Paradise Energy Solutions
Save With Solar Energy

Harrisonburg Office
1931 South High Street
Harrisonburg, VA 22801
p: (540) 705-1330
f: (540) 228-1331

Project proposal

The proposed Crown Orchard Solar project is a 491.7kW DC solar photovoltaic system located at 2859 Crown Orchard Rd., Batesville, VA 22924. The primary existing use of the site is a cold storage facility for apples grown by the Crown Orchard Company. This facility has been in operation for approximately 40 years. There are also approximately 40 acres of peach trees on this parcel, which totals 346.58 acres. The owner is Crown Orchard Company, Parcel ID# 09700-00-00-00100.

This project is designed to offset the electricity consumption of 16 meters owned by the Crown Orchard Company and associated with its fruit production and cold storage facility located on the same property. The solar panels, racking system and all associated electric equipment will occupy about 1.5 acres.

The proposed system is a ground-mounted array, using driven steel C-channel posts for foundations. A steel support structure is built on these posts, which will hold the solar panels at a fixed angle, facing south. Other than a new power pole to be installed by the electric utility, the array will be no higher than approximately 10' above grade. The inverters and other electrical equipment will be either mounted directly on the same steel structure that supports the panels, or a small wooden structure just beside the array. When operational, the PV system will not create any perceptible noise, dust or other nuisance.

Over the projected 30-year operational lifespan of this solar PV system, it is projected to produce more than 17,300 megawatt-hours of renewable energy. In its first year of operation alone, it is projected to offset 483.5 tons of carbon dioxide emissions, conferring significant environmental benefits to the county's residents and natural environment.

This investment by the Crown Orchard Company will also allow it to significantly reduce its long-term energy costs and support its ongoing operations. In doing so, this project will represent continued economic benefit to the community and help preserve its agricultural sector. These environmental and economic benefits are shared both by the applicant and the wider public.

The proposed project location is on a south-facing hillside overlooking the existing apple storage facility, and is not in the viewshed of any other homes, businesses or other buildings. Due to the existing topography, the project would not be visible when approaching from the north on Crown Orchard Rd. (State Rte. 695) until directly east of the project location. This public road ends at this property, meaning nearly all the traffic on it is in- or out-bound from the apple storage facility.

Harrisonburg Office
1931 South High Street
Harrisonburg, VA 22801
p: (540) 705-1330
f: (540) 228-1331

During a short period of construction, this project would create a very modest amount of additional traffic on Crown Orchard Rd. Once the system is operational, the only anticipated traffic impact would be very infrequent service visits.

In summary, no substantial detrimental impact to any nearby property owner is anticipated.

Consistency with the Albemarle County Zoning Ordinance

The proposed project lies within the Rural Areas District, which is "intended to preserve the county's active farms" and encourage the "continuation and establishment of agriculture and agriculturally-related uses…." As discussed above, by improving the financial and environmental sustainability of a long-established agricultural operation, the proposed project is in alignment with the intended uses in the Rural Areas District.

Section 10.2.2 of the Zoning Ordinance permits solar energy systems by special use permit in this district.

When operational, the proposed project will create no noise, dust or nuisance or have any other negative effect on public health, safety or welfare.

Consistency with the Albemarle County Comprehensive Plan

The Crown Orchard Solar project is consistent with several objectives of the 2015 Albemarle County Comprehensive Plan. These include:

- *Natural Resources Objective 2 (project air quality)* and *Objective 8 (recognize changes occurring to the earth's climate to anticipate and mitigate impacts to the County*): Over the next 30 years, 491.7kW DC solar photovoltaic system projected to produce 17,300MWh of renewable energy, offsetting 483.5 tons of carbon dioxide emissions in Year 1 alone.
- *Economic Development Objective 1 (promote economic development activities that help build on the County's assets while recognizing distinctions between expectations for the Development Areas and the Rural Areas)*: The proposed project improves the long-term economic outlook for an agricultural business in a rural area of Albemarle County.
- *Economic Development Objective 3 (provide diversified economic opportunities that benefit County citizens and existing businesses by basing policy decisions on efforts that support and enhance the strengths of the County)*: This project supports an established agribusiness operation, one of the four target industries identified in the Comprehensive Plan

Harrisonburg Office
1931 South High Street
Harrisonburg, VA 22801
p: (540) 705-1330
f: (540) 228-1331

.

- *Rural Area Objective 1 (support a strong agricultural and forestal economy)*: This project represents a significant investment by a long-established county fruit grower that will help support its operations for many years to come.
- *Rural Area Criteria for Review of New Uses:* As a renewable energy generation facility that will directly support the operation of an agricultural business with little to no adverse impact on the surrounding area, the proposed project is consistent with the new use review criteria outlined on p. 7.5 of the Comprehensive Plan.

Impacts to environmental features

The proposed project site is approximately 1.5 acres in a section of peach orchard. To clear the land for the solar array, a section of peach trees were removed using a forestry mulcher to minimize environmental impacts. Apart from the removal of the peach trees, the project will result in very little additional impact on the environment. The most significant ground disturbance will be a small amount of trenching to run wires between arrays and to the point of interconnection beside a new utility pole that will be placed beside the array. The estimated area disturbed by this trenching is less than 500 square feet.

Construction activities will cause limited and temporary disturbance to the existing vegetation. The only other anticipated, limited disturbance during construction will be some limited areas of minor grading to allow construction equipment easier access on steeper sections of the construction area.

After construction is complete, spaces between the rows of solar panels will revegetate, requiring only period mowing to prevent shading on the solar panels. This vegetation will prevent erosion and control runoff from the solar panels.

Impacts to public facilities

The proposed project is not expected to have any impact on public transportation, safety, schools or recreation facilities. Apart from a very small amount of temporary construction traffic, it will place no additional burden on existing roads or any other public services.