Section 8: Alternate Energy Sources

(orig. 4-20-10)

A. Intent and Purpose

This section is intended to establish regulations for the location, design, and appearance of alternate energy sources and energy conversion systems (ECS), to promote the research and development of sustainable alternative energy sources, and to encourage the preservation of the environment through the use of alternate energy sources. (orig. 4-20-10)

B. General Provisions

1. Applicability

   a. New ECS and associated equipment. All new ECS in Jefferson County shall be subject to these regulations. (orig. 4-20-10)

   b. Energy conversion systems include but are not limited to wind energy conversion systems (WECS) and solar energy conversion systems. (orig. 4-20-10)

   c. Preexisting energy conversion systems (ECS): Preexisting ECS, for which a permit has been properly issued prior to date of enactment of this resolution, shall not be required to meet the requirements of this section. Changes, alterations, modifications and additions to pre-existing system not specifically allowed by previous zoning permits shall meet the applicable requirements of this section. (orig. 4-20-10)

   d. An ECS shall be considered abandoned if the use is discontinued (no energy production) for a period of 12 consecutive months or more unless a plan has been submitted and approved by the Zoning Administrator outlining steps and a schedule for return the system to service. (orig. 4-20-10)

2. Regulation

   a. It shall be unlawful for any person, firm, or corporation to erect, construct, change, alter, modify or add ECS or accessory structure without first obtaining a permit from Planning and Zoning. (orig. 4-20-10)

   b. Nothing in this section precludes compliance with the specific zone district regulations, other regulations within this Zoning Resolution or other County regulations, or with State and Federal standards and regulations as they may exist. If such State and Federal standards and regulations are changed, then the owners of the ECS facility governed by this section shall bring such facility into compliance with such revised standards and regulations within the time period mandated by the controlling State or Federal agency. Failure to meet such revised standards and regulations shall constitute grounds for the removal of the ECS facility at the owner's expense. (orig. 4-20-10)

   c. The provisions of this section are not intended to prevent the use of any design, material or method of installation not specifically proscribed by this section provided any such alternate has been approved by the Director of Planning and Zoning or his/her appointed designee. An alternate may be approved if the proposed design, material or method is equal to or better than the specific requirements of this section and complies with the intent of this section and such modifications are consistent with the overall intent of the Zoning Resolution, the Land Development Regulation, Plat and Exemption From Platting restrictions, Site Development Plan, and zoning conditions, and do not result in adverse impacts that were not previously considered. (orig. 4-20-10; am. 12-21-10; am. 3-26-13)

3. Procedures

a. Administrative Review

General: The following provisions shall govern the issuance of administrative approval of ECS and associated facilities and equipment. (orig. 4-20-10)

(1) The following uses may be approved by the Zoning Administrator or his/her appointed designee after conducting an administrative review: (orig. 4-20-10)

(a) Placement of any commercial ECS, or associated equipment as allowed in Table AES-1. (orig. 4-20-10; am. 3-26-13)

(b) Placement of any non-commercial ECS, or associated equipment as allowed in Table AES-1. (orig. 4-20-10; am. 3-26-13)

(2) Each applicant for administrative review shall apply to the Zoning Administrator or his/her appointed designee providing the information set forth in this Regulation and a nonrefundable fee as established by resolution of the Board of County Commissioners. (orig. 4-20-10)

(3) The Zoning Administrator or his/her appointed designee shall review the application for an ECS and determine if the proposed use(s) complies with this Regulation. (orig. 4-20-10)

(4) The Zoning Administrator or his/her appointed designee shall respond to each such application within 30 calendar days after receiving a complete application by approving, conditionally approving, or denying the application, or requesting additional information necessary to evaluate the application. (orig. 4-20-10)

(5) Applicants may appeal a denial of a Miscellaneous Permit in accordance with the Board of Adjustment section of this Zoning Resolution. (orig. 4-20-10; am. 3-26-13)

b. ECS Permits

(1) ECS Permit applications shall be accepted, reviewed and processed pursuant to the Miscellaneous Permit process outlined in the General Provisions and Regulations section of this Zoning Resolution, except as modified here. (orig. 4-20-10; am. 3-26-13)

(2) ECS Permit Requirements: The permit application shall include, in addition to other requirements, the following: (orig. 4-20-10)

(a) A site plan that shows all existing property boundaries, structures and the shape, size, height, and location of all existing and proposed ECS structures, warning signs, fencing, and access restrictions. (orig. 4-20-10; am. 3-26-13)

(b) The number, type and size of ECS that can be accommodated. (orig. 4-20-10)

(c) A fee in an amount established by the Board of County Commissioners will be charged for each permit application. (orig. 4-20-10)

(d) A report that includes the following, if applicable, and if requested by the County: (orig. 4-20-10)

(d-1) A description of any proposed ECS including elevations generally depicting all proposed structures, platforms, finish materials and colors, accessory equipment and height above grade. (orig. 4-20-10)

(d-2) A landscaping and/or visual mitigation plan (to scale) acceptable to the Zoning Administrator or his/her appointed designee, detailing how mitigation of visual impacts will be accomplished. This may include, but is not limited to, a visual study containing a view shed map depicting

where within a three mile radius any portion of the proposed facility could be seen, and cross sectional views and photographic simulations showing the appearance of the proposed facility and accessory structures from up to five points within the view shed, such points to be mutually agreed upon by Planning and Zoning and applicant. (orig.4-20-10; am. 3-26-13)

(d-3) An erosion control and revegetation plan. (orig. 4-20-10)

(d-4) A performance guarantee, in an amount acceptable to Planning and Zoning and in a form acceptable to the County Attorney's Office, to ensure the landscaping, screening, erosion, and revegetation plans are completed. (orig.4-20-10)

(e) Inventory of Existing Sites. Each applicant for a commercial ECS facility shall provide to Planning and Zoning a narrative and map description of the applicant's/operator's existing and currently proposed ECS facilities within the County. This shall include the physical location and general description of the site. This provision is not intended to be a requirement that the applicant submit its business plan, proprietary information, or make commitments regarding the future location of facilities within the County. (orig. 4-20-10)

(f) The Zoning Administrator may waive application requirements that will not materially aid in the review of the application. (orig. 4-20-10)

(3) Decision. The Zoning Administrator or his/her appointed designee shall review the ECS permit application and determine if the proposed use complies with this ordinance. The Zoning Administrator or his/her appointed designee shall respond to each such application within 30 calendar days after receiving a complete application by either approving or denying the application, or requesting additional information necessary to evaluate the application. Any decision to deny an application for a ECS facility shall be in writing and supported by substantial evidence in a written record. (orig. 4-20-10)

(4) Appeal. In the event an applicant is aggrieved by the determination of the Zoning Administrator or his/her appointed designee, the applicant may appeal to the Board of Adjustment pursuant to the Board of Adjustment Section of this Zoning Resolution. (orig. 4-20-10)

C. Specific Standards

1. Non-commercial Energy Conversion Systems (ECS)

a. Intent: The purpose and intent of this Regulation is to establish guidelines for the siting non-commercial ECS and associated equipment in an effort to allow for alternative energy sources. The non-commercial ECS shall only provide power to the principal and accessory uses of the property and shall not be for the generation of power for commercial purposes. However, this provision shall not be interpreted to prohibit the sale of excess power generated from the system back to the public utility. (orig. 4-20-10)

b. Wind Energy Conversion Systems (WECS) Performance standards: (orig. 4-20-10)

(1) Unless specifically permitted in Table AES-1, non-commercial WECS shall be building mounted. (orig. 4-20-10;am. 3-26-13)

(2) The height of the building mounted WECS shall extend no further than 5 feet above the structure to which it is mounted, or exceed the maximum height permitted in the zone district, which ever is lower. (orig. 4-20-10)

(3) Free standing non-commercial WECS, where permitted, shall not exceed the maximum height permitted in the zone district. (orig. 4-20-10)

(4) Building mounted non-commercial WECS shall be placed on a structure that either meets the minimum setback requirements of the zone district, has gone through a process to legalize the existing setbacks, or has been established as being legal non-conforming in regards to the setbacks of the structure (orig. 4-20-10;am. 3-26-13)

(5) Free standing non-commercial WECS shall be constructed of a monopole or similar design, and shall meet the minimum setback for the primary structure, or shall be setback 1:1 times the height of the tower, which ever is greater. (orig. 4-20-10; am. 3-26-13)

(6) Non-commercial WECS shall be painted a subdued earth-tone, white, or gray to mute the visual impact of the system. (orig. 4-20-10)

(7) Applications for a non-commercial WECS shall include the make, model, picture and manufacturer's specification, including specifications of electromagnetic shielding, filtering, or construction design so as to not cause electrical, radio frequency, television, and other communication signal interference, and noise decibels produced by the system. (orig. 4-20-10)

c. Solar Energy Conversion Systems (SECS) Performance standards:

(1) Unless specifically permitted in Table AES-1, non-commercial SECS shall be building mounted. (orig. 4-20-10)

(2) The height of the building mounted SECS shall extend no further than 5 feet above the structure to which it is mounted, or exceed the maximum height permitted in the zone district, whichever is lower. (orig. 4-20-10; am. 3-26-13)

(3) Free standing non- commercial SECS, where permitted, shall not exceed 12 feet in height. (orig. 4-20-10)

(4) Building mounted non-commercial SECS shall be placed on a structure that either meets the minimum setback requirements of the zone district, has gone through a process to legalize the existing setbacks, or has been established as being legal non-conforming in regards to the setbacks of the structure. (orig. 4-20-10; am 3-26-13)

(5) Free standing non-commercial SECS shall meet the minimum setback for an accessory structure. (orig. 4-20-10; am. 3-26-13)

(6) Non-commercial SECS shall be painted, where possible, a subdued earth-tone, white, or gray to mute the visual impact of the system. (orig. 4-20-10)

2. Commercial Energy Conversion Systems (ECS)

a. Intent: The purpose and intent of this Regulation is to establish guidelines for the siting of commercial ECS and associated equipment for the primary purpose of research and development of ECS technology, or the generation of electrical power for sale, resale, or off-site use. (orig. 4-20-10)

b. Wind Energy Conversion Systems (WECS) Performance standards:

(1) The subject lot, tract, or parcel where a commercial WECS is proposed must meet the current minimum lot size requirement of the zone district in which it is to be erected. (orig. 4-20-10)

(2) Freestanding WECS shall be constructed of a monopole or similar design, and shall meet the minimum setback for a primary structure, or shall be setback 1:1 to the total height of the WECS system, whichever is greater. (orig. 4-20-10; am. 3-26-13)

(3) All setbacks shall be measured from the base of the WECS tower. (orig. 4-20-10)

(4) All free standing WECS shall be constructed in a monopole design of tubular steel, or equivalent material, and shall be self-supporting without the use of guy wires or other similar features. (orig. 4-20-10)

(5) All WECS towers shall be white, gray, or another non-obtrusive color demonstrated to minimize visibility unless otherwise required by FAA regulations. The rotor blades may be black in order to facilitate deicing. (orig. 4-20-10)

(6) All WECS towers shall be reasonably protected against unauthorized climbing. The bottom of the WECS tower, from ground level to 12 feet above ground, shall be designed in a manner to preclude unauthorized climbing, or shall be enclosed in a fashion to prevent unauthorized climbing of the tower. (orig. 4-20-10)

(7) All turbines shall be equipped with redundant braking systems. This includes both aerodynamic (including variable pitch) overspeed controls and mechanical brakes. (orig. 4-20-10)

(8) WECS rotor blades or airfoils must maintain at least a 25-foot clearance between their lowest point and the ground unless the proposed design follows the best management practices for safety. (orig. 4-20-10; am. 3-26-13)

(9) No WECS tower shall have light, reflectors, flashers, daytime strobes, steady nighttime red lights, or other illuminating device affixed to it unless required by FAA or FCC. Security lighting is allowed at the tower base. (orig. 4-20-10)

(10) No advertising signs shall be placed on WECS towers. (orig. 4-20-10)

(11) Cautionary signs in conformance with the “Signs and outdoor advertising” section of this Zoning Resolution shall be posted on the site to warn of high voltage and no trespassing. (orig. 4-20-10)

(12) Applications for a commercial WECS shall provide a report addressing the minimization, or mitigation of interference with electromagnetic communications, such as radio, telephone, microwaves, or television signals caused by the proposed WECS including letters of notification of all communication providers within a two mile radius of the proposed project. Additionally, a map indicating of sufficient scale identifying the location of such communications facilities within a two mile radius of the proposed project shall be provided for review and verification. (orig. 4-20-10)

(13) Applications for a commercial WECS shall provide a report by a licensed professional engineer demonstrating compliance with applicable structural standards and the general structural capacity of the proposed facility. (orig. 4-20-10)

(a) The specific proposed ECS support structure shall be engineered, constructed, installed and maintained to withstand the normal wind and vertical loads, plus safety loads, for the specific proposed location and for the specific wind load size, in force at the time of application. (orig. 4-20-10)

(b) The ECS support structure shall be electrically grounded per the International Electrical Code in force at time of application, and consistent with normal engineering practices. (orig. 4-20-10)

(14) The latitude and longitude of each WECS tower shall be include on the site plan of the proposed project. (orig. 4-20-10)

(15) Applications shall include copies of all FCC or FAA notifications/ permits as required. (orig. 4-20-10)

(16) Each application shall include a decommissioning plan which details the anticipated life of the project, when and how the facility is to be decommissioned, and an estimated cost of decommissioning. (orig. 4-20-10)

c. Solar Energy Conversion Systems (SECS) Performance standards:

(1) The subject lot, tract, or parcel where a commercial SECS is proposed must meet the current minimum lot size requirement of the zone district in which it is to be erected. (orig. 4-20-10)

(2) The setback for a free standing SECS shall meet the minimum setback for the primary structure. (orig. 4-20-10; am. 3-26-13)

(3) All setbacks shall be measured from the panel of the SECS. (orig. 4-20-10)

(4) The height of the building mounted SECS shall extend no further than 5 feet above the structure to which it is mounted, or exceed the maximum height permitted in the zone district, whichever is lower.. (orig. 4-20-10; am. 3-26-13)

(5) Free standing commercial SECS, where permitted, shall not exceed the maximum height of 25 feet. (orig. 4-20-10)

(6) The height of the SECS system shall be measured from the average natural ground level adjacent the base of the SECS array to the highest point of the array. (orig. 4-20-10)

(7) Cautionary signs in conformance with the "Signs and outdoor advertising" section of this Zoning Resolution shall be posted on the site to warn of high voltage and no trespassing. (orig. 4-20-10)

(8) Each application shall include a decommissioning plan which details the anticipated life of the project, when and how the facility is to be decommissioned, and an estimated cost of decommissioning. (orig. 4-20-10)

ALTERNATIVE ENERGY SYSTEMS TABLE (Table AES-1)

Zone District	Non-commercial WECS	Commercial WECS	Non-commercial SECS	Commercial SECS
Residential	**P[1]**		**P**	
R-3 (Multifamily)	**P[1]**		**P**	
R-3A (Multifamily)	**P[1]**		**P**	
R-4 (Multifamily)	**P[1]**		**P**	
RC-1	**P[1]**		**P**	
C-1 (Convenience)	**P[1]**		**P**	
C-1 (Neighborhood)	**P[1]**		**P**	
C-1 (Community)	**P[1]**		**P**	
C-1 (Regional)	**P[1]**		**P**	
C-2	**P**		**P**	
I-1	**P**	**P**	**P**	**P**
I-2	**P**	**P**	**P**	**P**
I-3	**P**		**P**	
I-4	**P**	**P**	**P**	**P**
A-1	**P**		**P**	
A-2	**P**	**P**	**P**	**P**
A-35	**P**	**P**	**P**	**P**
CD	**P[1]**	**P**	**P**	**P**
M-C		**P**		**P**
PD*	**P[1]**		**P**	**P**

P = Permitted (Use by Right – administrative review of alternative energy permit)
P[1] = Non-commercial WECS shall be limited to building mounted facilities
PD*=WECS in Planned Developments will be reviewed and compared to the most similar standard zone district.
Blank = **Rezoning Required**

(orig. 4-20-10)