

Ordinance for Solar Energy Facilities in Lunenburg County, VA

(as enacted by the Lunenburg County Board of Supervisors
on September 9, 2021)

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**Ordinance for Solar Energy Facilities
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Section 1. Purpose and intent.

The purpose of this article is to provide for and regulate the location, siting, development, construction, installation, operation, and decommissioning of solar energy facilities in the county in a manner that promotes the goals of the Comprehensive Plan to facilitate safe, effective, and efficient use of such facilities while protecting the health, safety, and welfare of the community and avoiding adverse impacts on county resources.

The intent of this article is to allow solar energy facilities in a manner that promotes the development of renewable energy sources, while limiting impacts on natural resources, including pollinator and wildlife habitats, water resources, and existing agricultural, forestry, residential, commercial, industrial, historical, cultural, and recreational uses of property or the future development of such uses of property in the county.

This article is not intended to abridge safety, health, environmental, or land use requirements contained in other applicable laws, codes, regulations, standards, or ordinances. This article does not supersede or nullify any provision of local, state, or federal law that applies to solar energy facilities.

Section 2. Definitions.

The following words, terms, and phrases, used in this article, shall have meanings ascribed to them in this section, except where the context clearly indicates a different meaning:

2232 review. The review required by the Code of Virginia (§15.2-2232) for features not shown on the adopted master plan, including public utility facilities.

Acreeage coverage. The total acres covered by PV pods, buildings, inverters, a substation, battery storage, ancillary equipment, and fencing around these items but excluding wildlife corridors, mandated setbacks, wetlands, and other avoided natural or cultural features outside of the security fencing on the project site.

Applicant. The person or entity who applies to the county for a zoning permit and/or Conditional Use Permit, to site, develop, construct, install, and/or operate a solar energy facility under this article.

Brownfield. A former industrial or commercial site typically containing low levels of environmental pollution such as hazardous waste or industrial byproducts.

Decommissioning and Reclamation Plan. A plan to disconnect, remove, and properly dispose of equipment, facilities, or devices and restore the site.

Facility Owner. The person or entity that owns or leases all or a portion of the solar energy facility.

Integrated Photovoltaics (Integrated PV). Photovoltaics incorporated into building materials for structures, such as shingles or roofs. Such structure(s) may be free standing and be an accessory use to the principal use of the property.

Operator. The person or entity responsible for the overall operation and management of the solar energy facility, if different than the facility owner.

Photovoltaic (PV). Materials and devices that absorb sunlight and convert it directly into electricity.

Project area. The area within a site used for the construction and operation of the solar energy facility, including security fencing but excluding setbacks and buffer areas.

PV Pod. Contiguous rows of solar panels, including the space between rows, fenced together in a group. A solar facility is typically comprised of multiple pods.

Rated capacity. The maximum capacity of a solar energy facility based on the sum of each photovoltaic system's nameplate capacity.

Site. The property parcels containing a solar energy facility.

Site Owner. The person or entity that owns all or a portion of the site, if different than the facility owner.

Siting Agreement. An agreement entered into between the Applicant and the county as defined in Va. Code § 15.2-2316 et seq.

Solar Energy Generating Facilities (Solar Facilities). Solar energy generating devices, inverters, a substation, ancillary equipment, buildings, security fencing, access roads, setbacks, and screening on the site. Solar energy generating devices utilize sunlight as an energy source to heat or cool buildings, heat or cool water, or produce mechanical power by means of any combination of collecting, transferring, or converting solar generated energy. The term applies to, but is not limited to, solar photovoltaic systems, solar thermal systems, and solar hot water systems.

Solar Facility, Community. A facility that generates electricity from sunlight that was not constructed by an investor-owned utility that will be part of an investor-owned utility's community solar pilot program. A community solar facility does not exceed two megawatts (2 MW) alternating current. This facility type is a subset of either integrated PV, small-scale, or medium-scale solar facility.

Solar Energy Facility, Large-scale. A ground-mounted solar facility that generates electricity from sunlight on an area adequate to support a rated capacity of five megawatts (MW) alternating current or greater.

Solar Energy Facility, Medium-Scale. A ground-mounted solar facility that generates electricity from sunlight on an area adequate to support a rated capacity greater than one megawatt (1 MW) and less than five megawatts (5 MW) alternating current.

Solar Facility, Multi-Family. A ground-mounted facility that generates electricity from sunlight that was not constructed by an investor-owned utility and that will be part of an investor-owned utility's multi-family shared solar pilot program. A multi-family shared solar facility does not exceed three megawatts (3 MW) alternating current at any single location or that does not exceed five megawatts (5 MW) alternating current at contiguous locations owned by the same entity or affiliated entities, serves at least three subscribers, is connected to the electric distribution grid, and is located on a parcel of land on the premises of the multi-family utility customer or adjacent thereto.

Solar Facility, Power Purchase Agreement (PPA). A facility that generates electricity from sunlight that was not constructed by an investor-owned utility and that will be part of an investor-owned utility's power purchase agreement solar pilot program. A facility has a capacity of no less than 50 kilowatts and no more than three megawatts (3 MW) alternating current. This facility type is a subset of either rooftop, small-scale, or medium-scale solar facility.

Solar Energy Facility, Small-Scale. A ground-mounted solar facility that generates electricity from sunlight on an area adequate to support a rated capacity of one megawatt (1 MW) alternating current or less.

Viewshed. The view of an area from a specific vantage point. It includes all surrounding points that are in line of sight with that location.

Section 3. Applicability; Permitting.

The requirements set forth in this article shall govern the location, siting, development, construction, installation, operation, and decommissioning of solar energy facilities in the county. Battery energy storage facilities will be addressed by a separate ordinance.

Facilities shall be permitted as follows:

- a. ***Integrated Photovoltaics (Integrated PV)*** may be allowed by-right on roofs structures or free standing as an accessory use to the principal use of the property. Integrated PV systems shall have a zoning permit application to the Zoning Administrator for review and approval; follow all Federal, State, and Local regulations; and be located on the property to be served. Rooftop facilities on commercial or industrial buildings shall also submit an engineering study to the Building Official Office for review and approval.
- b. ***Solar energy facilities, small-scale*** are required to have a Conditional Use Permit unless waived by the County. The Zoning Administrator may require additional information from the applicant to determine whether the facility requires a Conditional Use Permit. If a Conditional Use Permit is required, the Zoning Administrator may exempt applications from some of the requirements of this article.

- c. *Solar energy facilities, medium-scale* are required to have a Conditional Use Permit unless waived by the County. The Zoning Administrator may require additional information from the applicant to determine whether the facility requires a Conditional Use Permit.
- d. *Solar energy facilities, large-scale* are required to have Conditional Use Permit to be constructed, installed, or operated in the county. No large-scale solar energy facility shall be constructed on property that carries a Conservation Easement, whether local, state, or federal.
- e. All solar facilities shall require a County Building Permit and shall be subject to the requirements found in Virginia Code § 15.2-2288.7 (Local regulation of solar facilities).

Section 4. Applications and procedures for solar energy facilities.

In addition to materials required for a permit application under section 3, applications for solar energy facilities shall, unless otherwise provided herein, include:

1. A pre-application meeting. The meeting shall be held with the Zoning Administrator to discuss the location, scale, and nature of the proposed use and what will be expected during that process.

2. Community meeting. An in-person public meeting shall be held at least 30 days prior to the determination that the project is in substantial accord with the Comprehensive Plan to give the community an opportunity to hear from the applicant and ask questions regarding the proposed facility. The meeting shall adhere to the following:

- a. The applicant shall inform the Zoning Administrator and adjacent property owners in writing of the date, time, and location of the meeting, at least 14 but no more than 21 days, in advance of the meeting date.
- b. The date, time and location of the meeting shall be advertised in a newspaper of record in the County by the applicant, at least 14 but no more than 21 days, in advance of the meeting date.
- c. The meeting shall be held within the County, at a location open to the public with adequate parking and seating facilities that will accommodate persons with disabilities.
- d. The meeting shall give members of the public the opportunity to review application materials, ask questions of the applicant, and provide feedback.
- e. The applicant shall provide to the Planning Office with a summary of any input received from members of the public at the meeting and copies of any written submissions from the public.

3. Official application form, fees, and required information. The form and fee schedule are provided by the Zoning Administrator in accord with Lunenburg County Zoning Ordinance Sec. 3-16. Fees. The County may retain qualified third parties to review portions of a permit application that are outside the County's areas of expertise and do not have adequate state and federal review. Any out-of-pocket costs incurred by the County for such review by qualified third-party shall be paid by the applicant. The third-party reviewers and their estimated costs will be submitted to applicant for approval before the costs are incurred. The County may, in the alternative, accept such review by qualified third-party selected, retained, and paid by the applicant. Fees for other

costs incurred by the County will be paid by the applicant in accordance with fee schedules as published in the Lunenburg County Code. Required information includes:

- a. **Project narrative.** A narrative identifying the applicant, facility owner, site owner, and operator, if known at the time of application, and describing the proposed solar energy facility, including an overview of the project and its location; the size of the site, and the project area; the current use of the site; the estimated time for construction and proposed date for commencement of operations; the planned maximum rated capacity of the facility; the approximate number; representative types and expected footprint of solar equipment to be constructed, including the maximum number of photovoltaic panels; ancillary facilities; and how and where the electricity will be transmitted, including the location of the proposed electrical grid interconnection.
- b. **Environmental impacts narrative.** A report on the potential impacts on the environment, including water and air quality, at the site and within a two and one-half (2.5) mile radius of the proposed facility using information provided by the Virginia Department of Environmental Quality (DEQ), the Virginia Department of Conservation (DCR), and/or a qualified third party, such as ConserveVirginia. The County shall have the right to request a review from DEQ and/or DCR prior to the determination that the project is in substantial accord with the Comprehensive Plan.
- c. **Wildlife impacts narrative.** A report on the potential impacts on wildlife and wildlife habitats at the site and within a two and one-half (2.5) mile radius of the proposed facility using information provided by the Virginia Department of Wildlife Resources (DWR) or a qualified third party. The County shall have the right to request a review from DWR prior to the determination that the project is in substantial accord with the Comprehensive Plan.
- d. **Cultural impacts narrative.** A Virginia Cultural Resource Information System report taken from the latest data provided by the Virginia Historic Resources, Virginia Cultural Resource Information System must be submitted to identify historical, architectural, archeological, or other cultural resources at the site and within a two and one-half (2.5) mile radius of the proposed facility.
- e. **Preliminary Site Plan.** The site plan drawings shall include the following information:
 1. Property lines, minimum required setback lines under this article, and any proposed setback lines that exceed the minimum requirements.
 2. Existing and proposed buildings and structures, including the preliminary location(s) of the proposed solar equipment.
 3. Existing and proposed roads, permanent entrances, temporary construction entrances, drives, turnout locations, and parking, including written confirmation from the Virginia Department of Transportation that all entrances meet applicable requirements and are appropriate for the use.

4. Proposed locations and maximum heights of substations, electrical cabling from the solar systems to the substations, panels, ancillary equipment and facilities, buildings, and structures (including those within any applicable setbacks).
5. Fencing, as required under this article, and other methods of ensuring public safety.
6. Areas where the vegetative buffering, required in this article, will be installed and maintained and areas where pollinator-friendly and wildlife-friendly native plants, shrubs, trees, grasses, forbs, and wildflowers required in this article will be installed and maintained.
7. Existing wetlands, waterways, floodplains, woodlands, and areas containing substantial woods or vegetation.
8. Identification of recently cultivated lands and predominant soil types based on geotechnical investigation.
9. Topographic map of the site with contours at a maximum of 5-foot intervals. Interpolation of satellite generated maps or USGS maps is acceptable.
10. Additional information may be required, as determined by the Planning Office, such as a scaled elevation view and other supporting drawings, photographs of the proposed site, photo or other realistic simulations or modeling of the proposed solar energy project from potentially sensitive locations as deemed necessary by the Planning Office to assess the visual impact of the project, aerial image or map of the site, and additional information that may be necessary for a technical review of the proposal. The Planning Commission or Board of Supervisors may require other relevant information deemed to be necessary to evaluate the application.
11. General location of all landscape areas, stream buffers, and wildlife corridors.
12. General location, height, and material for all fences, walls, screen plantings, berms, and peripheral landscaping. The dimensions of required perimeter and front buffer(s), if any, shall be shown.
13. Proposed location of all non-residential uses, accessory or main, including accessory structures, retaining walls, wells, pedestrian bridges, etc.
14. Proposed locations and orientation of all proposed detached, free-standing signs, if known.
15. Method of transporting construction personnel to the construction area, including construction materials storage areas.
16. List of all adjacent property owners, their tax map numbers, and addresses.
17. Drawings shall include:
 - i. Name of the site plan, proposed purpose of the plan set, and case number shall be shown in the lower right corner of the cover sheet.
 - ii. Magisterial District, County, and State.
 - iii. Owner's name and address.
 - iv. Applicant's name and address.
 - v. Tax Parcel Number and total acreage of the project.
 - vi. Name of individual or firm that prepared plan including professional status and seal where applicable.
 - vii. Address and telephone number of individual or firm that prepared the plan.
 - viii. Date of submission and all revision dates.
 - ix. Sheet number/ total sheets.
 - x. Zoning district boundaries including zoning of project property.

- xi. Approval letters for any prior zoning, conditional use permit, special exception, variance, or other permitted use shall be copied on cover page number 2 of the plan set.
- xii. Location maps, at a scale no greater than 1": 1000'.
- xiii. North arrow shall be on each page of the set.
- xiv. The scale of the plan shall be as follows:
 - a. Projects containing more than 200 acres: not more than 200': 1".
 - b. Projects containing 50 to 200 acres: not more than 100': 1"
 - c. Projects containing 10 to 50 acres: not more than 50': 1"
 - d. Projects containing 10 acres or less: not more than 30': 1".
- xv. Show and list any applicable Overlay districts for this property including any Conservation Easements.
- xvi. Site tabulation charts showing the following:
 - a. Buildings: _____Sq. ft. _____% of site area.
 - b. Impervious area: _____Sq. ft. _____% of site area.
 - c. Open area: _____Sq. ft. _____% of site area.
- xvii. Parking required and provided.
- xviii. Loading space and area required and provided.
- xix. The boundaries of the property involved; County and/or town boundaries; property lines with bearings and distances; existing easements with recordation reference; streets with R/W width and Route number; buildings, and /or waterways; burial sites or cemeteries; and major tree masses.

- f. **Public Information.** Additional information as may be available on public databases, such as ConserveVirginia, including:
1. Location and dimensions of all off-street parking and loading areas and traffic zones.
 2. The general location and character of construction of proposed, streets, alleys, driveways, curb cuts, entrances, exits, both existing and proposed.
 3. Distances from the centerline of driveways and public roadways in either direction from the subject site and site boundary lines.
 4. Turning radius at intersections. For sites utilizing commercial freight transfer vehicles, the radius is required to be based on the tractor and 53' trailer.
 5. Location and method of screening for all outdoor waste receptacles on site. Dumpsters must be screened on all four sides. Provide a detail of the fence enclosure and gate on the plans.
 6. The approximate location(s) and size(s) of sanitary and storm sewers, water mains, culverts, and other underground structures, both existing and planned, in or adjacent to the project.
 7. All existing easements must reference recordation information, including recorded court location (i.e., Deed book and page number).
 8. Sanitary facilities, if private, including the locations of primary and secondary drain fields.
 9. Existing, electric, telephone, and cable lines.

10. Location of all non-visible, or underground structures, major service lines, graves, shelters.
- b. **Draft landscaping and screening plan.** The applicant must submit a landscaping and screening plan that addresses the vegetative buffering required in this article, including the use of existing and newly installed vegetation to screen the facility. The plan also must address the use of pollinator-friendly and wildlife-friendly native plants, shrubs, trees, grasses, forbs, and wildflowers in the project area and in the setbacks and vegetative buffering, as required in this article.
- c. **Draft grading plan.** The plan shall identify:
 1. Areas of steep slopes.
 2. Locations of topsoil to be removed and preserved.
 3. Locations of stormwater drainage and erosion and sediment control features.
- d. **Draft Traffic Study.**
 1. A traffic study modelling the construction and decommissioning processes.
 2. The haul route(s) must be provided and approved for construction impacts.
- e. **Draft Decommissioning and Reclamation Plan.** The plan shall identify:
 1. The anticipated life of the project. The applicant shall provide the basis for determining the anticipated life of the project.
 2. The estimated decommissioning and reclamation cost in current dollars. The applicant shall provide a cost estimate for the decommissioning and reclamation of the facility prepared by a professional engineer or contractor who has expertise in the removal of solar facilities. The decommissioning and reclamation cost estimate shall explicitly detail the cost without any reduction for salvage value.
 3. The method of ensuring that funds will be available for decommissioning and reclamation. A proposed method of providing appropriate escrow, surety, or security for the cost of the decommissioning and reclamation plan. The surety shall be updated when the decommissioning and reclamation cost estimate is updated. The estimated cost of decommissioning shall be guaranteed by the deposit of funds in an amount equal to the estimated cost in an escrow account at a federally insured financial institution approved by the County unless otherwise provided for in subsection d below.
 - i. The applicant shall deposit the required amount into the approved escrow account before any building permit is issued to allow construction of the solar facility.
 - ii. The escrow account agreement shall prohibit the release of the escrow funds without the written consent of the County. The County shall consent to the release of the escrow funds upon on the owner's or occupant's compliance with the approved decommissioning and reclamation plan. The County may approve the partial release of escrow funds as portions of the approved decommissioning plan are performed.
 - iii. The amount of funds required to be deposited in the escrow account shall be the full amount of the estimated decommissioning and reclamation cost.

- iv. The County may approve alternative methods to secure the availability of funds to pay for the decommissioning and reclamation of a solar facility, such as a performance bond, letter of credit, or other security approved by the County.
- 4. The method that the estimated cost will be kept current. The decommissioning and reclamation cost estimate shall include a mechanism for calculating increased removal costs due to inflation. This cost estimate shall be recalculated every five (5) years and the surety shall be updated accordingly. If the recalculated estimated cost exceeds the original estimated cost by ten percent (10%), then the owner or occupant shall deposit additional funds into the escrow account to meet the new cost estimate. If the recalculated estimated cost is less than ninety percent (90%) of the original estimated cost, then the County may approve reducing the amount of the escrow account to the recalculated estimate of cost.
- 5. The manner in which the site will be decommissioned and reclaimed. This will include:
 - a. Notice to the Zoning Administrator by certified mail and in person of the proposed date of discontinued operations and plans for removal.
 - b. A traffic study submitted with application modelling the decommissioning processes. County staff will review the study in cooperation with VDOT.
 - c. An estimated deconstruction schedule.
 - d. Removal of all solar electric systems, buildings, cabling, electrical components, security barriers, roads, foundations, pilings, and any other associated facilities, so that any agricultural ground upon which the facility and/or system was located is again tillable and suitable for agricultural or forestall uses.
 - e. The site shall be graded and re-seeded or replanted within 12 months of removal of solar facilities to restore it to as natural a pre-development condition as possible. Re-grading and re-seeding or replanting shall be initiated within a six-month period of removal of equipment. Any exception to site restoration, such as leaving access roads in place or re-seeded or replanted must be requested by the landowner in writing, and this request must be approved by the Board of Supervisors.
 - f. Hazardous material from the property shall be disposed of in accordance with federal and state law.
- k. **Supplemental information.** If deemed relevant to the consideration of a Conditional Use Permit application or the conditions to be included in any Conditional Use Permit, the Planning Office, Planning Commission or Board of Supervisors may require the applicant to submit any of the following information, either as part of the Conditional Use Permit application or as a condition of any Conditional Use Permit:
 - 1. The submission of a construction plan (as a condition of the conditional use permit), including a proposed construction schedule and hours of operation, before obtaining a building permit.
 - 2. The identification and location of any existing large-scale solar energy facilities and any known proposed large-scale solar energy facilities within a five (5) mile radius of the proposed site.

3. A report of impact on adjacent property values, prepared by a qualified third-party, such as a licensed real-estate appraiser.
4. An economic impact analysis, prepared by a qualified third-party, that reports any expected change in the value of the subject property, expected employment during the construction of the facility, any expected impact on the County's tax revenues, the estimated costs to the County associated with the facility in the form of additional services, and information on any other economic benefits or burdens from the facility that may be requested by the zoning administrator.
5. A report on potential impacts on pollinators and pollinator habitats at the site, including but not necessarily limited to, the submission of a completed solar site pollinator habitat assessment form as required by the Planning Office.
6. A report on wildfire mitigation, prevention, and management shall be submitted to the County and to the local responding agencies for review and comment.
7. A glint and glare study that demonstrates either that the panels will be sited, designed, and installed to eliminate glint and glare effects on roadway users, nearby residences, commercial areas, and other sensitive viewing locations, or that the applicant will use available mitigation techniques to reduce glint and glare to the lowest achievable levels. The study will assess and quantify potential glint and glare effects and address the potential health, safety, and visual impacts associated with glint and glare and will assess the impact of the project on the public viewshed. Any such assessment must be conducted by qualified individuals approved by the County using appropriate and commonly accepted software and procedures at the time an application for a building permit is submitted.

4. Comprehensive Plan (2232) Review. Comprehensive Plan review shall be based on the CUP Application Form and Concept Plan. The *Code of Virginia* §15.2-2232 requires a review of public utility facility proposals by the Planning Commission to determine if their general or approximate location, character, and extent are substantially in accord with the Comprehensive Plan or part thereof.

- a. The Planning Commission must consider, at a public meeting, whether the project is in substantial accord with the Comprehensive Plan. Failure of the Planning Commission to act within 60 days of a submission, unless the time is extended by the Board of Supervisors, shall be deemed approval.
 - i. If the Planning Commission approves the 2232 review, the project shall be recommended for a public hearing for the CUP permit.
 - ii. If the Planning Commission does not approve the 2232 review, the applicant may appeal the decision to the Board of Supervisors within 10 days after the decision of the Planning Commission. The appeal shall be by written petition to the Board of Supervisors setting forth the reasons for the appeal. The appeal shall be heard and determined within 60 days from its filing unless the time is extended by the applicant. A majority vote of the Board of Supervisors shall overrule the Planning Commission.
- b. If the Board of Supervisors agree to negotiate a Siting Agreement in accordance with Code of Virginia § 15.2-2316.8, the 2232 review process may be delayed until negotiations are complete.

5. Consideration of the Conditional Use Permit by the Planning Commission. The Planning Commission must consider the Conditional Use Permit application at a public hearing. The Planning Commission has three options:

- a. Recommend approval of the application to the Board of Supervisors with written reasons for its decision.
- b. Recommend denial of the application to the Board of Supervisors with written reasons for its decision.
- c. Defer the application for further discussion and consideration.

6. Consideration of the Conditional Use Permit by the Board of Supervisors. The Board of Supervisors must consider the Conditional Use Permit application at a public hearing. The Board of Supervisors has three options:

- a. Approve the application with written reasons for its decision.
- b. Deny the application with written reasons for its decision.
- c. Defer the application for further discussion and consideration.

7. Post-application documentation and approvals. All documentation required to be submitted to and approvals required from the county after the issuance of the permit shall, unless otherwise stated in the conditions attached to the conditional use permit, be submitted, or obtained no later than 30 days prior to the date of any application for a building permit for the facility. The failure or refusal to submit required documentation or obtain required approvals following the issuance of a conditional use permit shall result in the suspension or revocation of the Conditional Use Permit and the denial of the building permit.

Section 5. Location, appearance, and operational requirements.

A. The following requirements apply to all solar energy facilities that shall be considered by the Lunenburg Planning Commission and the Board of Supervisors in addressing whether to recommend or approve a Conditional Use Permit:

1. Signage. All signage on the site shall comply with the County Sign Ordinance, as adopted and, from time to time, amended.
2. Noise. Noise levels from the facility shall comply with the County Noise Ordinance, as adopted and, from time to time, amended.
3. Lighting. Lighting shall be limited to the minimum necessary for security purposes and shall be designed to minimize off-site effects. Lighting on the site shall comply with any Dark Skies Ordinance the Board of Supervisors may adopt or, from time to time, amend.
4. Height. The maximum height of the lowest edge of photovoltaic panels shall be ten feet as measured from the finished grade. Solar energy generation facilities shall not exceed a height of 15 feet, which shall be measured from the highest natural grade below each solar panel. This limit shall not apply to utility poles and the interconnection to the overhead electric utility grid. The

Board of Supervisors may approve a greater height based upon the demonstration of a significant need where the impacts of increased height are mitigated.

5. Groundcover.

- a. Groundcover on the site shall consist of pollinator plants, grasses, forbs, and wildflowers native to the County.
- b. Groundcover shall be maintained in accordance with established performance measures noted in the landscaping plan. A performance bond reflecting the costs of anticipated maintenance shall be posted and maintained.
- c. Failure to maintain the ground cover shall result in revocation of the CUP and the facility's decommissioning.
- d. The operator shall notify the County prior to application of pesticides and fertilizers. The County reserves the right to request soil and water testing.
- e. A list of appropriate plant materials shall be available at the Planning Office. Species listed on DCR's Invasive Plant Species list shall not be used.

6. Fencing. The project area shall be enclosed by security fencing not less than six feet in height and equipped with an appropriate anticlimbing device such as strands of barbed wire on top of the fence. The height and/or location of the fence may be altered in the conditions for a particular permit. Fencing must be installed on the interior of the vegetative buffer. Fencing shall be placed around sections of the infrastructure (not the entire site) to provide access corridors for wildlife to navigate through the facility. The fencing shall be maintained while the facility is in operation.

7. Entry and inspection. For inspections and other requirements, all solar applicants, property owners and solar facility owners shall grant to the County a non-exclusive, perpetual easement for pedestrian, vehicular, and equipment access to the Solar Facility, and an easement across or through applicant's remaining property, which is necessary or convenient for ingress and egress to the Facility. The County will adhere to all safety requirements in gaining access to the Solar Facility.

8. Coordination of local emergency services. The Applicant shall coordinate with the County's emergency services providers to provide materials, education, and/or training on how to safely respond to on-site emergencies.

- a. Emergency personnel will be given a key or code to access the property in case of an on-site emergency.

9. Conditions pursuant to Virginia Code § 15.2-2288.8 that shall apply to all solar facilities. The Board of Supervisors may grant a condition that includes (i) dedication of real property of substantial value or (ii) substantial cash payments for or construction of substantial public improvements, the need for which is not generated solely by the granting of a Conditional Use Permit, so long as such conditions are reasonably related to the project.

10. Siting Agreement. The applicant shall enter into a Siting Agreement with the County unless that requirement is waived by the County.

B. The following requirements also apply to ground-mounted small-scale and medium-scale solar energy facilities:

1. Applications for medium-scale solar energy facilities located within 1 mile of a town shall be shared with the town for review and comment. No projects within the 1 mile zone around a town shall be sited within 1 mile of another solar facility without town approval.
2. Setbacks. Setbacks are measured from the outermost structures including the security fence, substation, and inverters but not including the driveways and power poles.
 - a. The project area shall be set back a distance of at least
 - i. 100 feet from adjacent property lines,
 - ii. 125 feet from the centerline of all adjoining public rights-of-way, and
 - iii. 400 feet from residential structures on non-project parcels. Exceptions may be made for adjoining parcels that are owned by the applicant.
 - b. Increased setbacks up to 200 feet and additional buffering may be included in the conditions for a particular permit.
 - c. Solar energy facilities also shall meet all setback requirements for primary structures for the zoning district in which the facility is located, in addition to the requirements set forth above.
 - d. In the case of the facility location incorporating multiple zoning districts, the more restrictive requirements shall apply.
 - e. Access, erosion and stormwater structures, and interconnection to the electrical grid may be made through setback areas provided that such are generally perpendicular to the property line.
3. Vegetated Buffer. A vegetated buffer sufficient to mitigate the visual impact of the facility is required.
 - a. The buffer shall consist of a landscaped strip at least 25 feet wide, shall be located within the setbacks and outside of the security fencing required under this Section, and shall run around the entire perimeter of the property.
 - b. The buffer shall consist of existing vegetation and, if deemed necessary for the issuance of a Conditional Use Permit, an installed landscaped strip consisting of multiple rows of staggered trees and other vegetation. This buffer should be made up of plant materials at least three feet tall at the time of planting, and that are expected to grow to a minimum height of eight feet within three years.
 - c. Landscaping intended for screening shall consist of plants, shrubs, trees, grasses, forbs, and wildflowers native to the County. If sufficient quantities of native plants cannot be procured, non-invasive plants may be used. A list of appropriate plant materials shall be available at the Planning Office. Species listed on the DCR Virginia Invasive Plant Species List shall not be used.
 - d. The Planning Commission or Board of Supervisors may require increased setbacks and additional or taller vegetative buffering in situations where the height of structures or the topography affects the visual impact of the facility.
 - e. A recommendation that the screening and/or buffer creation requirements be waived or altered may be made by the Planning Commission when the applicant proposes to use

existing wetlands or woodlands. The wetlands or woodlands shall be permanently protected for use as a buffer.

- f. Existing trees and vegetation may be maintained within such buffer areas except where dead, diseased or as necessary for development or to promote healthy growth, and such trees and vegetation may supplement or satisfy landscaping requirements as applicable. If existing trees and vegetation are disturbed, new plantings shall be provided for the buffer.
- g. The buffer shall be maintained for the life of the facility.

C. The following requirements also apply to medium-scale solar energy facilities:

- 1. Density. Medium-scale solar facilities shall be sited at least one (1) mile from existing medium- and large-scale solar facilities.

D. The following requirements also apply to large-scale solar energy facilities:

1. Location. Solar facilities should locate on brownfields, County-owned capped landfills, or near existing industrial uses, where feasible (but not within areas designated for growth). Solar facilities shall not be located within 1 mile from a Town. Solar facilities shall not be located within two miles of an airport unless the applicant submits, as part of its application, written certification from the Federal Aviation Administration that the location of the facility poses no hazard for, and will not interfere with, airport operations.

2. Density. Large-scale solar facilities shall be sited at least one (1) mile from existing medium- and large-scale solar facilities as measured from the nearest fence line. No more than 5% of the land in a five-mile radius of the project area of any existing large scale solar energy facility shall be approved for use as the project area for a new large-scale solar energy facility. The center point of the project shall be at the intersection of the mid-points of the north, south, east, and west property lines. Measurement to achieve the required five-mile distance shall begin at the midpoint of each north, south, east, and west property line chosen to determine the center of the property.

3. Visual impacts. The applicant shall demonstrate through project siting and proposed mitigation, that the solar project minimizes impacts on public viewsheds, including from residential areas and areas of scenic, historical, cultural, archaeological, and recreational significance. The facility shall utilize only panels that employ anti-glare technology, anti-reflective coatings, and other available mitigation techniques, all that meet or exceed industry standards, to reduce glint and glare. The applicant shall provide written certification from a qualified expert, acceptable to the county, that the facility's panels incorporate and utilize anti-glare technology and anti-reflective coatings and reduce glint and glare to levels that meet or exceed industry standards.

4. Setbacks. Setbacks are measured from the outermost structure including the security fence, substation, and inverters but not including the driveways and power poles.

- a. The project area shall be set back a distance of at least
 - i. 200 feet from adjacent property lines,
 - ii. 200 feet from the centerline of all adjoining or abutting public rights-of-way, and
 - iii. 400 feet from residential structures on non-project parcels. Exceptions may be made for adjoining parcels that are owned by the applicant.

- b. Increased setbacks up to 300 feet and additional buffering may be included in the conditions for a particular permit.
- c. Solar energy facilities also shall meet all setback requirements for primary structures for the zoning district in which the facility is located, in addition to the requirements set forth above.
- d. In the case of the facility location incorporating multiple zoning districts, the more restrictive requirements shall apply.
- e. Access, erosion and stormwater structures, and interconnection to the electrical grid may be made through setback areas provided that such are generally perpendicular to the property line.
- f. County approved permanent, buffered setback easements with non-solar facility landowners may be utilized to meet these setback requirements so long as solar facility setbacks from public rights of way are maintained.

5. Vegetated Buffer. A vegetated buffer sufficient to mitigate the visual impact of the facility is required.

- a. The buffer shall consist of a landscaped strip at least 50 feet wide, shall be located within the setbacks required under this Section, and shall run around the entire perimeter of the property.
- b. The buffer shall consist of existing vegetation and, if deemed necessary for the issuance of a Conditional Use Permit, an installed landscaped strip consisting of multiple rows of staggered trees and other vegetation. This buffer should be made up of plant materials at least three feet tall, at the time of planting, and that are expected to grow to a minimum height of eight feet within three years.
- c. Landscaping intended for screening shall consist of plants, shrubs, trees, grasses, forbs, and wildflowers native to the County. If a sufficient quantity of native plants cannot be procured, non-invasive plants may be used. A list of appropriate plant materials shall be available at the Planning Office. Species listed on the DCR Virginia Invasive Plant Species List shall not be used.
- d. The Planning Commission or Board of Supervisors may require increased setbacks and additional or taller vegetative buffering in situations where the height of structures or the topography affects the visual impact of the facility.
- e. Non-invasive plant species and pollinator-friendly and wildlife-friendly native plants, shrubs, trees, grasses, forbs, and wildflowers must be used in the vegetative buffer.
- f. A recommendation that the screening and/or buffer creation requirements be waived or altered may be made by the Planning Commission when the applicant proposes to use existing wetlands or woodlands. The wetlands or woodlands shall be permanently protected for use as a buffer.
- g. Existing trees and vegetation may be maintained within such buffer areas except where dead, diseased or as necessary for development or to promote healthy growth, and such trees and vegetation may supplement or satisfy landscaping requirements as applicable. If existing trees and vegetation are disturbed, new plantings shall be provided for the buffer.
- h. The buffer shall be maintained for the life of the facility.
- i. An earthen berm may be utilized to comply with the intent of this Section 5, D5 to screen or mitigate the visual impact of the solar facilities from public view.

6. Wildlife corridors. The Applicant shall identify access corridor(s) for wildlife to navigate through and across the Solar Facility. The proposed wildlife corridor(s) shall be shown on the site plan submitted to the County. Areas between fencing shall be kept open to allow for the movement of migratory animals and other wildlife.

Section 6. Additional considerations for granting a Conditional Use Permit pertaining to a large-scale solar energy facility.

To preserve the intent and goals of the Comprehensive Plan, protect County viewsheds and resources, protect the health, safety, and welfare of the community, and to otherwise advance the purpose and intent of this article, the following non-exhaustive list of additional criteria may be considered by the Planning Commission and the Board of Supervisors in addressing whether to recommend or grant a Conditional Use Permit, and what conditions to impose on any permit, for a large-scale solar energy facility:

1. The topography of the site and the surrounding area.
2. The proximity of the site to, observability from, and impact on urban and residential areas.
3. The proximity of the site to, observability from, and impact on areas of historical, cultural, and archaeological significance.
4. The proximity of the site to other large-scale solar energy facilities, other energy generating facilities, and utility transmission lines.
5. The proximity of the site to, observability from, and impact on areas of scenic significance, such as scenic byways, vistas, and blue-ways.
6. The proximity of the site to, observability from, and impact on public rights-of-way, including but not necessarily limited to highways, secondary roads, streets, and scenic byways.
7. The proximity of the site to, observability from, and impact on recreational areas, such as parks, battlefields, trails, lakes, rivers, and creeks.
8. The proximity of the site to airports.
9. The preservation and protection of wildlife and pollinator habitats and corridors.
10. The proximity of the site to any urban planning area or community planning area identified in the Comprehensive Plan.
11. The proposed use of available technology, coatings, and other measures for mitigating adverse impacts of the facility.
12. Any other criteria addressed in this ordinance.

13. The preservation and protection of prime farmland and prime timberland or forested land in the county, provided that:

- a. "Prime farmland" and "Prime Timberland" shall have the meaning assigned to it by the Natural Resource Conservation Service of the United States Department of Agriculture, except the lands established in silviculture shall not be considered prime farmland.
- b. Not more than 5% (approximately 3,500 acres) of the prime farmland in the County is utilized for solar facilities.
- c. Not more than 5% (approximately 10,000 acres) of prime timberland or forest land in the County is utilized for solar facilities.

The enumeration of these criteria shall not prohibit the Planning Commission or Board of Supervisors from considering other factors deemed relevant to a specific Conditional Use Permit application based on the details of the application. Nothing herein shall limit in any manner the nature and scope of reasonable conditions that may be recommended by the Planning Commission or imposed by the Board of Supervisors.

Section 7. Decommissioning; Unsafe or abandoned projects.

A. The following requirements apply to all solar energy facilities:

1. Prior to operation, the applicant shall provide a final decommissioning and reclamation plan for review and approval.
2. Prior to operation, the applicant must provide security in the amount of the estimated cost of the decommissioning. Options for security include a cash escrow, a performance surety bond, a certified check, or other security acceptable to the County in an amount equal to the estimated decommissioning cost developed and updated in accordance with the decommissioning plan acceptable to the County. The decommissioning cost estimate may not in any circumstance be reduced by estimated salvage values. The security must remain valid until the decommissioning obligations have been met. The security may be adjusted up or down, by the County, if the estimated cost of decommissioning the facility changes. The security must be renewed or replaced, if necessary, to account for any changes in the total estimated overall decommissioning cost in accordance with the periodic updated estimates required by the decommissioning plan. Obtaining and maintaining the requisite security will be a mandatory condition of the conditional use permit. The security shall be in favor of the County and shall be obtained and delivered to the County before any construction commences. Failure of the applicant, owner, occupant, or other responsible party to provide updated decommissioning costs shall be grounds for suspension or revocation of the Conditional Use Permit.
3. The decommissioning plan and the estimated decommissioning cost will be reviewed and updated once every five years by an independent third-party.
4. The decommissioning and reclamation plan, cost estimates, and all updates of those plans and estimates shall be sealed by a professional engineer and approved by the County.

B. The following requirements also apply to medium-scale and large-scale solar energy facilities:

1. If a solar energy facility has been determined to be unsafe by a county, state, or Federal building official, the facility shall be required to be repaired by the facility owner, site owner, or operator to meet federal, state, and local safety standards, or to be removed by the owner(s) or operator. The owner(s) or operator must complete the repair or removal of the facility, as directed by the building official, within the time period (not to exceed 12 months) allowed by the building official. If directed to do so by the building official, the owner(s) or operator will remove the solar energy facility in compliance with decommissioning plan established for such facility.
2. If any solar energy generation facility is not operated for a continuous period of 12 months, the county may notify the facility owner by registered mail and provide 45 days for a response. In its response, the facility owner shall set forth reasons for the operational difficulty and provide a reasonable timetable for corrective action. If the county deems the timetable for corrective action to be unreasonable, it may notify the facility owner, and the facility owner, site owner, or operator shall remove the solar energy facility in compliance with decommissioning plan established for such facility.
3. At such time that a solar energy facility is scheduled to be abandoned, the facility owner, site owner, or operator shall notify the County Administrator in writing.
4. Within 365 days of the date of abandonment, whether as declared by the County under or as scheduled by the owner(s) or operator, the facility owner, site owner, or operator shall complete the physical removal of the solar energy facility in compliance with decommissioning plan established for such facility. This period may be extended at the request of the owners or operator, upon approval of the Board of Supervisors.
5. When the facility owner, site owner, operator, or other responsible party decommissions a solar energy facility, he/she shall handle and dispose of the equipment and other facility components in conformance with federal, state, and local requirements. All equipment, both above and below ground, must be removed as part of the decommissioning plan. Internal paths, roads, travel-ways, and landscaping may be left at the discretion of the site owner.
6. If the facility owner, site owner, or operator fails to timely remove or repair an unsafe or abandoned solar energy facility after written notice (45 days), the county may pursue a legal action to have the facility removed at the expense of the facility owner, site owner, or operator, each of whom shall be jointly and severally liable for the expense of removing or repairing the facility. The county also may call upon the decommissioning security to remove the facility.

Section 8. Federal, state, and local requirements.

The following requirements apply to all solar energy facilities:

1. Compliance with Uniform Statewide Building Code. All solar energy facilities shall be constructed and operated in compliance with the Uniform Statewide Building Code.

2. Compliance with National Electric Code. All solar energy facilities shall be constructed and operated in compliance with the National Electric Code.

3. Compliance with regulations governing electric energy supply. Large-scale solar energy facilities connected to the utility grid must comply with permitting requirements of the state corporation commission or the permit by rule requirements of the Department of Environmental Quality, as applicable.

4. FAA regulations. All solar energy facilities within 5 miles of an airport must meet or exceed the standards and regulations of the Federal Aviation Administration.

5. Other applicable laws. All solar energy facilities shall be constructed and operated in compliance with all applicable local, state, and federal laws, rules, regulations, permit requirements, and ordinances.