

Planning Commission Staff Report

File #: C-21-4
Applicant: Sam Clay, and his agent, Mike Wallgren, an authorized representative for Glidepath Power Solutions
CUP Request: Conditional Use Permit to operate a 10-megawatt alternating current solar energy generation facility with a 4-megawatt battery storage facility
Property Location: Between Wheelers Pond Road (Route 645) and Wilkinson Road (Route 611) bounded on the north by Wilkinson Road and on the south by Wheelers Pond Road approximately 0.48 mile west of the intersection of Wheelers Pond Road and Wilkinson Road
Property Size: Approximately 150.0 +/- acres with 57.8 +/- acres under panel and with battery storage
Tax Map Parcel: 43-9
Magisterial District: Rowanty District
Planning Commission Mtg.: September 8, 2021

CASE AND PROJECT OVERVIEW

The applicant, Sam Clay, and his agent, Mike Wallgren, an authorized representative for Glidepath Power Solutions are proposing to design, construct and operate a 10-megawatt alternating current solar photovoltaic (PV) ground mounted electric generation project located on approximately 150.0 +/- acres with approximately 57.8 +/- acres under panel to include 4-megawatts of battery storage. The SED, Utility Scale Solar Energy District, zoning classification allows for solar energy projects pursuant to the Zoning Ordinance allowed density with a conditional use permit. The property is generally located between Wheelers Pond Road (Route 645) and Wilkinson Road (Route 611) bounded on the north by Wilkinson Road and on the south by Wheelers Pond Road approximately 0.48 mile west of the intersection of Wheelers Pond Road and Wilkinson Road. The property is further defined as Tax Map Parcel No. 43-9. As indicated in the Dinwiddie County Comprehensive Land Use Plan, the subject property is located within the Rural Conservation Area, which allows limited industrial, service, and utility uses for this general area.

The proposed facility will connect to the Southside Electric Cooperative power grid creating energy via solar and storing energy produced during periods of oversupply and discharging to the electrical grid during periods of high demand. The project site is located approximately 2,500 feet from the Southside Electric Cooperative Center Star electric substation. As indicated in the application the site itself is partially flat and open with areas of slopes and woods. There is existing vegetation on 85% of the property lines. The solar energy conversion panels will be single axis tracker, which will follow the sun east to west. They will be 10 to 12 feet tall and arranged in arrays as illustrated below. There would be approximately 70,000 solar panels. The panels will be mounted on a steel and aluminum racking structure and average approximately 10 to 12 feet above grade.

The racking system is installed in the ground with pilings (I-beams) that are driven directly into the ground at a depth usually between 6 feet and 8 feet depending on soil conditions. The racking system manufacturer's engineer will provide certification that the design of the foundations and panels are within accepted professional standards, given local soil and climate controls. The

equipment is designed to withstand wind up to 90 miles per hour and fifty pounds per square foot of snow.

The panels will be arranged into rows. Each row of solar panels will connect to an inverter. The inverters will be connected by directionally bored underground conduit that is housed inside of housing that will be installed 2 feet below the surface. The conduit will lead to the concrete equipment pad for each inverter. The inverters transform the direct current power generated by the photovoltaic system to alternating current power, which is then connected to the existing Southside Electric Cooperative three phase power distribution line at the point of common coupling. The solar array will be contained within an area protected by a seven-foot chain link fence with barbed wire on top of it. It will not create any noise, dust, fumes, glare, or other disturbances.

The battery energy storage system (BESS) will be comprised of lithium-ion battery modules housed within approximately 8 storage containers. Containers will be approximately 53' long by 8' wide and 10' high. Depending on the BESS manufacturer(s) selected for the project, the number, size and overall configuration of the battery modules could change. Containers will be supported on slabs/spread footings or piles/piers, with the ultimate choice based on final design. Each container will have an exterior HVAC. From the BESS container, low voltage cables will connect to pad mounted switchgear, step up transformer(s) and a power distribution system. An on-site sub-station will be constructed to connect the project to the adjacent Center Star substation. Additionally, stabilized gravel access roads and perimeter fencing will be provided.

The project would be equipped with a state-of-art Battery Management System (BMS) which would monitor cell level voltage, state of health, cell temperature, and cell current in and out. If any of the monitored parameters were above or below pre-determined limits, BMS would shut down and electrically isolate the battery rack from the system, preventing any potential for overheating and risk of thermal runaway.

The detailed list of major equipment is as follows:

- Batteries (LG Chem or Samsung SDI modules assembled and connected in racks)
- Power Conversion System (PCS - i.e., Power Electronics inverters) to convert direct current into alternative current and vice versa. Each PCS is 3 Mega Volt Amp (MVA) power capacity, with noise levels < 79 A-weighted decibels (dBA) measured at 1 meter from the back of the unit.
- HVAC systems to keep battery cores at optimal operating temperature
- BMS to prevent overheating and risk of thermal runaway
- Fire suppression systems in each container (clean agent Novec 1230 in a tank connected to nozzles and designed to flood the entire container during fire event) equipped with early smoke detection, alarms and remote monitoring
- Low and medium voltage electrical switching equipment
- Computer and telecommunications equipment
- Medium-voltage transformers
- Medium-voltage switchgear
- Step-up transformer and associated equipment
- Security lighting and fencing
- Signage

ATTACHMENTS

C-21-4 Application and Application Package Attachments

LAND USE AND ZONING ANALYSIS

The area is generally rural and used for silviculture and agricultural purposes interspersed with rural single-family residential lots. The site includes forested land and cropland on the subject property. The properties in the immediate area surrounding the subject land parcels include agricultural and forested land, and low-density single-family residential land uses, and the project site is located approximately 2,500 feet from the Southside Electric Cooperative Center Star electric substation. The properties to the north, east, south and west are zoned A-2, Agricultural General.

A primary purpose of the SED zoning district is to outline the process and requirements for the construction, installation, and operation of solar energy projects in Dinwiddie County in a manner that promotes economic development and ensures the protection of health, safety, and welfare while also avoiding adverse impacts to agricultural lands, endangered species habitats, conservation lands, and other sensitive lands.

OVERVIEW OF IMPACTS

Project Operations and Construction Plan

The applicant is currently planning to start commercial operations in 2024 and has a planned useful life of 30 years. Glidepath Power Solutions would be the system owner and operator. The system would be remotely operated by Glidepath personnel. The long-term operational workforce would entail contracted maintenance staff who would maintain the facilities and landscaping on a periodic basis over the project life. The project would require a four-person crew for maintenance visits once a month on average. The crew would normally consist of one operator, one contracted field engineer, and two mechanical or electrical technicians. The project would be primarily operated remotely by Glidepath personnel; thus, no restroom or office facilities are proposed.

Planned maintenance would typically be developed and scheduled a few months in advance. Typical maintenance intervals for major project components include:

- Fire protection system – twice a year
- HVAC – twice a year
- Battery core – once a year
- Relay protection – once in two years
- Project performance testing – once a year

The project is designed with multiple automatic and manual power-down/safety mechanisms. Electrical and fire systems are designed to open breakers automatically during fault conditions. Each container fire protection system would have a signal that would trigger container power-down during fire, electrical fault, overheating, etc. The entire project power-down would occur automatically during electrical fault conditions (e.g., high-voltage, high-frequency, ground fault etc.). In addition, the project would be equipped with breakers that could be opened manually to

power-down different equipment or the project as a whole. The manual power-down could be done by local personnel or remote operator.

The project is designed to be in operation for 30 years. After completion of 30 years of operations, most of the project's electrical equipment (panels, breakers, transformers and inverters) would be removed and recycled. Project batteries would be returned to the battery manufacturer for recycling. Equipment foundations and pads would be demolished and removed.

The project would be constructed in a single phase. Once the construction of the project begins the duration would be approximately 12 months. Construction would occur Monday through Friday, between the hours of 7 AM and 7 PM. Between 17 and 52 workers would be on-site at any given time each week during construction, which would decrease to 14 or less during the last quarter of construction.

Construction activities would include foundation/concrete work, building construction, electrical/HVAC/fire protection installation, battery rack installation, battery/inverter/controls installation, and grading. Recycling, reduction, and reuse of materials would be incorporated whenever feasible. Construction equipment to be used would include a scraper, excavators, dump trucks, a drum roller, forklifts, a crane, pump trucks, concrete trucks, man lifts, and a boom truck. Low emission construction vehicles and equipment (at least Tier 3 or better) fitted with diesel particulate filters (DPF) would be utilized. Temporary construction staging/laydown/storage areas would be contained within the project site boundary.

Fiscal Impact

In consultation with the Commissioner of the Revenue, the tax liability for this project will be \$15,000 per acre with an estimated one-time \$16,954.96 land use rollback. The applicant is submitting a siting agreement to be negotiated with the County Board of Supervisors.

Cultural and Environmental Impacts

The project site drains into the White Oak Creek that ultimately drains to Stony Creek. The soils in the general area are Appling and Cecil sandy loam and Mattaponi sandy loam.

The proposed facility has been designed to avoid sensitive resources. The facility has been sited within the project parcel to avoid any wetlands to the maximum extent feasible. In addition, the existing driveway would be widened and reutilized to minimize any additional impacts associated with necessary access requirements.

The proposed development would conform to the natural topography of the site to the maximum extent practicable. Battery storage containers and inverters/transformers would be placed on individual concrete equipment pads to allow for incorporation of the elevation change of the natural topography. The majority of the proposed facility would consist of permeable gravel infill. Stormwater best management practices would be implemented.

- As a preliminary review of cultural resources in the Project Area, Westwood examined the Virginia Cultural Resource Information System (V-CRIS) maintained by the Virginia Department of Historic Resources (DHR). An initial inventory of archaeological sites and historic structures was compiled. Mapping of previous surveys was also examined.

Additionally, the National Register of Historic Places (NRHP) database was reviewed. The entire Project Area was examined, as well as a one-mile buffer.

- No previously recorded cultural resources are identified in the Project Area.
- No archaeological sites are located within one mile of the Project Area.
- Four inventoried historic resources are recorded within one mile of the Project Area. The closest inventoried historic resource is a house (026-0142) located approximately 0.25 mile west of the Project Area.
- Two historic districts are located within one mile of the Project Area. A property associated with the Rosenwald Schools in Virginia MPD is located approximately 0.42 miles east of the Project Area and the Petersburg National Battlefield is located approximately 0.90 miles northeast of the Project Area.
- No cultural resource surveys have occurred in the Project Area.
- No NHRP listed properties are located within 1 mile of the Project Area.

Landscaping/Open Space

The applicant is proposing that new landscaping would be included where necessary to fill in the existing vegetation and would be designed to screen the proposed project facilities from North along Wilkinson Road and South along Wheelers Pond Road. Landscape design would be in compliance with the Zoning Code including requirements and minimum distances between trees. See the included Landscape Plan. Technicians would travel to the site approximately once per month to provide contracted maintenance services, including landscaping. The project would be in compliance with all county Design Guidelines, including landscaping and color scheme requirements, per consultation with Dinwiddie County.

The aforementioned studies are included with the application package. Development will be done in accordance with state and local regulations.

School System, Public Safety, & Public Utilities Impacts

There are no impacts to the school system with the proposed rezoning allowing for construction of the solar energy generating facility. The potential impact on public safety with the rezoning of the subject property include the proposed solar arrays, inverter and transformers, and battery storage and generators having to address fire protections as required by the applicable National and local Fire Code and Building Code. The impact on public utilities involves the point of interconnection with the existing transmission line.

Transportation Impacts

The width of the project access road from Wilkinson Road would total 24 feet, including a three-point hammerhead turnaround at the northern end of the facility. The 24-foot wide driveway heads south through the center of the facility and terminates with a 40-foot radius cul-de-sac at the southern end of the facility. Roadway surface materials would consist of asphalt concrete

(AC)/aggregate base (AB). The project would include parking spaces for part-time staff who would perform routine maintenance activities on a periodic (monthly) basis.

To ameliorate the impacts of the increased traffic on area roads VDOT is recommending that a Construction Traffic Management Plan (CTMP) be required to account for the transportation impacts related to the development of the property. The CTMP includes (1) a plan to show proposed construction access routes to the development site from the State primary routes; (2) a pre-construction assessment of the condition of the secondary roadways to be used as a haul route to the facility with a commitment from the applicant to repair any damage caused during construction and to restore the roadways to pre-construction conditions; and (3) a plan to identify on-site areas suitable for parking for the construction workers and areas exist on-site to allow trucks to be unloaded and to turn around without having to back onto State maintained roadways.

Additionally, VDOT anticipates that low-volume commercial entrances are required to serve the proposed solar energy facility. The low volume commercial entrance has to demonstrate that stopping sight distance based on the posted speed limit is available at the proposed entrance location. All future transportation related improvements for the construction entrances and commercial entrances will have to meet VDOT design and construction requirements and standards and be permitted through VDOT.

Decommissioning Plan

Introduction

The Decommission Plan (the “Plan”) describes anticipated activities and process for decommissioning of the proposed facility following its useful life. The purpose of decommissioning is to restore the Property to a clean, safe and usable condition for continued use by the landowner.

Decommissioning consists of the removal of above-ground and below-ground facility components, management of excess materials and waste as well as the restoration of Project lands, as applicable. Activities are expected to take between 8-10 weeks but no longer than four-months.

Potential negative environmental effects from decommissioning of the facility will be mitigated through use of erosion and sediment control measures, limiting the use of heavy machinery (where possible), and maintaining a buffer from natural features. These control measures, as well as other mitigation measures used during construction will be re-implemented during the decommissioning phase and until the site is stabilized.

Future consultation will occur with the municipality prior to decommissioning to discuss preferences and commitments to restore the Project to its pre-construction condition or a similar state. All decommissioning and restoration activities will adhere to the requirements set forth by Occupational Health and Safety Administration (OSHA) and will be in accordance with all applicable federal, state and local permitting requirements. As with the construction phase, an onsite manager responsible for safety will be present on-site (generally the contractor’s project manager) while decommissioning activities are taking place.

The decommissioning plan is based on current procedures and experience. These procedures may be subject to revision based on new experiences and requirements over time. At the time of

decommissioning, various options and procedures will be re-evaluated to ensure that decommissioning is safe and beneficial to the environment.

Equipment Removal

A significant amount of the components of the Project will include recyclable or re-saleable components, including copper, aluminum, galvanized steel, and modules. Due to their resale monetary value, these components will be dismantled and disassembled rather than being demolished and disposed of.

Following coordination with the local utility company regarding timing and required procedures for disconnecting the Facility from the utility, all electrical connections to the system will be disconnected and all connections will be tested locally to confirm that no electric current is running through them before proceeding. All electrical connections to the panels will be cut at the panel and then removed from their framework by cutting or dismantling the connections to the supports. Inverters, transformers, and switchgear will be lifted, secured onto flat beds, and transported off-site for processing.

Modules will be detached from the racking system and stacked for removal. However, in the event of a total fracture, the interior materials are silicon-based and may not be considered hazardous. Disposal of these materials at a landfill will be permissible.

The metal piling systems used to secure the PV system in the ground will be removed entirely and if full removal is not possible, then terminated at a depth greater than four-feet from grade or at bedrock whichever is shallower. The piling materials will be collected and recycled. Additionally, all associated metal mounting structures along with the metal perimeter fencing and gates will be removed and either reused or sent for recycling.

Grade slabs will be broken, removed, and disposed of off-site or recycled. Unless requested by the landowner for the access road to remain, materials from road construction will be removed, shipped off-site for either re-use or disposal. If necessary, the former road bed will be backfilled and graded with material native to the region to blend it with the immediately adjacent and existing topography.

Aboveground utility poles owned by the Project will be completely removed and disposed of off-site in accordance with utility best practices. Overhead wires will be removed from the area of the solar modules and terminated at the point of interconnection. Underground wiring at depths of less than four-feet will be removed and recycled.

Prior to final demobilization, a final walkthrough of the Project area and the Property is completed to police for and ensure all debris is collected and removed.

Site Restoration

Those areas disturbed during decommissioning activities will be graded as necessary to ensure a uniform slope for proper storm water management, prevent the ponding of waters and address any rutting or other depressions caused by removal equipment. The disturbed areas will then be seeded either by hand or via hydro seeding to reestablish vegetation compatible with the Property and region. It is anticipated that a seed mix native to the area will be used by the decommissioning contractor, unless the landowner instructs that they will begin using the property for agricultural purposes and will reestablish the area with agricultural vegetation.

Permitting & Approvals

Prior to the initiation of decommissioning activities, local code will be reviewed for applicability with decommissioning activities. The municipality will be consulted to confirm and applications made for appropriate permits and approvals, if any. At a minimum, it is anticipated that a new storm water pollution prevention plan (SWPPP) will be required along with a building permit. It is assumed that neither a new or revised site plan nor special use permit would be necessary because decommissioning activities are associated with the originally issued approvals.

Throughout the decommissioning process, the municipality will be provided with regular updates and notice upon completing the restoration activities.

Form of Assurance

A Decommissioning Agreement (“Agreement”), will be established for the project entered into by the Operator/Owner of the project and the county. The Agreement will result in the Operator/Owner securing a bond as assurance. The bond will begin with and maintained for the duration term established in the Agreement. The bond will be maintained and updated according to the Agreement and remain in place through the completion of decommissioning activities at the Project. The amount and term of the bond will be established and agreed upon by both parties.

Use of Assurance

In the event that the Operator/Owner fails to undertake decommissioning activities within the established period of the Agreement, the county shall have the right to undertake decommissioning activities and make a claim against the decommissioning assurance. In such circumstances, the county shall have such access to the Property as may be necessary to allow its qualified contractors to conduct decommissioning activities.

PLANNING COMMISSION ACTION

The Planning staff has reviewed the request to rezone the property from A-2, Agricultural General to SED, Utility Scale Solar Energy District to allow for a solar energy generating and battery storage project and with the subject request, there are impacts and the Planning Commission ultimately must weigh those impacts against the benefits of the rezoning request.

The Planning Commission should consider if the rezoning request is compatible and not a substantial detriment with the surrounding zoning pattern and surrounding property and that it conforms to the underlying uses outlined in the Rural Conservation Area in the Comprehensive Land Use Plan for this general area of the County.

Proposed Project Conditions

Preliminary Conditions proposed by Planning Staff:

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1. The use of the property shall be limited to a 10-megawatt alternating current (MW AC) ground-mounted solar photovoltaic electric generating facility with 4-MW battery storage (the “Project”). The project site (the “Project Site”) shall consist of land identified as Dinwiddie County Tax Map Parcel 43-9 (the “Project Parcel”) and consisting of approximately 150.0 acres of which will be rezoned to Utility Scale Solar Energy District

(SED) and utilized for the Project. The Project will be developed in substantial conformity with the preliminary site plan dated February 16, 2021 and included with the CUP application (the “Cavalier Solar Site Plan”). The Project Site shall include the areas shown on the Cavalier Solar Site Plan and as may be shown on the final site plan (the “Final Site Plan”) containing racking, panels, inverters, transformers, cabling, battery storage and supporting infrastructure (collectively, the “Solar Facilities”) to include stormwater management areas.

2. The Applicant (or “Owner” or “Operator”, which may be used interchangeably) shall develop the Project Site in substantial accord with the Cavalier Solar Site Plan as determined by the Zoning Administrator. Significant deviations or additions, including any enclosed building structures not shown on the Cavalier Solar Site Plan shall require review and approval by the Planning Commission.
3. Studies and Plans. Prior to or concurrent with the submission of the Site Plan, the Applicant will submit to the County the studies and plans as set forth in this Section 3.

(a) Construction Management Plan (the “Construction Management Plan”). Applicant will submit the Construction Management Plan, including the following items:

- i. Proposed construction schedule and hours of operation;
- ii. Project access planning for each entry to the Project and any required road improvements;
- iii. Project security measures to be implemented prior to the commencement of construction of the Solar Facilities;
- iv. Dust mitigation and any burning operations; and
- v. Handling of construction complaints via a project liaison (the “Project Liaison”).

(b) Construction Traffic Management Plan/Traffic Mitigation Plan (the “CTMP”) and Road Repair Plan (the “Road Repair Plan”). The Applicant shall:

- i. Develop the CTMP in consultation with the County Planning Staff, the Virginia Department of Transportation (“VDOT”), the Dinwiddie County Sheriff’s Office, and the Virginia State Police to identify and expeditiously resolve or mitigate traffic issues that arise during the construction or decommissioning of the Solar Facilities, including but not limited to (A) lane closures, (B) signage, and (C) flagging procedures. Employee and delivery traffic shall be scheduled and managed so as to minimize conflicts with local traffic. Permanent access roads and parking areas will be stabilized with gravel, asphalt or concrete to minimize dust and impacts to adjacent properties. Traffic control methods shall be coordinated with VDOT prior to initiation of construction. The CTMP will identify on-site areas suitable for parking for construction workers and for trucks to be unloaded and to turn around without having to back onto public roadways during construction and decommissioning.
- ii. Develop the Road Repair Plan in consultation with VDOT to provide for repair of damage to public roads attributable to construction or decommissioning of the Solar Facilities. The Road Repair Plan shall provide that such repair restore the roads to conditions at least comparable to their conditions before the commencement of construction or decommissioning.

(c) Landscaping Plan (the “Landscaping Plan”) The Applicant shall submit the Landscaping Plan showing the Solar Facilities and the Project, including the security fence, screened from public rights-of-way and adjacent residential properties with existing or proposed vegetation, including the vegetative buffer surrounding the Project. The vegetative buffer shall be located outside of any public utility easement, if any, running along the property line. The vegetative buffer provided in the Landscaping Plan shall conform to the following requirements:

- i. The vegetative buffer will consist of trees and/or shrubs which at planting shall be a minimum of six (6) feet in height;
- ii. Existing vegetation will be maintained where possible and supplemented, as necessary;
- iii. The vegetative buffer will be regularly inspected and supplemented with additional plantings as necessary to replace dead trees and shrubs. To ensure this process is completed on a timely basis, Applicant will provide for an annual third-party inspection of the buffer which third-party will submit a report detailing the condition of the buffer and any needed replanting or supplementing due to thinning or vegetative attrition. A copy of this report will be provided to Applicant and County staff and Applicant will ensure the remedial measures are addressed. Applicant shall also provide the following:
- iv. The Applicant shall submit renderings along with the Site Plan describing the buffer areas, specifically delineating the areas where existing vegetation is to be maintained or supplemented and areas where the vegetative buffer will be established;
- v. The Landscaping Plan for Wilkinson Road and Wheelers Pond (Route 1) shall include sufficient landscaping to screen the solar panels and battery storage area from view by the motoring public driving along Wilkinson Road and Wheelers Pond Road. The determination of satisfaction of this requirement shall be made by the Zoning Administrator as part of the approval of the Site Plan.
- vi. Provisions for the establishment of the vegetative buffer in core areas either prior to or simultaneous with the commencement of construction of the Facility to ensure those new vegetative buffers are well-established prior to the completion of the Facility. No plants on the Department of Conservation and Recreation's Invasive Plants Species List will be used.
- vii. A twenty thousand dollar (\$20,000.00) landscaping bond will be posted for ten (10) years to ensure maintenance of the vegetative buffer in accordance with the Landscaping Plan. The bond shall be in a form acceptable to the County Attorney and shall be in place at the time of final site plan approval. The bond shall be replenished by Applicant in the event it is drawn upon by the County on or before December 31 of any given year during the first ten (10) years of the Project, calculated from the date of commencement of operation of the Project.

(d) Building and Electrical Plans. The Applicant shall submit building and electrical plans to the Building Official for approval.

(e) Final Environmental and Historic Survey Studies. The Applicant shall prepare and submit to the appropriate agencies (as applicable) the following studies and reports, and provide copies to the County:

- i. Wetland and Stream Delineation, including Preliminary Jurisdictional Determination from the Army Corps of Engineers;
- ii. Threatened and endangered species habitat assessment; and
- iii. Phase 1 archaeological and historical survey of the Project.

(f) Liability Insurance Certificate. The Applicant shall provide proof of adequate liability insurance for the Project.

(g) Grading Plan. The Project shall be constructed in compliance with the County approved grading plan (the "Grading Plan") as determined and approved by the Planning Director or its designee prior to the commencement of any construction activities and a bond or other security will be posted for the grading operations. The Grading Plan shall:

- i. Clearly show existing and proposed contours;
- ii. Note the locations and amount of topsoil to be removed (if any) and the percent of the site to be graded;

- iii. Limit grading to the greatest extent practicable by avoiding steep slopes and laying out arrays parallel to landforms;
- iv. Balance the earthwork on-site with no import or export of soil, with the exception of construction of any berms, if any, as otherwise provided herein;
- v. In areas proposed to be permanent access roads which will receive gravel or in any areas where more than a few inches of cut are required, provide that topsoil will first be stripped and stockpiled on-site to be used to increase the fertility of areas intended to be seeded; and
- vi. Take advantage of natural flow patterns in drainage design and keep the amount of impervious surface as low as possible to reduce storm water storage needs.

(h) Erosion and Sediment Control Plan. Unless the County chooses not to opt out of the Erosion and Sediment control program, thereby delegating that authority to DEQ, the County may undertake a third-party review of the Erosion and Sediment Control Plan with corrections completed prior to the County's review and approval of the Site Plan. The Owner or Operator shall construct, maintain and operate the Project in compliance with the approved plan, posting an Erosion and Sediment Control bond (or other security) for the construction portion of the project.

(i) Stormwater Management Plan. The County may require a third-party review with corrections completed prior to County review and approval. The Owner or Operator shall construct, maintain and operate the project in compliance with the approved plan. A storm water control bond (or other security) shall be posted for the project for both construction and post construction as applicable and determined by the Environmental Administrator. If the County chooses to opt out of Stormwater Management, DEQ will conduct all necessary Stormwater Management control review.

(j) Initial Groundwater Report. Prior to issuance of the building permit, the Applicant shall submit the initial groundwater monitoring report and confirm the schedule for updated reports as required by Section 22-234.67 of the Dinwiddie County SED District Regulations.

(k) Reimbursement for Third Party Reviews; Inspections. During the development of the Project, Applicant agrees to refund the County up to \$20,000 per year for any costs associated with the provision and/or employment of outside experts and consultants necessary to review specific technical issues related to the Project outside the County's expertise or for which the County has inadequate full-time staff. This provision shall commence upon submission of a Final Site Plan for approval by the Planning Director and continue through the date of commencement of commercial operation (the "Commercial Operation Date") for the Project, at which point this condition shall be deemed satisfied and the obligation will terminate. However, Applicant agrees to reimburse the County for up to the actual costs of employee time for inspection and other permit compliance duties, not to exceed 40 hours, in any calendar year during the life of the Project to off-set the costs to the County of inspections and other permit compliance duties. During this time, the County shall submit to Applicant invoices for such costs not less than quarterly and such invoices shall be paid within thirty (30) days of receipt.

4. Site Plan Features. The Final Site Plan will include and the Project will be developed in substantial conformity with the Cavalier Solar Site Plan dated February 16, 2021 and included with the CUP application and will include:

(a) a 75-foot setback maintained from the fence line of the Project to the edge of the right-of-way where the Site abuts the public rights-of-way along Wilkinson Road and wheelers Pond Road;

(b) a 75-foot wide setback for the remaining perimeter of the Project Site will maintained between the fenced solar arrays and the property lines of the adjoining properties.

(d) A vegetative buffer of will surround the perimeter of the Project Site. Existing trees and vegetation will be retained where possible and additional vegetation added where necessary as provided in the Landscaping Plan;

(e) no setbacks for the electrical collection/transmission lines right of ways; and

(f) landscaping along Wilkinson Road and Wheelers Pond Road as otherwise provided herein and as depicted in the Landscaping Plan as part of the Final Site Plan.

5. Limited Access to the Project. The Project may have the access as shown on the Cavalier Solar Site Plan.
6. Lighting. During construction of the Solar Facilities, any temporary construction lighting shall be positioned downward, inward, and shielded to minimize glare from all adjacent properties. Emergency and safety lighting shall be exempt from this construction lighting condition. Any onsite lighting provided for the operational phase of the Project shall be dark-sky compliant, shielded away from adjacent properties, and positioned downward to minimize light spillage onto adjacent properties.
7. Access and Inspections. The Applicant and property owners shall allow designated County representatives or employees access to the facility at any time for inspection purposes. Access and Inspection. The Applicant will allow designated County representatives or employees access to the facility at any time for inspection purposes, with advance notice to the Owner or Operator of the Project and subject to reasonable site safety and security requirements to ensure safe inspection by the County. The Project may be inspected by the County Building Official on an annual basis to ensure compliance with applicable State Building and Electrical Codes. The Project shall be required to have the Solar Facilities inspected annually for three (3) years by the Zoning Administrator or their designee following the commencement of commercial operation in order to verify continued compliance with the Conditional Use Permit and the Zoning Ordinance, as applicable. Additional inspections shall be conducted as necessary in the event of complaints and shall not replace the inspections specified in this section.
8. Training. The Applicant shall arrange a training session with the Dinwiddie County Public Safety Departments to familiarize personnel with issues unique to a solar facility before operations begin and shall repeat such training on an as-needed basis not to exceed once per year.
9. Compliance. The Solar Facility shall be designed, constructed, and tested to meet all relevant local, state, and federal standards as applicable.
10. Groundwater Monitoring. To establish the current groundwater quality and levels of specific element contaminates, groundwater monitoring shall take place prior to and upon completion of construction of the Project throughout the area of the Project. Ground water monitoring shall take place every five (5) years of the operation of the Project, and upon completion of decommissioning, with each report provided to the Zoning Administrator.
11. Signage. Warning signage shall be placed on the Solar Facilities to the extent required by any local, state or federal law or regulation. The Solar Facilities shall not be used for

displaying any advertising except for reasonable identification of the Owner and Operator of the Project. All signs, flags, streamers or similar items, both temporary and permanent, are prohibited on the Solar Facilities except as follows: (a) manufacturer's or installer's identification; (b) appropriate warning signs and placards; (c) signs that may be required by a governmental agency; and (d) signs that provide a 24-hour emergency contact phone number and warn of any danger.

12. Agricultural Use Value Program and Applicable Taxes and Fees. For any Project Parcel that has been part of the Agricultural Use Value program pursuant to Virginia Code Sections 58.1-3230 and 58.1-3231 during the past five years, all penalties and interest payments that are due to the County will be paid within ninety (90) days of issuance of the CUP.
13. Project Components and Design. The Solar Facilities shall comply with generally accepted national environmental protection and product safety standards for the use of solar panels and associated technologies for solar photovoltaic projects. The Project shall be constructed in compliance with the requirements of the most current Virginia Building and Electrical Codes in effect upon issuance of the building permit. The total height of the Solar Facilities shall not exceed 18 feet above the ground when orientated at maximum tilt. This height limitation shall not apply to the power poles, substation equipment and the connections to the existing transmission lines on the Property. Any electrical wiring used in the Project shall be underground (trenched) except:
 - (a) wiring directly connecting individual panels or arrays of panels,
 - (b) where necessary to avoid natural obstacles, wetlands or electrical interference, or
 - (c) where wiring is brought together for interconnection to system components, and/or the local utility power grid.
14. Decommissioning.
 - a. Decommissioning Plan. The Applicant shall submit a decommissioning plan (the "Decommissioning Plan") to the County in the form of a written agreement for approval in conjunction with the building permit. The Decommissioning Plan shall be in the form of a written agreement acceptable to the County, shall comply with Virginia Code Section 15.2-2241.2 and the Zoning Ordinance, and shall set forth the joint and several responsibilities of the Applicant and all the successors and assigns of the Applicant (the "Responsible Party"). The purpose of the Decommissioning Plan is to specify the procedure by which the Responsible Party would remove the Solar Facility after the end of its useful life and restore the property for agricultural uses.
 - b. Decommissioning Cost Estimate. The Decommissioning Plan shall include a decommissioning cost estimate (the "Decommissioning Cost Estimate") prepared by a Virginia licensed professional engineer.
 - i. The Decommissioning Cost Estimate shall provide the gross estimated cost to decommission the Solar Facilities in accordance with the Decommissioning Plan and these Conditional Use Permit Conditions. The decommissioning cost estimate may include any estimates or offsets for the resale or salvage values of the Solar Facilities equipment and materials.
 - ii. The Responsible Parties shall reimburse the County for an independent review and analysis by a Virginia licensed professional engineer of the initial Decommissioning Cost Estimate.

- iii. The Responsible Party shall update the Decommissioning Cost Estimate every five (5) years from the Commercial Operation Date and reimburse the County for an independent review and analysis by a Virginia licensed professional engineer of each Decommissioning Cost Estimate revision.
- c. Security.
 - i. Prior to the County's approval of the building permit, the Applicant shall provide decommissioning security in the Decommissioning Cost Estimate. A financial security (the "Financial Security") shall be provided in accordance with Virginia Code Section 15.2-2241.2 and the Zoning Ordinance.
 - ii. Upon the receipt of the first revised Decommissioning Cost Estimate (following the 5th anniversary from The Commercial Operation Date, if there is any increase in the Decommissioning Cost Estimate, the Financial Security shall be increased by the Applicant, or its successors and assigns, within ninety (90) days and shall be similarly trued up for every subsequent five year updated Decommissioning Cost Estimate.
 - iii. The Financial Security must be received prior to the approval of the building permit and must stay in force for the duration of the life span of the Solar Facilities and until all decommissioning is completed. If the County receives notice or the County receives notice that the Financial Security may be revoked, the County may give a notice of violation in accordance with these Conditional Use Permit Conditions and if the violation is not cured, the County shall be entitled to take all action to obtain the rights to such financial security.
 - iv. Notwithstanding the foregoing requirements in subsections (i)-(iii) above, an alternative security arrangement may be accepted by the County so long as it is a form acceptable to the County Attorney.
- d. Applicant Obligation. Within six (6) months after the cessation of use of the Solar Facilities for electrical power generation, the Applicant or its successors and assigns, at their sole cost and expense, shall commence decommissioning of the Solar Facilities in accordance with the Decommissioning Plan approved by the County. Following the completion of decommissioning of the entire Solar Facilities arising out of a default by the Applicant, or its successors and assigns, any remaining Financial Security held by the County shall be distributed to the Owner or Operator of the Solar Facility.
- e. Applicant; Decommissioning by the County.
 - i. If the Applicant, or its successors or assigns, fail to timely decommission the Solar Facilities, the County shall have the right, but not the obligation, to commence decommissioning activities and shall have full access to the property and access to the full amount of the Financial Security.
 - ii. If applicable, any excess Financial Security shall be returned to the Owner or Operator, or their successors or assigns, after the County has completed the decommissioning activities.
 - iii. Prior to the issuance of any permits, the Applicant shall deliver a legal instrument to the County granting the County the right to access the property to complete the decommissioning upon the Applicant, Owner or Operator's default. Such instrument(s) shall bind the Applicant and their successors, heirs, and assigns. Nothing herein shall limit other rights or remedies that may be available to the County to enforce the obligations of the Applicant, including under the County's zoning powers.

- f. Equipment/building removal. All physical improvements, materials, and equipment related to Solar Facilities, both surface and subsurface components, shall be removed in their entirety. The soil grade shall also be restored following disturbance caused in the removal process. Perimeter fencing shall be removed and recycled or re-used. The County in its sole discretion may grant an exception to removal of the materials and equipment upon written request from the current or future landowner indicating areas where removal is not desired.
- g. Infrastructure removal. All access roads shall be removed, including any geotextile material beneath the roads and granular material. The County in its sole discretion may grant an exception to removal of the access roads and associated culverts or their related material would be upon written request from the current or future landowner to leave all or a portion of these facilities in place for use by that landowner. Access roads shall be removed within areas that were previously used for agricultural purposes and topsoil shall be redistributed to provide substantially similar growing media as was present within the areas prior to site disturbance.
- h. Partial Decommissioning. If decommissioning is triggered for a portion of the Solar Facilities, then the Applicant or its successor or assigns shall commence and complete decommissioning, in accordance with the Decommissioning Plan, for the applicable portion of the Solar Facilities; the remaining portion of the Solar Facilities would continue to be subject to the Decommissioning Plan. In the event of a partial decommissioning, the financial security shall be reduced in direct proportion to the proportion of the Project being decommissioned. Any reference to decommissioning the Solar Facilities shall include the obligation to decommission all or a portion of the Solar Facilities whichever is applicable with respect to a particular situation.

15. Permits, reports, etc.

- a. Regular Reports. Prior to the Commercial Operation Date of the Project, the Applicant shall submit a report annually to the County Administrator outlining the permitting and development plan progress for the Project. After the Commercial Operation Date, the Applicant shall submit an annual operational report to the County Administrator.
- b. All applicable federal, state, and local permits shall be obtained and filed with the Dinwiddie County Planning Department prior to the Commercial Operation Date. This Conditional Use Permit is effective only upon receipt by the Dinwiddie County Planning and Zoning Department of all such permits.
- c. All applicable federal, state, and local permits shall be maintained in good standing by Owner or Operator. Owner or Operator shall provide copies of such permits to Dinwiddie County Planning and Zoning Department during operations. Failure to maintain all applicable permits shall be grounds for revocation of this Conditional Use Permit.
- d. Copies of violations and/or reports to or from applicable federal and state agencies shall be made available to Dinwiddie County upon request of the County.

16. Project Liaison. The Applicant will designate at least one public liaison (the “Liaison”), will publicize a toll-free phone number and email address for communication with the Liaison during construction, and will post such information on a temporary sign at each major access point to the Solar Facilities. The Applicant shall, at a minimum, publish this information on the Operator’s website and provide the Zoning Administrator with the same information for publication on the County’s website and other social media. The Liaison shall act as a point of contact between citizens and construction crews. The Liaison shall be available in person and by phone during active construction hours and shall respond to any questions related to the Solar Facilities or the Project within 72 hours. The Liaison role shall commence at the initial preconstruction meeting. The Liaison shall prepare a monthly report detailing any complaints, complaint date, resolution, and resolution date of any inquiries. The Liaison shall provide a copy of the report to the Zoning Administrator on the first business day of each month throughout the construction period and for an additional six (6) months following the Commercial Operation Date.
17. Compliance with laws. All operations pursuant to this conditional use permit shall be conducted in compliance with all applicable federal, state and local laws and regulations. In the event of a conflict, the CUP Conditions control.
18. Annual review. This CUP shall be reviewed a minimum of once per calendar year to evaluate compliance with conditions contained herein.
19. Violations and Revocation. At all times, all activities conducted on the Project Site shall be in conformance with the CUP and all federal, state and local laws, regulations and ordinances. In the event of a conflict, the CUP Conditions control. A violation of any type continuing for 60 days from the date a written notice of violation (“NOV”) is mailed to the Applicant’s point of contact, as designated in writing to the Zoning Administrator, may result in revocation of this CUP if the Operator has failed to meet with the Zoning Administrator and submit a plan to address the violations cited in the NOV. With respect to any road repairs necessitated by the Operator’s use of the roads during construction, any such repairs shall be made within a reasonable period of time after obtaining approval from VDOT. Failure to comply with any and all conditions as approved by the Board of Supervisors may result in this CUP being revoked after a public hearing by the Board.
20. Successors and Assigns. The CUP and the Conditions shall apply to the Applicant and any successors or assigns of the Applicant.

Planning Staff Recommendation:

The Planning staff has reviewed the request and with the proposed utility scale solar project with battery storage, there are impacts, and the Planning Commission ultimately must weigh those impacts against the benefits of the development. Staff has prepared the aforementioned conditions in an attempt to ameliorate the impacts of the proposed project.

PLANNING COMMISSION RECOMMENDATION

Since this is a zoning matter, the standard statement regarding the Planning Commission's recommendation on this zoning matter must be read. In order to assist, staff prepared the following statement:

BE IT RESOLVED, that in order to assure compliance with Virginia Code Section 15.2-2286(A) (7) it is stated that the public purpose for which this Resolution is initiated is to fulfill the requirements of public necessity, convenience, general welfare and good zoning practice, I move that the Glidepath Power Solutions, request to receive a conditional use permit to operate an 10-megawatt alternating current solar photovoltaic (PV) ground mounted electric generation project with 4-MW battery storage, as described in conditional use permit request, C-21-4, be recommended for (approval with conditions or disapproval) to the Board of Supervisors.