

TOWN OF EDEN
IOWA COUNTY, WISCONSIN

ORDINANCE NO. 2026-4

BATTERY ENERGY STORAGE SYSTEMS (BESS)

An Ordinance establishing standards for the siting, installation, operation, and decommissioning of Battery Energy Storage Systems within the Town of Eden to protect the health, safety, welfare, property values, and agricultural character of the Town, consistent with the Town of Eden Comprehensive Plan.

The Town Board of the Town of Eden, Iowa County, Wisconsin, does ordain as follows:

Section 1. Purpose and Authority

The purpose of this Ordinance is to regulate Battery Energy Storage Systems (BESS) within the Town of Eden in order to promote the health, safety, and general welfare of residents; protect property values and the quiet enjoyment of property; preserve agricultural land and the rural character of the Town; and minimize adverse impacts from noise, fire risk, toxic-gas exposure, visual intrusion, security risks, and other effects associated with large-scale energy storage facilities. The standards in this Ordinance are sized to account for the Town's low rural background sound levels, the travel time of potential toxic-gas plumes, the time required to alert neighboring properties, and the volunteer nature of the Cobb-Eden Fire District.

This Ordinance is adopted pursuant to the Town's authority under Wis. Stat. §§ 60.10, 60.22, 60.61 (to the extent applicable), and the Town's police powers to protect public health, safety, and welfare. It is intended to supplement Iowa County zoning regulations. Where Iowa County zoning applies, this Ordinance establishes the Town's preferred standards and shall be considered by the Town Board when making recommendations to the County or when exercising any residual local authority regarding noise, nuisance, road use, emergency planning, security, and related matters.

The Town further finds that, under current Wisconsin law, a standalone Battery Energy Storage System is not a "facility" for purposes of a Certificate of Public Convenience and Necessity under Wis. Stat. § 196.491. Section 196.491(1)(e) defines "facility" as "a large electric generating facility or a high-voltage transmission line." A standalone BESS does not generate electricity and is not a high-voltage transmission line. Accordingly, the Town finds that siting and operating standards for standalone BESS projects remain a matter of local police power and county zoning, and that this Ordinance is intended to supply those standards. This finding does not address energy storage that is part of a large electric generating facility, nor does it waive any separate Certificate of Authority requirements that may apply to a public utility under Wis. Stat. § 196.49.

This Ordinance is further intended to implement and be consistent with the goals, objectives, and policies of the Town of Eden Comprehensive Plan (adopted January 7, 2005), including but not limited to the following:

Issues and Opportunities Element (Section A): Policies to “Protect and improve the health, safety, and welfare of residents in the Town of Eden,” “Preserve and enhance the quality of life for the residents of the Town of Eden,” and “Protect and preserve the small community character of the Town of Eden.”

Agricultural, Natural, and Cultural Resources Element (Section E): Recognition that agriculture plays an important economic, cultural, aesthetic, and recreational role in the Town; the need to conserve productive agricultural areas and farmland; and the challenge of allowing new development while protecting the natural environment and preserving the rural character of the area.

Land Use Element (Section H): Policies requiring that new development be harmonious with the surrounding rural landscape and not environmentally degrading; that development have acceptable limits for airborne emissions, erosion, noise, odor and waste; and that proposals for future development or redevelopment enhance the overall quality of life in the Town. The Element further establishes commercial and industrial siting criteria intended to separate incompatible uses and protect agricultural and residential areas.

Section 2. Definitions

For purposes of this Ordinance, the following terms shall have the meanings set forth below:

Battery Energy Storage System (BESS): An electrochemical device or system capable of storing electrical energy from the grid or a generation source and discharging it at a later time. This includes, but is not limited to, lithium-ion, lithium iron phosphate, flow batteries, and other battery technologies, but excludes systems with a nameplate capacity of less than 500 kW that are intended solely for private residential or on-site commercial use.

Participating Property: Real property that is subject to a lease, easement, or other written agreement authorizing the installation or operation of a BESS.

Non-Participating Residence: An existing residential dwelling located on property that is not a Participating Property.

Utility-Scale BESS: A BESS with a nameplate capacity of 500 kW or greater that is intended primarily to serve the electric grid or wholesale markets rather than a single on-site user.

Nameplate Energy Capacity: The rated energy storage capacity of the BESS expressed in megawatt-hours (MWh).

Cobb-Eden Fire District: The volunteer fire district serving the Town of Eden, together with any successor fire protection provider and mutual-aid partners.

Section 3. Applicability

1. This Ordinance applies to all Utility-Scale BESS with a nameplate capacity of 500 kW or greater proposed, constructed, expanded, or operated within the Town of Eden after the effective date of this Ordinance.
2. No Utility-Scale BESS shall be constructed, installed, expanded, or operated within the Town without compliance with this Ordinance and all applicable Iowa County zoning requirements.
3. Small-scale private-use systems under 500 kW that serve only the property on which they are located are exempt from this Ordinance, provided they comply with all applicable building, electrical, and fire codes.
4. Expansion. Any expansion that increases Nameplate Energy Capacity shall be treated as a new application to the extent of the expansion. If the expanded facility as a whole would fall within a higher setback tier under Section 7, the higher setback shall apply to the entire facility, including existing components, unless a recorded waiver is obtained under Section 7.

Section 4. Application and Review Requirements

5. Any applicant seeking to develop a Utility-Scale BESS within the Town shall submit to the Town Clerk, in addition to any materials required by Iowa County, the following:
 - A detailed site plan showing layout, equipment locations, access roads, fencing, vegetation-management areas, water-supply or drafting locations, and measured setbacks from Non-Participating Residences and property lines.
 - A noise study prepared by a qualified acoustical consultant demonstrating compliance with the noise standards in Section 6, using ISO 9613-2 or equivalent methodology, under worst-case full-load and high-temperature operating conditions.
 - An emergency response and hazard mitigation plan coordinated with the Cobb-Eden Fire District and Iowa County Emergency Management, consistent with NFPA 855, including the neighbor-notification, livestock and displaced-occupant, fire-site, runoff-containment, and 24-hour contact measures required by Section 8.
 - A security plan addressing unauthorized access, vandalism, and potential threats of intentional harm or terrorism, as required by Section 8.
 - Proof of compliance with the current edition of NFPA 855 (Standard for the Installation of Stationary Energy Storage Systems) and applicable UL standards, including UL 9540A test data where required.
 - A decommissioning plan meeting the requirements of Section 9.
 - Evidence of liability insurance as required in Section 8.
 - An agreement to reimburse the Town for reasonable review costs as required by this Section, and documentation of the emergency-response escrow required by Section 8.

6. Town Review Costs. The applicant shall reimburse the Town for reasonable costs incurred in reviewing the application, including attorney review and independent noise, fire, or environmental consultant fees. The Town may require an escrow deposit before commencing review. Unused funds shall be returned; additional deposits may be required if costs exceed the escrow.

7. The Town Board may require one or more public informational meetings prior to making any recommendation to Iowa County. Notice shall be provided to all property owners within at least one (1) mile of the proposed site at the applicant's expense.

8. The Town Board may recommend denial, approval, or approval with conditions to Iowa County based on compliance with the standards of this Ordinance and consistency with the Town of Eden Comprehensive Plan.

Section 5. Design and Installation Standards

9. All BESS facilities shall comply with or exceed the current edition of NFPA 855, the National Electrical Code, and applicable UL standards. Third-party verification of compliance may be required at the applicant's expense. The operator shall also comply with all applicable Wisconsin Department of Natural Resources wildlife protections, including those for protected wild animals under Wis. Admin. Code § NR 10.02 (such as the American badger) and any requirements arising from an Endangered Resources Review.

10. Maximum height of any BESS structure or enclosure (excluding transmission poles) shall not exceed twenty-five (25) feet.

11. Lighting shall be limited to the minimum necessary for safety and security and shall be downward-directed and shielded to prevent glare on adjacent properties.

12. Screening consisting of berms, native vegetation, or other opaque barriers may be required to minimize visual impact from Non-Participating Residences and public roads.

13. Construction Hours and Temporary Impacts. Construction, including delivery of equipment, shall be limited to 7:00 a.m. to 6:00 p.m., Monday through Friday. No construction or equipment delivery shall occur on Saturdays, Sundays, or federal holidays, unless the Town Board approves other hours for a specific activity. Construction traffic shall comply with the road-use agreement required by Section 8. The operator shall take reasonable measures to control dust, erosion, and construction noise.

Section 6. Noise Standards

The Town of Eden experiences low ambient background sound levels typical of rural agricultural areas, typically less than 30 dBA under quiet nighttime conditions. Continuous operational noise from BESS facilities (primarily from cooling systems, inverters, and transformers) can remain audible at significant distances in such environments.

14. Maximum Sound Level. No Utility-Scale BESS shall produce a continuous sound level exceeding forty-five (45) dBA (Leq) as measured at any Non-Participating Residence, or fifty (50) dBA (Leq) as measured at any non-participating property line, under any continuous operating condition. These limits are intended to protect the quiet enjoyment of property consistent with the Comprehensive Plan and typical rural ambient levels.

15. Tonal Noise. If the sound contains a prominent discrete tone (as defined by standard acoustical practice), the applicable limit shall be reduced by five (5) dBA.

16. Study Requirement. Compliance shall be demonstrated by a noise study prepared by a qualified acoustical consultant using manufacturer sound power data and ISO 9613-2 (or equivalent) propagation methodology under worst-case full-load and high ambient temperature conditions. The study shall identify predicted levels at all Non-Participating Residences within one (1) mile.

17. Measurement Protocol. For purposes of demonstrating or enforcing compliance, sound levels shall be measured as A-weighted equivalent continuous sound level (Leq) over a representative period of not less than fifteen (15) minutes during typical full-load operation. Measurements at a Non-Participating Residence shall be taken outdoors at a height of approximately five (5) feet above ground, at a location representative of the dwelling, under meteorological conditions that do not unreasonably distort the result. The operator shall cooperate with any compliance measurement required by the Town.

Section 7. Setbacks from Non-Participating Residences

Setbacks from Non-Participating Residences are established to protect quiet enjoyment of property, to provide dilution distance and travel time for potential toxic-gas plumes, and to provide a buffer for radiant heat and secondary fire spread while neighboring residents can be alerted and volunteer fire resources of the Cobb-Eden Fire District are mobilizing. These setbacks are also intended to provide separation of incompatible uses as contemplated by the Comprehensive Plan Land Use Element. Rural background levels in the Town are typically less than 30 dBA under quiet nighttime conditions. Free-field sound attenuation is approximately 6 dB per doubling of distance.

18. Minimum Setbacks. All BESS components (including battery containers, inverters, transformers, and associated cooling equipment, but excluding perimeter fencing) shall maintain the following minimum setbacks from any Non-Participating Residence, measured from the nearest edge of equipment to the nearest point of the dwelling:

- (a) Systems with nameplate energy capacity of less than 100 MWh: 1,500 feet.
- (b) Systems with nameplate energy capacity of 100 MWh to less than 500 MWh: 2,000 feet.
- (c) Systems with nameplate energy capacity of 500 MWh or greater: 2,500 feet.

19. Property Line Setback. In addition to the residential setbacks, a minimum setback of two hundred (200) feet from any non-participating property line shall apply, or such greater distance

as required to meet the noise standards in Section 6. This property-line setback provides a basic buffer for adjoining landowners who may not have a residence on the property and helps ensure that equipment is not placed immediately adjacent to neighboring land.

20. Waiver. The setback from a Non-Participating Residence may be reduced upon written consent of the owner of that residence, recorded with the Iowa County Register of Deeds, provided the noise standards in Section 6 are still met. A property-line setback may be reduced only with recorded written consent of the adjoining non-participating landowner, and only if the noise standards in Section 6 are still met.

Section 8. Operation, Insurance, Monitoring, Security, Emergency Planning, and Environmental Protection

21. The operator shall enter into a road-use agreement with the Town covering construction and ongoing maintenance traffic on Town roads, including financial assurance for repair of Town roads. Where project access uses United States, State of Wisconsin, or Iowa County highways, the operator shall also comply with all applicable requirements of the Wisconsin Department of Transportation, Iowa County Highway Department, or other responsible highway authority, and shall provide the Town with evidence of any required permits or agreements from those authorities. All access onto Town roads shall comply with the Town of Eden driveway ordinance.

22. The operator shall maintain commercial general liability insurance of not less than Five Million Dollars (\$5,000,000) per occurrence, with the Town named as an additional insured. Liability insurance shall not be construed as a cap on the uncapped emergency transportation, lodging, boarding, feed, or related-care obligations of Section 8.

23. Emergency Response Plan and Training. The operator shall provide training to the Cobb-Eden Fire District and other local emergency responders at the operator's expense and shall maintain an up-to-date emergency response and hazard mitigation plan on file with the Town, the Cobb-Eden Fire District, and Iowa County Emergency Management, consistent with NFPA 855. The plan shall address thermal runaway, fire, toxic-gas release, drought-season vegetation fire risk, water supply, and mutual-aid needs. The plan shall also address livestock and displaced occupants as required by this Section.

24. Neighbor Notification. Because a toxic-gas plume may reach residential setback distances within a few minutes under average wind conditions, and because rural residents are not continuously monitoring for industrial incidents, the emergency plan shall include a specific procedure for promptly notifying Non-Participating Residences and other occupied properties within at least one (1) mile of the facility. The procedure shall identify the method of notification (which may include coordination with Iowa County Emergency Management for reverse-911 or equivalent alert, telephone notification, or other reliable means), the persons responsible for initiating the alert, and shelter-in-place or evacuation guidance. A windsock or other means of indicating wind direction shall be maintained on site to assist responders and downwind residents.

25. **Livestock and Displaced Occupants.** The emergency plan shall address the protection and, if necessary, evacuation or relocation of livestock and other farm animals on Participating and Non-Participating Properties that may be affected by fire, toxic-gas release, or official evacuation or shelter-in-place direction. If an incident at the facility causes residents or livestock to be evacuated, relocated, or unable to remain safely on the affected property, the operator and the owner of the BESS shall, at their sole expense, pay all actual documented costs of transportation and temporary lodging for displaced residents, and all actual documented costs of transportation, boarding, feed, and related care for displaced livestock and other farm animals, until it is safe to return or until a public authority determines that return is not required. There shall be no cap, ceiling, per-person limit, per-animal limit, or aggregate dollar limit on these emergency transportation, lodging, boarding, feed, or related-care expenses. The operator shall identify in the emergency plan the resources it will use for livestock transport and boarding. This obligation is in addition to any other legal liability and does not limit claims for other damages. Payment and Collectability. The operator and owner shall reimburse any person or the Town for such actual documented costs within fifteen (15) days of written invoice or demand, unless a longer period is agreed in writing. Before construction, the operator shall establish and maintain a standing emergency-response escrow, letter of credit, or equivalent financial assurance payable to the Town, in an initial amount set by the Town Board, to be used if the operator or owner fails to pay these costs when due. The Town may draw on the assurance to pay invoices and shall require the operator to replenish it within thirty (30) days after any draw. The existence, amount, or exhaustion of the financial assurance does not cap, limit, or satisfy the uncapped payment obligation of the operator and owner.

26. **Fire-Site Measures.** The site shall include, and the emergency plan shall describe:

- (a) Vegetation management and defensible space around containers and equipment sufficient to reduce the risk of secondary fire spread to grass, crop residue, or other fine fuels, including during drought conditions.
- (b) Non-combustible ground cover under and immediately around battery containers, inverters, and transformers.
- (c) On-site water supply or an identified drafting source acceptable to the Cobb-Eden Fire District, together with access for tankers or tenders. The quantity and location shall be determined in consultation with the District and documented in the emergency plan.
- (d) A second emergency access suitable for fire apparatus, independent of the primary driveway to the extent practicable. The secondary access shall be designed and maintained to support fire apparatus under reasonably expected weather conditions and shall be shown on the site plan. The location and design shall be acceptable to the Cobb-Eden Fire District.
- (e) Containment of fire-suppression water and other runoff from a fire, thermal runaway, or hazardous-material release, sufficient to prevent uncontrolled discharge to adjoining land, surface water, or groundwater. The containment design shall be shown on the site plan and

described in the emergency plan, and shall comply with applicable Wisconsin Department of Natural Resources and Iowa County stormwater and spill-prevention requirements.

27. Twenty-Four-Hour Contact and Complaints. The operator shall maintain a local or toll-free telephone number that is answered twenty-four (24) hours a day for emergencies and complaints, and shall post that number at the site entrance and file it with the Town Clerk, the Cobb-Eden Fire District, and Iowa County Emergency Management. The operator shall investigate noise, traffic, lighting, odor, security, or other complaints and provide a written response to the complainant and the Town Clerk within five (5) business days. Emergency calls shall be directed immediately to 911 and to the Cobb-Eden Fire District as appropriate.

28. The Town may require periodic noise monitoring or compliance reporting at the operator's expense if complaints are received or conditions change.

29. Security Plan. The operator shall prepare and implement a security plan designed to deter, detect, and respond to unauthorized access, vandalism, theft, and intentional acts of harm or terrorism. The plan shall be submitted with the application and shall include, at a minimum:

- (a) Perimeter fencing of sufficient height and design to deter unauthorized entry, with locked gates and controlled access points.
- (b) Appropriate lighting, surveillance cameras, or other monitoring systems sufficient to detect unauthorized activity, without creating excessive light trespass on adjacent properties.
- (c) Procedures for notifying local law enforcement and emergency responders of any security breach or threat.
- (d) Measures to protect critical equipment and control systems from physical and cyber intrusion, consistent with applicable industry best practices and any requirements of the utility interconnection agreement or federal critical infrastructure standards.
- (e) The security plan shall be updated as necessary and provided to the Town and local law enforcement upon request. Sensitive security details may be maintained as confidential to the extent permitted by law.

30. Groundwater and Soil Protection. To protect groundwater and soil resources consistent with the Comprehensive Plan's emphasis on agricultural and natural resource protection:

- (a) Prior to the start of construction, the operator shall conduct baseline soil sampling (and groundwater sampling if shallow groundwater is present) at representative locations on the site. Sampling shall be performed by a qualified environmental professional and the results provided to the Town.
- (b) In the event of a thermal runaway, fire, or any release of battery electrolyte or other hazardous materials, the operator shall promptly conduct soil (and groundwater if warranted) testing in the affected area and submit the results to the Town and the Wisconsin Department of Natural Resources as required by law.

(c) Soil and groundwater testing shall also be performed as part of decommissioning in accordance with Section 9.

(d) The Town may require additional testing if it has reasonable cause to believe that contamination may have occurred.

Section 9. Decommissioning

31. Prior to construction, the applicant shall provide a decommissioning plan and financial assurance in a form acceptable to the Town (escrow, irrevocable letter of credit, or equivalent), payable to the Town of Eden, in an amount sufficient to cover the full estimated cost of removal of all equipment and restoration of the site to a condition suitable for agricultural use or other use consistent with the surrounding area. The amount shall be based on a qualified independent estimate and shall be updated at least every five (5) years.

32. Upon cessation of operations for more than twelve (12) consecutive months, or upon abandonment, the Town may draw upon the financial assurance to complete decommissioning and restoration.

33. Soil testing and remediation, if necessary, shall be included in the decommissioning plan, particularly on agricultural land, consistent with the baseline and incident-related testing requirements of Section 8.

Section 10. Appeals

34. Any person aggrieved by a decision, recommendation, or determination of the Town Board or Town officials made under this Ordinance may appeal such decision to the Town Board by filing a written notice of appeal with the Town Clerk within thirty (30) days of the date of the decision or recommendation.

35. The notice of appeal shall state the specific decision being appealed, the grounds for the appeal, and the relief requested. The Town Board shall hold a hearing on the appeal within a reasonable time and may affirm, reverse, or modify the decision. Notice of the hearing shall be provided to the appellant and any other interested parties.

36. The decision of the Town Board on an appeal shall be final for purposes of further review. Any person aggrieved by the final decision of the Town Board may seek judicial review by certiorari in the Circuit Court for Iowa County within thirty (30) days of the Town Board's final decision, as provided by Wisconsin law.

37. Nothing in this Section limits any separate right of appeal or review available under Iowa County zoning ordinances or Wisconsin Statutes with respect to decisions of the County.

Section 11. Transfer, Enforcement, and Severability

38. Any transfer of ownership or operational control shall be reported to the Town Clerk within thirty (30) days. The successor shall assume all obligations under this Ordinance, including the decommissioning financial assurance and security plan requirements.

39. Violations of this Ordinance shall be subject to enforcement under Town citation authority and applicable Wisconsin statutes. Each day a violation continues may constitute a separate offense. The landowner and the operator shall be jointly and severally responsible for compliance.

40. If any provision of this Ordinance is held invalid, the remainder shall continue in full force and effect.

Section 12. Effective Date and Review

This Ordinance shall take effect upon passage and publication as provided by law. The Town Board shall review this Ordinance at least once every three (3) years, or sooner if warranted by technological changes, new technical data, experience with energy storage facilities, or amendments to the Town of Eden Comprehensive Plan or Iowa County zoning regulations.

Adopted this 14th day of September, 2026.

Rick Zomlick

Town Chair, Town of Eden

Attest:

Cheryl Kelly

Town Clerk, Town of Eden

TOWN OF EDEN
IOWA COUNTY, WISCONSIN

MEMORANDUM

Technical Basis for the Proposed BESS Ordinance, with Plain-Language Explanations

Purpose

This memorandum explains why the proposed Battery Energy Storage Systems (BESS) Ordinance uses the distances, sound limits, and operating rules that it does. It is written so a Town resident without engineering training can follow every figure. Technical terms are defined the first time they appear. The ordinance is the Town's preferred set of standards under Iowa County zoning. It is meant to guide Town recommendations to the County and to cover noise, roads, emergency planning, and security where the Town still has local authority.

How to Read the Numbers and Terms

BESS (battery energy storage system). A group of large batteries, usually in metal containers about the size of shipping containers or semi trailers, that take electricity off the grid when it is plentiful and send it back later. It is a warehouse for electricity, not a power plant. It does not make new electricity.

kW and MW (kilowatt and megawatt). These measure how much power the system can put out at one moment, like horsepower. One megawatt (MW) equals 1,000 kilowatts (kW). A typical house might use a few kilowatts. A utility-scale project is 500 kW or more.

MWh (megawatt-hour). This measures how much energy is stored, like gallons in a tank rather than the size of the pump. A 100 MWh system can deliver 100 MW for one hour, or 25 MW for four hours. The ordinance uses MWh to size setbacks because a larger tank means a larger fire and a larger noise source if many cooling fans and inverters run at once.

Setback. The required empty distance between the equipment and a neighbor's house or property line. It is a buffer, not a property taking. The owner of the project site still owns that land; the batteries just cannot sit that close to the neighbor.

Non-participating. A neighbor who has not signed a lease or agreement with the project. Participating land is land under contract with the project.

dBA (A-weighted decibel). The everyday unit for how loud a sound is to the human ear. Rough comparisons: a quiet bedroom at night is often in the 20s; a library is around 30–40; normal conversation is about 60; a tractor at idle is much louder. "Typically less than 30 dBA" at night in the Town means it is quieter than most villages or cities.

Leq. An average sound level over a set period, not a single peak. The ordinance uses a 15-minute average so a brief clank does not decide compliance, but steady fan and inverter noise does.

Tonal noise. A hum, whine, or buzz on one pitch, like a transformer. The ear notices it more than mixed noise of the same number, so the limit drops 5 dBA if the sound is tonal.

6 dB per doubling of distance. Outdoors in open country, each time you double how far you are from a noise source, the sound drops about 6 decibels. Example: if equipment is 50 dBA at 400 feet, it is about 44 dBA at 800 feet and about 38 dBA at 1,600 feet. That is why distance matters in a quiet township.

ISO 9613-2. The common engineering method for predicting how sound travels outdoors. The applicant's noise study must use this method or an equivalent one, at full load and hot weather, when cooling fans are loudest.

Thermal runaway. A battery fire that feeds itself. Once a cell overheats, it can heat the next cell. Water often cannot "put it out" the way a barn fire can be knocked down. The fire may have to burn out while crews protect exposures.

Toxic-gas plume. A cloud of gases that can leave a battery fire and drift with the wind. The main gas of concern is hydrogen fluoride (HF), which can irritate or burn lungs and eyes at high concentrations. Carbon monoxide and other smoke gases can also be present. "Plume travel time" is how many minutes that cloud takes to reach a house.

Dilution. Mixing of the cloud with outdoor air as it moves. Farther from the fire, the same amount of gas is spread through more air, so the dose at a house is lower.

NFPA 855 and UL 9540A. National fire and product standards for battery systems. NFPA 855 is the installation rulebook fire departments use. UL 9540A is a burn test that shows how a particular battery design behaves in a fire. The ordinance requires both.

Cobb-Eden Fire District. The volunteer fire department that covers the Town. Members are called from home or work, go to the station, put on gear, and then drive to the scene. That takes longer than a full-time city department.

CPCN and PSC. A Certificate of Public Convenience and Necessity is a state permit from the Public Service Commission (PSC) for large power plants and high-voltage transmission lines. Wisconsin's current statute defines that kind of "facility" as a large generating plant or a high-voltage line. A standalone battery does neither. A Certificate of Authority is a different, narrower utility permit that can still apply in some cases.

Escrow. Money or a bank letter of credit parked up front so the Town can pay bills if the company does not. It is a collection tool. It is not a cap on what the company owes.

Decommissioning. Taking the equipment out and putting the land back to farm or similar use when the project ends.

1. Residential Setbacks

The ordinance requires the batteries, inverters, transformers, and cooling equipment to stay at least the following distances from a house that is not part of the project:

- Less than 100 MWh: 1,500 feet (a little more than a quarter mile).
- 100 MWh to less than 500 MWh: 2,000 feet.
- 500 MWh or more: 2,500 feet (a little under half a mile).

Those distances are not fire-code spacing between two containers. They are community buffers. They do three jobs at once: keep steady equipment noise from sitting on a quiet farmhouse; give a toxic cloud more air to mix with before it reaches a yard; and give extra minutes while neighbors are called and volunteer firefighters are rolling.

There is also a 200-foot minimum from any property line that is not under contract with the project. That protects a neighbor who owns bare ground, woods, or tillable acres even if there is no house on that tract. If the noise limits require more than 200 feet, the greater distance controls. A house setback can be shortened only if that homeowner records written consent and the noise limits are still met.

If a project starts small and later adds batteries so that it jumps into a higher size tier, the whole site must meet the larger house setback. The Town would not accept a 90 MWh project at 1,500 feet that later becomes 200 MWh without moving to the 2,000-foot rule.

2. Noise Standards

The ordinance caps continuous operating noise at 45 dBA at a non-participating house and 50 dBA at a non-participating property line. In plain terms: at the neighbor's house, the project may not run louder than a quiet conversation in another room. At the fence line it may be a little higher, but still far below a tractor or a highway.

Nighttime background in the Town is typically less than 30 dBA. That is why a sound that would disappear in town can still be noticed here. The ordinance does not try to hold the project to 30 dBA at the house. It holds it to 45 dBA at the house so the added sound stays limited while remaining achievable with modern equipment and distance.

The applicant must hire a qualified noise consultant. The study must assume full load and hot weather, when fans work hardest, and must report predicted levels at every non-participating house within one mile. If the Town later receives complaints, it may require follow-up measurements at the operator's expense. Measurements are a 15-minute average, about five feet off the ground, at a spot that represents the house—not behind a shed and not in a windstorm that would distort the reading.

3. Toxic Gas, Travel Time, and Neighbor Notification

If a battery container goes into thermal runaway or fire, it can release gases. Hydrogen fluoride is the one most often discussed for health. Published fire-plume studies of container-sized systems generally show the highest, most dangerous concentrations close to the unit—tens of feet to a few hundred feet—not at 1,500 to 2,500 feet. By the time the cloud reaches those ordinance distances under average conditions, it has mixed with a large volume of outdoor air.

Time is the other half. Average winds in southwest Wisconsin are often about 8 to 12 miles per hour. At 10 miles per hour, air travels about 880 feet in one minute. So the leading edge of a cloud can reach 1,500 feet in roughly one and a half to two and a half minutes, and 2,500 feet in roughly two and a half to four minutes. That is faster than a volunteer department can assemble. It is also faster than a neighbor will notice unless someone calls.

That is why the ordinance requires a written plan to notify occupied properties within at least one mile, coordination with Iowa County Emergency Management, simple stay-inside or leave instructions, and a windsock on site so firefighters and neighbors can see which way the air is moving. A 24-hour phone number must be posted at the gate and filed with the Town, the Cobb-Eden Fire District, and Emergency Management. Ordinary complaints get a written answer within five business days. A fire or gas event goes to 911.

4. Fire Risk, Response Time, and the Cobb-Eden Fire District

Dry weather does not make a battery more likely to fail. Dry grass, corn stubble, and ditch vegetation do make a battery fire more likely to leave the pad and become a field fire. The ordinance therefore requires managed vegetation and a non-burnable surface under and around the equipment, plus water on site or a drafting pond or hydrant the District accepts.

Volunteer response is not a criticism of the District. It is a fact of rural coverage. Call-out, travel to the station, gear, and travel to the site often take several minutes and can exceed ten minutes before the first truck arrives. Tankers and mutual aid take longer. The setbacks are sized for that sequence: a cloud can cover 1,500 to 2,500 feet in a few minutes; calling neighbors takes more time; the first apparatus is still on the road.

The site must also have a second driveway or field access that a fire truck can use if the main drive is blocked, built to hold apparatus in ordinary weather, and acceptable to the District. Firefighting water and foam runoff must be caught so it does not run onto the next farm, into a creek, or down a sinkhole. That is the same idea as keeping milkhouse waste or silage leachate off a neighbor's field.

5. Livestock, Displaced People, and Who Pays

If a fire, gas release, or official evacuation makes a house or a barn unsafe, people and animals may have to leave. The ordinance requires the project owner and operator to pay the actual, documented cost of hauling and lodging people, and of hauling, boarding, and feeding livestock,

until it is safe to come home or a public authority says they should not return. There is no dollar cap, no per-person cap, and no per-animal cap.

An uncapped promise is only useful if it can be collected the week of the fire. The ordinance therefore requires payment within 15 days of an invoice and a standing emergency escrow or bank letter of credit payable to the Town. If the company does not pay, the Town can draw the escrow and pay the motel, the trucker, or the boarding farm, then require the company to refill the escrow within 30 days. The escrow amount is set by the Town Board. Whatever that starting amount is, it does not limit what the company owes. The \$5 million liability policy is also not a cap on these particular bills.

6. Other Operating Rules

Construction and equipment deliveries are limited to 7:00 a.m. to 6:00 p.m., Monday through Friday. No construction on Saturday, Sunday, or federal holidays unless the Board approves other hours for a defined task. Town-road access must meet the Town driveway ordinance. A road-use agreement and repair security cover Town roads. State and county highway permits are required where those roads are used.

The applicant pays the Town's reasonable review costs (attorney and outside consultants). Before dirt is turned, soil—and groundwater if it is shallow—is sampled so there is a baseline. After a fire or a spill, the ground is tested again. The same testing is part of taking the site apart. A security plan must cover fencing, cameras or equivalent monitoring, notice to law enforcement, and both physical and computer intrusion. When the project ends, a funded decommissioning plan must remove the equipment and restore the land to farm use or a similar surrounding use. That fund is updated at least every five years.

7. Public Service Commission and Standalone Batteries

Wisconsin law requires a state CPCN for a "facility." The statute defines that word as a large electric generating plant or a high-voltage transmission line. A standalone battery stores power and sends it back out. It does not generate power and it is not a transmission line. Under the words of the current statute, it is not a CPCN facility.

The PSC has still published filing papers for storage and may review some projects under other laws, including a Certificate of Authority when a public utility's spending crosses a dollar line. That extra path has not been settled by a published court case on standalone batteries. Until the Legislature changes § 196.491, Town and County siting rules are the clear local standards. Batteries built as part of a 100 MW or larger power plant can still be reviewed with that plant.

8. Summary

The distances and sound limits are not copied from another county's mile-wide rule. They rest on how sound falls off in open country, how fast a fire cloud can move at ordinary local wind speeds, how long it takes to reach a neighbor in a township without sidewalks or a siren on every

corner, and how long it takes a volunteer department to put a truck on the scene. The operating rules—notification, second access, water, runoff control, 24-hour contact, livestock and lodging bills with no cap, and an escrow so those bills can actually be paid—are what make the distances usable when something goes wrong. The standards are meant to protect health, safety, farms, and quiet use of property, consistent with the Town's 2005 Comprehensive Plan and with the Town's role under Iowa County zoning.