

# Queen Anne's County Solar and Wind Zoning

This document provides a compilation of excerpts from the Queen Anne's County Code applicable to the siting of solar and wind projects. Specifically, the excerpts include definitions of solar and wind projects, zoning exclusions, use regulations, and setback and height regulations for solar and wind structures.

## Guidance for Viewing Excerpts

### SOLAR

#### Summary

- 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.

#### Relevant Sections of the Queen Anne's County Code

- **Chapter 18:1 Zoning and Subdivision Regulations**
  - Appendix a: Glossary: Definitions for "Solar Array", "Solar Energy", "Utility-Scale Solar Array", and "Small-Scale Solar Array" (§18App-1).
  - Article V: District Standards: Conditional uses for Agricultural (§18:1-14) and Countryside Districts (§ 18:1-15). Regulations for Utility Scale Solar Array (USSA) overlay District Part 5 Conditional Uses
  - Article XVII: Procedures and Standards: Regulations for conditional use of solar arrays and changes to setback requirements (§ 18:1-95. S)
- **Queen Anne's County Ordinance 17-15**
  - Article III: Establishment of Zoning Districts
- **Queen Anne's County Ordinance 17-16**
  - Article V: District Standards Housing
- **Queen Anne's County Ordinance 17-17**
  - Article IV Zoning Maps

## SMALL SOLAR

### Summary

- 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.

### Relevant Sections of the Queen Anne's County Code

- **Chapter 18:1 Zoning and Subdivision Regulations**
  - Appendix a: Glossary: Definitions for "Solar Array", "Small-Scale Solar Array" and "Solar Energy" (§18App-1). Chapter 18.1 Zoning and Subdivision Regulations, Part 3 Zoning Districts,
  - Article VI Accessory Uses: Accessory uses and regulations for small scale solar arrays (Section 18:1-49.1).

## WIND

### Summary

- 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.

### Relevant Sections of the Queen Anne's County Code

- No document available for viewing.

## SMALL WIND

### Summary

- 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.

Last Updated: April 2020

## Relevant Sections of the Queen Anne's County Code

- "Queen Anne's County Wind Turbine Policy" - Review Criteria and Procedures

# Queen Anne’s County Code

<http://ecode360.com/7137102> (accessed 12/23/2015)

## CHAPTER 18:1 ZONING AND SUBDIVISION REGULATIONS

### ARTICLE IV. ZONING MAPS

#### *Section 18:1-12. Permitted uses in open space*

- A. The following are permitted or conditional uses allowed in open space areas required by this Chapter [18:1](#). Any use not specifically listed below is not permitted in required open space areas.

	A	B	C	
	Non-contiguous Open Space/TDR	Multifamily/ Manufactured Home Community/ Master Planned Residential Development	Single-Family Cluster Development Single-Family Cluster Development	
			NC	Other
Allowable Uses				
Solar arrays	C	N	N	N

### ARTICLE V. DISTRICT STANDARDS

#### *Section 18:1-14. Agricultural (AG) District*

- C. Conditional uses  
(24) Solar arrays.

#### *Section 18:1-15. Countryside (CS) District*

- C. Conditional uses  
(24) Solar arrays.

COUNTY ORDINANCE NO. 17-15

A BILL ENTITLED

AN ACT CONCERNING Amendments to Queen Anne’s County Zoning Maps to create a Utility Scale Solar Array Overlay District;

FOR THE PURPOSE OF creating the Utility Scale Solar Array Overlay District and amending the Queen Anne's County Zoning Maps to graphically illustrate the location of the Overlay District;

BY AMENDING Sections 18:1-9 of the Code of Public Local Laws of Queen Anne’s County, Maryland and the Queen Anne's County Zoning Maps.

SECTION I

BE IT ENACTED BY THE COUNTY COMMISSIONERS OF QUEEN ANNE’S COUNTY, MARYLAND, that Section 18:1-9 of the Code of Public Local Laws of Queen Anne’s County and the Queen Anne's County Zoning Maps be and are hereby AMENDED to read or appear as follows:

Chapter 18 Land Use and Development

...

Article III: Establishment of Zoning Districts

§ 18:1-9. Zoning Districts Enumerated

For the purpose of this Chapter 18:1 , the County is hereby divided into zoning districts that are designated as follows:

...

**Y. Utility Scale Solar Array Overlay (USSA) District**

SECTION II

BE IT FURTHER ENACTED, that the Queen Anne's County Zoning Maps are amended placing a digitally generated and geo-referenced parcel layer - known as the Utility Scale Solar Array Overlay District - over all lands in Queen Anne's County that are within two (2) miles of electric transmission lines with capacity of at least 69KV as more particularly shown on Exhibit A attached hereto.

BE IT FURTHER ENACTED that upon introduction, this Ordinance shall be referred to the Queen Anne's County Planning Commission for their investigation and recommendation.

SECTION III

BE IT FURTHER RESOLVED that this Ordinance shall take effect on the forty-sixth (46<sup>th</sup>) day following its enactment.

INTRODUCED BY: Commissioner J. Wilson

DATE: September 26, 2017

PUBLIC HEARING HELD: November 28, 2017 @ 6:30 pm

VOTE: 5 Yea 0 Nay

DATE OF ADOPTION: December 12, 2017

EFFECTIVE DATE: January 27, 2018

COUNTY ORDINANCE NO. 17-16

A BILL ENTITLED

AN ACT CONCERNING Amendments to Chapter 18:1 of the Code of Public Local Laws (the Queen Anne’s County Zoning and Subdivision Regulations) Regarding Utility Scale Solar Arrays;

FOR THE PURPOSE OF creating standards and definitions for utility scale solar arrays and allowing such uses under certain conditions in the Utility Scale Solar Array Overlay (USSA) District;

BY ADDING Sections 18:1-39 to the Code of Public Local Laws of Queen Anne’s County, Maryland and BY AMENDING Section 18App-1 to add definitions.

SECTION I

BE IT ENACTED BY THE COUNTY COMMISSIONERS OF QUEEN ANNE’S COUNTY, MARYLAND, that Section 18:1 of the Code of Public Local Laws of Queen Anne’s County be and is hereby AMENDED to add Section 18:1-39 which shall read as follows:

Chapter 18 Land Use and Development

...

Article V: District Standards Housing

§ 18:1-39 Utility Scale Solar Array (USSA) District

A. Purpose.

(1) To create a zone to allow Utility Scale Solar Arrays, as defined in Chapter 18App: Appendix a: Glossary, in a specified area of the County,

(2) To add additional requirements for Utility Scale Solar Arrays, including setbacks from residential and other uses.

(3) To provide landscape screening from adjacent properties, roads, rights-of-way to prevent glare,

noise, visually unattractive appearance or other adverse impacts to adjoining properties

(4) To provide for the removal of Utility Scale Solar Arrays at the termination of the use.

B. Utility Scale Solar Arrays:

(1) Shall be permitted only as a conditional use in the Agricultural (AG) and Countryside (CS) Districts within a two (2) mile radius on either side of the electric transmission lines with a capacity equal to or greater than 69 kV as identified on the Utility Scale Solar Array Overlap (USSA) District map,

(2) Shall not be on a parcel with conservation or open space easement(s) as recorded in the Land Records of Queen Anne's County or otherwise designated through agreement,

(3) Shall not be on a parcel within a greenbelt designation or a municipal growth area as identified in the 2010 Queen Anne's County Comprehensive Plan as amended or a Queen Anne's County municipality's community plan,

(4) Shall not be permitted on a parcel reconfigured through administrative subdivision for the purpose of adding additional acreage to the area available for Utility Scale Solar Arrays,

(5) Shall comply with all applicable federal and state regulations, including by not limited to obtaining a certificate of public convenience and necessity from the Public Service Commission if required, and in the removal and disposal of the Utility Scale Solar Array and all of its components,

(6) Shall comply with all standards in §18-1-95 S.

SECTION II

BE IT FURTHER ENACTED, that Section 18App-1 (Definitions) is amended to add the following definitions:



**SMALL - SCALE SOLAR ARRAY** is a private use facility generating solar energy for a single residential home or community, a private entity or business or institutional use, may be ground mounted or roof mounted, but does not prohibit the sale of excess generation back to a local utility company.

**UTILITY SCALE SOLAR ARRAY** is a commercial production facility that converts sunlight into electricity, via photovoltaics or various other solar technologies on typically ground-mounted systems, for the purpose of wholesale or retail sale of generated electricity to a utility company and off-site customers.

BE IT FURTHER ENACTED that upon introduction, this Ordinance shall be referred to the Queen Anne's County Planning Commission for their investigation and recommendation.

SECTION III

BE IT FURTHER RESOLVED that this Ordinance shall take effect on the forty-sixth (46<sup>th</sup>) day following its enactment.

INTRODUCED BY: Commissioner J. Wilson

DATE: September 26, 2017

PUBLIC HEARING HELD: November 28, 2017 @6:35 pm

VOTE: \_\_\_\_\_ Yea \_\_\_\_\_ Nay

DATE OF ADOPTION: \_\_\_\_\_

EFFECTIVE DATE: \_\_\_\_\_

COUNTY ORDINANCE NO. 17-17

A BILL ENTITLED

AN ACT CONCERNING Amendments to Chapter 18:1 of the Code of Public Local Laws (the Queen Anne's County Zoning and Subdivision Regulations) Regarding Conditional Use Standards for Solar Arrays, Standards for Accessory Solar Arrays, and Elimination of Solar Arrays in Open Space;

FOR THE PURPOSE OF establishing guidelines for the siting of small and utility scale solar arrays and accessory facilities, submission requirements for conditional use applications, landscaping and screening requirements for solar arrays and prohibiting solar arrays in open space;

BY REPEALING AND RE-ENACTING Sections 18:1-12 and 18:1-95.S of the Code of Public Local Laws of Queen Anne's County, Maryland and by ADOPTING §18:1-49.1 as an addition to the Public Local Laws of Queen Anne's County, Maryland.

SECTION I

BE IT ENACTED BY THE COUNTY COMMISSIONERS OF QUEEN ANNE'S COUNTY, MARYLAND, that Section 18:1-12 of Public Local Laws of Queen Anne's County be and is hereby REPEALED and RE-ENACTED to read as follows:

Part 3 Zoning Districts

Article IV Zoning Maps

§18:1-12 Permitted uses in open space

- A. The following are permitted or conditional uses allowed in open space areas required by this Chapter 18:1. Any use not specifically listed below is not permitted in required open space areas.  
[Amended 6-12-2007 by Ord. No. 06-22; 8-19-2008 by Ord. No. 08-15; 12-13-2011 by Ord. No. 11-07; 8-13-2013 by Ord. No. 13-15]

A  
Non-

B  
Multifamily/

C  
Single-Family

Allowable Uses	contiguous Open Space/TDR	Manufactured Home Community/ Master Planned Residential Development	Cluster Development
			NC Other
Solar arrays	C	N	<del>N</del> N

SECTION II

BE IT ENACTED BY THE COUNTY COMMISSIONERS OF QUEEN ANNE'S COUNTY, MARYLAND, that Section 18:1-95.S of Public Local Laws of Queen Anne's County be and is hereby REPEALED and RE-ENACTED to read as follows:

Chapter 18 Land Use and Development

...

S. Solar arrays.

(1) Purpose and intent. The purpose of this subsection is to establish guidelines for the siting of a utility scale solar array and accessory equipment, buildings or facilities that generate, maintain, operate, manage, store, distribute and transmit power, other than facilities designed for small scale solar array applications.

(a) The goals of this subsection are to:

[1] Protect existing residential areas and land uses from potential adverse impacts, while accommodating utility scale solar arrays in the County's solar array overlay map.

[2] Encourage the configuration of solar arrays so that adverse visual impacts are minimized through careful design, siting, and landscaping screening and buffering.

[3] Encourage the configuration of solar arrays so that the health, safety, and general welfare of the public are protected.

(2) All applications for zoning permits for solar arrays requiring conditional use

approval shall, in addition to what is otherwise required for a conditional use permit, present a special application in accordance with § 18:1-143 to the Planning Commission during a public meeting. The Planning Commission shall forward its report and recommendations to the Board of Appeals within 60 days of the Planning Commission's review. The Board of Appeals shall not render its decision until the Planning Commission recommendations have been received and reviewed.

**(3) Submission requirements for Board of Appeals conditional use approval.**

**(a) In addition to other conditional use requirements set forth in Chapter 18:1, Part 5, Article XVII, applications for utility scale solar arrays shall provide and demonstrate the following:**

**[1] Site plan level information with engineered construction drawings, including but not exclusive to proposed grading, proposed equipment and/or storage structures and shelters, all existing structures, existing and proposed landscaping, site access, and environmental features on the site.**

**[2] A written statement that describes the project including the anticipated generating capacity, the proposed type, size, and cost of the solar panels, the intended length of operation, and general information about the applicant and if possible, future operators.**

**[3] A stormwater management plan that is in accordance with all County and State requirements showing that there is no discharge that causes degradation of County or State property or waters.**

**[4] Provide evidence that lighting shall be in accordance with § 18:1-85.C, Exterior lighting standards, of this chapter.**

**[5] Signage will be in accordance with Article XII.**

**[6] Site circulation, parking, and interior access as well as emergency vehicle access, including where construction vehicles and materials will be stored while under construction.**

**[7] Projected trip generation information regarding site preparation, construction, and operation, which may include local traffic conditions, roadway conditions, and school bus schedules.**

[8] Existing conditions, including documentation of consultation with Maryland Historic Trust, shall show historic structures or features or other heritage and cultural resources. The utility scale solar array shall minimize adverse impacts to view sheds of designated historic sites and scenic corridors, and further, shall not be located in a scenic byway.

[9] Identification of any public or private runway, airstrip or airport within one mile of the proposed solar array, and provision of any FAA/MAA clearance that may include a glare analysis other documentation as necessary.

[10] To the maximum extent practicable, the solar arrays shall be sited using natural topography and vegetation to buffer it from the view of adjacent properties and roads and/or rights of way.

**(b) Environment:**

[1] All forested areas impacted or proposed for removal for construction shall be mitigated in accordance with Chapter 18:2, Forest Conservation Act.

[a] If reforestation is required, planting may be incorporated as landscaping per §18:2-14.A.

[2] Show that the gross usable area for panels will exclude wetland areas that are regulated by the Maryland Department of the Environment or the U.S. Department of the Interior (administered by the U.S. Army Corps of Engineers). Impacts associated with access or interior roads and utility crossings shall provide the necessary Authorization for any disturbances.

[3] All natural resources are to be identified and protected in accordance with Chapter 18:1, Part 4, Article IX.

[4] Identification on the site plan of the site's soil composition. Existing top soil shall not be removed from the site.

[5] Provide a detailed landscape plan, which is a combination of plantings, existing vegetation, fencing, and if applicable, berms, and demonstrating the following:

[a] A vegetated buffer that is a minimum of 50 feet wide

around the perimeter of the site area of the utility scale solar array s which provides screening from adjacent properties and residential uses and roads and/or rights-of-way. This buffer may be located within the setback.

[b] The plan shall identify the location and general size and composition of existing vegetation. Healthy existing vegetation within the designated buffer area may be used to satisfy the specific buffer standards when it is identified as to what standards it meets under [f] of this section. Where existing vegetation is retained, any required berm installation may be waived in whole or in part by the Board of Appeals. In the event that healthy vegetation which is intended to meet the buffer planting requirements is cleared, damaged or destroyed during construction, the vegetation shall be replaced with the same species or with an approved substitute. The removal of any existing vegetation under a waiver, shall void such waiver received and a revised landscape plan must be submitted.

[c] Non-invasive native plant species are recommended. Non-native plant material shall not total more than fifty percent (50%) of all plantings.

[d] The plan shall be prepared by a licensed landscape architect registered in the State of Maryland.

[e] Where a phased construction plan is proposed, the landscape plan shall identify the phasing of the plantings applicable to each construction phase.

[f] To ensure adequate variety, and avoid monotony and uniformity within the buffer, plant materials shall not include more than twenty-five percent (25%) of any single species. The vegetation shall be thickly planted and of such species that it will provide an opaque visual barrier that obscures the utility scale solar array from sight once the vegetation reaches maturity or within five years, whichever comes first. Plantings shall include a mix of evergreen and deciduous trees, shrubs, and beneficial habitat as follows:

(1) A minimum of two staggered rows of evergreen trees that at installation, shall be at least 6 feet in height, each planted no more than 10 feet apart. Evergreen tree species shall be a varied mixture of compatible types and achieve a height of eight (8) feet in a minimum of 2 years.

(2) In addition to the evergreen trees, native deciduous or shade trees with a minimum size at installation of 2 inch caliper will be interspersed to enhance the evergreen screening along with understory trees with a minimum size at installation of 1 inch caliper or six (6) feet in overall height.

(3) Shrubs with a minimum size at installation of 24 inches in height or 30 inches in spread.

(4) The buffer shall include a flowering ground cover for pollinators or other beneficial habitat. The ground cover seed mixture shall include a minimum of 10 plant species with a minimum of 2 flowering seasons.

(5) The height of proposed plantings may require alternatives based upon the site elevation and visibility from adjacent properties and roads and/or rights of ways. If necessary, an elevation or perspective illustration exhibit shall be provided with viewpoints from relevant locations around the site.

[g] A landscape berm shall be provided at a minimum of three (3) feet high to assist in screening. The design of the berm shall be such that the natural drainage patterns of the site will not be altered. The requirement of providing a landscape berm may be waived in part or in total by the Board of Appeals subject to the following conditions:

(1) A minimum of two staggered rows of evergreen trees that at installation shall be at least 8 feet in height, each planted no more than 10 feet apart.

(2) Interspersed shade trees with a minimum size at

installation of 2 ½ inch caliper.

(3) Understory trees with a minimum size at installation of 1 ½ inch caliper or 6 feet in overall height.

(4) Shrubs with a minimum size at installation of 30 inches in height.

[h] Irrigation Standards - To assist in maintaining plant materials in a healthy condition, all newly created landscape buffer areas shall be watered in a manner adequate to ensure its establishment and survival. The landscape plan shall include a watering schedule appropriate for the proposed plantings, which may include service by on-site irrigation or water truck, until the plant material is sufficiently established to survive on natural soil moisture. An irrigation system is subject to the following:

(1) The irrigation system shall be designed to prevent runoff, low head drainage, overspray, or other similar conditions where irrigation water flows onto non-targeted areas such as adjacent properties, roadways, or structures.

(2) All automatic irrigation systems shall be designed to minimize water usage, and shall be manually shut off during water emergencies or water rationing periods.

(3) An alternative form of irrigation for a particular site may be approved or waived through the applicable review process upon determining that underground irrigation is not necessary for the type of plant material being proposed.

[i] A maintenance agreement for the landscape plan shall be provided with a surety or other financial assurance per Part 7, Article XXVII of Chapter 18 to cover replacement of the plantings and/or irrigation system for any failed plantings and/or irrigation system. All plantings shall be maintained in a live, healthy condition for the duration of



the solar array use and shall be replaced by the solar array operator as necessary to maintain all required screening.

[j] The surety may be provided on a phased basis per the landscape phasing plan, and shall be held by the County for a period of 3 years following planting, after which the County, upon satisfactory inspection of the landscape buffer, may release 50% of the surety. After an additional 2 years, to ensure proper survival and maintenance of the planted material, and upon satisfactory inspection, the County may release the remainder of the surety. The County reserves the right to inspect and require replacement of failed plant material for the duration of the solar array.

**(c) Setbacks:**

[1] 75 feet from any lot line

[2] 100 feet from any road and/or right-of-way

[3] 150 feet from any residential use or zoning district

[4] Setbacks may be reduced to the minimum required for non-residential development with written consent from the property owner(s) whose property is adjacent to the area for which the setback reduction is sought.

[5] Setbacks shall be measured from the nearest solar panel/structure within the solar array, excluding security fencing, screening, access roads, and berms.

**(4) Solar arrays shall be constructed and maintained according to following:**

(a) If solvents are required for cleaning of solar modules, they must be biodegradable.

(b) All broken or waste solar modules shall be removed from the site within 60 days of being taken out of service.

(c) All wiring not on the solar arrays shall be underground except where necessary to connect to the public utility.

(d) Any required utility right-of-way shall be secured through an

easement, lease, service agreement or other legally binding document.

(e) The solar array shall be enclosed by a fence or other appropriate barrier at the interior edge of the required landscape buffer or immediately adjacent to the solar array. The fence or barrier shall:

[1] Secure the facility at all times and prevent unauthorized persons or vehicles from gaining access.

[2] All access gates will provide a sign that identifies the responsible parties or owners and contact information.

[3] Be a maximum of 8 feet in height. Wire mesh shall be green vinyl. Barbed or razor wire is prohibited.

(f) Provide documentation that noise generated by the facility shall be limited to 60 DBA as measured at the property line except when a back-up generator is needed for maintenance. Construction on the site is exempt from this standard.

(g) Solar arrays, including the electrical and mechanical components, shall conform to relevant and applicable local, state and national codes.

(h) To protect adjacent properties, and not interfere with roadways or create a safety hazard, evidence shall be provided that the solar panels are designed to avoid glare and/or reflection with anti-reflective coating or non-glare technology and if necessary, have been evaluated with a solar glare hazard and analysis tool.

**(5) Decommissioning and Abandonment:**

(a) A bond or other financial assurance shall be required to assure complete removal of a utility scale solar array. The financial assurance shall be renewable or require the obligor to provide the County notice of its expiration. The amount shall include a mechanism for calculating increased removal costs due to inflation to ensure the amount is adequate for the cost of removal and restoration of the site. A financial assurance provided to satisfy the conditions of the Maryland Public Service Commission's Certificate of Public Convenience and Necessity may also satisfy this requirement provided it complies with the foregoing and is enforceable by the County. Removal shall occur within one (1) year of the earlier of:

[1] The end of life of the solar array with a decommissioning plan;  
or

[2] Abandonment .

(b) The operator of a solar array shall provide written notice to Queen Anne's County whenever the solar array is out of active production for 6 or more months.

(c) Any utility scale solar array that has not operated for a continuous period of 12 months shall be considered unused and abandoned and the conditional use will expire unless the Board of Appeals grants an extension. The owner of the solar array may present substantial evidence that cessation of the solar array occurred from causes beyond the owner's reasonable control, that there is no intent to abandon the solar array, and that resumption of the solar array is reasonably practicable.

(d) Removal of a solar array and restoration of the site shall occur within 1 year of receipt of notice from Queen Anne's County notifying the owner of the equipment removal requirement. Removal includes removing any underground structures or supports and electrical transmission wire. All materials must be legally removed from the site. The site shall be restored to its original condition after removal when abandoned or in accordance with a decommissioning plan.

(e) A decommissioning plan shall include but is not limited to:

[1] The expected life of the solar array.

[2] Time frame for decommissioning of the solar array.

[3] An estimate of the costs associated with the removal of the solar array.

[4] Proposed stabilization measures including an approved sediment and erosion control plan.

[5] Removal of all above and underground equipment, structures, fencing, and access roads.

[6] Only like-kind topsoil may be used for restoration.

[7] Legal documents shall be created outlining the legal

responsibility for any environmental pollution that occurs after the solar array is removed.

[8] Any alteration to the decommissioning plan or necessary restoration shall require Board of Appeals approval.

[9] An End Use plan showing the following:

[a] The proposed condition of the site once the solar array has been removed.

[b] The property owner may request to retain vegetation planted and/or berms that were required by the solar array use, as well as access or interior roads, and fencing.

[c] If the End Use is to be open space, then documentation shall be provided in the form of restrictive covenants.

[d] Any afforestation or reforestation or other vegetative planting.

### SECTION III

BE IT FURTHER ENACTED, that a new Section 18:1-49.1 entitled "Small Scale Solar Arrays" is ADOPTED as an addition to Section 18:1 of the Public Local Laws of Queen Anne's County, Maryland which shall read as follows:

#### §18:1-50. Small Scale Solar Arrays

As an accessory use, small scale solar arrays will be designed and intended to offset part or all of the beneficiary's requirements for energy consumption provided that:

##### A. Siting and location

1. Is located on the beneficiary's premises or shared premises for the beneficiary's use.
2. Is secondary to the beneficiary's use of the premises.
3. When mounted on a roof:
  - a. Shall not extend beyond the surface of the roof by more than necessary for proper operation or a maximum of 10 feet above a roof.
  - b. The total height of the building or structure, including the solar panels or collection devices, shall comply with the height regulations established in this Chapter.
4. When mounted on the ground:

- a. Shall meet all accessory setbacks on residential properties.
- b. When located on a residential property, shall be located only in side or rear yards
- c. If constructed as a roof above a parking area, shall be subject to applicable height limitations.
- d. When located on a commercial or institutional property, shall meet all required setbacks.

#### B. Installation

1. Certification of the structural safety of the system must be provided to ensure that the system does not cause a hazard to the health, safety, or welfare of adjacent properties.
2. All roof mounted systems shall provide evidence of compliance with fire safety codes and be accessible in the event of emergency.
3. Residential applications shall have a safety mode system capable of shutdown via a clearly marked and readily accessible switch.

#### C. Performance standards

1. Submittal of a plan or survey with existing conditions and structures that shows where the solar array is to be located.
2. All setbacks will be shown with distances indicated from property lines.
3. The plan shall show that any glare, glint, or reflection from the solar array is oriented away from adjacent residences or buildings.
4. The solar panels or devices proposed will be identified on the plan and show that they are designed with anti-reflective coating.
5. If any lighting is proposed for security purposes, all lighting must comply with §18:1-85.
6. Shall comply with Stormwater Management regulations.
7. When located on a commercial property shall not exceed the permitted impervious surface limitation.
8. If located in the Critical Area, shall comply with lot coverage limitations.

#### 9. Environment

##### a. Landscaping and screening

- i. Shall be screened from public view to the maximum extent practicable.
- ii. Natural features and existing vegetation may be used to screen a solar array from adjacent residences and properties
- iii. Screening shall be designed on a landscape plan and may consist of fences, berms, or vegetation that sufficiently screen the solar arrays at the time of installation.
- iv. All vegetation planted for screening shall be maintained for the duration of the solar array 's operation via a maintenance agreement.
- v. A landscape surety shall be provided. The surety will be held by the County for up to 3 years and upon inspection, may release up to 50% and then held for 3 additional years

to determine the plant material has been maintained in good health. The County reserves the right to inspect and require replacement of plant material.

- b. Solar arrays shall not be located in floodplains without proper review and approval of the Floodplain Manager.
- c. No disturbance to wetlands is permitted.
- d. No forest or woodland may be cleared without first complying with the Forest Conservation Act, §18:2.

#### SECTION IV

BE IT FURTHER ENACTED that upon introduction, this Ordinance shall be referred to the Queen Anne's County Planning Commission for their investigation and recommendation.

#### SECTION V

BE IT FURTHER RESOLVED that this Ordinance shall take effect on the forty-sixth (46<sup>th</sup>) day following its enactment.

INTRODUCED BY: Commissioner Moran

DATE: September 26, 2017

PUBLIC HEARING HELD: January 23, 2018

VOTE: 4 Yea 0 Nay (Commissioner Buckey absent)

DATE OF ADOPTION: January 23, 2018

EFFECTIVE DATE: March 10, 2018

# Queen Anne's County Wind Turbine Policy

## Review Criteria and Procedures

### □ Before You Start

Queen Anne's County encourages the use of alternative energy sources, such as, small wind energy turbines, when practicable. Unlike other types of alternative energy sources, such as solar or geothermal systems, wind energy systems have unique characteristics that must be considered in order to comply with established zoning and building regulations. County Staff will consider the following review criteria and procedures when evaluating zoning certificate and building code permit requests to ensure that these systems do not have the unintended consequence of creating a noise nuisance for neighbors, create potential safety hazards, and comply with applicable zoning and building requirements. We want to support clean and safe energy, but please make sure that you are investing in a wind energy system that also complies with the applicable local zoning and building regulations. The U.S. Department of Energy classifies most of Queen Anne's County as marginal for wind energy potential; however, if wind energy is the choice for you, then here are some things to consider before investing in a wind energy system to help ensure that your experience is positive and productive:

- Zoning Certificates are required for wind turbines not attached to a structure;
- Building Code Permits are required for wind turbines attached to a structure;
- Electrical Permits and Inspections are required for all wind turbines;
- Height and Setback limits are established for each zoning district;
- Board of Appeals approval is necessary for height variances;
- Board of Appeals approval is necessary for multiple turbines; and
- For-Profit Commercial ventures are prohibited.

Each property has unique conditions, please check with the Queen Anne's County Land Use and Growth Management Department before you purchase your system to learn how these requirements may affect your circumstance.



# Queen Anne's County Wind Turbine Policy

## Review Criteria and Procedures

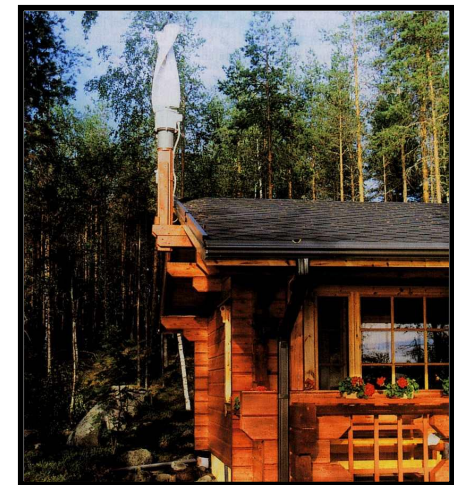
### □ Building Permits and Inspection

A zoning certificate is required for all wind turbines not attached to structure and a building code permit and structural inspection are necessary for all wind turbines attached to a structure. Zoning certificate and building code permit applications for wind energy systems shall be accompanied by standard drawings of the wind turbine structure, including the tower, base, footings, guy wires and site plan (showing the location of the proposed small wind energy system and the locations of all existing buildings and structures within a 150 foot radius of the small wind energy system, and property lines to scale along with distances). An engineering analysis of the tower showing compliance with the Uniform Statewide Building Code and certified by a licensed professional engineer shall also be submitted.

### □ Electrical Permits and Inspection

An electrical permit, obtained by a master electrician, licensed in Queen Anne's County and inspection for compliance with the 2008 National Electrical Code are also required for all wind turbines. Electrical generation by small wind energy systems is intended for individual use and on-site consumption. Electrical grid-tie is permitted; however, connection into the electrical grid, for for-profit commercial ventures, is prohibited and is regulated by the Public Service Commission. Applicants shall certify that they will comply with the utility notification requirements contained in the Maryland net metering law, unless the applicant intends, and so states on the application, that the system will not be connected to the electricity grid, for for-profit commercial purposes. Building code permit applications for wind turbines shall be accompanied by a line drawing of the electrical components in sufficient detail to allow for a determination that the manner of installation conforms to the National Electrical Code. This information may be supplied by the manufacturer.

Horizontal-Axis System



Vertical-Axis System





# Queen Anne's County Wind Turbine Policy

## Review Criteria and Procedures

### □ Accessory Structures, Setbacks and Noise

Wind turbines in Queen Anne's County are considered accessory structures and are only required to meet the accessory structure setback for the particular zone as provided in Chapter 18, Zoning and Subdivision Regulations. Setback from property lines, road right of way, utility right of way and residential structures equal to the height of the turbine, plus 10 feet, is encouraged. Audible sound due to wind turbines should not exceed fifty-five (55) dBA at the hub, or less at any measured distance, as supplied by the manufacturer. The siting of wind turbines within the 100 foot Critical Area buffer should be prohibited. Attachment of communications antennae, satellite disks, microwave disks, and anything other than what is necessary for the operation of the wind turbine should be prohibited. One small wind turbine per lot should be sufficient to generate enough power for most applications; however, if more than one wind turbine is necessary, then approval from the Board of Appeals is required.



### □ Agriculturally Assessed Property

On agriculturally assessed property, 5 acres or more, where the wind turbine is accessory to a farm operation, the hub of the wind turbine may be no higher than 135 feet.



# Queen Anne's County Wind Turbine Policy

## Review Criteria and Procedures

### □ Residential Lots

Residential lots less than 2 acres are encouraged to consider using solar, geothermal, or vertical-axis, low profile structural or roof mounted type wind turbine systems as an alternative energy source to reduce potential noise conflicts.

Any residential lot may have a stand-alone pole or lattice mounted wind turbine no higher than 20 feet, measured at the hub. The wind turbine should also be located away from the property line a distance of at least equal to the height of the wind turbine hub. The Board of Appeals may grant an additional foot of height, up to 20 feet, for every additional foot of separation provided from the property line. Audible noise should not exceed fifty-five (55) dBA at the hub, or less at any measured distance, as supplied by the manufacturer.

If there are existing trees that would impede the effectiveness or feasibility of the wind turbine or would otherwise need to be removed to accommodate the wind turbine, then the Board of Appeals may consider a height variance for a stand-alone pole or lattice mounted wind turbine hub not to exceed 30 feet above the mature tree height or 80 feet, whichever is less; and providing that the wind turbine is at least equal to the height of the wind turbine from the property line and does not exceed fifty-five (55) dBA at the hub, or less at any measured distance, as supplied by the manufacturer.

Stand Alone Horizontal-Axis



Vertical-Axis Roof Mount



# Queen Anne's County Wind Turbine Policy

## Review Criteria and Procedures

### □ Commercial/Industrial Zoned Property

On commercial and industrial zoned property, the hub of the wind turbine may be no higher than 45 feet. The Board of Appeals may grant an additional foot of height, up to 20 feet, for every additional foot of separation provided from the property line. If there are existing trees that would impede the effectiveness or feasibility of the wind turbine or would otherwise need to be removed to accommodate the wind turbine, then the Board of Appeals may consider a height variance for a stand-alone pole or lattice mounted wind turbine hub not to exceed 30 feet above the mature tree height or 80 feet, whichever is less; and providing that wind turbine is located at least equal to the height of the turbine, plus 10 feet, from the property line.

### □ Wind Measuring Devices (Anemometers)

The Board of Appeals may grant the temporary use of wind measuring devices, up to one year, to measure wind and wind energy generation potential. For residential lots of less than 2 acres, the height may not exceed 100 feet and is not located within the height, plus 10 feet, from an adjacent residential structure. For residential lots greater than 2 acres; commercial; industrial; or agricultural properties, the height may not exceed 150 feet and is not located within the height, plus 10 feet, from an adjacent residential structure.



Contact Queen Anne's County Department of Land Use, Growth Management & Environment for more information.

160 Coursevall Drive, Centreville, MD 21617 (410)758-4088

Illustrative photos from multiple internet sources.

