

3507: Renewable Energy System Standards

Increased energy costs, government rebates and incentives, and a greater awareness of sustainability issues and human impacts on our planet have created an increased interest in renewable energy systems for homes and businesses. It is the County's intent to allow for and encourage such systems in locations that minimize impacts on the environment and the surrounding area.

3507.01: Solar Energy Systems

- A. **Small Scale Solar Energy Systems:** Small scale solar energy systems shall be used primarily for on-site, private purposes. Ground mounted systems in commercial, industrial, and multi-family developments shall be reviewed through the Class 2 review process. All other systems shall be reviewed through the Class 1 review process.
1. **Location:**
 - a. **Roof Mounted:** Allowed in all Zoning Districts, including PUD's as an accessory use.
 - b. **Ground Mounted:** Allowed in all Zoning Districts, including PUD's, as an accessory use in accordance with the following provisions:
 - i. Systems may be ground mounted in the front, side, or rear yard. Systems may not be mounted in the front setback area.
 - ii. Ground mounted systems may be located within side and rear setback areas a minimum of 10 feet from the lot line, but may not be located within any road setbacks unless:
 - aa. There are no public health, safety, or welfare issues with the proposed location.
 - ba. The Road and Bridge and Engineering Departments have approved the location and the property owner has completed an indemnification agreement releasing the County from any liability associated with allowing a structure within the road setback area.
 - ca. The applicant has demonstrated, to the satisfaction of the Planning Department, that there is no alternative location on the property or on an existing or proposed structure that is viable without: i) removing significant numbers of healthy trees, or ii) reducing the efficiency of the system by 15% or more.
 - iii. Ground mounted systems shall comply with applicable stream and wetland setbacks.
 - iv. All building and disturbance envelope restrictions shall apply to ground mounted solar energy systems.
 - v. If deemed necessary by the review authority to adequately buffer the system, landscaping, berms and/or an alternative location may be required.
 - vi. Ground mounted systems in the BC zoning district must also be in conformance with Section 3514.04.D.
 2. **Height:**
 - a. **Roof Mounted:** Roof mounted systems may exceed the permitted height by a maximum of ten percent (10%).
 - b. **Ground Mounted:** Ground mounted systems may be a maximum of 25 feet tall. The permitted height of systems located in side and rear setback areas shall not be greater than the distance from the system to the nearest property line.
 3. **Legal Nonconforming Structures:** Solar energy systems may be roof mounted on legal nonconforming structures. Systems located on portions of the building that are nonconforming cannot extend above the ridgeline of the roof the system is mounted on and cannot extend more than one foot above the roof surface, measured perpendicularly from the roof surface.
 4. **Shared Systems:** Solar Energy systems shared by up to 10 property owners may be allowed with approval of a conditional use permit following the Class 4 development review process per Section 12300. Such systems may be located on vacant lots. Such systems must comply with the location and height regulations for small scale solar energy systems.
- B. **Large Scale Solar Energy Systems:** Large scale solar energy systems are primarily used to produce power for use off-site, and may be allowed in the A-1, M-1, CG, CN, B-1, B-3, and I-1 zoning districts, and within areas of PUDs allowing uses consistent with these zoning districts, with approval of a conditional use permit following the Class 4 development review process per Section 12300.

3507.02: Wind Energy Systems

- A. **Small Scale Wind Energy Systems:** Small scale wind energy systems shall be used primarily for on-site, private purposes. Systems shall be reviewed through the Class 1 review process unless otherwise indicated in this Section.
1. Horizontal Axis Wind Turbines (“HAWT”)
 - a. **A-1 and M-1:** HAWTs are permitted on parcels of 20 acres or more. On parcels less than 20 acres, HAWTs shall be reviewed through a class 4 conditional use permit. Maximum height shall be 80 feet. Setbacks to any property line shall be two times the height of the turbine.
 - b. **R-U, R-E, RME, OS, and BC:** HAWTs shall be reviewed through a class 4 conditional use permit. Maximum height shall be 80 feet. Setbacks to any property line shall be two times the height of the turbine.
 - c. **R-1, R-2, R-3, R-4, R-6, R-25, R-P, RC-40000, RC-5000, CG, CN, B-1, B-3, and I-1:** Not permitted.
 - d. **PUD:** Systems shall be permitted within PUDs as stated in the PUD as an accessory use. If a PUD does not specifically state that a small scale wind energy system is allowed, then such systems shall be allowed in accordance with the most similar zoning district allowing uses and having lot sizes most similar to the use and lot size permitted in the PUD, as determined by the Planning Department.
 2. Vertical Axis Wind Turbines (“VAWT”)
 - a. **All Zoning Districts:** Roof mounted VAWTs are permitted up to a maximum of ten percent (10%) above the permitted height.
 - b. VAWTs that are tower mounted shall be permitted in accordance with the regulations for HAWTs, as indicated in Section 3507.02.A.1.
 3. Noise: Except during severe wind storms, wind turbines shall not cause a sound level exceeding fifty (50) dba, as measured at the nearest lot line.
 4. Colors: Towers, turbines, and blades or vanes shall be a color that blends with the background of the structure, and shall be nonreflective.
 5. Height: Height for horizontal axis turbines is measured to the center of the turbine shaft. Vertical axis turbines shall be measured to the top of the blades or vanes. Height shall be measured as indicated in Section 3505.06.
- B. **Large Scale Wind Energy Systems:** Large scale wind energy systems are primarily used to produce power for use off-site, and may be allowed in the A-1 and M-1 zoning districts with approval of a conditional use permit following the Class 4 development review process per Section 12300.

3507.03: Hydroelectric Energy Systems

- A. **Small Scale Hydroelectric Energy Systems:** Small scale hydroelectric energy systems are allowed in all zoning districts, including PUDs, as an accessory use and shall be reviewed through the Class 2 application process. Small scale hydroelectric energy systems shall be used primarily for on-site, private purposes and shall comply with the following standards:
1. Wheel turbines, generators, and other mechanical equipment shall be enclosed in a wheelhouse/pumphouse structure.
 2. The system shall be designed to blend in with its surrounding environment. All system components, including the structure and pipes shall not create visual or auditory impacts, or create impediments or other unnatural hazards or impacts upon wildlife. If deemed necessary by the review authority to adequately buffer the system and associated buildings, landscaping and/or berms may be required.
 3. The system shall be designed to minimize the length of the diversion to the maximum extent practicable in order to minimize impacts to the stream section with reduced flows. Systems shall be designed to minimize construction disturbance and permanent disturbance to streams.
 4. Dams are not permitted for any small scale hydroelectric system. Partial diversion structures such as weirs or head gates are allowed with proper permitting.
 5. The system shall comply with all applicable water quality control regulations contained in Chapter 7, and other applicable portions of the Code.
 6. Equipment housing structures shall be permitted within setback areas in accordance with Section 3505.13.G.3.L.
- B. **Large Scale Hydroelectric Energy Systems:** Large scale hydroelectric energy systems are primarily used to

produce power for use off-site, and may be allowed in the A-1, M-1, and I-1 zoning districts with approval of a conditional use permit following the Class 4 development review process per Section 12300.

3507.04: Wood Burning Energy Systems

- A. **Small Scale Wood Burning Energy Systems:** Small scale wood burning energy systems are allowed as an accessory use on lots which are a minimum of 5 acres in all residential Zoning Districts, including PUDs, and shall be used primarily for on-site, private purposes. Small scale wood burning energy systems shall be reviewed through the Class 1 application process. Only clean untreated wood or pellets shall be burned. Systems located within structures other than the primary structure or garage shall comply with the following standards.
1. **Smoke:** Systems must be outdoor wood-fired hydronic heater devices, or similar as approved by the Public Health and Building Inspection Departments in accordance with the current adopted Building Codes.
 2. **Location:** Systems may be located in the side or rear yard. Systems are not permitted within setback areas.
 3. **Height:** Structure height may not exceed the permitted building height. The chimney height may exceed the permitted height by up to a maximum of ten (10) percent.
 4. Unless otherwise approved by the Review Authority, natural colors shall be used.
- B. **Large Scale Wood Burning Energy Systems:** Large scale wood burning energy systems are primarily used to produce power for use off-site, and may be allowed in the A-1, M-1, and I-1 zoning districts with approval of a conditional use permit following the Class 4 development review process per Section 12300.