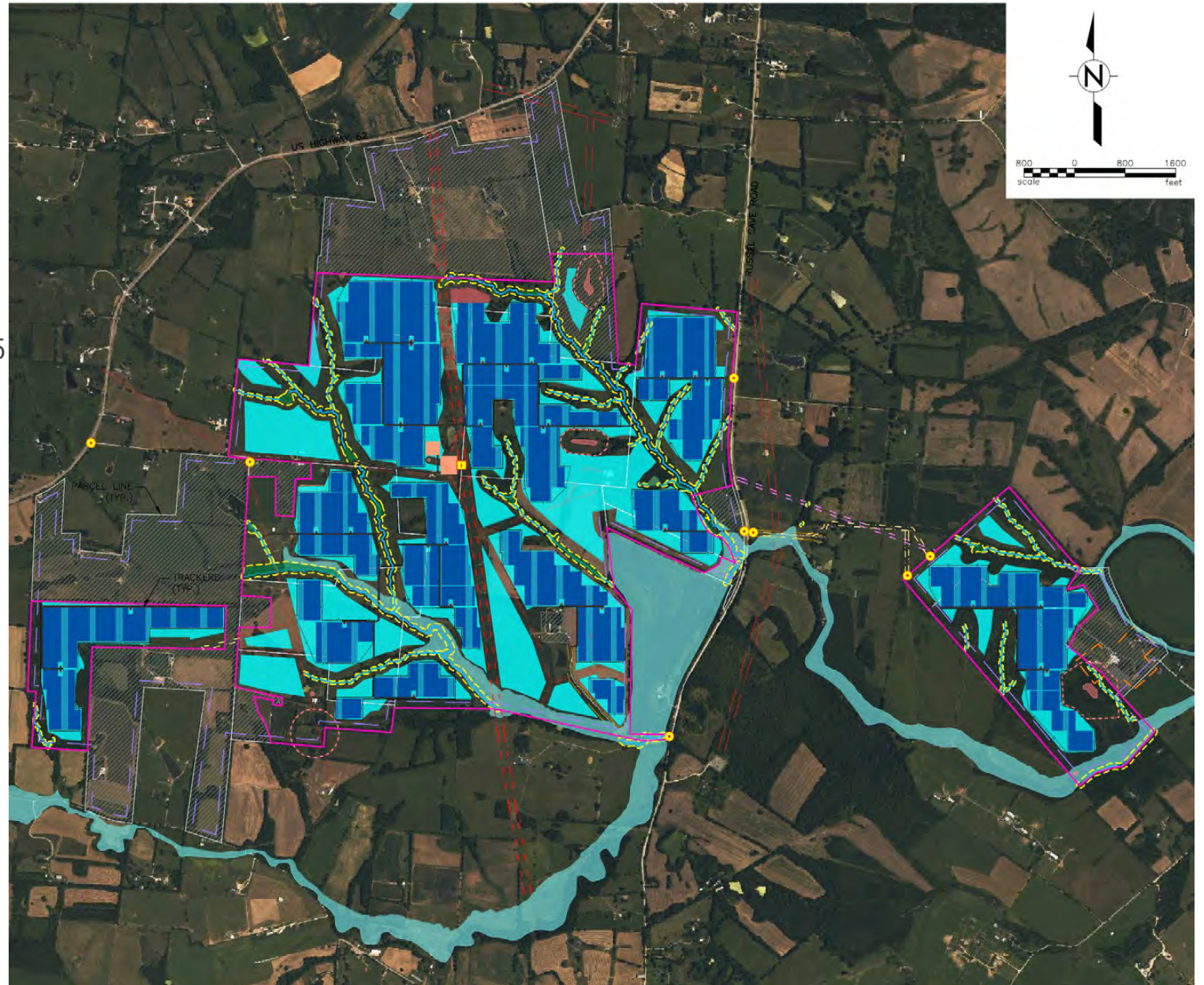
Eastern Red Bat (*Lasiurus borealis*)



Big Brown Bat (*Eptesicus fuscus*)

Wetlands

- ▶ Wetlands avoided
 - ▶ Wetland and stream buffer of 25 to 50 feet



Threatened and Endangered Species

- ▶ No endangered species found
- ▶ Surveys conducted for Shorts Goldenrod, Short's Bladderpod, and Running Buffalo Clover



Common Goldenrod



White Clover

Cultural Studies



Environment

- ▶ Solar is clean, quiet (after construction), and safe with no adverse health effects.
 - ▶ If damaged, a panel will cause no contamination to the soil or ground water.
- ▶ Solar is an unobtrusive neighbor with minimal traffic except during construction.
- ▶ The land can return to agricultural use after the lifetime of the project.
 - ▶ Solar can be an interim use and the land can “rest” while the project is in operation.
 - ▶ “Soil can improve by planting native grasses/pollinators and effectively letting the soil rest. In the future, when a solar project is decommissioned, farming can once again resume on that land.” - National Renewable Energy Laboratory



1

Local Benefits

2

Road Trips

3

Land Value &
Decommissioning



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Local Benefits,
Road Trips,
Land Value,
Noise



Local Benefits

- ▶ **Land remains Zoned Agricultural**
 - ▶ One of the few land uses after which the land can be used for agriculture (if landowners so desire)
 - ▶ No pressure on land for housing or other type of development
 - ▶ The land can return to agriculture after the lifetime of the project

- ▶ **Low impact land use**
 - ▶ No cost to taxpayers for Infrastructure or Services. County will not have to:
 - ▶ Build new schools or hire new teachers
 - ▶ Build new roads
 - ▶ Build water/sewer lines or expand facilities

Local Benefits

Local Benefits

- ▶ Increase in property tax revenues over current use
- ▶ Approximately 200 construction jobs, hired locally when possible, during installation phase
- ▶ Full-time construction jobs for 12 - 18 months
- ▶ Increased business for local restaurants, supply stores, gas stations, accommodations, and contractors during time of construction

- ▶ **Local positions in**
 - ▶ Landscaping and grounds-keeping
 - ▶ Grading
 - ▶ Fencing
 - ▶ Electricians
 - ▶ Pile drivers
 - ▶ Surveyors

- ▶ **Ongoing contracts with local businesses wherever possible**
 - ▶ Landscaping and grounds-keeping
 - ▶ Site operations and maintenance
 - ▶ Inverter and substation maintenance

Generation of tax revenue

- ▶ The economic development study for the project, estimated that there will be 213 construction jobs over one year.
 - ▶ Additionally, the project is anticipated to have 2 on-site operations and maintenance technicians full-time.
- ▶ Non full-time positions would be in landscape maintenance and inverter and project substation maintenance.
- ▶ The project is estimated to generate an additional \$273,000 in occupational taxes while the project is being constructed.
- ▶ The project's annual operations would also be subject to the County net profits tax, assuming the Project earns a profit.
- ▶ In addition, Harrison County and the Applicant have negotiated an Industrial Revenue Bond ("IRB") and a Payment in Lieu of Taxes ("PILOT") agreement, whereby the company makes annual payments to the County jurisdictions.
 - ▶ The projected new property taxes plus the PILOT amount to over \$1.5 million over the next thirty years. These payments, averaging around \$50,000 per year, can be compared to the \$16,000 per year currently paid by landowners of the site (almost all of which is assessed at its agricultural use value). In other words, the new property taxes and PILOT payments will average approximately three times more than what the landowners currently pay in taxes.

Truck Road Trips

Truck Road Trips

- ▶ The traffic impact study analyzes four roadways in the area that will be impacted by entrances to the solar facility or the trips generated by the development. These roadways include the following:
 - ▶ Leesburg Pike (US 62)
 - ▶ Russell Cave Road (KY 353)
 - ▶ Silas Pike
 - ▶ Allen Pike
- ▶ Townsend Valley Road was not included in the analysis as the road is not being used for construction trips.
- ▶ When comparing the no build analysis to the build analysis it was determined that the roadways in the study area will continue to operate at a level of service (LOS) similar to existing conditions.

Truck Road Trips

Truck Road Trips

- ▶ Next to 0 car trips during project operation.
- ▶ Based on the analyses performed, no changes to the roadway network are recommended within the study area in order for traffic conditions to operate within acceptable conditions.
- ▶ The turn lane analysis determined that no additional turn lanes are warranted for any roadways based on the traffic volumes on the road.
- ▶ The sight distance analysis determined that traffic entering US 62 at Allen Pike and the proposed entrances to KY 353 and Allen Pike meet all sight distance requirements.
 - ▶ Some clearing along right of way may be required at these entrances to ensure proper sight distance is provided.

Land Value

- ▶ The criteria that typically correlates with downward adjustments on property values such as noise, odor, and traffic all indicate that a solar facility is a compatible use for rural/residential areas and that it would function in a harmonious manner.
 - ▶ Solar facilities offer protection from light pollution at night
 - ▶ They are quiet after construction
 - ▶ There is minimal if close to no traffic after construction

- ▶ Data from university studies, broker commentary, and other appraisal studies support a finding of no impact on property value adjoining a solar facility with setbacks and landscaped buffers.

- ▶ Very similar solar facility in very similar areas have been found by hundreds of towns and counties not to have a substantial negative effect to abutting or adjoining properties, and many of those findings of no impact have been upheld by appellate courts. Similar solar farms have been approved with adjoining agricultural uses, schools, churches, and residential developments.

Land Value

Determining what is an External Obsolescence

An external obsolescence is a use of property that, because of its characteristics, might have a negative impact on the value of adjacent or nearby properties because of identifiable impacts. Determining whether a use would be considered an external obsolescence requires a study that isolates that use, eliminates any other causing factors, and then studies the sales of nearby versus distant comparable properties. The presence of one or a combination of key factors does not mean the use will be an external obsolescence, but a combination of these factors tend to be present when market data reflects that a use is an external obsolescence.

- ▶ External obsolescence is evaluated by appraisers based on several factors. These factors include but are not limited to:
 - 1) Traffic. Solar Farms are not traffic generators.
 - 2) Odor. Solar farms do not produce odor.
 - 3) Noise. Solar farms generate no noise concerns and are silent at night.
 - 4) Environmental. Solar farms do not produce toxic or hazardous waste. Grass is maintained underneath the panels so there is minimal impervious surface area.
 - 5) Appearance/Viewshed. This is the one area that potentially applies to solar farms.

However, solar farms are generally required to provide significant setbacks and landscaping buffers to address that concern.

Matched Pair Analysis

The paired sales analysis is based on the theory that when two properties are in all other respects equivalent, a single difference can be measured to indicate the difference in price between them.

- ▶ The paired sales analysis employed in the report uses the following process:
 1. Identify sales of property adjoining existing solar farms.
 2. Compare those sales to similar property that does not adjoin an existing solar farm.
 3. Confirmation of sales are noted in the analysis write ups.
 4. Distances from the homes to panels are included as a measure of the setbacks.
 5. Topographic differences across the solar farms themselves are likewise noted along with demographic data for comparing similar areas.

Noise

- ▶ Noise monitoring was conducted at 5 different sites outside the project boundary to document existing noise conditions on April 12, 2021. Each site was monitored for 15 minutes. Weather conditions (temperature, relative humidity, wind speed and direction, and sky condition) were documented.



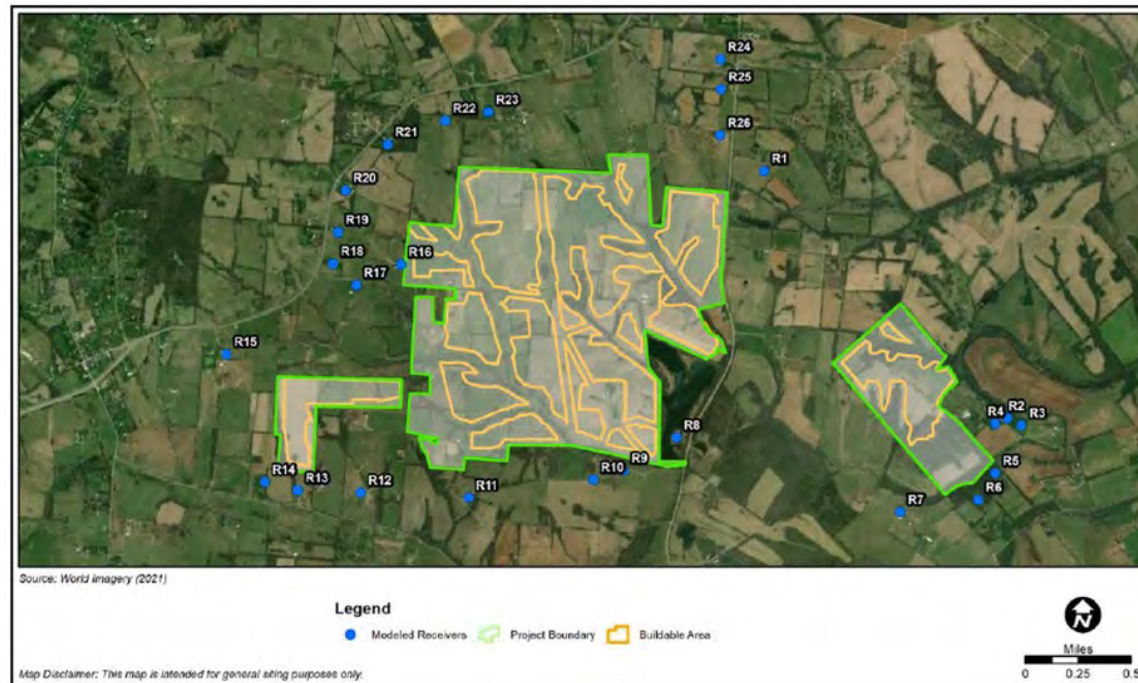
Noise

- ▶ The monitored noise levels represent the existing baseline noise condition within and adjacent to the project area during daytime hours. The average ambient noise levels from the measurements ranged from 45 dBA to 69 dBA. The lowest monitored noise level was recorded from site MON-3 on the west side of the project boundary approximately 12 feet north of Allen Pike. The highest monitored noise level was recorded from site MON-1 on a private driveway west of Lail Ln.

Monitor Number (MON)	Address/Description	Day/ Time	Monitoring Result LAeq, dBA
1	Property owner driveway approximately 3 feet west of Lail Ln	April 12/ 2:28-2:43 PM	69
2	Road ROW approximately 10 feet east of Allen Pike	April 12/ 12:24-12:39 PM	49
3	Road ROW approximately 12 feet north of Allen Pike	April 12/ 11:42-11:47 AM	45
4	Road ROW approximately 15 feet west of Russel Cave Rd/KY-353	April 12/ 1:37 -1:52 PM	61
5	Property owner driveway approximately 30 feet west of Russel Cave Rd/KY-353	April 12/ 1:01-1:16 PM	57

Noise

- ▶ The SoundPLAN® computer noise model was used for computing noise levels from the proposed operation noise from the transformers, inverters, and trackers under worst case scenario. An industry standard, SoundPLAN® was developed by Braunstein + Berndt GmbH to provide estimates of sound levels at distances from specific noise sources taking into account the effects of terrain features including relative elevations of noise sources, receivers, and intervening objects (buildings, hills, trees), and ground effects due to areas of hard ground (pavement, water) and soft ground (grass, field, forest).



Noise

- ▶ The following data was used as input into the model.
 - ▶ Operation Noise Analysis Report AZTEC Engineering 11 April 2021
 - ▶ A total of 31-point sources was modeled to represent small-scaled transformers, inverters, and trackers on the transformer pads. A combined sound power level of 79 dBA was assumed for equipment on each transformer pad. The source height was assumed to be 5 feet.
 - ▶ A point source was modeled to represent a large-scaled transformer for the substation/switchyard. A combined sound power level of 86 dBA was assumed for equipment in the substation and switchyard.
 - ▶ A total of 26 receivers was modeled to represent sensitive noise receptors. The source height was assumed to be 5 feet.
 - ▶ Topo contour lines were inputted into the model to consider terrain variation.
 - ▶ Ground surface was assumed to be soft ground.



Noise

- ▶ The model determined that equipment noise energy dissipated rapidly before reaching the sensitive receptors. Operation noise would be masked by background ambient noise.

As can be seen from Table 3 below, predicted operation noise level are below 20 dBA L_{dn} at all sensitive receivers. Therefore, the proposed project operation will comply with EPA standard of 55 dBA L_{dn} as identified in Section 4. No future noise mitigation is needed for the project.

Receiver ID	Noise Levels (L_{Aeq} , dBA)	Noise Levels (L_{dn} , dBA)	Receiver ID	Noise Levels (L_{Aeq} , dBA)	Noise Levels (L_{dn} , dBA)
R1	16.0	14.6	R14	16.3	14.8
R2	14.6	13.4	R15	15.1	13.8
R3	13.3	12.3	R16	19.0	17.3
R4	15.8	14.4	R17	17.3	15.7
R5	13.7	12.6	R18	15.9	14.5
R6	13.0	12.1	R19	15.3	14.0
R7	14.0	12.9	R20	14.5	13.3
R8	17.5	15.9	R21	14.9	13.6
R9	16.8	15.3	R22	16.2	14.7
R10	16.9	15.4	R23	16.9	15.4
R11	16.2	14.7	R24	12.2	11.5
R12	15.5	14.1	R25	13.5	12.5
R13	16.4	14.9	R26	15.9	14.5

Note:
 1. Solar facility would not operate during night time hours and thus would not generate noise.



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Decommissioning,
Reflectivity,
Landscaping,
Construction



Decommissioning

BayWa works with the local jurisdiction to ensure solar projects are viable and can return the land to agriculture after the life cycle of the solar facility.

- ▶ The County requires a Decommissioning Plan before Building Permits can be issued.

- ▶ The landowner leases contain decommissioning provisions to protect the landowner

- ▶ The value from the glass, steel, and other materials covers the company cost to decommission the project, even if the County does not allow for the bond to take into account salvage value.

- ▶ Applicant and the County shall enter into a recorded agreement in a form approved by the Planning Commission that ensures that the decommissioning is carried out in accordance with this Ordinance.

Decommissioning Estimate

M
M
MOTT
MACDONALD

Project:	Bluebird Solar LLC	Engineer:	M. Franklin
Client:	BayWa r.e.	Issue Date:	4/2/21
Location:	Harrison County, KY	Revision:	0

OPINION OF PROBABLE COST - PV PLANT DECOMMISSIONING - 90 MW - ANNUAL INFLATION=1.3% - END OF LIFE: YEAR 40				
DISASSEMBLY & DISPOSAL				
ITEM	DESCRIPTION	QUANTITY	UNIT PRICE	TOTAL
1.0	PV Modules (520 W)	242,379	\$ 1.92	\$ 465,367.68
2.0	PV Inverter(s) (3.43 MVA)	28	\$ 1,103	\$ 30,884.00
3.0	PV Transformer(s) (3.43 MVA)	28	\$ 552	\$ 15,456.00
4.0	ESS Inverter(s) (2MVA)	0	-	-
5.0	ESS Container(s)	0	-	-
6.0	ESS Transformer(s) (2MVA)	0	-	-
7.0	Racking Frame (Single Axis)	2,993	\$ 152	\$ 454,936.00
8.0	Racking Posts	38,909	\$ 15	\$ 583,635.00
9.0	Tracker Motors	2,993	\$ 21	\$ 62,853.00
10.0	Racking Wiring	1,044,019 LF	\$ 0.08	\$ 83,521.52
11.0	Underground Cable (LV, MV, Comm)	593,626 LF	\$ 0.63	\$ 373,984.38
12.0	PV Plant Fence	77,011 LF	\$ 2.56	\$ 197,148.16
13.0	Interconnection Facilities	1 LS	\$ 166,791.82	\$ 166,791.82
14.0	Concrete	86 CY	\$ 83	\$ 7,138.00
15.0	Gravel	7,852 CY	\$ 31	\$ 243,412.00
16.0	Offsite Disposal by Volume	7,941 CY	\$ 45	\$ 357,345.00
17.0	Offsite Disposal by Weight	0.00 TON	\$ 95	\$ -
18.0	General Conditions	90 MW	\$ 3,532	\$ 317,880.00
			SUBTOTAL	\$ 3,360,352.56

Decommissioning Estimate

SITE RESTORATION				
ITEM	DESCRIPTION	QUANTITY	UNIT PRICE	TOTAL
19.0	Re-Seeding	535 ACRES	\$ 135	\$ 72,225.00
20.0	Re-Grading	0 CY	\$ 21	\$ -
21.0	Erosion and Sediment Control	1 LS	\$ 223,012	\$ 223,012.00
SUBTOTAL				\$ 295,237.00

SALVAGE				
ITEM	DESCRIPTION	QUANTITY	UNIT PRICE	TOTAL
22.0	PV Modules (520 W)	230,260	\$ 14	\$ 3,223,640.00
23.0	PV Inverter(s) (3.43 MVA)	28	\$ 2,998	\$ 83,944.00
24.0	PV Transformer(s) (3.43 MVA)	28	\$ 2,576	\$ 72,128.00
25.0	ESS Inverter(s) (2MVA)	0	\$ 2,998	\$ -
26.0	ESS Container(s)	0 LBS	\$ 0.12	\$ -
27.0	ESS Transformer(s) (2MVA)	0	\$ 2,576	\$ -
28.0	Racking Frame (Single Axis)	8,678,091 LBS	\$ 0.12	\$ 1,041,370.92
29.0	Racking Posts	6,419,985 LBS	\$ 0.12	\$ 770,398.20
30.0	Tracker Motors	161,622 LBS	\$ 0.26	\$ 42,021.72
31.0	Interconnection Steel Structures	31,694 LBS	\$ 0.12	\$ 3,803.28
32.0	Interconnection Power & Instrument Transformers	144,141 LBS	\$ 0.12	\$ 17,296.92
33.0	Interconnection Disconnect Switches (1 & 3-Phase)	4,076 LBS	\$ 0.40	\$ 1,630.40
34.0	Interconnection Primary Conductor	3,365 LBS	\$ 0.40	\$ 1,346.00
35.0	Interconnection Pre-Fab Steel Buildings	34,500 LBS	\$ 0.12	\$ 4,140.00
36.0	Control Panels	800 LBS	\$ 0.12	\$ 96.00
37.0	Electronic Controls	255 LBS	\$ 0.25	\$ 63.75
38.0	LV Wiring (PV Plant & Interconnection)	134,690 LBS	\$ 1.61	\$ 216,850.90
39.0	MV Wiring	811,687 LBS	\$ 1.03	\$ 836,037.61
40.0	Chain Link Fence (PV Plant & Interconnection)	1,176,200 LBS	\$ 0.12	\$ 141,144.00
SUBTOTAL				\$ 6,455,911.70

<i>TOTAL DISASSEMBLY, DISPOSAL, & SITE RESTORATION COST</i>	\$ 3,655,589.56
<i>TOTAL SALVAGE VALUE</i>	\$ 6,455,911.70
<i>NET DECOMMISSIONING COST</i>	\$ (2,800,322.14)
<i>NET DECOMMISSIONING COST WITH NO SALVAGE VALUE</i>	\$ 3,655,589.56

Mott MacDonald



Matt A Franklin, P.E.
Senior Project Manager
(859) 629-3521

4/7/2021

Date

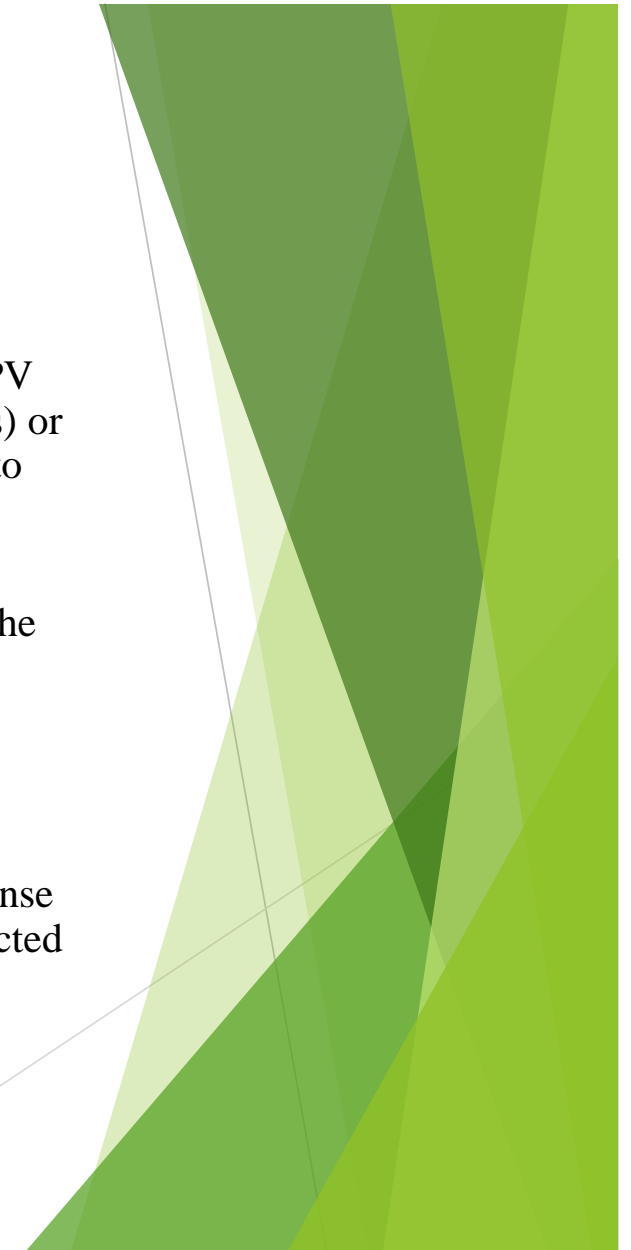
Reflectivity

- ▶ The Reflectivity and Visibility analysis is an analysis of the potential glare events caused by the Bluebird Solar Project on adjacent potential dwelling units and land traffic on roads near the project.
- ▶ PV installations are based on flat photovoltaic modules with low reflectivity characteristics. However, the fraction of the incident light that is reflected increases with the incidence angle, being higher when solar elevation is low (sunrise and sunset), thus potentially causing glare/glint events to observers.



Reflectivity

- ▶ To evaluate glare from the Bluebird Solar Project, a geometric analysis using a computer model is done to evaluate the occurrences of geometric alignment of the PV plant reflected solar beams with observers known as Key Observation Points (KOPs) or Sensitive Receptors, located at existing dwelling units or driving on roads adjacent to the project site.
- ▶ Because of the rural environment and the terrain orography, the KOPs are dispersed around the project boundaries and in most of the cases without any direct visual of the solar modules. Thus, reflectivity events are unlikely to happen at ground level.
- ▶ In addition, the existence of dense vegetation plus the additionally proposed landscaping tree barriers are in most cases sufficient to fully mitigate any potential reflectivity events.
- ▶ However, because of the complex terrain topography, some KOPs without a near dense wooden mass do have visibility of the solar modules and therefore potentially subjected to glare.



Reflectivity

- ▶ The procedure followed to identify reflectivity events at KOPs consisted of using a 3D geometric analysis solving for the reflection of solar beams onto the surface of the modules. The first geometric analysis conducted did not consider vegetation or topographic visual screens; those were evaluated in a second step. Both geometric analyses were completed for a full calendar year in 1-minute intervals. All mathematical expressions for sun position, KOP's position, orientation of PV modules and reflected sun beams were inputted into a computer model to evaluate the risk of reflected sunlight reaching the KOPs or observers.



Reflectivity

- ▶ Solar reflection from flat surfaces is a mathematical problem that can be solved by means of 3D geometry concepts.
- ▶ A mitigation strategy consists in altering the orientation of the solar modules based on identifying which tracker areas are causing the reflectivity events. This is known as backtracking.

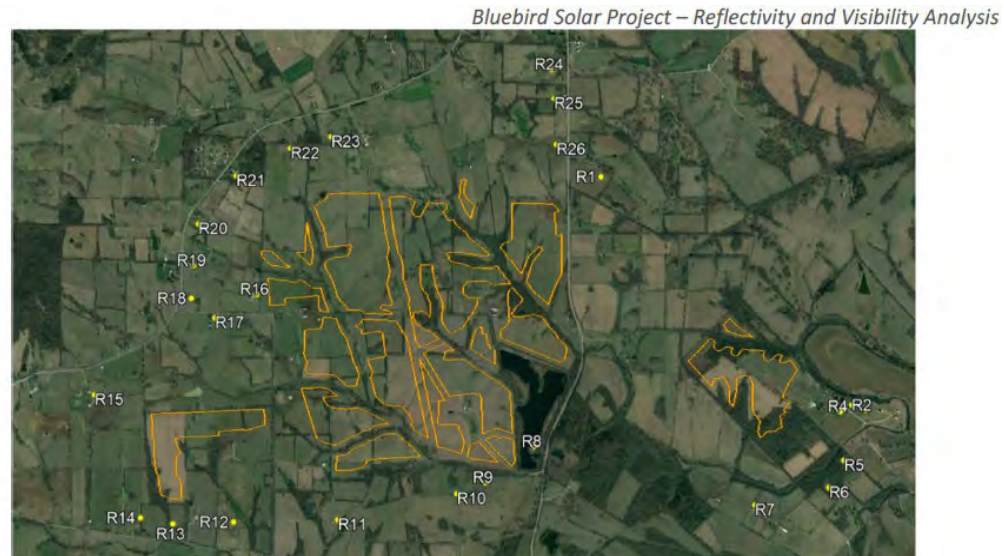


Figure 21 – Location for KOPs (Sensitive Receptors)



Landscaping

Landscaping is an integral part of each BayWa r.e. project. We work with a licensed landscape architect to specially select species suited to the region and climate and preferably native species when possible. The goal with the vegetation selection is to create a natural look and a visually pleasing buffer with shrubs to fill in the understory and trees to fill in the higher views. We discuss any vegetative and location preferences with the landowners and always follow the local requirements.

- ▶ The following landscape plans are suggestions as provided by a landscape architect.
- ▶ The County requirement is for a double row of plant material 6 feet high at planting. Evergreen trees are to be placed no more than 20 feet apart with the second row centered between the first rows to create a layered look. The chain link fence is to be coated green or black. Trees are to be replaced within 6 months upon death.
- ▶ Bluebird Solar is interested in learning community feedback about their preferred planting plan.

LANDSCAPE BUFFER ZONES

Five different landscape buffers have been designed for the project: Segment 1, Segment 2, Segment 3, Segment 4, and Segment 5. Each landscape buffer segment is approximately 585' in length, comprised of different dominant tree and shrub landscape material, and designed so that the landscape buffers blend together.

Segment 1

- Dominate Trees and Shrub
 - Black Walnut (*Juglans nigra*)
 - Eastern Red Cedar (*Juniperus virginiana*)
 - Coralberry (*Symphoricarpos orbiculatus*)
- Secondary Tree and Shrubs
 - Pin Oak (*Quercus palustris*)
 - Black Raspberry (*Rubus occidentalis*)
 - Black Huckleberry (*Gaylussacia baccata*)

Segment 2

- Dominate Tree and Shrub
 - Eastern Red Cedar (*Juniperus virginiana*)
 - Coralberry (*Symphoricarpos orbiculatus*)
- Secondary Tree and Shrubs
 - Silver Maple (*Acer saccharinum*)
 - Prairie Crabapple (*Malus ioensis*)
 - Southern Viburnum (*Viburnum dentatum*)
 - American Hazelnut (*Corylus americana*)

Segment 3

- Dominate Trees and Shrub
 - Eastern Red Cedar (*Juniperus virginiana*)
 - Silver Maple (*Acer saccharinum*)
 - Black Raspberry (*Rubus occidentalis*)

Secondary Trees and Shrubs

- Redbud (*Cercis canadensis*)
- American Plum (*Prunus americana*)
- Black Raspberry (*Rubus occidentalis*)
- Black Huckleberry (*Gaylussacia baccata*)

Segment 4

- Dominate Trees and Shrub
 - Eastern Red Cedar (*Juniperus virginiana*)
 - American Hazelnut (*Corylus Americana*)
- Secondary Trees and Shrubs
 - American Holly (*Ilex Opaca*)
 - Shortleaf Pine (*Pinus Echinata*)
 - Coralberry (*Symphoricarpos orbiculatus*)
 - Southern Viburnum (*Viburnum dentatum*)

Segment 5

- Dominate Trees and Shrub
 - Existing trees
 - Existing shrubs
- Secondary Trees and Shrubs
 - Eastern Red Cedar (*Juniperus virginiana*)
 - Downy Serviceberry (*Amelanchier arborea*)
 - Black Huckleberry (*Gaylussacia baccata*)
 - Black Raspberry (*Rubus occidentalis*)

County Option

- Dominate Trees and Shrub
 - Eastern Red Cedar (*Juniperus virginiana*)
- Secondary Trees and Shrubs
 - American Holly (*Ilex opaca*)
 - Shortleaf Pine (*Pinus echinata*)

Sections of perimeter fencing that will require landscape buffer zones range in length from approximately 60' (a portion of one segment) to 3,200' (5.5 segments). Each segment will use the same native grass/pollinator seed mix. The intent is to interchange the landscape buffers as they are used around the site.

LANDSCAPE INTENT

The intent of the landscape design for the Bluebird Solar site is to have the trees and shrubs be dense enough to screen/break up views to the solar array fields year-round and to blend with the surrounding rural character comprised of its woodlots and tree lined roads and fields. This is accomplished by preserving existing landscape vegetation, new plantings consisting of a mix of native trees and shrubs, and a native grass/pollinator mix located within a thirty-foot (30') landscape buffer that surrounds the site. The plant material selected for the landscape buffer provides layers of screening and habitat for the various types of wildlife in the area. New tree plantings are selected to provide various heights, shapes, and fall color. The selected shrubs provide a variety of foliage textures, visual interest through bloom color, and a supplemental food source for wildlife. In total, the selected plant materials screen and break-up views to the solar arrays while blending with the surrounding landscape.

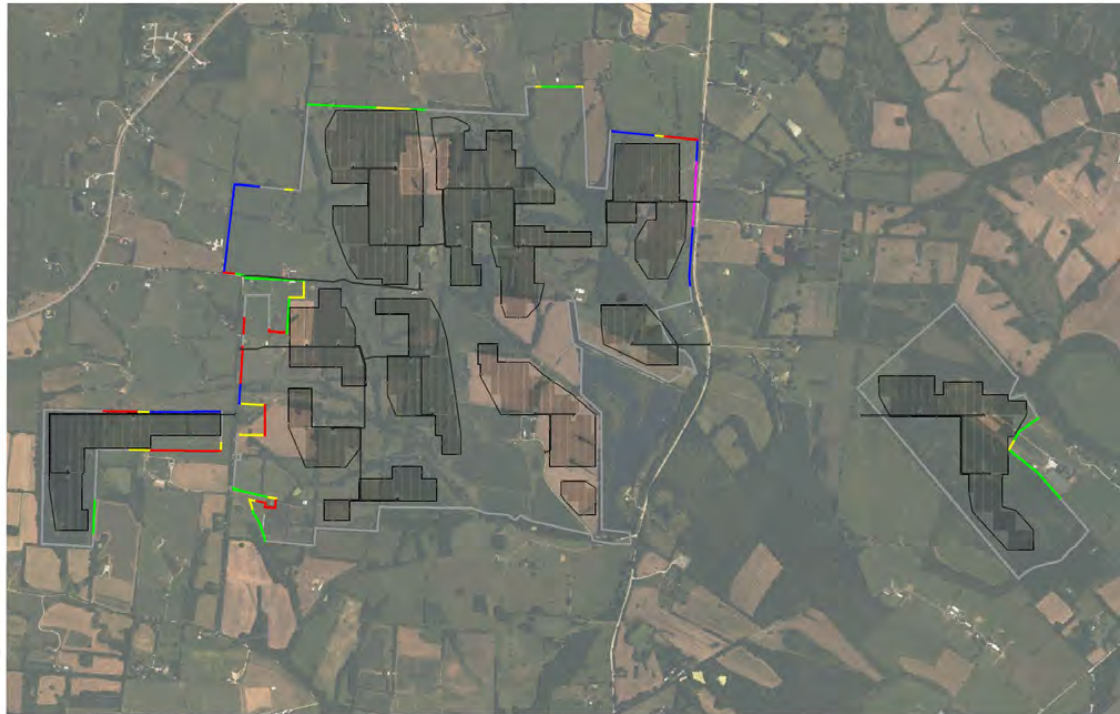
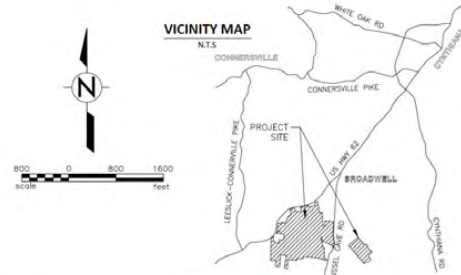
LANDSCAPE LEGEND

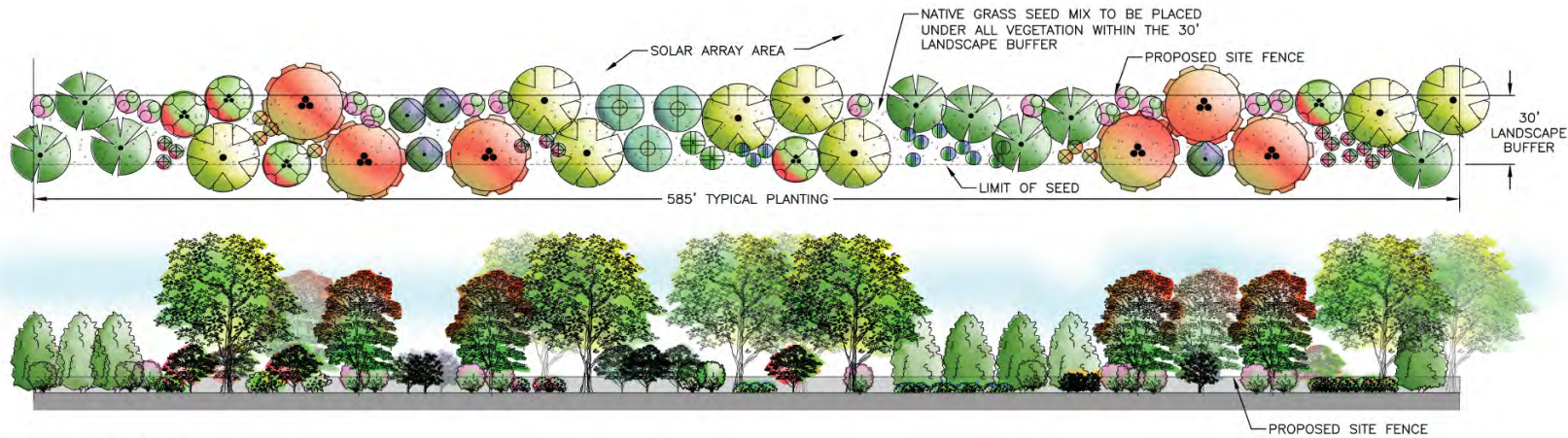
SYMBOL	DESCRIPTION
	EXISTING VEGETATION NO BUFFER REQUIRED

TYPICAL LANDSCAPE BUFFER ZONES	
	SEGMENT 1
	SEGMENT 2
	SEGMENT 3
	SEGMENT 4
	SEGMENT 5

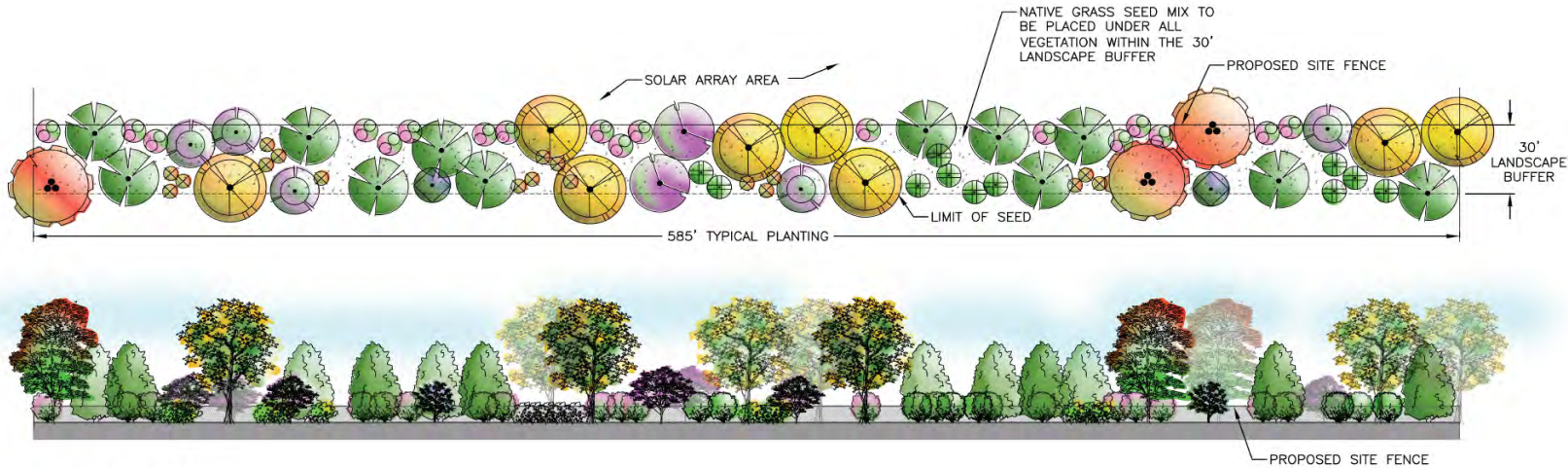
SEE SHEET L2.02 FOR TYPICAL LANDSCAPE PLANTING DESIGN IN BUFFER AREAS

30' LANDSCAPE BUFFER TO BE SEEDED WITH NATIVE GRASS/POLLINATOR SEED MIX. SEEDING TO EXTEND UNDER ALL PLANTINGS





SEGMENT 1



SEGMENT 2

LANDSCAPE LEGEND

SYMBOL	BOTANICAL NAME COMMON NAME
	ACER SACCHARINUM SILVER MAPLE
	AMELANCHIER ARBOREA DOWNY SERVICEBERRY
	CERCIS CANADENSIS REDBUD
	CORNUS AMOMUM SILKY DOGWOOD
	ILEX OPACA
	AMERICAN HOLLY
	JUNIPERUS VIRGINIANA EASTERN RED CEDAR
	JUGLANS NIGRA BLACK WALNUT
	MALUS IOENSIS PRAIRIE CRABAPPLE
	PINUS ECHINATA SHORTLEAF PINE
	PRUNUS AMERICANA AMERICAN PLUM
	QUERCUS PALUSTRIS PIN OAK
	CORYLUS AMERICANA AMERICAN HAZELNUT
	GAYLUSSACIA BACCATA BLACK HUCKLEBERRY
	HYDRANGEA ARBORESCENS WILD HYDRANGEA
	RUBUS OCCIDENTALIS BLACK RASPBERRY
	SYMPHORICARPOS ORBICULATUS CORALBERRY
	VIBURNUM DENTATUM SOUTHERN VIBURNUM

NATIVE GRASS/POLLINATOR SEED MIX

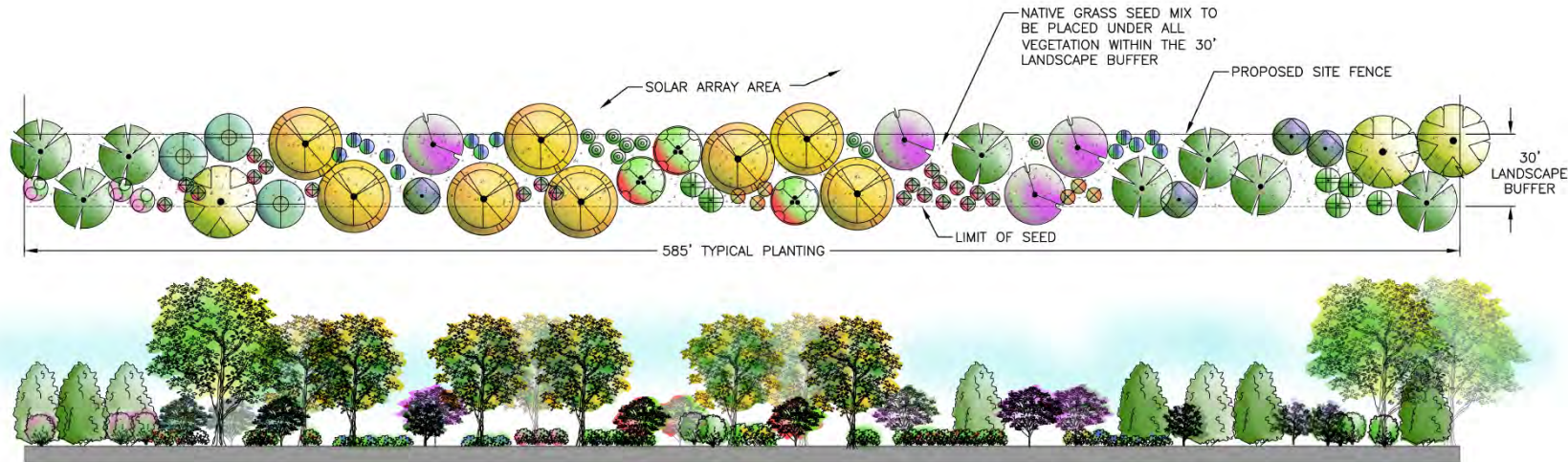
BOTANICAL NAME / COMMON NAME
ASTER LAEVIS / SMOOTH ASTER
BAPTISIA AUSTRALIS / BLUE FALSE INDIGO
BOUTELOUA CURTIPENDULA / SIDE OATS GRAMA
CASSIA FASCICULATA / PARTRIDGE PEA
COREOPSIS LANCEOLATA / LANCE LEAVED COREOPSIS
DALEA CANDIDA / WHITE PRAIRIE CLOVER
DALEA PURPUREA / PURPLE PRAIRIE CLOVER
ERYNGIUM YUCCIFOLIUM / RATTLESNAKE MASTER
GAILLARDIA PULCHELLA / INDIAN BLANKET
HELIPOPSIS HELIANTHOIDES / FALSE SUNFLOWER
LIATRIS SQUARROSA / BLAZING STAR
MONARDA FISTULOSA / BERGAMOT
PANICUM VIRGATUM / SWITCHGRASS
PARTHENIUM INTEGRIFOLIUM / WILD QUININE
RATIBIDA PINNATA / GREYHEADED CONEFLOWER
RUBEBECKIA HIRTA / BLACKEYED SUSAN
SCHIZACHYRIUM SCOPARIUM / LITTLE BLUESTEM
SOLIDAGO RIGIDA / RIGID GOLDENROD
SOLIDAGO NEMORALIS / GRAY GOLDENROD
SPOROBOLUS COMPOSITUS / TALL DROPSEED
TRIDENS FLAVUS / PURPLE TOP

LANDSCAPE LEGEND

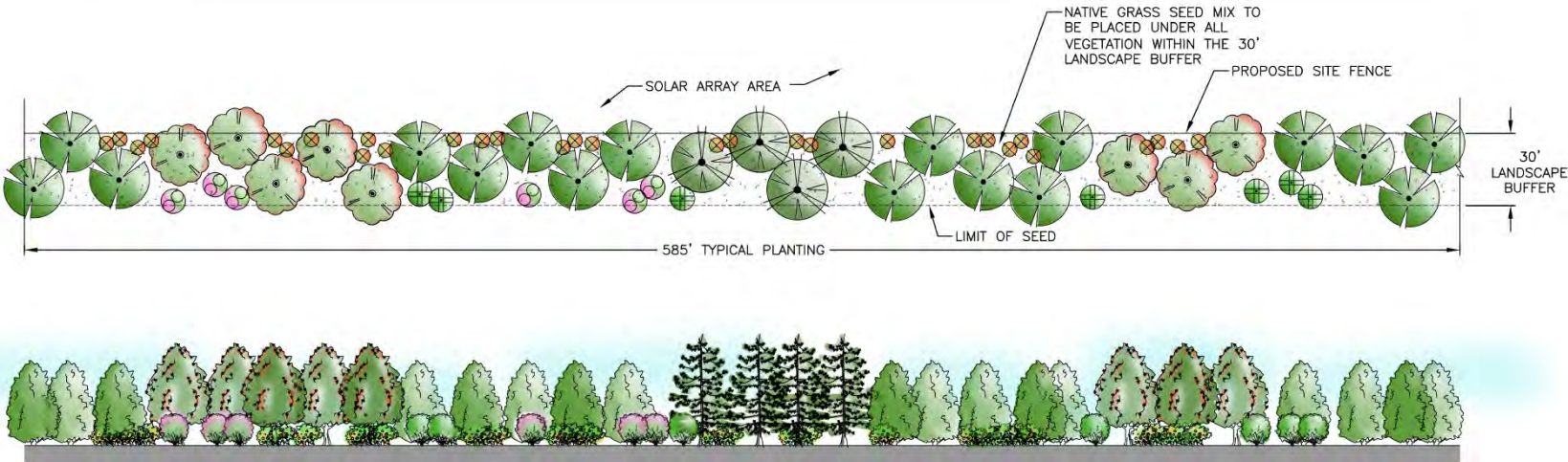
SYMBOL	BOTANICAL NAME COMMON NAME
	ACER SACCHARINUM SILVER MAPLE
	AMELANCHIER ARBOREA DOWNY SERVICEBERRY
	CERCIS CANADENSIS REDBUD
	CORNUS AMOMUM SILKY DOGWOOD
	ILEX OPACA AMERICAN HOLLY
	JUNIPERUS VIRGINIANA EASTERN RED CEDAR
	JUGLANS NIGRA BLACK WALNUT
	MALUS IOENSIS PRAIRIE CRABAPPLE
	PINUS ECHINATA SHORTLEAF PINE
	PRUNUS AMERICANA AMERICAN PLUM
	QUERCUS PALUSTRIS PIN OAK
	CORYLUS AMERICANA AMERICAN HAZELNUT
	GAYLUSSACIA BACCATA BLACK HUCKLEBERRY
	HYDRANGEA ARBORESCENS WILD HYDRANGEA
	RUBUS OCCIDENTALIS BLACK RASPBERRY
	SYMPHORICARPOS ORBICULATUS CORALBERRY
	VIBURNUM DENTATUM SOUTHERN VIBURNUM

NATIVE GRASS/POLLINATOR SEED MIX

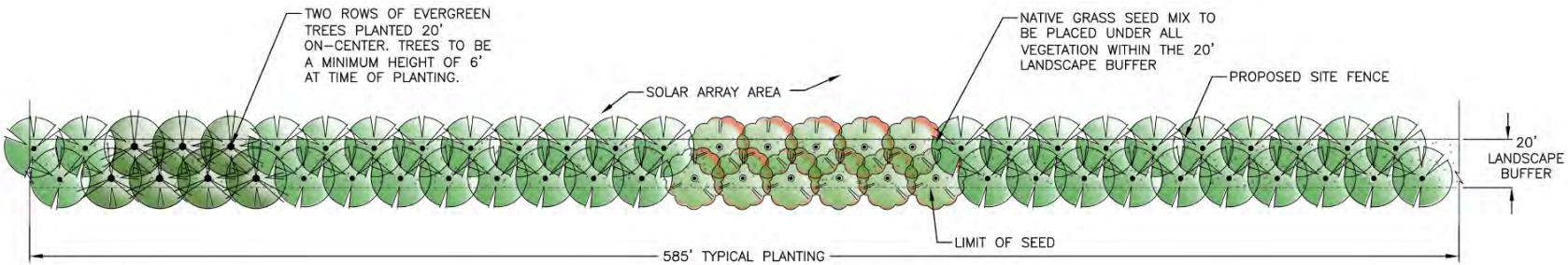
BOTANICAL NAME / COMMON NAME
ASTER LAEVIS / SMOOTH ASTER
BAPTISIA AUSTRALIS / BLUE FALSE INDIGO
BOUTELOUA CURTIPENDULA / SIDE OATS GRAMA
CASSIA FASCICULATA / PARTRIDGE PEA
COREOPSIS LANCEOLATA / LANCE LEAVED COREOPSIS
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LIATRIS SQUARROSA / BLAZING STAR
MONARDA FISTULOSA / BERGAMOT
PANICUM VIRGATUM / SWITCHGRASS
PARTHENIUM INTEGRIFOLIUM / WILD QUININE
RATIBIDA PINNATA / GREYHEADED CONEFLOWER
RUDBECKIA HIRTA / BLACKEYED SUSAN
SCHIZACHYRIUM SCOPARIUM / LITTLE BLUESTEM
SOLIDAGO RIGIDA / RIGID GOLDENROD
SOLIDAGO NEMORALIS / GRAY GOLDENROD
SPOROBOLUS COMPOSITUS / TALL DROPSEED
TRIDENS FLAVUS / PURPLE TOP



SEGMENT 3



SEGMENT 4



COUNTY OPTION

LANDSCAPE LEGEND

SYMBOL	BOTANICAL NAME COMMON NAME
	ILEX OPACA AMERICAN HOLLY
	JUNIPERUS VIRGINIANA EASTERN RED CEDAR
	PINUS ECHINATA SHORTLEAF PINE

NATIVE GRASS/POLLINATOR SEED MIX

BOTANICAL NAME / COMMON NAME
ASTER LAEVIS / SMOOTH ASTER
BAPTISIA AUSTRALIS / BLUE FALSE INDIGO
BOUTELOUA CURTIPENDULA / SIDE OATS GRAMA
CASSIA FASCICULATA / PARTRIDGE PEA
COREOPSIS LANCEOLATA / LANCE LEAVED COREOPSIS
DALEA CANDIDA / WHITE PRAIRIE CLOVER
DALEA PURPUREA / PURPLE PRAIRIE CLOVER
ERYNGIUM YUCCIFOLIUM / RATTLESNAKE MASTER
GAILLARDIA PULCHELLA / INDIAN BLANKET
HELIOPSIS HELIANTHOIDES / FALSE SUNFLOWER
LIATRIS SQUARROSA / BLAZING STAR
MONARDA FISTULOSA / BERGAMOT
PANICUM VIRGATUM / SWITCHGRASS
PARTHENIUM INTEGRIFOLIUM / WILD QUININE
RATIBIDA PINNATA / GREYHEADED CONEFLOWER
RUDBECKIA HIRTA / BLACKEYED SUSAN
SCHIZACHYRIUM SCOPARIUM / LITTLE BLUESTEM
SOLIDAGO RIGIDA / RIGID GOLDENROD
SOLIDAGO NEMORALIS / GRAY GOLDENROD
SPOROBOLUS COMPOSITUS / TALL DROPSEED
TRIDENS FLAVUS / PURPLE TOP



Viewshed

Pictures taken on an iPhone

- ▶ *Images are the view from the major road*
- ▶ *5 gallon at planting, pictures taken at year three.*

Construction - Typical 12 - Month Schedule

- ▶ *Internal roads serve to bring truck trips off the surrounding roads and onto internal circulation*

Table 2: Construction Phase Breakdown Including Duration and Equipment Inventory

Activity	Duration	Equipment	Quantity
Perimeter fence installation	1.5 months	Front-end loader with auger	1
		Pick-up truck	1
		Flatbed truck	1
Site preparation and clearing/grading	2 months	Water truck – 3 axles	3
		Grader	2
		Bulldozer	1
		Scraper	1
		10-ton roller	1
		Sheepsfoot roller	1
		Tractor (with mower attachment)	1
		Excavator	2
Underground work (trenching)	4 months	Sheepsfoot roller	1
		Water truck – 3 axles	1
		5 kW generator	1
		Soil mix rig	1
		4x4 forklift	1
		4x4 forklift	8
		Small crane (80 ton)	1
System installation	4.5 months	Pile driver	4
		Pick-up truck	4
		5 kW generator	2
		Pick-up truck	4
		Grader	1
Testing & commissioning, Site cleanup & restoration	1 month	Front-End loader	1

Construction - Stormwater Management

- ▶ Stormwater management plans will be prepared that meet or exceed the state's Kentucky Stormwater Management Program regulations for all regulated activities at all stages of construction, operation, and decommissioning.
- ▶ The Project will obtain a Kentucky Department of Environmental Protection Stormwater Construction General Permit (Permit) from the Kentucky DOW for construction projects that disturb 1 or more acres of land in compliance with the National Pollutant Discharge Elimination System (NPDES) of the Clean Water Act (CWA).
- ▶ The Kentucky Pollution Discharge Elimination System (KPDES) permit (KPDES No. KYR100000) is a General Permit for Stormwater Discharges Associated with Construction Activity.
- ▶ Hours of Operation: All construction activities will be limited to daylight hours between 7:00 a.m. to 9:00 p.m., and will not be conducted on Sundays unless it is necessary to make up for delays or to meet deadlines.
 - ▶ Construction workers may arrive on site prior to 7 a.m., but construction activities will not take place until that time.

Safety is Our Priority

As a trusted global leader in solar energy for more than 90 years, BayWa has developed safe operational standards to ensure the safety of every community we serve.

- ✓ BayWa works with businesses, installers, developers, utility providers, investors and governments throughout the world, and we are helping them to realize their renewable energy goals through our depth of knowledge and expertise.
- ✓ Fires caused by solar equipment are extremely rare, and BayWa complies with the National Electrical Code safety provisions to prevent such accidents.
- ✓ BayWa adheres to all manufacturers installation standards and obeys all local safety codes adopted by the communities we invest in.
- ✓ Firefighter safety has been addressed by several organizations including Underwriters Laboratories (UL), the Interstate Renewable Council (IREC) and the International Association of Firefighters (IAFF). Standards and training have been developed for all fire departments in responding to calls on or near solar installations.
- ✓ "In the solar industry, product standards serve to ensure safety and reliability of all components of a solar electric system. Product standards, plus conformity assessment procedures, ensure all products meet a minimum threshold of safety, performance, and reliability." - Solar Energy Industries Association



Thank you.