Going Solar: The Roles Of The Local And State Governments Post-

Board Of County Commissioners Of Washington County V. Perennial Solar, LLC

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Maryland's Renewable Energy and Climate Change Goals

- Renewable Energy Goal: Clean Energy Jobs Act of 2019 requires 50% renewable energy by 2030 with 14.5% solar "carve out"
- Clean Electricity Goal: Clean and Renewable Energy Standard (CARES) calls for 100% clean electricity by 2040
- Current Climate Change Goal: 25% greenhouse gas emission reductions from 2006 levels by 2025
- New Climate Change Goal: 40% greenhouse gas emission reductions from 2006 levels by 2030 with "aspirational goal" of 80% by 2050



"Back of the Envelope" Estimate for Land-Based Solar

Energy needed by 2030	54.5 million MWH	 Acres/MWH = 8 Total Ag Acres in MD = ~2,000,000 		
Solar Carve Out	14.5%			000,000
Solar energy required	7,902,500 MWH	Ground mounted		
Existing Solar energy (2019)	1,146,840 MWH	percentage (assumed)	100%	60%
Energy needed from ground mounted solar	6,755,660 MWH	Capacity required from new ground mounted solar	4,721 MW	2,833 MW
Energy to power (MWH-ac/MW- dc) conversion	1,431 MWH = 1 MW	Acres of panels required for new land based solar	37,767	22,660
ratio for new solar (assumed)		Percent of total ag lands	1.9%	1.1%

Recent Utility Scale Solar Projects

2019

Richfield Solar	Dorchester Co.	50 MW	3.19.19
Cherrywood	Caroline Co.	202 MW	4.16.19
Bluegrass	Queen Anne's	80 MW	
Kieffer Funk	Washington	11.8 MW	

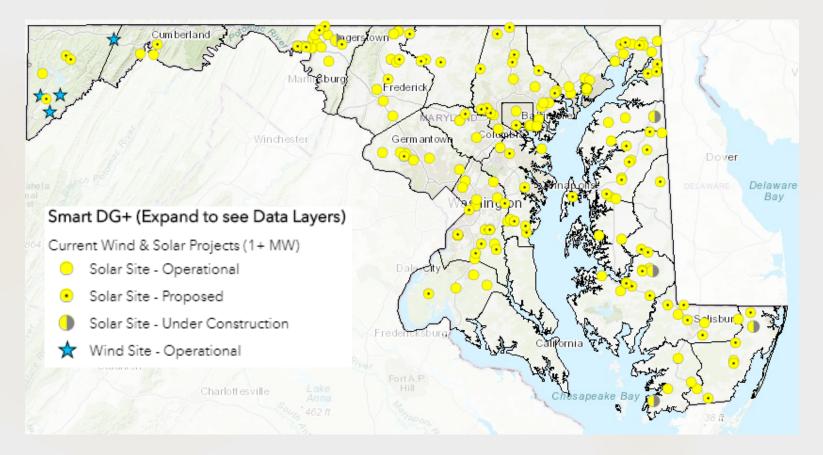
2018	- 8	granted
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 Brick Kiln Rd 	Wicomico Co.	5.4 MW	2.6.18
*LeGore Bridge Solar	Frederick Co.	20 MW	3.23.18
 Chesapeake Solar 	Cecil Co.	9 MW	4.6.18
Jones Farm	Queen Anne's	56.7 MW	4.17.18
Egypt Rd	Cambridge	45.9 MW	4.27.18
MD Solar 2	Charles Co.	27.5 MW	9.21.18
MD Solar 1	Charles Co.	32.5 MW	9.21.18
Massey Solar	Kent Co.	5 MW	12.31.18

Full list of past projects can be found on AELC page, supplemental materials.

Solar Projects in Maryland

- Map shows all solar projects operational, proposed, pending
- 32 approved utility-scale projects since 2011, 1 denied

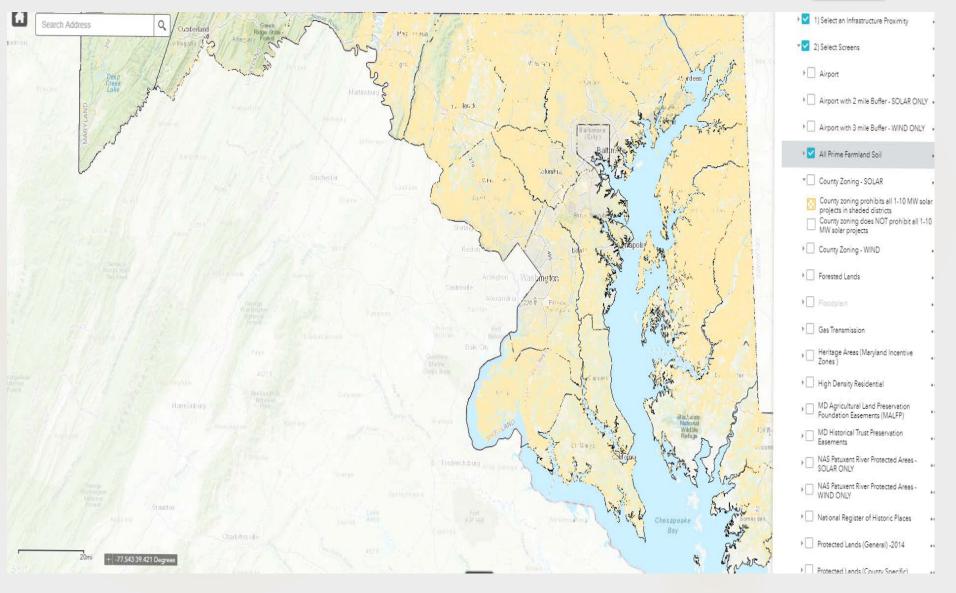


PPRP's Online Tool – Smart DG

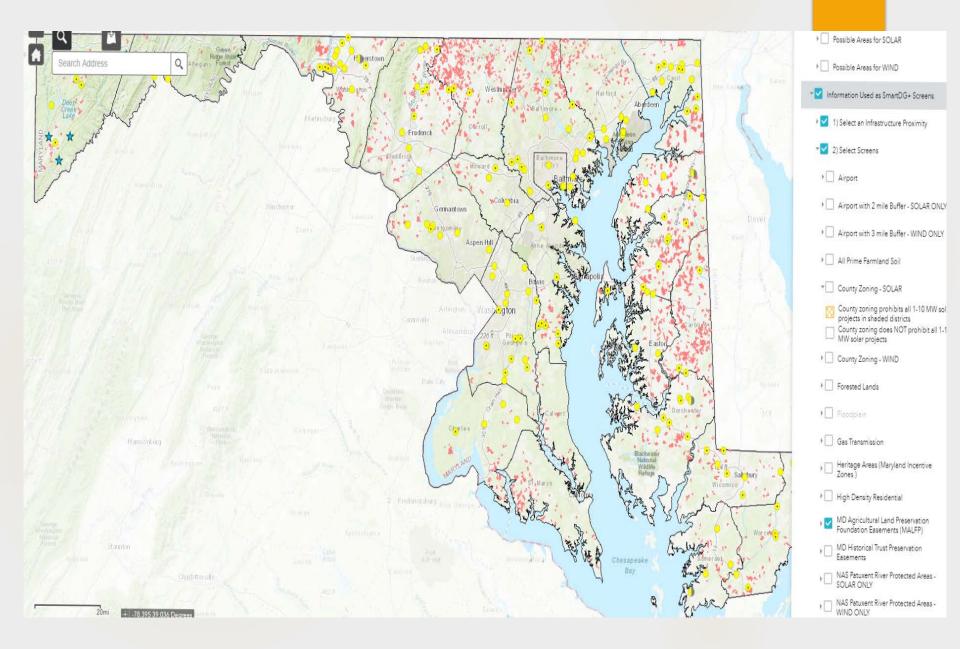
Link: https://dnr.maryland.gov/pprp/Pages/smartdg.aspx

Infrastructure Proximity	 Electricity lines 	<i>The Lynchpin</i> A statewide map of 1-to-4 mile wide
Renewable Resource Availability	 Viable wind speeds (wind only) Land Suitability: 	<i>corridors surrounding electrical distribution and transmission lines that appear strong enough to absorb projects greater than2 MW.</i>
Protected areas	 Flood zones Land cover/land use Airports DOD no-go zones 	Viewers can choose additional screens such as: ✓ County-level zoning (learn more) ✓ County-level protected areas
County zoning		 NAS Patuxent River Protected Areas MALPF easements Forested lands

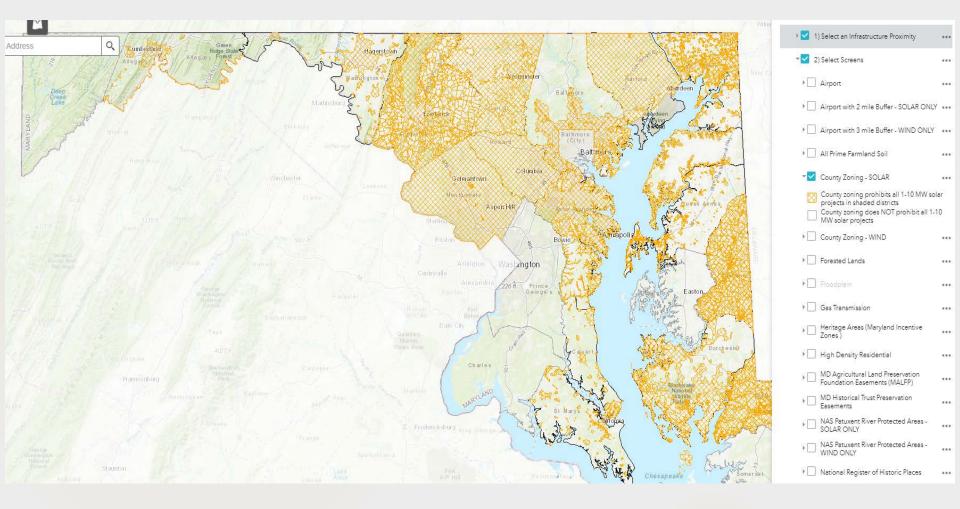
SmartDG+ -- PPRP Online Tool – Prime Farmland



SmartDG+ -- PPRP Online Tool – MALPF

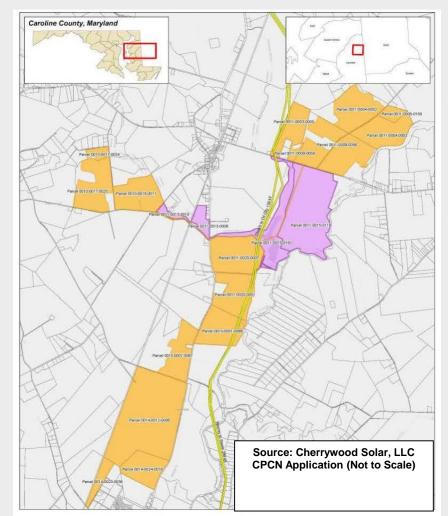


SmartDG+ -- PPRP Online Tool – Zoning Prohibitions



Cherrywood Solar - 9477

- 202 MW Solar PV proposed by Open Road Renewables on 1,085 acres of agricultural land
- 499,806 panels of single-axis tracking design
- Largest solar project proposed in Maryland to date
- Entire Project area zoned Rural (R1) and current land use is agricultural
- Project area includes portions designated as Prime Farmland
- Filed 23 January 2018
- Final Order 16 April 2019



Union Bridge Solar - 9483

- 8.2 MW Solar PV proposed by Citizens Union Bridge on 48 acres of industrial land in Carroll County
- Approximately 24,375 panels of fixed-tilt design
- Pollinator Habitat



CPCN Process

- Application (More than 2 MW)
- Testimony and Discovery
 - Including PPRP review and NR 3-306 recommendation from reviewing State agencies.
- PPRP coordination with state agencies and local jurisdictions as part of its independent review
- Public Hearing where proposed project located
- Evidentiary Hearing
- Proposed Order (PULJ)
- Final Order (PSC)
- Appeal of Final Order
- Compliance with the CPCN and conditions

PUA §207 (e) and PSC's "Due Consideration"

- Recommendation of the governing body where project is located (PUA 207(e)(1))
- Impact on stability and reliability of the electric system, economics, esthetics, historic sites, aviation, environment (air, water, solid waste) (PUA 207(e)(2))
- Consistency with the comprehensive plan and zoning and efforts to address concerns of the county or municipality (PUA 207(e)(3))

MACo Position on Solar Energy Siting

- Maryland Association of Counties (MACo) supports solar energy development with local zoning and siting requirements as part of the project approval process
- MACo recognizes that there needs to be a mix of rooftop, community, commercial, and utility-scale solar projects to meet Maryland's renewable energy goals
- Solar projects should be prioritized in following manner:
 - 1) Rooftop and Commercial solar
 - Community & Utility-scale projects on brownfields, grayfields (parking lots and rooftops), industrial areas, and appropriate government-owned lands (such as landfills and wastewater treatment plants)
 - 3) Community & Utility-scale projects on open space zoned for solar by local governments with appropriate protections for prime farmland, forestlands, critical areas and wetlands, environmentally sensitive areas, and areas of cultural or historical importance

The Perennial Decision

- In Board of County Commissioners of Washington County, Maryland v. Perennial Solar, LLC (July 15, 2019), the Maryland Court of Appeals held that the PSC had implied preemption over local zoning and land use requirements regarding the siting of solar or other energy generation facilities
- Case outcome is unfortunate from MACo's perspective but holding is narrow and does not eliminate important role of local zoning in the CPCN process
- Case does not change the CPCN or PSC decision-making process (PSC traditionally given great deference to local concerns)
- Case does not change the scope of the CPCN or PSC (limited to utility-scale solar and other energy generation facilities requiring a CPCN)
- Due consideration "requirements of §207(e) of Public Utilities Article still apply

Role of Local Zoning

- Section 207(e) of Public Utilities Article requires PSC to give "due consideration" to:
 - Position of a local government on a proposed energy generation project within their jurisdiction
 - Consistency of a proposed energy generation project with the local government's comprehensive plan and zoning
 - Any actions taken to address concerns raised by the local government over the proposed energy generation project
- Consistency and mitigating actions requirements added to law by HB 1350 of 2017 (a MACo legislative initiative)



Role of Local Zoning

- Local governments can and should enact zoning for utility-scale solar projects
- Different counties taken different approaches to zoning (overlay zones, special exception requirements, total or individual project caps)
- Zoning can limit or prohibit utility-scale solar development on lands with other important uses, including prime farmland, forestlands, or historical sites or viewsheds (have a rationale)
- Zoning should provide for "viable" sites for utility-scale solar development (proximity to high voltage transmission lines, good solar production)
- "Good faith" zoning efforts will carry great weight with PSC
- Outright or de facto bans on utility-scale solar could invite preemption
- Energy developers should reach out to affected local governments as early as possible – ignore local zoning at your peril

County Role in CPCN Process

Consistent with PUA Section 7-207 (e)

- Joint public hearing with the PSC and local jurisdiction
- PSC consideration of:
- Local jurisdiction's recommendation
- Consistency with Comprehensive Plan and zoning
- Efforts to resolve any issues presented by the county/municipal

As a party in the PSC docket (Intervention in the Case)

(e.g., Mills Branch Solar (Kent), Morgnec Road Solar (Kent), LeGore Bridge (Frederick), Biggs Ford (Frederick), Dan's Mountain Wind (Washington), Union Bridge Solar (Town of), Casper Solar (Queen Anne's), Dan's Mtn Wind,

Comments to PSC (Administrative Meetings)

Compliance with CPCN conditions (e.g., Great Bay Solar (Caroline))

Perennial Solar - 9408

See https://dnr.maryland.gov/pprp

- 8 MW Solar PV proposed by Community Energy on 70 acres of agricultural land in Washington County
- > 34,000 PV modules of fixed-tilt design
- Prime Farmland and Farmland of Statewide Importance
- COA decision Upheld previous case law as to PSC preemption authority and clarified its application to utility scale solar.
 - A specific county decision opposing a project was not at issue in this case. The County had granted the special exception for the Perennial project.
- Summarized PUA Section 7-207(e) and recently passed PUA Section 7-207(e)(3)
- Referenced Maryland's renewable portfolio standards and solar carve-out.



Examples of CPCN Cases

Siting Issues

- Mills Branch Solar PSC Case No. 9411
 - CPCN Denied
- Casper Solar PSC Case No. 9450
 - Withdrawn
- Mattawoman Solar PSC Case No. 9469
 - Procedural Schedule Suspended

Role of Counties

- Urbana Loop (transmission)
 - PSC Case No. 9018
- Blue Star Solar and Ibis Solar
 - PSC Case Nos. 9387 and 9392
- Mill's Branch Solar
 - PSC Case No. 9400
- Dan's Mountain Wind
 - PSC Case No. 9413
- Legore Bridge Solar
 - PSC Case No. 9429
 - Currently on appeal by Frederick County
- Biggs Ford Solar (remanded)
 - PSC Case No. 9439
 - Currently Before PULJ Division

Casper Solar – 9450

See https://dnr.maryland.gov/pprp

- 36.7 MW Solar PV proposed by Coronal Energy on 360 acres of agricultural land in Queen Anne's County
- 150,000 panels of single-axis tracking design
- Filed April 2017. Procedural schedule is currently suspended
- Voluntary compliance with FCA administered through County ordinance
- Site is within a Priority Preservation Area
- The Procedural Schedule has been suspended since October 2018
- Withdrew application



Bluegrass Solar - 9496

See https://dnr.maryland.gov/pprp

- 80 MW Solar PV proposed by OneEnergy Renewables on 500 acres of agricultural land in Queen Anne's County
- 271,830 panels and horizontal tracking racking system
- Filed November 2018
- Portions considered Prime Farmland
- 70 acres of forest to be placed in conservation easement
- Additional plantings for vegetative buffer and to meet afforestation requirements planned



Difficult Balancing Act

Environmental and Development Constraints

- Environmental features (forest, streams, wetlands, Critical Area)
- Development constraints (capacity, interconnection location, contiguity, interconnection and improvement costs)

State and Local Requirements and Preferences

- Zoning
- Private land use restrictions (conservation easements, community restrictions)
- Aesthetics & Mitigation
- Forest Conservation
- Taxation

Landowner Considerations

- Typically, multiple property owners
- Secure appropriate site on economically viable terms (sale or lease)
- Lengthy approval processes

Location, Location, Location

Careful site selection is imperative for project success

- Process schedule and complexity Reduced by avoidance of additional permitting (forest clearing, wetland impacts, zoning revisions)
- Project costs Reduced by optimizing interconnection, minimizing need for mitigation (environmental and aesthetic)
- Public support/opposition "Out of sight, out of mind" Relatively little public interest or opposition if not visible.

Local Government Coordination and Preemption

- Perennial Solar confirmed the application of State preemption to CPCNs for utility-scale solar.
- Narrow practical impact under the "due consideration" standard
- The potential for preemption should cause local governments to meaningfully engage, even on projects that do not enjoy local support
- CPCN Approval Condition Prior to commencement of Project construction, certify to PSC and PPRP that facility was designed in "substantial conformity" to local zoning requirements and "has received site plan approval and all required local permits"
- Engagement with local government and direct, efficient communication is beneficial
- Meet early and often

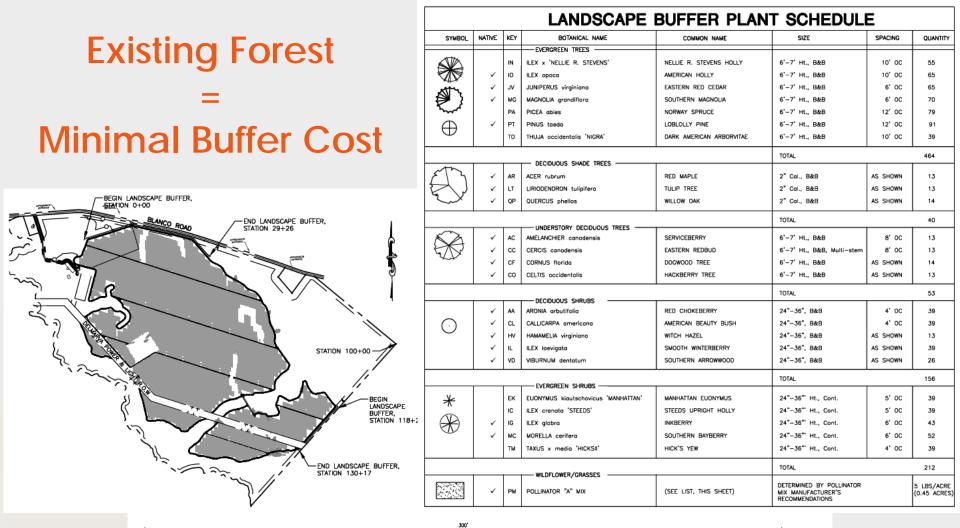
Local Government Review

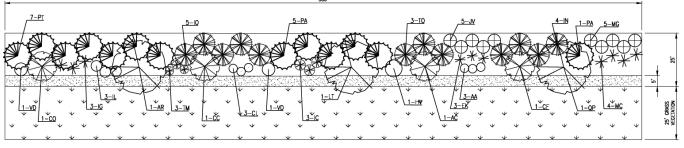
Zoning Approvals:

- Wide range of zoning approaches: Regulated as a "utility" use, Solar overlay district (2 miles of transmission), acreage caps
 - Permitted by Right
 - Special Exception/Conditional Use
- Variances

Site Design:

- Site plan approval by the local Planning Commission
- Aesthetic and screening considerations often also considered in depth by the Board of Appeals

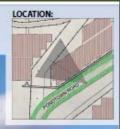




TYPICAL LANDSCAPE BUFFER PLANTING PLAN (300' x 50')

NOT TO SCALE

PHOTO SIMULATION : VIEW NORTH FROM PONDTOWN RD. EXISTING CONDITIONS





BLUEGRASS SOLAR, LLC.

BLUEC

Westwood

THE APPART



PHOTO SIMULATION : VIEW NORTH FROM PONDTOWN RD. 2 YEARS AFTER PLANTING



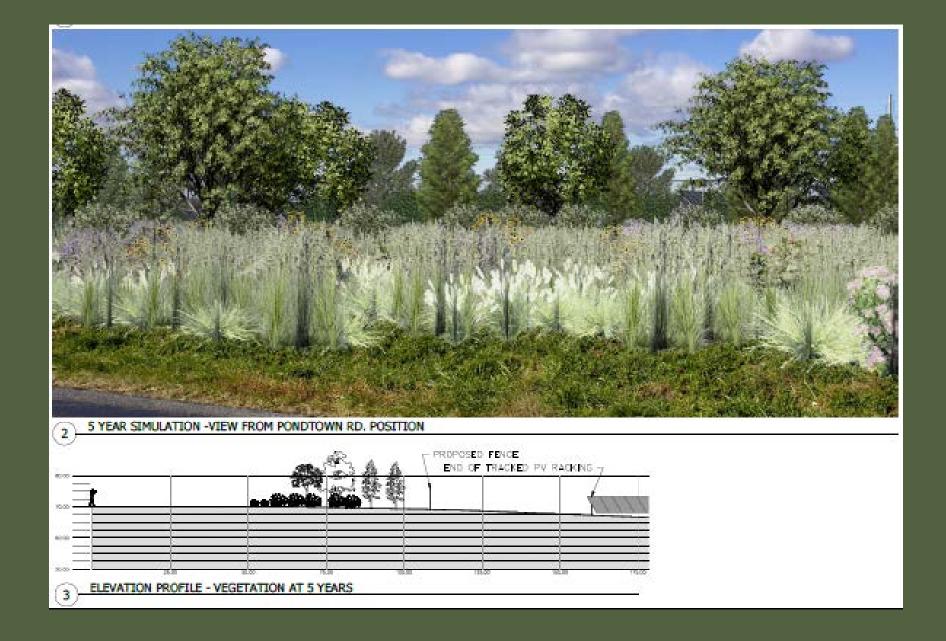


LOCATION:

PREPARED FOR: BLUEGRASS SOLAR, LLC.

Westwood

AND ADDRESS



Personal Property Taxes and PILOTs

Local government taxation of electric generating equipment

50% exemption

30 year depreciation with 25% floor

Payment in Lieu of Taxes Agreement – real and personal property

Real Estate Considerations

Option or Purchase Contracts

- Due diligence, approval contingencies and timeframes
- Deposit or option fee
- Record notice (memorandum)

<u>Leases</u>

- Due diligence & development periods
- Exclusive rights/easements (sunlight, utilities, operations)
- Lease term/renewals (recordation tax < 7 years)
- Economic terms (pre-development, rent, property taxes)
- Construction liens
- Decommissioning
- Indemnification
- o SNDAs

Who's Talking Solar Siting?

- Governor's Task Force on Renewable Energy Development and Siting
 - Established by Executive Order 01.01.2019.09
 - The Task Force will study and make consensus-based recommendations on the siting of clean and renewable energy projects, including:
 - how to accelerate and streamline the siting of projects in desired areas, such as developed lands, brownfields, and parking lots, while
 - minimizing the impact of projects sited in less-desired areas, such as agriculturally, ecologically, or culturally important lands
 - The recommendations must recognize and respect local government legal authority and private property rights.



Who's Talking Solar Siting?

- Maryland House of Delegates Environment and Transportation Workgroup on Solar Development
 - Created by the House Environment and Transportation Committee, this Workgroup is focused specifically on the land use and siting issues surrounding solar development, with a focus on utility-scale solar facilities
- Senate Finance Committee Energy Briefing (September 16, 2019)
 - Considered the issues of solar siting and net metering

Statewide Joint Land Use Survey (JLUS) Implementation Committee Alternative Energy Siting Project

- The Committee is tasked with studying and implementing the Maryland Statewide Joint Land Use Study Response Implementation Strategy, which contains recommendations to make state and local land use priorities align with the needs of military facilities located in the state
- The Committee is developing an Alternative Energy Siting Project to ensure that alternative energy projects are located in a manner that do disrupt base missions or current or future operating areas

The 2020 Session & Beyond

The 2020 Session

- Expect legislation similar to SB 744 of 2019 (establishing a Commission on the Development of a Blueprint for Solar Energy in Maryland)
- Preliminary policy, regulatory, and statutory recommendations from the Renewable Energy Task Force
- Potential legislation on state and local revenue authority regarding solar energy projects
- Beyond 2020 Session
 - Final recommendations of Renewable Energy Task Force in 2020
 - Increasing pressures to meet State's energy goals
 - Grid infrastructure and storage challenges

List of All Utility Scale Solar Projects in Maryland

Project Name	County	MW Production	Date Approved
MD Solar Farm	Washington Co.	20 MW	10.11.11
Church Hill Solar	Queen Anne's Co.	6 MW	6.24.13
2014: 2 granted			
Cambridge Solar	Dorchester Co.	3.3 MW	9.5.14
Rockfish Solar	Charles Co.	10 MW	9.16.14
2015: 5 granted			
Constellation Solar	Harford Co.	20 MW	4.16.15
LS-Egret Solar	Wicomico Co.	15 MW	5.28.15
O.E. Dorchester	Dorchester Co.	15.5 MW	6.9.15
Wye Mills Solar	Queen Anne's Co.	10 MW	6.15.15
*Great Bay Solar	Somerset Co.	150 MW	12.15.15
2016: 9 granted			
Sunfish Solar	Queen Anne's	6.0 MW	1.22.16
Heron Solar	Worcester Co	20 MW	4.25.16
Seabeach Solar	Worcester Co	15 MW	5.2.16
Baker Point Solar	Frederick Co.	9 MW	7.6.16
Dan's Mtn. Solar	Washington Co.	18.36 MW	7.11.16
Todd Solar	Dorchester Co.	20 MW	7.28.16
*Blue Star Solar	Kent Co.	6 MW	10.21.16
*Ibis Solar	Somerset Co.	6 MW	10.21.16
Gateway Solar	Worcester Co.	12 MW	12.15.16
2017: 4 granted, 1 denied			
Pinesburg	Washington Co.	8 MW	3.3.17
Mason-Dixon	Washington Co.	18.4 MW	3.3.17
*Mills Branch	Kent Co.	60 MW	9.10.17
Big Spring Solar	Washington Co.	3.5 MW	10.31.17
Phoenix Solar	Prince George's Co.	2.5 MW	11.9.17
2018: 8 granted			
Brick Kiln Rd	Wicomico Co.	5.4 MW	2.6.18
*LeGore Bridge Solar	Frederick Co.	20 MW	3.23.18
Chesapeake Solar	Cecil Co.	9 MW	4.6.18
Jones Farm	Queen Anne's	56.7 MW	4.17.18
Egypt Rd	Cambridge	45.9 MW	4.27.18
MD Solar 2	Charles Co.	27.5 MW	9.21.18
MD Solar 1	Charles Co.	32.5 MW	9.21.18
Massey Solar	Kent Co.	5 MW	12.31.18
2019			
Richfield Solar	Dorchester Co.	50 MW	3.19.19
Cherrywood	Caroline Co.	202 MW	4.16.19
Bluegrass	Queen Anne's	80 MW	
Kieffer Funk	Washington	11.8 MW	