

PERMIT APPLICATION FOR GIBSON SOLAR LLC (“PROJECT”)

Project Summary – Section 5(a)

Project Location

The Project is located within Patoka and Union Townships in Gibson County, Indiana. The Project’s collector substation and the approximate geographic center of the Project area is located at a latitude of 38.320339°N and a longitude of 87.533564°W. Please refer to the Site Plan for a more detailed view of the Project’s location. It is noted that the Project Permit Application includes land within the 2-mile zoning jurisdiction of the City of Princeton for which siting approval is not being sought from Gibson County, see Exhibit A – Jurisdiction Map. The entirety of the Project was included in the Project Permit Application to provide Gibson County with a complete understanding of the Project.

Size of Project Area in Acres

The amount of participating properties under option for leasing, land purchases and for transmission easements is approximately 3,872 acres as outlined in the Site Plan. The area occupied within the Project’s fences is approximately 2,720 acres. The solar modules will be mounted on single-axis tracker tables and are anticipated to cover approximately 770 acres, or 35.0% ground within the array areas when positioned horizontally. This will leave roughly 1,950 acres of open space within the fence. Vegetation will be planted with the intent of controlling soil erosion within the perimeter fencing.

Project Description

The Project will be a photo voltaic (PV) solar energy conversion system. There will be approximately 59 separate regions or “blocks of solar panels”. The size of the blocks will vary based on the size of the contiguous land suitable for development and the physical constraints separating the various blocks as shown on the Site Plan. The largest block has an approximate size of 197 acres. The horizontal single axis tracing structures will have a maximum height of Twelve (12) feet in the maximum tilt position. The Project will have one (1) collector substation which will be located near the intersection of County Road 175 and County Road 250 S. The Project will have one main temporary laydown yard approximately 10-acres in size and approximately five other temporary staging areas throughout the Project Area to facilitate the construction of the Project. The temporary laydown areas will be covered with a geotextile fabric and aggregate to provide all-weather access. The main laydown yard will also include construction trailers for the construction staff as well as restrooms, parking and other equipment storage. The temporary laydown areas will be removed and restored at the end of construction. The Project will also have an operations and maintenance (“O&M”) building co-located near the Project’s collector substation. The O&M building will be used to conduct maintenance and repair of Project equipment and solar module components. It will also include warehouse space to store parts, equipment and operation and maintenance supplies. The O&M building will also house the Supervisory Control and Data Acquisition (SCADA) system that will monitor and control the Project facilities.

Generating Capacity

The Project will have an approximate total name plate generating capacity of Two Hundred and Eighty (280) MW AC. Each block of solar panels will be comprised of solar arrays, which will range in size from 900 kVA up to 4,400 kVA depending on the specific inverter model used to convert the direct current power generated by the solar panels to alternating current consistent with the electrical grid.

Components of the Proposed Project

The Project will utilize equipment from Tier 1 manufacturers. Equipment manufacturers currently being evaluated for use in the Project include Jinko Solar Panels, NexTracker Racks, and SMA Inverters.

The main components of the Project include:

- Solar PV panels – The panels are comprised of silicon wafers and conduit, which are adhered directly to a substrate and encased in safety glass and metal. The panels have an output rating of approximately 525 watts of DC power and are linked to one another via junction boxes to form an array.
- Racking to fasten and support the panels – Steel piles are driven into the soil (concrete foundations typically not required); horizontal beams are then affixed to piles as part of the mounting structure; and the panels are then secured to the structures.
- Tracking system – The panels are mounted on tracking systems, which increase Project output by orienting the solar arrays directly into the sun. A tracker follows the sun from east to west over the course of a day and stows parallel to the ground at night.
- Transformers and inverters – Inverters are electronic devices which convert solar electricity from direct current (DC) to alternating current (AC) and are typically placed interior to the solar arrays at the end of tracker rows as depicted within the preliminary Development Plan.
- Electrical cabling, conduits, and storage – Invertors connect to a Project substation via underground cabling. Within the Project substation, a step-up transformer will convert the medium voltage (AC) to high voltage (AC) for interconnection into the utility transmission system. The Project substation may also include a utility-scale energy storage component to charge and store electricity from the Project site and/or the grid.
- Perimeter fencing, security lighting, site access and internal roads – The Project includes perimeter security fencing with controlled points of ingress and egress. Permanent lighting will be installed at the Project's collector substation and at any operation and maintenance building. Temporary security lighting may be used at laydown areas during the construction of the Project. Roads within the site provide access to the Project equipment.
- Gen-Tie Line – The Project will include an overhead Gen-Tie Line that will connect the Project's collector substation to the Point of Interconnection at a newly constructed substation that will tap directly into the Duke 138-kV line.