

An aerial photograph of a white wind turbine is the central focus, set against a background of a wood-grain pattern. The image is split diagonally: the upper-left portion is a vibrant yellow, and the lower-right portion is a deep blue. The turbine's three blades are visible, with one pointing towards the top right and another towards the bottom right. The wood-grain pattern consists of concentric, wavy lines that create a sense of depth and texture.

BrightNight
Ragland Solar Project
Open House Materials

PROJECT DILIGENCE OVERVIEW

Solar facilities are subject to extensive diligence and oversight from federal, state, and local agencies, requiring many studies and plans to create the best project possible for host communities.

Diligence underway or soon to begin:

- Wetland and waterbody delineation
- Protected species habitat assessment
- Phase I environmental site assessment
- Cultural resources assessment
- Traffic impact study
- Economic impact assessment
- Erosion and sediment control plan
- Property value assessment
- Noise evaluation
- Visual simulations
- Landscaping schematics
- Glare study
- FAA hazard determination review
- Decommissioning plan

KENTUCKY SITING BOARD PROCESS

BrightNight is working with a team of consultants to complete studies and prepare an application for a Construction Certificate (KRS 278.700-718).

The Kentucky Siting Board (KSB), which will include two appointed McCracken County residents, will use their own consultants in review of the application. The KSB process is designed to include public participation throughout.

An evidentiary hearing will be held prior to the KSB decision, which includes sworn expert testimony.

The KSB review focuses on three areas:

1. Impact to surrounding community;
2. Economic impacts; and
3. Impact onto the electric transmission grid.



PHASES OF CONSTRUCTION

Phase 1:

Site Prep
3-4 months

Key developments

- Minor site grading
- Tree clearing as needed
- Soil erosion mitigation
- Equipment delivery
- Perimeter fencing
- Install project access roads

What to expect

- Temporary traffic
- Use of machinery limited to daytime hours

Phase 2:

Racking
Installation
2-3 months

Key developments

- Equipment delivery
- Rows of posts placed in the ground over the project area
- Install mechanism to move solar panels
- Begin installing electrical equipment

What to expect

- Equipment delivery vehicles
- Some machine noise while posts are installed

Phase 3:

Panel
Installation
2-3 months

Key developments

- Panels are installed on racking by construction crew

What to expect

- Project will begin to take shape
- Majority of construction noise complete from this phase forward

Phase 4:

Electrical Install
2-3 months

Key developments

- Lay cabling in trenching
- Connect cabling

What to expect

- Electric crews onsite for installation
- De-mobilization of large construction equipment

Phase 5:

Final Testing &
Landscaping
2 months

Key developments

- ~3,300 trees to be planted post construction
- Inspections of installed equipment
- Power testing
- Site safety testing and training

What to expect

- Inspection crews
- Plant begins operating

Construction Equipment

Site Prep



Racking Installation



Panel Installation



Electrical Install



Final Testing &
Landscaping



Photos selected from similar projects

COLLECTING AND TRANSPORTING THE ELECTRICITY

- One central inverter for every 38 acres will be placed to convert the solar energy to the type of electricity used on the grid
- Monitored remotely for safety and performance
- Inverters will be placed at the interior of the project so that the humming sound will not be detected beyond the project perimeter
- Inverters will only operate during the day



WHAT IS SOLAR PROJECT DUAL-USE?

Dual-use is the co-location of solar projects with agricultural or non-conventional soil and vegetation management applications that help to make the most of solar project land

Benefits

- Lower vegetation management costs with no change in design
- Additional local job creation
- Less damage to equipment compared to traditional mowing
- Better soil quality compared to standard grass and mowing
- Land remains in agricultural use for life of the project
- Quieter than mowing
- Lower greenhouse gas emissions because of reduced mowing and locally sourced products
- Higher yields on neighboring agricultural land
- Creates a more beautiful project

Sheep Grazing



Pollinator Habitat



Apiaries



Anatomy of a solar project

Panels and posts are safe for the environment. Their placement on land does not result in soil or water contamination

Agricultural land at rest during the life of a solar project **provides regenerative soil benefits**

At the end of a project's life, the project is removed; and **99% of the project materials will be recycled**

Solar panels

8-10 ft panel height

Mechanism that slowly tilts panels to follow the sun

Solar panel surface area does not cause rainwater pooling

Traditional ground mount installation

No concrete

GROUND LEVEL

10 ft into the ground

Agrivoltaics is the combination of farming and solar. Sheep grazing around solar projects is a great way to keep valuable farmland at work

Leased site selected for the project. Provides valuable income to local landowners



Quiet operation



No odor or emissions



Monitored remotely with only occasional site visits



Panels are designed to absorb the sun, not reflect it. A glare study is conducted to ensure minimal impact

SIMULATION | PICTURED ON FLAT TERRAIN

Anatomy of a substation

Image is a typical example of a substation for a 100-150 MW project.

Lightning Protection

Secure parameter fencing

Controls Building

Vegetative screening

Underground power line

SIMULATION | PICTURED ON FLAT TERRAIN

What will you see from your home?

- Project setback: 500 ft from nearest property
- Vegetation at planting



SIMULATION | PICTURED ON FLAT TERRAIN

What will you see from the road?

- Project setback: **150 ft from nearest road**
- **Vegetation at planting**



SIMULATION | PICTURED ON FLAT TERRAIN