

**GOOCHLAND COUNTY**  
**Board of Supervisors**  
**Solar Energy Facility and Energy Storage Facility Policy**

**Date:** \_\_\_\_\_

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- A. **Purpose.** *Solar energy facility, principal (SEFP) and Energy storage facility (ESF)* are uses defined within the Goochland County Zoning Ordinance. The SEFP use may be permitted by a Conditional Use Permit in the A-1 District. The ESF use may be permitted by a Conditional Use Permit in the A-1, A-2, M-1 and M-2 Districts. A conditional use permit provides that the County evaluate a use application on an individual basis through the consideration of specific factors, to include ordinance and comprehensive plan compliance, land use compatibility, and the impacts of the specific use. The purpose of this policy is to serve in the County's evaluation, and an applicant's preparation, of an application for an SEFP or ESF. As part of this policy there is provided land use guidance and recommended base conditions to be considered, evaluated and, as appropriate, adopted with SEFP or ESF zoning applications.
- B. **Additional Provisions:** In addition to the criteria in this policy for evaluation of the zoning application, staff shall consider the Siting Agreement provisions where such have been adopted by the Board of Supervisors. Where an SEFP intends to include an ESF or similar uses, such uses should also be included within the conditional use permit application and detailed on any conceptual plans.
- C. **General Criteria and Application Requirements.** Appendix A provides general criteria related to an SEFP request and specific application requirements for such use that are in addition to standard zoning application requirements.
- D. **Standards Conditions.** Appendix B lists the standard recommended conditions related to the approval of an SEFP. Appendix C lists the standard recommended conditions related to the approval of an ESF. As each application is situationally unique, these standard conditions may not sufficiently address all site or operation specific concerns associated with a particular zoning application and may require additional or modified conditions to address such concerns, or to ensure compliance with the comprehensive plan or the purposes of the Zoning Ordinance.
- E. **Policy Intent.** The recommendations provided herein are intended to address the Comprehensive Plan guidance for the Rural Enhancement land use category in which an SEFP may be located through standards that encourage the preservation of the existing rural character and protect both natural and scenic resources. The provisions are also intended to meet the goals of planning and zoning under the Code of Virginia and to provide for the health, safety, convenience, and welfare of our community. The recommendations provide for this utility/business use while considering the needs of the local agricultural industry and the goal of preservation of agricultural and forestal lands. Through reasonable regulation, the health and safety of the community are addressed with provisions to include traffic management, decommissioning procedures, fencing, design, and equipment standards. Additionally, the convenience and welfare of the community are considered through provisions which preserve rural viewsheds, protect the natural environment, protect the food supply, and help ensure that the incompatibility between the use and the plan for residential and agricultural uses of the area may be minimized.

**Appendix A: General Criteria and Application Requirements:**

<b>Solar Energy Facility, Principal (SEFP)</b>	
<b>General Criteria</b>	
<b>Comprehensive Plan Designation</b>	SEFPs may only be located on property zoned A-1, Agricultural General and designated on the Comprehensive Plan as Rural Enhancement Areas.
<b>Distance Separation</b>	A minimum separation of 2 linear miles, as measured between closest property lines, shall be provided between SEFPs, as measured between closest property lines.
<b>Locational Requirements</b>	SEFP shall be located on a contiguous site of no less than 30 acres and no more than 1000 acres.
<b>Site Environmental Requirements</b>	Development in wetlands or other environmentally sensitive areas shall generally be avoided.
<b>Farmland Preservation</b>	No more than 20% of the area utilized for the SEFP may include Prime Agricultural lands and/or Lands of Statewide Significance
<b>Application Requirements</b>	
<b>Project Description</b>	Project overview in textual form that includes estimated facility completion date, operational lifespan of facility, approximate rated capacity of solar energy system, specified types of solar equipment to be placed on site and description of any anticipated supplementary structures or uses.
<b>Concept Plan</b>	Plan shall include, at a minimum, location, access points, anticipated location of transmission lines and other utility connections, general location of solar equipment and supplementary facilities to be placed on site, fencing, buffers, and other items required for zoning applications layout plans.
<b>Phasing Plan</b>	If facility development is to be phased, a general phasing plan shall be provided.
<b>Siting Agreement</b>	A copy of the Siting Agreement approved by the Board of Supervisors, if applicable.
<b>Plat</b>	Survey plat of property and facility boundaries which shall also include documentation verifying amount of Prime Agricultural lands or Lands of Statewide Significance within the facility

**Appendix B: Standard CUP conditions – Solar Energy Facility, Principal**

1. Use. A solar energy facility, principal, may be operated on the Property subject to these conditions.
2. Plan of Development. Site shall be subject to the Plan of Development process as established in Article 21 of Chapter 15 and the additional provisions herein.
3. Required Approvals. Use shall not begin until a plan of development (POD) is approved, all POD improvements have been installed and approved by the County, and any other approvals that may be required by other departments (such as a building inspection change of use or a health department approval) have been obtained.
4. Siting Agreement. Use must comply with the approved Siting Agreement for the Property. *[as applicable]*
5. Setbacks. The solar facility operational area, to include any buildings, structures, equipment, parking, and disturbed areas, shall have a minimum setback of:
  - a. 150 feet from any property with an existing residence;
  - b. 100 feet from any other property or road;
  - c. 100 feet from wetlands, rivers, streams, or other environmentally sensitive feature; and
  - d. 25 feet from any required buffer.
6. Buffers. A buffer shall be provided equal to the required setback provided in 5 a-c. Each buffer shall comply with the requirements of buffers and landscaping materials in Chapter 15 and the following:

Landscape Type [1]	Amount		Size at Planting			Size at Maturity	
	100-foot buffer Number/Linear feet	150-foot buffer Number/Linear feet	Caliper	Multi- Stem Height	Height	Height/ Years	Crown Spread/ Years
Small Deciduous Trees	2/30	3/30	2"	8' [1]			More than 12'/10
Large Deciduous Trees	2.5/50	3.5/50	2.5"	10' [1]			More than 30'/20
Evergreen Trees	4/ 30	6/30			6'	18'/20	
Medium Shrubs	3/10	4.5/10			18"	3'/5	

[1] County reserves the right to approve proposed composition of species and landscaping layout.  
 [2] Multi-stem trees shall have a minimum of 3 canes

- a. Preservation. Whether parcels are developed or undeveloped, preservation of existing trees and shrubs within required buffers shall be maximized to provide continuity,

improved buffering and to minimize new landscaping that needs watering. All trees located within a buffer shall be retained unless removal is necessary to accommodate vehicular access and/or utilities that run generally perpendicular through the buffer, and which are approved through plan of development review with exact locations of access and utilities determined by the director of community development. Buffers shall be exclusive of easements which are generally parallel to the buffer, road fill slopes, and any cut slopes steeper than 3 to 1. Easements crossing buffers shall generally be at right angles or shall cross the buffer in a manner to have the least impact to the buffer. Stormwater ponds or BMP facilities may not be located in a required buffer.

- b. **Buffer Vegetation Required.** At a minimum, buffers shall preserve, include, or be planted with materials as outlined in Table 3.b. For sites where no creditable vegetation exists, planted buffers may include a minimum four-foot-high berm with 3:1 maximum side slope and the provision of the required buffer planting materials in Table 3.b. provided that small deciduous trees may be calculated per 50 linear feet and medium shrubs per 15 linear feet. A landscape plan meeting the approval of the director of community development shall be provided at time of plan of development detailing any vegetation preserved, credited, or proposed to be planted to comply with buffer requirements.
- c. **Supplemental vegetation.** In addition to the provisions of a and b where buffer areas are disturbed or where existing native timber stands are less than 50 feet in depth the director of community development may require the provision of one or more double staggered rows of evergreen trees meeting the height requirements of Table 3.b. and spaced 10 feet on center for each 50 feet of buffer depth missing.
- d. **Credit.** Any healthy existing tree or shrub may be included for credit towards landscaping requirements as long as credited existing vegetation is reasonably distributed throughout the length and depth of the setback or buffer area. All existing vegetation which is to be preserved on the site shall be shown on the required landscaping plan and grading and erosion control plans, or when there are groups of trees or shrubs, such groups may be outlined. Any existing trees to be removed shall be clearly delineated on the landscaping plan and grading and erosion control plan. If any tree or shrub that has been credited or planted dies, one tree or shrub shall be planted for each tree or shrub lost. The removal of credited or planted trees or shrubs in buffers without approval from the director of community development shall result in two trees or shrubs being planted for each tree or shrub removed.
- e. **Surety for Landscaping.** Prior to the approval of a plan of development, surety shall be provided for any landscaping plantings or improvements proposed for buffers or screening.
- f. **Maintenance.** The owner or his agent shall be responsible for the maintenance and replacement of all required landscaping materials. All plant material shall be tended

and maintained in a healthy growing condition, free from refuse and debris. Limbing of trees shall not be permitted unless the director of community development determines that limbing is necessary to insure healthy growth of understory vegetation.

7. Structure Views Minimized and Screening. Any proposed structures, equipment and related items shall be of a neutral color to minimize visual obtrusiveness. Excluding solar panel arrays, facility outdoor equipment or storage shall be screened unless determined through plan of development review that provided buffer is sufficient to mitigate view from adjacent property or road.
8. Access. In addition to, or as a part of, any road access approved in coordination with Goochland County and VDOT, access to the property shall be provided for Goochland County Fire Department, and where necessary Environmental Engineering, in a manner satisfactory to each department as determined at time of plan review. Location and design of access roads interior to the site necessary for the passage of emergency services and necessitated county inspections shall also be established during plan of development.
9. Height. Excluding transmission utility poles serving the site, no buildings, structures, solar panel arrays or other equipment utilized on the site shall exceed 20 feet in height. The director of community development may approve the permitted height to be exceeded where due to terrain, screening or other mitigation visibility of a structure is minimized.
10. Transmission lines. Except for lines that are solely subject to State Corporation Commission jurisdiction, and where necessary for lines to directly connect to existing transmission lines or any approved electrical substation, new transmission lines are subject to plan of development review and shall not be located above ground. The director of community development may approve use of above ground transmission lines where determined during plan review that such action would mitigate impact upon protected environmental features or there exist other site-specific features where underground placement of lines is not feasible.
11. Wildlife Habitat Friendly Design. Design of facility shall minimize impact or avoid forested area, wetlands, or other sensitive habitats to the extent possible. Vegetative groundcover is required to be planted and maintained within the facility to include the ground below, amid and surrounding the solar arrays. Such groundcover should consist of native groundcover appropriate to the region that includes species beneficial to birds, bees, or other pollinators. Fence breaks, equipment grouping, or other appropriate methods shall be incorporated to permit passage of wildlife. Detailed descriptions of groundcover species, planting methods and ongoing maintenance program shall be provided with plan of development application.
12. Fencing. Security fencing and gates shall be provided for areas of facility operation. Fencing shall be located interior to the buffer when possible. Maximum height for

fencing shall be eight (8) feet and should include wildlife friendly design where appropriate.

13. Land disturbance and inspection. Land disturbance activity shall be limited to no more than 100 acres at a time unless a greater amount is permitted at the time of plan review by the director of community development. Such area of disturbance shall be stabilized prior to continuing further land disturbance activity in additional areas. Land disturbance activities and stabilization shall be supervised by a third-party engineer or other qualified individual as approved by the director of community development, and weekly reports of activities, as well as the final stabilization report, shall be submitted for approval by the director. All fees associated with any third-party review shall be the responsibility of the registered land disturber.
14. Traffic management plan. When determined by VDOT or the director of community development that construction or decommissioning activity for the site creates a significant traffic or safety impact upon, or damage to, area roads or properties, a traffic management plan shall be provided. The plan shall be provided at time of plan of development review and shall include a reasonable road maintenance plan if deemed appropriate by VDOT or the director of community development.
15. Airport and Federal Aviation Administration (FAA) approval. Prior to plan of development approval, applicant shall provide approval/clearance from the FAA and demonstrate that panels utilize anti glint/glare coating.
16. Hours of Construction and decommissioning activity. Except as provided herein, all construction and decommissioning activity shall be limited to the hours of 7 AM to 7 PM Monday through Saturday. Pile driving activity will be further limited to the hours of 9 AM to 5 PM Monday through Saturday. No construction activities will be permitted on Sunday.
17. Facility operation and design.
  - a. Facility design, construction and installation shall conform to applicable industry standards, including those of the American National Standards Institute (ANSI), Underwriters Laboratories (UL), the American Society for Testing and Materials (ASTM), or other similar certifying organizations, and shall comply with the Uniform Statewide Building Code and with all other applicable fire and life safety requirements. The type, and manufacturer specifications of, solar panels shall be submitted for review and approval as part of the plan of development application and may be modified through request to, and approval by, the director of community development;
  - b. Prior to start of electricity transmission, documentation shall be provided to the director of community development verifying interconnection agreement or similar agreement with the applicable public utility pursuant to a Power Purchase Agreement (PPA) or other off taker as permitted by state law or the State Corporation

Commission, and notification of when electricity transmission is to begin. The director of community development shall be notified by certified mail within 30 days of cessation of such agreement. Where such power distribution is permitted by law, agreements for power distribution which do not require a PPA shall also comply with the above documentation and notification;

- c. The director of community development shall be notified of any planned substantial upgrades or changes made to the design or operation of the facility a minimum of 60 days before any activity related to such upgrades or changes are undertaken. This shall not preclude changes resulting solely from an emergency provided that such changes shall be disclosed within 30 days and shall be subject to county inspection and review for compliance with applicable standards and regulations.
  - d. Generation of power shall be limited to photovoltaic panels, provided that any on-site buildings may utilize integrated photovoltaic building materials;
  - e. Solvents used for the cleaning of solar panels shall be biodegradable;
  - f. Wiring, excluding that which is on a solar array, shall be located underground except where necessary to directly connect to public service corporation;
  - g. Solar panels shall be placed so as to prevent concentrated solar radiation, heat or glare being directed onto other properties or roads;
  - h. Onsite lighting shall be the minimum necessary for security or onsite maintenance and shall comply with Article 25 of Chapter 15;
  - i. Solar equipment shall not be utilized to provide advertising or function as signs;
  - j. Steep slopes of 20 percent or greater shall remain in a natural, undisturbed state to the extent practicable, unless otherwise approved by the director of community development;
  - k. Solar panels shall not be installed on steep slopes of 20% or greater;
  - l. Except for initial construction or decommissioning activity, maintenance periods or emergency conditions which require temporary use of onsite generator(s), noise generated by the facility shall not exceed 60 dBA as measured at property line with any adjacent property not part of facility; and
  - m. Facility owner must submit and receive approval of a maintenance inspection agreement from the county to provide for inspection of facility and panels, and thereafter comply with the agreement.
18. Change of facility owner, facility operator, or property owner. The director of community development shall be notified by certified mail of any change in ownership of the facility owner, facility operator, or property owner, within 60 days of the change.

19. Decommissioning plan. A decommissioning plan shall be submitted for review and approval with the initial plan of development. A decommissioning plan shall include the following:

- a. Contact information for the party identified as primarily responsible for site decommissioning. Regardless of who is identified as primarily responsible for decommissioning, the county may hold the property owner, facility owner, and/or facility operator responsible for decommissioning the facility. The contact information shall be updated with notice to the director of community development if party changes;
- b. Timeline for, and written description of, decommissioning procedures which shall include, but not be limited to, removal of any above and below ground tanks, cables, fencing, debris, buildings, structures, or equipment, to include foundations and pads, related to the facility and the restoration of solar facility land and related disturbed areas to a natural condition or other approved state. At time of zoning approval, the Board of Supervisors may approve and condition a request by an applicant to have certain items intended to be utilized to serve a permitted use on the site, to remain provided plan of development approval is obtained;
- c. “Natural condition” means the stabilization of soil to a minimum depth of 3 feet and restoration of site vegetation and topography to pre-existing condition, provided that the exact method and final site restoration plan shall be subject to plan of development review giving, among other things, consideration to impacts upon future site use, environmental and adjacent property impacts. The director of community development may approve a request by the landowner for alternatives to site restoration to allow roads, pads or other items which will serve a future permitted site use to remain. Where applicable, if the director of community development determines that a restoration plan significantly deviates from the description and conditions approved by the Board such plan shall require amendment of conditions through the zoning process;
- d. Unless otherwise approved during decommissioning plan review all wetland protections, buffers, natural vegetation, erosion control and stormwater features shall remain in place;
- e. Plan should include statement of disposal or recycling destination for solar panels. Recycling or disposal of solar panels will not be permitted in Goochland County.
- f. A detailed estimate of the cost of decommissioning, and site restoration or, if approved by Board of Supervisors, future site development. If decommissioning is phased, then such costs shall be so described and calculated to match phased plan. An estimate shall be prepared by an engineer licensed in the state of Virginia, having expertise in the removal of solar facilities and site restoration as applicable to request; and

- g. Decommissioning plan must require Landowner, applicant, or facility owner shall provide the county with a surety, payable to the county, in a form acceptable to the director of community development, equal to the estimated costs of the decommissioning and site restoration or redevelopment as applicable. Any such surety shall be provided prior to plan of development approval for the facility and shall include the ability for automatic adjustment for inflation or as necessary based upon decommissioning and/or restoration plan update.

20. Decommissioning, abandonment, and maintenance compliance.

- a. The facility owner or operator must update the decommissioning plan and site restoration plan, accompanying estimates and surety every three years and provide it to the director of community development.
- b. The director of community development shall be notified by certified mail 30 days prior to the intended decommissioning of a solar facility.
- c. A sealed dry-waste container shall be maintained at the facility at all times for the temporary storage/disposal of damaged or unusable solar panels. Damaged or unusable panels or arrays shall be removed from site within 60 days of removal from service.
- d. Any applicable permits shall be obtained prior to decommissioning activities.
- e. A solar facility, or any portion thereof, shall be considered abandoned where not utilized for the generation and distribution of electricity for a continuous period of six months. The director of community development may extend such time period where evidence is provided by the facility owner or operator demonstrating that the failure to utilize the facility for power generation is beyond the reasonable control of facility owner or facility operator, the facility is operationally capable of generation and has not been abandoned.
- f. Decommissioning procedures shall be completed within 1 year of decommissioning notice, abandonment of a solar facility, or a shorter time period where in writing the building official or other county official determines the facility or some aspect thereof to be unsafe. If facility owner, facility operator or property owner fails to meet decommissioning requirements or comply with a request for removal or repair, the county may at its option:
  - 1) remove and salvage facility equipment and structures and perform related restoration using provided surety. If the decommissioning surety and salvage recompense is insufficient, the county shall have the right to recover its costs from facility owner, facility operator, or property owner, jointly or severally, to include legal fees, expenses, and fines; or

- 2) pursue legal recourse to have the solar facility, or portion thereof as applicable, removed. The county may seek to recover, from facility owner, facility operator, or property owner, its costs, legal fees and legal expenses incurred to have the facility decommissioned in compliance with approved plan.

**Appendix C: Standard Conditions Energy Storage Facility.**

1. Use. An energy storage facility may be operated on the Property subject to these conditions.
2. Siting Agreement. Use must comply with the approved Siting Agreement for the Property. [*as applicable*]
3. Setback. Minimum 100-foot setback from road or adjacent property;
4. Access. Access to the property shall be provided for Goochland County Fire Department, and where necessary Environmental Engineering, in a manner satisfactory to each department as determined at time of plan review. Location and design of access roads interior to the site necessary for the passage of emergency services and other necessitated county inspections shall also be established during plan of development;
5. Buffer. A minimum buffer of 50 feet in depth shall be provided along road and adjacent property lines;
6. Screening. Equipment shall be screened from view of roads and adjacent properties; and
7. Wiring. Wiring shall be located underground except where necessary to directly connect to public service corporation transmission or distribution lines
8. Transfer or Lease. Prior to the transfer or long-term lease of the Property, the property owner(s) shall notify, in writing, (a) the Department of Community Development of the planned transfer or lease, and (b) the new owner or lessee of this CUP and its conditions, with a copy to the Department of Community Development.