

Planning Board Regulation No. PBR-2025-1

BE IT ENACTED BY THE QUORUM COURT OF THE COUNTY OF MADISON,
STATE OF ARKANSAS; A RULE TO BE ENTITLED:

A RULE ENACTING REGULATIONS FOR WIND ENERGY CONVERSION SYSTEMS
IN THE COUNTY OF MADISON, STATE OF ARKANSAS

WHEREAS, Ordinance No. 2025-7 authorizes the Planning Board, with the advice and consent of the Quorum Court, to promulgate plans, rules, and regulations in the areas of planning and zoning within the County of Madison, State of Arkansas, and,

WHEREAS, the Planning Board has drafted, reviewed, and held public hearings on this rule in accordance with the law.

NOW, THEREFORE, IN ACCORDANCE WITH ORDINANCE NO. 2025-7, BE IT
PROMULGATED BY THE QUORUM COURT OF MADISON COUNTY, ARKANSAS:

Section 1. Purpose and Intent

This regulation is adopted to promote the safe, effective, and responsible development of wind energy systems within Madison County. These regulations aim to minimize environmental, noise, and visual impacts, protect public health and property values, and ensure compatibility with surrounding land uses, while upholding the rights of property owners and encouraging the development of renewable energy.

Section 2. Definitions

- Small-Scale Wind Energy System – A wind energy conversion system of up to 25 kW generating capacity, used primarily for on-site energy.
- Mid-Scale Wind Energy System – A wind energy conversion system generating more than 25 kW but less than 100 kW, used primarily for on-site power.
- Large-Scale Wind Energy System – A wind energy conversion system generating 100 kW or more but less than 5 MW, which may connect to local distribution or serve large on-site loads.
- Commercial Wind Energy Facility – A wind energy conversion system with a generating capacity of 5 MW or more, designed for utility-scale generation and regulated under state law.
- Wind Energy Conversion System (WECS) – Any mechanism or combination of devices that converts wind energy into electricity, including turbines, towers, inverters, and control systems.
- Arkansas Wind Energy Development Act – A 2025 Arkansas state law (Act 945 of 2025) that governs commercial wind energy facilities (5 MW and above), establishing siting, notification, and permitting requirements, and preempting local regulation in certain areas.

Section 3. Classification of Wind Energy Systems

Class	Name	Size Threshold	Typical Use
1	Small-Scale	Up to 25 kW	Individual residential or accessory use
2	Mid-Scale	>25 kW – <100 kW	Farm, institutional, or business on-site use
3	Large-Scale	100 kW – <5 MW	Large commercial or pre-grid-scale generation
4	Commercial	5 MW and Over	Grid-scale commercial wind facility

Section 4. Permitting Requirements

Class	Permit Fee
1	\$100
2	\$300
3	\$1,000 base fee, plus \$1,000 for each full megawatt (MW) of capacity
4	\$10,000 base fee, plus \$5,000 for each additional 5 MW of capacity

Required Application Contents:

- Site plan showing turbine layout, access paths, and setbacks
- Electrical and structural design information
- Liability insurance documentation naming participating landowners as additional insured (Class 2 and above)
- Construction timeline and responsible parties (Class 2 and above)
- Interconnection agreement or utility pre-approval for grid-connected systems (Class 2 and above)
- Emergency Response Plan, including evacuation zones, local responder coordination, and annual review procedures (Class 3 and above)

Section 5. Setback Requirements

Class	Property Lines	Residences/Driveways	Public Roads
1	150 ft	200 ft	100 ft
2	200 ft	300 ft	100 ft
3	500 ft	1000 ft	150 ft
4	See note below	See note below	See note below

Setbacks for Class 4 systems are governed by the Arkansas Wind Energy Development Act and include: 2,500 feet from non-participating landowners’ property lines and residences/driveways, and 250 feet from public roads. County-specific setbacks may be considered by the Planning Board only to the extent consistent with state preemption.

Section 6. Noise Standards

- Class 1 and 2 systems shall not exceed 45 dBA at the nearest non-participating property line.
- Class 3 and 4 systems shall not exceed 35 dBA at the nearest non-participating residence and 45 dBA at the nearest non-participating property line, as required by the Arkansas Wind Energy Development Act.
 - Class 4 systems shall be required to test project for noise compliance. The assessment must adhere to standards such as the American National Standards Institute (ANSI) standard and be conducted by a third-party noise expert approved by the Planning Board.
 - The Planning Board may require Class 3 systems to test for noise compliance in the same manner as Class 4 systems due to project size, turbine size, topography of project location, or proximity to occupied dwellings.

Section 7. Shadow Flicker

- Class 1 and 2: No modeling required. Operators must make good-faith effort to avoid siting turbines in locations that create regular flicker on non-participating neighboring structures.
- Class 3: Shadow flicker modeling may be required by the Planning Board for turbines within 1,500 ft of any non-participating occupied structure. If modeling is required and projected flicker exceeds 30 hours per year, the Planning Board may require mitigation.
- Class 4: Modeling is required for all non-participating occupied structures within 2,500 ft. Mitigation is required if projected flicker exceeds 20 hours annually.

Section 8. Visual Screening and Design Standards

- All systems shall use neutral, non-glare colors.
- Class 3 and 4 systems must submit a visual impact assessment including photorealistic simulations.
- No commercial logos, branding, or reflective surfaces shall be visible on turbine components.

- The Planning Board may require Arkansas native vegetative screening (e.g. shrubs, bushes, and/or trees) depending on the topography of the planned location for Class 3 and 4 systems.

Section 9. Lighting

- FAA-compliant lighting is required.
- Radar-activated lighting (ADLS) is encouraged for Class 3 and required for Class 4 unless infeasible or waived.
- All general lighting for Class 3 and 4 shall:
 - Be fully shielded, downward-facing, and motion-activated or timer-controlled.
 - Emit no more than 3000 Kelvin color temperature.
 - Conform to Dark-Sky Lighting standards as approved by the Planning Board to prevent light pollution and neighborhood disturbance.

Section 10. Safety Standards

- Class 1 systems and up shall:
 - Include a manual shutoff switch accessible to the property owner.
 - Employ basic tower access prevention, such as ladder guards or locked hatches.
- Class 2 systems and up shall:
 - Include over-speed protection through passive or active mechanical means.
 - Maintain a minimum ground clearance of 15 feet from the lowest point of the blade arc.
 - Comply fully with applicable provisions of the National Electric Code (NEC).
- Class 3 systems and up shall:
 - Maintain a minimum ground clearance of 20 feet from the lowest point of the blade arc.
 - Include automatic shutdown and braking systems for high wind conditions or turbine fault detection.
- All systems 1 MW and up shall:
 - Meet International Electrotechnical Commission (IEC) or equivalent third-party safety certifications.
 - Maintain a minimum ground clearance of 25 feet from the lowest point of the blade arc.
 - Post signage at site access points indicating emergency shutdown procedures.
 - Coordinate with Madison County emergency services to submit an emergency response plan prior to operation.
 - Be required to be equipped with de-icing and/or anti-icing systems to mitigate dangerous ice build-up on turbine blades. Additionally, regardless of ice mitigation system in place, when an ice buildup threat is deemed hazardous to the safety and welfare of the citizens and property of Madison County, systems shall be required to comply with an order of the County Judge and shut down operations immediately and remain shut down until the County Judge similarly lifts the order.
- Class 4 systems also shall:
 - Demonstrate compliance with ANSI and OSHA safety standards for turbine access, electrical safety, and maintenance protocols.
 - Install permanent safety signage at all service points.
 - Submit detailed safety documentation and personnel training plans to the Planning Board as well as maintain all other requirements as required by the Arkansas Wind Energy Development Act.

Section 11. Wildlife Protection and Bird Strike Mitigation

- Applicability:
 - Class 3 systems located within two (2) miles of a designated migratory corridor or flyway, or within one (1) mile of a known raptor nesting territory or Important Bird Area may be subject to bird strike mitigation requirements as determined by the Planning Board.
 - Class 4 systems shall be subject to mandatory mitigation requirements.
- Mandatory Requirement:
 - One turbine blade shall be painted matte black to reduce motion smear and avian collision risk. (can be substituted for a different mitigation requirement at the discretion of the Planning Board)

- Additional Mitigation Requirements (as determined by the Planning Board):
 - Use of FAA-approved ultraviolet (UV) or contrasting blade patterns
 - Seasonal curtailment during migration periods
 - Deployment of radar-based deterrent or shutoff systems

Section 12. Landowner Participation and Notification

- Written consent from all participating landowners is required and must be submitted with the permit application.
- Class 3 systems: Applicant must notify landowners of record within 1 mile at least 60 days prior to permit hearing.
- Class 4 systems: Applicant must notify landowners of record within 4 miles at least 60 days prior to permit hearing, in accordance with the Arkansas Wind Energy Development Act.

Section 13. Decommissioning and Financial Assurance

- A Decommissioning Plan must include:
 - Removal of all parts, equipment and paraphernalia associated with the wind energy conversion system, as well as fencing, foundations (to 4 feet below grade), and any other non-original additions necessary to prepare the location to its original condition.
 - Site restoration to original condition and grade, and reseeding with native vegetation.
 - A certified cost estimate, updated every 5 years.
- Abandonment and trigger for decommissioning:
 - Class 3: non-operation for 12 consecutive months without written notice and plan to recommission
 - Class 4: 180 days of non-operation per state law
- Financial Security:
 - Class 3: 125% of certified decommissioning cost
 - Class 4: 150% of certified decommissioning cost
- Funds must be in a financial assurance instrument (bond, escrow, or letter of credit) before construction begins.

Section 14. Inspections and Reporting

- Annual inspection reports shall be submitted to the Planning Board for Class 3 and 4 systems.
- The Madison County Planning Board may inspect system locations at their discretion; if deficiencies are found, the owner shall have 60 days to correct them.
- Class 4 operators must submit annual operational summaries and maintenance logs.

Section 15. Environmental Study

- Class 3 and 4 applicants must submit a qualified environmental impact study addressing:
 - Wildlife and critical habitat (Arkansas Game & Fish consultation recommended).
 - Wetlands and floodplains using FEMA and NWI data.
 - Soil erosion/stormwater mitigation consistent with ADEQ regulations.
 - Historic/cultural resource review in coordination with Arkansas SHPO, if appropriate to site location.

Section 16. Enforcement and Penalties

- A first violation may result in fines up to \$1,000.
- Repeat violations may result in fines up to \$2,000 per offense.
- A continuing violation may incur up to \$500 per day for each day the violation persists.
- Remedies may also include permit suspension or revocation, and legal injunction or enforcement orders.

Section 17. Arkansas Wind Energy Development Act

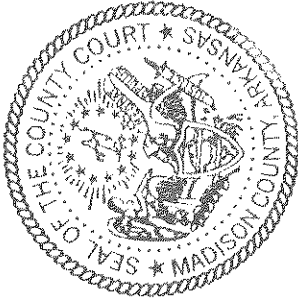
All Class 4 Wind Energy Conversion Systems, and any other classes that should be required, shall comply with the Arkansas Wind Development Act requirements and all other Arkansas state, and US federal law. Any such provision in these regulations that can be considered below those standards, when such an action is not permitted under the law, shall be considered null and void and those higher regulatory standards shall apply.

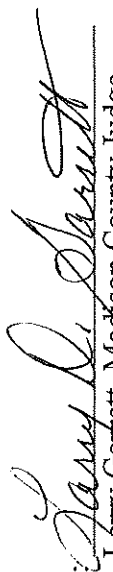
Section 18. Severability

If any provision of these regulations is found to be invalid, the remainder shall remain in full force and effect.

Rule Effective: 01-01-2026

Dated: 10-20-2025



Approved: 
Larry Garrett, Madison County Judge

Attest: 
Austin Boatright, Madison County Clerk

FILED

OCT 21 2025

AUSTIN BOATRIGT
COUNTY AND PROBATE CLERK
MADISON COUNTY, ARKANSAS
BY  D.C.