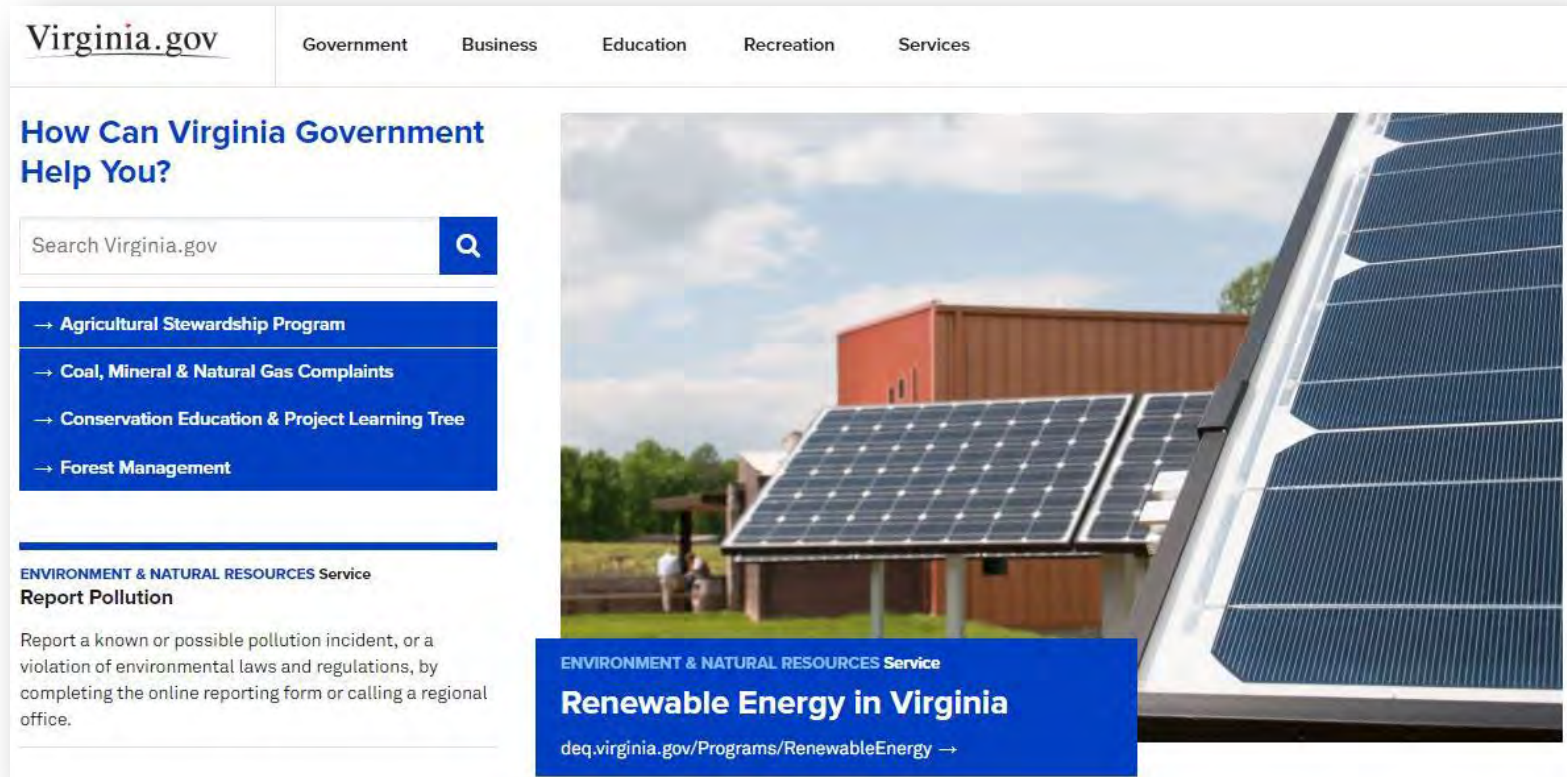


Utility Scale Solar

June 18, 2019

The Solar Industry is Growing



The screenshot displays the Virginia.gov website. At the top, the navigation bar includes links for Government, Business, Education, Recreation, and Services. The main content area is titled "How Can Virginia Government Help You?" and features a search bar. Below the search bar, a blue sidebar lists several programs: Agricultural Stewardship Program, Coal, Mineral & Natural Gas Complaints, Conservation Education & Project Learning Tree, and Forest Management. To the right of the sidebar is a large image of solar panels installed on a building. Below this image, a blue banner reads "ENVIRONMENT & NATURAL RESOURCES Service Renewable Energy in Virginia" with a link to deq.virginia.gov/Programs/RenewableEnergy. On the left side of the main content area, under the heading "ENVIRONMENT & NATURAL RESOURCES Service Report Pollution", there is a paragraph stating: "Report a known or possible pollution incident, or a violation of environmental laws and regulations, by completing the online reporting form or calling a regional office."

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

“Green” As Good Business



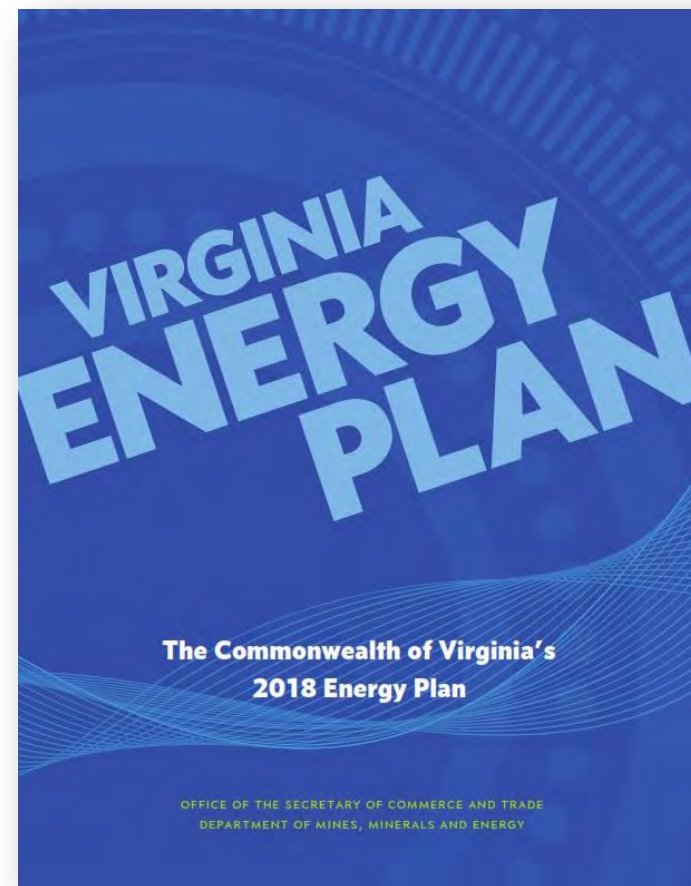
The Growing Solar Industry in Virginia

2018 Energy Plan Targets

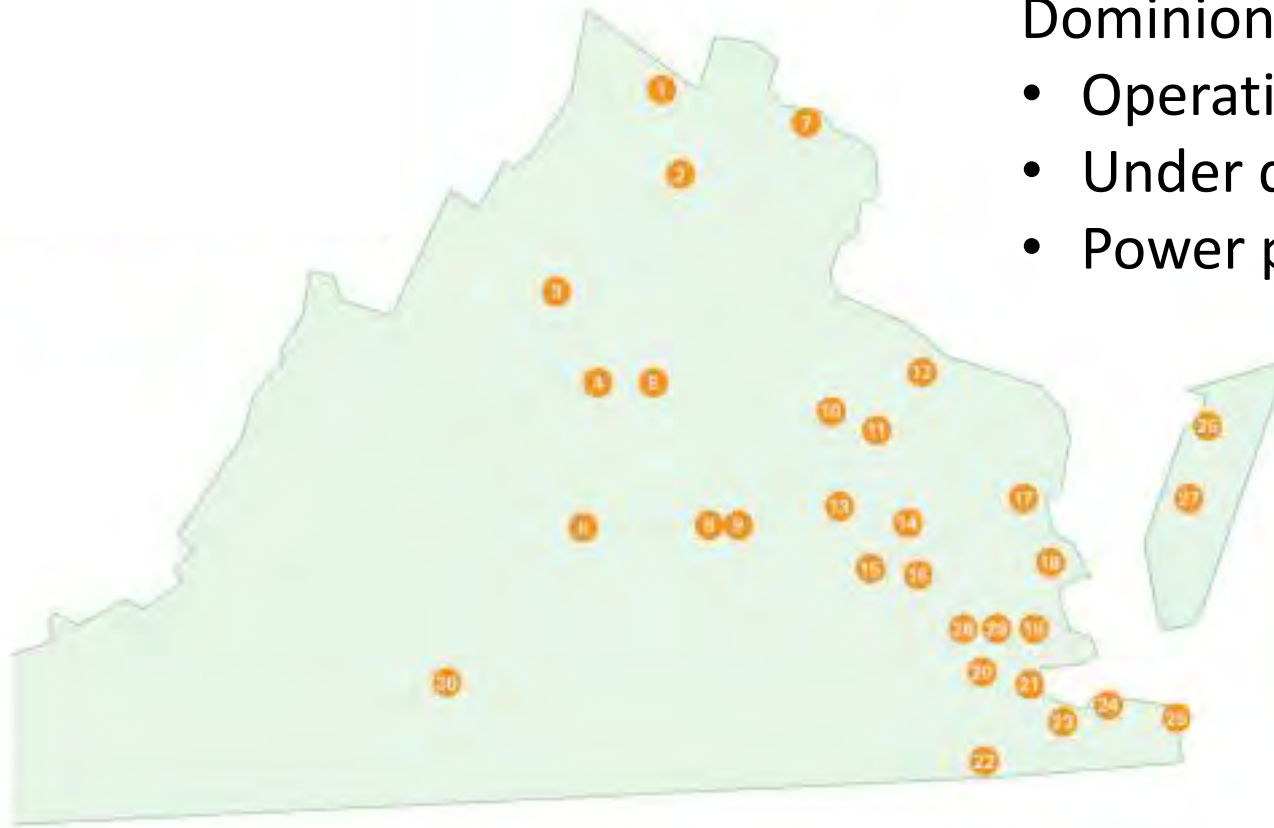
- 3,000 MW solar and on-shore wind by 2022
- State government targets 16% renewable by 2022
- Support corporate use of renewables

Progress

- **Permitted = 1,000 MW**
- Notice of Intent = 3,400 MW



The Growing Solar Industry



- Dominion has 1,000 MW solar
- Operational
 - Under development
 - Power purchase agreements

*They could add
5,000 MW
by 2045*

Current Project

- 100 MW on 1400 ac
- Operational in 2021
- Investment of \$155 M
- Economic impact during operations
 - County = \$2.6 M / yr
 - Virginia = \$3.1 M / yr
- **Tax revenue to county**
 - **Design and construction (BPOL) = \$7,000**
 - **Operations (real estate and business taxes) = \$2 M / yr**



State Permit By Rule Process

The
application is
the permit

It is the
developer's
responsibility

It is DEQ's
responsibility

1. Notice of Intent
- 2. Local government certification**
3. Interconnection Studies
4. Interconnection Agreement
5. Certification project doesn't exceed 150MW
6. Analysis of NAAQS
7. Analysis on impacts to natural resources: DGIF, DCR, DHR
8. Coastal Avian Protection Zone Review
9. Operating Plan
10. Site Plan and Context Map
11. Environmental permits
12. Certification of either Utility or non-utility
13. 30-day Public comment/with public meeting
14. Appropriate permit fee

The County's Tools

Virginia Code Section 15.2-2232

- Local Planning Commission must review public utility facilities...

1

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

DEQ Permit by Rule (PBR) process (<150 MW)

- Local government must certify compliance with **land use ordinances**

2

The People!



The County's Process – Recommended

1. **Receive 2232 application**
2. 2232 Review Staff Report
3. Planning Commission approval/denial



Comprehensive
Plan



1

Comprehensive Plan



SUSSEX COUNTY, VIRGINIA
2004-2005 Comprehensive Plan Update
Adopted: October 20, 2005



Sussex County Planning Commission
Sussex County Board of Supervisors



COMMUNITY PLANNING COLLABORATIVE, INC.

Does it address solar?

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

1 Comprehensive Plan

A Guide

LOCAL PRODUCTION OF RENEWABLE ENERGY

- 1) There is a great interest in the construction of Solar Energy Farms throughout the County as a result for the quest to generate environmental friendly energy

STRATEGIES/POLICIES

- a. If not detrimental to the surrounding area, Solar Energy Projects greater than 20 MW_{AC} are encouraged in agricultural zoned districts.

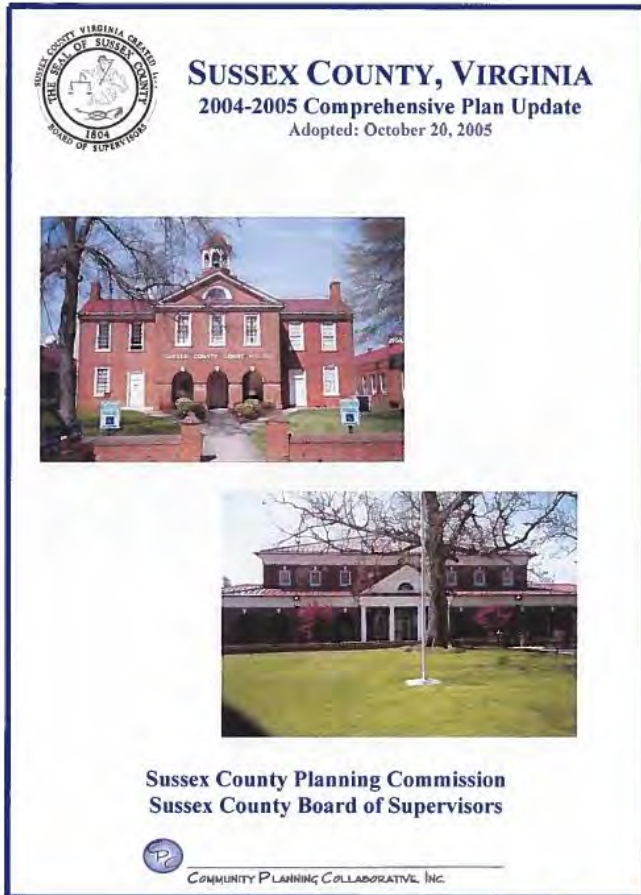
COMPREHENSIVE PLAN 2013-2018

County of Greenville, Virginia

Revised June, 2013



1 Comprehensive Plan – 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.

1 Comprehensive Plan – Land Uses

90% ag / forestry

5% residential

5% commercial, industrial, public

5 Planning/Growth Areas



Future Land Uses

- Facilitate farming, reduce erosion, protect watersheds
- Restrict use to agriculture, forestry, passive recreation, and conservation

1 Comprehensive Plan – Goals

Commercial and Industrial Development

- Increase employment

Growth Management

- Growth consistent with rural image and character



Land Development and Land Use Compatibility

- Minimize direct or secondary environmental impacts

1 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

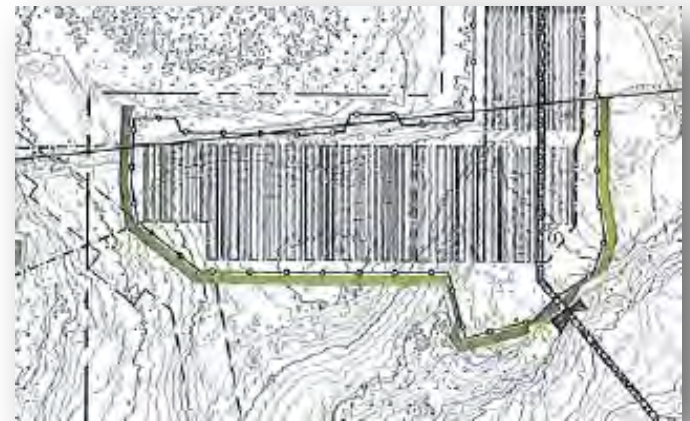


The County's Process – Recommended

1. Receive 2232 application
 2. 2232 Review Staff Report
 - 3. Planning Commission approval/denial**
- 1** Comprehensive Plan
- 4. Receive CUP application**
 5. CUP Review Staff Report
 6. Planning Commission approval/denial
 7. Planning Commission Report
 8. Board approval/denial
- 2** Land Use Ordinances

CUP Application

- Application
- Tax Map
- Adjacent Owners List
- Statement of Intent
- Draft Conditions
- Conceptual Site Plan
- Project Screening and Buffers
- Economic Impact Analysis
- Decommissioning Plan



2

Zoning Ordinance

Zoning Ordinance
Sussex, Virginia



Revised November 15, 2007
Effective Date of Revisions January 1, 2008

This document is an edited version of the original
Zoning Ordinance adopted on November 18, 1988.

It was edited to include a number of ordinance amendments
adopted by the County through November 15, 2007.

Does it address solar?
Is it a special use?

*Local government must
certify compliance with
land use ordinances*

A Regulation

The County's Process – Recommended

1. Receive 2232 application
2. 2232 Review Staff Report
3. Planning Commission approval/denial



Comprehensive
Plan

4. Receive CUP application
5. CUP Review Staff Report
6. Planning Commission approval/denial
7. Planning Commission Report
8. **Board approval/denial**



Land Use
Ordinances

The County's Tools – Updates

1 Comprehensive Plan

2 Land use ordinances

Stakeholder engagement



1 Comprehensive Plan – Recommendation

Describe preferred features

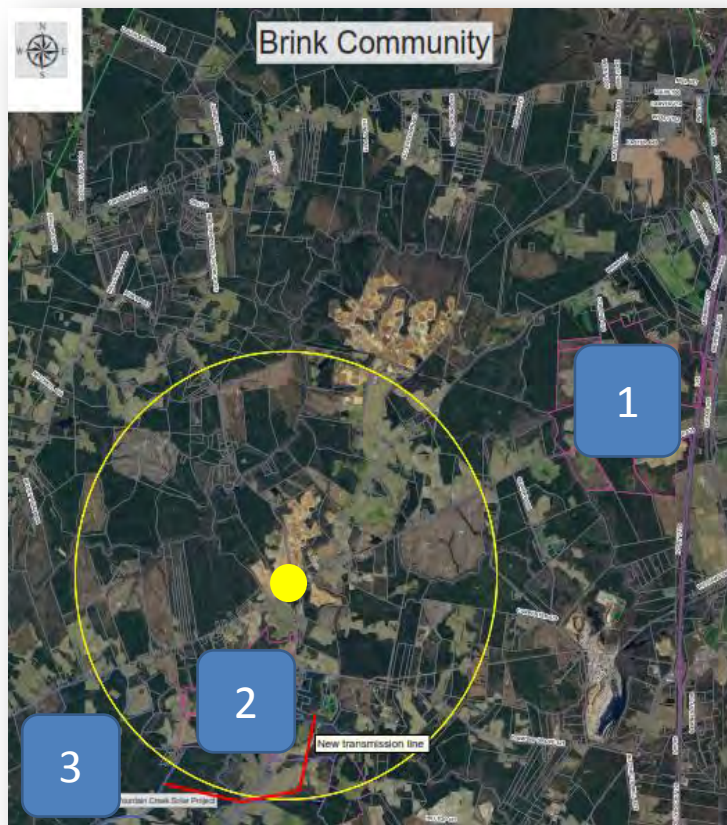
Utility-scale Solar Facilities (>1MW)

- Agriculture, brownfields, landfills
- Avoid prime farmland, forests, development areas
- Consider proximity to residences; historic, cultural, recreational, or environmentally-sensitive areas; and scenic viewsheds

A Guide



1 Comprehensive Plan – Recommendation



Describe preferred features

Utility-scale Solar Facilities (>1MW)

- <1,500 ac
- <65% PV panel coverage
- >1 mi from any city or town
- >2 mi from other utility-scale solar facilities
- <1 mi of electric transmission lines

1 Comprehensive Plan – Recommendation

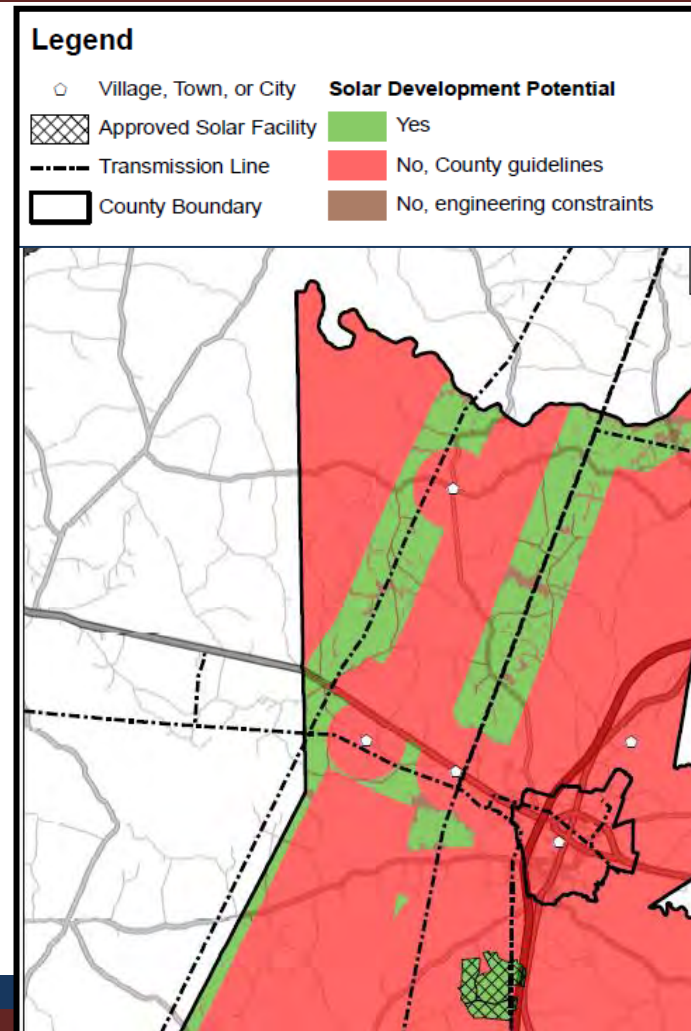
Include relevant maps

Existing Land Use Map

- Prime Farmland
- Brownfields
- County-owned capped landfills

Major Electrical Facilities

- Transmission lines
- Transfer stations
- Generation facilities (including solar)



2 Zoning Ordinance – Recommendations

Add definitions

A Regulation

Solar facility, small-scale

- <15 kW and <1 ac or on existing structure

Solar facility, medium-scale

- <999 kW to reduce onsite consumption

Solar facility, utility-scale

- >1 MW electricity to provide electricity to a utility provider

2 Zoning Ordinance – Recommendations

SITE PLAN REQUIREMENTS

When required.

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

ADD

- Utility-scale solar facilities.

2 Zoning Ordinance – Recommendations

❖ Intent

❖ Applicability

ADD SOLAR ARTICLE

❖ Zoning districts

- **Small-scale solar facilities:** by-right in all districts
- **Medium-scale solar facilities:** by-right in commercial and industrial districts
- **Utility-scale solar facilities:** CUP in A-1, brownfields, or landfills

2 Zoning Ordinance – Recommendations

❖ Applications and procedures

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



2 Zoning Ordinance – Recommendations

❖ Applications and procedures (cont.)

- Traffic study
- Construction schedule
- Wetland, waterways, and floodplain inventory >3 mi
- Environmental inventory
- Visual impact analysis



2 Zoning Ordinance – Recommendations

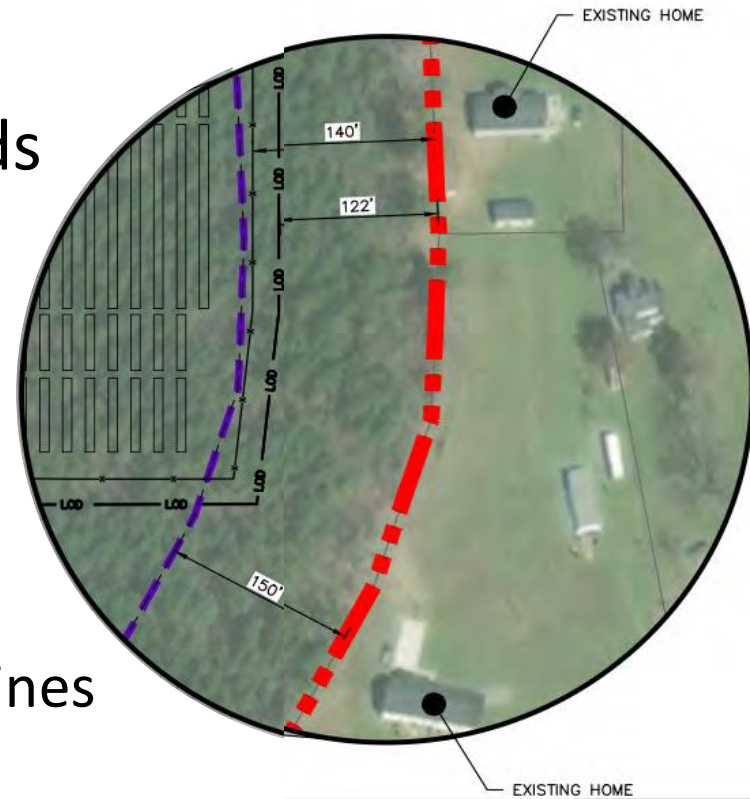
❖ Applications and procedures (cont.)

- Decommissioning plan
 - Removal of all infrastructure
 - Seeding or tree planting
- Cost estimate
- Schedule for updating plan
- Security - Escrow, Surety, or LOC



2 Zoning Ordinance – Recommendations

- ❖ Neighborhood meeting
- ❖ Minimum development standards
 - Area <1,500 ac
 - PV coverage <65%
 - Inventory solar facilities within 4 mi
 - Setbacks
 - >200 ft from residential property lines
 - >150 ft otherwise



2 Zoning Ordinance – Recommendations

❖ Minimum development standards (cont.)

- Height <15 ft (10' max drip line)
- Buffer/screen >100 ft vegetated
- Fence >7 ft and on interior of buffer
- Wildlife corridors
- Native vegetation; pollinators
- Minimize lighting nuisance



2 Zoning Ordinance – Recommendations

❖ Other conditions

- Erosion and sediment control plan
- Stormwater management plan
- Acquire building permit within 18 months
- Change of owner notification (30 day)
- Project specific conditions



Stakeholder Engagement

**Staff, Planning Commission, Board/Council,
landowners, farmers, citizens... developers**

- Start outreach and education now!
- During 2232 and SUP application reviews
- Comprehensive Plan and Zoning Ordinance update



Typical Concerns

- Toxins
- Taxes and electric bill increasing
- Property value decreasing
- Water pressure decreasing
- Wells going dry
- Construction traffic
- Tree removal and burning stumps



NC CLEAN ENERGY
TECHNOLOGY CENTER

**Health and Safety Impacts of Solar
Photovoltaics**
MAY 2017

Public Workshop



Discuss

- Top opportunities / benefits
- Top challenges

To propose

- Vision for utility scale solar
- Goals for implementing vision

Public Workshop Results

Opportunities/Benefits

- Diversify County industries
- Attract private industry preferring green energy
- Create jobs
- Education and workforce development
- Environmental benefit compared to fossil fuels
- County tax benefit
- Landowners' financial benefit
- Alternate use of land
- Keeping up with national policy trends

Challenges

- Preserving County's rural character (concentration of projects)
- Loss of farmland
- Guaranteeing local workers are hired
- Decommissioning concerns
- Aesthetics (buffers and screening)
- Long term environmental impacts (water, soil, wildlife, etc.)
- Reduced recreation on sites
- Educating landowners/residents on solar to address misconceptions

Public Workshop Results

Develop a Vision

- Preserve quality of life and rural character
- Establish solar projects that are properly designed to meet energy goals of the industry and be compatible with the community
- Welcome solar projects from reputable companies
- Assist landowners in transitioning use of land that will aid in profitability while not hindering adjacent landowners
- Protect the environmental without over regulating

Public Workshop Results

Develop Goals / Tactics

- Allow solar farms in industrial and commercial zones
- Expand siting to include rooftops for commercial infrastructure
- Set standard application and permitting procedures
- Educate community on solar industry
- Protect landowner's rights
- Provide directions to allow landowners to use their land as they see fit
- Encourage economic development and the solar industry
- Expand energy facilities to include wind opportunities

Summary

Review an application

1

2232 Review
Comprehensive Plan
Planning Commission

2

CUP Review
Land use ordinances
Planning Commission
Board of Supervisors

Update tools

1

Comprehensive Plan

2

Zoning Ordinance



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