Agricultural Land Preservation Program Howard County, Maryland

COMMERCIAL SOLAR FACILITIES

The purpose of this policy is to explain the process by which the Agricultural Land Preservation Board (ALPB) will review applications for a commercial solar facility (CSF) on land that is encumbered with a Howard County Agricultural Land Preservation Program (ALPP) easement ("the Property"). A CSF is a collection of photovoltaic solar panels that generate electrical power by harnessing radiant light from the sun. This policy was developed pursuant to Council Bill 59-2016 (CB 59-16), which allows a CSF of up to 75 acres in size on ALPP properties.

The intent of CB 59-16 is to: 1) support Policy 4.12 of *PlanHoward 2030*, which calls for the County to develop an energy plan that prepares for different future energy scenarios, examines options for various kinds of future energy sustainability, promotes conservation and renewable resources, and sets targets to reduce greenhouse gases, and 2) to help ensure that Howard County's farms remain economically viable into the future through diversification, to the benefit of both farmers and county residents.

CB 59-16 requires the ALPB to provide advisory review of Conditional Use Petitions for CSFs prior to submission to the County. The ALPB is required to provide a recommendation as to whether a proposal meets the following criteria, as set forth in Section 131 of the Howard County Zoning Regulations:

1. "The siting of the CSF on the parcel or parcels is an ancillary business which supports the economic viability of the farm, or
2. The siting of the CSF on the parcel or parcels supports the primary agricultural purpose of the easement property."

In order to fairly and consistently review CSF proposals, the ALPB developed standards of review to determine if each proposal meets one or both of the aforementioned criteria. The following policy outlines the ALPB review process and lists the standards developed by the ALPB to be applied during review of a CSF Conditional Use Petition.

POLICY: Upon submission of a CSF proposal, the ALPP Administrator will prepare a technical analysis and ensure that all necessary information is available for the ALPB to review each criteria. The ALPP Administrator will present the proposal to the ALPB for consideration.

The ALPB will apply the following standards of review to the CSF Conditional Use Petition criteria:

1. In determining if the CSF is ancillary to the primary farming operation, the commercial solar operational area must be equal to or less than 34% of the Property's size. The commercial solar operational area is defined as the entire area of the CSF (including any equipment, spacing, structures or other uses that support the CSF) and any new roads that must be constructed in order to access the CSF. Existing roads being used to access the new facility are not included within the 34% operational area (i.e. existing dirt, gravel, or paved farm lanes).
2. In determining if the siting of the CSF supports the primary agricultural purpose of the Property, the portion not included in the commercial solar operational area must have a soils capability of more than 50% USDA Classes I-III and more than 66% USDA Classes I-IV.

Other standards the ALPB may consider include:

1. If possible, the prescribed landscape buffer should be placed within the 50 foot conditional use setback. Landscaping should only be required alongside public road frontage, and not along sidelines or the Property's interior. When present, existing vegetation should be used as a landscaped buffer (i.e. hedgerows, fencerows, trees, shrubs, etc.).
2. Placement of the commercial solar operational area will minimize impact on existing environmental features (for example: Green Infrastructure Network, streams, wetlands, etc.)
3. In general, the commercial solar operational area should maintain the integrity and spirit of the Agricultural Land Preservation Program.

SUBMISSION REQUIREMENTS:

Petitioners must submit the following to the ALPP Administrator for review by the Agricultural Land Preservation Board:

1. A copy of the Agricultural Land Preservation Program Easement
2. A copy of the current Soil Conservation and Water Quality Plan[1]
3. A copy of the proposed Conditional Use Plan
4. A Soil Classification Analysis Map & Table (see below)

The Soil Classification Analysis Map must include the following:

1. An aerial map featuring the layout of the commercial solar operational area scaled appropriately to include the Property boundaries.
    a. Label the size (in acres) of the commercial solar operational area, and the remaining balance of the Property.
    b. Label any applicable access roads as to whether they are new or existing.
    c. Include and label any environmental features.
2. The soil classes within the portion of the Property not included in the commercial solar operational area. Soils must be organized by Capability Classes I to IV, as outlined in the *Soil Survey of Howard County*.

The Soil Classification Analysis Table should include the following:

1. Calculate and show the total percentage of the portion of the Property not included in the commercial solar operational area containing USDA Soil Capability Classes I, II, & III, AND Classes I, II, III, & IV.
    a. Include the acreage and percentage makeup of each class present within the portion of the Property not included in the commercial solar operational area.
    b. Include the total sum for Classes I, II, & III, AND Classes I, II, III, & IV.

Please refer to the Commercial Solar Facility Application Submittal Procedure and Checklist for additional information on how to submit a CSF request to the Board.

This Policy is applied exclusively to County agricultural preservation easement properties (ALPP Purchased and ALPP Dedicated), as set forth in Section 106.1 of the Howard County Zoning Regulations.

For More Information

Joy Levy, Agricultural Land Preservation Program Administrator
jlevy@howardcountymd.gov or 410-313-5407

[1] County Code §15.512 requires a current Soil Conservation and Water Quality Plan, prepared by the Howard Soil Conservation District, for any ALPP property.

HOWARD COUNTY OFFICE OF COMMUNITY SUSTAINABILITY
3430 Court House Drive ■ Ellicott City, Maryland 21043 ■ 410-313-0700
www.howardcountymd.gov FAX 410-313-3390 TDD 410-313-2323

Howard County Solar Task Force – Cover Letter

July 24, 2020

On October 7, 2019 the County Council of Howard County, Maryland passed Resolution No. 133-2019 to create a Task Force to study commercial solar facilities on agricultural land preservation parcels. Members of this Task Force include two representatives from the Howard County Agricultural Land Preservation Board, one representative from the Maryland Clean Energy Advisory Council, one representative from the Maryland-DC-Delaware-Virginia Solar Energy Task Force, two representatives from the Howard County Farm Bureau, one representative from the Howard County Soil Conservation District, one representative from Maryland Solar United Neighbors, two representatives from the Environmental Sustainability Board, two representatives from the Howard County Office of Community Sustainability and two representatives from the Howard County Department of Planning and Zoning.

The Task Force met for a total of 14 meetings starting on January 23, 2020 and ending on July 14, 2020. A Public Hearing was held on May 28, 2020 that included testimonies from 16 individuals/organizations along with 12 written testimonies.

In regard to the recommendations being submitted past the July 1, 2020 deadline, the co-chairs of the Task Force determined that in the interest of having a complete and thorough recommendation document to submit, as well as detailed supplemental documentation, an additional meeting was needed. The first available date for the additional meeting that accommodated the majority of the members was July 14, 2020.

The following documents constitute the final submission package:

1. Names of Task Force Members
2. Solar Task Force Recommendations: Responses to the questions originally posed to the Task Force by the Council
3. Solar Task Force Definition Recommendations: The Task Force's recommended updates to the current solar definitions in Howard County's Zoning Regulations
4. Solar Task Force Resource Guide: Additional resources which were discussed by the Task Force but not directly included in the above documentation

Meeting agendas, meeting minutes, and written public testimonies can be found on the Environmental Sustainability Board webpage: http://www.howardcountymd.gov/Departments/County-Administration/Community-Sustainability/Environmental-Sustainability.

For questions about the documents, please contact the Task Force Chair, James Zoller, at Jzoller@howardcountymd.gov or Task Force Co-Chair, Dani Phillips, at Dphillips@howardcountymd.gov.

Names of Task Force Members

Agricultural Land Preservation Board
Jamie Brown
Cathy Hudson
Maryland Clean Energy Advisory Council
Kevin Lucas
MD-DC-DE-VA Solar Energy Industries Association
Franny Yuhas
Howard County Farm Bureau
Daniel Jacobs
Keith Ohlinger
Howie Feaga (Alternate)
Howard County Soil Conservation District
John Dove
Maryland Sun (Solar United Neighbors)
Corey Ramsden
Environmental Sustainability Board
Kelly Hensing
Amber Butler
Howard County Office of Community Sustainability
James Zoller (Chair)
Leah Miller (Vice Chair from 1/23-4/21/20)
Dani Phillips (Vice Chair from 4/21-7/14/20)
Howard County Department of Planning and Zoning
Amy Gowan
Mary Kendall
Joy Levy

HOWARD COUNTY OFFICE OF COMMUNITY SUSTAINABILITY
3430 Court House Drive ■ Ellicott City, Maryland 21043 ■ 410-313-0700
www.howardcountymd.gov FAX 410-313-3390 TDD 410-313-2323

Howard County Solar Task Force Recommendations

1) Regulations governing the size, location, and siting of commercial solar facilities.

See associated definition recommendations for further information pertaining to definitions, size limitations, locations, and siting of commercial solar facilities. Siting considerations for commercial solar facilities may also be dependent upon additional policy decisions, which were not part of the Task Force's purview. It is not the Task Force's intent to exclude brownfield, mine lands, and landfill sites from commercial solar development. The Task Force supports incentivizing development on such locations in the County.

2) Application procedures and approval processes for commercial solar facilities.

The Task Force recommends the following modifications to the application procedures for commercial solar projects in order to streamline the process, remove unnecessary steps, and improve the overall process:

a) Eliminate the requirement for a glare study except when required by state or federal mandate.
   - According to the Howard County Department of Planning and Zoning, none of the proposed solar projects have been turned down due to glare issues. Solar panels are inherently designed to absorb sunlight and not reflect sunlight, therefore eliminating the need for a glare study. This would need to be addressed in Howard County's Zoning regulations, Conditional Use Criteria – Sec. 131.0.N.52.

b) Add an Agricultural Land Preservation Board (ALPB or 'Board') preliminary conditional use review for Commercial Solar Facilities.
   - Currently, an application for conditional use for commercial solar is submitted to the Agricultural Land Preservation Program to be reviewed by the ALPB. The conditional use application requires a letter from property owner, deed of easement, Soil Conservation and Water Quality Plan, Soil Classification Analysis Map, Soil Classification Analysis table and Proposed Condition Use Plan.
   - The recommendation would be to have a preliminary review **prior to the submission of the Conditional Use Application** (similar to a pre-submission hearing), which would require all of the items listed above less the Conditional Use Plan. The Conditional Use Plan requires extensive engineering for the placement of the commercial solar panels. By requiring this preliminary review, the Board will be able to make suggestions on placement of the solar facility before costly engineering is done by the applicant. This will create a beneficial dialog between the Board, landowner, and solar developer to ensure the best placement for the solar project.

3) The role of the Agricultural Land Preservation Board in the commercial solar facility policy and approval process.

The Task Force recognizes the importance of agricultural land, and its preservation, as well as solar energy as a clean energy source for Howard County. The Task Force believes agricultural land and commercial solar can coexist in a mutually beneficial relationship. It is recommended that the ALPB should continue to provide input to the discretionary permit (CUP) approval process of commercial solar on Agricultural Preservation Land and should have the ability to create their own policy for Commercial Solar on those properties. The ALPB is comprised of farmers, agricultural experts, and leaders in the community that have intimate knowledge of farming in Howard County and can assist in creating a balance between agricultural land and solar energy.

The Task Force recommends the following to assist the Board in reviewing and updating, as necessary, the current Commercial Solar Facility Policy for Howard County Agricultural Preservation Properties:

- The policy must be realistic (not so restrictive that it eliminates most potential projects) and allow for the Commercial Solar Facility to be beneficial to both the farmer/property owner and solar company.
    - Community Solar projects are more likely to be economically feasible when their generating capacity is close to the 2-Megawatt (MW) program maximum size as defined in COMAR.
    - Community solar installations are a good means of supplementing farm income in order to keep farms financially viable by using a portion of their land to obtain year-round and dependable income.
- The policy suggests placement of Solar Facilities to the less desirable farmland of the property as much as possible and takes into consideration the current and future farming practices planned for the property.
    - Where possible, at least two potential placements on the property should be proposed to the ALPB, to allow the board to select the best placement of solar facility to minimize a negative impact on the farming operation.
- The policy recognizes that each property is unique and has different characteristics that dictate the placement and size of a Solar Facility.
- The policy recognizes there are three types of ground-mounted commercial solar facilities with differing requirements.
    - Solar Collector, Accessory Use (is no larger than the maximum system size according to state net metering regulations). This includes Municipality and Non-Profit Commercial Solar using Aggregated Net Metering (as defined in COMAR);
    - Solar Collector, Commercial (is no more than the maximum system size according to state net metering regulations). This includes: Community Solar facilities (as defined in COMAR); and
    - Solar Collector, Utility-Scale (larger than the maximum system size according to state net metering regulations).
- The policy supports the intent of the Agricultural Preservation Easement.
- The Task Force recommends that the ALPB take into account both quantitative and qualitative aspects of the potential solar project. Not only should the data-driven

analyses be reviewed (i.e. soil analysis, business plan, percentage of property), but the Board should have the flexibility to utilize their expertise when making recommendations. This aligns with the Preliminary Review recommendation from Question 2.

4) Conditional use parameters.

The Task Force recommends keeping in place most of the current conditional use parameters for commercial **ground-mount** solar collectors, keeping in mind that the Task Force recommends allowing **rooftop** solar collectors in all zones as an accessory use *without conditional use parameters*.

Recommended changes to the Conditional Use Parameters:

- Remove the requirement of a glare study [Howard County Zoning Code Section 131.0, 52 (i)]
- As noted in the response to Question 2, add a preliminary meeting (similar to a pre-submission hearing) with the ALPB to discuss locations and the feasibility of the solar installation project **prior to establishing a conditional use plan** [Howard County Zoning Code Section 131.0, 52 (m)(1)]. This recommendation is also discussed in further detail in the Task Force's response to Question 3.
- Add a requirement for one of the agricultural practices/pollinator habitats to be included in the solar project on ag pres land as listed in the response to Question 6. For projects on non-ag pres land, these practices should be encouraged.

5) Circumstances or exceptions when solar facilities may be installed on agricultural preservation easements without a conditional use application.

Solar collectors to produce energy *solely* for the use of a farm in Howard County may be placed on existing roofs of farm buildings and ground-mounted installations **without** a conditional use application, referred to in the definitions matrix as "Solar Collector, Rooftop", "Solar Collector, Accessory Use Ground-Mount", and "Solar Collector, Accessory Use Ground-Mount (aggregated)".

6) Methods and strategies for integrating commercial solar facilities and agricultural practices and pollinator habitat.

On Agricultural Preservation Land, one of the following should be required by applicant to meet the intentions of the ALPB policy:

- Pollinator or native grass habitats;
- Livestock grazing, such as sheep;
- Agrivoltaics (i.e. crop production under or directly adjacent to an installation, edible landscape barriers, tree crops);
- Or other suitable alternative, as proposed by the applicant.

7) Potential incentives for ground mount, carport, parking canopies, and rooftop commercial installations across the County.

Property tax incentives/credits (real property tax) are one of the options that can be implemented by the County, although in the current climate of COVID-19 and budget limitations, these types of

incentives may not be feasible in the near-term. Personal property tax exemptions or incentives may be more feasible and should be evaluated, specifically incentivizing rooftop installations. Other incentives that the Task Force has considered and recommends are a) streamlining the application and permitting processes and b) allowing commercial solar installations in more zones within the County, especially for rooftop installations.

The Task Force recommends County government evaluate the feasibility of County property/land for solar projects. The Task Force recommends the same of Howard County Public Schools, Howard County Libraries, and community colleges within the County.

Further research is recommended into the concept of establishing a Solar Preservation program (funded by a portion of Transfer Taxes).

8) Recommendations for updates to zoning regulations to encourage more high-quality solar projects across the County.

See associated definition recommendations for further information pertaining to definitions and updates to zoning regulations to encourage more high-quality solar projects across the County.

Highlights:

a. Recommend updating the definitions to have more clarity:
    i. between different scales for ground-mount (personal use for property vs. commercial & community-scale vs. utility scale)
    ii. between ground-mount vs rooftop solar
b. Allow rooftop solar to be installed if more than 50% of the power is used offsite
c. Expand the zoning district regulations to allow for commercial and accessory use rooftop solar/parking canopies in all zoning districts
d. Expand the zoning district regulations to allow for ground-mount solar in more zoning districts such as Business Rural (BR), Corridor Activity Center (CEC), Manufacturing (M) or Institution (I). Explore allowing ground-mount solar in all zoning districts (including residential) in the East with consideration for what is the best land use policy in those districts.

Additional Recommendations

Note: These recommendations are not included in prior responses and were not specifically posed as Questions to the Task Force but were considered and discussed by the Task Force.

- The Howard County Landscape Manual should be reviewed and updated, to allow other alternatives in addition to those presented in the response to Question 6.

Solar Task Force Definition Recommendations

Type of System	Definition	Principal Use By Right	Accessory Use	Conditional Use	Zoning Districts	Allowable on Ag Pres Land
Solar Collector, Rooftop	A solar collector or commercial solar collector and all supporting electrical and structural components that is attached to the rooftop of an existing structure or integrated into the building envelope, where the solar panels themselves act as a building material or structural element. Examples include rooftop net-metering, rooftop aggregated net-metering, and commercial rooftop including community solar.		X		All	Yes
Solar Collector, Accessory Use Ground-Mount	A solar collector and all supporting electrical and structural components that is mounted onto the ground or is a canopy and is used for the purpose of generating electrical power to be consumed primarily by the principal use. Examples include ground-mounted net-metering.		X		All	Yes
Solar Collector, Accessory Use Ground-Mount (aggregated)	A solar collector and all supporting electrical and structural components that is mounted onto the ground or is a canopy and is used for the purpose of generating electrical power to be consumed primarily by the principal use. A ground mounted accessory solar collector may be located on a different lot than the principal use, including systems eligible for net meter aggregation by state net metering regulations. Examples include ground-mounted aggregated net-metering.		X		All	Yes
Solar Collector, Commercial Ground-Mount	A commercial solar collector and all supporting electrical and structural components that is mounted onto the ground or is a canopy and is no more than the maximum system size according to state net metering regulations. Examples include community solar (virtual net metering) and small-scale power purchase agreements (PPAs) located off-site from customer.			X	RC/RR plus consideration of others (policy decision)	Yes, with conditional use criteria
Solar Collector, Utility-Scale Ground-Mount	A commercial solar collector and all supporting electrical and structural components that is mounted onto the ground or is a canopy and is more than the maximum system size according to			X	RC/RR plus consideration of	No

	state net metering regulations. Examples include large-scale merchant facilities tied to the grid and large-scale PPAs located off-site from customer.	others (policy decision)
Commercial Solar Collector	A solar collector connected directly to the electrical distribution or transmission system separately from any other electrical service on the property on which it is hosted and whose generated electrical power is not primarily consumed by the principal use. **Note:** This is purely a definition to assist with clarifying the other definitions.	

For Reference:

Principal Use	The main use of a lot or the structure used for the main function of a lot, as opposed to an accessory use or structure. Structures which are attached to the principal structure, either directly or by a breezeway not to exceed 15 feet in length, shall be considered part of the principal structure.
Accessory Use	A use or structure which is customarily incidental to the principal use or structure, serving no other use or structure, and which is subordinate in area, intensity and purpose to the principal use or structure. An accessory use or accessory structure shall be located on the same lot or parcel as the principal use or structure, except where it is otherwise allowed in these Zoning Regulations.

HOWARD COUNTY OFFICE OF COMMUNITY SUSTAINABILITY
3430 Court House Drive ■ Ellicott City, Maryland 21043 ■ 410-313-0700
www.howardcountymd.gov FAX 410-313-3390 TDD 410-313-2323

Howard County Solar Task Force Additional Resources

The following sections are background information and references the Howard County Solar Task Force considered on key topic areas when making recommendations.

Agricultural Preservation Easements
https://www.howardcountymd.gov/Departments/Planning-and-Zoning/Conservation-and-Preservation/Agriculture

https://livegreenhoward.com/food-ag/ag-preservation-easements/

https://mda.maryland.gov/malpf/pages/default.aspx

Tax Implications
See associated document – Howard County Department of Planning and Zoning "Commercial Solar Facilities Policy-REVISED"

Ground-Mount Project Scales and Land Use Averages

- Ground-mount commercial solar facilities typically use ~5 to 10 acres per Megawatt (MW)
- Community solar projects (as defined in COMAR) have a maximum size of 2 MW
- The maximum size project for a facility that is directly offsetting energy loads of one ("net metering") or more ("aggregated net metering") electric meters owned by the same entity is 2 MW
- Only projects above 2 MW need Public Service Commission approval through the Certificate of Public Convenience and Necessity (CPCN) process

Interconnection Line Capacity Considerations for Project Siting
The density of commercial solar installations is inherently limited by the electricity grid and its capacity to handle electrical power introduced into the grid from distributed locations. Once a project is approved for a particular location on a distribution circuit, the number of other projects that can be added to that line is limited by the capacity of the line.

Here's an example of the impacts of this fact, provided by Stefano Ratti of Chaberton Energy to the Solar Task Force: "A typical 13 kV distribution line (which is the most common type) generally maxes out at 3 MW (equivalent to 12-18 acres). What it means is that, once you have injected ~3 MW on a distribution line (often referred to as "circuit"), no more solar energy (or any other type of energy for that matter) can be injected on that line. The line has a thermal limit that cannot be exceeded (too much energy would "fry" the line)." "Each line is several miles long, which means that, once a project has "occupied" a line (such project being anyway <12-18 acres), no other solar development can occur for miles around it (or until the next circuit). There are a few bigger (34 kV) lines, which can take generally up to 10 MW (equivalent to 40-60 acres), but those are far and few in between in the agricultural area (in BG&E territory, I know there are two on Rt 144, one on Rt 32, one on Folly Quarter Rd., and I would guess perhaps a couple of others)."

Health and Safety Impacts

Sound/Noise

According to a State of Massachusetts report, "*Ground-mounted solar PV array inverters and transformers make a humming noise during daytime, when the array generates electricity. At 50 to 150 feet from the boundary of the arrays, any sound from the inverters is inaudible.*" The report further notes "*Most typically, the source of noise associated with ground-mounted solar PV comes from inverters and transformers. There also may be some minimal noise from switching gear associated with power substations. The crackling or hissing sound caused by high-voltage transmission lines (the "Corona Effect") is not a concern in the case of solar PV, which uses lower voltage lines.*"

For specific Howard County and State of Maryland noise regulations see: http://howardcounty-md.elaws.us/code/coor_title8_subtitle9_sec8.900 and http://mdrules.elaws.us/comar/26.02.03.02

The table below represents the maximum allowable noise levels specified in State regulations.

Zoning Designation			
	Industrial	*Commercial*	*Residential*
Day	75	67	65
Night	75	62	55

Day: 7am - 10pm

Night: 10pm - 7am

Electric and Magnetic Fields (EMF)

Concerns of electromagnetic radiation are sometimes voiced in opposition to solar array facilities. While all electronic equipment has electric and magnetic fields associated with their operation, there is no indication that solar facilities present any significant concern. According to a State of Massachusetts report: "*Electric and magnetic fields are a normal part of life in the modern world. PV arrays generate EMF in the same extremely low frequency (ELF) range as electrical appliances and wiring found in most homes and buildings. The average daily background exposure to magnetic fields is estimated to be around one mG (milligauss – the unit used to measure magnetic field strength), but can vary considerably depending on a person's exposure to EMF from household electrical devices and wiring. The lowest exposure level that has been potentially associated with a health effect is three mG. Measurements at three commercial PV arrays in Massachusetts demonstrated that their contributions to off-site EMF exposures were low (less than 0.5 mG at the site boundary), which is consistent with the drop off of EMF strength based on distance from the source.*"

As reference, EMFs are measured in milliGauss (mG). The Environmental Protection Agency recommends that you limit your exposure to **0.5 mG to 2.5 mG**. When you are three feet away from a microwave, you are exposed to up to 25 mG. More information can be found here: https://www.safespaceprotection.com/emf-health-risks/emf-health-effects/emfs-in-the-home/

Environmental/Pollution Impacts

Chemicals Leaching into the Soil

A concern that is often raised about ground-mounted solar installations is that some chemical toxins can leach into the soil underneath the panels. Most panels consist of a rigid aluminum frame silicon, tempered glass, an inert substrate under the silicon and a series of thin metal connectors between the silicon cells. Small amounts of lead may be used in electrical connections but increasingly those connections are made by silver compounds which are superior conductors of electricity. Some models which are much less commonly used, especially in non-utility scale projects, could use hazardous materials such as cadmium telluride (CdTe), copper indium diselenide (CIS), and gallium arsenide (GaAs). However, as is noted by a report from the State of Massachusetts, all "*solar panels materials, including the chemicals noted above, are contained in a solid matrix, insoluble and non-volatile at ambient conditions, and enclosed. Therefore, releases to the ground from leaching, to the air from volatilization during use, or from panel breakage, are not a concern." The report also notes that "Release of any toxic materials from solid state inverters is also unlikely provided appropriate electrical and installation requirements are followed.*"

Run-off/Impervious Surfaces

The State of MD has very strict rules regarding stormwater management to prevent/mitigate runoff. The Maryland Department of the Environment (MDE) Stormwater Design Guidance – Solar Panel Installations can be found here. This guidance addresses installations Average Slope ≤ 5%, Average Slope ≥ 5% but ≤ 10%. Detail for all situations including those areas with slopes greater than 10% can be found in the *"2000 Maryland Stormwater Design Manual."*

Glare and Glare Studies

According to a State of Massachusetts report, "*solar panels are designed to absorb solar energy and convert it into electricity. Most are designed with anti-reflective glass front surfaces to capture and retain as much of the solar spectrum as possible. Solar module glass has less reflectivity than water or window glass. Typical panels are designed to reflect only about 2 percent of incoming sunlight. Reflected light from solar panels will have a significantly lower intensity than glare from direct sunlight."*

Fixed-tilt systems are typically oriented south with an upward tilt of 20-30 degrees. Any sunlight that is not absorbed by the panels will bounce off at the same angle that it hit the panel. For most hours, this means the reflections will be directed up into the sky and away from any people or buildings near the ground.

Tracking systems are designed to follow the sun through the day. For these systems, the panels are typically oriented on north-south trackers and turn to match the elevation of the sun (that is, when the sun is overhead, the panels are pointing straight up, and when the sun is halfway up, the panels are pointed at a 45 degree angle with respect to the horizon). Any reflected light will be directed back to the same elevation as the sun.

Current State of Grazing as a Co-Location Benefit

Grazing under and around commercial solar installations is still a relatively new but growing part of the solar industry. As an indication of the growth of this practice in the industry, the American Solar Grazing Association was established recently and supports the expansion of this agricultural co-location benefit to solar. Grazing service providers are compensated to keep the vegetation on the solar array site at a manageable height to avoid shading the panels and to keep vegetation intact to avoid erosion and run off. Some key facts about this practice:

- Service providers can be either the land host or a 3rd party contracted by the solar facility owner.
- The most common animal used is sheep which do not eat wiring or climb on equipment unlike goats which are not a good option for solar grazing services.
- Panel height is not an issue as sheep are able to make their way in and out of relatively low and tight spaces.

Current State of Native & Pollinator-Friendly Habitat as Co-Location Benefits

Native grasses and pollinator friendly habitats are increasingly being included in ground-mounted commercial solar facilities. The state of Maryland and other states in the region have adopted scorecards to allow commercial solar facilities to qualify and stay certified with a state designation. The addition of these plantings provides a number of co-location benefits on commercial solar installation sites. Among them:

- Long-term cost savings for the facility owner in operations and maintenance due to a reduced need for mowing and landscaping service.
- Pollinator habitat provides opportunities for apiaries to be sited close by and utilized by either the land host or a 3rd party an additional income source.
- Well-established plantings can reduce erosion and water runoff from the site.

Resource: https://fresh-energy.org/beeslovesolar/

Additional Resource: https://dnr.maryland.gov/pprp/Pages/pollinator.aspx

Current State of Agrivoltaics as a Co-Location Benefit

The practice of co-locating crops under and around solar arrays is still uncommon but interest and supporting research is growing with small-scale projects taking place in a number of areas across the country and worldwide. The NC Clean Energy Technology Center at the NC State University published a recent whitepaper entitled "Balancing Agricultural Productivity with Ground-Based Solar Photovoltaic (PV) Development." This paper discusses some of the considerations that agricultural land owners should take into account when investigating whether PV development is appropriate for their land, and covers the following topics:

- Understanding the Context of Solar Development and Agriculture
    - Developing Renewable Energy
    - Landowner Land Use Choice
    - Solar Facility Construction
    - Duration of Solar Use
- Weighing the Impact of PV Development on Agriculture
    - Solar PV Land Use
    - Impact on Agricultural Productivity

Other Resources Utilized by Task Force

Governor's Task Force on Renewable Energy Development and Siting Interim Report: https://governor.maryland.gov/energy-task-force/

Maryland Farm Bureau Policy

Maryland Agricultural Land Preservation Foundation Policy

Howard County Agricultural Preservation Board Solar Policy Guidelines

ZRA-197 DPZ RECOMMENDATION MATRIX

Use	Definitions			Proposed Zoning Districts			Allowed on Ag Pres	Major Changes
	Current Definition	Solar Task Force Definition	DPZ Definition	Principal Use By Right	Accessory Use	Conditional Use		
Commercial Solar Collector	Not Defined	A solar collector connected directly to the electrical distribution or transmission system separately from any other electrical service on the property on which it is hosted and whose generated electrical power is not primarily consumed by the principal use. Note: **This is purely a definition to assist with clarifying the other definitions.**	A SOLAR COLLECTOR CONNECTED DIRECTLY TO THE ELECTRICAL DISTRIBUTION OR TRANSMISSION SYSTEM SEPARATELY FROM ANY OTHER ELECTRICAL SERVICE ON THE PROPERTY ON WHICH IT IS HOSTED AND WHERE ELECTRICAL POWER GENERATED MAY BE USED ON OR OFF-SITE.	This is purely a definition to assist with clarifying the other definitions.				N/A
Solar Collector, **Rooftop**	**Solar Collector, Accessory:** A building mounted or ground mounted solar collector which is an accessory use to a principal use and is used for the primary purpose of generating electrical power to be consumed primarily by the principal use. A ground mounted accessory solar collector may be located on a different lot than the principal use.	A solar collector or commercial solar collector and all supporting electrical and structural components that is attached to the rooftop of an existing structure or integrated into the building envelope, where the solar panels themselves act as a building material or structural element. Examples include rooftop net-metering, rooftop aggregated net-metering, and commercial rooftop including community solar.	A SOLAR COLLECTOR OR COMMERCIAL SOLAR COLLECTOR AND ALL SUPPORTING ELECTRICAL AND STRUCTURAL COMPONENTS THAT IS ATTACHED TO THE ROOFTOP OF AN EXISTING STRUCTURE OR INTEGRATED INTO THE BUILDING, WHERE THE SOLAR PANELS THEMSELVES ACT AS A BUILDING MATERIAL OR STRUCTURAL ELEMENT.	All Zoning Districts	All Zoning Districts	None	Yes	All power generated from rooftop and building mounted solar collectors may be sent off-site.
Solar Collector, **Accessory Use Ground-Mount**	**Solar Collector, Accessory:** A building mounted or ground mounted solar collector which is an accessory use to a principal use and is used for the primary purpose of generating electrical power to be consumed primarily by the principal use. A ground mounted accessory solar collector may be located on a different lot than the principal use.	A solar collector and all supporting electrical and structural components that is mounted onto the ground or is a canopy and is used for the purpose of generating electrical power to be consumed primarily by the principal use. A ground mounted accessory solar collector may be located on a different lot than the principal use, including systems eligible for net meter aggregation by state net metering regulations. Examples include ground-mounted aggregated net-metering.	A SOLAR COLLECTOR AND ALL SUPPORTING ELECTRICAL AND STRUCTURAL COMPONENTS THAT IS ATTACHED TO THE GROUND OR A CANOPY ON A PROPERTY THAT CONTAINS A PRINCIPAL USE OR AN ADJACENT LOT; WHERE ELECTRICAL POWER GENERATED IS USED BY THE PRINCIPAL USE AND EXCESS ELECTRICAL POWER GENERATED MAY BE USED FOR NET METERING, INCLUDING NET METER AGGREGATION, ACCORDING TO STATE NET METERING REGULATIONS.	None	All Zoning Districts ********** 3% lot coverage on residential lots	None	Yes	Allows excess power generated by solar collectors to be used for net metering. ********** Codifies DPZ policy regarding accessory structure lot coverage requirement exemption and increases the percentage fom 2 to 3.
Solar Collector, **Commercial Ground-Mount**	**Solar Facility, Commercial:** A series of ground mounted solar collectors used to generate photovoltaic power, where less than 50% of the power generated is consumed by the principal use on the site	A commercial solar collector and all supporting electrical and structural components that is mounted onto the ground or is a canopy and is no more than the maximum system size according to state net metering regulations. Examples include community solar (virtual net metering) and small-scale power purchase agreements (PPAs) located off-site from customer.	A COMMERCIAL SOLAR COLLECTOR AND ALL SUPPORTING ELECTRICAL AND STRUCTURAL COMPONENTS THAT IS MOUNTED ONTO THE GROUND OR A CANOPY.	None	None	Current: RC, RR ********** Proposed: B-1, B-2, CE, M-1, M-2, PEC, POR	Yes, with 16 acre/34% limitation	Creates a two step review process for the Ag Pres Board **********Removes the glare study requirement. **********Establishes a maximum size of 16 acre/34% on Ag Pres. ********** Expands principal use ground mounted commercial solar to commercial and industrial areas through CU process.

Howard County

Department of Planning and Zoning

Subject: ***Ground-mounted Accessory Solar Collectors – Lot Coverage Exception Policy***

To: Staff of the Division of Public Service and Zoning Administration

Through: Marsha McLaughlin, Director

From: Cindy Hamilton, Chief
Division of Public Service and Zoning Administration

Date: October 30, 2014

In the 2013 Comprehensive Zoning Plan, the use category of Accessory Solar Collectors was added throughout the Zoning Regulations as a permitted accessory use. This was done in acknowledgment of the continuing interest in adding solar collectors to residential and non-residential uses for environmental and economic reasons. Since the effective date of the 2013 Zoning Regulations, it has been recognized that in order for ground-mounted accessory solar panel arrays to be of a practical size for residential lots improved with a single-family detached dwelling, the lot coverage of the solar panel arrays has often exceeded the lot coverage size restrictions in Section 128.0.A.12 of the Supplementary Zoning District Regulations for accessory structures.

In the interest of continuing to encourage the addition of accessory solar panels on such residential lots, a decision has been made to allow an exception to the lot coverage size restrictions in Section 128.0.A.12 for reasonably-sized ground-mounted accessory solar panel arrays. Effective as of the date of this policy memorandum, for a residential lot or parcel that is improved with a single-family detached dwelling, the lot coverage of a ground-mounted solar panel array does not count towards the calculation of accessory structure lot coverage in Section 128.0.A.12, provided that the lot coverage of the ground-mounted solar panel array is 2% or less of the lot area of the lot or parcel. Ground-mounted accessory solar panel arrays on residential lots or parcels improved with a single-family detached dwelling must still comply with the structure and use setback requirements that are applicable to the lot or parcel.

CH/jtl/ Ground-mounted Accessory Solar Collectors Policy

SmartDG+
County Zoning Guide

April 2020

Maryland Energy Administration

MARYLAND DEPARTMENT OF NATURAL RESOURCES

Table of Contents

Introduction

Many of Maryland's counties have passed regulations to guide the siting of large-scale (i.e., greater than 2 MW) wind and/or solar projects. Usually, this guidance lists zoning districts where such projects would potentially be permitted and notes any special requirements that must be met.[1] The SmartDG+ screening tool simplifies matters by noting areas where county zoning prohibits all large-scale projects.[2] This document provides an overview of each county's zoning policy related to the siting of solar and wind projects. Specifically, this document consists of two components: a County Zoning Cheat Sheet and a County Zoning Guide sheet for each county.

County Zoning Cheat Sheet

- A summary table of the zoning exclusions for large-scale solar and wind projects.
- *Note:* Some of Maryland's counties do not refer to wind or solar specifically, but instead treat large-scale wind and solar as large utility or alternative energy projects. The *Applicable Term* columns in the cheat sheet indicate the specific terms used by counties to refer to large-scale solar or wind projects.

County Zoning Guide

- A summary sheet for each county that elaborates on the information provided in the County Zoning Cheat Sheet and summarizes the treatment of small-scale, i.e., less than 2 MW, solar and wind projects, and other renewable generation resources.
- The *Solar and Wind Zoning* section provides a link to a *Solar and Wind Zoning Document* for each county, which contains excerpts from the county's zoning code that pertain to the development of solar and wind projects as well as guidance for navigating the excerpts.
- The *Comprehensive Plan* section summarizes any mentions made in the county's Comprehensive Plan of land use recommendations for the development of large-scale renewable energy facilities.
- The *PACE* section provides information on whether the county is participating in Maryland's Commercial Property Assessed Clean Energy (C-PACE) program. A C-PACE program authorizes counties to provide upfront financing to commercial property owners for qualifying energy efficiency and renewable generation projects. Maryland currently has 17 counties that have enabled C-PACE programs and three additional counties with C-PACE programs in development.
- Finally, the *Public Policy* section provides an overview of any other county policy related to renewable generation that would provide an incentive or disincentive for the development of such projects.

[1] Within municipalities, additional/other rules may apply.

[2] The information in the SmartDG+ tool is updated annually using zoning information from county officials. However, as county zoning information is constantly evolving, anyone interested in siting a large-scale renewable energy system or facility at a specific site should contact the county or municipality where the site is located. The local jurisdiction's planning or zoning department is the appropriate entity to confirm the accuracy of the zoning information and can respond to other relevant questions regarding the site.

County Zoning Cheat Sheet

COUNTY	APPLICABLE TERM FOR SOLAR	SOLAR ZONING EXCLUSIONS	ADDITIONAL CONDITIONS AND RESTRICTIONS FOR SOLAR	APPLICABLE TERM FOR WIND	WIND ZONING EXCLUSIONS	ADDITIONAL CONDITIONS AND RESTRICTIONS FOR WIND
ALLEGANY	Solar Energy System as Primary Use	Exclude everything EXCEPT: A, C, I	Permitted by special exception with conditions in A, C, I; for projects on "brownfield" land, reclaimed, or abandoned surface mining land: permitted with conditions in A, C, and by special exception in I	Industrial Wind Energy Conversion System and Industrial Wind Farms	Exclude everything EXCEPT: A and C	Permitted in A and C by special exception with conditions
ANNE ARUNDEL	Solar Energy Generating Facility – Utility Scale	Exclude everything EXCEPT: RA, W1, W2, W3 and (roof-mounted only) C4	Permitted by special exception in RA; permitted with conditions in W1, W2, W3, C4	No zoning regulations specified	Exclude EVERYTHING	No zoning regulations specified
BALTIMORE	Solar Facility	Exclude everything EXCEPT: R.C.2, R.C.3, R.C.4, R.C.5, R.C.6, R.C.7, R.C.8, B.L., B.M., M.R., M.L.R., M.H.	Permitted by special exception	No zoning regulations specified	Exclude EVERYTHING	No zoning regulations specified
BALTIMORE CITY	Alternative Energy System: Commercial	Exclude everything EXCEPT: OIC, BSC, IMU, I-1, I-2, PC-1, PC-2, PC-3, PC-4	Permitted	Alternative Energy System: Commercial	Exclude everything EXCEPT: OIC, BSC, IMU, I-1, I-2, PC-1, PC-2, PC-3, PC-4	Permitted
CALVERT	Power Generating Facility, Commercial	Exclude everything EXCEPT: EC, I-1, FFD, RDC, WL	Permitted by special exception in EC, I-1; permitted by special exception with conditions in FFD, RDC, WL	Power Generating Facility, Commercial	Exclude everything EXCEPT: EC, I-1, FFD, RDC, and WL	Permitted by special exception in EC, I-1; permitted by special exception with conditions in FFD, RDC, WL
CAROLINE	Commercial Solar Energy System: Large Scale	Exclude everything EXCEPT: R, C-2, I-2	Permitted by special exception	Renewable Energy Sources	Exclude everything EXCEPT: R, C-2, I-2	Permitted by special exception
CARROLL	Solar Energy Conversion Facility	Exclude everything EXCEPT: C-2, C-3, I-1, I-2, and (roof-mounted only) C-1, EC	Permitted with conditions for ground-mounted facilities in C-2; permitted in C-1, C-3, I-1, I-2, EC	No zoning regulations specified	Exclude EVERYTHING	No zoning regulations specified
CECIL	Power Generating Facilities	Exclude everything EXCEPT: M1, M2, NAR, SAR, BG	Permitted by special exception with conditions in NAR, SAR, BG; permitted by special exception in M1; permitted without exception in M2	Power Generating Facilities	Exclude everything EXCEPT: M1, M2, NAR, and SAR	Permitted by special exception with conditions in NAR, SAR; permitted by special exception in M1; permitted without exception in M2
CHARLES	Solar Energy System, Large	Exclude NOTHING	Permitted by special exception	Not permitted in any district	Exclude EVERYTHING	Not permitted
DORCHESTER	Solar Energy System, Utility Scale	Exclude everything EXCEPT: RC, AC, AC-RCA, B2, I-1, I-2	Permitted by special exception	No zoning regulations specified	Exclude EVERYTHING	No zoning regulations specified
FREDERICK	Solar Facility, Commercial	Exclude everything EXCEPT: A, LI, GI	Permitted subject to site development plan approval in LI, GI; permitted subject to approval of Floating Zone in A	No zoning regulations specified	Exclude EVERYTHING	No zoning regulations specified

County Zoning Cheat Sheet

COUNTY	APPLICABLE TERM FOR SOLAR	SOLAR ZONING EXCLUSIONS	ADDITIONAL CONDITIONS AND RESTRICTIONS FOR SOLAR	APPLICABLE TERM FOR WIND	WIND ZONING EXCLUSIONS	ADDITIONAL CONDITIONS AND RESTRICTIONS FOR WIND
GARRETT	No zoning regulations specified	Exclude EVERYTHING	No zoning regulations specified	No zoning regulations specified	Exclude EVERYTHING	No zoning regulations specified
HARFORD	Power and Regenerating Plants	Exclude everything EXCEPT: GI	Permitted with conditions	Power and Regenerating Plants	Exclude everything EXCEPT: GI	Permitted with conditions
HOWARD	Solar Facility, Commercial	Exclude everything EXCEPT: RR, RC, RR-DEO, RC-DEO	Permitted with conditions	No zoning regulations specified	Exclude EVERYTHING	No zoning regulations specified
KENT	Solar Energy Systems, Utility Scale	Exclude everything EXCEPT: Agricultural, Resource Conservation, Crossroads Commercial, Commercial, Commercial Critical Area, Employment Center, Industrial	Permitted without excpetion; on farmland, permitted by special exception	No zoning regulations specified	Exclude EVERYTHING	No zoning regulations specified
MONTGOMERY	Public Utility Structure	Exclude NOTHING	Permitted in LSC; permitted with limited use in CRT, CR; permitted with conditional use in AR, R, RC, RNC, RE-2, RE-2C, RE-1, R-200, R-90, R-60, R-40, TLD, TMD, THD, R-30, R-20, R-10, CRN, GR, NR, EOF, IL, IM, IH	No zoning regulations specified	Exclude EVERYTHING	No zoning regulations specified
PRINCE GEORGE'S	No zoning regulations specified	Exclude EVERYTHING	No zoning regulations specified	No zoning regulations specified	Exclude EVERYTHING	No zoning regulations specified
QUEEN ANNE'S	Utility-Scale Solar Array	Exclude everything EXCEPT: AG, CS	Permitted with conditions	No zoning regulations specified	Exclude EVERYTHING	No zoning regulations specified
SOMERSET	Solar Energy System, Utility	Exclude everything EXCEPT: AR, I-2	Permitted as industrial use on Utility Scale SEF Floating Zones in AR, I-2	Wind Energy System (as principal use)	Exclude EVERYTHING	Not permitted in any disctrict
ST. MARY'S	Utility, Major	Exclude everything EXCEPT: RPD, RL-T, RL, I, OBP	Permitted with conditions	Utility, Major	Exclude everything EXCEPT: RPD, RL-T, RL, I, OBP	Permitted with conditions
TALBOT	Solar Energy System, Large-scale	Exclude everything EXCEPT: AC, CP, WRC, TC, RR, TR, VR, VH, VM, LC, GC, LI	Permitted by special exception	Wind Turbine Production Facility, Small	Exclude everything EXCEPT: AC, CP, LC, GC, LI	Permitted without exception in LC, GC, LI; permitted by special exception in AC, CP
WASHINGTON	Solar Energy Generating System	Exclude everything EXCEPT: A(R), EC, P, IM, PI, AP, IR, IG	Permitted by special exception	Wind Mill Farm	Exclude everything EXCEPT: A(R), EC, P, RV	Permitted with special exception
WICOMICO	Privately Owned and Operated Utility	Exclude everything EXCEPT: C-2, I-1, I-2, A-1, V-C, R-8, R-15, R-20, REC, R-30, TT	Permitted by special exception	Privately Owned and Operated Utility	Exclude everything EXCEPT: C-2, I-1, I-2, A-1, V-C, R-8, R-15, R-20, REC, R-30, TT	Permitted with special exception
WORCESTER	Solar Energy System, Large and Solar Energy System, Utility Scale	Exclude everything EXCEPT: A-1, A-2, E-1, V-1, C-1, C-2, C-3, I-1, I-2	Permitted by special exception	Large Wind Energy Conversion System	Exclude EVERYTHING	Not permitted in any disctricts

Allegany County Zoning Guide

Solar and Wind Zoning

Link to Solar and Wind Zoning Document

SOLAR

- The Allegany County Code defines large-scale solar projects as a "Solar Energy System as Primary Use." The Code also distinguishes between large-scale solar systems that are used on "brownfield" land, reclaimed, or abandoned surface mining land.
    - Permitted use in Agricultural (A), Conservation (C), and Industrial (I) zoning districts.
        - In general: permitted, by special exception of the Board of Zoning Appeals and subject to conditions, in the A, C, and I zoning districts.
        - If on "brownfield" land, reclaimed, or abandoned surface mining land: permitted, subject to conditions, in the A and C zoning districts, and permitted by special exception of the Board of Zoning Appeals in the I zoning district.

SMALL SOLAR

- The Allegany County Code defines small-scale solar projects as "Solar Energy Systems Accessory to Nonresidential Use" or "Solar Energy Systems Accessory to Residential Use." "Solar Energy Systems Utilizing Thermal Energy Production" projects are also classified as small-scale under the County Code.
    - Solar Energy System Accessory to Residential Use: permitted use, subject to conditions, in all zoning districts.
    - Solar Energy System Utilizing Thermal Energy Production: permitted use, by special exception of the Board of Zoning Appeals and subject to conditions, in District I.

WIND

- The Allegany County Code defines Industrial Wind Farms as a cluster of Industrial Wind Energy Conversion Systems (IWECS), i.e., wind chargers, windmills, or wind turbines used to produce energy intended for sale to large-scale energy providers through the electrical grid system. IWECS and Industrial Wind Farms are subject to the same zoning and use regulations.

- Permitted use, by special exception of the Board of Zoning Appeals and subject to conditions, in the Agricultural (A) and Conservation (C) zoning districts.

SMALL WIND

- The Allegany County Code defines a small-scale wind project as either an "Agricultural or Domestic Wind Energy Device," i.e., a single wind energy device situated in an agricultural or residential setting, respectively, intended to utilize wind power for the use of the individual landowner of the property where the device is situated.
- The Allegany County Code does not have specific zoning districts designated for the development of Agricultural or Domestic Wind Energy Devices; however, the Code does provide information regarding height and setback distance requirements for these projects.

COMPREHENSIVE PLAN

Link to Comprehensive Plan

- The Allegany County Comprehensive Plan does not make specific land use recommendations for the development of large-scale renewable energy facilities.

PACE PROGRAM

Link to PACE Program

- Allegany County is currently enrolled in the Maryland Commercial Property Assessed Clean Energy (MD-PACE) program.
- Article XIII of the Allegany County Taxation Code (see link above) established the Clean Energy Loan Program to finance energy efficiency and renewable energy projects for commercial businesses in the County.

PUBLIC POLICY

- Allegany County does not have any other public policy that concerns the siting of solar or wind projects.

Anne Arundel County Zoning Guide

Solar and Wind Zoning

Link to Solar and Wind Zoning Document

SOLAR

- The Anne Arundel County Code uses the term "Solar Energy Generating Facility – Utility Scale" to refer to large-scale solar projects. A Solar Energy Generating Facility – Utility Scale project is defined as an industrial-scale, renewable energy generating facility as a principal use that uses energy from the sun to produce electricity for sale to a regional wholesale electricity market through transmission lines and not to end-users.
    - Permitted use, by special exception of the Anne Arundel County Administrative Hearing Officer, in Residential Agricultural (RA) zoning districts.
    - Permitted use, subject to conditions laid out in the Anne Arundel County Code, in the Industrial Park (W1), Light Industrial (W2), and Heavy Industrial (W3) zoning districts.
    - Rooftop-mounted Solar Energy Generating Facility – Utility Scale projects are permitted, subject to conditions laid out in the Anne Arundel County Code, in Highway Commercial (C4) zoning districts.

SMALL SOLAR

- The Anne Arundel County Code defines small-scale solar energy projects as either "Solar Energy Generating Facility – Accessory" or "Solar Energy Generating Facility – Community."
    - Solar Energy Generating Facility – Accessory is defined as a renewable energy generating facility that uses energy from the sun to produce electricity for on-site use as accessory to a principal use, for which excess electricity generated and not immediately utilized for on-site use or temporarily stored for future on-site use may be provided to a utility company in exchange for a credit.
        - Permitted use in all districts.
    - Solar Energy Generating Facility – Community is defined as an industrial-scale, renewable energy generating facility as a principal use that is not an aggregate net energy facility, uses energy from the sun to produce electricity

for delivery through distribution lines to end-users, and does not exceed 2 MW of output.[1]

- Permitted use, by special exception of the Anne Arundel County Administrative Hearing Officer, in Residential Agricultural (RA) zoning districts.
- Permitted use, subject to conditions laid out in the Anne Arundel County Code, in the Industrial Park (W1), Light Industrial (W2), and Heavy Industrial (W3) zoning districts.
- Rooftop-mounted Solar Energy Generating Facility – Community projects are permitted, subject to conditions laid out in the Anne Arundel County Code, in Highway Commercial (C4) zoning districts.

WIND

- Anne Arundel County has no specific zoning regulations surrounding large-scale wind energy projects. Correspondence with County officials determined that large-scale wind energy projects are not permitted in any zoning district.

SMALL WIND

- The Anne Arundel County Code uses the term "Small Wind Energy System" to refer to a small-scale wind energy project, and defines it as a system that generates energy for use on site and not for sale, and whose wind turbine height may not exceed 150 feet.
  - Small Wind Energy Systems on a lot of least three acres: permitted use, subject to conditions laid out in the Anne Arundel County Code, in all Residential, Commercial, Industrial, and Maritime zoning districts,.
  - Small Wind Energy Systems on a lot of less than three acres: permitted use, by special exception, in all Residential, Commercial, Industrial, and Maritime zoning districts.

COMPREHENSIVE PLAN

Link to Comprehensive Plan

- The Anne Arundel County General Development Plan does not make specific land use recommendations for the development of large-scale renewable energy facilities. The County's Comprehensive Plan recommends a review of existing practices regarding generation of emissions and adoption of strategies to reduce emissions. The Comprehensive Plan contains a goal to offset future land use and zoning

[1] Satisfies the requirements of § 7-306.2(a)(3) of the Public Utilities Article of the State Code as existing on July 1, 2018, and is part of the Community Solar program approved by the Maryland Public Service Commission.

intensifications of open space and natural resource land by acquiring additional land for preservation.

PACE PROGRAM

Link to PACE Program

- Anne Arundel County is currently is currently enrolled in the Maryland Commercial Property Assessed Clean Energy (MD-PACE) program.
- More information regarding Anne Arundel County's PACE program can be found at the County's Financing & Tax Credits webpage (see link above).

PUBLIC POLICY

- Anne Arundel County does not have any other public policy that concerns the siting of solar or wind projects.

Baltimore County Zoning Guide

Solar and Wind Zoning

Link to Solar and Wind Zoning Document

SOLAR

- Baltimore County's Zoning Regulations use the term "Solar Facility" to refer to large-scale solar projects, and defines them as facilities that produce power for sale by energy suppliers to consumers.
    - Permitted use, by special exception of the Board of Appeals, in the following zoning districts: Resource Conservation – Agricultural (R.C.2), Resources Conservation – Deferral of Planning and Development (R.C.3), Resource Conservation – Watershed Protection (R.C.4), Resource Conservation – Rural Residential (R.C.5), Rural Conservation and Residential (R.C.6), Resource Preservation Zone (R.C.7), Environmental Enhancement Zone (R.C.8), Business Local (B.L.), Business Major (B.M.), Manufacturing Restricted (M.R.), Manufacturing Light Restricted (M.L.R.), and Manufacturing Heavy (M.H.).

SMALL SOLAR

- Baltimore County's Zoning Regulations do not have specific zoning districts designated for small-scale/accessory solar projects.

WIND

- Baltimore County's Zoning Regulations do not have specific zoning districts designated for large-scale wind projects.

SMALL WIND

- Baltimore County's Zoning Regulations do not have specific zoning districts designated for small-scale/accessory wind projects.

COMPREHENSIVE PLAN

Link to Comprehensive Plan

- The Baltimore County Master Plan does not make specific land use recommendations for the development of large-scale renewable energy facilities. The Plan promotes the development of waste-to-energy technologies/ facilities and the use of landfill gas for the generation of electricity. It also encourages the redevelopment of urban land to reduce greenhouse gas emissions, and to reduce the potential for development on critical farmland and natural resource areas.

PACE PROGRAM

Link to PACE Program

- Baltimore County is currently enrolled in the Maryland Commercial Property Assessed Clean Energy (MD-PACE) program.
- More information regarding Baltimore County's PACE program can be found in the Baltimore County Code of Ordinances: Article 10. - Finance. Title 15: Clean Energy Loan Program (see link above).

PUBLIC POLICY

- Baltimore County does not have any other public policy that concerns the siting of solar or wind projects.

Baltimore City Zoning Guide

Solar and Wind Zoning

Link to Solar and Wind Zoning Document

SOLAR

- The Baltimore City Zoning Code uses the term "Alternative Energy System: Commercial" to refer to large-scale renewable energy projects, including large-scale solar energy projects. Specifically, Alternative Energy System: Commercial projects are designed to produce greater levels of energy for consumers with high energy demands, such as industrial users, or for supply to an electric grid.
    - Permitted use in Commercial zoning districts OIC, BSC, IMU, I-1, and I-2.
    - Permitted use in all Port Covington zoning districts.[1]

SMALL SOLAR

- The Baltimore City Zoning Code uses the terms "Alternative Energy Systems: Community-based" or "Alternative Energy Systems: Private" to refer to small-scale renewable energy projects, including small-scale solar projects.
    - Alternative Energy Systems: Private are privately owned, small-scale wind energy systems that produce power for on-site use. Permitted use in all zoning districts.
    - Alternative Energy Systems: Community-based refers to small-scale renewable energy projects that produce output of less than 2 MW and are supported by community members who purchase energy and benefit financially from the system.
        - Permitted use in all Commercial zoning districts.[2]
        - Permitted use in all Industrial zoning districts.[3]
        - Permitted use in all Port Covington zoning districts.
        - For use on lot size of 0.5 acres or more: Permitted use in all Detached and Semi-detached Residential and Rowhouse and Multi-family Residential zoning districts.

[1] Port Covington Districts Port Covington Subdistrict 1 (PC-1), Port Covington Subdistrict 2 (PC-2), Port Covington Subdistrict 3 (PC-3), and Port Covington Subdistrict 4 (PC-4).

[2] Commercial districts: Neighborhood Business (C-1), Neighborhood Business Village Center (C-1-VC), Neighborhood Business and Entertainment (C-1-E), Community Commercial (C-2), General Commercial (C-3), Heavy Commercial (C-4), and Downtown (C-5).

[3] Industrial districts: Office-Industrial Campus (OIC), Bio-Science Campus (BSC), Industrial Mixed-Use (IMU), Light Industrial (I-1), General Industrial (I-2), and Maritime Industrial (MI).

- For use on lot size of less than 0.5 acres: Permitted use, subject to conditions, in all Detached and Semi-detached Residential and Rowhouse and Multi-family Residential zoning districts.

WIND

- The Baltimore City Zoning Code the term "Alternative Energy System: Commercial" to refer to large-scale renewable energy projects, including large-scale wind energy projects. Specifically, Alternative Energy System: Commercial projects are designed to produce greater levels of energy for consumers with high energy demands, such as industrial users, or for supply to an electric grid.
  - Permitted use in Commercial zoning districts OIC, BSC, I-MU, I-1, and I-2.
  - Permitted use in all Port Covington zoning districts.

SMALL WIND

- The Baltimore City Zoning Code the terms "Alternative Energy Systems: Private" and "Alternative Energy Systems: Community-based" to refer to small-scale renewable energy projects, including small-scale wind projects.
  - Alternative Energy Systems: Private are privately owned, small-scale wind energy systems that produce power for on-site use. Permitted use in all zoning districts.
  - Alternative Energy System: Community-based
    - Permitted use in all Commercial, Industrial, and Port Covington zoning districts.
    - For use on lot size of 0.5 acres or more: Permitted use in all Detached and Semi-detached Residential and Rowhouse and Multi-family Residential zoning districts.
    - For use on lot size of less than 0.5 acres: Permitted use, subject to conditions, in all Detached and Semi-detached Residential and Rowhouse and Multi-family Residential zoning districts.

COMPREHENSIVE PLAN

Link to Comprehensive Plan

- The City of Baltimore Comprehensive Master Plan does not make specific land use recommendations for the development of large-scale renewable energy facilities. The Plan does mention strategies for updating existing school facilities by using small-scale solar installments.

PACE PROGRAM

Link to PACE Program

- Baltimore City is currently enrolled in the Maryland Commercial Property Assessed Clean Energy (MD-PACE) program.
- More information regarding Baltimore City's PACE program can be found in the City's Taxes Code (see link above) under Subtitle 30. Property Assessed Clean Energy (PACE) Loan Program.

PUBLIC POLICY

- Baltimore City does not have any other public policy that concerns the siting of solar or wind projects.

Calvert County Zoning Guide

Solar and Wind Zoning

Link to Solar and Wind Zoning Document

SOLAR

- The Calvert County Zoning Ordinance includes large-scale solar projects under the definition of "Power Generating Facility, Commercial."
    - Permitted use, by special exception of the Board of Appeals, in the Employment Center (EC) and Light Industrial (I-1) zoning districts.
    - Permitted use, by special exception of the Board of Appeals and subject to conditions, in the Farm and Forest (FFD), Rural Community (RDC), and Wetlands (WL) zoning districts.

SMALL SOLAR

- The Calvert County Zoning Ordinance includes small-scale/accessory solar projects under the definition of "Power Generating Facility, Accessory to a Residence or Business."
    - Permitted use, subject to conditions, in the following zoning districts: Employment Center (EC), Marine Commercial (MC), Residential District (RD), Rural Commercial (RC), Agricultural Preservation District (APD), Historic District (HD), Light Industrial (I-1), Farm and Forest (FFD), and Rural Community (RDC).

WIND

- The Calvert County Zoning Ordinance considers large-scale wind projects as "Power Generating Facility, Commercial;" however, the County discourages the siting of wind energy systems that are greater than 1 MW in any part of the county because of the Naval Air Station Patuxent River site.
    - Permitted use, by special exception from the Board of Appeals, in the Employment Center (EC) and Light Industrial (I-1) zoning districts.
    - Permitted use, by special exception of the Board of Appeals and subject to conditions, in the Farm and Forest (FFD), Rural Community (RDC), and Wetlands (WL) zoning districts.

SMALL WIND

- The Calvert County Zoning Ordinance breaks up small wind projects into two categories: "Wind Energy System, Ground Mounted" and "Wind Energy System, Roof Mounted," which are limited to 85 feet and 150 feet, respectively.
    - Permitted use, subject to conditions, in the following zoning districts: Employment Center (EC), Marine Commercial (MC), Residential District (RD), Rural Commercial (RC), Agricultural Preservation District (APD), Historic District (HD), Light Industrial (I-1), Farm and Forest (FFD), Town Center (TC), and Rural Community (RDC).

COMPREHENSIVE PLAN

Link to Comprehensive Plan

- The Calvert County Comprehensive Plan recommends that Calvert County actively seek and evaluate potential locations for solar and wind facilities outside of agricultural lands, such as the reuse of brownfield sites and locations adjacent to utility corridors. The Plan also recommends that wind energy options not interfere with the U.S. Navy's Atlantic Test Range's inner Test Range or Helicopter Operating Area.

PACE PROGRAM

- Calvert County currently has no Property Assessed Clean Energy (PACE) program.

PUBLIC POLICY

- Calvert County does not have any other public policy that concerns the siting of solar or wind projects.

Caroline County Zoning Guide

Solar and Wind Zoning

Link to Solar and Wind Zoning Document

SOLAR

- The Caroline County Zoning Ordinance defines large-scale solar energy projects as "Commercial Solar Energy System: Large Scale" with a primary purpose of wholesale or retail sales of generated electricity and that produce over 2 MW of power.
    - Permitted use, by special exception of the Board of Zoning Appeals, in the Rural (R), General Commercial (C-2), and Light Industrial (I-2) zoning districts.

SMALL SOLAR

- The Caroline County Zoning Ordinance defines small-scale solar energy projects as either "Commercial Solar Energy System: Small Scale" or "Solar Energy System, Accessory."
    - Commercial Solar Energy System: Small Scale is defined as having a primary purpose of wholesale or retail sales of generated electricity and producing up to 2 MW of power.
        - Permitted use, by special exception of the Board of Zoning Appeals, in the Rural (R), General Commercial (C-2), and Light Industrial (I-2) zoning districts.
    - Solar Energy System, Accessory is defined as any roof-mounted or ground-mounted solar array that is an accessory to and incorporated into the development of an authorized use on a land parcel and is used for the purpose of reducing or meeting on-site energy needs.
        - Permitted use in all zoning districts.

WIND

- The Caroline County Zoning Ordinance does not have language specific to large-scale wind energy projects; they are treated as "Renewable Energy Sources."
    - Permitted use, by special exception of the Board of Zoning Appeals, in the Rural (R), General Commercial (C-2), and Light Industrial (I-2) zoning districts.

SMALL WIND

- The Caroline County Zoning Ordinance defines a small-scale wind energy system as a "Small Wind-Energy System" that has a rated nameplate capacity of 100 kW or less and a total height limit of 199 feet.
    - Permitted use in the following zoning districts: Village Center (VC), Village Neighborhood (VN), Rural (R), Single Family Residential (R-1), Single-Family and Two-Family Residential (R-2), Neighborhood Commercial (C-1), General Commercial (C-2), and Light Industrial (I-2).

COMPREHENSIVE PLAN

Link to Comprehensive Plan

- The Caroline County Comprehensive Plan does not make specific land use recommendations for the development of large-scale renewable energy facilities.

PACE PROGRAM

- Caroline County currently has no Property Assessed Clean Energy (PACE) program.

PUBLIC POLICY

Link to Ordinance #2017-2

- Caroline County Ordinance #2017-2 limits the combined additional aggregate acreage of commercial solar energy systems, both large-scale and small-scale, utilized throughout the County to 2,000 acres, and established screening protocols when considering new solar energy systems to ensure a system does not cause significant impacts to the aesthetic and scenic quality of the surrounding area. The ordinance also increased the distance from residential zones from 100 feet to 200 feet.

Carroll County Zoning Guide

Solar and Wind Zoning

Link to Solar and Wind Zoning Document

SOLAR

- The Carroll County Zoning Ordinance uses the term "Solar Energy Conversion Facility" to refer to large-scale solar projects. A Solar Energy Conversion Facility is defined as either ground-mounted or roof-mounted, and is designed to supply power at a utility level rather than on site or to a local user.
    - Solar Energy Conversion Facility, Ground-mounted
        - Permitted use, subject to conditions laid out in the Carroll County Code of Ordinance, in the Commercial C-2 zoning district.
        - Permitted use in the Commercial C-3 and Industrial I-1 and I-2 zoning districts.
    - Solar Energy Conversion Facility, Roof-mounted
        - Permitted use in the Employment Campus (EC), Commercial C-1 and C-2, and Industrial I-1 and I-2 zoning districts.

SMALL SOLAR

- The Carroll County Zoning Ordinance uses the term "Solar Energy Conversion Facility, Accessory" to refer to small-scale solar projects, and defines them as systems that generate electricity primarily for on-site use.
    - Permitted as accessory use in all zoning districts.

WIND

- The Carroll County Zoning Ordinance does not have specific zoning districts designated for large-scale wind projects. Correspondence with the County determined that large-scale wind energy projects are not preferred in any zoning district.

SMALL WIND

- The Carroll County Zoning Ordinance uses the term "Small Wind Energy System" to refer to small-scale wind energy systems, and defines them as single-towered wind energy systems with a rate nameplate capacity of 50 kW or less, and a total height of 150 feet or less.
    - Permitted use in all zoning districts.

COMPREHENSIVE PLAN

Link to Comprehensive Plan

- The Carroll County Freedom Community Comprehensive Plan does not make specific land use recommendations for the development of large-scale renewable energy facilities.

PACE PROGRAM

Link to PACE Program

- Carroll County is currently enrolled in the Maryland Commercial Property Assessed Clean Energy (MD-PACE) program.
- More information regarding Carroll County's PACE program is available on the County's Financing & Incentives web page (see link above).

PUBLIC POLICY

- Carroll County does not have any other public policy that concerns the siting of solar or wind projects.

Cecil County Zoning Guide

Solar and Wind Zoning

Link to Solar and Wind Zoning Document

SOLAR

- The Cecil County Zoning Ordinance treats large-scale solar energy projects as "Power Generating Facilities."
    - Permitted use in the Heavy Industrial (M2) zoning district.
    - Permitted use, by special exception, in the Light Industrial (M1) zoning district.
    - Permitted, by special exception and subject to conditions, in the Northern Agricultural-Residential (NAR) and Southern Agricultural-Residential (SAR) zoning districts.
    - A solar Power Generating Facility is permitted, by special exception and subject to conditions, in the Business General (BG) zoning district, provided that the minimum parcel size is 50 acres and the facility is screened from adjoining residential zones.

SMALL SOLAR

- The Cecil County Zoning Ordinance does not have specific zoning districts designated for small-scale/accessory solar projects.

WIND

- The Cecil County Zoning Ordinance treats large-scale wind energy projects as "Power Generating Facilities."
    - Permitted use in the Heavy Industrial (M2) zoning district.
    - Permitted use, by special exception, in the Light Industrial (M1) zoning district.
    - Permitted use, by special exception and subject to conditions, in the Northern Agricultural-Residential (NAR) and Southern Agricultural-Residential (SAR) zoning districts.

SMALL WIND

- The Cecil County Zoning Ordinance does not have specific zoning districts designated for small-scale/accessory wind projects.

COMPREHENSIVE PLAN

Link to Comprehensive Plan

- The Cecil County Comprehensive Plan does not make specific land use recommendations for the development of large-scale renewable energy facilities.

PACE PROGRAM

Link to PACE Program

- Cecil County is currently enrolled in the Maryland Commercial Property Assessed Clean Energy (MD-PACE) program.
- More information regarding Cecil County's PACE program can be found in the county's Taxes Code (see link above) under Chapter 45: Finance and Taxation. Section 3: Clean Energy Loan Program.

PUBLIC POLICY

- Cecil County does not have any other public policy that concerns the siting of solar or wind projects.

Charles County Zoning Guide

Solar and Wind Zoning

Link to Solar and Wind Zoning Document

SOLAR

- The Charles County zoning code uses the term "Solar Energy System, Large" to refer to large-scale solar projects as a solar collection system that can be either ground- or roof-mounted and generates energy to be sold for profit through a regional transmission organization (RTO) on the wholesale electricity market. The system is able to be used for interconnection through an electric utility power grid and/or for direct distribution to multiple consumers.
    - Permitted use, by special exception of the Board of Appeals, in all zoning districts.

SMALL SOLAR

- The Charles County zoning code uses the term "Solar Energy System, Small" to refer to small-scale solar projects, and defines them as solar collection systems that can be either ground-mounted or roof-mounted and that produce energy for either direct consumption on the subject property or to offset energy use on the subject property.
    - Permitted as accessory use, subject to conditions, in all zoning districts.

WIND

- The Charles County zoning code does not allow large-scale wind energy projects with wind turbines and towers exceeding 150 ft. in total height.

SMALL WIND

- The Charles County zoning code defines small-scale wind projects as either "Wind Energy System, Small" or "Wind Energy System, Large."
    - Wind Energy System, Small is defined as either ground-mounted or roof-mounted. Ground-mounted small systems cannot exceed 50 feet in height and must be rated at 15 kW capacity or less. Roof-mounted small systems cannot exceed 15 feet in height above the base and must be rated at 2 kW capacity or less.
        - Permitted use, subject to conditions, in all zoning districts.
    - Wind Energy System, Large is defined as a system of wind energy devices not exceeding 150 feet in height that can be used for direct consumption of wind

energy on the subject property, interconnection to the electric utility power grid to offset energy use on the subject property, sold for profit to a wholesale electricity market through an RTO and an interconnection with the local utility power grid, and/or for direct distribution to a number of properties and consumers.

- Permitted use, by special exception of the Board of Appeals, in all zoning districts.

COMPREHENSIVE PLAN

Link to Comprehensive Plan

- The Charles County Comprehensive Plan does not make specific land use recommendations for the development of large-scale renewable energy facilities.

PACE PROGRAM

Link to PACE Program

- Charles County is currently enrolled in the Maryland Commercial Property Assessed Clean Energy (MD-PACE) program.
- More information regarding Charles County's PACE program can be found in the Charles County Code of Ordinances and Resolutions (see link above) under Chapter 158: Clean Energy Loan Program.

PUBLIC POLICY

- Charles County does not have any other public policy that concerns the siting of solar or wind projects.

Dorchester County Zoning Guide

Solar and Wind Zoning

Link to Solar and Wind Zoning Document

SOLAR

- The Dorchester County Code uses the term "Solar Energy System, Utility Scale" to refer to large-scale solar energy projects and defines them as a system of solar energy devices used to generate energy primarily for off-site use.
    - Permitted use, by special exception of the Board of Appeals, in the following zoning districts: Resource Conservation (RC), Agricultural Conservation (AC), Agricultural Conservation – Resource Conservation Area (AC-RCA), General Business (B-2), Light Industrial (I-1), and Heavy Industrial (I-2).

SMALL SOLAR

- The Dorchester County Code does not have specific language regarding the zoning of solar energy systems that are not utility-scale. However, correspondence with County officials determined that small-scale solar energy systems are permitted in all zoning districts as an accessory use.

WIND

- The Dorchester County Code does not have specific zoning regulations surrounding large-scale wind energy projects. Correspondence with County officials determined that large-scale wind energy projects are not permitted in any zoning district.

SMALL WIND

- The Dorchester County Code uses the term "Small Wind Energy Systems" to refer to small-scale wind energy projects and defines them as wind energy conversion systems that produce less than 100 kW in output.
    - Permitted as accessory use in all zoning districts.

COMPREHENSIVE PLAN

Link to Comprehensive Plan

- The Dorchester County 1996 Comprehensive Plan does not make specific land use recommendations for the development of large-scale renewable energy facilities.
- Correspondence with Dorchester County officials determined that the County is in the process of updating its Comprehensive Plan.

PACE PROGRAM

Link to PACE Program

- In October 2019, Dorchester County passed Bill No. 2019-6, enabling Maryland's Commercial Property Assessed Clean Energy (MD-PACE) program financing in the County.
    - County Council of Dorchester County Regular Meeting Minutes October 1, 2019 (see link above, p. 5).

PUBLIC POLICY

Link to Bill No. 2017-2

- The Dorchester County Council passed Bill No. 2017-2, which established a tax on utility-scale power-generating facilities including solar fields.
    - County Council of Dorchester County Regular Meeting Minutes April 4, 2017 (see link above, p. 5).

Frederick County Zoning Guide

Solar and Wind Zoning

Link to Solar and Wind Zoning Document

SOLAR

- The Frederick County Zoning Code uses the term "Solar Facility, Commercial" to refer to large-scale solar projects, and defines them as generating electricity in an amount that exceeds 200% of the consumption of the uses on the parcel upon which they are constructed and whose excess electricity is fed into the electric grid.
    - Permitted use, subject to site development plan approval, in the Limited Industrial (LI) and General Industrial (GI) zoning districts.
    - Permitted use, subject to approval of a "Solar Facility, Commercial Floating Zone," in the Agricultural (A) zoning district.

SMALL SOLAR

- The Frederick County Zoning Code defines small-scale solar projects as either "Solar Facility, Accessory" or "Solar Facility, Community Energy Generating System."
    - Solar Facility, Accessory is either mounted on a building or on the ground and generates electricity in an amount that does not exceed 200% of the electric consumption of the principal use.
        - Permitted as accessory use in all zoning districts.
    - Solar Facility, Community Energy Generating System permitted as an accessory in all zoning districts.[1]

WIND

- The Frederick County Zoning Code does not have specific zoning districts designated for large-scale wind projects. Correspondence with County officials determined that large-scale wind energy projects are not permitted in any zoning district.

[1] Satisfies the requirements of § 7-306.2(a)(3) of the Public Utilities Article of the State Code as existing on July 1, 2018, and is part of the Community Solar program approved by the Maryland Public Service Commission.

SMALL WIND

- The Frederick County Zoning Code uses the term "Limited Wind Energy System" to refer to small-scale wind projects and defines them as having a rated nameplate capacity of 50 kW or less and a total height of 150 feet or less.
    - Permitted use in all zoning districts.

COMPREHENSIVE PLAN

Link to Comprehensive Plan

- Frederick County adopted a new comprehensive plan, "The Livable Frederick Master Plan," in September 2019. The Plan does not make specific land use recommendations for the development of large-scale renewable energy facilities.

PACE PROGRAM

Link to PACE Program

- Frederick County is currently enrolled in the Maryland Commercial Property Assessed Clean Energy (MD-PACE) program.
- More information regarding Frederick County's PACE program is available on the County's PACE Loans web page (see link above).

PUBLIC POLICY

- Frederick County does not have any other public policy that concerns the siting of solar or wind projects.

Garrett County Zoning Guide

Solar and Wind Zoning

Link to Solar and Wind Zoning Document

SOLAR

- Garrett County does not have a zoning code for the County as a whole, only municipal-level zoning for the Deep Creek Watershed and the towns of Friendsville, Oakland, Accident, Mountain Lake Park, Grantsville, and Loch Lynn Heights. Garrett County does not have specific zoning districts designated for large-scale solar projects in any of its zoning codes.

SMALL SOLAR

- Garrett County does not have a zoning code for the County as a whole, only municipal-level zoning for the Deep Creek Watershed and the towns of Friendsville, Oakland, Accident, Mountain Lake Park, Grantsville, and Loch Lynn Heights. Garrett County does not have specific zoning districts designated for small-scale solar projects in any of its zoning codes.

WIND

- Garrett County does not have a zoning code for the County as a whole, only municipal-level zoning for the Deep Creek Watershed and the towns of Friendsville, Oakland, Accident, Mountain Lake Park, Grantsville, and Loch Lynn Heights. Garrett County does not have specific zoning districts designated for large-scale wind projects in any of its zoning codes.

SMALL WIND

- Garrett County does not have a zoning code for the County as a whole, only municipal-level zoning for the Deep Creek Watershed and the towns of Friendsville, Oakland, Accident, Mountain Lake Park, Grantsville, and Loch Lynn Heights. Garrett County does not have specific zoning districts designated for small-scale wind projects in any of its zoning codes.

COMPREHENSIVE PLAN

Link to Comprehensive Plan

- The 2008 Garrett County Comprehensive Plan illustrates several areas that County officials believe are suitable for wind power (see link above, Figure 7.2, p. 7-14).

- The Plan is in the process of being revised. Revisions to the Plan are expected to be completed by year-end 2020.

PACE PROGRAM

Link to PACE Program

- Garrett County is currently enrolled in the Maryland Commercial Property Assessed Clean Energy (MD-PACE) program.
- More information regarding the Garrett County's PACE program can be found in the July 2016 Resolution (see link above), which established the program.

PUBLIC POLICY

- Garrett County does not have any other public policy that concerns the siting of solar or wind projects.

Harford County Zoning Guide

Solar and Wind Zoning

Link to Solar and Wind Zoning Document

SOLAR

- The Harford County Zoning Code does not specifically mention guidelines and definitions for large-scale solar projects. Correspondence with County officials determined that Harford County uses the term "Power and Regenerating Plants" to refer to large-scale solar projects.
    - Permitted use, subject to applicable code requirement, in the General Industrial (GI) zoning district.

SMALL SOLAR

- The Harford County Zoning Code does not have specific zoning districts designated for small-scale/accessory solar projects.

WIND

- The Harford County Zoning Code does not specifically mention guidelines and definitions for large-scale wind projects. Correspondence with County officials determined that Harford County uses the term "Power and Regenerating Plants" to refer to large-scale wind projects.
    - Permitted use, subject to applicable code requirement, in the General Industrial (GI) zoning district.

SMALL WIND

- The Harford County Zoning Code uses the term "Small Wind Energy System" to refer to small-scale or accessory wind projects. These projects are defined as having a rated nameplate capacity of 50 kW or less and a total height of 150 feet or less.
    - Permitted use, subject to applicable code requirement, in all zoning districts.

COMPREHENSIVE PLAN

Link to Comprehensive Plan

- The County's Comprehensive Master Plan ("HarfordNEXT") mentions a goal to increase access to alternative energy sources, specifically wind and solar. Implementation includes considering solar farms in zoning districts, identifying local barriers to alternative energy use, and evaluating the viability of small-scale solar on

public schools and county buildings. The Plan also mentions a goal to foster the use of alternative energy sources (i.e., wind, solar, and geothermal) at community facilities.

  - Description and implementation recommendations for alternative energy sources (see link above, Ch. 4, p. 70, Goal ES 5.6).
  - Community Planning Area (see link above, Ch. 8, p. 139, CPA 2.10; and Ch. 8, p. 167, CPA 6.12).

PACE PROGRAM

Link to PACE Program

- Harford County is currently enrolled in the Maryland Commercial Property Assessed Clean Energy (MD-PACE) program.
- More information regarding Harford County's PACE program can be found in the Harford County Code (see link above) under Ch. 123 Finance and Taxation. Article VIII: Clean Energy Loan Program.

PUBLIC POLICY

- Harford County does not have any other public policy that concerns the siting of solar or wind projects.

Howard County Zoning Guide

Solar and Wind Zoning

Link to Solar and Wind Zoning Document

SOLAR

- The Howard County Code refers to large-scale solar projects as "Solar Facility, Commercial" and defines them as a series of ground-mounted solar collectors used to generate photovoltaic power, where less than 50% of the power generated is consumed by the principal use on the site.
    - Permitted use, subject to conditions, in the following zoning districts: RR (Rural Residential), RC (Rural Conservation), Rural Residential – Density Exchange Overlay (RR-DEO), and Rural Conservation (Density Exchange Overlay (RC-DEO).
    - County Preservation Easements restrict the use of large-scale solar projects in the RR, RC, RR-DEO, and RC-DEO zoning districts.

SMALL SOLAR

- The Howard County Code uses the term "Solar Collector, Accessory" to refer to small-scale or accessory solar projects, and defines them as a building-mounted or ground-mounted solar collector that is an accessory use to a principal use and is used for the primary purpose of generating electrical power to be consumed primarily by the principal use.
    - Permitted as accessory use in the following zoning districts: Residential Village Housing (R-VH), Historic Office (HO), Historic Commercial (HC), Manufacturing Heavy (M-2), Residential Single Attached (R-SA-8), Residential Single Cluster (R-SC), Residential Single (R-12 and R-20), Business General (B-2), Planned Employment Center (PEC), Institutional (I), Business Local (B-1), Community Center Transition (CCT), Residential Senior Institutional (R-SI), Residential Apartment (R-A-15 and R-APT), Planned Office Research (POR), Business Rural (BR), Manufacturing Light (M-1), Solid Waste (SW), Planned Golf Course Community (PGCC), Residential Mobile Home (R-MH), Corridor Employment (CE), Corridor Activity Center (CAC), Planned Senior Community (PSC), Residential Environmental Development (R-ED), RR, RC, RR-DEO, RC-DEO, Traditional Neighborhood Center (TNC), and Transit Oriented Development (TOD).

WIND

- The Howard County Code does not have specific zoning districts designated for large-scale wind projects.

SMALL WIND

- The Howard County Code has two categories of small-scale wind energy systems: "Small Wind Energy System, Freestanding Tower" and "Small Wind Energy System, Building Mounted." Both categories must have a rated nameplate capacity of less than 100 kW.
    - Small Wind Energy System, Freestanding Tower
        - Permitted as accessory use in the following zoning districts: Residential Historic Environmental District (R-H-ED), RR, RC, RR-DEO, RC-DEO, R-ED, R-20, R-12, R-SC, R-SA-8, R-A-15, R-APT, I, POR, PEC, BR, CCT, B-1, B-2, SC, M-1, M-2, PGCC, PSC, CE, TOD, CAC, and TNC.
    - Small Wind Energy System, Building Mounted
        - Permitted as accessory use in the following zoning districts: Residential Historic Environmental District (R-H-ED), RR, RC, RR-DEO, RC-DEO, R-ED, R-20, R-12, R-SC, R-SA-8, , R-A-15, R-APT, I, POR, PEC, BR, CCT, B-1, B-2, SC, M-1, M-2, PGCC, PSC, CE, TOD, CAC, and TNC.
    - County Preservation Easements restrict the use of both types in the RR, RC, RR-DEO, and RC-DEO zoning districts.

COMPREHENSIVE PLAN

Link to Comprehensive Plan

- The Howard County Comprehensive Plan, "PlanHoward 2030," does not make specific land use recommendations for the development of large-scale renewable energy facilities. The Plan mentions an ongoing policy goal to implement the County's 2010 Climate Action Plan. The Plan recognizes solar, wind, geothermal, and biofuel as examples of alternatives that may offer reliable sources of fuel in the future.

PACE PROGRAM

Link to PACE

- Howard County is currently enrolled in the Maryland Commercial Property Assessed Clean Energy (MD-PACE) program.
- More information regarding Howard County's MD-PACE program can be found in the Howard County Code (see link above) under Title 20 - Taxes, Charges, and Fees. Subtitle 12 - Clean Energy Loan Program.

PUBLIC POLICY

- Howard County does not have any other public policy that concerns the siting of solar or wind projects.

Kent County Zoning Guide

Solar and Wind Zoning

Link to Solar and Wind Zoning Document

SOLAR

- The Kent County Land Use Ordinance uses the term "Solar Energy System, Utility Scale" to refer to large-scale solar energy projects, and defines them as generating energy primarily for use off-site.
    - Permitted use in the following zoning districts: Agricultural, Resource Conservation, Crossroads Commercial, Commercial, Commercial Critical Area, Employment Center, and Industrial.
    - Permitted use, by special exception, on farmland.

SMALL SOLAR

- The Kent County Land Use Ordinance uses the term "Solar Energy System, Small" to refer to small-scale solar energy projects, and defines them as generating energy primarily for use on-site.
    - Permitted use in all zoning districts.

WIND

- The Kent County Land Use Ordinance has no specific zoning regulations surrounding large-scale wind energy projects. However, in April 2016, the "Renewable Energy Task Force" voted unanimously that utility-scale wind energy systems are not consistent with the intent of the Ordinance or the County's Comprehensive Plan.

SMALL WIND

- The Kent County Land Use Ordinance uses the term "Wind Energy System, Small" to refer to small wind projects.
    - Wind Energy System, Small project that does not exceed 80 feet in total height: permitted as accessory use in all zoning districts.
    - Wind Energy System, Small project that exceeds 80 feet in total height or on parcels less than 20 acres: permitted, by special exception, in all zoning districts.

COMPREHENSIVE PLAN

Link to Comprehensive Plan

- The Kent County Comprehensive Plan does not make specific land use recommendations for the development of large-scale renewable energy facilities. However, the Plan does mention a general goal of identifying any zone locations suitable for large/utility-scale renewable resource facilities that do not impinge on the County's rural character nor its productive agricultural lands.
    - Kent County Comprehensive Plan (see link above): Environmental: Goal: Promote Sustainable Building Practices and Provide an Effective Renewable Resource Strategy (p. 88).

PACE PROGRAM

Link to PACE Program

- Kent County is currently enrolled in the Maryland Commercial Property Assessed Clean Energy (MD-PACE) program.
- More information regarding Kent County's MD-PACE program can be found in the Kent County Code (see link above) under Ch. 152 Taxation. Article VII: Clean Energy Loan Program.

PUBLIC POLICY

- Kent County does not have any other public policy that concerns the siting of solar or wind projects.

Montgomery County Zoning Guide

Solar and Wind Zoning

Link to Solar and Wind Zoning Document

SOLAR

- The Montgomery County Zoning Ordinance uses the term "Public Utility Structure" to refer to large-scale solar projects.
    - Permitted with limited use in the Commercial Residential Town (CRT) and Commercial Residential (CR) zoning districts.
    - Permitted use in the Life Sciences Center (LSC) zoning district.
    - Permitted use, subject to conditions, in the following zoning districts: Agricultural Reserve (AR), Rural (R), Rural Cluster (RC), Rural Neighborhood Cluster (RNC), Residential Estate (RE-2, RE-2C, and RE-1), Residential (R-200, R-90, R-60, and R-40), Townhouse Low Density (TLD), Townhouse Medium Density (TMD), Townhouse High Density (THD), Residential Multi-Unit Low Density (R-30), Residential Multi-Unit Medium Density (R-20), Residential Multi-Unit High Density (R-10), Commercial Residential Neighborhood (CRN), General Retail (GR), Neighborhood Retail (NR), Employment Office (EOF), Light Industrial (IL), Moderate Industrial (IM), and Heavy Industrial (IH).

SMALL SOLAR

- The Montgomery County Zoning Ordinance uses the term "Solar Collection System" to refer to small-scale solar projects. Accessory projects are considered to produce less than 1 MW of capacity.
    - Solar Collection System that produces more than 1 MW of capacity:
        - Permitted with limited use in the following zoning districts: R, RC, RNC,RE-2, RE-2C, RE-1, R-200, R-90, R-60, R-40, TLD, TMD, THD, R-30, R-20, R-10, CRN, CRT, CR, GR, NR, LSC, EOF, IL, IM, and IH.
    - Solar Collection System, Accessory:
        - Permitted as accessory use in all zoning districts.

WIND

- The Montgomery County Zoning Ordinance does not have specific zoning regulations surrounding large-scale wind energy projects. Correspondence with County officials determined that large-scale wind energy projects are not permitted in any zoning district.

SMALL WIND

- The Montgomery County Zoning Ordinance does not have specific zoning districts designated for small-scale/accessory wind projects.

COMPREHENSIVE PLAN

Link to Comprehensive Plan

- The Montgomery County General Plan does not make specific land use recommendations for the development of large-scale renewable energy facilities. The Plan mentions encouraging environmentally preferable alternatives to fossil fuel consumption such as solar power. The Plan was last updated in 1993. Montgomery County is currently in the process of updating its comprehensive Plan.

PACE PROGRAM

Link to PACE Program

- Montgomery County currently administers its own Commercial Property Assessed Clean Energy (C-PACE) program.

PUBLIC POLICY

Link to Bill 18-48

- Montgomery County Zoning Ordinance No. 18-48 (Zoning Text Amendment No. 18-08) was passed in July 2018 by the Montgomery County Council and allows solar collection systems to be added, without an amendment, to a previously approved site plan under certain circumstances.

Prince George's County Zoning Guide

Solar and Wind Zoning

Link to Solar and Wind Zoning Document

SOLAR

- The Prince George's County Zoning Ordinance does not have specific zoning districts designated for large-scale solar projects.

SMALL SOLAR

- The Prince George's County Zoning Ordinance does not have specific zoning districts designated for small-scale/accessory solar projects.

WIND

- The Prince George's County Zoning Ordinance does not have specific zoning districts designated for large-scale wind projects.

SMALL WIND

- The Prince George's County Zoning Ordinance does not have specific zoning districts designated for small-scale/accessory wind projects.

COMPREHENSIVE PLAN

Link to Comprehensive Plan

- The "Plan Prince George's 2035 Approved General Plan" does not make specific land use recommendations for the development of large-scale renewable energy facilities. However, the Plan aims to evaluate the regulations in the zoning ordinance that impact the location, size, and design of alternative energy production facilities.
    - See the link above, Policies and Strategies: Land Consumption and Water Quality: Policy 10 (p. 179).

PACE PROGRAM

Link to PACE Program

- Prince George's County currently administers its own Commercial Property Assessed Clean Energy (C-PACE) program.

PUBLIC POLICY

- Prince George's County is currently undergoing a rewrite of its entire zoning ordinance. The rewrite will include language specific to the zoning of large-scale and small-scale solar and wind projects.

Queen Anne's County Zoning Guide

Solar and Wind Zoning

Link to Solar and Wind Zoning Document

SOLAR

- The Queen Anne's County Code uses the term "Utility Scale Solar Array" to refer to large-scale solar projects and requires that a Utility Scale Solar Array Overlay (USSA) District be created.
    - A USSA district is permitted, subject to conditions, in the Agricultural (AG) and Countryside (CS) zoning districts.
    - A USSA district cannot be created on a parcel with conservation or open space easement as recorded in the Land Records of Queen Anne's County, or within a greenbelt designation or a municipal growth area as identified in the Queen Anne's County Comprehensive Plan.

SMALL SOLAR

- The Queen Anne's County Code uses the term "Small-scale Solar Array" to define small-scale solar projects.
    - Permitted as accessory use in all zoning districts.

WIND

- Queen Anne's County does not have specific zoning regulations surrounding large-scale wind energy projects. Correspondence with County officials determined that large-scale wind energy projects are not permitted in any zoning district.

SMALL WIND

- Queen Anne's County has a wind turbine policy separate from the County Code that is specific to small-scale wind turbines that are no higher than 135 feet and sited on 5 acres or more.
    - Permitted as accessory use, subject to conditions, in all zoning districts.

COMPREHENSIVE PLAN

Link to Comprehensive Plan

- The Queen Anne's County 2010 Comprehensive Plan does not make specific land use recommendations for the development of large-scale renewable energy facilities.

However, the Plan acknowledges the need for more alternative energy methodologies and small-scale energy conservation efforts within buildings.

- Queen Anne's County is in the process of creating a new 2020 Comprehensive Plan.

PACE PROGRAM

Link to PACE

- Queen Anne's County is currently enrolled in the Maryland Commercial Property Assessed Clean Energy (MD-PACE) program.
- More information regarding Queen Anne's County's PACE program can be found in the Queen Anne's County Code (see link above) under Ch. 5, County Finance: Article VIII: Clean Energy Loan Program (Section 5-27).

PUBLIC POLICY

- Queen Anne's County does not have any other public policy that concerns the siting of solar or wind projects.

Somerset County Zoning Guide

Solar and Wind Zoning

Link to Solar and Wind Zoning Document

SOLAR

- The Somerset County Zoning Ordinance uses the term "Solar Energy System, Utility" to indicate a large-scale solar project. A Solar Energy System, Utility must be developed on a Utility Scale Solar Energy Facilities (SEF) Floating Zone, which are subject to approval by the Somerset County Planning Commission based on certain conditions.
    - Utility Scale SEF Floating Zones are permitted, as industrial use, in the Agricultural Residential (AR) and General Industrial (I-2) zoning districts.

SMALL SOLAR

- The Somerset County Zoning Ordinance uses the terms "Solar Energy Facility (SEF), Small" and "Solar Energy Facility (SEF), Medium" to indicate a small-scale solar project. A Small SEF can be used as an accessory to a residential use and generate no more than 999 kV of electricity. A Medium SEF can be used as an accessory to a commercial or industrial use and generate no more than 2 MW of electricity, and is not connected to the grid.
    - Small SEF
        - Permitted as accessory use in the following zoning districts: Agricultural Residential (AR), Conservative (CO), Low-Density Residential (R-1), Medium-Density Residential (R-2), High-Density Residential (R-3), and Maritime-Residential-Commercial (MRC).
    - Medium SEF
        - Permitted as accessory use in the AR, C-1, C-2, I-1, and I-2 zoning districts.

WIND

- The Somerset County Zoning Ordinance uses the term "Wind Energy Systems (as principal use)" to indicate a large-scale wind energy project. The Zoning Ordinance explicitly outlines that large-scale wind energy projects are not permitted in any district.

SMALL WIND

- The Somerset County Zoning Ordinance defines small-scale wind energy projects as "Small Wind Energy Systems," which consist of a single towered wind energy conversion system that does not exceed a total height of 160 feet.
    - Permitted as accessory use in the following zoning districts: Agricultural Residential (AR), Low-Density Residential (R-1), Medium-Density Residential (R-2), High-Density Residential (R-3), and Maritime-Residential-Commercial (MRC).

COMPREHENSIVE PLAN

Link to Comprehensive Plan

- The Somerset County Comprehensive Plan does not make specific land use recommendations for the development of large-scale renewable energy facilities. The cities of Crisfield and Princess Anne have their own comprehensive plans from 2010 and 2009, respectively, neither of which make land use recommendations for the development of large-scale projects.
- Somerset County is currently in the process of creating a new Comprehensive Plan.

PACE PROGRAM

- Somerset County does not currently have a Property Assessed Clean Energy (PACE) program.

PUBLIC POLICY

- Somerset County does not have any other public policy that concerns the siting of solar or wind projects.

St. Mary's County Zoning Guide

Solar and Wind Zoning

Link to Solar and Wind Zoning Document

SOLAR

- The St. Mary's County Comprehensive Zoning Ordinance uses the term "Utility, Major" to refer to large-scale solar energy projects.
    - Permitted use, subject to conditions, in the following zoning districts: Rural Preservation Districts (RPD), Residential Low Density – Transitional (RL-T), Residential Low Density (RL), Industrial (I), and Office and Business Park (OBP).

SMALL SOLAR

- The St. Mary's County Comprehensive Zoning Ordinance does not have specific zoning districts designated for small-scale/accessory solar projects.

WIND

- The St. Mary's County Comprehensive Zoning Ordinance uses the term "Utility, Major" to refer to large-scale wind energy projects.
    - Permitted use, subject to conditions, in the RPD, RL-T, RL, I, and OBP zoning districts.

SMALL WIND

- The St. Mary's County Comprehensive Zoning Ordinance uses the term "Small Wind Energy System" to define small-scale wind energy systems, and defines them as having a capacity of less than 100 kW.
    - Permitted as accessory use in all zoning districts.

COMPREHENSIVE PLAN

Link to Comprehensive Plan

- The St. Mary's County Comprehensive Plan does not make specific land use recommendations for the development of large-scale renewable energy facilities. The Plan does mention encouraging the development of renewable energy as well as clean, non-renewable energy.

PACE PROGRAM

- St. Mary's County does not currently have a Property Assessed Clean Energy (PACE) program.

PUBLIC POLICY

- St. Mary's County does not have any other public policy that concerns the siting of solar or wind projects.

Talbot County Zoning Guide

Solar and Wind Zoning

Link to Solar and Wind Zoning Document

SOLAR

- The Talbot County Code uses the term "Solar Energy System, Large-Scale" to refer to large-scale solar energy projects. Solar Energy System, Large-scale projects generate at least 2 MW of power and utilize ten acres or more.
    - Permitted use, by special exception, in all zoning districts except for the Rural Conservation (RC) district.

SMALL SOLAR

- The Talbot County Code uses the terms "Solar Energy System, Small-Scale" and "Solar Energy System, Medium-Scale" to refer to small-scale solar energy projects.
    - Solar Energy System, Small-Scale projects produce at least 200 kW of power but less than 2 MW, and utilize more than one acre of land but less than ten acres.
        - Permitted as accessory use in all zoning districts.
    - Solar Energy System, Small-Scale projects produce less than 200 kW of power and utilize one acre or less. Any rooftop solar system is considered small-scale.
        - Permitted as accessory use in all zoning districts.

WIND

- The Talbot County Code uses the term "Wind Turbine Production Facility, Small" to refer to large-scale wind energy systems. Wind Turbine Production Facility, Small projects generate at least 100 kW of power and utilize ten acres or more.
    - Permitted use in the Limited Commercial (LC), General Commercial (GC), and Limited Industrial (LI) zoning districts.
    - Permitted use, by special exception, in the Agricultural Conservation (AC) and Countryside Preservation (CP) zoning districts.

SMALL WIND

- The Talbot County Code uses the terms "Wind Turbine Production Facility, Small" or "Wind Turbine System, Small" to refer to small-scale wind energy projects. The total

height of the small wind turbine systems is limited to less than 75 feet and should not exceed production of 100 kW of power on a single site. Wind Turbine Production Facility, Small projects generate at least 100 kW of power and utilize ten acres or more.

- Wind Turbine Production Facility, Small
  - Permitted use in the LC, GC, and LI zoning districts.
  - Permitted use, by special exception, in the AC and CP zoning districts.
- Wind Turbine System, Small
  - Permitted as accessory use in the following zoning districts: Western Rural Conservation (WRC), Town Conservation (TC), Rural Conservation (RC), Rural Residential (RR), Town Residential (TR), Village Mixed (VM), Agricultural Conservation (AC), Countryside Preservation (CP), Limited Commercial (LC), General Commercial (GC), and Limited Industrial (LI).

COMPREHENSIVE PLAN

Link to Comprehensive Plan

- The Talbot County Comprehensive Plan mentions the preference for large-scale solar installations to be given to sites using existing impervious surfaces and discourages placement on prime farmland. The Plan encourages the use of cost-effective renewable energy resources at appropriate scale and on suitable sites.
  - See link above, Chapter 3 Transportation and Utilities: utility policies for establishing large-scale solar installations (pp. 3-12, 3-13).

PACE PROGRAM

Link to PACE Program

- Talbot County is currently enrolled in the Maryland Commercial Property Assessed Clean Energy (MD-PACE) program.
- More information regarding Talbot County's PACE program can be found in the Talbot County Code (see link above) under Chapter 172 Taxation. Section 172-31 Definitions. Section 172-36 Eligibility. Section 172-37 Qualifying Improvements.

PUBLIC POLICY

- Talbot County does not have any other public policy that concerns the siting of solar or wind projects.

Washington County Zoning Guide

Solar and Wind Zoning

Link to Solar and Wind Zoning Document

SOLAR

- The Washington County Zoning Ordinance uses the term "Solar Energy Generating System" to refer to large-scale solar energy projects.
    - Permitted use, by special exception, in the following zoning districts: Agricultural Rural (A(R)), Environmental Conservation (EC), Preservation (P), Industrial Mineral (IM), Planned Industrial (PI), Airport District (AP), Industrial Restricted (IR), and Industrial General (IG).
    - Solar Energy Generating Systems are prohibited to be used in defined Priority Preservation Areas, Rural Legacy Areas, and Antietam Overlay zones.

SMALL SOLAR

- The Washington County Zoning Ordinance uses the term "Solar Collection Systems" to refer to small-scale solar projects.
    - Permitted as accessory use in all zoning districts.

WIND

- The Washington County Zoning Ordinance uses the term "Wind Mill Farm" to indicate a large-scale wind energy project.
    - Permitted, by special exception, in the Rural Village (RV), A(R), EC, and P zoning districts.

SMALL WIND

- The Washington County Zoning Ordinance defines a "Small Wind Energy System" as a single-towered wind energy system that does not exceed 150 ft. in total height or 50 kW in generating capacity.
    - Permitted as accessory use in all zoning districts.

COMPREHENSIVE PLAN

Link to Comprehensive Plan

- The Washington County Comprehensive Plan does not make specific land use recommendations for the development of large-scale renewable energy facilities.
- Washington County is currently in the process of updating its Comprehensive Plan.

PACE PROGRAM

- Washington County does not currently have a Property Assessed Clean Energy (PACE) program.

PUBLIC POLICY

- Washington County does not have any other public policy that concerns the siting of solar or wind projects.

Wicomico County Zoning Guide

Solar and Wind Zoning

Link to Solar and Wind Zoning Document

SOLAR

- The Wicomico County Zoning Code treats a large-scale solar energy project as a "Privately Owned and Operated Utility."
    - Permitted, by special exception, in the following zoning districts: General Commercial (C-2), Light Industrial (I-1), Heavy Industrial (I-2), Agricultural Rural (A-1), Village Conservation (V-C), Residential (R-8, R-15, R-20, REC, and R-30), and Town Transition (TT).

SMALL SOLAR

- The Wicomico County Zoning Code does not have specific zoning districts designated for small-scale/accessory solar projects.

WIND

- The Wicomico County Zoning Code treats large-scale wind energy projects as "Privately owned and operated utility."
    - Permitted, by special exception, in the C-2, I-1, I-2, A-1, V-C, R-8, R-15, R-20, REC, R-30, and TT zoning districts.

SMALL WIND

- The Wicomico County Zoning Code defines "small-scale wind energy systems" as a wind generating system that does not exceed 150 ft. in total height.
    - Permitted as accessory use in all zoning districts.

COMPREHENSIVE PLAN

Link to Comprehensive Plan

- The Wicomico County Comprehensive Plan does not make specific land use recommendations for the development of large-scale renewable energy facilities. The Plan's economic development objectives list does "encourage the development and growth of the local renewable source industry."

PACE PROGRAM

Link to PACE Program

- Wicomico is currently enrolled in the Maryland Commercial Property Assessed Clean Energy (MD-PACE) program.
- More information regarding Wicomico County's PACE program can be found in the Wicomico County Code (link above) under Chapter 30. Clean Energy Loan Program.

PUBLIC POLICY

- Wicomico County does not have any other public policy that concerns the siting of solar or wind projects.

Worcester County Zoning Guide

Solar and Wind Zoning

Link to Solar and Wind Zoning Document

SOLAR

- The Worcester County Code has two different classifications that could refer to large-scale solar projects: "Solar Energy System, Large" and "Solar Energy System, Utility Scale."
- A Large Solar Energy System has a capacity of 200 kW up to 2.5 MW.
    - Large Solar Energy Systems with a minimum of area of 20 acres: permitted use, by special exception, in the Agricultural (A-1 and A-2) and Industrial (I-1 and 1-2) zoning districts.
    - Large Solar Energy Systems with a minimum of area of 30 acres: permitted use, by special exception, in the Estate (E-1), Village (V-1), Neighborhood Commercial (C-1), General Commercial (C-2), and Commercial Marine (C-3) zoning districts.
- A Utility Scale Solar Energy System has a capacity in excess of 2.5 MW and a minimum lot area of 50 acres.
    - Permitted use, by special exception, in the A-1, A-2, E-1, V-1, C-1, C-2, C-3, I-1, and I-2 zoning districts.

SMALL SOLAR

- The Worcester County Code has three different classifications that could refer small-scale solar projects: "Solar Energy System, Small," "Solar Energy System, Medium," and "Solar Energy System, Large."
    - A Small Solar Energy System has a capacity of 5 kW or less.
        - Permitted use in all zoning districts.
    - A Medium Solar Energy System has a capacity of greater than 5 kW but less than 200 kW.
        - Permitted use in all zoning districts.
    - A Large Solar Energy System has capacity of 200 kW to 2.5 MW.
        - Large Solar Energy Systems with a minimum of area of 20 acres: permitted use, by special exception, in the A-1, A-2, I-1, and 1-2 zoning districts.

- Large Solar Energy Systems with a minimum of area of 30 acres: permitted use, by special exception, in the E-1, V-1, C-1, C-2, and C-3 zoning districts.

WIND

- The Worcester County Code defines a large-scale wind energy project as a "Large Wind Energy Conversion System" but does not permit them in any zoning district.

SMALL WIND

- The Worcester County zoning code has three different classifications that could refer small-scale wind projects: "Small Wind Energy Conversion System," "Medium Wind Energy Conversion System," and "Large Wind Energy Conversion."
  - A Small Wind Energy Conversion System has a capacity of 20 kW or less and generates power used primarily for on-site consumption.
    - Permitted use in all zoning districts.
  - A Medium Wind Energy Conversion System has a capacity of 20 kW to 100 kW and generates power used primarily for on-site consumption.
    - Permitted use in all zoning districts.

COMPREHENSIVE PLAN

Link to Comprehensive Plan

- The Worcester County Comprehensive Development Plan does not make specific land use recommendations for the development of large-scale renewable energy facilities.

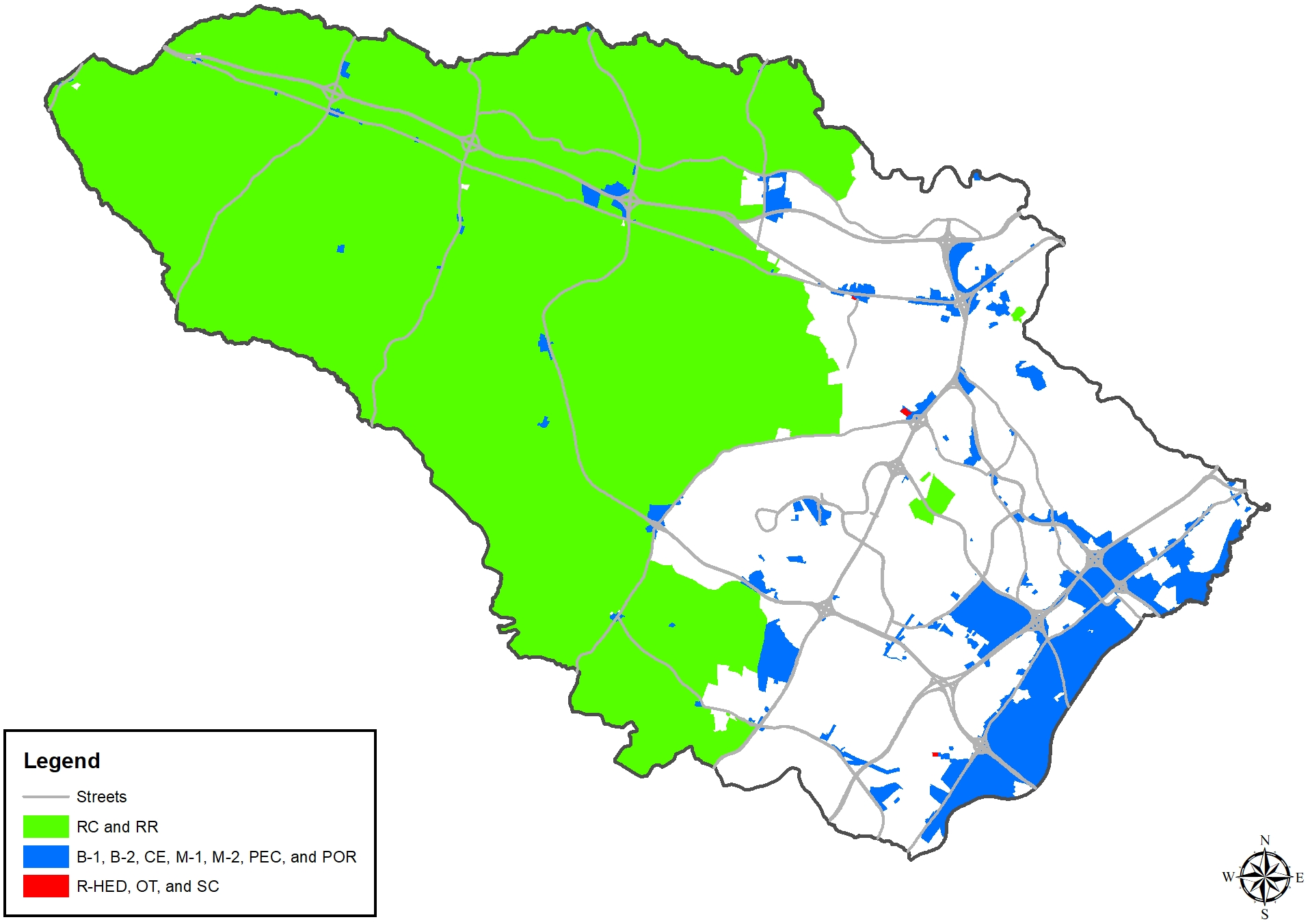
PACE PROGRAM

- Worcester County does not currently have a Property Assessed Clean Energy (PACE) program.

PUBLIC POLICY

- Worcester County does not have any other public policy that concerns the siting of solar or wind projects.

Impacted Areas - ZRA-197



HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
3430 Court House Drive ■ Ellicott City, Maryland 21043 ■ 410-313-2350
Voice/Relay

Amy Gowan, Director FAX 410-313-3467

Subject: General Plan Comments for ZRA-197

To: Geoffrey Goins, Division Chief, Public Service and Zoning, Department of Planning and Zoning (DPZ)

From: Kristin O'Connor, Division Chief, Comprehensive and Community Planning (DCCP), DPZ

Date: January 21, 2021

General Plan

DCCP prepared this memo as an evaluation of ZRA-197 consistency with the County's general plan, *PlanHoward 2030*.

The proposed ZRA includes an amendment for ground-mount solar panels in B-1, B-2, CE, M-1, M-2, POR and PEC Districts as a Conditional Use. Many of these commercial and manufacturing zoning districts are located in the Route 1, Snowden River Parkway, and Route 40 corridors—which are corridors promoted in the general plan as employment-focused, growth corridors. *Plan Howard 2030* economic development policies as they pertain to commercial and industrial growth corridors state the following:

- Policy 5.4 has a goal of enhancing the Route 1 Corridor with a revitalization strategy to achieve its market potential with an implementing action to "[f]ocus on planning efforts to maximize development potential in four types of land-use opportunity areas: redevelopment of highly-visibility employment areas; greenfield development of high-visibility employment areas; major industrial park development, and mixed-use opportunity sites";
- Policy 5.6 supports Class A office, industrial and mixed-use redevelopment in the Snowden River Parkway/GE area, an area with B-1, B-2 and large M-1 parcels; and
- Policy 5.9 has a goal of enhancing the vitality of the Route 40 Corridor with the implementing action that encourages "commercial renovation".

The financial cost of commercial and industrial land in the eastern part of the county will most likely be prohibitive for principal use commercial solar facilities. Therefore, rooftop solar and solar collectors on parking canopies is most likely to be used in the commercial and industrial growth corridors and do not appear to hinder the economic development policies identified in PlanHoward 2030.

HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
3430 Court House Drive ■ Ellicott City, Maryland 21043 ■ 410-313-2350
Voice/Relay

Amy Gowan, Director FAX 410-313-3467

Subject: General Plan Environmental Policy Comments for ZRA-197

To: Geoffrey Goins, Chief, Public Service and Zoning Division, DPZ

From: Beth Burgess, Chief, Resource Conservation Division, DPZ

Date: January 19, 2021

Plan Howard 2030 Environmental Policies and Objectives

The Department of Planning and Zoning, Resource Conservation Division finds that the proposed ZRA-197 is consistent with the environmental policies and actions in Plan Howard 2030, the County's general plan. Plan Howard 2030 contains several policies and implementing actions that support the proposed ZRA-197, which will expand opportunities for the generation of solar powered energy, a renewable energy source, throughout the County.

ZRA-197 is proposed to implement the recommendations of the Howard County Solar Task Force, which was created by Council Resolution 133-2019 to study commercial solar facilities on agricultural land preservation parcels. This Task Force included representatives from the Howard County Agricultural Land Preservation Board, Maryland Clean Energy Advisory Council, Maryland-DC-Delaware-Virginia Solar Energy Task Force, Howard County Farm Bureau, Howard County Soil Conservation District, Maryland Solar United Neighbors, Howard County Environmental Sustainability Board, Howard County Office of Community Sustainability and Howard County Department of Planning and Zoning. The Task Force issued its report on July 24, 2020 with multiple recommendations to increase opportunities for solar energy generation throughout the County and to minimize conflicts between the installation of solar energy facilities on agricultural land preservation parcels.

Plan Howard 2030 contains Policy 4.12, which has a goal to develop "an energy plan that prepares for different future energy scenarios, examines options for various kinds of future energy sustainability, promotes conservation and renewable resources, and sets targets to reduce greenhouse gases." Plan Howard 2030 also contains Policy 5.3, which has a goal to promote "future energy and green industries." By implementing the Task Force recommendations, ZRA-197 helps address implementing actions c., d., e. and g. for Policy 4.12 and implementing action b. for Policy 5.3. (Note that action g. for Policy 4.12 is the same as action b. for Policy 5.3.)

The Task Force reviewed options to improve the current zoning regulations to allow more solar energy installations and streamline the application process, addressing action c. to investigate "development regulations and infrastructure policies related to future energy options" and action g. to explore "evolving energy markets," which revealed "new opportunities to create, store, consume, and invest in energy commodities and related assets." The Task Force included representation from the solar energy industry, in support of action e. to work closely with "businesses and nonprofits to address their energy supply planning and potential infrastructure needs." ZRA-197 expands opportunities for solar energy generation throughout the County, helping to address implementing action d. to implement "the County's 2010 Climate Action Plan," which includes a goal "to educate and include our residents, local businesses, and manufacturers in the development and implementation of climate change strategy, actions, and workable solutions for their homes."

Plan Howard 2030 also contains Policy 4.1, which has a goal to promote "additional agricultural preservation opportunities," with two implementing actions intended to increase the acreage of agricultural land under protective easements. While ZRA-197 does not address this goal directly, it does place limitations on the areal impact of commercial solar facilities on parcels that are already in the Agricultural Land Preservation Program. It also adds an additional review

by the Agricultural Preservation Board to provide design input early in the review process to help minimize the solar facility's impacts to prime agricultural land and agricultural activities. These proposed amendments thereby help further the County's interest in the preservation of agricultural land.