

## MEMORANDUM

# #2

To: Loudoun County Planning Commission

From: Judi Birkitt, AICP, CZA, Interim Assistant Director, Planning and Zoning  
Daniel Galindo, AICP, Assistant Director, Planning and Zoning

Date: September 1, 2022

Re: September 8, 2022, Planning Commission Work Session  
**ZOAM-2020-0001 Zoning Ordinance Rewrite – Solar Facilities  
Information Item**

### **PURPOSE**

The purpose of this item is for staff to provide the Planning Commission (Commission) information regarding the text being developed for solar facilities in the Draft Zoning Ordinance.

Staff seeks input from the Commission on the following to inform the Uses and Use Specific Standards chapters of the Draft Zoning Ordinance the Commission will consider at a future public hearing.

1. Should Commercial Solar Facility be separated into two categories based on the scale of the facility (acreage and/or capacity in wattage)? Potential categories that are commonly used in American Planning Association materials are "Utility Solar" and "Community Solar," which may be appropriate for multi-family housing and Owners Associations. Minimum lot size, permissibility in which zoning districts, and standards to mitigate potential impacts would be part of this discussion.
2. The existing Zoning Ordinance and draft Zoning Ordinance permit Commercial Solar Facilities by special exception in the Planned Development-General Industry (PD-GI) and Mineral Resource-Heavy Industry (MR-HI) zoning districts. Should this be expanded to other zoning districts? (Refer to the General Plan Policy Guidance section of this memo.)
3. Should solar canopies over off-street and on structured parking facilities be permitted in districts other than industrial?
4. Should solar facilities be permitted on brownfield or landfill sites?
5. What other solar-related topics or questions does the Commission recommend for further research and consideration?

## **DISCUSSION**

Staff are developing draft recommended text for solar facilities as part of the Zoning Ordinance Rewrite project. This Information Item discusses the two types of solar facilities addressed in the current draft text: Site Specific and Commercial.

**Site Specific Solar Facility** (Accessory Use,<sup>1</sup> Consumed Onsite): These facilities provide solar power only to the site on which they are located and may be roof-mounted or ground-mounted.

Current Zoning Ordinance Requirements: The *Revised 1993 Loudoun County Zoning Ordinance* (Revised 1993 Zoning Ordinance) allows “solar power panels, to include ground-mounted solar facilities and ground-mounted solar energy generating facilities” as an accessory use to principal residential, agricultural, commercial, and industrial uses in all zoning districts. Such accessory solar panels are limited to the height and setback requirements of the underlying zoning district and provisions related to historic, architectural preservation, and corridor protection requirements (Code of Virginia § 15.2-2288.7. Local regulation of solar facilities).

Draft Zoning Ordinance Requirements: The Draft Zoning Ordinance continues to allow solar as an accessory use in all zoning districts. As currently drafted, the only difference from the current Zoning Ordinance is for clarity, the Draft Zoning Ordinance defines the use with the term “Site Specific Solar Facility.”

*Solar Facility, Site Specific: A photovoltaic system, such as but not limited to solar panels, that is accessory to a principal use and that provides solar power to the site on which it is located.*

**Commercial Solar Facility** (Principal Use, Offsite to Power Grid): Sometimes referred to as “solar farms,” these utility level facilities supply solar power through the electrical grid for offsite consumption. Commonly, either an electrical utility owns the project or an independent project owner enters into a power purchase agreement to sell electricity to wholesale utility buyers.

Current Zoning Ordinance Requirements: Under the Revised 1993 Zoning Ordinance, a utility-scale solar energy generation facility is classified as an “Electric Generating Plant and Transmission Facility,” which is a special exception use in the PD-GI and MR-HI zoning districts.

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<sup>1</sup> Accessory Use: A use or structure is “accessory” when it is associated with and incidental to the principal use or structure.

Principal Use: The primary use and chief purpose for which a lot or the main building thereon is designed, arranged, or intended.

Currently, this use is not permitted by-right in any zoning district. However, an active Zoning Ordinance Amendment (ZOAM-2022-0001, Amendment to the Revised 1993 Loudoun County Zoning Ordinance Regarding Ground-Mounted Solar Energy Generation Facilities) proposes to allow a “Utility generating plant and transmission facility, ground-mounted solar energy generation facility only” as a permitted (by-right) use, subject to new “Use Limitations.” The “Use Limitations” were adapted from the new standards being developed as part of the ZO Rewrite. A significant difference is that in the ZOAM, the minimum lot size for the use is 500 acres, and in the Draft Zoning Ordinance the minimum lot size is 2 acres.

Draft Zoning Ordinance Requirements: The draft continues to allow Commercial Solar Facilities as a principal use upon Board approval of a special exception only in the following industrial zoning districts: PD-GI and MR-HI. Utility-scale solar facilities are ideally located in industrial areas, as such uses are part of the larger utility network and tie into a substation, which transmits energy through either low-voltage distribution lines or high-voltage transmission lines. Also, a Commercial Solar Facility could include an onsite substation and switching yard.

For clarity, the Draft Zoning Ordinance adds a definition for Commercial Solar Facilities as follows:

*Solar Facility, Commercial: A photovoltaic system, including but not limited to a ground-mounted solar energy generation facility, built to supply commercial solar power into the electricity transmission or distribution network. It is comprised of a large, decentralized solar panel installation that aims to provide its power to the power grid at the utility level.*

Additionally, as drafted, Commercial Solar Facilities are subject to Use Specific Standards summarized in Table 1.

<b>Table 1. Use Specific Standards for Commercial Solar Facilities</b>	
<b>Standard</b>	<b>Parameter</b>
Minimum Lot Size	2 Acres
Maximum Height	20 feet excluding utility poles and the interconnection to the overhead electric utility grid
Glint and Glare	Must use anti-glare technology, anti-reflective coatings, and other available mitigation techniques, all that meet or exceed industry standards, to reduce glint and glare.
Viewshed Impacts	Must minimize impacts on viewsheds, including from residential areas and areas of scenic, historical, cultural, archaeological, and recreational significance as demonstrated through project siting and mitigation.

<b>Table 1. Use Specific Standards for Commercial Solar Facilities</b>	
<b>Standard</b>	<b>Parameter</b>
Minimum Setback From Public Rights-of-Way	75 feet, unless more restrictive within the underlying zoning district
Minimum Setback From Main Buildings on Adjoining Parcels	75 feet, unless more restrictive within the underlying zoning district
Minimum Setback From Adjacent Property Lines	25 feet (Not intended to restrict the location of access, erosion and stormwater structures, and interconnection to the electrical grid.)
Minimum Distance From An Airport	1 mile or submit written certification from the Federal Aviation Administration that the location of the facility poses no hazard for, and will not interfere with, airport operations.
Access	Must be from a paved road at least 20 feet wide and maintained by a public body.
Landscaping, Buffering and Screening	For PD-GI and MR-HI zoning districts, when the adjacent use is office, commercial, retail, heavy industrial, or aviation, a B buffer type is required (semi-opaque, 20-foot-wide buffer with 80 plant units per 100 linear feet). When the adjacent use or district is residential, community, or civic, a C buffer type is required (opaque, 30-foot-wide buffer with 120 plant units per 100 linear feet, and 6-foot-tall fence).
Decommissioning	Decommission Plan is required with submission of Site Plan. Security is required for the estimated decommissioning cost.
Restoration	Must restore the property where the solar facility was located, including soil stabilization and revegetation of the ground cover of the disturbed property (per decommission plan).

In addition to the standards in Table 1, the draft standards address facilities that have been deemed by the County as unsafe or non-operational. Standards for notification, removal or repair periods, handling and disposal, and legal action are detailed. Refer to Attachment 1 for a copy of the draft use specific standards and definitions.

Table 2 provides a comparison of how the Revised 1993 Zoning Ordinance and the Draft Zoning Ordinance regulate solar facilities.

<b>Table 2. Solar Facilities – Comparison of Existing and Draft Zoning Ordinances</b>			
<b>Use</b>	<b>Use Type</b>	<b>Existing Zoning Ordinance</b>	<b>Draft Zoning Ordinance</b>
Site Specific Solar Facility	Accessory  (onsite consumption)	Not defined  Permitted by-right in all zoning districts  Subject to height and setback requirements of the underlying zoning district and historic, architectural preservation, and corridor protection requirements	New definition  Permitted by-right in all zoning districts  Subject to height and setback requirements of the underlying zoning district and historic, architectural preservation, and corridor protection requirements
Commercial Solar Facility	Principal  (offsite to power grid)	Classified as an “Electric Generating Plant and Transmission Facility”  Special Exception in Mineral Resource Heavy Industry (MR-HI) and Planned Development General Industry (PD-GI)  Active ZOAM-2022-0001 proposes to allow the use, with a minimum lot size of <b>500 acres</b> , by-right in the PD-GI zoning district, subject to proposed “Use Limitations” that were adapted from the new standards drafted as part of the ZO Rewrite project	New definition for “Commercial Solar Facility”  Special Exception in Mineral Resource Heavy Industry (MR-HI) and Planned Development General Industry (PD-GI)  New use specific standards with a minimum lot size of <b>2 acres</b>

Should the Board adopt ZOAM-2022-0001, staff will incorporate those amendments into the Zoning Ordinance Rewrite project. It will be necessary to address the

minimum lot size for a Commercial Solar Facility, given the discrepancy between the 2-acre and 500-acre minimum lot size.

### **GENERAL PLAN POLICY GUIDANCE**

The *Loudoun County 2019 General Plan* (2019 GP) includes the following policy guidance for solar power development:

- Establish zoning regulations and design standards that permit alternative electrical generation such as wind and solar generation by and for individual users. (Chapter 6, Action 6.1.A)
- Adopt solar zoning and permitting best practices for accessory use solar development. (Chapter 3, Strategy 9.5, Action A)
- Become certified as a “solar-ready” community under the Department of Energy’s SolSmart program. (Chapter 3, Strategy 9.5, Action B)
- Support solar farms with locational criteria to be identified. (Chapter 3, Strategy 9.5, Action C)

The 2019 GP supports Commercial Solar Facilities (“solar farms”) and identifies the need for the County to develop criteria for where these uses should be located. As part of the Zoning Ordinance Rewrite project, the Commission may recommend to the Board where Commercial Solar Facilities should be located. The Commission could also recommend that the Board initiate a separate Comprehensive Plan Amendment (CPAM) to consider solar facilities after adoption of the Zoning Ordinance Rewrite project.

### **ZONING ORDINANCE COMMITTEE**

Staff presented the draft commercial solar facility use specific standards to the Zoning Ordinance Committee in a subcommittee in April 2022. After lengthy discussion, the subcommittee recommended and the committee of the whole agreed that given the sensitivity of this issue and the level of detail in the proposed standards, if solar facilities cannot be adequately addressed during the Zoning Ordinance Rewrite project, the Board may choose to consider solar facilities as a separate ZOAM.

### **PUBLIC COMMENT**

A primary public comment theme calls for a future amendment, separate from the Zoning Ordinance Rewrite project, to consider whether to allow commercial solar facilities in urban, suburban, and certain rural areas with standards protecting habitats and other environmental, natural, and cultural resources.

Another comment theme is to better address energy storage. Staff is actively revising text for energy storage and will discuss that language as part of the discussion on Uses and Use Specific Standards at a future Commission public hearing.

**ATTACHMENTS**

1. Draft Text for Solar Facilities (September 1, 2022)
2. Zoning Ordinance Committee and Public Comments - Solar

#### 4.07.04 Solar Facility, Commercial

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- A. **Applicability.** This section applies to commercial solar facilities. It does not apply to site specific solar facilities.
- B. **Intensity/Character.**
1. **Size of Use.**
    - a. **Minimum Lot Size.** 2 Acres.
    - b. **Height.** Ground-mounted facilities must not exceed 20 feet in height, measured from the highest natural grade below each solar panel to the top of the solar panel or its supporting structure, whichever is higher. This height limit does not apply to utility poles and the interconnection to the overhead electric utility grid.
  2. **Visual Impacts.**
    - a. The facility must minimize impacts on viewsheds, including from residential areas and areas of scenic, historical, cultural, archaeological, and recreational significance as demonstrated through project siting and mitigation.
    - b. The facility must use 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.
  3. **Location/Dimensional.**
    - a. **Setbacks.** Unless more restrictive within the underlying zoning district, any element of the solar facility must be set back a distance of at least 75 feet from all public rights-of-way and main buildings on adjoining parcels, and a distance of at least 25 feet from adjacent property lines. These setbacks must not restrict the location of access, erosion and stormwater structures, and interconnection to the electrical grid.
    - b. **Distance From Airport.** The facility must not be located within 1 mile 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.
- C. **Access/Driveways.**
1. **Access.** Access to the lot on which the facility is located must be provided from a paved road that is maintained by a public body and that is at least 20 feet in width.
  2. **Driveways.** Driveways are not permitted within a required buffered setback except as necessary to access the site. Driveways must have all-weather roadways negotiable by loaded transport vehicles.
- D. **Landscaping/Buffering/Screening.** Refer to Section 7.04.
- E. **Decommission Plan/Security.**
1. **Decommission Plan.** As part of the site plan submission, the facility owner or property owner must provide a detailed decommission plan acceptable to the County that provides procedures and requirements for removal of all parts of the solar facility and its various structures at the end of the useful life of the facility or if it is deemed abandoned by the County. The decommission plan must include the anticipated life of the facility, the estimated overall cost of decommissioning the facility in current dollars, the methodology for determining such estimate, and the manner in which the facility will be decommissioned. The decommission plan and the estimated decommissioning cost must be updated upon the request of the zoning administrator, provided the update is no more frequent than once every 5 years and no less frequently than once every 10 years.
  2. **Security.** Prior to operation, the applicant must provide a security in the amount of the estimated cost of the decommissioning. Options for security include a cash escrow, a performance surety bond, an irrevocable letter of credit, or other security acceptable to the county in an amount equal to the estimated decommissioning cost developed and updated in accordance with the decommission plan acceptable to the county. 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 decommission plan. The security must be for the benefit of the county and must be obtained and delivered to the county before any construction commences.

## F. **Unsafe or Abandoned Facility/Decommissioning.**

1. **Unsafe Facility.** If the county determines a solar facility is unsafe, the facility owner or property owner must complete either of the following within the time period as directed by the county and in compliance with the facility's decommission plan:
  - a. Repair the facility to meet federal, state, and local safety standards.
  - b. Remove the facility.
2. **Abandoned Facility.** If any solar facility is not operated for 12 continuous months, the county will notify the facility owner by registered mail that the County deems the facility abandoned and provide 45 days for the facility owner a response. In its response, the facility owner must 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, the county will notify the facility owner, and the facility owner, site owner, or operator must remove the solar facility in compliance with the decommission plan established for such facility.
3. **Notification.** At the time a solar facility is scheduled to be abandoned, the facility owner or property owner must notify the zoning administrator in writing.
4. **Removal Period.** Within 365 days of the date of abandonment, the physical removal of the solar facility must be completed in compliance with the facility's decommission plan. This period may be extended at the request of the owners or operator, upon approval of the Board of Supervisors.
5. **Handling and Disposal.** The handling and disposal of all equipment and facility components must comply with the decommission plan and federal, state, and local requirements.
6. **Legal Action.** If the facility owner or property owner fails to timely remove or repair an unsafe or abandoned solar facility after written notice, the county may pursue legal action to have the facility removed at the expense of the facility owner and property owner, each of whom will be jointly and severally liable for the expense of removing or repairing the facility. The county also may use the decommissioning security to remove the facility.

### 13.03 Definitions

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**Decommission, Solar Facility:** The removal and proper disposal of solar energy equipment, facilities, or devices on real property. It shall include the reasonable restoration of the real property upon which such solar equipment, facilities, or devices are located, including (i) soil stabilization and (ii) revegetation of the ground cover of the real property disturbed by the installation of such equipment, facilities, or devices.

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

**Solar Energy Equipment, Facilities or Devices:** Any property designed and used primarily for the purpose of collecting, generating, or transferring electric energy from sunlight.

**Solar Facility, Commercial:** A photovoltaic system, including but not limited to a ground-mounted solar energy generation facility, built to supply commercial solar power into the electricity transmission or distribution network. It is comprised of a large, decentralized solar panel installation that aims to provide its power to the power grid at the utility level.

**Solar Facility, Site Specific:** A photovoltaic system, such as but not limited to solar panels, that is accessory to a principal use and that provides solar power to the site on which it is located.

Draft 9/1/24

# Draft Zoning Ordinance (April 18, 2022)

## Public Comments Submitted to enCodePlus

### Solar Facilities

ID	Section
#13389	3.01 Uses Generally
By: Peter Weeks Tags: public <a href="mailto:pqweeks@aol.com">pqweeks@aol.com</a> Date:7/17/2022	(3.01) A future zoning amendment should initiate a regulatory path to review whether to allow "solar facility, commercial" in certain rural areas as long as performance standards to protect exemplary and high-quality habitats, and other natural resources, from land disturbance are included.
#13183	3.01 Uses Generally
By: Adam Stevenson Tags: public <a href="mailto:stevensona95@gmail.com">stevensona95@gmail.com</a> Date:7/17/2022	A future zoning amendment should initiate a regulatory path to review whether to allow "solar facility, commercial" in certain rural areas as long as performance standards to protect exemplary and high-quality habitats, and other natural resources, from land disturbance are included.
#12954	3.01 Uses Generally
By: Environmental Commission (Keara Moore, staff liaison) Tags: public <a href="mailto:keara.moore@loudoun.gov">keara.moore@loudoun.gov</a> Date:7/15/2022	Note: This comment applies to the 3.02.01, 3.02.02, and 3.02.03 Use Tables and is also relevant to 11.03. Comment: "Energy storage" and "batteries" are uses but not identified in the ordinance. This has previously been accepted as a use by the County when CMPT-2021-0005 approved an energy-battery storage use on a parcel adjacent to an existing substation, on a parcel zoned AR-2. It is also mandated statewide, requiring 3,100 megawatt of energy storage by 2035 per the Virginia Clean Economy Act. Recommendation: "Energy storage" and "Batteries" should be defined as uses in Section 11.03. The Use Tables should then be updated to allow in all zoning districts. Definitions available at Taming the Sun: Innovations to Harness Solar Energy and Power the Planet (Varun Sivaram, 2018; ISBN 9780262037686) could be used as examples to draft something similar to what was approved in CMPT-2021-0005. BATTERY – Electrochemical devices that store and release electric energy by using chemical reactions. Lithium-ion batteries, which operate by shuttling lithium ions between two electrodes, are increasingly popular for powering electric vehicles as well as for stationary uses such as stabilizing the electricity grid. Many other battery designs exist or are under development – from well-established lead-acid batteries to promising flow batteries. (pp.283-4) ENERGY STORAGE – The process of storing energy, or converting it from one form to another, for later use. Energy storage technologies used – or under development for future use – in the electric power sector include pumped hydro storage, electro-chemical batteries,

ID	Section
	superconducting magnetic energy storage, supercapacitors, flywheels, compressed air, and underground thermal energy storage. (p.285)
#12911	3.01 Uses Generally
By: Trinity Mills Tags: public <a href="mailto:tmills@loudounwildlife.org">tmills@loudounwildlife.org</a> Date:7/15/2022	A future zoning amendment should initiate a regulatory path to review whether to allow "solar facility, commercial" in certain rural areas as long as performance standards to protect exemplary and high-quality habitats, and other natural resources, from land disturbance are included.
#12910	3.01 Uses Generally
By: Trinity Mills Tags: public <a href="mailto:tmills@loudounwildlife.org">tmills@loudounwildlife.org</a> Date:7/15/2022	A future zoning amendment should initiate a regulatory path to review whether to allow "solar facility, commercial" in certain rural areas as long as performance standards to protect exemplary and high-quality habitats, and other natural resources, from land disturbance are included.
#12596	3.01 Uses Generally
By: Michael Myers Tags: public <a href="mailto:mmyers@loudounwildlife.org">mmyers@loudounwildlife.org</a> Date:7/15/2022	(3.01) A future zoning amendment should initiate a regulatory path to review whether to allow "solar facility, commercial" in certain rural areas as long as performance standards to protect exemplary and high-quality habitats, and other natural resources, from land disturbance are included.
#12576	3.01 Uses Generally
By: Brian Magurn Tags: public <a href="mailto:bmagurn@gmail.com">bmagurn@gmail.com</a> Date:7/15/2022	A future zoning amendment should initiate a regulatory path to review whether to allow "solar facility, commercial" in certain rural areas as long as performance standards to protect exemplary and high-quality habitats, and other natural resources, from land disturbance are included.
#13978	3.02.01 Urban and Suburban Use Table
By: Michael Romeo Tags: public <a href="mailto:mromeo@thelandlawyers.com">mromeo@thelandlawyers.com</a> Date:7/18/2022	Solar facility, commercial This use should be permitted by special exception in the UE and SE districts Permit this use by special exception in the UE and SE districts
#13642	3.02.01 Urban and Suburban Use Table
By: Environmental Commission (Keara Moore, staff liaison) Tags: public <a href="mailto:keara.moore@loudoun.gov">keara.moore@loudoun.gov</a>	(See associated comments in 3.02.02, 3.02.03, and 3.05.07.03) Concern: The draft ordinance unreasonably restricts ability of property owners to voluntarily install commercial solar facilities. Recommendation: The Environmental Commission recommends expanded application of "solar facility, commercial" based

ID	Section
Date:7/18/2022	on benign land use impact when compared to other commercial uses like commercial or retail areas with surface parking. "Solar facility, commercial" uses do not produce noise or traffic, unlike residential and commercial uses. Performance standard language added to Section 3.05.07.04 should mitigate other potential impacts of "solar facility, commercial." Suggested zoning districts for solar include: any zoning district with a history as a brownfield (ie Hidden Lane Landfill, zoned PDH-3), all suburban and JLMA districts allowing commercial use, and all transition districts that require open space.
#13642	3.02.01 Urban and Suburban Use Table
By: Environmental Commission (Keara Moore, staff liaison) Tags: public <a href="mailto:keara.moore@loudoun.gov">keara.moore@loudoun.gov</a> Date:7/18/2022	(See associated comments in 3.02.02, 3.02.03, and 3.05.07.03) Concern: The draft ordinance unreasonably restricts ability of property owners to voluntarily install commercial solar facilities. Recommendation: The Environmental Commission recommends expanded application of "solar facility, commercial" based on benign land use impact when compared to other commercial uses like commercial or retail areas with surface parking. "Solar facility, commercial" uses do not produce noise or traffic, unlike residential and commercial uses. Performance standard language added to Section 3.05.07.04 should mitigate other potential impacts of "solar facility, commercial." Suggested zoning districts for solar include: any zoning district with a history as a brownfield (ie Hidden Lane Landfill, zoned PDH-3), all suburban and JLMA districts allowing commercial use, and all transition districts that require open space.
#14034	3.02.02 Transition and JLMA Use Table
By: Michael Romeo Tags: public <a href="mailto:mromeo@thelandlawyers.com">mromeo@thelandlawyers.com</a> Date:7/18/2022	Solar facility, commercial This use should be permitted by special exception in the TLI and JLMA-LE districts Permit this use by special exception in the TLI and JLMA-LE districts
#13643	3.02.02 Transition and JLMA Use Table
By: Environmental Commission (Keara Moore, staff liaison) Tags: public <a href="mailto:keara.moore@loudoun.gov">keara.moore@loudoun.gov</a> Date:7/18/2022	(See associated comments in 3.02.01, 3.02.03, and 3.05.07.03) Concern: The draft ordinance unreasonably restricts ability of property owners to voluntarily install commercial solar facilities. Recommendation: The Environmental Commission recommends expanded application of "solar facility, commercial" based on benign land use impact when compared to other commercial uses like commercial or retail areas with surface parking. "Solar facility, commercial" uses do not produce noise or traffic, unlike residential and commercial uses. Performance standard language added to Section 3.05.07.04 should mitigate other potential impacts of "solar facility, commercial." Suggested zoning districts for solar include: any zoning district with a history as a brownfield (ie Hidden Lane Landfill, zoned PDH-3), all suburban and JLMA districts allowing commercial use, and all transition districts that require open space.

ID	Section
#13645	3.02.03 Rural Use Table
<p>By: Environmental Commission (Keara Moore, staff liaison)            Tags: public  <a href="mailto:keara.moore@loudoun.gov">keara.moore@loudoun.gov</a>            Date:7/18/2022</p>	<p>(See associated comments in 3.02.01, 3.02.02, and 3.05.07.03)            Concern: The draft ordinance unreasonably restricts ability of property owners to voluntarily install commercial solar facilities. Recommendation: Recommend a subsequent zoning amendment creating a regulatory path to approve “solar facility, commercial” in the rural area. Statement of policy for Board to consider in authorizing this recommendation: The Environmental Commission recommends the initiation of a County solar zoning review pursuant to Virginia Code regulating residential, commercial, industrial, institutional, and rural zoning of solar facilities.            The solar zoning review would include Virginia Code parameters from electrical co-operative NOVEC and Phase II Utility Dominion to inform solar facility size.            The Virginia Code empowers a solar zoning review to concern forest and prime agricultural land, areas of high ecological value, setbacks and fencing, and gives the municipality the flexibility to express its values to create a solar facility review process codified by County zoning.</p>
12955	3.03 Accessory Uses
<p>By: Environmental Commission (Keara Moore, staff liaison)            Tags: public  <a href="mailto:keara.moore@loudoun.gov">keara.moore@loudoun.gov</a>            Date:7/15/2022</p>	<p>Table 3.03-1 Permitted Accessory Uses (Would also need to be addressed in 11.03 and 3.05.) Comment: Some renewable energy, such as wind, can be used to generate power for single lots, but without a use in the ZO, it could be prohibited or discouraged. Recommendation: Site-specific renewable energy as defined in the Virginia Clean Economy Act  <a href="https://law.lis.virginia.gov/vacode/title56/chapter23/section56-576/">https://law.lis.virginia.gov/vacode/title56/chapter23/section56-576/</a>) should be recognized as a permitted accessory use for the same principal uses as site-specific solar energy. Specific standards may be necessary to limit some characteristics such as the height of a wind turbine or setback requirements from property lines.</p>
#13708	4.06.04 Flex Buildings
<p>By: Steffen H Warfield            Tags: public  <a href="mailto:steffenwarfield@gmail.com">steffenwarfield@gmail.com</a>            Date:7/18/2022</p>	<p>This Comment proposes a new use-specific standard under 3.05.06 but has been included under its analogous section, 3.05.06.04. To address the mounting environmental challenges caused by climate change, the United States Government, the Commonwealth of Virginia through the Virginia Clean Economy Act, and many local leaders support the transition to a renewables-driven, clean electric grid over the next 15-20 years. Renewables, such as wind and solar, have essential roles in any path to net zero carbon electricity but they are variable energy sources. Energy storage systems efficiently integrate these renewables onto the grid. Moreover, these energy storage systems offer other grid-related services that improve grid reliability and resiliency, which provide economic advantages and strengthen national security. In recognition of these facts, the Commonwealth of Virginia has mandated that its utilities procure and deploy at least 3,100MW of energy storage resources by 2035, which is the second-most ambitious storage target in the nation. To achieve these important goals, local government must reduce barriers to energy storage systems, including those in this Proposed Zoning Ordinance. In the proposed draft ordinance, it is unclear how energy storage is classified. It could fall within several defined uses, including Major Utility, Energy Storage, or Electric Generating Plant and Transmission. Nonetheless, each instance is a Prohibited Use or requires a Special Exception (SPEX) in the commercial Zoning Districts –</p>

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	<p>Suburban Industrial (SI), Suburban Commercial (SC-NC and SC-CC), Suburban Employment (SE), and Suburban Mixed Use (SM). The effects of prohibition are obvious, and barriers imposed by the SPEX zoning process result in delay, significant cost increases, and the uncertainty related to a legislative process. Energy storage systems should be treated similarly to By-Right Flex Buildings, subject to use-specific standards, such as Flex Buildings in the SI and SE commercial Zoning Districts. This treatment of energy storage systems would satisfy the stated purpose of Use-Specific Standards, which is, in part, to “minimize negative impacts on neighboring properties, implement State and federal law, and ensure the orderly development of a diversity of land uses within the county. These standards will provide uniform criteria for development approval, protect the public health, safety and welfare, and protect property values and economic development.” Of significance, energy storage systems do not carry the operating concerns of other industrial operations, such as traffic, noise, light, pollution, or water and transportation requirements that could affect neighboring landowners, and does not require the large acreage of renewable energy generation. Indoor energy storage, moreover, does not present aesthetic challenges. Specific use standards are sufficient to address the unique character of energy storage systems, such as fire safety, by following local fire codes and nationally recognized lithium-ion battery standards like NFPA 855, Standards for the Installation of Stationary Energy Storage Systems. Local fire officials and third-party experts can administer and enforce these standards thereby protecting the health, safety, and welfare of the County. Finally, energy storage systems as a By-Right use, subject to use-specific standards, would further the Commonwealth’s legislatively-directed goal of 3,100MW of energy storage by 2035.</p>
#12869	4.06.04 Flex Buildings
<p>By: Nelis Law            Tags: public  <a href="mailto:sdonches@nelislaw.com">sdonches@nelislaw.com</a>            Date:7/15/2022</p>	<p>This Comment proposes a new use-specific standard under 3.05.06 but has been included under its analogous section, 3.05.06.04. To address the mounting environmental challenges caused by climate change, the United States Government, the Commonwealth of Virginia through the Virginia Clean Economy Act, and many local leaders support the transition to a renewables-driven, clean electric grid over the next 15-20 years. Renewables, such as wind and solar, have essential roles in any path to net zero carbon electricity but they are variable energy sources. Energy storage systems efficiently integrate these renewables onto the grid. Moreover, these energy storage systems offer other grid-related services that improve grid reliability and resiliency, which provide economic advantages and strengthen national security. In recognition of these facts, the Commonwealth of Virginia has mandated that its utilities procure and deploy at least 3,100MW of energy storage resources by 2035, which is the second-most ambitious storage target in the nation. To achieve these important goals, local government must reduce barriers to energy storage systems, including those in this Proposed Zoning Ordinance. In the proposed draft ordinance, it is unclear how energy storage is classified. It could fall within several defined uses, including Major Utility, Energy Storage, or Electric Generating Plant and Transmission. Nonetheless, each instance is a Prohibited Use or requires a Special Exception (SPEX) in the commercial Zoning Districts – Suburban Industrial (SI), Suburban Commercial (SC-NC and SC-CC), Suburban Employment (SE), and Suburban Mixed Use (SM). The effects of prohibition are</p>

ID	Section
	<p>obvious, and barriers imposed by the SPEX zoning process result in delay, significant cost increases, and the uncertainty related to a legislative process. Energy storage systems should be treated similarly to By-Right Flex Buildings, subject to use-specific standards, such as Flex Buildings in the SI and SE commercial Zoning Districts. This treatment of energy storage systems would satisfy the stated purpose of Use-Specific Standards, which is, in part, to “minimize negative impacts on neighboring properties, implement State and federal law, and ensure the orderly development of a diversity of land uses within the county. These standards will provide uniform criteria for development approval, protect the public health, safety and welfare, and protect property values and economic development.” Of significance, energy storage systems do not carry the operating concerns of other industrial operations, such as traffic, noise, light, pollution, or water and transportation requirements that could affect neighboring landowners, and does not require the large acreage of renewable energy generation. Indoor energy storage, moreover, does not present aesthetic challenges. Specific use standards are sufficient to address the unique character of energy storage systems, such as fire safety, by following local fire codes and nationally recognized lithium-ion battery standards like NFPA 855, Standards for the Installation of Stationary Energy Storage Systems. Local fire officials and third-party experts can administer and enforce these standards thereby protecting the health, safety, and welfare of the County. Finally, energy storage systems as a By-Right use, subject to use-specific standards, would further the Commonwealth’s legislatively-directed goal of 3,100MW of energy storage by 2035.</p>
#13648	4.07.03 Recycling Collection Centers and Material Recovery Facilities
<p>By: Environmental Commission (Keara Moore, staff liaison)            Tags: public  <a href="mailto:keara.moore@loudoun.gov">keara.moore@loudoun.gov</a>            Date:7/18/2022</p>	<p>Note that this comment applies to 3.05.07.04 but is entered here as EnCode does not have a spot for .04. (See associated comments in 3.02.01, 3.02.02, and 3.02.03) Concern: The draft Zoning Ordinance unreasonably restricts ability of property owners to voluntarily install commercial solar facilities. Recommendation: Include for public comment draft language for Section 3.05.07.04, as presented to the Zoning Ordinance Committee in the 2022-04-26 Use Standards Subcommittee Packet. Environmental Commission will comment on this language when it is published and will support language that includes protections for natural resources and prime agricultural soils.</p>

# Draft Zoning Ordinance

## Zoning Ordinance Committee Comments

### Solar Facilities

ID	Section
#793	[Table Format] Use Classifications, Categories, and Types
By: Maura Walsh-Copeland Tags: zoc <a href="mailto:Maura@Walsh-CopelandConsulting.com">Maura@Walsh-CopelandConsulting.com</a> Date:5/4/2021	"SOLAR FACILITY, SITE-SPECIFIC. Glad to see this is Permitted. Key will be performance standards to match new use. -- Definition: What was the rationale for selecting "capacity not less than 50 kilowatts?" -- Definition: Is "Solar energy system" synonymous to "solar array" and/or "Utility-scale Solar Photovoltaic?" If so, these are more common terms used. In alternative, add the latter term for further explanation."
#13936	Solar Facility
By: Gem Bingol/PEC Tags: zoc <a href="mailto:gbingol@pecva.org">gbingol@pecva.org</a> Date:7/18/2022	Add Solar, Community to the definitions list for multi-family housing and HOAs.
#13816	7.06.10 Parking Location and Design
By: Gem Bingol/PEC Tags: zoc <a href="mailto:gbingol@pecva.org">gbingol@pecva.org</a> Date:7/18/2022	5.05.10.C. & E. Provide an incentive for the addition of solar canopies over off-street and on structured parking facilities and built-in EV charging capability.
#13882	7.02.05 Open Space Design Standards
By: Gem Bingol/PEC Tags: zoc <a href="mailto:gbingol@pecva.org">gbingol@pecva.org</a> Date:7/18/2022	5.04.05 Open Space Design Standards. Ensure that standards for open space do not prohibit installation of community solar, district energy, or geothermal/ground source heat pumps in landscaped areas that will not disturb natural vegetation.
#7635	Chapter 7: Development Standards

ID	Section
By: Gem Bingol Tags: zoc <a href="mailto:gbingol@pecva.org">gbingol@pecva.org</a> Date:1/22/2022	Will there be any sustainability development or performance standards? I see nothing for energy efficiency requirements, solar incorporated into building or parking lot requirements, LID or green infrastructure/stormwater management BMPs that go above and beyond existing requirements. Am I missing something?
#6843	Chapter 6: Natural and Environmental Resources (NER)
By: Maura Walsh-Copeland Tags: zoc <a href="mailto:Maura@Walsh-CopelandConsulting.com">Maura@Walsh-CopelandConsulting.com</a> Date:1/3/2022	"5.03. PROHIBITION OF CLEAR CUTTING. Is there a place where clear cutting of lots is prohibited in advance of building lots or future uses (e.g., solar commercial) later? While there may be restrictions in the state codes on how this is handled, at the least there could be a grace period to disincentivize people to clear lots in anticipation of selling them to a developer to be built upon without as many restrictions due to the lack of a tree canopy."
#3901	4.07.04 Solar Facility, Commercial
By: Jean Ault Tags: zoc <a href="mailto:jean.ault@gmail.com">jean.ault@gmail.com</a> Date:9/8/2021	As solar facilities are a forward-thinking good source to harness renewable energy, I would advocate regulating them not prohibiting them.
#3747	4.07.04 Solar Facility, Commercial
By: Charles Houston Tags: zoc <a href="mailto:CharlesHouston3@yahoo.com">CharlesHouston3@yahoo.com</a> Date:9/4/2021	Please delete commercial solar as a use, on the aesthetic grounds.
#3447	4.07.04 Solar Facility, Commercial
By: Tia Walbridge Tags: zoc <a href="mailto:tiawalbridge@gmail.com">tiawalbridge@gmail.com</a> Date:8/25/2021	This should not be included. The cost of land, rapid loss of our land in western Loudoun really should take commercial scale solar off the table for us. We are not a good place for these operations. If we are going to allow private land owners to lease a portion of their land to solar contractors than we need to write detailed regulations including the exclusion of prime ag soils from these leases.
#883	3.02.03 Rural Use Table
By: Charles Houston Tags: zoc <a href="mailto:CharlesHouston3@yahoo.com">CharlesHouston3@yahoo.com</a> Date:5/8/2021	I disagree with John on several points which he may be advocating. Mobile vendors should NOT be allowed near wineries or breweries. There should be NO outdoor shooting ranges. Commercial solar should NOT be allowed.
#792	3.02.03 Rural Use Table

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By: Maura Walsh-Copeland Tags: zoc <a href="mailto:Maura@Walsh-CopelandConsulting.com">Maura@Walsh-CopelandConsulting.com</a> Date:5/4/2021	SOLAR FACILITY, COMMERCIAL. Why are SPEX uses identified in TPA Industrial (TIE) and Leesburg Industrial (JLMA-LI), but not UPA/SPA? Commercial Solar Arrays should be SPEX in ALL areas of the County. WHEN performance standards are developed, will additional P, M, or S locations in UPA/SPA be identified/expected? The definition needs a little work to be more clear/specific.
#759	3.02.03 Rural Use Table
By: John Merrithew Tags: zoc <a href="mailto:John.merrithew@loudoun.gov">John.merrithew@loudoun.gov</a> Date:5/3/2021	Commercial solar should be permitted by SPEX or with tight standards.I don't see a functional distinction between a Farm Distribution Hub and a Coopertative operation.
#746	3.02.03 Rural Use Table
By: Charles Houston Tags: zoc <a href="mailto:CharlesHouston3@yahoo.com">CharlesHouston3@yahoo.com</a> Date:5/3/2021	Infrastructure: Solar facility, site-specific: What exactly is this, and how is it limited?
#13650	3.02.02 Transition and JLMA Use Table
By: Gem Bingol/PEC Tags: zoc <a href="mailto:gbingol@pecva.org">gbingol@pecva.org</a> Date:7/18/2022	Add solar, commercial to JLMA commercial and transition districts as a special exception use (excluding TCC).
#1336	3.02.02 Transition and JLMA Use Table
By: Maura Walsh-Copeland Tags: zoc <a href="mailto:Maura@Walsh-CopelandConsulting.com">Maura@Walsh-CopelandConsulting.com</a> Date:5/31/2021	Table 3.02.02-2. SOLAR FACILITY, COMMERCIAL not permitted in JLMA-20 near Leesburg Airport is a good move. But why no SOLAR FACILITY, SITE-SPECIFIC that could be on parking or rooftops?
#1310	3.02.02 Transition and JLMA Use Table
By: Charles Houston Tags: zoc <a href="mailto:CharlesHouston3@yahoo.com">CharlesHouston3@yahoo.com</a> Date:5/27/2021	Do not permit commercial solar, even if a SPEX is required.
#13647	3.02.01 Urban and Suburban Use Table

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By: Gem Bingol/PEC Tags: zoc <a href="mailto:gbingol@pecva.org">gbingol@pecva.org</a> Date:7/18/2022	Add solar, commercial to suburban commercial districts and brownfield sites as a special exception use.
#1329	3.02.01 Urban and Suburban Use Table
By: Maura Walsh-Copeland Tags: zoc <a href="mailto:Maura@Walsh-CopelandConsulting.com">Maura@Walsh-CopelandConsulting.com</a> Date:5/31/2021	Table 3.02.01-1. Urban/Suburban Use Table. SOLAR FACILITY, COMMERCIAL -- Use was added as SPEC to Suburban Ag/Residential (former A3). It appears there are 4 areas along the Potomac River with this zoning, some open/vacant, some dense residential. This may need a "hold" until the Solar Array BMI workplan is integrated in the Zoning Ordinance Rewrite to preclude premature applications.
#707	3.02.01 Urban and Suburban Use Table
By: Kevin Ruedisueli Tags: zoc <a href="mailto:kevinruedisueliZOC@gmail.com">kevinruedisueliZOC@gmail.com</a> Date:5/2/2021	'Solar Facility, commercial' should be an S use in SAR