

Large-Scale Solar in Kentucky— What You Need To Know

A Primer for Local Officials

Any views expressed in this presentation are those of the presenter and do not reflect official positions of the Public Service Commission or the Electric Generation and Transmission Siting Board

Key Terms

- MW= Megawatt
 - How much electricity can be produced by a facility
 - 1 Megawatt can power about 750 homes
 - Approximate acreage needed per 1 MW—5 to 10 acres
- Merchant Generator= generation facility not owned by a utility
- Industrial Revenue Bonds (IRBs)=issued by state and local governments to finance industrial facilities as defined by KRS 103.200. Solar farms qualify.
- Decommissioning= Returning land back to its original condition, regardless of depth, except for major moved earth and roads
- Kentucky State Board on Electric Generation and Transmission Siting= Siting Board

Solar Generation—Why Such Interest in Kentucky at This Time?

- Declining costs of solar panels and increasing demand for renewable energy.
- Solar facility can be used to serve Ky. entities or out of state entities/markets.
- For out of state, the facilities can serve specific customers or specific utilities, or no one in particular.
- Merchant generators in Kentucky have multiple markets/grids
 - KU/LG&E (including municipalities)
 - TVA (to the South)
 - PJM (to the North and East)
 - MISO(to the West)

The Siting Board

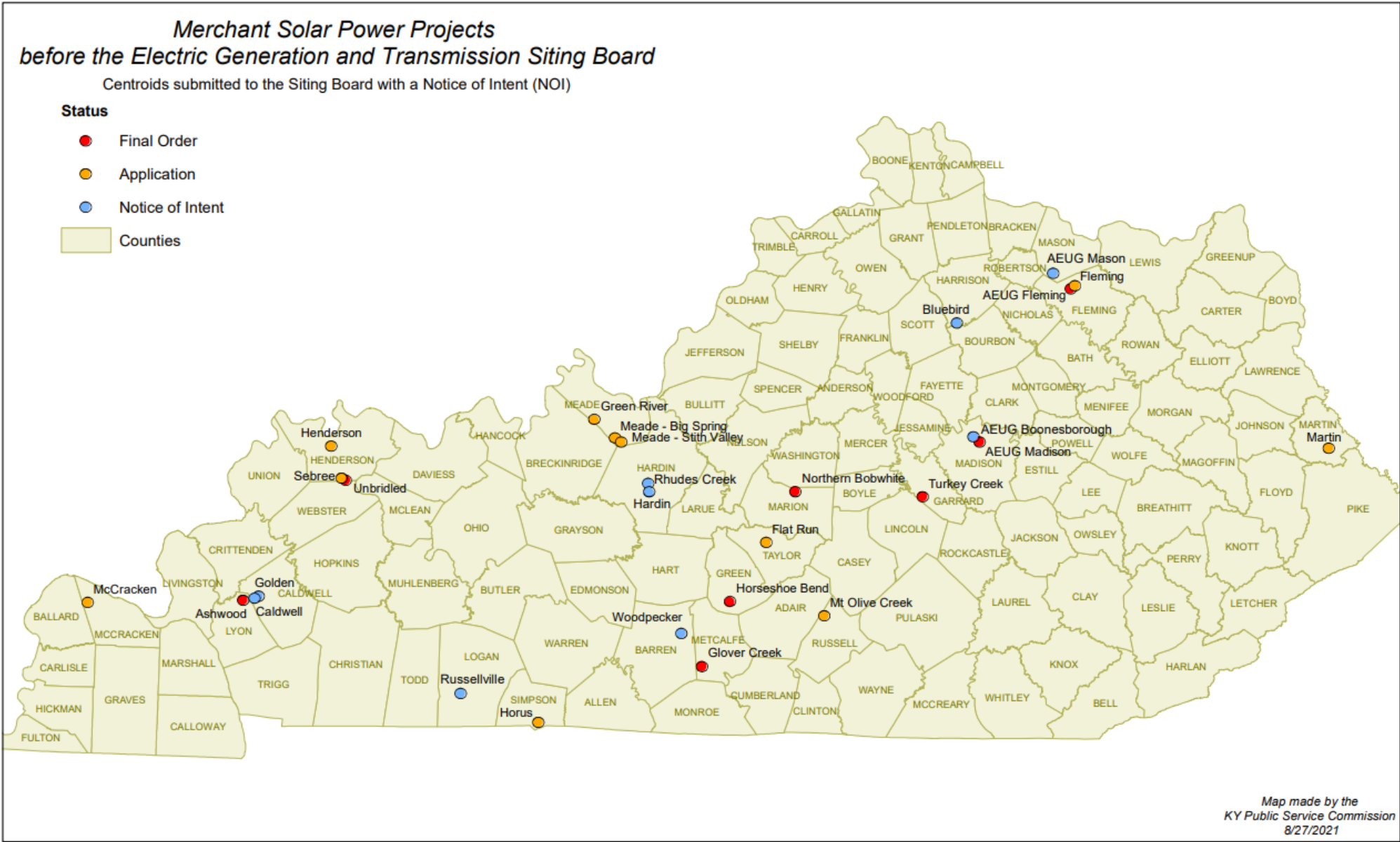
- Created in 2002 with very few changes since
- Reviews applications and grants certificates if approved for the construction of electric generating facilities (i.e., merchant generators) greater than 10 MW and transmission lines from entities not regulated by the PSC.
- Review focuses on such factors as noise and visual impacts; economic impacts; and potential impact on transmission lines within the state.
- Attached to the PSC and staffed by PSC staff
- Operations are funded through fees paid by applicants

Siting Board Members

- Three members of the PSC
- Secretary of the Energy and Environment Cabinet or a designee/proxy
- Secretary of the Cabinet for Econ. Development or a designee/proxy
- Two local members, with one appointed by the Governor to serve for a specific case
 - Ordinarily Judge/Executive or chair of P & Z is one member

Each project has a distinct Siting Board because the local ad hoc members vary.

Current & Approved Solar Projects as of August '21



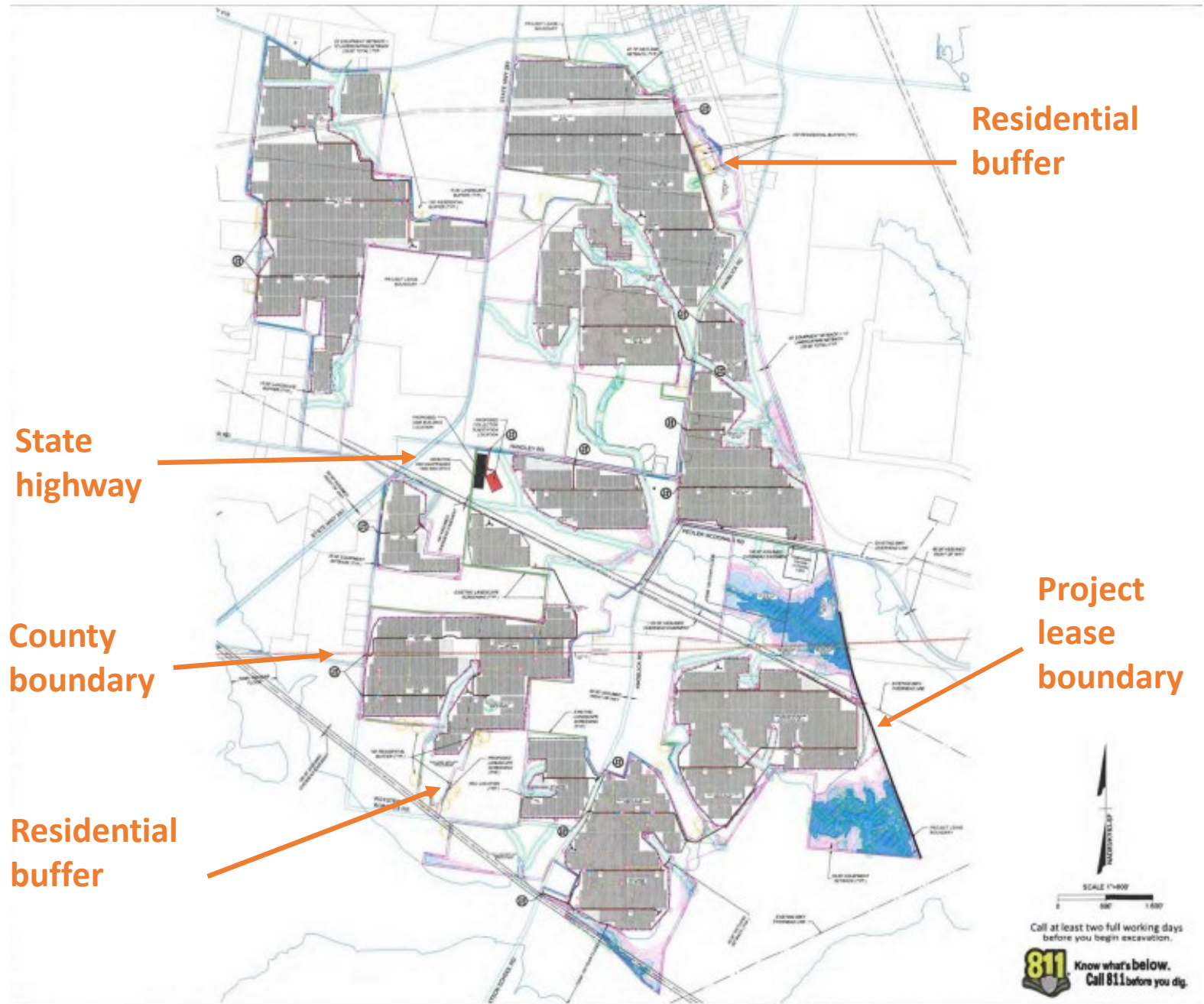
Solar Facility Siting

- Site identification by the project developer—occurs before developer files a Notice of Intent with the Siting Board
 - Contact with landowners for leasing
 - Interconnection studies
- What are developers looking for?
 - Suitable land, sufficient contiguous acreage, access to transmission with sufficient capacity for interconnection, topography, etc.
- Permitting assessments (such as state or federal environmental permits)—often occur prior to filing NOI.

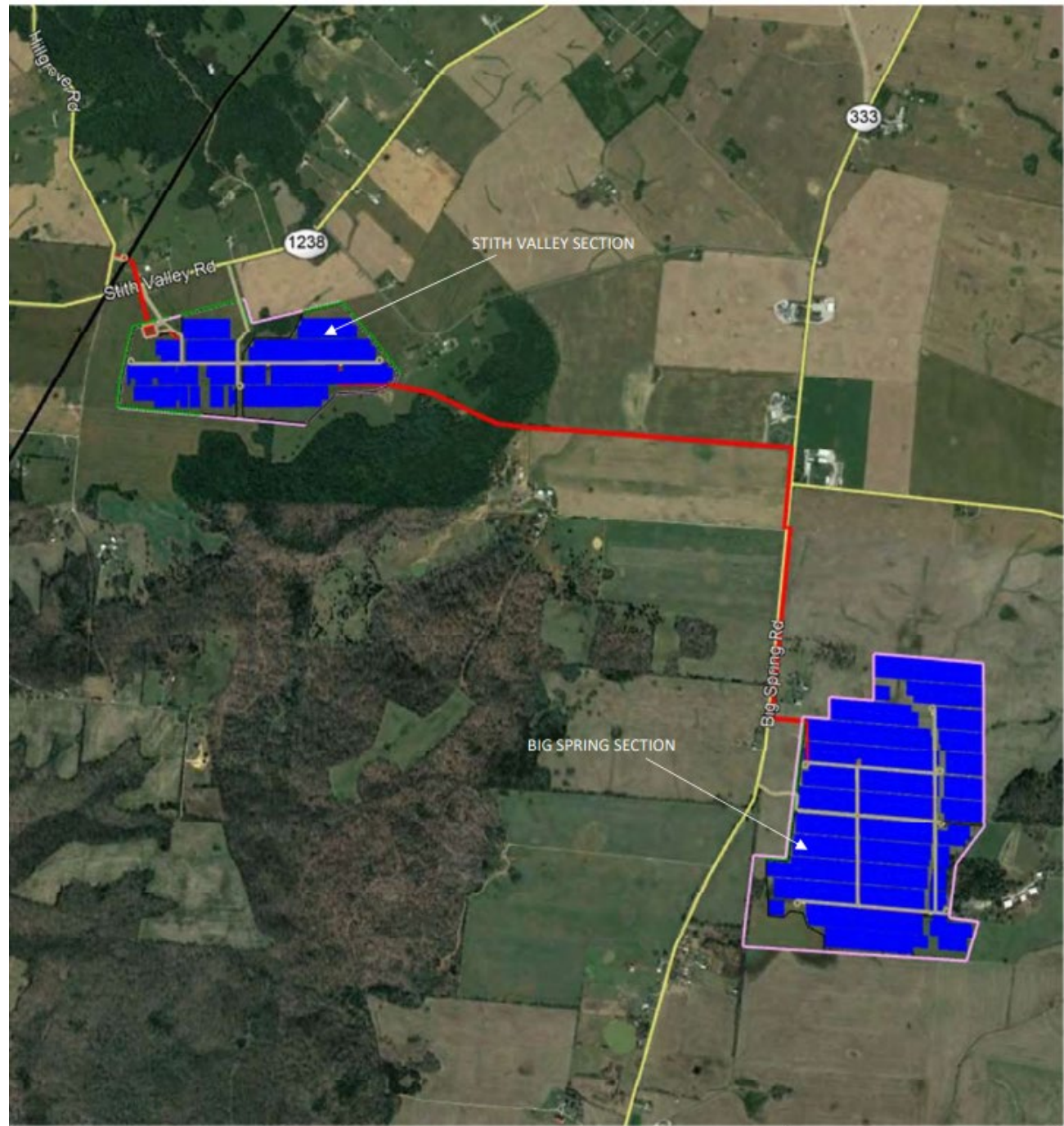
Things you will likely hear about before Siting Board does.

- Industrial Revenue Bonds
 - With PILOT agreements
- Planning & Zoning—overrides State Siting Board authority on certain issues:
 - Setbacks
 - Work hours
 - Decommissioning
- Traffic agreements with a county (are you discussing with county road department?)

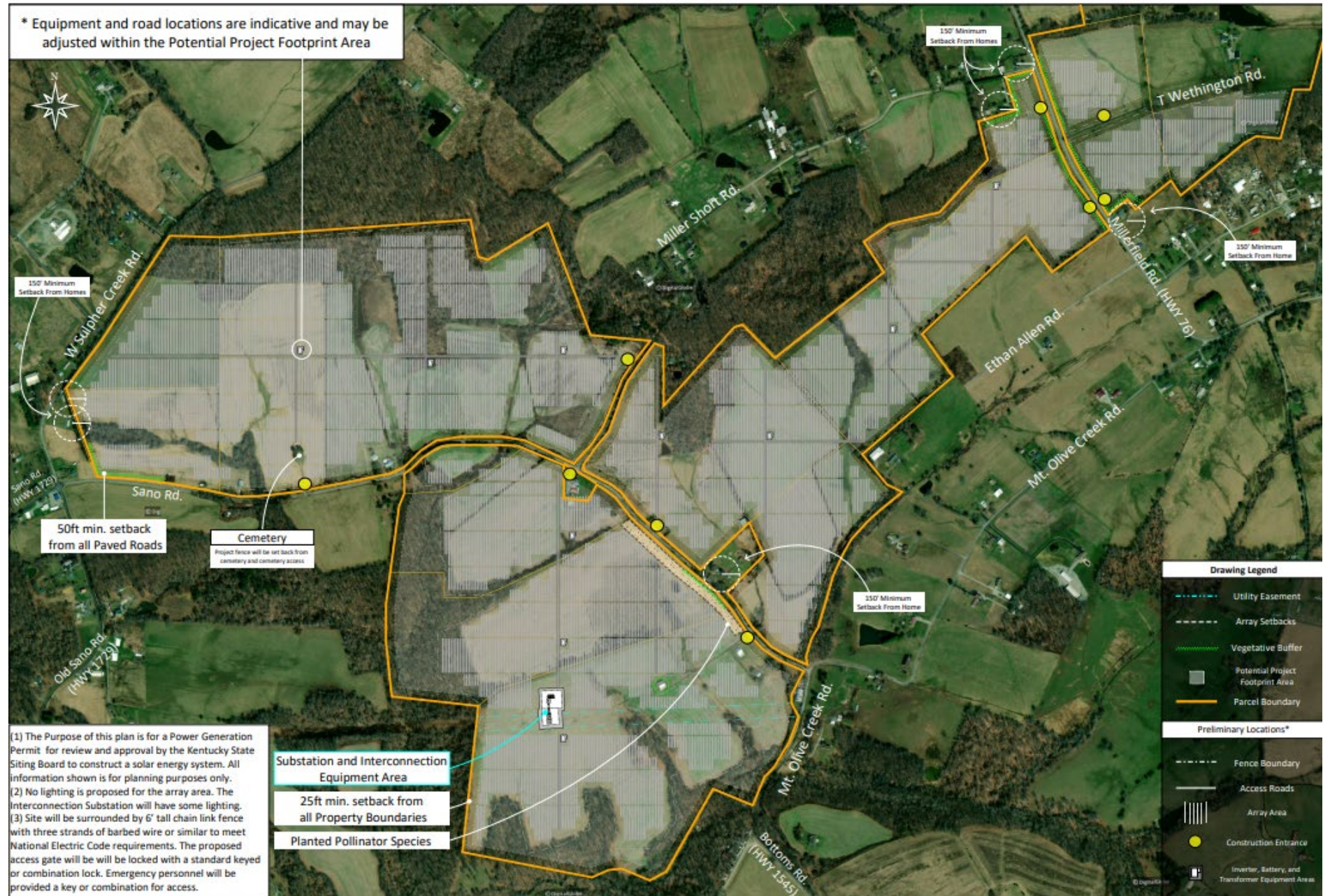
- Unbridled Solar (2020-00242)
- Webster and Henderson counties
- 160 MW facility
- 1600 acres



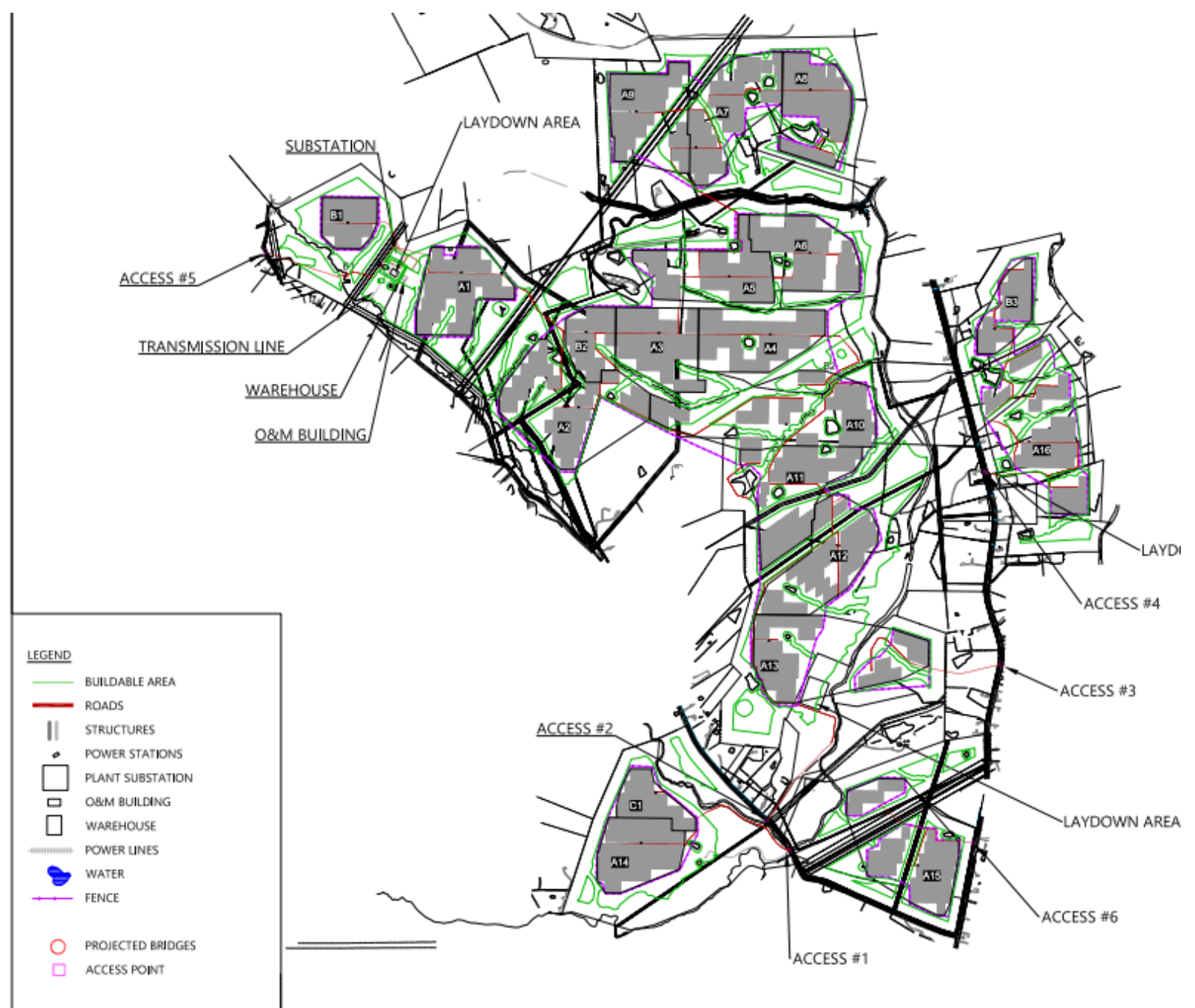
- **Meade County Solar (2020-00390)**
- **Meade County—2 locations**
- **Connected by underground transmission**
- **40 MW facility**
- **370 acres**



- Mt. Olive Creek (2020-00226)
- Russell County
- 60 MW facility
- 475 acres



- AEUG Madison (2020-00219)
- Madison County
- 100 MW facility
- 1,770 acres



Siting Board Process- Before filing application

- 90 days before application is filed, applicant must conduct local public meeting:
 - Public notice 2 weeks before local public meeting, at a minimum, must be provided to:
 - General public via newspaper
 - Bordering landowners by mail
 - Additional public involvement program activities via other media coverage, direct mailing, fliers, newsletter, additional public meeting, etc. can be conducted
- At least 30 days before application, applicant must file notice with PSC/Siting Board with pertinent information, such as the site location and whether P&Z applies.
- 30 days before application, applicant must provide public notice of the location and a general description of the project to:
 - General public (in newspaper)
 - Bordering landowners

Notice of Intent

- Developer submits Notice of Intent at least 30 days before submitting an application.
 - NOI is made public by the applicant
 - Includes brief description of the proposed facility and its location:

b. The proposed construction is briefly described as follows:

The Horseshoe Bend Project will consist of approximately 550 acres of solar photovoltaic panels and associated racking (approximately 60MW), 15 inverters, decoupled battery storage which will be co-located at each inverter, and a project substation transformer which will connect to East Kentucky Power Cooperative's Green County – Summer Shade 161kv transmission line near the community of Exie in Green County, Kentucky

- c. The street address of the proposed Horseshoe Bend Project is 1648 Ky 218, Greensburg, KY 42743 and the latitude and longitude are 37°9'58.06"N, 85°34'14.65"W. The Horseshoe Bend Project is not located within the limits of any city.
- d. There is no planning or zoning commission with jurisdiction over the site.
- e. There are no local set-back requirements applicable to this site.
- f. Pursuant to KRS 278.704(4), the applicant will request a deviation from the setback requirements found in KRS 278.704(2).

Example
from an
NOI



Application For Construction Certificate

- Must include:
 - Evidence that public notice of application has been made
 - A report on public involvement activities conducted by the applicant
 - The Site Assessment Report—detailed description of the project and a thorough analysis of the impacts (visual, traffic, property values, etc) to be considered by the Siting Board; average SAR is several hundred pages.
 - A statement of compliance with any local zoning regulations and noise control regulations
 - An analysis of the effects of the proposed facility on the electric transmission grid.
 - An analysis of the economic impacts of the proposed facility
 - Disclosure of past environmental violations by the applicants

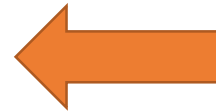
Application

Contents

1. Applicant Information
2. Description of Proposed Site
3. Public Notice Evidence
4. Compliance with Local Ordinances and Regulations
5. Setback Requirements
6. Public Notice Report
7. Efforts to locate near Existing Electric Generation
8. Proof of Service to County and Municipality Officials
9. Effect on Kentucky Electricity Generation System
10. Effect on Local and Regional Economies
11. Record of Environmental Violations
12. Site Assessment Report

Attachments

- A. Context Map
- B. Proof of Notice of Application
- C. Letter from Green County Judge Executive John Frank
- D. Certificate of Compliance
- E. Public Involvement Activities
- F. Public Meeting Documentation
- G. Horseshoe Bend Feasibility Study Report
- H. Horseshoe Bend System Impact Study Report
- I. Economic Report
- J. Site Assessment Report
- K. Horseshoe Bend Solar, LLC Certificate of Authority



Example from an
application

Siting Board Process- After filing application

- Ad hoc members are placed on the Siting Board for that project
 - Local member appointed by Governor
 - Statutory member (planning and zoning chair, Judge/Executive, mayor, etc.) provided notice by Siting Board staff
- Application fee filed (\$1,000 per megawatt, with min. \$40,000 and maximum \$200,000)
- Procedural schedule entered allowing for:
 - Deadline for motions to intervene
 - Two rounds of discovery
 - Date for the Siting Board consultant's report to be filed
 - Applicant's response to consultant's report
 - Evidentiary Hearing
- By statute, Siting Board has 120 days to render a final order, or 180 days after application is filed if an evidentiary hearing is held.

Siting Board Considerations Include

- Site suitability
- Scenic compatibility
- Traffic
- Economic impact
- Property values
- Local environmental impact
- Applicant's history of environmental compliance

PJM Interconnection Queue—snapshot

Queue/OASIS ID		Name		State	Status	Transmission Owner	MFO	MW Energy	MW Capacity	MW In Service	Project Type	Fuel
<input type="text" value="Search"/>		<input type="text" value="Search"/>				<input type="text" value="Search"/>						<input type="text" value="Solar"/>
AC1-074	Jacksonville-Renaker 138kV I	KY	Engineering and Procurement	EKPC	80	80	56	1	GI			
AC2-075	Jacksonville-Renaker 138 kV	KY	Engineering and Procurement	EKPC	100	20	13.3		GI			
AE1-143	Marion County 161 kV	KY	Engineering and Procurement	EKPC	96	96	64.163		GI			
AE2-254	Garrard County-Tommy-Gooch 69 kV	KY	Engineering and Procurement	EKPC	50	50	30		GI			
AC1-101	Johns Creek-Excel 138kV I	KY	Active	AEP	50	50	19		GI			
AC1-102	Johns Creek-Excel 138kV II	KY	Active	AEP	50	50	19		GI			
AD2-048	Cynthia-Headquarters 69 kV	KY	Active	EKPC	70	70	46.7		GI			
AE1-144	Goddard-Plumville 138 kV	KY	Active	EKPC	120	120	80.2		GI			
AE1-246	Barren County-Summer Shade 161 kV	KY	Active	EKPC	120	120	80.7		GI			
AE2-038	Goddard-Plumville 138 kV II	KY	Active	EKPC	200	80	53.5		GI			
AE2-071	Patton Rd-Summer Shade 69 kV	KY	Active	EKPC	35	35	21		GI			

Dozens of potential projects in the interconnection queue. Many/most will not be developed for various reasons; MISO has similar queue

Decisions to Date

- The Siting Boards have required the following (not exhaustive list):
 - Compliance with planning & zoning (setbacks of P & Z prevail over statutory setbacks)
 - Decommissioning plan and bond
 - Traffic management plan; transportation agreements
 - Construction hour limits – 8:00 am to 6:00 pm Monday – Saturday
 - Compliance with FAA if applicable
 - Noise control measures
 - Vegetative buffers
 - Notification to adjoining residents and business regarding construction plan
 - Customer Resolution Program