



COUNTY OF ALBEMARLE PLANNING
STAFF REPORT SUMMARY

Proposal: SP202100006 Ivy Landfill Solar Facilities	Staff: Scott Clark, Senior Planner II
Planning Commission Public Hearing: August 3, 2021	Board of Supervisors Hearing: TBD
Owner: Rivanna Solid Waste Authority	Applicant: Community Power Group LLC
Acreage: 300.59 acres	Special Use Permit for: Solar-energy system
TMPs: 07300-00-00-02800 Location: 4576 Dick Woods Rd	Zoning/by-right use: RA Rural Area - agricultural, forestal, and fishery uses; residential density (0.5 unit/acre in development lots)
Magisterial District: Samuel Miller	Conditions: Yes EC: Yes
School Districts: Murray Elementary School – Henley Middle School – Western Albemarle High School	
Proposal: Solar-energy electrical generation facility, with solar panels occupying approximately 15 acres	Requested # of Dwelling Units: n/a
DA: - RA: X	Comp. Plan Designation: Rural Area – preserve and protect agricultural, forestal, open space, and natural, historic and scenic resources; residential (0.5 unit/ acre in development lots)
Character of Property: Open portion of a closed, capped landfill. Existing tree buffers have been maintained along the edges of the property.	Use of Surrounding Properties: Most are large residential lots with a mix of tree cover and open land. I-64, an Entrance Corridor, is adjacent to the north.
Factors Favorable: 1. Provides a source of renewable power generation. 2. Is in compliance with the Comprehensive Plan. 3. Site is already impervious, so solar panels do not add a significant new impact.	Factors Unfavorable: None.
RECOMMENDATIONS: <ul style="list-style-type: none"> • Staff recommends approval of the SP202100006 with conditions. • Staff recommends that the Planning Commission make the finding that SP202100026 would be in compliance with the Comprehensive Plan. 	

STAFF CONTACT:
PLANNING COMMISSION:
BOARD OF SUPERVISORS:

Scott Clark, Senior Planner II
August 4, 2021
TBD

PETITION

PROJECT: SP-2021-00006 Ivy Landfill Solar Facilities

MAGISTERIAL DISTRICT: Samuel Miller

TAX MAP/PARCEL(S): 07300-00-00-02800

LOCATION: 4576 Dick Woods Rd., Charlottesville, VA 22903-7205

PROPOSAL: Solar-energy electrical generation facility, with solar panels occupying approximately 15 acres

PETITION: Solar energy system allowed by special use permit under section 10.2.2.58 of the Zoning Ordinance on a 300.59-acre parcel. No dwellings proposed.

ZONING: RA Rural Area - agricultural, forestal, and fishery uses; residential density (0.5 unit/acre in development lots)

OVERLAY DISTRICT(S): Entrance Corridor, Flood Hazard Overlay District

COMPREHENSIVE PLAN: Rural Area – preserve and protect agricultural, forestal, open space, and natural, historic and scenic resources; residential (0.5 unit/acre in development lots)

CHARACTER OF SURROUNDING AREA

Most of the surrounding Rural Area has been converted to large-lot residential uses. However, some tree cover has been retained in the area. The site is bounded to the north by Interstate 64 (an Entrance Corridor), beyond which lies another area of rural land that has been converted to suburban development.

PLANNING AND ZONING HISTORY

As a landfill facility that has expanded and added facilities over the years, the property has had multiple site development plan approvals. In addition, an application was received for a personal wireless service facility on this property in 1995. However, that application was denied.

DETAILS OF THE PROPOSAL

The applicant has proposed a solar-energy electrical generation facility including three areas of photovoltaic panels totaling 3.1 megawatts in capacity. This facility would occupy approximately 15 acres of the 300-acre site, and would be located near the center of the open area of the landfill. As the landfill has been closed and capped in this location, the applicants are proposing a design that does not require excavation or underground foundations. The solar panels would be installed on frames that rest on surface-mounted supports, rather than the typical underground concrete support blocks. This design approach has already been used on closed landfills elsewhere. Attachment B contains the main narrative submitted by the applicant. Attachment C is a concept plan of the proposed project. All of the information submitted by the applicant, including the exhibits (technical studies) for the narrative, is available by clicking [HERE](#).

COMMUNITY MEETING

A virtual community meeting was held on June 7, 2021. One nearby resident attended the meeting. Discussion topics included potential visibility, but no significant concerns or objections were expressed. A recording of the community meeting can be found by clicking [HERE](#).

ANALYSIS OF THE SPECIAL USE PERMIT REQUEST

This special use permit, and all special use permits, are evaluated for compliance with the provisions of Chapter 18, Section 33.40b of the Code of Albemarle. Each provision of that section is addressed below. The provisions of the ordinance are in bold font and underlined.

Staff's analysis is based on the detailed information submitted by the applicant. That information is not restated here, but is available at [THIS LINK](#).

No substantial detriment. The proposed special use will not be a substantial detriment to adjacent lots.

Impacts on adjacent lots would be limited to visual and noise impacts. Noise generated by the proposed use would be minimal and would be less than that generated from by-right agricultural uses. (This site currently has some vehicle traffic associated with the landfill use.) The sound generated by the proposed inverter boxes on site would be similar to that from the heating and cooling equipment associated with a single-family residence. The conceptual plan (Attachment B) places these inverters near the north-south road that runs through the open landfill area. As proposed, the inverter boxes would be at least 1,500 feet from the nearest dwellings. At that distance, the sound level of an inverter that emitted 70 decibels would be reduced to 6.5 decibels, which is slightly louder than the sound of a person breathing normally. Inverters for solar facilities do not operate or create sound at night.

Visibility of the landfill site is significantly limited by the existing vegetative buffers around the site (see the aerial photo in Attachment B). Installation of the proposed solar arrays would not require the removal of vegetation. Exhibit I of the application narrative (available at the link above) is the applicant's visibility analysis. In the areas where their GIS indicated that topography might make the project site visible from an adjacent property, existing vegetation (largely trees) blocked that sight line.

The applicants also provided a glint and glare study (see Exhibit J of the application narrative). This study concluded that neither surrounding properties nor adjacent major roads (Interstate 64 or Dick Woods Road) would be impacted by glint or glare from the proposed solar panels.

Staff opinion is that the proposed use would not be a substantial detriment to adjacent parcels.

Character of the nearby area is unchanged. Whether the character of the adjacent parcels and the nearby area will be changed by the proposed special use.

Solar facilities must be located on relatively large, open, gently sloping land with access to power transmission lines. The Rural Areas of the Comprehensive Plan are the only areas where utility scale solar is permitted. Utility scale solar is permitted in the RA, Rural Area zoning district. This district is the predominant district in the part of the County designated Rural Areas in the Comprehensive Plan. Minor areas of RA zoning may be found in the Development Areas. However, the size of these parcels and their designation as a Development Area makes use of these parcels for utility scale solar unlikely.

The primary commercial use intended for the Rural Areas is the production of forestal and agricultural commodities. While this utility use is not identified as a policy priority for the Rural Areas, it helps the County to meet other Comprehensive Plan goals related to renewable-energy production. The decommissioning plan ensures that the equipment can be removed after the solar-generation use ends. Staff opinion is that utility scale solar does not, as a use type, change the character of the area.

Solar facilities do represent a change in the character of the area due to the industrial appearance of the facility. In this case, however, the facility would occupy 15 acres of an already-disturbed landfill site, and visibility from surrounding properties and roads would be minimal, unless significant land clearing occurred around the site.

Staff opinion is that, given the existing character of the site, the character of the surrounding area will not be changed.

Harmony. Whether the proposed special use will be in harmony with the purpose and intent of this chapter,

Staff has reviewed the purposes of the Zoning Ordinance (Chapter 18, Section 1.4) and the intent of the Rural Areas District (Chapter 18, Section 10.1). The review criteria for a special use permit is designed to address the purpose and intent of the ordinance as stated in these sections.

Section 10.1 of the Zoning Ordinance establishes the following purposes for the RA Rural Areas zoning district:

Preservation of agricultural and forestal lands and activities;

This site is a landfill and has already been removed from potential agricultural or forestal production. The installation of the proposed facility would have no impact on the preservation or development of agricultural or forestal lands or activities.

Water supply protection;

This site is located in the watershed of the South Fork Rivanna Reservoir. However, no forested lands or riparian buffers would be impacted by the proposed use. Any difference between the runoff characteristics of the capped landfill and the capped landfill with the proposed facility on top would be considered during the Water Protection Ordinance and stormwater reviews, which would run concurrently with the site development plan, if the use is approved. Mitigation measures, if necessary, would be required at that stage.

Limited service delivery to the rural areas; and

Service delivery to the rural areas would not be affected by this use.

Conservation of natural, scenic, and historic resources.

As the site is a closed landfill, there are no native biological resources in the area where the solar facilities would be established. The panels do not move or create emissions, and would

be removed after the facility shuts down, so natural resources (other than water runoff as discussed above) would not be impacted.

The visibility analyses described above establish that the use would cause minimal to no impact on the scenic character of the area.

No known historic resources are located on the site.

The intent of the RA district, Section 10.1, also states in part “Residential development not related to bona fide agricultural/forestral use shall be encouraged to locate in the urban area, communities and villages as designated in the comprehensive plan where services and utilities are available and where such development will not conflict with the agricultural/forestral or other rural objective.” Although this project is not a residential development staff does note that utility scale solar facilities are most appropriately located where power distribution infrastructure exists. This property is already used as a public facility, meaning that no additional land-clearing or conversion of farm or forest land is needed. The site already has access to electrical transmission lines.

Staff would not normally make a finding that even a temporary installation (25 years or more) of a large impervious area in a water supply watershed is consistent with the intent of the RA district without significant mitigating factors. In this case, the impacts of the proposal are mitigated by the fact that the capped landfill is already impervious. As no open or natural land is being disturbed, and stormwater impacts can be mitigated by changes to the site’s existing site development plan, staff finds that the proposed facility would be in general accord with intent of the district, and of no significant impact to water-quality concerns.

Harmony. ...with the uses permitted by right in the district

The proposed facility will not prevent any by-right uses on surrounding properties.

Harmony. ...with the regulations provided in section 5 as applicable,

This use is not subject to any regulations contained in section 5.

Harmony. ...and with the public health, safety and general welfare.

Public health and safety are addressed during the site plan review process, as are the stormwater runoff, erosion control, and other health- and safety-related elements of site design. After reviewing this application recommended that the requested special use permit require the applicant to provide a training program to address the unique characteristics of a utility scale solar facility. The applicant has agreed to this condition.

The Virginia Department of Transportation has reviewed this request and found it generally acceptable. No conditions of approval were recommended.

Staff has considered the content of the Climate Action Plan when evaluating this project’s harmony with the general welfare. Attachment D contains some of the section considered when evaluating this application. The Climate Action Plan supports the use of utility scale solar.

Staff finds that, with the proposed layout and the condition requiring the Fire/Rescue training program, this project will be in harmony with the public health, safety and general welfare.

Consistency with the Comprehensive Plan. The use will be consistent with the Comprehensive Plan.

The applicant's application narrative contains discussion about consistency with the Comprehensive Plan (Attachment B). Staff provides the following additional comments.

Background (Page 1.6)

Promote the conservation and efficient use of energy resources

This project would provide for efficient production and use of energy.

Natural Resources (Page 4.5):

The Comprehensive Plan states:

History of Watershed Protection in Albemarle County The County's water resources programs include stormwater management (including water quality treatment, and channel and flood protection), erosion and sediment control, stream buffer protection, collection of groundwater information, capital projects, public education, illicit discharge detection and elimination, and infrastructure maintenance. These activities are a result of comprehensive planning and regulations to protect water resources since the 1970s. In 1980, most land in water-supply watersheds was designated rural in order to prevent and reduce pollution and development potential in the Rural Area was restricted.

This property is located within the watershed of the South Fork Rivanna Reservoir. The RA district is the predominant zoning within the watershed of the South Fork Rivanna Reservoir, in recognition of the RA district's limited impact on the watershed as compared to more intensive zoning. Approximately 15 acres of the site would be used for the solar facility. The exact area of panel coverage will be required at the time of site plan review to verify that water control measures to address the quantity and quality of the runoff from these panels are addressed as required by the ordinance.

A large impervious area in the reservoir watershed would be inconsistent with the Comprehensive Plan. However, staff finds that the impervious nature of the proposed facility is mitigated by the fact that the capped landfill is already impervious, and that any additional runoff volume or velocity created by the installation of solar panels can be accommodated by on-site stormwater facilities.

Natural Resources (Page 4.45):

the Comprehensive Plan states:

In 2010, members of the community and representatives of the County, the City, and UVA began a local planning process to find ways to lower the community's energy

consumption and, thus, greenhouse gas emissions. The Committee, known as the Local Climate Action Planning Process (LCAPP) Steering Committee, recommended that the City, County, and UVA:

- *Continue to demonstrate leadership in energy and carbon reductions at the local level;*
- *Build on existing synergies by continued collaboration of City, County, UVA, and community partners;*
- *Integrate the role of energy and carbon emissions in projects and planning;*
- *Equip the community at all levels to make informed decisions about the impacts of carbon emissions and energy; and*
- *Identify and promote actions that enable the community to reap the health, economic and environmental benefits that accompany sound energy-based decisions.*

Utility scale solar satisfies these objectives.

Review for Compliance with the Comprehensive Plan

As a solar facility, this proposal is subject to a Compliance with the Comprehensive Plan Review as required by the Code of Virginia (§15.2-2232). A compliance review considers whether the general location, character, and extent of a proposed public facility are in substantial accord with the adopted Comprehensive Plan. It is reviewed by the Planning Commission, and the Commission's findings are forwarded to the Board of Supervisors for their information. No additional action is required of the Board.

For the reasons discussed above staff finds that this proposal is consistent with the Comprehensive Plan.

SUMMARY

This project has been reviewed for compliance with the factors to be considered in acting on a special use permit. Staff has also reviewed the ordinances and requirements of other Virginia localities to determine best practices for utility scale solar projects. It is the opinion of staff that this project, with conditions, is consistent with the ordinance requirements for approval of a special use permit and is consistent with best practices principles. In the opinion of staff, this project will have limited impact. The impacts caused by this project are primarily associated with construction. The construction impact is of limited duration. This project is unusual in that it is a use that can be removed, allowing the site to largely return to its existing condition.

Staff finds the following factors favorable to this request:

1. Provides a source of renewable power generation.
2. Is in compliance with the Comprehensive Plan.
3. Site is already impervious, so solar panels do not add a significant new impact.

Staff finds the following factors unfavorable to this request:

None.

RECOMMENDED ACTION FOR SPECIAL USE PERMIT

Staff recommends approval of SP202100006 Ivy Landfill Solar Facilities with the following conditions:

1. Development and use must be in general accord (as determined by the Director of Planning and the Zoning Administrator) with the plans prepared by Community Power Group titled "Conceptual Plan – Special Use Permit," dated May 13, 2021 (hereinafter "Concept Plan") and included as Attachment C. To be in general accord with the Concept Plan, development and use must reflect the following major elements as shown on the Concept Plan:
 - a. Location of solar development envelopes,
 - b. Location of equipment yard, and
 - c. Retention of wooded vegetation in stream buffers.

Upon the approval of the Zoning Administrator and the Director of Planning, minor modifications may be made to the Concept Plan that (i) do not otherwise conflict with the elements listed above and (ii) ensure compliance with the Zoning Ordinance, and State or Federal laws.

2. The applicant must submit a decommissioning and site rehabilitation plan (hereinafter "Decommissioning Plan") with the building permit application. The Decommissioning Plan must include the following items:
 - a. A description of any agreement (e.g. lease) with the landowners regarding decommissioning;
 - b. The identification of the party currently responsible for decommissioning;
 - c. The types of panels and material specifications being utilized at the site;
 - d. Standard procedures for removal of facilities and site rehabilitation;
 - e. An estimate of all costs for the removal and disposal of solar panels, structures, cabling, electrical components, roads, fencing, and any other associated facilities;
 - f. An estimate of all costs associated with rehabilitation of the site; and
 - g. Provisions to recycle materials to the maximum extent possible.

The Decommissioning Plan must be prepared by a third-party engineer and approved by both the party responsible for decommissioning and all landowners subject to the project. The Decommissioning Plan is subject to review and approval by the County Attorney and County Engineer, and must be in a form and style suitable for recordation in the office of the Circuit Court of the County of Albemarle.

3. Before a grading permit may be issued:
 - a. The Decommissioning Plan shall be recorded by the applicant in the office of the Circuit Court of the County of Albemarle; and
 - b. To guarantee performance of Condition 8, the permittee shall furnish to the County's Zoning Administrator a certified or official check, a bond with surety satisfactory to the County, or a letter of credit satisfactory to the County (collectively, the "guarantee"), in an amount sufficient for, and conditioned upon compliance with Condition 8. The amount of the guarantee shall be the costs identified in Conditions 4(e) and 4(f), and the amount of the guarantee must be updated as costs are updated

as provided in Condition 6. The type of guarantee shall be to the satisfaction of the Zoning Administrator and the County Attorney,

4. The Decommissioning Plan and estimated costs must be updated upon (a) change of ownership of either the property or the project's owner or (b) written request from the Zoning Administrator, but in any event at least once every five years. The applicant must record any changes or updates to the Decommissioning Plan in the office of the Circuit Court of the County of Albemarle.
5. The owner must notify the Zoning Administrator in writing within 30 days of any abandonment or discontinuance of the use.
6. All physical improvements, materials, and equipment (including fencing) related to solar energy generation, both above ground and underground, must be removed entirely, and the site rehabilitated as described in the Decommissioning Plan, within 180 days of any abandonment or discontinuance of the use.
7. If the use, structure, or activity for which this special use permit is issued is not commenced by DATE 3 YEARS AFTER APPROVAL BY THE BOARD OF SUPERVISORS, the permit will be deemed abandoned and will thereupon terminate.
8. The facility must comply with all provisions of the *Albemarle County Code*, including § 18-4.14.
9. Panels may be cleaned only with water and biodegradable cleaning products.
10. No above ground wires are permitted except for those associated with (a) the panels and attached to the panel support structure; (b) the “above-ground conduit” shown on the Concept Plan; and (c) tying into the existing overhead transmission wires.
11. Before activating the site, the applicant must provide training to the Department of Fire Rescue. This training must include documentation of onsite materials and equipment, proper firefighting and lifesaving procedures, and material handling procedures.
12. The property owner must grant the Zoning Administrator (or any designees) access to the facility for inspection purposes within 30 days of any such request.
13. Outdoor lighting for the facility is permitted only during maintenance periods. Regardless of the lumens emitted, each outdoor luminaire must be fully shielded as required by *County Code* § 18-4.17, except for any outdoor lighting required by state or federal law.

RECOMMENDED ACTION FOR COMPLIANCE REVIEW

Based on the analysis above, staff recommends that the Planning Commission make the finding that SP202100006 would be consistent with the Comprehensive Plan.

ATTACHMENTS

1. [Location Map](#)
2. [Application Narrative](#)
3. [Conceptual Plan](#)
4. [Climate Action Plan \(excerpt\)](#)