



**DIVISION OF PLANNING
FREDERICK COUNTY, MARYLAND**

Winchester Hall 12 East Church Street Frederick, Maryland 21701 (301) 600-1138

To: Board of County Commissioners

FROM: Larry Smith, Zoning Administrator

DATE: April 28, 2009

RE: Public Hearing for ZT-09-02 "Wind/Solar Energy Text Amendment"

ISSUE:

Should the Board of County Commissioners (BOCC) approve an ordinance to add the following new sections §1-19-8.205.4 to provide for a Solar Collection System, §1-19-8.205.5 to provide for a Solar Array, §1-19-8.205.6 to provide for Limited Wind Energy Systems, and to amend §1-19-11.100 by adding definitions for Solar Array; Solar Collection System; Wind Energy System; Limited Wind Energy System; Wind Energy System Total Height; Wind Generator; and Wind Tower?

BACKGROUND

The Board of County Commissioners (BOCC) directed staff on February 24, 2009, to remove the solar and wind energy draft text from the Agricultural (A) and Resource Conservation (RC) zoning ordinance update, and move it forward as a separate text amendment.

This issue came to light due to the significant interest and number of requests submitted to County Staff. Staff has received numerous requests to construct Wind/Solar Energy Systems but has been unable to approve such applications without appropriate provisions in the County Code.

PROPOSED TEXT AMENDMENT

PROPOSED TEXT AMENDMENT:

[Additions are shown in capitals and bold type; deletions are shown as strike-through.]

ARTICLE VIII: SPECIFIC USE REGULATIONS
DIVISION 2. ACCESSORY USES

~~§1-19-8.200.3 RESERVED~~ **§ 1-19-8.205.4. SOLAR COLLECTION SYSTEM.**

A SOLAR COLLECTION SYSTEM IS PERMITTED IN ANY ZONING DISTRICT ON THE ROOF OR EXTERIOR WALLS OF STRUCTURES.

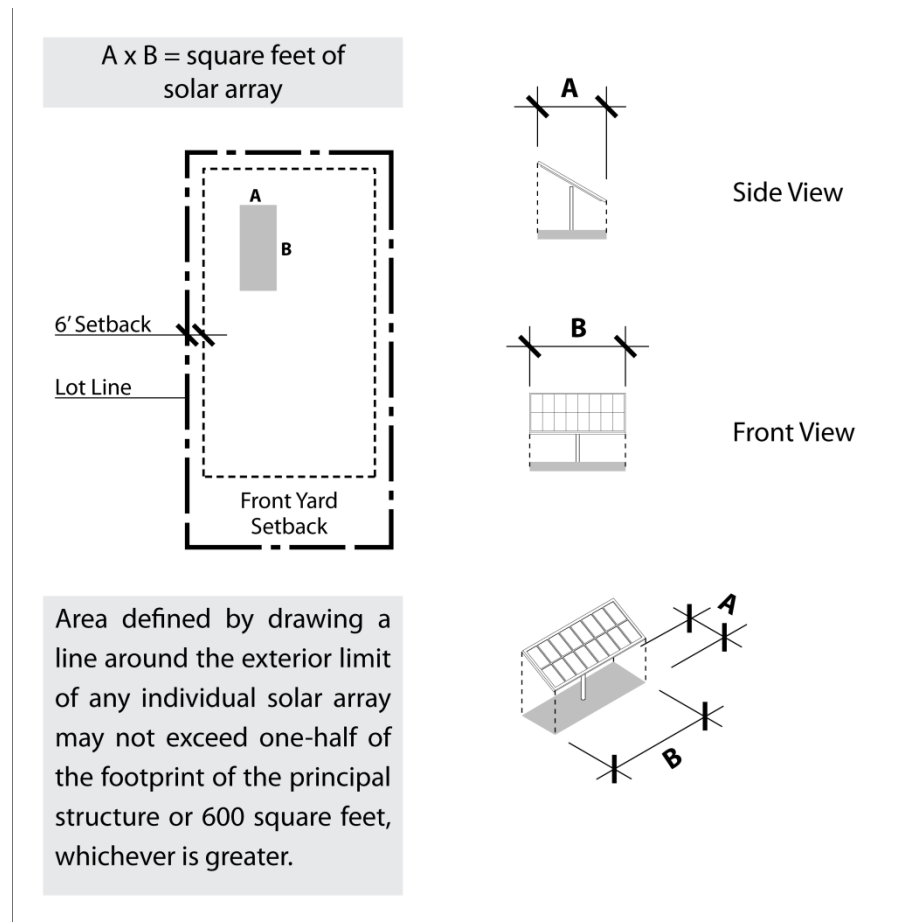
~~§1-19-8.200.4 RESERVED~~ **§ 1-19-8.205.5. SOLAR ARRAY.**

THE FOOTPRINT OF THE SOLAR ARRAY AND ANY INDIVIDUAL COMPONENT SHALL BE USED IN CALCULATING THE SQUARE FOOTAGE BY DRAWING A LINE AROUND THE EXTERIOR LIMITS OF AN INDIVIDUAL SOLAR ARRAY. SOLAR ARRAYS ARE PERMITTED IN ANY ZONING DISTRICT SUBJECT TO THE FOLLOWING SETBACK AND SIZE RESTRICTIONS:

(A) THE TOTAL SQUARE FOOTAGE OF THE SOLAR ARRAY(S) SHALL NOT EXCEED THAT OF THE PRINCIPAL STRUCTURE;

(B) THE FOOTPRINT OF AN INDIVIDUAL SOLAR ARRAY SHALL NOT EXCEED THE GREATER OF:

- (1) ONE-HALF OF THE FOOTPRINT OF THE PRINCIPAL STRUCTURE OR
- (2) SIX HUNDRED SQUARE FEET



Solar Array

§ 1-19-8.205.6. LIMITED WIND ENERGY SYSTEMS.

(A) LIMITED WIND ENERGY SYSTEMS ARE PERMITTED IN ANY ZONING DISTRICT SUBJECT TO THE FOLLOWING STANDARDS EXCEPT THAT LIMITED WIND ENERGY SYSTEMS UNDER 10 FEET IN HEIGHT AND LOCATED ON A PRINCIPAL OR ACCESSORY STRUCTURE ARE NOT SUBJECT TO THESE PROVISIONS:

(1) THE LIMITED WIND ENERGY SYSTEM SHALL BE USED FOR THE PURPOSE OF GENERATING POWER FOR THE PROPERTY ON WHICH THE LIMITED WIND ENERGY SYSTEM IS LOCATED. COMMERCIAL SALE OF POWER IS PROHIBITED.

(2) THE LIMITED WIND ENERGY SYSTEM SHALL BE SET BACK A DISTANCE EQUAL TO ITS TOTAL HEIGHT PLUS AN ADDITIONAL 20 FEET FROM:

- (a) ANY RIGHT-OF-WAY AS DESIGNATED BY THE COUNTY COMPREHENSIVE PLAN;
- (b) ANY RIGHT OF INGRESS OR EGRESS ON THE OWNER'S PROPERTY;
- (c) ANY OVERHEAD UTILITY LINES;
- (d) ALL PROPERTY LINES.

(3) THE LIMITED WIND ENERGY SYSTEM SHALL NOT BE LOCATED WITHIN THE REQUIRED FRONT YARD SETBACK.

(4) ALL GROUND MOUNTED ELECTRICAL AND CONTROL EQUIPMENT SHALL BE LABELED AND SECURED TO PREVENT UNAUTHORIZED ACCESS.

(5) ALL ELECTRICAL WIRES ASSOCIATED WITH A GROUND MOUNTED WIND ENERGY SYSTEM SHALL BE LOCATED UNDERGROUND, EXCEPT THOSE WIRES NECESSARY TO CONNECT THE WIND GENERATOR TO THE WIND TOWER WIRING, THE WIND TOWER WIRING TO THE DISCONNECT JUNCTION BOX, AND THE GROUNDING WIRES.

(6) A WIND TOWER AND GENERATOR SHALL NOT BE ARTIFICIALLY LIGHTED UNLESS SUCH LIGHTING IS REQUIRED BY THE FEDERAL AVIATION ADMINISTRATION (FAA).

(7) WIND ENERGY SYSTEMS SHALL BE PAINTED A NON-REFLECTIVE, NON-OBTRUSIVE COLOR SUCH AS THE MANUFACTURER'S DEFAULT COLOR OPTION OR A COLOR THAT CONFORMS TO THE ENVIRONMENT AND ARCHITECTURE OF THE COMMUNITY IN WHICH IT WILL BE LOCATED. WIND ENERGY TOWERS SHALL MAINTAIN A GALVANIZED STEEL, BRUSHED ALUMINUM OR WHITE FINISH, UNLESS FAA STANDARDS REQUIRE OTHERWISE. THE ZONING ADMINISTRATOR MAY REQUIRE A PHOTO OF A WIND ENERGY SYSTEM OF THE SAME MODEL THAT IS THE SUBJECT OF THE APPLICATION, ADJACENT TO A BUILDING OR SOME OTHER OBJECT ILLUSTRATING SCALE.

(8) THE BLADE TIP OR VANE OF ANY WIND ENERGY SYSTEM SHALL, AT ITS LOWEST POINT, HAVE GROUND CLEARANCE OF NO LESS THAN FIFTEEN (15) FEET, AS MEASURED AT THE LOWEST POINT OF THE ARC OF THE BLADES.

(9) WIND ENERGY SYSTEMS SHALL COMPLY WITH ALL APPLICABLE CONSTRUCTION AND ELECTRICAL CODES.

(10) WIND ENERGY SYSTEMS THAT CONNECT TO AN ELECTRIC UTILITY COMPANY SHALL COMPLY WITH THE PUBLIC SERVICE COMMISSION REGULATIONS.

(11) EACH PROPERTY IS ELIGIBLE FOR TWO (2) WIND ENERGY SYSTEMS. ADDITIONAL WIND ENERGY SYSTEMS SHALL NOT EXCEED THE TOTAL NUMBER NEEDED TO GENERATE THE AMOUNT OF ELECTRICITY FOR THE ESTABLISHED USES ON THE PROPERTY UNLESS THE APPLICANT CAN DEMONSTRATE THE ON-SITE NEED FOR ADDITIONAL POWER.

(12) ABANDONMENT.

(a) THE ZONING ADMINISTRATOR MAY ISSUE A NOTICE OF ABANDONMENT TO THE OWNER OF A WIND ENERGY SYSTEM THAT IS OUT OF SERVICE FOR A CONTINUOUS 6-MONTH PERIOD. THE OWNER SHALL HAVE THE RIGHT TO RESPOND IN WRITING, WITHIN 30-DAYS, TO THE NOTICE OF ABANDONMENT SETTING FORTH THE REASONS FOR OPERATIONAL DIFFICULTY AND PROVIDING A REASONABLE TIMETABLE FOR CORRECTIVE ACTION. IF SUFFICIENT REASON IS PROVIDED, THE ZONING ADMINISTRATOR SHALL WITHDRAW THE NOTICE OF ABANDONMENT AND THE OWNER OF THE WIND ENERGY SYSTEM WILL BE NOTIFIED.

(b) IF THE WIND ENERGY SYSTEM IS DETERMINED TO BE ABANDONED, THE OWNER SHALL REMOVE THE WIND ENERGY SYSTEM WITHIN 3 MONTHS OF THE DATE OF THE NOTICE OF ABANDONMENT, AT THE OWNER'S EXPENSE. IF THE OWNER FAILS TO REMOVE THE WIND ENERGY SYSTEM, THE ZONING ADMINISTRATOR MAY PURSUE LEGAL ACTION TO HAVE THE WIND ENERGY SYSTEM REMOVED AT THE OWNER'S EXPENSE.

(13) ALL WIND ENERGY SYSTEMS SHALL COMPLY WITH THE LIMITATIONS CONTAINED IN THE NOISE ORDINANCE OF FREDERICK COUNTY (FREDERICK COUNTY CODE §1-11-6).

(B) IT IS UNLAWFUL FOR ANY PERSON TO CONSTRUCT, INSTALL, OR OPERATE A WIND ENERGY SYSTEM THAT IS NOT IN COMPLIANCE WITH THIS CHAPTER OR WITH ANY CONDITION CONTAINED IN A BUILDING PERMIT ISSUED PURSUANT TO THIS CHAPTER, OR THAT IS IN VIOLATION OF ANY STATE OR FEDERAL REGULATION.

ARTICLE XI: DEFINITIONS
§1-19-11.100. DEFINITIONS.

SOLAR ARRAY. A GROUND MOUNTED SOLAR COLLECTION SYSTEM CONSISTING OF A LINKED SERIES OF PHOTOVOLTAIC MODULES.

SOLAR COLLECTION SYSTEM. A PANEL OR OTHER SOLAR ENERGY DEVICE, THE PRIMARY PURPOSE OF WHICH IS TO PROVIDE FOR THE COLLECTION, INVERSION, STORAGE, AND DISTRIBUTION OF SOLAR ENERGY FOR ELECTRICITY GENERATION, SPACE HEATING, SPACE COOLING OR WATER HEATING.

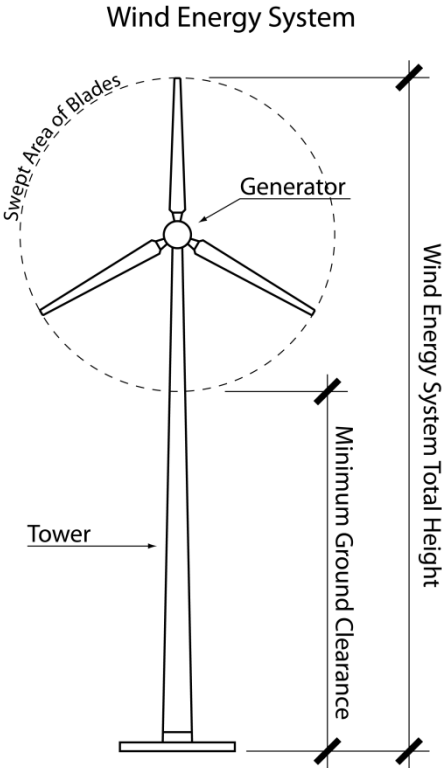
WIND ENERGY SYSTEM. EQUIPMENT THAT CONVERTS AND STORES OR TRANSFERS ENERGY FROM THE WIND INTO ELECTRICITY OR OTHER USABLE FORMS OF ENERGY. THIS EQUIPMENT INCLUDES ANY BASE, VANE, BLADE, FOUNDATION, GENERATOR, ALTERNATOR, TOWER, TRANSFORMER, TAIL, WIRE, INVERTER, BATTERIES, GUY WIRE OR OTHER COMPONENT USED IN THE SYSTEM.

LIMITED WIND ENERGY SYSTEM. A SINGLE-TOWERED WIND ENERGY SYSTEM THAT HAS A RATED NAMEPLATE CAPACITY OF 50 KILOWATTS OR LESS; AND HAS A TOTAL HEIGHT OF 150 FEET OR LESS.

WIND ENERGY SYSTEM TOTAL HEIGHT. THE VERTICAL DISTANCE FROM GROUND LEVEL TO THE TIP OF A WIND GENERATOR VANE OR BLADE WHEN THE TIP IS AT ITS HIGHEST POINT.

WIND GENERATOR. BLADES AND ASSOCIATED MECHANICAL AND ELECTRICAL CONVERSION COMPONENTS MOUNTED ON TOP OF THE TOWER.

WIND TOWER. THE MONOPOLE, FREESTANDING, OR GUYED STRUCTURE THAT SUPPORTS A WIND GENERATOR.



AGENCY COMMENTS

Planning Staff referred the proposed amendments to other County agencies for input.

The Citizens Zoning Review Committee (CZRC) during the review of the zoning ordinance under General Uses recommended “*The County should encourage alternate forms of electricity production including such methods as private windmills. With appropriate performance measures these types of utilities could be considered for certain zones*”.

PLANNING COMMISSION RECOMMENDATION

The FcPc recommended approval of the text amendment to the BOCC.

- Motioned: Forrence, 2nd by White
- Vote: 6-0-0-1
- For: 6 – Brown, Floyd, Forrence, McClurkin, Wolfe, White
- Against: 0 – None
- Absent: 0 – None
- Abstain: 1 – Hagen

The FcPc also added the following recommendations:

1. Within the definition of Limited Wind Energy system change the Kilowatt capacity from 50 to 100. **Consensus**
2. Clarify between ground mounted solar arrays and roof mounted solar collection systems. **Consensus**
3. With regard to the amount of ground mounted solar arrays, allow for certain operations in the A and RC districts to be allowed additional square footage, but not to exceed their usage. **Majority**
4. Expressed concern about the possible 150' height of wind energy systems on smaller parcels. **Majority**

STAFF RECOMMENDATION

Staff recommends approval of Zoning Text Amendment ZT-09-02.

ENCLOSURES:

Exhibits # 1: Staff Report
 # 2: Transmittal Memorandum
 # 3: Draft Ordinance



FREDERICK COUNTY PLANNING COMMISSION
DIVISION OF PLANNING
FREDERICK COUNTY, MARYLAND

Winchester Hall 12 East Church Street Frederick, Maryland 21701 (301) 600-1138

FCPC Transmittal Memorandum

TO: Board of County Commissioners
FROM: Frederick County Planning Commission
Through: Eric Soter, Director
DATE: April 9, 2009
RE: ZT-09-02 - Wind/Solar Energy Text Amendment

On March 25, 2009 the FcPc held a Public Hearing regarding the above referenced zoning ordinance text amendment which proposes to add a new section to Chapter 1-19 of the Frederick County Code (the Zoning Ordinance): § 1-19-8.205, to include provisions to address Solar Collection Systems, Solar Arrays and Limited Wind Energy Systems to be permitted as an accessory use within all zoning district subject to specific standards. The proposed ordinance would also amend § 1-19-11.100 Definitions by providing definitions related to Solar Collection Systems, Solar Arrays and Limited Wind Energy Systems.

The FcPc recommended to the Board of County Commissioners (BoCC) approval of Text Amendment ZT-09-02:

Motioned: Forrence, 2nd by White
Vote: 6-0-0-1
For: 6 – Brown, Floyd, Forrence, McClurkin, Wolfe, White
Against: 0 – None
Absent: 0 – None
Abstain: 1 – Hagen

In addition, the FcPc recommended the following comments be forwarded, with the above recommendation, to the Board of County Commissioners regarding Text Amendment ZT-09-02:

1. Within the definition of Limited Wind Energy System change the Kilowatt capacity from 50 to 100.
LIMITED WIND ENERGY SYSTEM: A SINGLE-TOWERED WIND ENERGY SYSTEM THAT HAS A RATED NAMEPLATE CAPACITY OF ~~50~~ 100 KILOWATTS OR LESS; AND HAS A TOTAL HEIGHT OF 150 FEET OR LESS. - Consensus
2. Clarify between ground mounted solar arrays and roof mounted solar collection systems. - **Consensus**
3. With regard to the amount of ground mounted solar arrays, allow for certain operations in the A and RC districts to be allowed additional square footage, but not to exceed their usage. - **Majority**
4. Expressed concern about the possible 150' height of wind energy system on smaller parcels. - **Majority**

cc: Ronald A. Hart, County Manager
Teresa Biser, Executive Assistant to County Manager
Joyce Grossnickle, Administrative Officer
File – ZT-09-02