

Utility Scale Solar

June 11, 2019

The Solar Industry is Growing

Virginia.gov

Government Business Education Recreation Services

How Can Virginia Government Help You?


Search Virginia.gov

- Agricultural Stewardship Program
- Coal, Mineral & Natural Gas Complaints
- Conservation Education & Project Learning Tree
- Forest Management

ENVIRONMENT & NATURAL RESOURCES Service

Report Pollution

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.



ENVIRONMENT & NATURAL RESOURCES Service

Renewable Energy in Virginia

deq.virginia.gov/Programs/RenewableEnergy →

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

“Green” As Good Business



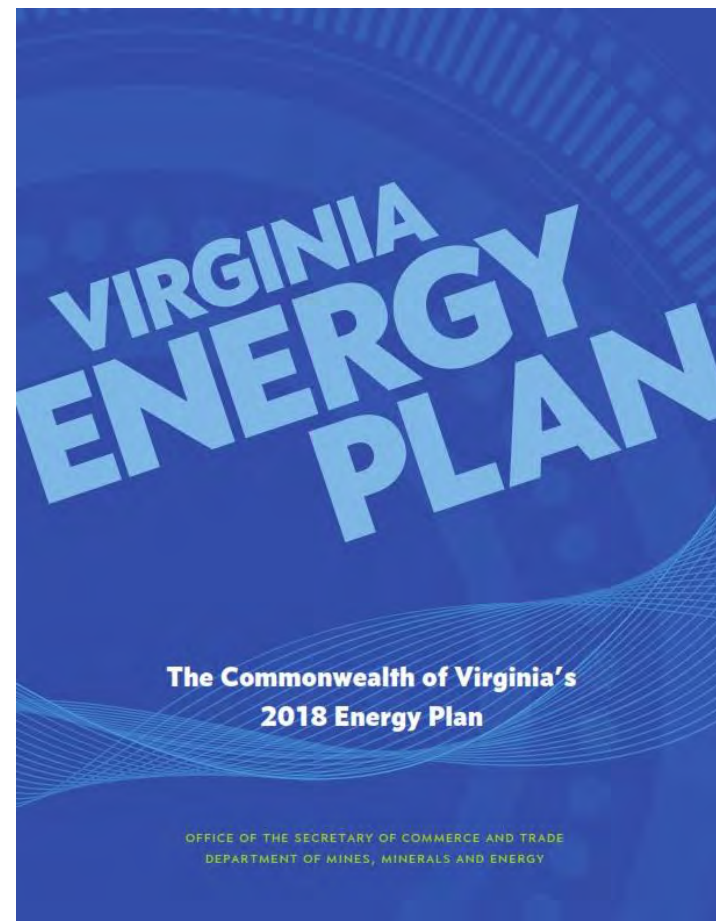
The Growing Solar Industry in Virginia

2018 Energy Plan Targets

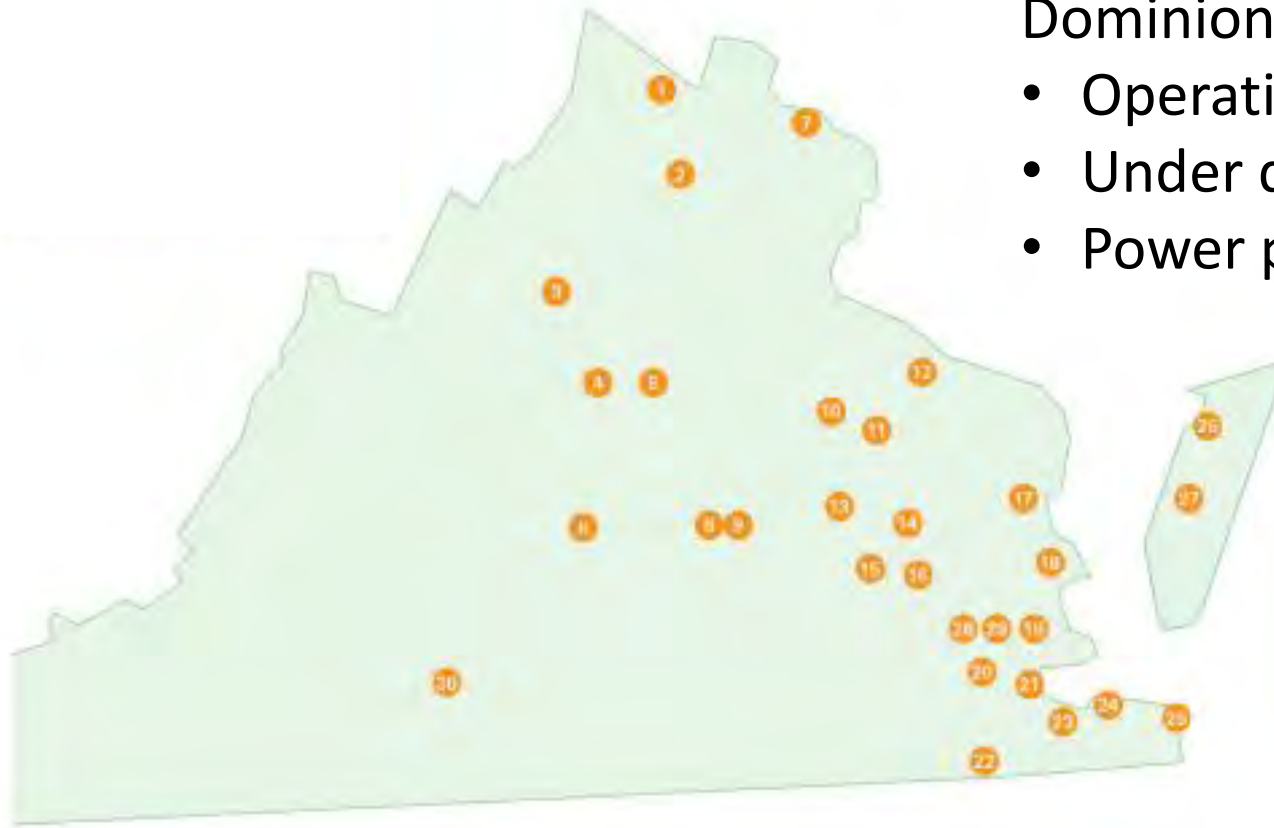
- 3,000 MW solar and on-shore wind by 2022
- State government targets 16% renewable by 2022
- Support corporate use of renewables

Progress

- **Permitted = 750 MW**
- Notice of Intent = 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 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 County's Process – Recommended

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



Comprehensive
Plan



1

Comprehensive Plan – *Silent?*



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?”*

A Guide

1

Comprehensive Plan – *Vague?*

COMPREHENSIVE PLAN 2013-2018

County of Greenville, Virginia

Revised June, 2013



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

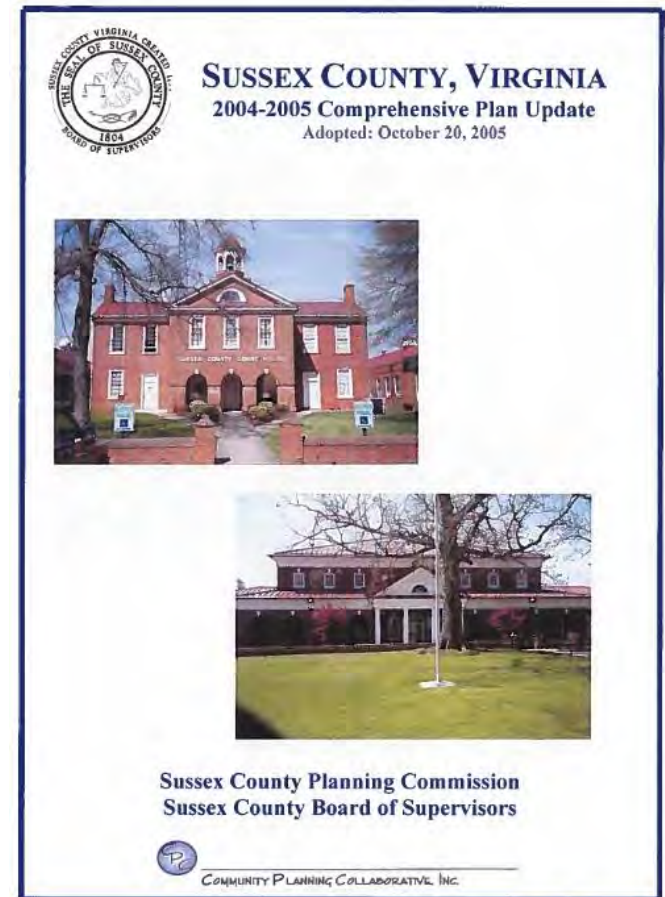
STRATEGIES/POLICIES

- a. If not detrimental to the surrounding area, Solar Energy Projects greater than 20 MW_{AC} are encouraged in agricultural zoned districts.
- b. If not detrimental to the surrounding area, Solar Energy Projects 20 MW_{AC} or less are encouraged in industrial and commercial zoned districts.
- c. It is encouraged that a Decommissioning plan be provided by the owner of such Solar Energy Projects to ensure to proper dismantling of the project.

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



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

CUP Application

Application

Tax Map

Adjacent Owners List

Statement of Intent

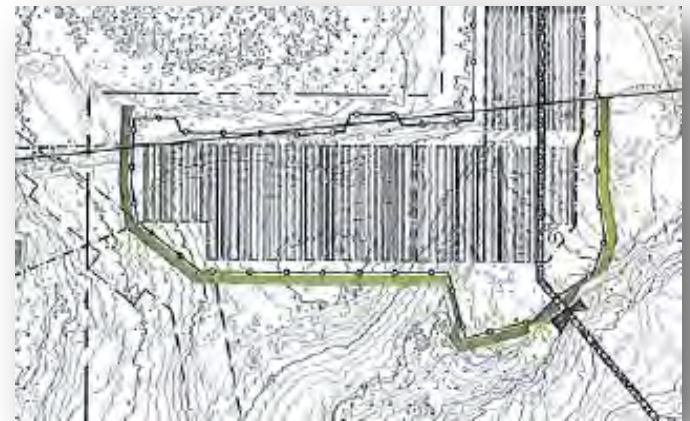
Draft Conditions

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
- 3 Stakeholder Engagement



1 Comprehensive Plan – Recommendation

Describe preferred solar project features

Utility-scale Solar Facilities (>1MW)

A Guide

- Agriculture, brownfields, landfills
- <1,500 ac, <65% PV panel coverage
- Outside planning areas or community hubs; forests
- >1 mi from any village, town, boundary
- >2 mi from other utility-scale solar facilities
- <1 mi of electric transmission lines
- Consider proximity to residences; historic, cultural, recreational, or environmentally-sensitive areas; and scenic viewsheds

1 Comprehensive Plan – Recommendation

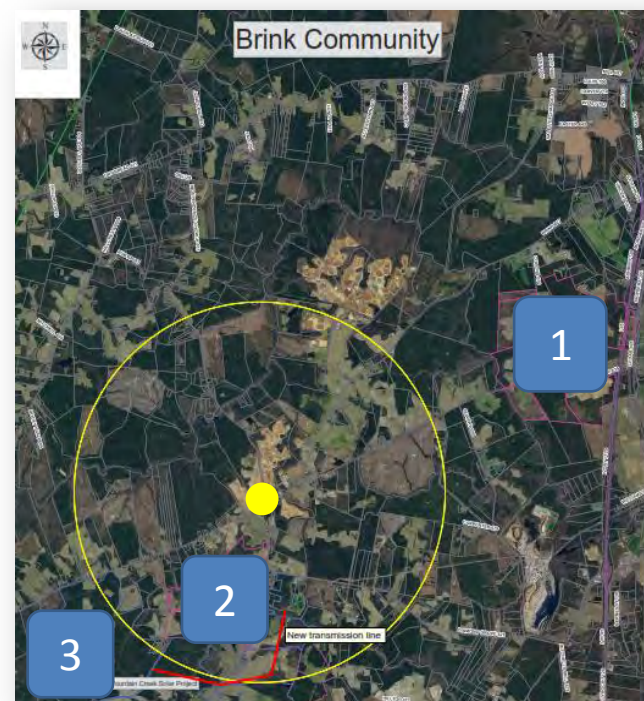
Include relevant maps

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

Solar facility, small-scale generates less than 15 kW electricity from sunlight and meets at least one of the following criteria: has a disturbance zone 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 generates less than 999 kW electricity from sunlight primarily to reduce onsite consumption of utility power for commercial and industrial applications. Sites are between 1-3 acres.

Solar facility, utility-scale generates more than 1 MW electricity from sunlight which will be used to provide electricity to a utility provider. Sites are generally over 2 acres.

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 Solar Ordinance – Recommendations

Intent

ADD NEW ORDINANCE

Applicability

A Regulation

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

Applications and procedures

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



2

Solar Ordinance – Recommendations

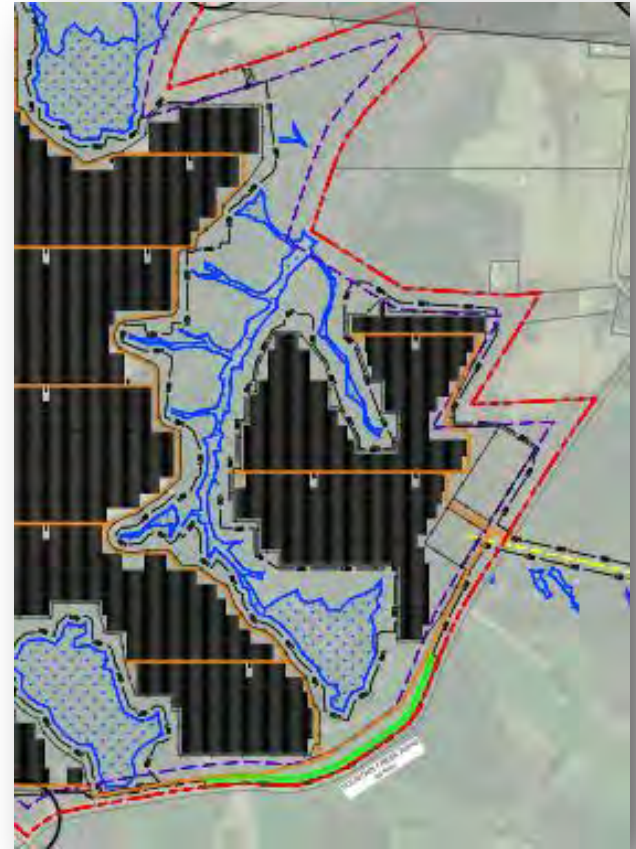
Applications and procedures (cont.)

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



Applications and procedures (cont.)

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

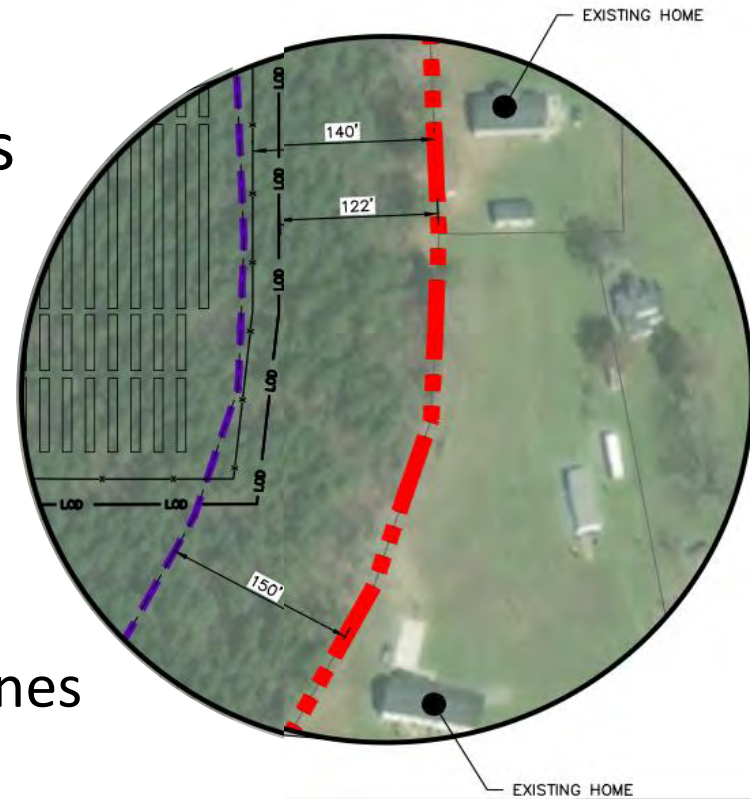


2 Solar Ordinance – Recommendations

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 Solar Ordinance – Recommendations

Minimum development standards

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

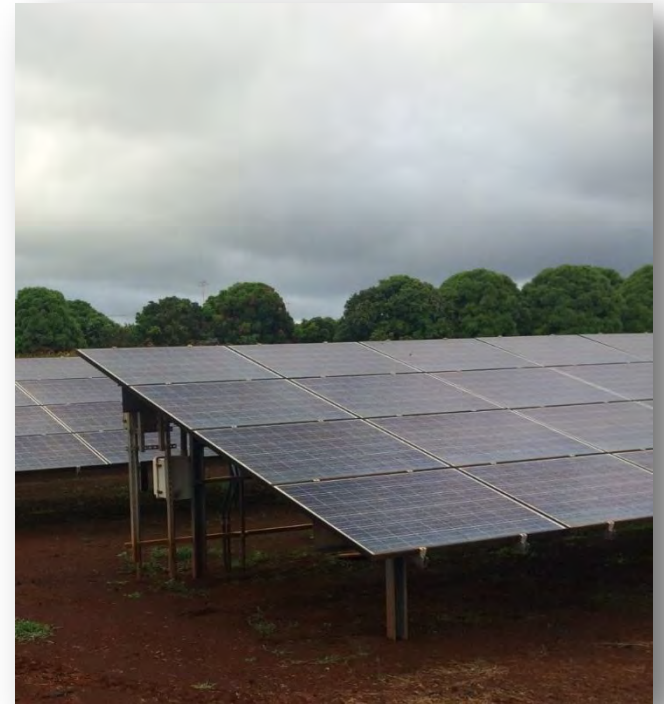


2

Solar Ordinance – Recommendations

Other conditions

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



3

Stakeholder Engagement

Discuss

- Top opportunities / benefits
- Top challenges

To propose

- Vision for utility scale solar
- Goals for implementing vision



3

Stakeholder Engagement

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

3 Stakeholder Engagement – Outcomes

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

3

Stakeholder Engagement – 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

3 Stakeholder Engagement – Goals

- 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

The County's Tools



1

2232 Review
Comprehensive Plan
Planning Commission

2

CUP Review
Land use ordinances
Planning Commission
Board of Supervisors

3

Stakeholder Engagement

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