



## 2021 Virginia Statewide Solar Survey

### ABOUT

The Energy Transition Initiative at the Weldon Cooper Center for Public Service at the University of Virginia and the Virginia Department of Mines, Minerals and Energy are administering this survey to all Virginia counties and independent cities in order to collect information related to each locality's experience, readiness and needs related to solar development.

Your individual survey responses will be kept confidential, and the data will be presented to reveal regional and statewide trends, gain comprehensive insights in Virginia's preparedness for a clean energy transition and inform the future development of research, resources and technical assistance.

### SURVEY FORMAT

This survey was designed using survey logic; this means that gating questions are asked and the follow-up questions presented to you depend on how you answered the gating questions. We have made every effort to employ gating questions so that you are not asked questions that do not pertain to you. Due to survey logic, you may notice question numbers appear out of sequence or you are not asked questions that appear on the pdf.

This survey is designed to take 25-30 minutes to complete. It is intentionally comprehensive and while most questions can be answered in seconds, some may take more time or require you to consult with others from within your organization.

## VIRGINIA SOLAR SURVEY QUESTIONNAIRE

Particularly, questions in Section 2 related to energy procurement and questions in Section 7 related to the economic considerations of solar policy may be outside of your scope of expertise. Additionally, questions in Section 4 ask about numbers and specifics related to utility scale solar projects proposed in your locality; answering those questions may require you to consult project documents and/or past solar applications.

The survey consists of the following sections:

Section 1: Solar Readiness

Section 2: Renewable Energy Procurement

Section 3: Distributed Generation

Section 4: Utility Scale Solar

Section 5: Comprehensive Plan

Section 6: Zoning

Section 7: Economic Considerations

Section 8: Energy Storage

Section 9: General Questions

## SURVEY NAVIGATION

If you want to download a PDF of the full questionnaire before starting the survey, please see the email where you received this survey link.

Each survey web page features forward and backward arrows; **your progress is automatically saved**. Do not use the forward and back buttons on your browser's navigation bar.

You cannot skip questions, but if you exit before completing the survey you can return and continue from where you stopped. You can also navigate backwards and change answers.

You can download a summary of your responses by clicking the "Download pdf" box that appears after you have submitted your responses.

If you need technical assistance, please email Elizabeth Marshall: [emm2t@virginia.edu](mailto:emm2t@virginia.edu).

## ACKNOWLEDGEMENTS

This survey was created with significant input from representatives of the following stakeholder organizations. In addition, several Virginia localities participated in a beta-test to ensure the relevancy and quality of the survey. Many thanks to all for sharing their time and expertise.



## Section 1: SOLAR READINESS

The 2020 and 2021 Virginia legislative sessions set the stage for increased demand for solar development at all scales. The questions in this section are intended to reveal how localities are preparing for solar development and what resources should be prioritized to support them.

*Q1.1.* Is your locality preparing to update or is actively updating its solar policies, regulations, and/or application and permitting processes?

Yes, update is in progress

No, but it is on our radar to do so

No, we have already updated our solar policies, regulations, and/or application and permitting processes

No, not at this time

*Q1.2.* What resources are your locality turning to (or did your locality turn to) for support and assistance in developing new policies and ordinances? Choose all that apply.

Other Virginia localities

Planning District Commission

Membership associations (Virginia Association of Counties, Virginia Municipal League, American Planning Association, etc.)

Local Extension Office and/or Soil & Water Conservation District

State agencies (Departments of Environmental Quality, Historic Resources, Wildlife Resources, Conservation Resources, etc.)

Institutions of higher education (University of Virginia, Virginia Tech, Virginia Commonwealth University, etc.)

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Private consultants (attorneys, engineers, architects, planners, etc.)

Solar industry professionals (developers, trade associations, installers, etc.)

Nonprofits and advocacy groups (The Nature Conservancy, Alliance for Shenandoah Valley, Appalachian Voices, etc.)

National research entities and agencies (National Renewable Energy Laboratory, Department of Energy, etc.)

Utilities (Dominion, Appalachian Power, electric cooperative, etc.)

None

Other \_\_\_\_\_(please list)

**Q1.3.** State agencies such as Virginia Department of Mines, Minerals and Energy (DMME) and UVA offer technical assistance related to solar energy. With respect to solar development, would you be interested in training or technical assistance in any of the following areas for your locality? Choose all that apply.

Solar basics (foundational information about solar and solar+storage technology)

Technical assistance (tools and resources to assist with policy and process development)

Identification of previously disturbed land, brownfields or coal-impacted lands (DMME, DEQ assistance)

SolSmart Advisors Program (no-cost technical support and designation program to enhance solar readiness)

Energy procurement (solar leases, power purchase agreement, solar financing)

Tax and economic impact assessment (revenue share decision analysis)

Low impact development (pollinators, livestock grazing)

Locality best practices (Tips and Tricks from other localities)

No, not interested

Other:

Q1.4. To help DMME and UVA understand your priorities related to the siting and development of **utility scale solar**, please **indicate your level of interest** in the following topics:

	No interest	Minimal interest	Some interest	A lot of interest	The most interest
Agricultural, farmland impacts	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Decommissioning	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Emergency response	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
End users, corporate buyers, energy off-takers	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Energy equity, environmental justice	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Forests, timbering, carbon sequestration	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Low impact development, agrivoltaics (e.g., pollinator-friendly ground cover, dual-use solar + agriculture)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

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Property values, economic benefits, taxation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Soil and water conservation and protection	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Transmission, grid, energy storage, resiliency	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Viewsheds, cultural, historic resources	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Wildlife, habitat fragmentation and conservation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Landowner leases, property rights	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	No interest	Minimal interest	Some interest	A lot of interest	The most interest

Q1.5. Comments related to solar readiness (optional)

## SECTION 2: RENEWABLE ENERGY PROCUREMENT

The questions in this section are intended to capture what efforts, if any, your local government is undertaking to incorporate solar energy into your own public buildings and business operations.

Q2.1. Does your locality have a formalized process for making decisions regarding electricity procurement for your own public buildings? (i.e., necessary channels to go through to introduce a new fuel type into your energy mix)

Yes

No

Not sure

Q2.2. What buildings and entities are covered by your locality's electricity procurement? Check all that apply.

Administrative Offices

Fire & Rescue

Police Station

Courthouse

Schools (even if their procurement is managed by your locality's School Board)

Parks & Recreational Facilities

Public Works/ General Services/Transportation & Fleet Services

Not sure

Other (Please describe)



Q2.3.

The 2019 General Assembly [passed legislation that states](#): “*It is the intent of the General Assembly that new public-school buildings and facilities and improvements and renovations to existing public school buildings and facilities be designed, constructed, maintained, and operated to generate more electricity than consumed*”. This is known as “*energy positive building design*”.

What is your locality’s experience with using “*energy-positive building design*” for new public-school buildings?

- No experience
- Some experience
- Extensive experience
- Not sure

Q2.4. Does your locality have a policy requiring solar photovoltaics be considered in the design of new public buildings?

- Yes
- No
- Not sure
- Other

Q2.5. Does your locality procure any of its own energy load from solar?

Yes

No, not at this time but we are working towards it within the next 2 years

No, we have no plans to procure any of our own energy load from solar

Not sure

Q2.6. Is (or will) any of the solar energy be procured from on-site solar installations such as rooftop or ground-mounted systems on public property?

Yes

No

Not sure

Q2.7. Are (or will) your solar installation(s) be owned or procured through a power purchase agreement (PPA)?

Owned

PPA

Both: we have project(s) that are owned and project(s) that are procured through a PPA

Not sure

Q2.8. Optional: Please describe public solar project details such as whether they are on-site, rooftop or ground mounted, total size, and percentage of total usage, if known.

Q2.9. Has your locality considered incorporating solar in its generation mix?

Yes

No

Not sure

Q2.10. Is your locality actively pursuing the installation of solar systems on public buildings or public land?

Yes

No

Not sure

Q2.11. Has your locality encountered barriers which have prevented solar from being incorporated into its energy generation mix?

Yes

No

Not sure

Not applicable

Q2.12. Please allocate 100 points between the choices below, giving the most points to the topics that pose the biggest barriers (total must add up to 100.) If you wish to elaborate, please use comment box at the bottom of Section 2.

Site not suitable for solar (e.g., structural capacity of roof, lack of solar exposure)	<input type="text" value="0"/>
Upfront costs, financing	<input type="text" value="0"/>
Lack of staff time, capacity, bandwidth	<input type="text" value="0"/>
Lack of support or direction from leadership	<input type="text" value="0"/>
Complication in the process	<input type="text" value="0"/>
Other:	
<input type="text"/>	<input type="text" value="0"/>
Total	<input type="text" value="0"/>

Q2.13. Some localities can use cooperative contracts or riders on power purchase agreement contracts to allow another locality to use the existing terms as a way to reduce the time and negotiation required and to reduce barriers to entry.

Has your locality joined a PPA through a rider arrangement?

Yes

No

Not sure

Q2.14. Are you interested in learning more about cooperative procurement models and examples?

- Yes
- No
- Not sure

Q2.15. In the box below, please describe your biggest concerns and/or questions about incorporating solar into your locality's own energy generation mix, or select "No concerns" if you have none.

Concerns/Questions (Please describe)

- No concerns
- Not sure

Q2.16. Rate how familiar you are with each solar policy mechanism: (Note: You must move the slider off of the default position for each item.)

No response    Not at all familiar    Slightly familiar    Somewhat familiar    Moderately familiar    Extremely familiar

Federal Investment Tax Credit (ITC)

Net-metering

Virtual net-metering (meter aggregation)

Power Purchase

Agreements  
(including Virtual  
PPAs)

Shared, Community  
Solar

Q2.17. Comments related to renewable energy procurement (optional)

### SECTION 3: DISTRIBUTED GENERATION

The Virginia Clean Economy Act mandates investor-owned utilities provide one hundred percent of their electricity from clean or renewable energy sources by mid-century. Meeting this goal will require increased energy efficiency and growth in solar distributed generation (DG), as well as increased solar electric production at the utility scale. The questions in this section are intended to capture a snapshot of what your locality's policies and processes are regarding solar DG.

Q3.1. **Regarding residential and commercial solar permitting and inspections,** does your locality provide any of the following **online**?

	Yes	No	Not sure
Summary of the permitting process (permitting checklist)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

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Examples of typical building plans	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Fee schedule	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Local design criteria for building permits	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Incentives (summary of policy and/or forms)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**Q3.2. Regarding residential and commercial solar permitting and inspections, can an applicant in your locality do any of the following **online**?**

	Yes	No	Not sure
Apply for a building permit	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Submit construction plans/ drawings	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Schedule an inspection	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

neighboring localities lowers the cost of solar installation. To what extent are you

Q3.4. Research shows that **online permitting** lowers the cost of solar installation. To what extent are you interested in your locality adopting an **online permit review procedure**, such as the [SolarAPP](#) tool offered through the National Renewable Energy Laboratory?

Not at all interested

Somewhat interested

Very interested

Our locality already offers online permitting

Not sure

Q3.5. If your locality operates an electric utility, does it allow customers generating solar energy to “net meter” any excess solar generation?

Yes

No

Not sure

Not applicable

Q3.6. Has your locality **adopted by ordinance** a policy to exempt or partially exempt solar equipment from property taxes, as permitted by Virginia Code Section 58.1-3661? (This is different than the mandatory Machinery and Tools tax exemption per 58.1-3660.)

Yes

No

Not sure



Q3.7. To the best of your knowledge, why does your locality not exempt or partially exempt solar equipment from property taxes? Choose all that apply.

- Unaware tax exemption was allowed
- Because of potential fiscal impacts/revenue loss
- Citizens have not expressed interest
- Not sure
- Other:

Q3.8. Comments related to distributed generation (optional)

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#### **SECTION 4: UTILITY SCALE SOLAR**

Land use decisions regarding the siting and approval of solar facilities largely fall within the purview of the locality, and solar land use policies and permitting procedures vary across the state. The following questions are intended to capture you locality's experience and plans regarding large scale and utility scale solar development.

For the purposes of this survey, utility scale solar refers to solar generation facilities 5 MW and greater.

Q4.1. Is your locality large enough to accomodate a large or utility scale solar facility?

Yes

No

Q4.2. Has your locality ever reviewed an application (e.g., conditional use permit, special use permit, special exception, or Code of Virginia section 15.2-2232 compliance review) for a large or utility scale solar facility?

Yes

No

Not sure

Q4.3. **Per 9VAC15-60-130, for projects with capacity of 500 KW up to 5 MW, please indicate:**

(Please write the appropriate number in the boxes below.)

How many applications reviewed total? (Include

those currently under review)

How many applications currently under review?

How many applications approved?

How many applications withdrawn (and not resubmitted)?

How many applications denied?

**Q4.4. For projects with a capacity of 5-79 MW, please indicate:**

(Please write the appropriate number in the boxes below.)

How many applications reviewed total? (Include those currently under review)

How many applications currently under review?

How many applications approved?

How many applications withdrawn (and not resubmitted)?

How many applications denied?

**Q4.5. For projects with capacity of 80-149 MW, please indicate:**

(Please write the appropriate number in the boxes below.)

How many applications reviewed total? (Include those currently under review)

How many applications currently under review?

How many applications approved?

How many applications withdrawn (and not resubmitted)?

How many applications denied?

**Q4.6. For projects with capacity of 150 MW and above, please indicate:**

(Please write the appropriate number in the boxes below.)

How many applications reviewed total? (Include those currently under review)	<input type="text"/>
How many applications currently under review?	<input type="text"/>
How many applications approved?	<input type="text"/>
How many applications withdrawn (and not resubmitted)?	<input type="text"/>
How many applications denied?	<input type="text"/>

**Q4.7.**

Optional: For applications that have been withdrawn or denied, please describe the reasons:

Q4.8.

Regarding siting agreements, as passed in 2020 and updated in the 2021 legislative session, Virginia code section [15.2-2316.7](#) states:

*“Any applicant for a solar project or energy storage project shall give to the host locality written notice of the applicant's intent to locate a solar in such locality and request a meeting. Such applicant shall meet, discuss, and negotiate a siting agreement with such locality.”*

Are you aware of this section of the code?

Yes

No

Not sure

Q4.9. Has your locality ever entered into a siting agreement negotiation process for a solar project?

Yes, at least one agreement was negotiated

Negotiations are in progress, but not yet finalized

No

Q4.10. Would your locality be interested in participating in a case study project to help develop Virginia-based best practice guidance related to utility scale solar development?

Yes

No

**Q4.11.** Virginia has rich land and water resources, ecological corridors, agriculture, forests, and waterways. It is important to protect natural resources while transitioning to clean energy. The next two questions address if or how your locality considers conservation of natural resources when reviewing utility scale solar development applications.

Do your local regulations specify criteria for the evaluation of the following topics when reviewing a utility-scale solar facility application?

	Yes	No	Not Sure
Avoidance of invasive species	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Conservation easements, in Land Use Assessment Program	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Erosion and sediment control	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Habitat fragmentation, wildlife-friendly design elements (e.g., fencing)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Historic, cultural resources	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Redevelopment of brownfields or previously-developed sites for solar	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Pollinator-friendly species (Virginia Pollinator Smart)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

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Scenic rivers	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
State Wildlife Action Plan	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q4.12. To what extent do your local regulations enable the following low impact development practices for utility scale solar facilities?

	Not allowed	Allowed, but not recommended or required	Recommended, but not required	Required to be satisfied	Silent, No Position
Pollinator-friendly planting	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Vegetative ground cover (native or otherwise)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Animal grazing as a means of ground maintenance	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Apiary/Beekeeping	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Dual-use of agriculture and solar photovoltaics (agrivoltaics)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Soil health management (e.g., topsoil preservation)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q4.13. Comments related to large and utility scale solar (optional)

**SECTION 5: COMPREHENSIVE PLAN**

Virginia code does not explicitly require that comprehensive plan policies address climate change or energy. The questions in this section are intended to reveal the extent to which localities have included or are planning to include policies that address climate change and clean energy.

Q5.1. Does your comprehensive plan or policies adopted by reference speak to any of the following topics? Please choose the option that most closely matches your locality's status with respect to the topics below.

	Yes, adopted	No, but we are in the process of updating to include	No, but we are contemplating adding it in next revision cycle	No, no current plans to include	Not Sure
Sustainability goals	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Renewable/Clean Energy (e.g., development, procurement)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Greenhouse gas emissions, carbon reduction strategies					



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(e.g., tracking, goals, carbon sequestration)

Community disaster preparedness and energy resiliency (e.g., microgrid, solar+storage, resilience hubs)

Q5.2. Does your comprehensive plan prioritize general areas or types of lands that are preferred for utility scale solar energy generation facilities?

Yes

No

Other (Please explain)

Q5.3. What are the characteristics of the land identified? Choose all that apply.

Previously-disturbed land, brownfields, coal-impacted lands including Abandoned Mine Lands

Industrial land

Agricultural land

Land adjacent or within a certain proximity to existing electric infrastructure/grid

Commercial timber land

Other- Please describe:

Q5.4. Comments related to comprehensive planning (optional)

**SECTION 6: ZONING**

The questions in this section are intended to capture how your locality currently uses or plans to use zoning to regulate and guide solar development.

Q6.1. Does your locality have a zoning ordinance or UDO (unified development ordinance)?

Yes

No

Q6.2. Does your locality's ordinance provide a clear regulatory pathway for approval of **distributed generation** solar projects?

Yes

No

Not Sure

Q6.3. Is the regulatory pathway for approval of **distributed generation** solar projects an administrative approval process?

Yes

No

Not Sure

Other (Please explain)

Q6.4. Does your locality's ordinance provide a clear regulatory pathway for approval of **utility scale** solar facilities?

Yes

No

Not sure

Not applicable because our locality is too small or developed to accommodate any utility scale solar projects

Q6.5. What regulatory pathway(s) are used for approval of **utility scale** solar projects? Check all that apply:

With a conditional use permit, special use permit, special exception permit

By-right in certain districts

In an overlay district

In a floating district

Other (Please describe)

Q6.6. In which types of districts is a conditional use permit/special use permit/special exception an approval pathway for **utility scale** solar? Choose all that apply:

Agricultural/Rural

Residential

Civic/Institutional

Commercial

Manufacturing/Industrial

Floating Zone or Overlay District

Other (Please describe)

Q6.7. Is the dual-use of agriculture and solar photovoltaics (agrivoltaics) allowed in non-agricultural districts?

Yes

No

Not sure

Q6.8. Is your locality actively working towards adding a clear regulatory pathway for utility scale solar facilities to the ordinance?

Yes

No

Not sure

Q6.9. What regulatory pathways is/are your locality adding for utility scale solar?  
Choose all that apply:

By-right in certain districts

With a conditional use permit/special use permit/special exception in specific districts

In a floating zone

In an overlay district

Other

Q6.10. Has your locality adopted a solar ordinance?

Yes

No

We are in the process of adopting a solar ordinance

Not sure

Other (Please explain)

Q6.11. Which of the following solar applications does/will your solar ordinance address? Choose all that apply:

Residential

Commercial, Institutional

Agricultural generators

Shared or Community solar

Utility scale solar

Not sure

Other

Q6.12. Does it, or will it, address any of the following? Check all that apply:

Provisions for generally accepted national standards for solar panels

Provisions for generally accepted national standards for battery storage technologies for solar photovoltaic

Property line setbacks

Vegetated buffers or screening

Erosion & sediment control

Agricultural lands

Decommissioning Plan requirements above and beyond state code requirements

Agrivoltaics (dual-use solar and agriculture, i.e., grazing, apiary, agriculture)

Other:

Q6.13. Comments related to zoning (optional)

**SECTION 7: ECONOMIC CONSIDERATIONS**

Solar project development has the power to add economic value to businesses, the workforce, and public funds (budgets and revenue). This section addresses how your locality evaluates and promotes the economic considerations of utility scale solar development.

Q7.1. Has your locality considered or reviewed one or more economic impact analyses relating to solar development? (This includes economic impact analyses created internally by your locality.)

Yes

No

Not sure

Q7.2. How important are **DIRECT economic impacts** (e.g., tax revenue, revenue share or siting agreement proceeds) in your recommendation to approve or deny a utility scale solar application? (Note: You must move the slider off of the default position.)

No response    Not Sure    Not at all important    Slightly important    Moderately important    Very important

Importance of direct economic impacts

Q7.3. How important are each of the **INDIRECT economic impacts** listed below in your recommendation to approve or deny a utility scale solar application? (Note: You must move the slider off of the default position for each item.)

No response    Not Sure    Not at all important    Slightly important    Moderately important    Very important

Generation of local construction jobs

Increased revenue and demand for local businesses and services during construction and decommissioning

Increased revenue and demand for local businesses and services once facility is operational

Financial benefits to the property owner leasing their land to the solar developer



Q7.4. How familiar are you with new legislation which makes changes to the current Machinery and Tools (M&T) tax exemption for solar projects and introduces a revenue share option for projects over 5MW? (VA Code [58.1-2636](#))

No response      Not at all familiar      Slightly familiar      Moderatly familiar      Very familiar

Familiarity with tax model options

Q7.5. Has your locality evaluated the potential economic impacts of adopting a revenue share assessment ordinance as opposed to using the default M&T/real estate tax rate?

Yes

No

Not sure

Q7.6. Has your locality used [SolTax](#), a free, online computational tool to help localities analyze potential revenues under both the M&T/real estate tax rate and revenue share assessment models?

Yes

No

Not sure

Q7.7. Has your locality adopted or is in the process of adopting a revenue share ordinance?

Yes, adopted

Yes, in the process of adopting

No

Not sure

Q7.8. Effective July 1, 2021, Virginia localities are authorized by HB1919 ([§ 15.2-958.3:1](#)) to establish, by ordinance, a green bank to promote investment in solar and other clean energy technologies in that locality. To what extent is your locality considering establishing a green bank?

Not at all: we did not know about the authorizing legislation and/or are unfamiliar with what a green bank is.

Not actively: we are aware of green banks and the authorizing legislation, but we are not actively pursuing establishing one.

Actively: we have had/are having discussions about potentially establishing a green bank.

Not sure if this is being considered at this time.

Q7.9. Comments related to economic considerations (optional)

## **SECTION 8: ENERGY STORAGE**

Energy storage technology balances the flow of intermittent renewable energy sources and is an important part of Virginia's path to a clean economy. Virginia has an energy storage mandate for the largest utilities to build or procure over 3.1 Gigawatts of energy storage capacity. This section addresses if and how your locality is considering the development of utility-scale energy storage technology.

For the purposes of this survey, "utility scale energy storage" refers to storage projects typically greater than 5MW, "in front of the meter," owned by a private company or utility, and feeding one-way into the grid (not for virtual net metering or net metering).

**Q8.1.** Does your locality have policies or codes that address large or utility scale (front of the meter) energy storage as an allowable use?

Yes

No

Not sure

**Q8.2.** Does your locality require emergency preparedness plans for utility scale battery storage projects?

Yes

No

Not sure

Q8.3. Does your locality have any actively permitted large or utility scale energy storage projects?

Yes

No

Not sure

Q8.4. What type(s) of actively permitted large scale energy storage projects does your locality have? Choose all that apply.

Pumped Hydroelectric

Flywheel Energy Storage

Lead Acid Batteries

Lithium Ion Batteries

Sodium Sulphur Batteries

Sodium Nickel Chloride

Flow Batteries (Vanadium Redox, Zinc Bromine)

Not sure

Other (Please describe)

Q8.5. Are there any large or utility scale energy storage projects proposed or planned in your locality?

Yes

No

Not sure

Q8.6. Are the proposed project(s) standalone energy storage or tied in with a solar project (solar+storage)?

Standalone energy storage

Solar + storage

Not Sure

Other (Please describe)

Q8.7. What type of energy storage projects are proposed or planned? Choose all that apply, if known.

Pumped Hydroelectric

Flywheel Energy Storage

Lead Acid Batteries

Lithium Ion Batteries

Sodium Sulphur Batteries

Sodium Nickel Chloride

Flow Batteries (Vanadium Redox, Zinc Bromine)

Not sure

Other (Please describe)

Q8.8. Community planning for resiliency is important, and climate change has created greater urgency to plan response measures for events such as flooding, heat waves, and extreme storm events that may have energy outage impacts. The pairing of distributed generation solar and energy storage can serve as a community resilience "microgrid."

To what extent has your locality considered solar + storage as a resiliency tool?

Our locality has not considered microgrids as a resiliency tool

Our locality is considering policies to allow and/or promote microgrids as a resiliency tool

Our locality has already adopted policies that allow and/or promote microgrids as a resiliency tool

Not sure

Q8.9. Comments related to energy storage (optional)

## SECTION 9: GENERAL QUESTIONS

Locality: Select Locality from pull-down menu

Accomack County  
Albemarle County  
Alexandria  
Alleghany County  
Amelia County  
Amherst County  
Appomattox County  
Arlington County  
Augusta County

Planning District: Select Planning District from pull-down menu. For localities with more than one Planning District, select just one.

Region 1: LENOWISCO PDC  
Region 2: Mount Rogers PDC  
Region 3: Cumberland Plateau PDC  
Region 4: New River Valley RC  
Region 5: Roanoke Valley-Alleghany RC  
Region 6: Central Shenandoah PDC  
Region 7: Northern Shenandoah Valley RC  
Region 8: Northern Virginia RC  
Region 9: Rappahannock-Rapidan RC  
Region 10: Thomas Jefferson PDC

Of the following choices, how would you characterize your locality? Pick one:

Urban

Suburban

Rural

Combination (Please describe)

Other (Please describe)

VIRGINIA SOLAR SURVEY QUESTIONNAIRE

Name

Position or Title

Email

Phone Number

Are you willing to be contacted for follow-up information?

Yes

No



## **THANK YOU!**

Thank you for participating in the first ever Virginia Solar Survey! The information you have provided will shed light on the state of solar across the Commonwealth and help inform and drive the development of technical support and resources.

The Virginia Solar Initiative at the Weldon Cooper Center for Public Service at UVA and The Virginia Department of Mines, Minerals and Energy are committed to supporting Virginia localities as they develop policies, regulations and processes as they relate to solar and storage development. If you want to learn more about our work and how we can help, or you wish to request a SolSmart consultation, please contact us.

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*Resources.* Links to information and resources mentioned in this survey questionnaire can be found below.

[SolTax tool](#) for evaluating possible revenues under M&T or Revenue Share tax models

[SolSmart](#) Program for no-cost technical assistance and designation program for localities to help make it easier, faster and more affordable to go solar.