## **SOLAR PROJECT OPERATIONS**

# **Protecting the Land**



### Solar Panel Safety

- Clearway requires all solar panels undergo testing to ensure they cannot impact soil quality or leach anything into the environment
- Rigorous testing is performed to confirm solar panels can withstand wind and hail impacts
- Solar cells are made from sand and all materials in cells are encased in glass and plastic layers that prevent leaching
- During operations, weather is monitored so solar panels can be tilted to minimize hail or wind damage
- If any damage occurs, equipment is promptly replaced by trained professionals and recycled

### Protecting Soil & Water

- Areas around and below solar panels will be planted with deep-rooted grasses and sedges supporting improved drainage and soil health
- Sites can support low-impact grazing by sheep
- Low-intensity use allows soil to rest and reduces runoff and erosion
- Protects the land from permanent development such as subdivisions and urban sprawl

#### Wildlife Coordination

- Wildlife studies will be completed to understand potential project impacts and identify any species of concern
- Ground-based surveys catalog sensitive habitat areas to exclude from development
- Direct coordination is established with the U.S. Fish and Wildlife Service & the Kentucky Department of Fish & Wildlife
- Clearway implements best management practices in all projects including:
  - \*Limiting encroachment into wetlands and waters
  - \*Timing tree removal to avoid impacts to bats







## **SOLAR PROJECT DECOMMISSIONING**

## Returning the Land to its Prior Use









### **Requirements and Process**

- Decommissioning is required by state law and by our agreements with landowners
- We must remove all equipment and restore the site to its prior condition at the end of the project's life
- To permit the project, we must provide a detailed decommissioning plan, prepared by a registered engineer
- If the project ceases to generate energy for 12 months, it must be decommissioned

### **Financial Guarantee**

- Clearway must provide a financial security at the start of construction, controlled by the Kentucky Energy & Environment Cabinet, that will cover all costs of decommissioning
- Like an insurance policy, this guarantees the project will be decommissioned even if Clearway fails to do so
- Decommissioning costs are reviewed and updated by a third party every five years throughout the project's life

### **Recycling and Reuse**

- The majority of the components of a solar project, including the solar panels, are recyclable
- Clearway works with companies that recycle solar equipment so materials from projects are recovered and recused
- These steps help prevent solar equipment from ending up in landfills, and help conserve solar panel materials like glass and aluminum

# **SOLAR PROJECT OPERATIONS**

# Keeping Safety at the Forefront



#### Sound

Solar projects create virtually no noise.

Inverters emit a low hum between 60-70 decibels measured at 3 feet however, sound dissipates very quickly over distance.

At ~150 feet, inverter noise is at/below background noise.

There is no noise from a solar project at night.

The project will conduct a sound study as part of the permit process.

#### Fire

Fire at solar projects is very rare.

Clearway develops site-specific emergency plans for every project in coordination with local authorities and conducts trainings with local emergency responders.

Panels are encapsulated with the same shatter resistant material as windshields and hurricane windows.

Projects are monitored 24/7, to allow immediate response to any issues.

#### **EMF**

Electromagnetic radiation occurs with all electrical circuits; small amounts surround us every day.

Any EM radiation comes from inverters which convert direct current to alternating current.

EM radiation degrades very quickly; 150 feet from inverters, EM radiation degrades to a level below ambient level of EMF.

