

June 16, 2021

**To:** Planning Commission

**Fr:** Jay C. Leipzig, AICP, Director

Sean Pendley, AICP, Deputy Director

Karen Miller, Planner

**Re:** Utility-Scale Solar Facilities - Summary of Draft Application Requirements and Development Standards

Planning staff has worked with an independent consultant to draft amendments to the Zoning and Subdivision Regulations for the regulation of Small, Medium and Utility-Scale Solar Facilities. These draft regulations are currently being revised and finalized by Planning, and reviewed by Legal staff, so may be subject to further change. Highlights of proposed application requirements and development standards for Utility-Scale Solar Facilities, as currently contemplated, are summarized below and are submitted for Planning Commission discussion.

Staff anticipates that the proposed set of zoning regulation amendments will be finalized and ready for review by the Planning Commission at its July 26<sup>th</sup> meeting with a possible public hearing at the August 24<sup>th</sup> meeting.

## **HIGHLIGHTS OF UTILITY-SCALE SOLAR FACILITY APPLICATION REQUIREMENTS AND DEVELOPMENT STANDARDS**

### **General Provisions:**

1. **Buffer Zone:** The area between the Project Boundary (or Official Street Line, if there is one) and the required setback for the Solar Facility. This is the area intended to act as a buffer between properties outside of the Solar Facility and security fencing/structures within the Solar Facility. This area is also intended for any required landscaping and/or berming.
2. **Neighborhood Meeting:** Hosted by the applicant and held prior to the public hearing. All property owners within 1,000 ft. of the Solar Facility are invited.

### **Application Requirements (in addition to the general development plan requirements)**

1. **Concept Plan:** Provides a visual summary of the project including aerial imagery of the Project Area superimposed with the Project Boundary and the general location of screening, buffer zones, fencing, tree preservation, structures, PV pods, driveways, wildlife corridors, floodplain, utility lines, and connections to the electrical grid. This is in addition to the required Development Plan, which is a more detailed plan
2. **Visual Impact Analysis:** Photographic simulations showing relationship of Solar Facility to its surroundings. Views from adjacent roads, dwellings, residential zoning, historic and recreational areas in order to assess the visual impact of the Solar Facility. Total number established by Zoning Administrator.

3. Decommissioning and Reclamation Plan: Includes estimated lifespan and costs of the project, method of ensuring funds.
4. Traffic Study: Models the construction and decommissioning processes.
5. Construction Management Plan: Addresses the construction schedule; traffic control methods; site access; site security; lighting; water supply; mitigation of dust and burning operations; hours of construction activity; adherence to stormwater plans and land disturbance permits; and the handling of general construction complaints during construction and decommissioning activities.
6. Environmental Impact Assessment: Includes an assessment of viewshed impacts including impacts on historic and recreational areas, wetlands, streams, rivers and floodplains.

### Development Standards

1. Term: Up to 20 years.
2. Equipment: Includes photovoltaic panels, charge regulators, inverters, **substations** (which are also referred to as “transformers”), **Battery Energy Storage Facilities**, parking areas, and fencing. *Due to possible detrimental impacts, Battery Energy Storage Facilities are not allowed uses in Medium-Scale and Small-Scale Solar Facilities.*
3. Project Area: Greater than 10 acres and less than 2,000 acres. *This recommendation has been increased from 1,000 acres.*
4. Development Ratio: Percentage of Photovoltaic Panel Coverage in relation to the Project Area shall not exceed 65%. *This recommendation has been increased from 60%.*
5. Distance from Cities: The Solar Facility shall be greater than 1 mile from cities. Excludes city “islands”, which are not contiguous to the main body of the city. *A waiver is available for this requirement.*
6. Distance from Airports: The Solar Facility shall be greater than 1 mile from the boundary of airport area plans.
7. Distance from other Solar Facilities: The Solar Facility shall be greater than 2 miles from other Solar Facilities.
8. Setbacks: *Proposed setback requirements are currently drafted as follows:*
  - a) Project Boundary Setbacks: To minimize adverse impacts upon surrounding properties and the community at large, the setback of structures and uses associated with the Solar Facility from the Project Boundary or, if applicable, the Official Street Line, whichever is nearest to the structures and uses, shall be a minimum of 100 feet, with the exception that substations, Battery Energy Storage Facilities and outdoor storage shall be a minimum of 150 feet. Such structures and uses include fencing, PV panels and parking areas, but do not include landscaping and berming. *Portions of this recommendation have been decreased from 150 feet.*

Waiver: In the event that an applicant desires to deviate from the setback requirement, the application may only be approved if findings are made by the Board of County Commissioners that a) due to the circumstances surrounding the application, it would be unreasonable to require such a setback, or b) it would be reasonable to allow structures and uses closer to the Project Boundary or the Official Street Line (e.g., it may be reasonable to reduce the required

setback for portions of the Project Area abutting Planned Employment Center District Zoning.) However, in no case shall a structure be allowed to encroach upon the Official Street Line. The applicant shall submit written information to the BOCC indicating the circumstances which are believed to necessitate the need for a deviation from the setback requirement.

- b) Interior Setbacks: Minimum setbacks of structures associated with the Solar Facility from property lines within the interior of the Project Area and not part of the Project Boundary shall be in accordance with the underlying zoning district, with the exception that PV panels and associated support structures shall not have a minimum setback requirement.
- c) Setbacks from Dwellings: To minimize adverse impacts upon surrounding nearby residential uses, the minimum setback of structures and uses associated with the Solar Facility, including fencing, PV panels, parking areas, and outdoor storage, but not including landscaping and berming, shall be not less than 250 feet from the nearest dwelling existing at the time the Solar Facility was approved by the County.

Waiver: In the event that an applicant desires to deviate from the setback requirement, the application may only be approved if findings are made by the Board of County Commissioners that a) due to the circumstances surrounding the application, it would be unreasonable to require such a setback, or b) it would be reasonable to allow structures and uses closer to a dwelling (e.g., it may be reasonable to reduce the required setback from dwellings located within the Project Area.) The applicant shall submit written information to the BOCC indicating the circumstances which are believed to necessitate the need for a deviation from the setback requirement.

- 9. Height of Photovoltaic Panels: Maximum height of lowest edge is 10 feet and maximum height of highest edge is 15 feet. Maximum height of other structures is 35 feet. *A waiver is available for this requirement.*
- 10. Security Fencing: To be placed around sections of structures (e.g. PV panels) in order to provide wildlife corridors. Not more than 12 feet in height. May be chain link but shall not include slats.
- 11. Wildlife Corridors: Shall be provided and shown on Concept Plan and Development Plan. Driveways may be considered a type of wildlife corridor.
- 12. Ground Cover: Disturbed land shall be seeded with a revegetation seed mix based on prairie grasses and forbs native to the mid-west United States to include pollinator plants where compatible with site conditions.
- 13. Screening: *Proposed screening requirements are currently drafted as follows:*

Solar Facility structures and uses, including security fencing that is not ornamental, PV panels, equipment cabinets, substations, Battery Energy Storage Facilities, parking areas, and outdoor storage, shall be screened when visible from any road, Residential District, Planned Residential District, and Planned Rural District, and any dwelling existing at the time the Solar Facility was approved by the County.

The purpose of screening is to help avoid potential detrimental impacts that may accompany the Solar Facility use. The required Project Boundary Setbacks and associated Buffer Zone provide a measure of screening by providing increased distance or setbacks from exterior property lines to reduce impacts associated with the Solar Facility.

In addition to the Buffer Zone, the applicant shall use one or a combination of methods listed in this section, or other comparable methods deemed equivalent by the Zoning Administrator, to satisfy the screening requirements. The method or methods proposed by the applicant shall screen ground level views and activity. Such screening shall be located within the Buffer Zone and outside of security fencing and may also be required in other locations to screen specific uses or structures, such as substations and Battery Energy Storage Facilities. Screening shall not encroach upon the Official Street Line. The Board may approve a plan to allow phased screening based on special or unique conditions of the use or site. The screening required by this section shall be shown on the required Landscaping Plan that is a part of the Development Plan.

- a) Existing Screening: Existing vegetation, topography, buildings, open space, or other elements located on the site may be considered as part of the required screening.
- b) Landscaping: Landscaping intended for screening shall consist of a combination of evergreen trees that are 5-6 ft. in height at time of planting and deciduous trees, which may include fruit trees, that are 5-6 ft. in height at time of planting. Trees shall be placed on average at 15 ft. on center. A list of appropriate plant materials shall be available at the Planning Office.
- c) Berming: Berms shall generally be constructed with a 3:1 side slope to rise ratio, 4-6 ft. above the adjacent grade, with a 3 ft. wide top (the wide top is necessary to have a flat area for plantings). The outside edges of the berm shall be sculpted such that there are vertical and horizontal undulations to give variations in appearance. When completed, the berm should not have a uniform appearance like a dike. All land berms shall be seeded with a revegetation seed mix based on prairie grasses and forbs native to the mid-west United States to include pollinator plants where compatible with site conditions.
- d) Fencing: Fencing intended for screening shall be at least seventy-five (75) percent visually solid as viewed on any line perpendicular to the fence from adjacent property or a public street. Such fencing may be used in combination with other screening methods but shall not be the primary method. A typical example is the use of a combination of wood privacy fencing and landscaping to screen structures such as substations. Depending on the location, ornamental features may be required on the fence. Fencing material shall not include chain link fencing with slats.

Waiver: In the event that an applicant desires to deviate from the screening requirement, the application may only be approved if findings are made by the Board of County Commissioners that a) due to the circumstances surrounding the application, it would be unreasonable to require such screening, or b) it would be reasonable to require screening in a manner that differs from the requirement. (Example 1: It may be reasonable to allow a substation located within the interior of a 2,000-acre Project Area that is surrounded by PV panels to be constructed without landscaping at the base. Example 2: It may be reasonable to allow portions of the Project Area abutting Planned Employment Center Districts to receive a reduced amount of screening within the Buffer Area.) The applicant shall submit written information to the BOCC indicating the circumstances which are believed to necessitate the need for a deviation from the screening requirement.

- 14. Outdoor Lighting: Shall not exceed a 150 watt incandescent light bulb or 3,000 K LED. Shall be directed away from parcels outside of the Project Area and shall not cause glare. Fixtures shall be a cut-off or shoebox design to prevent glare and light spillage off-site. All light poles shall not exceed a height of 20 feet.

15. Annual Compliance Report: Indicates the state of compliance of the Solar Facility with the approved Conditional Use Permit.
16. Battery Energy Storage Facilities and Substations: Additional requirements will apply.
17. Decommissioning and Reclamation: Includes a surety and reclamation plan requirement.

Attachment: Comments dated June 4, 2021 from NextEra representatives to Planning staff.  
(Submitted prior to this memo.)