

NOTICE OF SPECIAL JOINT WORK SESSION



BOARD OF SUPERVISORS & PLANNING COMMISSION OF SUSSEX COUNTY, VIRGINIA

Pursuant to the Code of Sussex County, at Section 2-100, there will be a Special Joint Work Session of the Sussex County Board of Supervisors and the Planning Commission. The time and place of this Special Meeting is hereinafter stated, to-wit:

Date/Time of Meeting: Monday, March 4, 2019 at 3:00 p.m.

Place of Meeting: Prince George Electric Cooperative
Conference Room
7103 General Mahone Highway
Waverly, Virginia 23890

Matter(s) to be considered:

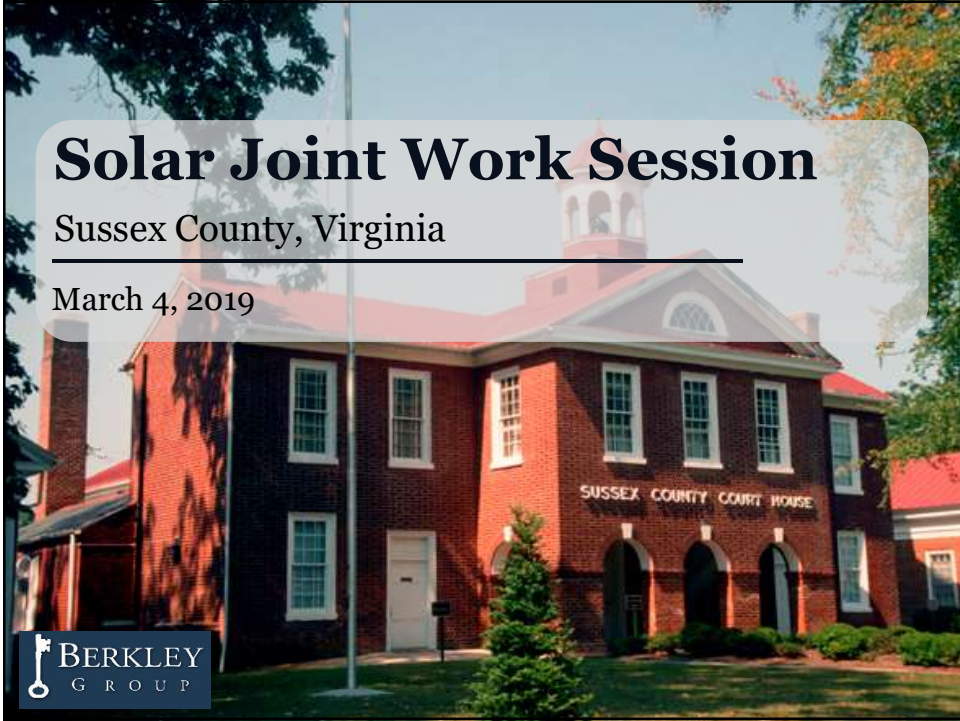
- 1) Call to Order/Determine Quorum
 - a. Board of Supervisors Call to Order
 - b. Planning Commission Call to Order
- 2) The Invocation
- 3) The Pledge of Allegiance
- 4) Agenda Amendment(s)
- 5) Approval of Agenda
- 6) Berkley Group
 - a. Overview of Comprehensive Plan
 - b. Ordinance Update Process
 - c. The Growing Solar Industry
 - d. The County's Tools
 - e. Proposed Amendments
 - f. Discussion to Finalize Amendments
 - g. Next Steps
- 7) Citizens' Comments
- 8) Adjournment

By: Sussex County Board of Supervisors members
Sussex County Planning Commission
Sussex, VA 23884

**Sussex County Special Joint Work Session
Board of Supervisors and Planning Commission
Monday, March 4, 2019 – 3:00 p.m.
Prince George Electric Cooperative – Conference Room
7103 General Mahone Highway, Waverly, Virginia 23890**

AGENDA

1. Call to Order
 - a. Board of Supervisors
 - b. Planning Commission
2. The Invocation
3. The Pledge of Allegiance
4. Agenda Amendment(s)
5. Approval of Agenda
6. Berkley Group
 - a. Overview of Comprehensive Plan
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Solar Joint Work Session

Sussex County, Virginia

March 4, 2019



Agenda

- Overview of comprehensive plan & ordinance update process
- The growing solar industry
- The County's tools
- Proposed amendments
- Discussion to finalize amendments
- Next steps

Overview

- Board of Supervisors and Planning Commission Joint Work Session
- Board of Supervisors and Planning Commission Approval
- Timeline



The Growing Solar Industry



[Home & Small Business](#) [Large Business](#) [Outage Center](#) [Safety](#) [Community](#)



We're Working Toward a Sustainable Future

Virginia's solar capacity went from 17 MW in 2014 to more than 320 MW in 2018

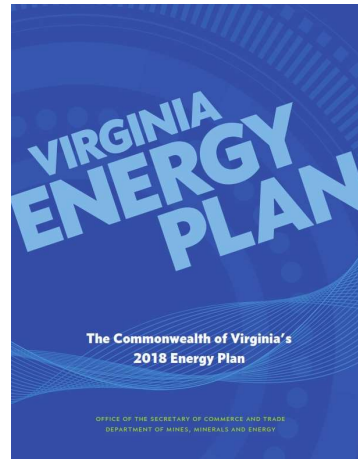
The Growing Solar Industry

2018 Energy Plan Targets

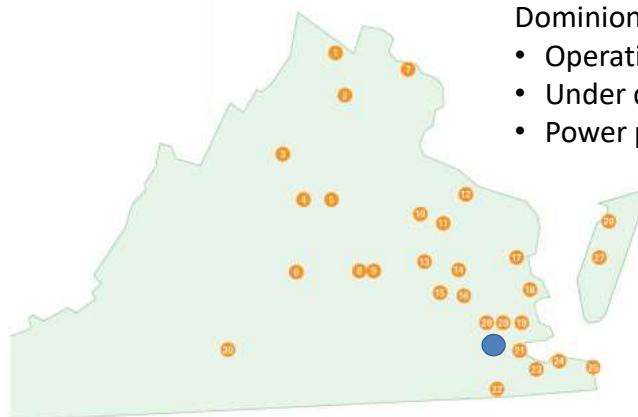
- 3,000 MW solar and on-shore wind by 2022
- State government targets 16% renewable by 2022
- Support corporate use of renewables

Progress

- Permitted = 750 MW
- Notice of Intents = 3,300 MW



The Growing Solar Industry



Dominion has 824 MW solar

- Operational
- Under development
- Power purchase agreements

*They could add
5,000 MW
by 2045*

The Growing Solar Industry

Solar in Sussex County

Project	Status	MW	Ac
Sappony	Operational	20	
Cabin Point / Coronal Energy	Proposed	75	600
Blackwater Solar	Proposed	500- 1,600	5,000- 13,000
Waverly / First Solar	Proposed	118	2,000
ODEC	Proposed		1200

The County's Tools

- DEQ Permit by Rule (PBR) process
 - Local government must certify compliance with **land use ordinances**
- Virginia Code Section 15.2-2232
 - Local Planning Commission must review public utility facilities...

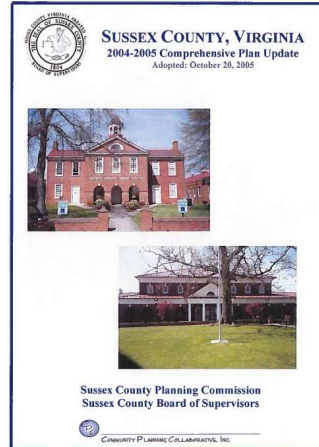
*Is the location, character, and extent substantially in accord with the **Comprehensive Plan**?*

Comprehensive Plan

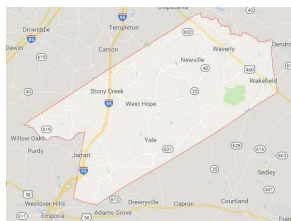
- Silent on solar
- Vision Statement:

Sussex County seeks to maintain its rural character and natural beauty.

The County is intent upon protecting its forest resources, agricultural lands, and natural environmental systems.

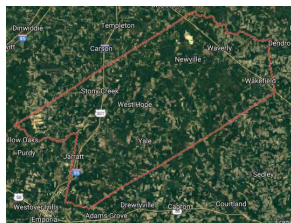


Comprehensive Plan – Land Uses



Land Use

- 90% ag / forestry
- 5% residential
- 5% commercial, industrial, public



5 Planning/Growth Areas

Ag / forestry land contain areas of environmental concern and importance.

Comprehensive Plan – The Future

Agricultural and Forested Lands (90% of County)

- Promote farming sector of economy
- Identify and preserve prime farmland
- Facilitate farming, reduce erosion, protect watersheds
- Restrict use to agriculture, forestry, passive recreation, and conservation

Comprehensive Plan – The Future

Issue 1 Commercial and Industrial Development

1. Increase employment
2. Sustainable development

Issue 2 Community Appearance

1. Sound and attractive land use
2. Aesthetically pleasing; maintain natural areas

Issue 6 Growth Management

2. Growth consistent with rural image and character

Comprehensive Plan – The Future

Issue 8 Infrastructure Carrying Capacity and Provision for Facilities and Services

2. Protect areas of environmental concern

Issue 10 Land Development and Land Use Compatibility

2. Minimize direct or secondary environmental impacts

Issue 11 Natural Systems

1. Develop forestry, agriculture, and related industry; protect beauty of landscape

Comprehensive Plan – Managing Development

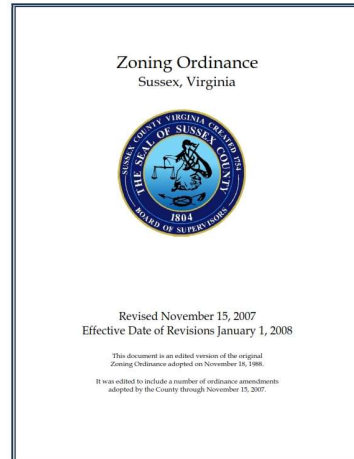
Consider the potential impact of a development or a proposed ordinance amendment on:

- The natural environment
- Important natural resources
- Neighboring development
- Community function, character, and attractiveness

Zoning Ordinance

Purpose:

3. To facilitate the creation of a **convenient, attractive and harmonious community**;
5. To protect against destruction of or encroachment upon **historic areas**;
7. To encourage economic development activities that provide **desirable employment** and enlarge the tax base;
8. To provide for the **preservation of agricultural and forest lands**;

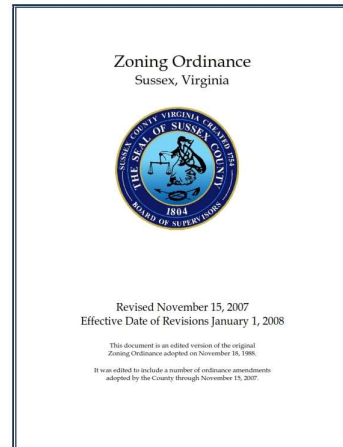
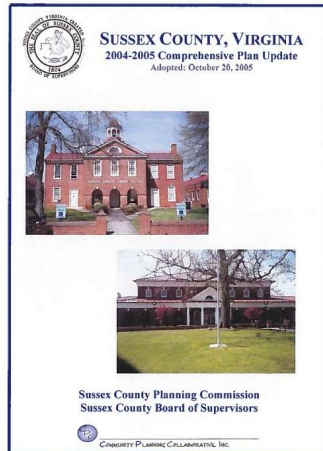


Zoning Ordinance

Districts allowing utility generation, with CUP

District	Min. Area (ac)	Setback (ft)
A-1	2	100
R-R	2	100
R-E	1	75
I-1	None	50
I-2	50	100

Proposed Amendments



Proposed Amendments – Comp Plan

Chapter II: Concerns and Aspirations

Issues and Existing and Emerging Conditions (p.II-12)

23. Utility-scale Solar Facilities

As used in this Comprehensive Plan, a utility-scale solar facility is ...

Update Mapping

ADD

- Existing Land Use Map *ADD brownfields*
- Major Electrical Facilities *CREATE MAP*
- Prime Farmland *CREATE MAP*

Proposed Amendments – Zoning Ordinance

ARTICLE XII. SITE PLAN REQUIREMENTS

Sec. 16-202 When required.

For the following uses, a site plan shall be submitted to and approved by the zoning administrator:

ADD

7. Utility-scale solar facilities.

Proposed Amendments – Zoning Ordinance

Article XXIII. Solar Facilities

- Intent
- Applicability
- Definitions
- Zoning districts
 - A-1, R-R, R-E, I-1, 1-2
 - Brownfields
 - Near industrial districts

*ADD
NEW
ARTICLE*

Proposed Amendments – Zoning Ordinance

Article XXIII. Solar Facilities

- Applications and procedures
 - Pre-application meeting
 - Comprehensive Plan review (2232)
 - CUP application
 - Concept plan
 - Concept plan compliance

*ADD
NEW
ARTICLE*

Proposed Amendments – Zoning Ordinance

Article XXIII. Solar Facilities

- Applications and procedures
 - Decommissioning plan
 - Escrow, surety, or security
 - Traffic study
 - Construction schedule
 - Wetland, waterways, and floodplain inventory, >3 mi
 - Environmental inventory
 - Visual impact analysis

*ADD
NEW
ARTICLE*

Proposed Amendments – Zoning Ordinance

Article XXIII. Solar Facilities

- Neighborhood meeting
- Minimum development standards
 - Area >2 ac
 - PV coverage <40%
 - PV area <1200 ac
 - Outside planning areas
 - Towns >1 mi
 - Solar >2 mi (inventory within 4 mi)

*ADD
NEW
ARTICLE*

Proposed Amendments – Zoning Ordinance

Article XXIII. Solar Facilities

- Minimum development standards
 - Setbacks >150 ft
 - Height <15 ft
 - Buffer/screen >100 ft vegetated
 - Fence >7 ft and on interior of buffer
 - Native vegetation
 - Minimize lighting nuisance

*ADD
NEW
ARTICLE*

Proposed Amendments – Zoning Ordinance

Article XXIII. Solar Facilities

- Decommissioning
- Coordination of local emergency services
- Conditions

*ADD
NEW
ARTICLE*

Discussion To Finalize Amendments



Next Steps

Public hearing to consider and approve amendments at joint session April 1, 2019, 6pm



Darren Coffey, AICP

Darren@BGLLC.net
434-981-2026

Denise Nelson, PE, CFM, ENV SP, LEED AP

Denise@BGLLC.net
804-363-7437



Richmond, Charlottesville, Harrisonburg, Lexington, Blacksburg



TO: Planning Commission and Board of Supervisors, Sussex County, Virginia

FROM: Darren Coffey, AICP
Denise Nelson, PE, CFM, ENV SP, LEED AP

DATE: March 4, 2019

RE: Comprehensive Plan and Zoning Ordinance Recommendations Regarding Solar Energy Facilities

Sussex County staff has requested a consultant review the Comprehensive Plan and Zoning Ordinance with consideration to additional amendments as may be appropriate regarding solar energy facilities. The County is in the process of reviewing solar energy facility applications and, as a result, staff has gained a better understanding of the land use issues related to these uses. A number of Comprehensive Plan and Zoning Ordinance amendments are recommended for discussion by the Planning Commission and Board of Supervisors to bring greater clarity and specificity for how the County reviews and potentially authorizes solar energy facilities.

Utility-scale solar facilities are large scale industrial/commercial facilities that can take up agricultural, industrial, or commercial land for at least twenty years or more. Any proposed location of these facilities needs to be carefully weighed against other potential uses of the same property.

Over the last five years, Virginia has seen a dramatic increase in its installed solar capacity, growing from 17 MW in 2014 to more than 320 MW installed by Oct. 2018. This is due to many factors:

1. The cost of solar tech decreased dramatically (80%) since 2010.
2. Demand from companies, organizations, and government entities for renewable energy is growing.
3. Solar facilities in the range of 20-150 MW are 80% exempt from property taxes.
4. The state's southern location and diverse geography make it a great state for installing solar power. Two-thirds of the state gets an average of nearly 5 kilowatt hours (kWh) per square meter of sunlight per day, with the rest getting slightly less.

In addition, the Virginia Energy Plan (October 2, 2018) calls for 3,000 megawatts (MW) of solar and onshore wind to be deployed by 2022. The plan further includes the recommendation to double the Commonwealth's renewable energy procurement target to 16% by 2022.

The Commonwealth currently uses a Permit by Rule (PBR) process managed by DEQ to permit wind, solar, and biomass based generation resources with a capacity less than 150 MW. To date, DEQ has issued 26 permits for solar projects totaling 750 MW and received an additional 58 Notices of Intent totaling 3,317 megawatts.



Dominion Energy has committed to solar as necessary for clean energy growth. In November 2018, Dominion stated they have 30 sites generating 824 MW solar. They have also announced plans to develop multiple utility-scale solar projects in Virginia through 2020 to meet the state's energy plan target. In addition, they project they could add at least 5,200 megawatts of solar in the state over the next 25 years (to 2045) to meet customers' energy needs.

This accelerated development of renewable energy will increase the duties of local governments and state agencies tasked with land use, permitting, and environmental decision making. Local governments must determine if solar facility applications are in accord with their Comprehensive Plan (a "2232 review") and in compliance with their land use ordinances.

Comprehensive Plan

Existing Plan

The Comprehensive Plan 2004-2005 update was adopted on October 20, 2005. The plan does not specifically mention solar or other energy generating facilities. The plan does describe the general trends and future preferences for development with emphasis on maintaining the rural character of the county.

Chapter II: Concerns and Aspirations, section C. County Vision, item 2. Vision Statement on p.II-13 states:

Sussex County seeks to maintain its rural character and natural beauty. The County is intent upon protecting its forest resources, agricultural lands, and natural environmental systems. It will accomplish its objectives by: concentrating commercial and industrial development along US 460 and the I-95/US 301 corridor and in other areas where adequate infrastructure exist to support such development; balancing residential and commercial land uses; protecting and preserving view sheds; protecting and preserving the natural environment and surface and ground waters; promoting smart growth practices and prudent land use decisions; and discouraging over development and strip development along State maintained roads.

Under Chapter IX: Land Use and Development (p.IX-1 to 2), section A. Introduction describes the County as:

General development patterns have not changed significantly in Sussex County in the past 10 years. Approximately 90% of the acres in the County are used for agriculture and forestry. Residential uses account for about 5% of the land area while commercial, industrial, public and semi-public uses and incorporated areas account for about 5%. Development in the County is concentrated in five general areas: in and around the four towns and in the vicinity of Sussex Courthouse.

In order to closely examine various development trends and patterns in Sussex County, the County was divided into several planning areas.



The remaining areas of Sussex County are classified as rural areas. While there is some scattered development in these areas, primarily rural residential in nature, these areas are predominantly open and essentially undeveloped. Rural areas are used for agriculture and forestry and contain significant water features, flood plains, conservation areas, and areas of environmental concern and importance.

In the same chapter, section B. Land Use Conflicts (p.IX-2) lists several issues to consider in addressing land use conflicts:

Land use conflicts that occur in Sussex County are typical of similar Virginia counties that must balance the needs of and activities associated with agriculture, forestry, and conservation uses with residential, commercial, industrial, and public uses. With respect to land uses and development, the County must remain cognizant and carefully consider a variety of issues when making land use decisions. These include:

- Encroachment of residential and other urban-level land uses into traditional agricultural and forestry areas;
- The balance between needed commercial and industrial development and the conversion of vacant land;
- [among others]

Section B includes specific recommendations for each of the five (5) planning areas (Jarratt, Stony Creek, Sussex Courthouse, Homeville/Wakfield, and Blackwater/Newville/Waverly) and the remaining rural area. Below are statements related to the rural areas (p.IX-8).

6. Rural Areas

These areas remain rural in nature with land reserved for agricultural and forested uses.

Public utilities are not available, nor should they be extended or expanded to sustain intense residential development.

Incidental commercial establishments occur throughout this planning area and are in support of residential growth.

Under Chapter X: Plan for the Future, section A. Introduction provides guidance for each land use type. Item 1. Agricultural and Forested Lands (p.X-1) states:

Agricultural land is one of the most valuable of all natural resources. Of major importance, and an objective of land use planning in Sussex County is to identify prime agricultural land and to preserve it from being developed for residential or other land uses. Once developed, it cannot easily be restored to its original condition (natures).

Much of Sussex County has been retained in an agricultural land use category for the duration of the planning period. The main purpose of this land use classification is to facilitate existing and future farming operations, reduce the effects of soil erosion, and



protect watersheds, in order to promote the continuation of farming as one of the most active sectors of the economy.

Permitted uses are restricted to agricultural and others that are compatible with the existing land use pattern, such as forestry, passive recreation, and other conservation uses, as well as incidental residential use. The overall density of these uses should be kept at a relatively low level by maintaining a minimum lot area of one (1) acre and allowing for only one dwelling unit (single-family dwelling) per acre. This should effectively limit development in the agricultural zone and encourage development in and on the fringe of existing towns.

This chapter also includes section C. County-wide Goals and Objectives clearly delineating 22 issues, each with one or two goals and possibly several objectives (tactics). There are six (6) issues and eight (8) goals relevant to the subject of solar facility siting.

Issue 1 Commercial and Industrial Development (p.X-10)

Goal 1: Promote economic development that will assure employment stability and provide ready access to needed goods and services in the County. Encourage local expansion and new industry location in the County to broaden the tax base and increase employment opportunities.

Goal 2: Sustainable commercial and industrial development in areas where such activities already occur or can be reasonably accommodated by public facilities and the County's natural systems and to encourage local support and patronage of County business.

Issue 2 Community Appearance (p.X-12)

Goal 1: Guide and support sound and attractive land use development with the County that will result in the least possible adverse fiscal and environmental impact.

Goal 2: Remain aesthetically pleasing while maintaining rural atmosphere, open spaces, and natural areas.

Issue 6 Growth Management (p.X-14)

Goal 2: Promote environmentally friendly development that is sustainable, aesthetically pleasing, and consistent with the County's rural image and character.

Issue 8 Infrastructure Carrying Capacity and Provision for Facilities and Services (p.X-16)

Goal 2: Ensure that public systems and services are sized, located, and managed to protect or restore the quality of areas of environmental concern or other fragile areas while providing adequate levels of service to meet the needs of citizens.

Issue 10 Land Development and Land Use Compatibility (p.X-18)



Goal 2: Ensure that development and use of resources or preservation of land minimizes direct and secondary environmental impacts, avoids risks to public health, safety and welfare and is consistent with the capability of the land based on considerations of interactions of natural and man-made features.

Issue 11 Natural Systems (p.X-20)

Goal 1: Preserve and develop forestry, agriculture, and related industry as important economic components of the County. Provide for the wise use of the County's nonrenewable earth and mineral resources, while protecting the beauty of the landscape.

Finally, Chapter XI: Tools for Managing Development, section A. Guide for Land Use Decision-Making (p.XI-2) offers general criteria to consider when evaluating a proposed development or ordinance amendment:

The Commission, however, should also look beyond the plan and consider whether proposed developments or requests for amendments to zoning or other ordinances, even if consistent with the plan, advance the best interests of public health, safety, and general welfare. This very general criterion calls for consideration of a wide range of issues, including, but not limited to the potential impact of a development or a proposed ordinance amendment on:

- The natural environment – i.e., how a proposed development or development allowed by an amendment might affect air quality, water quality, flooding, erosion, important natural areas, etc.;
- Important natural resources – i.e., how a proposed development or development allowed by an amendment might threaten or enhance the continued availability and efficient use of finite natural resources for agriculture or forestry.
- Neighboring development – i.e., how a proposed development or development allowed by an amendment might affect living or working conditions in neighboring areas (including whether development might deter or enhance the appropriate development or conservation of neighboring property;
- Community function, character, and attractiveness – i.e., how a proposed development or development allowed by an amendment might enhance the attractiveness and functional mix of land uses needed to meet the needs of future populations and avoid adverse impacts;
- [others]

Analysis

This language thoroughly describes the existing and desired County character and, in general terms, the intent for development. The plan does not describe specific criteria or siting parameters for solar facilities, energy generation stations, or other types of uses.

Chapter II: Concerns and Aspirations, section B. Issues and Existing and Emerging Conditions (p.II-12) does provide an appropriate venue to briefly mention specific types of new development options such as solar facilities.



In addition, the County provides details of physical features on several maps. Additional data relevant to solar facility siting can be provided on the existing maps or on supplemental maps.

Recommendations

Under Chapter II: Concerns and Aspirations, section B. Issues and Existing and Emerging Conditions (p.II-12), add a new item at the end of the list:

23. Utility-scale Solar Facilities

As used in this Comprehensive Plan, a utility-scale solar facility is a facility that generates electricity from sunlight which will be used to provide electricity to a utility provider or a large private user with a generating capacity in excess of one megawatt (1 MW). Sussex's abundant agricultural and forest land combined with its electrical infrastructure and transportation system appear to be attractive to the solar industry. These facilities are an industrial scale land use that occupy significant acreage. Many utility-scale solar facilities are located on agricultural or forested land that may have had other future land use potential or land use designations. The following site features should be addressed to mitigate the potential negative impacts of utility-scale solar facilities on County land use patterns as part of the evaluation of a Conditional Use Permit (CUP) application: proximity to 1) the planning areas; 2) electric transmission lines; 3) other solar facilities; 4) residences; 5) historic, cultural, recreational, or environmentally-sensitive areas; and 5) scenic viewsheds.

Brownfield sites are recommended for solar facilities since the land is typically not suitable for other types of development or use. Brownfield means former industrial or commercial sites typically containing low levels of environmental pollution such as hazardous waste or industrial byproducts. To facilitate reuse the sites, we recommend:

- Revising the Existing Land Use Map to include brownfields.

To facilitate compliance with Chapter X: Plan for the Future, section A. Introduction, item 1. Agricultural and Forested Lands (p.X-1) intent to preserve prime farmland referenced above, we recommend:

- Creating a map of Prime Farmland including areas of prime farmland or farmlands of statewide importance as defined by the USDA and Commonwealth of Virginia, respectively.

Solar facilities in close proximity to electric transmission lines minimize negative impacts on the community such as from clearing forest for towers and other interconnection facilities. As such, we recommend:

- Creating a map of Major Electrical Facilities to identify those facilities (i.e., transmission lines, transfer stations, generation facilities, etc.). Collaboration with the Crater Planning District Commission or other planning entities may be necessary to catalogue the infrastructure.



Zoning Ordinance

Existing Ordinance

The Zoning Ordinance was revised November 15, 2007 and adopted on January 1, 2008. The ordinance opens with the following purpose statement (Sec. 16-3. Purpose of chapter on p.19) that highlights the desire for an attractive and harmonious community (3), restricts encroachment on historic areas (5), creating desirable employment opportunities (7), and preserve agricultural and forest lands (8):

To these ends, this chapter is designed to give reasonable consideration to each of the following purposes, where applicable:

1. To provide for adequate light, air, convenience of access, and safety from fire, flood and other dangers;
2. To reduce or prevent congestion in the public streets;
3. **To facilitate the creation of a convenient, attractive and harmonious community;**
4. To facilitate the provision of adequate police and fire protection, disaster evacuation, civil defense, transportation, water, sewerage, flood protection, schools, parks, forests, playgrounds, recreational facilities, airports and other public requirements;
5. **To protect against destruction of or encroachment upon historic areas;**
6. To protect against one (1) or more of the following: overcrowding of land, undue density of population in relation to the community facilities existing or available, obstruction of light and air, danger and congestion in travel and transportation , or loss of life, health, or property from fire, flood, panic or other danger:
7. **To encourage economic development activities that provide desirable employment and enlarge the tax base;**
8. **To provide for the preservation of agricultural and forest lands;** and
9. To protect approach slopes and other safety areas of licenses airports.
10. Such ordinance may also include reasonable provisions, not inconsistent with applicable state water quality standards, to protect surface water and groundwater as defined on Code of Virginia, Section 62.1-44.85(8).

The ordinance permits power generation in these zoning districts:

District	Min. Area (ac)	Setback (ft)
General Agricultural, A-1	2	100
Rural Residential, R-R	2	100
Residential Estates, R-E	1	75
Limited Industrial, I-1	none	50
General Industrial, I-2	50	100



The ordinance does not permit power generation in these remaining zoning districts:

- General Residential, R-1
- Residential, manufactured/mobile homes, R-2
- Limited Business, B-1
- General Business, B-2
- Shopping Center District, B-3

For the permitted zoning districts, the use regulations state:

- If owned privately, utility generation, booster or relay stations, transformer substations, transmission lines and towers, television and radio towers and structures not necessary to house electronic apparatus, pipes, meters and other facilities for the provision and maintenance of public utilities, including railroads and facilities, and water and sewage installations, with a conditional use permit.
- The minimum lot area for permitted uses shall not include areas identified as jurisdictional wetlands or areas within a 100 year floodplain.
- All structures shall be located [50, 75, or 100] feet or more from any street right-of-way. This shall be known as the "setback line."

Analysis

While the Zoning Ordinances allows for power generating facilities in five (5) zoning districts, there are very few criteria for evaluating proposals.

The permitted size and scale of a proposed utility-scale solar facility may vary based on the location, the character of the area, and the extent of the facility. If the proposed location is near an identified population center or visible from a major road, then a smaller size or additional screening and buffering provisions may be appropriate. If a proposed location is more remote, not visible from a major road, or if the facility will occupy only a relatively small portion of a larger site, then a larger size and scale facility may be appropriate.

Recommendations

Under ARTICLE XII. SITE PLAN REQUIREMENTS, Sec. 16-202 When required, add a new item at the end of the list:

7. Utility-scale solar facilities.

To ensure that solar facilities are comprehensively addressed, we recommend amending the ordinance with a proposed new article specifically addressing solar facilities, ARTICLE XXIII. SOLAR FACILITIES (attached).



Conclusion

These amendments to the Comprehensive Plan and Zoning Ordinance, as recommended by the Planning Commission and approved by the Board of Supervisors, will provide further guidance to the solar industry and the County in how to prepare and evaluate future solar energy applications.

cc: Vandy Jones, County Administrator
Andre Greene, Director of Community Development
Wallace Brittle, Jr., County Attorney

encl: Zoning Ordinance, ARTICLE XXIII. SOLAR FACILITIES



ARTICLE I

Sec. 16-1 Definitions

Applicant means the person or entity who submits an application to the locality for a permit under this ordinance.

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

Disturbance zone means the area within the site directly impacted by construction and operation of the facility.

Integrated PV means photovoltaics incorporated into building materials, such as shingles.

Operator means the person responsible for the overall operation and management of a facility.

Owner means the person who owns all or a portion of a facility.

Photovoltaic or "PV" means materials and devices that absorb sunlight and convert it directly into electricity.

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

Site means the entire area containing a facility.

Solar facility, small-scale means a facility that either: (a) generates less than 15 kilowatts (kW) electricity from sunlight, consisting of one or more Photovoltaic (PV) systems and other appurtenant structures and facilities within the boundaries of the site; or (b) utilizes sunlight as an energy source to heat or cool buildings, heat or cool water, or produce electrical or mechanical power by means of any combination of collecting, transferring, or converting solar-generated energy; and (c) meets at least one of the following criteria: has a disturbance zone equal to or less than an acre; is mounted on or over a building, parking lot, or other previously disturbed area; or utilizes integrated PV only.

Solar facility, medium-scale means a facility that generates electricity from sunlight primarily to reduce onsite consumption of utility power for commercial and industrial applications. Sites are between one to three acres with a maximum capacity of 999 kW.

Solar facility, utility-scale means a facility that generates electricity from sunlight which will be used to provide electricity to a utility provider. Sites are generally over two acres and have a capacity in excess of one megawatt (1 MW).

ARTICLE XXIII

(new article)

SOLAR FACILITIES

Sec. 16-401 Statement of intent

The purpose of this section is to establish requirements for construction and operation of solar facilities and to provide standards for the placement, design, construction, monitoring, modification, and removal of solar facilities; address public safety, minimize impacts on scenic, natural, and historic resources; and provide adequate financial assurance for decommissioning.

Sec. 16-402 Applicability

This article shall apply to all solar facilities constructed after the effective date of this article, including any physical modifications to any existing solar facilities that materially alter the type, configuration, or size of such facilities or other equipment.

Sec. 16-403 Zoning districts

- (a) Small-scale solar facilities may be installed by-right in all zoning districts to provide electricity to individual structures; provided a site plan (as applicable) has been submitted to the zoning administrator for review and approval; all Federal, State and Local regulations have been followed; and the system is located upon the property or structure being served.
- (b) Medium and utility-scale solar facilities shall be permitted in zoning districts as follows:

Solar Facility	General Agricultural, A-1	Limited Industrial, I-1	General Industrial, I-2
<i>Medium-scale</i>	CUP	By-right	By-right
<i>Utility-scale</i>	CUP	-	-

- (c) Medium-scale solar facilities may be installed in the Industrial Districts to provide electricity for use on-site for commercial and industrial applications; provided a site plan has been submitted to the zoning administrator for review and approval; all Federal, State and Local regulations have been followed; and the system is located on the property or structure to be served.
- (d) Any commercial or industrial solar facility installed upon a roof top shall submit a site plan to the zoning administrator and an engineering study to the Building Official Office for review.
- (e) Solar facilities should locate on brownfields or near existing industrial uses (but not within planning area boundaries).

Sec. 16-404 Applications and procedures

In addition to other requirements of the Sussex County Zoning Ordinance and Conditional Use Permit requirements, applications for a solar facility (medium-scale and utility-scale) shall include the following information:

- (a) Pre-application meeting. Schedule a pre-application meeting with the zoning administrator to discuss the location, scale and nature of the proposed use and what will be expected during that process.
- (b) Comprehensive Plan Review. A 2232 review by the County is required by the *Code of Virginia* (§15.2-2232) for utility-scale solar facilities. This Code provision provides for a review by the Planning Commission of public utility facility proposals to determine if their general or approximate location, character and extent are substantially in accord with the Comprehensive Plan or part thereof.
- (c) CUP application. A complete CUP application including:
 - 1. Documents demonstrating the ownership of the subject parcel(s).
 - 2. Proof that the applicant has authorization to act upon the owner's behalf.
 - 3. Identification of the intended utility company who will interconnect to the facility.
 - 4. List of all adjacent property owners, their tax map numbers, and addresses.
 - 5. A description of the current use and physical characteristics of the subject parcels.
 - 6. A description of the existing uses of nearby properties.
 - 7. A narrative identifying the applicant, owner or operator, and describing the proposed solar facility project, including an overview of the project and its location, approximate rated capacity of the solar facility project, the approximate number of panels, representative types, expected footprint of solar equipment to be constructed, and type and location of interconnection to electrical grid.
 - 8. Aerial imagery which shows the proposed location of the solar facility, fenced area, driveways, and interconnection to electrical grid with the closest distance to all adjacent property lines and dwellings along with main points of ingress/egress.
 - 9. Payment of the application fee and any additional review costs, advertising, or other required staff time.
- (d) Concept plan. A concept plan prepared by an engineer with a professional engineering license in the Commonwealth of Virginia, that shall include the following:
 - 1. A description of the subject parcels.
 - 2. Property lines and setback lines.
 - 3. Existing and proposed buildings and structures; including preliminary locations of the proposed solar panels and related equipment; the location of proposed fencing, driveways, internal roads, and structures; and the location of points of ingress/egress.
 - 4. The location and nature of proposed buffers and screening elements, including vegetative and constructed buffers.
 - 5. A grading plan.
 - 6. A landscaping maintenance plan.
 - 7. Existing and proposed access roads, drives, turnout locations, and parking.
 - 8. Location of substations, electrical cabling from the solar facility systems to the substations, ancillary equipment, buildings, and structures including those within any applicable setback.
 - 9. Fencing or other methods of ensuring public safety.

10. **Fourteen sets** (11"× 17" or larger), one reduced copy (8½"× 11") and one electronic copy of the concept plan, including elevations and landscape plans as required.
 11. Additional information may be required as determined by the zoning administrator, such as a scaled elevation view of the property and other supporting drawings, photographs of the proposed site, photo or other realistic simulations or modeling of the proposed project from potentially sensitive locations as deemed necessary by the zoning administrator to assess the visual impact of the project, landscaping and screening plan, coverage map, and additional information that may be necessary for a technical review of the proposal.
- (e) Concept plan compliance. The facility shall be constructed and operated in substantial compliance with the approved Concept Plan, with allowances for changes required by the Virginia Department of Environmental Quality (DEQ) Permit by Rule (PBR) process.
- (f) Decommissioning plan. A detailed decommissioning plan, certified by an engineer, which shall include the following:
1. The anticipated life of the project;
 2. The estimated decommissioning cost in current dollars;
 3. How the estimate was determined;
 4. The method of ensuring that funds will be available for decommissioning and removal;
 5. The method that the estimated decommissioning cost will be kept current; and
 6. The manner in which the project will be decommissioned and the site restored.
- The applicant shall provide a cost estimate for the decommissioning of the facility that shall be prepared by a professional engineer or contractor who has expertise in the removal of the solar facility. The decommissioning cost estimate shall explicitly detail the cost and shall include a mechanism for calculating increased removal costs due to inflation and without any reduction for salvage value. This cost estimate shall be recalculated every five (5) years and the surety shall be updated accordingly.
- (g) A proposed method of providing appropriate escrow, surety or security for the cost of the decommissioning plan.
- (h) Traffic study submitted with application modelling the construction and decommissioning processes. County staff will review the study in cooperation with VDOT.
- (i) An estimated construction schedule.
- (j) Wetlands, waterways, and floodplains shall be inventoried, delineated, and avoided.
- (k) Environmental inventory and impact statement regarding any site and viewshed impacts, including direct and indirect impacts to national and state forests, national or state parks, wildlife management areas, conservation easements, recreational areas, or any known historic or cultural resources within three (3) miles of the proposed project.
- (l) A visual impact analysis demonstrating project siting and proposed mitigation, if necessary, so that the solar facility minimizes impact on the visual character of the County.

1. The applicant shall provide accurate, to scale, photographic simulations showing the relationship of the solar facility and its associated amenities and development to its surroundings. The photographic simulations shall show such views of solar structures from locations such as property lines and roadways, as deemed necessary by the County in order to assess the visual impact of the solar facility.
2. The total number of simulations and the perspectives from which they are prepared shall be established by the zoning administrator after the pre-application meeting.

Sec. 16-405 Neighborhood meeting

- (a) A public meeting shall be held prior to the public hearing with the Planning Commission to give the community an opportunity to hear from the applicant and ask questions regarding the proposed project.
 1. The applicant shall inform the zoning administrator's Office and adjacent property owners in writing of the date, time and location of the meeting, at least seven but no more than 14 days, in advance of the meeting date.
 2. The date, time and location of the meeting shall be advertised in the County's newspaper of record by the applicant, at least seven but no more than 14 days, in advance of the meeting date.
 3. The meeting shall be held within the County, at a location open to the general public with adequate parking and seating facilities which may accommodate persons with disabilities.
 4. The meeting shall give members of the public the opportunity to review application materials, ask questions of the applicant and provide feedback.
 5. The applicant shall provide to the zoning administrator summary of any input received from members of the public at the meeting.

Sec. 16-406 Minimum development standards

- (a) Location standards for utility-scale solar facilities. The location standards stated below for utility-scale solar facilities are intended to mitigate the adverse effects of such uses on adjoining property owners, the area, and the County.
 1. The minimum area of a utility-scale solar facility shall be two (2) acres.
 2. The equipment, improvements, structures, and percent of acreage coverage of a utility-scale solar facility shall be shown on the approved concept plan and site plan. The percent of acreage coverage shall not exceed 40%.
 3. The area within which all construction, materials storage, grading, and related activities for a utility-scale facility should be less than 1200 acres.
 4. Utility-scale solar facility shall be located outside of any identified planning area or community hub and not within one (1) mile of any village, town, or city boundary.
 5. No utility-scale solar facility shall be located within two (2) miles of another existing or permitted utility-scale solar facility.
 6. Provide an inventory of all solar facilities – existing or proposed – within a four (4) mile radius.
- (b) A utility-scale solar facility shall be constructed and maintained in substantial compliance with the approved concept plan.

- (c) The minimum setback to all property lines shall be 150 feet.
- (d) The maximum height of primary structures and accessory buildings shall be 15 feet as measured from the finished grade at the base of the structure to its highest point, including appurtenances. 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.
- (e) The facilities, including fencing, shall be significantly screened from the ground-level view of adjacent properties by a buffer zone at least 100 feet wide that shall be landscaped with plant materials consisting of an evergreen and deciduous mix (as approved by County staff), except to the extent that existing vegetation or natural land forms on the site provide such screening as determined by the zoning administrator. In the event, existing vegetation or land forms providing the screening are disturbed, new plantings shall be provided which accomplish the same. Opaque architectural fencing may be used to supplement other screening methods but shall not be the primary method.
- (f) The facilities shall be enclosed by security fencing on the interior of the buffer area (not to be seen by other properties) not less than seven (7) feet in height and topped with razor/barbed wire, as appropriate. A performance bond reflecting the costs of anticipated fence maintenance shall be posted and maintained. Failure to maintain the security fencing shall result in revocation of the CUP and the facility's decommissioning.
- (g) Ground cover on the site shall be native vegetation and maintained in accordance with the Landscaping Maintenance Plan in accordance with established performance measures. A performance bond reflecting the costs of anticipated landscaping maintenance shall be posted and maintained. Failure to maintain the landscaping shall result in revocation of the CUP and the facility's decommissioning.
- (h) The design of support buildings and related structures shall use materials, colors, textures, screening and landscaping that will blend the facilities to the natural setting and surrounding structures.
- (i) The owner or operator shall maintain the solar facility in good condition. Such maintenance shall include, but not be limited to, painting, structural integrity of the equipment and structures, as applicable, and maintenance of the buffer areas and landscaping. Site access shall be maintained to a level acceptable to the County. The project owner shall be responsible for the cost of maintaining the solar facility and access roads, and the cost of repairing damage to private roads occurring as a result of construction and operation.
- (j) A utility-scale solar facility shall be designed and maintained in compliance with standards contained in applicable local, state and federal building codes and regulations that were in force at the time of the permit approval.
- (k) A utility-scale solar facility shall comply with all permitting and other requirements of the Virginia Department of Environmental Quality.
- (l) The applicant shall provide proof of adequate liability insurance for a solar facility prior to beginning construction and before the issuance of a zoning or building permit to the zoning administrator.

- (m) Lighting fixtures as approved by the County shall be the minimum necessary for safety and/or security purposes to protect the night sky by facing downward and to minimize off-site glare. No facility shall produce glare that would constitute a nuisance to the public. Any exceptions shall be enumerated on the Concept Plan and approved by the zoning administrator.
- (n) No signage of any type may be placed on the facility other than notices, warnings, and identification information required by law.
- (o) All facilities must meet or exceed the standards and regulations of the Federal Aviation Administration (“FAA”), State Corporation Commission (“SCC”) or equivalent, and any other agency of the local, state or federal government with the authority to regulate such facilities that are in force at the time of the application.
- (p) At all times, the solar facility shall comply with the County’s **noise ordinance**.
- (q) Any other condition added by the Planning Commission or Board of Supervisors as part of a CUP approval.

Sec. 16-407 **Decommissioning**

The following requirements shall be met:

- (a) Solar facilities which have reached the end of their useful life or have not been in active and continuous service for a period of one (1) year shall be removed at the owner’s or operator’s expense, except if the project is being repowered or a force majeure event has or is occurring requiring longer repairs; however, the County may require evidentiary support that a longer repair period is necessary.
- (b) The owner or operator shall notify the zoning administrator by certified mail of the proposed date of discontinued operations and plans for removal.
- (c) Decommissioning shall include 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 uses. The site shall be graded and re-seeded to restore it to as natural a condition as possible, unless the land owner requests in writing that the access roads or other land surface areas not be restored, and this request is approved by the Board of Supervisors (other conditions might be more beneficial or desirable at that time).
- (d) The site shall be re-graded and re-seeded to as natural condition as possible within 12 months of removal of solar facilities. Re-grading and re-seeding shall be initiated within a six-month period of removal of equipment.
- (e) Decommissioning shall be performed in compliance with the approved decommissioning plan. The Board of Supervisors may approve any appropriate amendments to or modifications of the decommissioning plan.

(f) Hazardous material from the property shall be disposed of in accordance with federal and state law.

(g) 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.

1. 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.
2. 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 plan. The County may approve the partial release of escrow funds as portions of the approved decommissioning plan are performed.
3. The amount of funds required to be deposited in the escrow account shall be the full amount of the estimated decommissioning cost without regard to the possibility of salvage value.
4. The owner or occupant shall recalculate the estimated cost of decommissioning every five years. If the recalculated estimated cost of decommissioning exceeds the original estimated cost of decommissioning 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 of decommissioning is less than ninety percent (90%) of the original estimated cost of decommissioning, then the County may approve reducing the amount of the escrow account to the recalculated estimate of decommissioning cost.
5. The County may approve alternative methods to secure the availability of funds to pay for the decommissioning of a utility-scale solar facility, such as a performance bond, letter of credit, or other security approved by the County.

(h) If the owner or operator of the solar facility fails to remove the installation in accordance with the requirements of this permit or within the proposed date of decommissioning, the County may collect the surety and the County or hired third party may enter the property to physically remove the installation.

Sec. 16-408 Coordination of local emergency services

Applicants for new solar facilities shall coordinate with the County's emergency services staff to provide materials, education and/or training to the departments serving the property with emergency services in how to safely respond to on-site emergencies.

Sec. 16-409 Conditions

- (a) The Board of Supervisors may consider conditions addressing a proposed solar facility, including, but not limited to, the following:
1. A solar facility shall be constructed, maintained, and operated in substantial compliance with:
 - i. The development standards under this article.
 - ii. The approved concept plan.
 - iii. Any other conditions imposed pursuant to a Conditional Use Permit.

2. The Conditional Use Permit may require the applicant to submit an erosion and sediment control plan for review by the County or by a qualified third party, however, the third party review shall not supersede any requirements imposed by state agencies. The applicant shall construct, maintain, and operate the solar facility in compliance with the approved plan.
3. The Conditional Use Permit may require the applicant to submit a stormwater management plan for review by the County or by a qualified third party. The applicant shall construct, maintain, and operate the solar facility in compliance with the approved plan.
4. If the solar facility is declared to be unsafe by the zoning administrator or building official, the facility must be in compliance within fourteen (14) days or the Conditional Use Permit shall be terminated, and system removed from the property.
5. The owner and operator shall give the County written notice of any change in ownership or any change in the operator.
6. The applicant shall pay a supplemental application fee to cover the reasonable and actual cost of any review of the erosion and sediment control plan or the stormwater plan by a qualified third party.

Sec. 16-410 – 16-420 Reserved