
Shoreham (Leavenworth)


Spotsylvania Solar

Pine Grove Solar

Madison County, KY

August 18th, 2022

Project Team

David Stimson
Development Manager

Madeleine Ray
Permitting Analyst

John Stewart
Land Acquisition Manager

Helen Humphreys
Stakeholder Relations Manager

Our Ask

→ Conditional Use Permit from Madison County for Pine Grove Solar

→ Project located on 6 parcels, all zoned agricultural

→ Fiscal court passed ordinance 20-17 in June of 2020 to allow for commercial solar energy facilities to be built as a conditional use on certain commercial and agriculturally zoned land

→ Asking for Board of Adjustments Approval on a CUP application for Pine Grove Solar

About AES

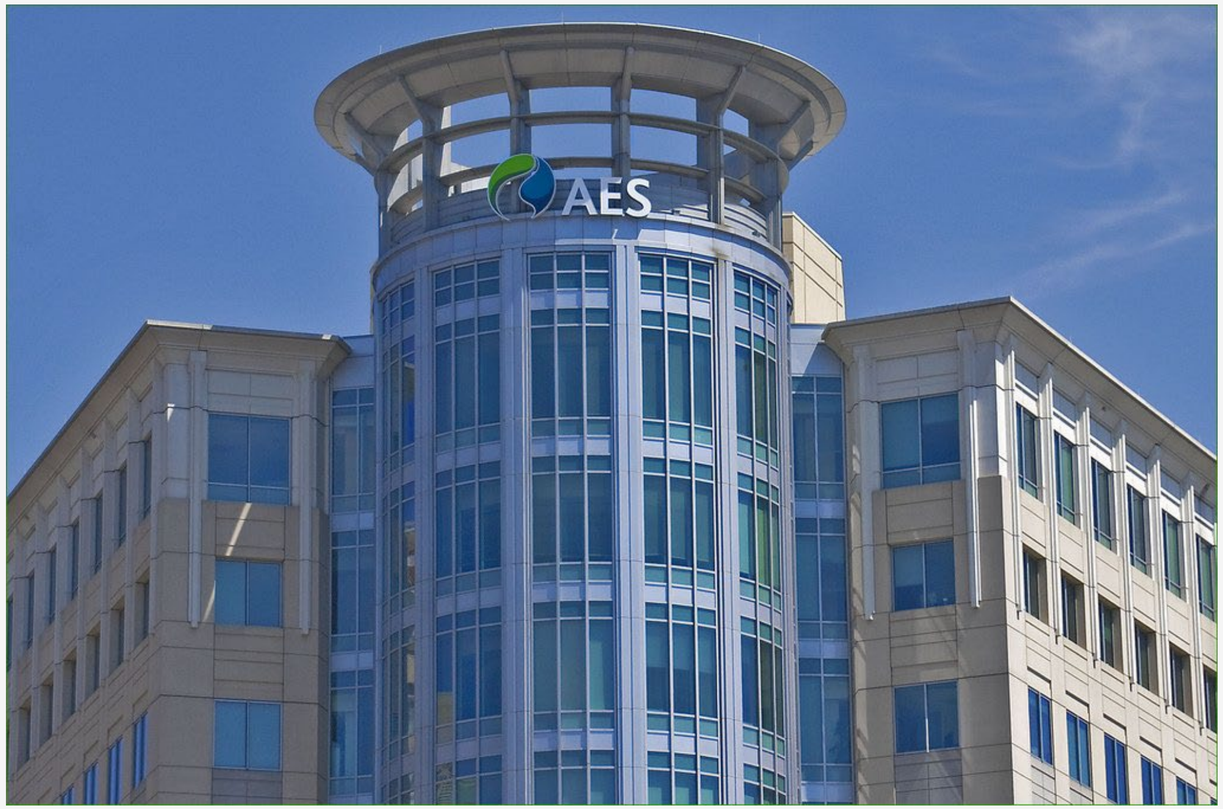
→ In business since 1981 (oldest IPP in the U.S.)

→ Headquartered in Arlington, VA

→ Building renewable energy projects since 2002

→ AES owns $33.0 Billion in global assets

→ $11.1 Billion in yearly revenue



* Data from AES Annual Report 2021

Clean Energy Portfolio

700+ Employees

400+ Renewable projects

21 States

4.5 GW
operating clean energy assets (solar, solar+ storage, wind, wind+storage)

40+ GW
clean energy projects in development

FLUENCE
A Siemens and AES Company

25
stand-alone energy storage or hybrid projects

3.6 GW
global energy storage portfolio (Fluence)

COMMUNITY ENERGY®

In December 2021, AES acquired Community Energy, a company with a 20-year track record of success in developing projects in the US, adding 10 GW to AES' renewable energy pipeline.

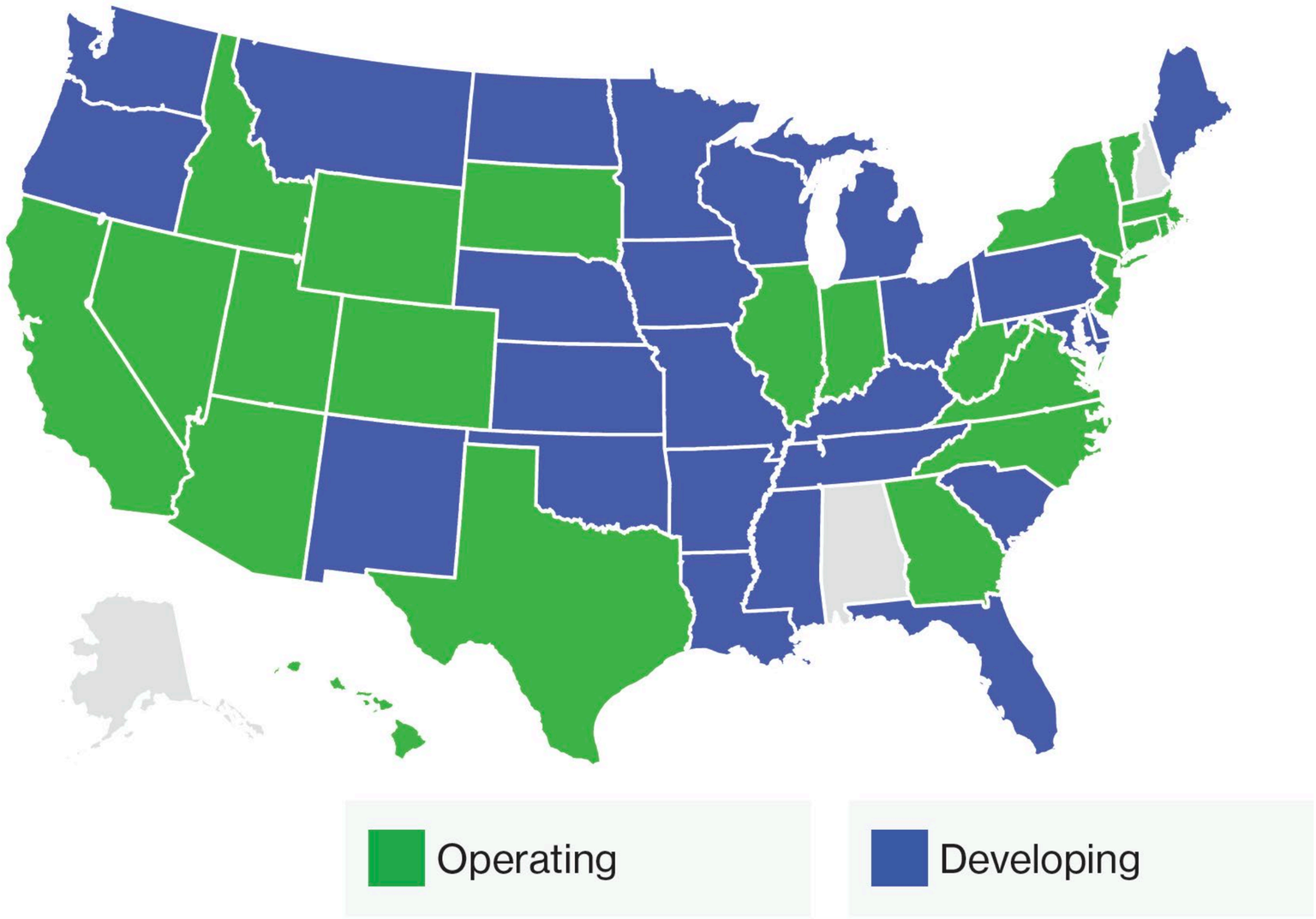
Bloomberg NEW ENERGY FINANCE

In 2021, “AES sold more clean energy to corporations than any other developer globally, at just under 3GW. Two thirds of this took place in the U.S.” -- *Bloomberg New Energy Finance’s “1H 2022 Corporate Energy Market Outlook” (Jan. 31, 2022)*

Clean energy operating and development footprint

4.5 GW Operating and Developing

40+ GW
Development pipeline



Other AES Projects

Skipjack Solar, VA

Elizabethtown Solar, PA

Antelope Valley, CA

Keystone Solar, PA

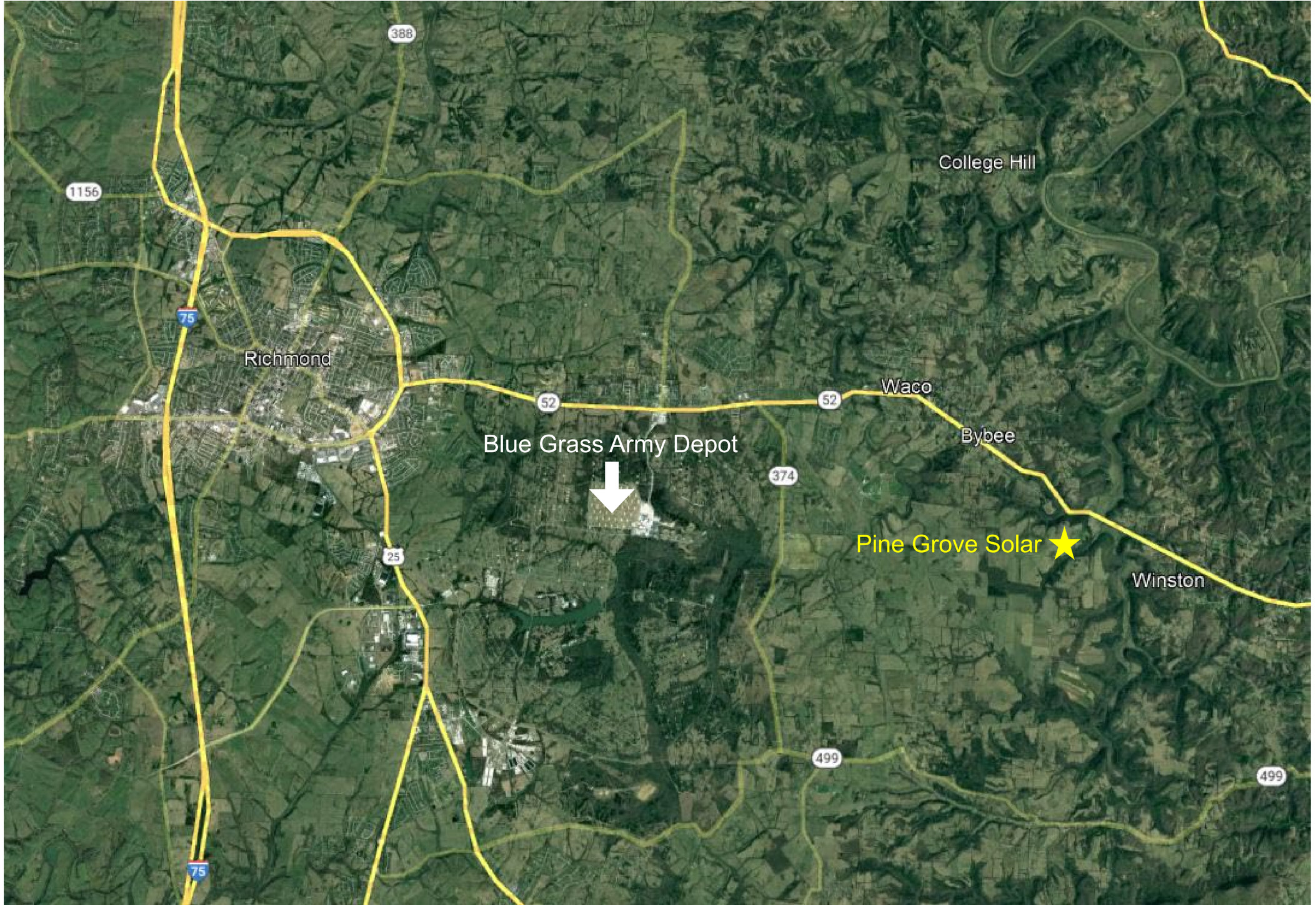
Why Madison County?

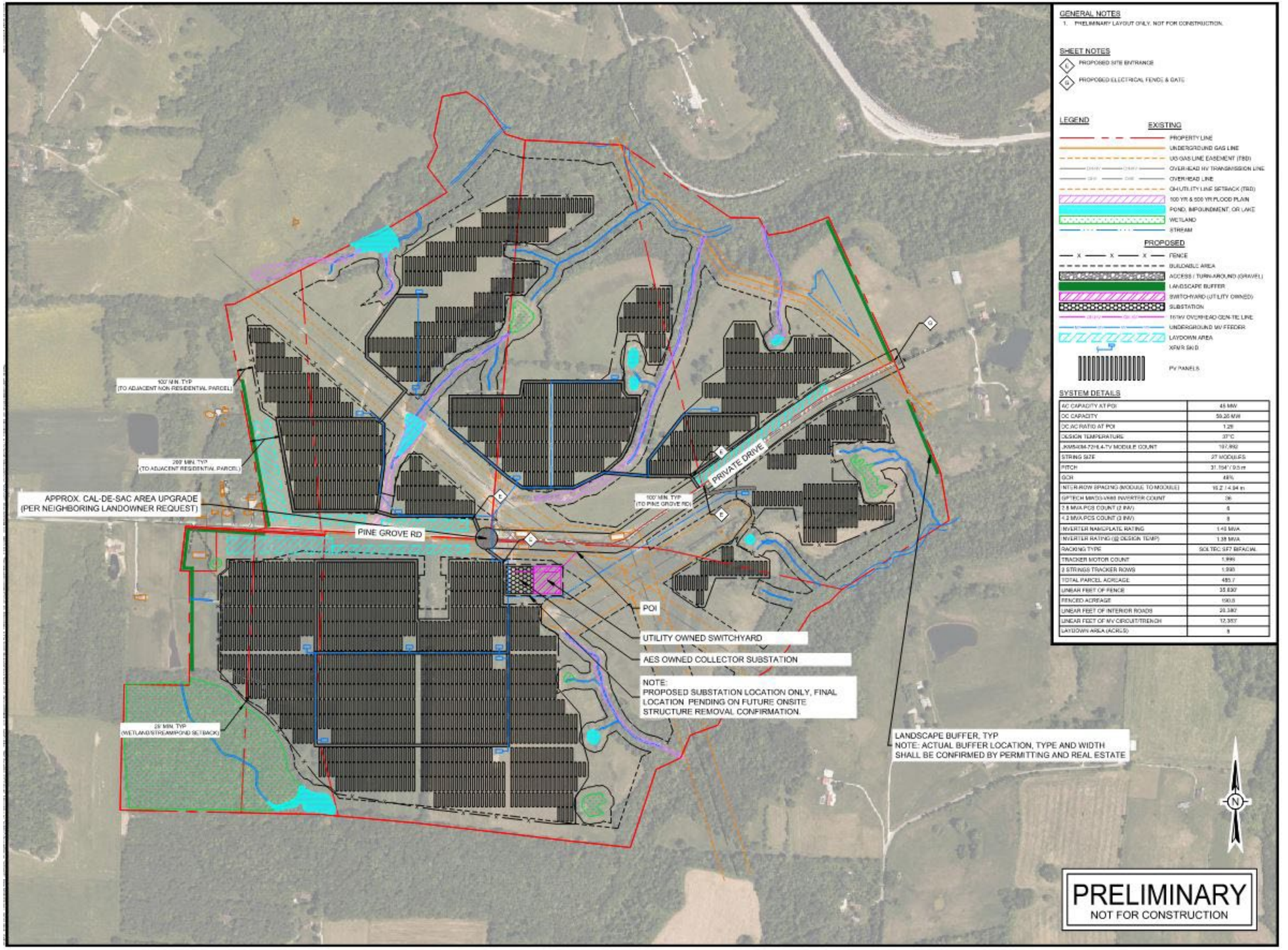
- → Proximity to existing electrical infrastructure
- → Abundance of suitable land for solar (relatively dry, flat, large parcel sizes)
- → Local commitment to economic development
- → Local labor force
- → Strong local solar resource
- → Increasing demand for clean energy from businesses, utilities, and co-ops


Madison County, KY

Pine Grove Solar Project Overview

- → Nameplate Capacity: 50 MW (enough energy to power over 15,000 homes every year)
- → Location: Madison County, KY. Nearest to the town of Bybee
- → Point of Interconnection: Kentucky Utilities 161 kV transmission line
- → Project Footprint: 484 acres total, about 220 acres with equipment (using only 45% of project area)
- → Expected Commercial Operation Date (COD): March 2025
- → Expected Life of Project: 35 years


388
College Hill
1156
75
Richmond
52
52
Waco
Bybee
Blue Grass Army Depot
374
Pine Grove Solar
25
Winston
499
499
75


GENERAL NOTES
1. PRELIMINARY LAYOUT ONLY. NOT FOR CONSTRUCTION.
SHEET NOTES
L PROPOSED SITE ENTRANCE
G PROPOSED ELECTRICAL FENCE & GATE
LEGEND
EXISTING
PROPERTY LINE
UNDERGROUND GAS LINE
US GAS LINE EASEMENT (TBD)
OVERHEAD HV TRANSMISSION LINE
OVERHEAD LINE
OH UTILITY LINE SETBACK (TBD)
100 YR & 500 YR FLOOD PLAIN
POND, IMPOUNDMENT, OR LAKE
WETLAND
STREAM
PROPOSED
FENCE
BUILDABLE AREA
ACCESS / TURN-AROUND (GRAVEL)
LANDSCAPE BUFFER
SWITCHYARD (UTILITY OWNED)
SUBSTATION
161kV OVERHEAD GEN-TIE LINE
UNDERGROUND MV FEEDER
LAYDOWN AREA
XFMR SKID
PV PANELS
SYSTEM DETAILS
AC CAPACITY AT POI 48 MW
DC CAPACITY 59.28 MW
DC AC RATIO AT POI 1.28
DESIGN TEMPERATURE 37°C
JKM540M-72HL4-TV MODULE COUNT 197,992
STRING SIZE 27 MODULES
PITCH 31.154' / 9.5 m
GCR 48%
INTER-ROW SPACING (MODULE TO MODULE) 15.2' / 4.64 m
SUNTECH MM75-VM8 INVERTER COUNT 96
2.5 MVA PCS COUNT (2 INV) 6
4.2 MVA PCS COUNT (3 INV) 8
INVERTER NAMEPLATE RATING 1.40 MVA
INVERTER RATING (@ DESIGN TEMP) 1.38 MVA
RACKING TYPE SOLTEC SF7 BIFACIAL
TRACKER MOTOR COUNT 1,999
STRINGS TRACKER ROWS 1,998
TOTAL PARCEL ACREAGE 485.7
LINEAR FEET OF FENCE 35,830
FENCED ACREAGE 190.6
LINEAR FEET OF INTERIOR ROADS 20,380
LINEAR FEET OF MV CIRCUIT/TRENCH 12,357
LAYDOWN AREA (ACRES) 8
100' MIN. TYP (TO ADJACENT NON RESIDENTIAL PARCEL)
200' MIN. TYP (TO ADJACENT RESIDENTIAL PARCEL)
APPROX. CAL-DE-SAC AREA UPGRADE (PER NEIGHBORING LANDOWNER REQUEST)
PINE GROVE RD
100' MIN. TYP (TO PINE GROVE RD)
PRIVATE DRIVE
POI
UTILITY OWNED SWITCHYARD
AES OWNED COLLECTOR SUBSTATION
NOTE:
PROPOSED SUBSTATION LOCATION ONLY, FINAL LOCATION PENDING ON FUTURE ONSITE STRUCTURE REMOVAL CONFIRMATION.
25' MIN. TYP (WETLAND/STREAM/POND SETBACK)
LANDSCAPE BUFFER, TYP
NOTE: ACTUAL BUFFER LOCATION, TYPE AND WIDTH SHALL BE CONFIRMED BY PERMITTING AND REAL ESTATE
N
PRELIMINARY
NOT FOR CONSTRUCTION

Setbacks and Landscaping

- → Project is located off of a partially private road (Pine Grove Road). Pine Grove Road is a dead-end road.
- → We have a GNA in place with the neighbors at the end of the road.
- → Requested Setbacks
  - → 100 ft from centerline of roads (Pine Grove Road only)
  - → 100 ft from adjacent non-participating properties
  - → 200 ft from any adjacent property that contains a residence
- → Requested Vegetation/Landscaping
  - → No gravel or bare areas underneath panels, must be native grasses
  - → Must have landscape screening around project perimeter <u>where it might be visible from roads or homes</u>

Landscaping Example

Newly Planted

10 Feet in Height

Full Maturity

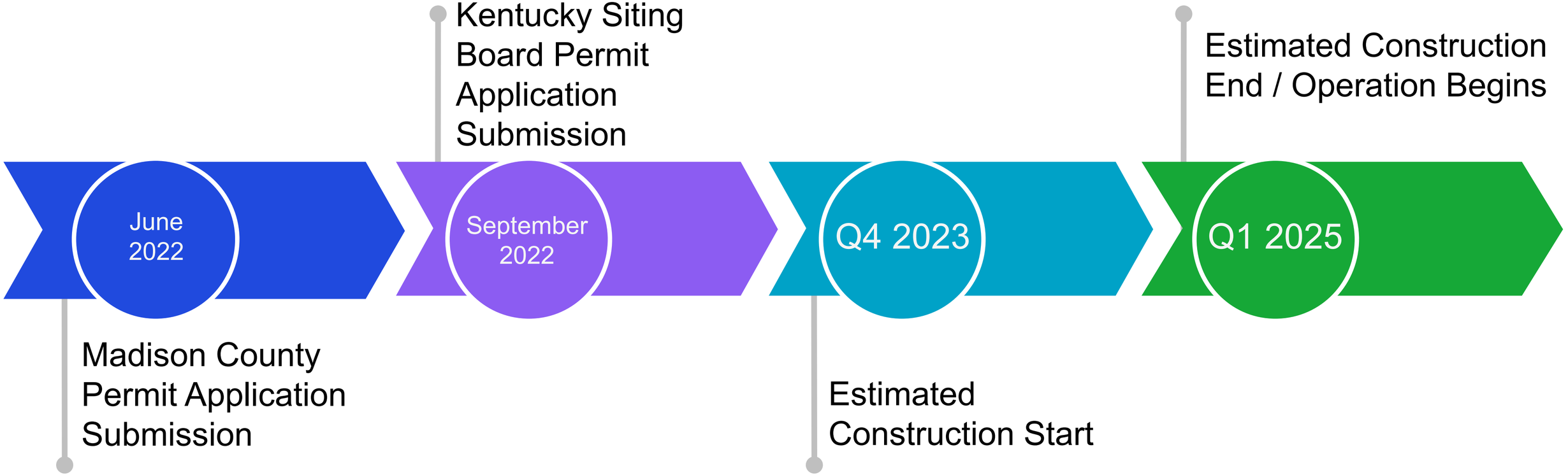
What to Expect

- → What will residents see and hear when the project is operational?
- → Solar panels about 15’ in height, low profile
- → Glare all but eliminated by anti-reflective coating on panels
- → Vegetation both underneath the panels and surrounding the project fence
- → Limited visibility of site based on location, no view of project from New Irvine Road, Bybee Loop Road, Dodd Road, or Brassfield Road
- → Will not affect local power prices $$$
- → Low hum from inverters inaudible off-site
- → Vast majority of noise on-site will be during the pile driving phase of the construction period, lasting only a few months
- → Useful life of 35 years, AES will be responsible for removal of equipment and likely post decommissioning bond with the County

Conservation

- → Establishing vegetation onsite is vitally important to proper stormwater management. Native grasses will slow down any runoff from the site and capture any sediment that may become suspended in the runoff
- → This project harvests minimal trees and keeps the vast majority of existing trees on the property in place
- → Cultural, Threatened & Endangered Species, and Wetlands studies all completed and identified no red flags for the project site
- → Tree buffer provides habitat for birds and other species
- → Minimal grading and wetland impacts anticipated for this project
- → Stewardship of the land: AES commits to returning the land to the condition it was the day we walked onto it

Expected Project Timeline



Economic Benefits

- → $70 million in capital investment
- → $5.97 million in property tax over 35 years of operation to Madison County
- → Project does not require additional County or City services, so no pressure on local services/resources
- → 108+ jobs during construction
- → $8.6 million in annual wages during construction
- → 2 full time jobs after construction, during operations
- → Supporting local businesses including restaurants, food trucks, construction equipment, building materials and lodging

Operations Overview

Remote monitoring

→ 24-7 / 365 days a year remote monitoring

→ Supervisory control and data acquisition (SCADA) system

Maintenance

→ Minimal annual maintenance will be required

→ AES will regularly inspect project site to ensure all components are operating properly

→ AES construction and operations team will be on-call in the event of a maintenance issue

→ AES typically contracts with a local landscaping company to provide services including any vegetative buffers to assist with viewshed

Security

→ Project sites will be fenced off with strict, electronically controlled security access gates

→ Securely installed enclosed electrical equipment will be on-site

→ Local fire & rescue will have access to the site as needed

Community
engagement & outreach

→ AES is committed to strengthening positive impact through mutually beneficial partnerships in the communities where we work

→ Our focus pillars include the following:

- Partnering for access to safe, efficient, and affordable energy and basic services
- Partnering for Inclusive Economic Growth & Education
- Partnering for the Environment
- Partnering for Community Health & Well-Being

→ For more information, please contact KYPineGroveSolar@aes.com

Pine Grove Solar Contact Info

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