Chapter 18: Zoning Ordinance

Solar Energy Facility and Battery Energy Storage Facility

Sec 3.1 Definitions.

Accessory solar energy facility. "Accessory solar energy facility" means a solar energy facility that is both (a) either roof- or ground-mounted and (b) producing energy primarily for use on site. Accessory solar energy facilities are permitted by-right in all zoning districts and are subject to section 5.1.65.

Accessory battery energy storage facility: "Accessory battery energy storage facility" means a battery energy storage facility not exceeding a combined total area of 500 square feet. Accessory battery energy storage facilities are permitted by-right in all zoning districts and are subject to section 5.1.65.

Battery energy storage facility. "Battery energy storage facility" means a physical container that both (a) has a combined total area greater than 500 square feet, (b) provides secondary containment to battery cells, and (c) is equipped with cooling, ventilation, fire suppression, and related technical and safety components.

Energy facility. "Energy facility" means an accessory battery energy storage facility, a battery energy storage facility, an accessory solar energy facility or a solar energy facility, each as defined in this section.

Panel zone. "Panel zone" means the area underneath the solar arrays, including inter-row spacing.

Solar energy facility. "Solar energy facility" means a system other than an accessory solar energy facility that captures and converts solar energy into electricity for the distribution to the power grid. A solar energy facility includes, but is not limited to, photovoltaic solar panels; racking system; solar inverters; access roads; fencing; and screening and buffering.

Wildlife corridor. "Wildlife corridor" means an area of habitat that both (a) provides passage for wildlife across artificial obstacles such as dams, roads, and railways, and (b) facilitates the migration, reproduction, and migration of animals.

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Supplementary Regulations

Sec. 5.1.65- Energy Facility.

a. Minimum Development Requirements for Energy Facilities.

1. The maximum height of the lowest edge of all ground-mounted photovoltaic panels is 10 feet as measured from the finished grade. The maximum height of

panels, buildings, structures, and other components of a solar facility is 20 feet, as measured from the highest natural grade below each element. This limit does not apply to utility poles, substations, roof-mounted solar facilities, or the interconnection to the overhead electric utility grid.

2. Accessory solar energy facilities, whether roof or ground mounted, are subject to the applicable structure setbacks of the zoning district in which the facility is located. The setbacks standards do not apply to parcels under common ownership.

3. By-right ground mounted solar energy facilities located outside the Rural Areas (RA) zoning district are limited to 500 square feet of panel zone when placed over existing pervious areas.

4. By-right ground mounted solar energy facilities in the Rural Areas (RA) zoning district are subject to the following separation standards from other ground-mounted solar energy facilities.

Project A Panel Zone	**Project B Panel Zone**			
	Less than 1 acre	*1 acre to 4.99 acres*	*5 acres to 9.99 acres*	*10 acres to 21 acres*
Less than 1 acre	No separation	No separation	No separation	No separation
1 acre to 4.99 acres	No separation	300 feet	500 feet	1,000 feet
5 acres to 9.99 acres	No separation	500 feet	1,000 feet	1,500 feet
10 acres to 21 acres	No separation	1,000 feet	1,500 feet	2,000 feet

5. By-right ground mounted solar energy facilities in the Rural Areas (RA) zoning district are limited to a maximum of 21 acres of panel area on any parcel in existence at the time of adoption of this ordinance.

6. Any solar energy facility with greater than one acre of panel zone within five nautical miles of a licensed airport must provide the Chief Operation Officer of the airport both (i) written notice to stating the system's location, technology to be used, and total land coverage and (ii) a glint/glare study.

7. Ground mounted solar energy facilities that both (a) are greater than 21 acres, (b) are in the Rural Areas (RA) zoning district, and (c) require a special use permit are subject to the following setbacks:

    a. 100 feet from adjacent parcels, not under common ownership, and all public rights-of-way, and;

b. 300 feet from dwellings on adjacent parcels, not under common ownership.

8. No energy facility may be located within riparian buffers, wetlands, or floodplains.

9. Energy facilities must incorporate separation between rows of photovoltaic panels or battery energy storage facilities to provide fire access and meet clear zone requirements.

10. All ground mounted solar energy facilities with a panel zone of two acres or greater are required to obtain Gold Certified Virginia Pollinator Smart status within three years of issuance of a building permit. Gold Certified Virginia Pollinator status must be maintained for the life of the facility.

11. Energy facilities with a panel zone of 10 acres or greater must be screened from public streets and abutting parcels not under common ownership. Screening provided must meet the screening level provided by a triple staggered row of evergreen trees and screening shrubs planted 15 feet on center with screening shrubs making up not more than 33% of the plantings and equally dispersed. The agent may approve any screening plan equal or greater to the standard listed above. All new plantings must include a variety of species from the agent's approved list.

12. Energy Facilities must be constructed, maintained, and operated in accordance with applicable codes and standards, including (but not limited to): applicable fire, electrical, and building codes adopted by the County; National Fire Protection Association (NFPA) 855, Standard for the Installation of Stationary Energy Storage Systems, 2023 Edition and subsequent additions; and Underwriters Laboratories (UL) 9540A Ed. 4-2019, Standard for Test Method for Evaluating Thermal Runway Fire Propagation in Battery Energy Storage Systems and subsequent editions.

13. Battery energy storage facilities that are subject to a special use permit must have the following setbacks:

    a. 100 feet from adjacent parcels, not under common ownership, and all public rights-of-way, and;

    b. 300 feet from dwellings on adjacent parcels, not under common ownership.

14. Any fencing on the interior of the buffer/screening area of ground-mounted energy facilities must be at a height of either 61 inches or less or 96 inches and greater (inclusive of razor/barbed wire). Fences of 61 inches or less in height may not include razor/barbed wire. Such fenced areas must provide wildlife corridors through the facility. All such fencing must allow for the movement or migration of small wildlife species.

15. All energy facilities must comply with section 4.18.

16. Energy facilities are not permitted within Forest Blocks identified in the Comprehensive Plan as scoring 4.1 or above.

17. Notwithstanding any exemption in *County Code* Chapter 17, all ground mounted energy facilities whose total land disturbance area, including the horizontal projected areas of the panel zone area, is 10,000 square feet or greater, must comply with *County Code* Chapter 17.

18. Notwithstanding section 32.2, a site plan is not required for an energy facility, but the energy facility is subject to the requirements of section 32, and the applicant must submit all schematics, plans, calculations, drawings, and other information required by the agent to determine whether the facility complies with section 32. In making this determination, the agent may impose reasonable conditions authorized by section 32 in order to ensure compliance.

19. Any new associated electrical transmission lines, whether connecting internal portions of the project or connecting to a switchyard, substation, or point of interconnection, and whether above or below ground, must be located in a manner to be least intrusive and mitigate their impact to surrounding parcels.

20. Except for any outdoor lighting required by federal law:

    i. Outdoor lighting is permitted only during maintenance periods.
    ii. Regardless of the lumens emitted, each outdoor luminaire must be fully shielded to the standard of section 4.17.

b. Special Use Permit Process.

1. The County may engage independent consultant(s) to review any special use permit application for an energy facility and all associated documents for completeness and compliance with applicable County, state, and federal laws. Any costs associated with the review must be paid by the applicant. Payment of such fees is not a substitute for payment for any other required fees.

2. As part of its review of special use permit applications for an energy facilities, the Commission will also conduct a Comprehensive Plan review under Virginia Code § 15.2-2232, and will specify whether the facility is in substantial accord with the County's Comprehensive Plan.

c. *Construction, Operational, and Decommissioning Requirements for Solar Energy Generating Facilities and Battery Energy Storage Facilities.* For ground-mounted solar energy facilities that are subject to a special use permit, the following requirements must be met during the construction phase and/or throughout their operational life.:

1. Coordination of Local Emergency Services - Prior to completion of construction, the owner or operator of a facility must provide materials, education, and/or training to the County's emergency services departments on how to safely respond to on-site emergencies, and develop, implement, periodically update, and perform exercises on an emergency response plan. County emergency personnel must be provided with a key or code to access the site in case of an on-site emergency.

2. The owner or operator of a facility must allow designated County representatives or employees access to a facility for inspection purposes. The County representative or employee will provide the facility operator with 24-hours' notice prior to an inspection when practicable. The owner of a facility must reimburse the County the costs of any required independent inspections.

3. Maintenance of Facility

    a. The owner or operator of an energy facility must monitor and maintain the facility in good condition. Such monitoring and maintenance must include (but is not limited to): painting, evaluating the structural integrity of equipment, foundations, structures, fencing and security barriers, as applicable, maintenance of the buffer areas, landscaping, and cleaning of equipment. Any cleaning products used to maintain photovoltaic materials must be biodegradable. Site access must be maintained at a level acceptable to the County.

4. Decommissioning and Site Rehabilitation

    a. Solar facilities that have reached the end of their operation or have not been in active and continuous service for a period of six months must be removed at the owner's or operator's expense. However, the County may extend this period upon a satisfactory showing that the project is being repowered or a force major event has or is occurring requiring longer repairs.

    b. The owner or operator of a facility must notify the Agent by certified mail of the proposed date of discontinued operations and plans for removal.

    c. Decommissioning must be performed in compliance with an approved Decommissioning Plan, which must be submitted for approval by the Agent, or an otherwise appropriate Agent, prior to the issuance of a Zoning Permit. The Agent may waive the requirement of a Decommissioning Plan based on the size of the solar facility. The Agent may approve any appropriate amendments to, or modifications of, the Decommissioning Plan.

    d. Decommissioning must include removal of all 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 uses. The site must be graded and re-seeded to restore it to as natural a condition as possible, except that the Agent may approve a written request that access roads or other land surface areas not be restored if other conditions are determined to be more beneficial or desirable at that time.

e. Any topsoil graded during reclamation must be returned during reclamation of land.

f. Any exception to site restoration, such as leaving driveways, entrances, or landscaping in place, or substituting plantings, must be requested by the landowner in writing, and this request is subject to approval of the Agent.

g. Hazardous material from the site must be disposed of in accordance with federal and state law.

h. If a decommissioning plan is required, the estimated cost of decommissioning must be guaranteed by the deposit of sufficient funds in an escrow account at a financial institution approved by the County.

    i. The applicant must 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 must prohibit the release of the escrow funds without the written consent of the County. The County will consent to the release of the escrow funds upon the owner's or occupant's compliance with the approved decommissioning 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 must be the full amount of the estimated decommissioning cost excluding salvage value.

    iv. The owner or occupant must recalculate the estimated cost of decommissioning every five years. If the recalculated estimated cost of decommissioning exceeds the original estimated cost of decommissioning by at least 10 percent, the owner or occupant must deposit additional funds into the escrow account to meet the new cost estimate. If the recalculated estimated cost of decommissioning is less than 90 percent (of the original estimated cost of decommissioning, the County may approve reducing the amount of the escrow account to the recalculated estimate of decommissioning cost.

v. The County may approve alternative methods to secure the availability of funds to pay for the decommissioning of a solar facility, such as a performance bond, letter of credit, or other security approved by the County.

i. If the owner or operator of the solar facility fails to remove the facility in accordance with this section or the facility's approved decommissioning plan, the County may collect the surety and the County, or its agent(s) may enter the site to perform any work necessary to complete the decommissioning.

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Rural Areas (RA) District – Permitted Uses

Sec. 10.2.1 - By right

35. Ground mounted solar energy facilities with a panel zone of 21 acres or less (5.1.65).

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Sec. 10.2.2 - By special use permit

58. Solar energy ~~systems.~~ facilities with a panel zone of greater than 21 acres (5.1.65).

59. Battery energy storage facilities (5.1.65).

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Industrial Districts – Generally

Sec. 26.2 - Permitted primary and accessory uses and structures; prohibited uses and structures

a. *Primary uses and structures*. Primary uses and structures within the industrial districts are permitted by right, by special use permit, and by special exception as provided in the following table, subject to the applicable requirements of this chapter:

Use	LI	HI	PD-IP Cat 1.	PD-IP Cat 2.
Public Uses, Utilities and Services, and Telecommunications Uses**				
Battery energy storage facilities (5.1.65).	SP	SP	SP	SP