

ORDINANCE NO. [____]

AN ORDINANCE ADDING A NEW CHAPTER 16 TO THE DUBUQUE COUNTY CODE OF ORDINANCES, "DATA CENTERS," ESTABLISHING DEFINITIONS, SITING PROHIBITIONS, SETBACKS, PERFORMANCE STANDARDS, APPLICATION AND PERMIT REQUIREMENTS, MONITORING, DECOMMISSIONING, FINANCIAL ASSURANCE, AND ENFORCEMENT PROVISIONS FOR DATA CENTERS AND RELATED FACILITIES IN THE UNINCORPORATED AREAS OF DUBUQUE COUNTY, IOWA, AND MAKING CONFORMING AMENDMENTS TO CHAPTER 1 (ZONING)

WHEREAS, Dubuque County exercises home rule authority under Iowa Code chapter 331 and county zoning authority under Iowa Code chapter 335, and has adopted a comprehensive plan consistent with the smart planning principles of Iowa Code chapter 18B; and

WHEREAS, data centers are industrial land uses of unprecedented scale in electrical demand, water demand, continuous mechanical noise, heat rejection, and site coverage, whose impacts differ in kind and degree from the uses for which the County's existing zoning districts and performance standards were written; and

WHEREAS, the County lies within the Driftless Area, where karst geology, sinkholes, shallow fractured bedrock, and vulnerable aquifers permit rapid movement of surface contamination into groundwater relied upon by rural households and public water systems; and

WHEREAS, the County's agricultural land base is a finite and non-renewable resource, and the Dubuque County Regional Comprehensive Plan directs the protection of productive farmland and orderly growth; and

WHEREAS, the operational characteristics of data centers — continuous mechanical noise and low-frequency sound, heat rejection, backup combustion generation, industrial lighting, and large-scale water handling — bear directly on the public health of nearby residents, including sleep, cardiovascular stress, and quality of life, and warrant standards set at protective levels; and

WHEREAS, the Dubuque Regional Airport and its Class D airspace, approach, departure, and traffic-pattern corridors require protection from thermal plumes, wildlife attractants, and airspace obstructions; and

WHEREAS, the Board of Supervisors has maintained a moratorium on data center applications for the purpose of studying and adopting regulations adequate to protect the public health, safety, and welfare, and this Chapter is the product of that study; and

WHEREAS, the Board finds that the standards of this Chapter are consistent with the Dubuque County Regional Comprehensive Plan and are the minimum necessary to protect the public health, safety, and welfare and the resources identified in these findings;

NOW, THEREFORE, BE IT ORDAINED BY THE BOARD OF SUPERVISORS OF DUBUQUE COUNTY, IOWA:

SECTION 1. NEW CHAPTER ADOPTED. The Dubuque County Code of Ordinances is amended by adding a new Chapter 16, "Data Centers," to read in its entirety as follows, and Chapter 1 (Zoning) is amended to the extent necessary to conform:

CHAPTER 16 — DATA CENTERS

ARTICLE I — GENERAL PROVISIONS

Sec. 16-101. Short Title.

This Chapter shall be known and may be cited as the "Dubuque County Data Center Ordinance."

Sec. 16-102. Purpose and Findings.

The purpose of this Chapter is to regulate the siting, construction, operation, monitoring, transfer, and decommissioning of Data Centers so that they do not diminish the County's public health, groundwater, farmland, airspace safety, road infrastructure, night sky, quiet, property values, or public finances, and so that every cost and risk of such facilities is borne by their owners and operators and not by the public. The Board adopts as findings the recitals of the ordinance enacting this Chapter and the following:

- A. The impacts regulated by this Chapter — including continuous low-frequency noise, large-scale water use and heat rejection, backup generation, and battery energy storage — are documented at operating facilities elsewhere and are not speculative.
- B. Standards in this Chapter are set at protective levels in express recognition that sensitivity to noise, vibration, light, and air emissions varies among residents, including persons with post-traumatic stress, night-shift workers, infants, and the medically vulnerable, and that standards adequate only for the average person are not adequate for the public.
- C. Where this Chapter is more restrictive than another applicable regulation, this Chapter governs; where another applicable regulation is more restrictive, that regulation governs.

Sec. 16-103. Authority.

This Chapter is adopted pursuant to Iowa Code chapters 331 and 335, in implementation of the Dubuque County Regional Comprehensive Plan and the smart planning principles of Iowa Code chapter 18B, and, with respect to Article IX, in coordination with airport zoning authority under Iowa Code chapter 329. Intergovernmental coordination under this Chapter is undertaken pursuant to Iowa Code chapter 28E.

Sec. 16-104. Applicability.

- A. This Chapter applies to every Data Center, Data Center Campus, Data Center Accessory Use, and Data Center Energy System proposed, constructed, expanded, modified, or operated in the unincorporated areas of Dubuque County after the effective date of this Chapter.
- B. This Chapter does not apply to computing or telecommunications equipment that is secondary and customarily incidental to an otherwise permitted principal use, such as servers serving an office or school that do not meet the thresholds of the definition of Data Center; an Accessory Server Room meeting every limit of its own definition is excluded notwithstanding those thresholds; whether such equipment exists on the effective date of this Chapter or is installed thereafter.
- C. For any facility lawfully existing on the effective date of this Chapter, any replacement of major equipment — including generators, chillers, cooling and heat-rejection equipment, and screening — shall comply with the standards of this Chapter in effect at the time of replacement, and any expansion, increase in electrical load, or Material Change shall comply with this Chapter in full and shall require approval under Article III. Any facility that does not conduct active Data Center operations for a continuous period of twelve (12) months shall meet the requirements of this Chapter in full before recommencing operations.
- D. Relationship to Chapter 5. Nothing in this Chapter modifies Chapter 5 of the Dubuque County Code of Ordinances (Renewable Energy), if and as adopted, or any successor renewable-energy

ordinance. A battery energy storage system that constitutes a Utility Scale Battery Energy Storage System under Chapter 5 — storage for off-site use through the grid or export to the wholesale market — requires approval under Chapter 5 in addition to any approval under this Chapter, and definitions in the two chapters shall be construed consistently for identical physical structures.

E. A Data Center, Data Center Campus, Data Center Accessory Use, and Data Center Energy System are not agricultural uses, farm operations, or farm buildings for any purpose, including any exemption under Iowa Code section 335.2.

Sec. 16-105. Interpretation.

A. Words and phrases defined in Article II have the meanings there given.

B. Any reference in this Chapter to a statute, administrative rule, or technical standard — including the Iowa Code, NFPA, ANSI, ISO, IEC, or FAA publications — means the version in effect at the time of application unless a specific edition is expressly stated.

C. In the event of conflict among provisions of this Chapter, the more restrictive provision governs.

Sec. 16-106. Costs Borne by Owner and Operator.

Except as expressly provided otherwise, all costs of application preparation, required studies, County-retained consultants and experts, technical review, utility extensions and upgrades, testing, monitoring, reporting, maintenance, remediation, decommissioning, restoration, enforcement, and compliance with this Chapter are the responsibility of the facility Owner and Operator, jointly and severally, and shall not be borne by the County.

Sec. 16-107. Floodplain.

Data Centers are maximum damage potential structures and facilities for purposes of floodplain district regulations. No Data Center, Data Center Accessory Use, or Data Center Energy System shall be located within any floodway or within the Special Flood Hazard Area (the one percent (1%) annual chance floodplain), and every application shall demonstrate compliance with the Dubuque County Floodplain Management Ordinance.

Sec. 16-108. Periodic Review.

Not later than two (2) years after the effective date of this Chapter, and at least every three (3) years thereafter, the [Zoning Administrator] shall report to the [Zoning Commission] and the Board of Supervisors on the operation and effectiveness of this Chapter — including technological change in the data center industry, the adequacy of the standards of Articles IV through XIII, enforcement experience, and the cumulative assessment of Sec. 16-305 — with recommended amendments, if any. The report and any resulting amendment process shall include opportunity for public comment. Failure to complete a review does not affect the validity or enforceability of this Chapter or of any permit or condition.

ARTICLE II — DEFINITIONS

Sec. 16-201. Definitions.

For purposes of this Chapter:

Abandonment or Discontinuation. Cessation of active Data Center operations for a continuous period of one (1) year, without regard to the maintenance of utility service, security, or caretaker activity, unless cessation results from casualty, court order, or a temporary suspension approved in writing by the County.

Accessory Server Room. A room, cabinet, closet, or small enclosed equipment area incidental and subordinate to the principal lawful use on the same parcel and used solely for the internal operations of the owner or occupant. An Accessory Server Room: (1) shall not be used for third-party colocation, cloud services, merchant hosting, AI training or inference for others, content delivery services, disaster recovery services for unrelated entities, blockchain validation, or Digital Asset Mining; (2) shall not exceed, in the aggregate on a parcel, two thousand five hundred (2,500) square feet of dedicated equipment area; (3) shall not exceed, in the aggregate on a parcel, five hundred (500) kilowatts of information technology load; and (4) shall not require a dedicated outdoor mechanical yard, generator yard, battery yard, or substation, and is not treated as a separate principal use.

Affiliate; Common Control. Any person or entity that directly or indirectly controls, is controlled by, or is under common control with another, including through ownership, voting rights, contract, lease, option, financing arrangement, or management authority. Parcels, phases, or applications held or advanced by Affiliates shall be aggregated and treated as a single project and a single site for every threshold, standard, setback, and requirement of this Chapter.

Baseline Ambient Sound. The pre-application sound environment at the property lines of the site, measured and documented under Sec. 16-701 before any site disturbance, expressed in dB(A), dB(C), and dB(Z), reported as the L90 (ninetieth-percentile exceedance) statistical sound level for each monitoring period, together with Leq and Lmax, with full-spectrum octave-band data by time of day and night.

Closed-Loop Cooling System. A cooling system that circulates water or other heat-transfer fluid within a sealed circuit, rejecting heat through a heat exchanger, and that does not rely on continuous withdrawal, evaporation, or discharge of water during normal operation.

CSR2. The Iowa Corn Suitability Rating 2 as published in the USDA-NRCS Soil Survey Geographic Database (SSURGO) and the NRCS Web Soil Survey.

Data Center. A building or group of buildings occupied primarily by computers, servers, or telecommunications and related equipment where digital information is processed, transferred, or stored primarily to and from offsite locations, including without limitation Digital Asset Mining, cryptocurrency mining, blockchain transaction processing, server farms, cloud computing, general computing, and artificial intelligence training or inference, whether primary or accessory in nature, together with supporting air handlers, power generation, cooling, storage, and utility infrastructure. A facility is a Data Center for purposes of this Chapter if it is designed, proposed, or operated at a total connected electrical service capacity of [five hundred (500)] kilovolt-amperes or greater — approximately six hundred (600) amperes at 480 volts three-phase — aggregated across all services, feeders, meters, and phases serving the site and any adjoining parcels under common Control, or an energy-use intensity of two hundred fifty (250) kWh per square foot per year or greater, or otherwise meets this definition.

Data Center Accessory Use. Ancillary uses or structures secondary and incidental to a Data Center, including administrative, logistical, fiber optic, storage, and security buildings; standby generators; battery energy storage systems and on-site solar generation serving the facility; electrical substations; utility lines; cooling water and wastewater facilities; water holding facilities and towers; pump stations; environmental controls; and security features, located on the same tract or assemblage of parcels developed as a unified development with the Data Center. Data Center Accessory Uses do not include any utility-scale electric generating plant or other facility intended for sale or export of electricity or for normal, continuous, non-emergency supply, which is a separate principal use requiring its own approval.

Data Center Campus. Two or more Data Centers, together with associated Data Center Accessory Uses, Data Center Energy Systems, and supporting infrastructure, planned or operated as an integrated facility.

Data Center Energy Systems. Energy generation and storage systems serving a Data Center, including generators and engines, solar panels, electric substations, backup power systems, battery energy storage systems (BESS), transmission and distribution lines, and pipelines, whether used during normal operations or as backup.

Digital Asset Mining. The use of computing equipment to mine, validate, hash, secure, stake, or otherwise support blockchain, distributed-ledger, or other digital asset operations for compensation, financial return, or speculative value.

Development Footprint. All areas of land disturbance, grading, construction, impervious surface, equipment placement, staging, and access associated with the project.

Emergency. An unexpected natural or weather disaster, utility system failure, or other unforeseen event causing an actual loss of utility electrical service to the site. Emergency does not include: any period when the serving utility has not yet permanently delivered power to the facility or its substations (bridge power pending interconnection); any declared grid overload, capacity, or demand-response event; or economic conditions, including energy prices.

End of Construction. The date on which construction of the Data Center — or, for a phased or multi-building campus, all of its buildings — is complete and certificates of occupancy have issued, and the Operator has so notified the [Zoning Administrator] in writing; provided that if all construction has stopped for more than six (6) consecutive months, other than due to County processing delays, End of Construction is deemed to have occurred as of the last day of that month, subject to written extension by the [Zoning Administrator].

Evaporative Cooling. Any cooling method — including cooling towers, adiabatic, hybrid, spray-assist, or misting systems — that rejects heat wholly or partly through the evaporation of water.

Exhaust or Emission Point. Any stack, vent, louver, or other point of discharge of combustion products, heated air, or process exhaust to the atmosphere.

Facility Classification. Every Data Center is classified as Small, Medium, Large-Scale, or Hyperscale, adopting the categories of the County's data center moratorium resolution, as follows:

1. Small: a Data Center whose design IT load is under one (1) megawatt, whose total design facility power does not exceed three (3) megawatts, and whose gross floor area is under twenty-five thousand (25,000) square feet. A Data Center exceeding any Small threshold is classified at the highest tier triggered under paragraphs 2 through 4.
2. Medium: design IT load of one (1) megawatt up to and including ten (10) megawatts; or total design facility power over three (3) megawatts up to and including fifteen (15) megawatts; or gross floor area of twenty-five thousand (25,000) square feet up to but not including one hundred thousand (100,000) square feet.
3. Large-Scale: design IT load over ten (10) megawatts up to and including fifty (50) megawatts; or total design facility power over fifteen (15) megawatts up to and including seventy-five (75) megawatts; or gross floor area of one hundred thousand (100,000) square feet up to but not including five hundred thousand (500,000) square feet.
4. Hyperscale: design IT load over fifty (50) megawatts; or total design facility power over seventy-five (75) megawatts; or gross floor area of five hundred thousand (500,000) square feet or more.
5. Rules of classification: (a) a facility is classified at the highest tier triggered by any single metric; (b) all metrics are measured on design capacity and contracted electrical service, not self-reported operating load; (c) all metrics aggregate across the entire Data Center Campus and across all parcels, phases, buildings, and facilities of the applicant and its Affiliates; (d) gross floor area includes all buildings and all containerized, modular, and prefabricated computing units

and equipment enclosures; (e) classification determines which standards of this Chapter apply, but does not limit the definition of Data Center, which alone governs applicability; and (f) any Data Center use areas located within one-half (0.5) mile of one another are considered cumulatively for classification and permit-type thresholds, whether or not under common ownership.

Material Change. Any change from the approved use, capacity, electrical load, customer mix, cooling technology, or operating model shown in the approved application, and any expansion, additional phase, or increase in any approved quantitative parameter.

Impervious Surface Footprint. The total cumulative horizontal surface area of all non-vegetative, non-porous structural elements on the site, including building roofs, concrete pads, server halls, cooling equipment footprints, substation pads, switchyards, access roads, and compacted gravel staging areas.

Occupied Structure. Any residence, dwelling, mobile home, cabin, school, preschool or daycare, long-term care or nursing facility, community center, place of worship, public park structure, public or institutional building, kennel, stable, or agricultural building containing livestock.

Operator; Owner. Any person or entity that owns, leases, manages, operates, or controls a Data Center or any portion of one, including any successor. Obligations of this Chapter bind Owner and Operator jointly and severally.

Prime Farmland; Farmland of Statewide Importance. Land so classified by USDA-NRCS, including every conditional prime subclass (such as prime if drained or prime if protected from flooding), whether or not the stated condition is satisfied.

Project Site. All parcels comprising the project, including all parcels aggregated under the Affiliate rules of this Chapter.

Projected Peak Demand. The maximum electrical demand of the facility, in megawatts, at full design capacity of all phases identified in the phasing plan, certified by a professional engineer and verified under Sec. 16-602.

Property Line. Every boundary of every parcel comprising the site, including boundaries abutting road rights-of-way. Compliance points under this Chapter are all Property Lines, without regard to any lease, easement, waiver, or agreement affecting an adjoining parcel.

Public Dashboard. The public, continuously updated internet monitoring platform required by Article XI.

Sensitive Area. A geographic area defined by natural or cultural features where there is significant risk of groundwater degradation or irreversible loss, including sinkholes, rivers, streams, creeks, natural springs, lakes, farm ponds, wetlands, karst topography, public water supplies, and cemeteries and known burial sites, as mapped in County, state, or federal records.

Sensitive Receptor. Any Occupied Structure; any parcel in a residential zoning district or in an agricultural or conservation district containing a residence; any county, state, or federal park, preserve, or recreation area; and any Iowa DNR regulated Animal Feeding Operation, including confinement feeding operations and open feedlots.

ARTICLE III — PERMIT REQUIRED; PROHIBITED PATHWAYS; TRANSFERS

Sec. 16-301. Conditional Use Permit Required.

A. No Data Center, Data Center Campus, Data Center Accessory Use, or Data Center Energy System shall be constructed, placed, expanded, or operated except pursuant to a Conditional Use Permit issued under this Chapter, in the [heavy industrial] zoning district only.

B. Data Centers are not a permitted-by-right use in any district. Rezoning, including rezoning to any exclusive or planned district, shall not be employed to authorize a Data Center, and no map amendment shall be adopted for that purpose.

C. The [Zoning Commission / Board of Adjustment] may attach any conditions necessary to protect public health, safety, and welfare, including further limitations on noise, hours, screening, traffic, setbacks, and infrastructure, and such conditions are enforceable terms of the permit.

Sec. 16-302. No Variance.

No variance, waiver, adjustment, exception, or offset shall be granted from: the prohibited locations and siting standards of Article IV; the setbacks of Article V; the cooling and water standards of Sec. 16-703; the noise standards of Sec. 16-701; the airport standards of Sec. 16-901 through 16-905; or the farmland standards of Sec. 16-801 through 16-806. Written waivers or consents of neighboring owners shall not authorize any departure from this Chapter.

Sec. 16-303. Lapse of Approval.

A Conditional Use Permit under this Chapter is void if substantial construction, as defined by the issuance of a building permit and commencement of foundation work, has not occurred within eighteen (18) months of final approval. The [Zoning Administrator] may grant one extension of up to six (6) months upon written application demonstrating good cause. Approvals shall not be stockpiled, banked, or held for resale.

Sec. 16-304. Transfers and Changes in Control.

A. No permit or approval under this Chapter may be assigned, sold, transferred, merged, or otherwise conveyed, in whole or in part, whether voluntary or involuntary, directly or by transfer of control of the Owner or Operator, or by any other change in Control, direct or indirect, without prior written approval of the Board of Supervisors following public notice and hearing.

B. Any successor Owner or Operator shall assume in writing all obligations of the permit, all agreements, and all financial assurance within sixty (60) days of transfer, and shall re-confirm every instrument of financial assurance under Article XIII. Failure to timely assume is grounds for suspension or revocation.

Sec. 16-305. Material Change; Expansion.

Any Material Change requires a new application and full demonstration of compliance with this Chapter as then in effect. Each application shall be evaluated cumulatively with all existing and approved Data Centers in the County with respect to water, electrical infrastructure, noise, and traffic.

Not less than once every three (3) years, and upon each new application, the [Zoning Administrator] shall update the cumulative assessment using best available data, including Data Centers existing, approved, or publicly proposed in adjacent counties within [ten (10)] miles of the County line, and shall report the results to the Board of Supervisors with the periodic review of Sec. 16-108.

ARTICLE IV — PROHIBITED LOCATIONS AND SITING STANDARDS

Sec. 16-401. Prohibited Locations.

Consistent with the Dubuque County Regional Comprehensive Plan — including the goals and objectives of Chapter 12 (Land Use), Chapter 9 (Agriculture and Natural Resources), and Chapter 11 (Watershed Management) — no Data Center, Data Center Accessory Use, or Data Center Energy System shall be located:

1. On Prime Farmland or Farmland of Statewide Importance, or on land exceeding the soil productivity standards of Article VIII, which Article governs all agricultural land questions under this Chapter;
2. Where the disposal or release of any hazardous substance, pollutant, or contaminant could affect karst terrain;
3. On lands with slopes over twenty percent (20%) or prone to flooding or soil or geologic instability;
4. In the floodplain, in any Floodplain Overlay District, or where the structure would restrict the flow of a 100-year flood or reduce floodplain storage;
5. In wetlands;
6. Within two thousand six hundred forty (2,640) feet of any Sensitive Area, sinkholes included;
7. Within two (2) miles of the corporate limits of any incorporated city;
8. Within five (5) statute miles of the Dubuque Regional Airport in the direct line of any runway, or otherwise in violation of Article IX;
9. Within one (1) mile of the property line of any federal, state, or county park, preserve, or public recreation area;
10. Where the facility may cause or contribute to the taking of a threatened or endangered species or adversely affect designated critical habitat;
11. Where any area within the County's burial mound overlay, cemetery, or known or potential archaeological or cultural resource area would be disturbed at any distance, in addition to the Sensitive Area setback of paragraph 6, except in compliance with Sec. 16-607(E) and Iowa Code chapter 523I; or
12. Within [two thousand six hundred forty (2,640)] feet of the right-of-way of the Great River Road National Scenic Byway, except where a greater setback of this Chapter applies.

Sec. 16-402. Spacing.

No Small Data Center shall be located within five (5) miles of another Small Data Center in the County, and no Medium, Large-Scale, or Hyperscale Data Center shall be located within twenty (20) miles of another Medium, Large-Scale, or Hyperscale Data Center in the County. Lawfully existing facilities are not rendered nonconforming by this Section, but no new Data Center shall be approved within the stated distances of any existing or approved Data Center.

Sec. 16-403. Site Alternatives Analysis.

The application shall include a site alternatives analysis documenting: (1) each previously developed, industrially zoned, or brownfield site of sufficient size within Dubuque County, and within [twenty (20)] miles of the proposed site, that the applicant evaluated; (2) the specific reasons each alternative was rejected; and (3) why the proposed use cannot reasonably be located on a previously developed alternative. No approval shall issue without a written finding, informed by the analysis and its independent review under Sec. 16-602, that no reasonably available previously developed alternative exists.

Sec. 16-404. Site Coverage.

Total impervious surface shall not exceed twenty percent (20%) of the site.

ARTICLE V — SETBACKS, DIMENSIONS, AND SCREENING

Sec. 16-501. Universal Setback.

Every Data Center structure, Data Center Accessory Use, and component of the Data Center Energy Systems — including buildings, substations, generators, battery energy storage systems, cooling and heat-rejection equipment, fuel storage, catch basins, and enclosures — shall be set back not less than one thousand three hundred twenty (1,320) feet, being one-quarter mile, from every Property Line and from every public road right-of-way.

Sec. 16-502. Exhaust Setback.

Every Exhaust or Emission Point shall be set back not less than two thousand (2,000) feet from every Property Line.

Sec. 16-503. Class Setbacks.

In addition to Sec. 16-501, and in each case measuring to the boundary of any residential zoning district, to the boundary of any agricultural or conservation parcel containing a residence, and to the lot line of any parcel developed with a Sensitive Receptor: a Large-Scale or Hyperscale Data Center shall be set back not less than two thousand six hundred forty (2,640) feet, and every other Data Center shall be set back not less than two thousand (2,000) feet. The greatest applicable setback governs. No reduction of any setback in this Article is available by demonstration, mitigation, or otherwise.

Sec. 16-504. Measurement.

Setbacks are measured from the nearest point of the nearest structure, equipment enclosure, cooling system, generator, tank, substation compound, or associated infrastructure, not from a building wall or parcel centroid.

Sec. 16-505. Height.

Maximum building height, inclusive of roof-mounted appurtenances, rooftop equipment, cooling and ventilation systems, and screening, shall be as established for the underlying [heavy industrial] district, or as limited by Article IX within the Airport Influence Overlay, whichever is more restrictive. In no case shall any ground-mounted solar energy installation or battery energy storage system, including enclosures, exceed fifty (50) feet, regardless of the underlying district.

Sec. 16-506. Screening, Berms, and Fencing.

- A. The facility and all Data Center Accessory Uses and Data Center Energy Systems shall be fully screened on all sides from all public roads and adjoining properties by a combination of berms, plantings, and walls.
- B. Berms shall average not less than fifteen (15) feet in height above adjacent grade, with side slopes not steeper than 3:1, covered by well-maintained all-season non-invasive ground cover, with required screening plantings arranged on the outside and top of the berm.
- C. Ground-mounted and roof-mounted equipment shall be fully enclosed where mechanically feasible per manufacturer specifications, and otherwise fully screened from public view. Ground-mounted equipment, including generators, fuel storage, and substations, is prohibited in any front yard and shall be located on the side farthest from residential use. All generators shall be permanently mounted on vibration isolation pads; roof-mounted generators are prohibited.
- D. Fencing shall be six (6) to ten (10) feet in height; fencing along public and private roadways shall not be chain-link and shall not include barbed wire or similar visibly intrusive devices; fencing and screening shall not obstruct sight distances at any street or driveway.
- E. Lot frontage on a public street shall include a landscaped yard of not less than twenty (20) feet. Buffer plantings shall be native, non-invasive species and shall include pollinator habitat restoration

offsetting habitat loss. Successful establishment of required plantings and preserved canopy shall be verified by a County-selected third-party ecological professional at applicant expense before release of any landscaping security.

Sec. 16-507. Structures; Real Property Assessment.

All production equipment — computers, servers, and associated components, including containerized, modular, and prefabricated units — shall be enclosed within structures complying with the County building code, placed on permanent foundations, converted to real property, and assessed for property taxation as provided by Iowa law.

ARTICLE VI — APPLICATION, NOTICE, AND PROCESS

Sec. 16-601. Application Contents; Completeness.

A. An application is complete only upon filing of every study, plan, and County-approved instrument of financial assurance required by this Chapter, including without limitation: site plan; site alternatives analysis under Sec. 16-403; soils and CSR2 report under Sec. 16-802 and Sec. 16-804; hydrogeologic and well study under Sec. 16-611; karst and geotechnical investigation under Sec. 16-709; a copy of the applicant's Stormwater Pollution Prevention Plan under Sec. 16-704; binding utility commitments under Sec. 16-606; airport assessments under Sec. 16-901 through 16-907 where applicable; acoustic baseline study under Sec. 16-701; a predictive sound-propagation model and contour map of proposed operations, extending to at least one (1) mile beyond every Property Line or to the 40 dB(A) facility-attributable contour, whichever is farther; measured operating sound pressure level data from comparable operating facilities; backup power, generator, and emissions plan, and ambient air quality and dispersion modeling study under Sec. 16-705(F); emergency response plan with fire-flow analysis under Sec. 16-706; fire suppression design under Sec. 16-706; photometric plan under Sec. 16-702(D); traffic impact study, Traffic Management Plan under Sec. 16-609, Workforce Commuter Mitigation Plan under Sec. 16-610, and executed Road Use Agreement under Sec. 16-1007 covering the construction and all post-construction phases; property-value appraisal for all owners within one (1) mile and Property Value Protection Program registration under Sec. 16-608; threatened and endangered species and eagle survey; fiscal impact analysis; cultural and archaeological survey under Sec. 16-607(E); decommissioning plan and cost estimate under Articles XII and XIII; construction management plan under Article X; energy usage plan; water and wastewater management plan; operations plan; phasing plan identifying the timing, location, electrical load, and capacity of every phase; and the Development Agreement affidavit under Article XV, including funding for the County's independent expert review.

B. No application shall be scheduled for hearing, and no review clock shall commence, until the [Zoning Administrator] issues a written completeness determination, which shall be a public record.

Sec. 16-602. County-Selected Consultants; Escrow.

A. Every study, review, verification, and inspection required by this Chapter shall be performed or independently peer-reviewed by qualified professionals selected and retained by the County, at the applicant's sole expense. No consultant selected or paid directly by the applicant shall certify compliance.

B. At filing, the applicant shall establish an escrow or advance-payment account in an amount set by the County, replenished within thirty (30) days of invoice, from which all County consultant, expert, legal, administrative, monitoring, and inspection costs under this Chapter shall be paid. Failure to replenish suspends processing and, after permit issuance, is a violation.

Sec. 16-603. Notice; Community Meeting; Project Website.

- A. The applicant shall provide mailed notice to all owners of property within one (1) mile of the site's Property Lines, and posted and published notice as otherwise required by law.
- B. The applicant shall hold at least one public community meeting in the vicinity of the site not less than fourteen (14) days before the first public hearing.
- C. The applicant shall create and maintain a public project website — including maps, elevations and renderings, project parameters, construction timeline and phasing, hearing and meeting dates, permit status, and contact information for feedback — live not less than two (2) weeks before the community meeting and maintained through final action.

Sec. 16-604. Public Records.

- A. Every application document, study, plan, report, and monitoring record under this Chapter is a public record upon filing, consistent with Iowa Code chapters 21 and 22.
- B. An applicant claiming that any submission contains a trade secret or other confidential information shall clearly identify the information at the time of submittal and provide a written legal basis under Iowa Code section 22.7. The County, not the applicant, determines what section 22.7 protects; all other information is public. The County may disclose identified information to staff and County-retained reviewers for evaluation of compliance.
- C. No nondisclosure agreement shall bind any County official, employee, or County-retained consultant with respect to review of an application or enforcement of this Chapter. No redaction shall withhold safety, water, noise, emissions, or fiscal information from the public record.

Sec. 16-605. Review Sequence.

Where the site lies within the Airport Influence Overlay, the Airport Commission, acting through the Airport Director, shall review and issue its recommendation under Article IX before the [Zoning Commission] acts. The County Board of Health shall be a referral agency on every application and may recommend monitoring conditions. The County Engineer shall approve the Road Use Agreement before application.

Sec. 16-606. Binding Utility Commitments.

- A. The application shall include written verification from each applicable electric, water, wastewater, and stormwater service provider, in a form enforceable according to its terms, demonstrating that capacity and infrastructure sufficient for the project is or will be available without adverse effect on the availability, reliability, quality, cost, or safety of service to existing customers, and that every required enhancement will be in place, at no cost to existing customers, before operation of the project. For electrical service, this shall include a certified financial agreement with the serving utility demonstrating that all substation upgrades, transformer installations, and distribution facilities required for the project are funded entirely and upfront by private applicant capital, with no utility rate-basing and no public subsidy. All required improvements shall be paid by the applicant.
- B. Conditional, non-binding, redactable, or coordination-only letters do not satisfy this Section.
- C. Capacity Margin; Regional Verification. For electrical service, the verification of subsection (A) shall additionally include: (1) written confirmation from the serving utility that firm generation and transmission capacity available to serve the facility equals or exceeds [one hundred fifty percent (150%)] of the facility's Projected Peak Demand, inclusive of all existing committed load, without degradation of service to existing customers; and (2) documentation that the facility's load has been studied under the reliability criteria of the Midcontinent Independent System Operator (MISO) or its successor regional transmission organization — a completed load-interconnection study, transmission-service study, affected-system study, or equivalent — with every network upgrade

identified in such study funded in the manner of subsection (A). Queue position alone, and conditional or preliminary study documentation, do not satisfy this subsection.

Sec. 16-607. Additional Application Standards.

A. Wells. The application shall map every public, private, and shared well within one (1) mile of the site, with specific analysis of shared wells serving multiple households. Sec. 16-703 generally prohibits the use of wells for cooling of computing systems or energy production; this Section governs any other proposed water use. Where no on-site withdrawal of any kind is proposed, the Study shall document that condition and the prohibition on withdrawal shall be made a metered condition of the permit. The required testing, modeling, and drawdown demonstration are governed by the Comprehensive Hydrological Impact Study of Sec. 16-611.

B. Surface Waters. The application shall map all surface waters within two thousand five hundred (2,500) feet of the site.

C. Insurance. Evidence of general liability insurance covering installation and operation, in the form of a certificate satisfactory to the [Zoning Administrator], shall be filed before any construction.

D. Property Values. The application shall include an appraisal, by a County-selected appraiser at applicant expense, of potential changes in property values and land use for all owners within one (1) mile, and findings on the application shall address impacts on properties in proximity to the facility, not merely those adjacent. A Property Value Protection Program is established at Sec. 16-608.

E. Cultural Resources. A cultural and archaeological resources survey by a qualified professional shall be filed, and shall specifically identify cemeteries, marked and unmarked graves, and burial sites. Iowa Code chapter 523I and the Office of the State Archaeologist govern the protection of human burials whether or not marked, and no disturbance of any such resource shall be authorized.

Sec. 16-608. Property Value Protection Program.

The Owner and Operator shall implement a Property Value Protection Program addressing potential impacts to nearby residential property values associated with the development and operation of the Data Center.

A. Impact Zone. A Property Value Protection Impact Zone extends [2,640] feet — one-half mile, or such greater radius as the Board of Supervisors establishes upon the advice of the County Attorney — from the outermost perimeter of the Data Center parcel Property Lines. A parcel is eligible if at least five percent (5%) of its acreage, or its primary residential structure, lies within the Impact Zone and the parcel is registered within the registration window fixed by the permit.

B. Security. Before construction, security of [\$50,000] per eligible registered parcel shall be posted and maintained through an irrevocable, cash-funded escrow held by an independent, federally insured escrow agent or trust company licensed in Iowa with a branch office in Dubuque County, or such other vehicle as the Board of Supervisors approves.

C. Floor; Replenishment. The security shall not fall below seventy-five percent (75%) of its initial required amount; any disbursement reducing it below that floor shall be restored to one hundred percent (100%) within thirty (30) days of written notice.

D. Claims. Claims are determined by pre- and post-construction appraisal by County-selected appraisers at the Owner's and Operator's expense, under procedures fixed in the Development Agreement.

E. Default and Enforcement. (1) Failure to initially fund the security, maintain the account, or execute a mandatory replenishment within the timelines of this Section is a material breach of this Chapter and an immediate Event of Default. (2) Upon an Event of Default, the [Zoning Administrator] shall issue a Cease and Desist Order suspending the facility's operational approvals; all data processing,

commercial operations, and non-safety electrical consumption shall cease until the default is fully cured. (3) If the default is not cured within sixty (60) calendar days, the County may pursue revocation under Sec. 16-1403 and may file an action in the Iowa District Court for Dubuque County to compel forfeiture of the security to restore the Program balances.

F. Successors; Bankruptcy. The obligations of this Section are covenants that run with the land and the operational approvals and bind all successors, assigns, receivers, and trustees. The security is held for the exclusive benefit of eligible property owners, shall not be pledged or encumbered by the Owner or Operator, and, to the fullest extent permitted by federal law, shall be structured so that it is not property of any bankruptcy estate and remains available for claim satisfaction throughout any bankruptcy proceeding.

Sec. 16-609. Traffic Management Plan.

With the application under Sec. 16-601, and in no event after issuance of any Conditional Use Permit or any grading or building permit, the Owner and Operator shall submit a comprehensive Construction Traffic Management Plan to the [Zoning Administrator], and no construction activity, site clearing, or equipment delivery may begin until the County Engineer approves it in writing. The Plan shall be prepared and stamped by an Iowa-licensed professional transportation engineer selected by the County Engineer at the applicant's sole expense, may be consolidated with the construction management plan of Sec. 16-1001, and shall be coordinated with the Road Use Agreement of Sec. 16-1007. It shall include, at minimum:

1. Designated haul and delivery routes: a detailed map identifying the specific state highways and County secondary roads for all heavy equipment, aggregate, concrete, and materials deliveries;
2. Bridge and culvert weight verification: a structural assessment verifying that every designated County bridge and culvert can safely accommodate the gross vehicle weight rating of the heaviest anticipated loads; and
3. Prohibited routes: express identification of no-go zones, including residential and school zones, where data center construction traffic is strictly prohibited.

Sec. 16-610. Workforce Commuter Mitigation Plan.

With the application under Sec. 16-601, the Owner and Operator shall submit a Workforce Commuter Mitigation Plan designed to minimize impacts on local travelers and to ensure the safe movement of farm equipment and livestock along affected roadways, including at minimum:

1. Peak-hour volume caps: a staggered shift schedule or off-site worker park-and-ride shuttle system is required if peak morning (6:00–8:00 a.m.) or evening (4:00–6:00 p.m.) passenger vehicle counts — as determined by the traffic impact study or verified by on-site peak-period axle counts — are projected to exceed one hundred fifty (150) vehicles where primary construction access connects directly to a paved state or federal highway or County paved major collector, or seventy-five (75) vehicles where primary access connects to or routes traffic across an unpaved, gravel, or chip-seal County secondary road;
2. Park-and-ride siting: any off-site park-and-ride lot must have direct, immediate access to an established state or federal highway or designated County paved major collector, and shuttle traffic shall not be routed onto unpaved, gravel, or weight-restricted County secondary roads; and
3. Access control: all construction traffic shall use a controlled construction entrance approved by the County Secondary Road Department.

Sec. 16-611. Comprehensive Hydrological Impact Study.

With the application under Sec. 16-601, the applicant shall submit a Comprehensive Hydrological Impact Study, and no Conditional Use Permit shall be approved until it is reviewed; the Study shall be prepared, signed, and stamped by an independent Iowa-licensed Professional Engineer or Professional Geologist practicing in hydrogeology, peer-reviewed by a County-selected third-party hydrogeological firm at the applicant's sole expense through the escrow of Sec. 16-602. The well inventory and shared-well analysis of Sec. 16-607(A) are components of this Study. The Study shall be localized to the proposed site and shall include, at minimum:

1. A continuous, minimum seventy-two (72) hour constant-rate, multi-well aquifer pumping test at the maximum projected peak operational withdrawal rate;
2. An observation-well network measuring the cone of depression, mathematically demonstrating that peak withdrawal will not cause static water level drawdown exceeding three (3.0) vertical feet at any active domestic, municipal, or agricultural livestock well within two (2) miles of the parcel boundaries;
3. Modeling against a 50-year drought event with a concurrent twenty-five percent (25%) increase in agricultural irrigation and livestock pumping;
4. Karst conduit, spring, and seep evaluation coordinated with Sec. 16-709; and
5. Certified mechanical documentation that cooling will use closed-loop non-evaporative, immersion, or air-cooled systems, or reclaimed wastewater consistent with Sec. 16-703(B).

ARTICLE VII — PERFORMANCE STANDARDS

Sec. 16-701. Noise and Vibration.

Consistent with the Dubuque County Regional Comprehensive Plan, Chapter 10, which directs sustained action to reduce or eliminate the long-term risks to people and property from hazards, the following noise and vibration standards apply:

A. **Baseline Study.** Before the application is complete, and before any site disturbance, a pre-construction noise study prepared by a professional engineer with expertise in acoustics, including low-frequency analysis, shall establish Baseline Ambient Sound at representative monitoring locations along all Property Lines, selected by the County's independent expert to capture the points most susceptible to noise, across all operational times of day and night and across representative seasonal conditions, expressly including harvest-season agricultural operations, with compliance comparisons made against season-matched baseline data. Seasonal baseline data are used solely for season-matched comparison under subsection (B) and shall never increase the limits of subsection (C). Field measurements for the baseline study shall be performed by, or in the physical presence of, the County-selected acoustic expert, with full-spectrum octave-band and narrow-band analysis, expressly including all proposed cooling systems, electrical substations, on-site power generation, and Data Center Accessory Uses, and with special consideration for infrasound (below 20 Hz) beyond standard dB(C) measurement. The applicant shall fund, at submission, the County's retention of an independent acoustic expert with infrasound expertise to review the study and report to the County.

B. **Primary Operating Standard.** Operations shall not cause sound levels at any Property Line to exceed Baseline Ambient Sound by more than three (3) dB, in dB(A) or dB(C), at any hour. Any exceedance is a violation unless expressly authorized as a condition of approval.

C. **Numeric Backstop.** Sound attributable to the facility, measured at every Property Line, shall not exceed forty (40) dB(A) and fifty (50) dB(C) at any hour of any day, determined by comparison of facility-on and facility-off conditions using the baseline methodology. Where Baseline Ambient

Sound already exceeds these values at a given location and time, subsection B governs at that location. In all other circumstances the more restrictive of this subsection or subsection B governs.

D. Infrasound. Infrasound (1 Hz to 20 Hz) shall not exceed sixty-five (65) dB(Z) at any Property Line, measured per ANSI S2.7 with instrumentation appropriate to infrasound; microphone-only measurement is not valid. Operations shall not generate vibration, oscillation, or infrasound causing perceptible resonance within any building or adverse effects on the human body, determined per ISO 2631 and ANSI standards for human exposure.

E. Tonal Penalty. Every sound study shall include narrow-band analysis per ISO/TS 20065. For sound above 20 Hz, where the decisive audibility of any narrow-band averaged spectrum is 10 dB or more, a 6 dB penalty shall be added to the measured A-weighted level for compliance purposes.

F. Vibration. Ground-borne vibration attributable to the facility shall not exceed a peak particle velocity of [0.02] inches per second at any Property Line, and shall not be perceptible without instruments at any Property Line.

G. Measurement. Measurements shall use sound level meters per ANSI S1.4 and Class 1/Type 1 instrumentation per IEC 61672-1 with one-third-octave capability per ANSI S12.9, at microphone heights of four (4) to five (5) feet, under suitable meteorological conditions (no precipitation; sustained wind at the microphone not exceeding 12 mph), at monitoring locations shown on the site plan at the points most susceptible to noise. Compliance is evaluated cumulatively for the facility, not source-by-source. Infrasound shall be measured in accordance with subsection (D).

H. Outages; Testing. The limits of this Section apply at all times, including during outages, Emergencies, equipment failures, testing, and maintenance. No allowance above subsections (B) and (C) is available, and the more protective standard governs.

I. Verification and Enforcement. Post-construction compliance testing of all levels, including infrasound, using the baseline methodology, shall occur within three (3) months of commencement of operation. The County may test at any time. Continuous monitoring shall stream to the Public Dashboard under Article XI, and third-party daytime and nighttime noise reports shall be filed publicly each year. Upon any verified exceedance, the automatic curtailment of Article XI applies; a sustained exceedance allows a cure period not exceeding one (1) month, after which the County may revoke the Conditional Use Permit and operations shall cease until compliance is demonstrated.

Sec. 16-702. Lighting.

A. Luminaires lighting horizontal surfaces — including parking, roadways, loading, entrances, and walkways — shall be aimed down and shall meet IESNA full cut-off, fully shielded criteria. Luminaires lighting non-horizontal surfaces shall be shielded and aimed so that no output projects into the windows of neighboring properties, past the object illuminated, skyward, or onto any public roadway.

B. Illumination measured line-of-sight from any point on any Property Line shall at no time exceed one-tenth (0.1) footcandle. Glare control shall be achieved primarily by cut-off luminaires, shields, baffles, mounting height, wattage, aiming, and placement, not by vegetative screening.

C. No luminaire shall be mounted more than twenty (20) feet above the finished grade of the surface illuminated. No pole-mounted lighting is permitted on any roof. Parking and vehicular-way lighting shall extinguish automatically within one-half hour of facility close. After-hours security lighting shall not exceed twenty-five percent (25%) of the fixtures permitted during business hours. Aviation-required lighting shall conform to Article IX and be shielded to the minimum required.

D. A photometric plan sealed by a qualified professional approved by the County under Sec. 16-602 shall be filed with the application, with post-installation compliance verification.

E. Between 10:00 p.m. and 7:00 a.m., total site lumen output shall be reduced by not less than fifty percent (50%) and limited to security and safety fixtures, in addition to every other limit of this Section.

Sec. 16-703. Cooling Systems and Water.

A. Required Technology. All cooling systems, primary, secondary, and auxiliary, serving computing, electrical, power generation, or energy storage components shall be air-cooled, Closed-Loop non-evaporative, or immersion cooling systems. Open-loop, once-through, evaporative, adiabatic, hybrid, spray-assist, misting, and water-consumptive cooling are prohibited. No exception, seasonal use, or alternative-technology approval is available.

B. Water Sources. Groundwater and surface water shall not be used for cooling. No private well shall supply cooling fluid or cooling-related water, and no private well for such purpose shall be permitted on the site. Sanitary and potable supply shall not be used for cooling in any capacity. Reclaimed wastewater delivered by a dedicated, independent line may serve as makeup or charge water for a Closed-Loop system, but shall not authorize any evaporative equipment or method.

C. Public-Source Closed-Loop Plans. Where a Closed-Loop system charged from a public source is proposed, the application shall include a detailed written plan — water source, all constituents added to the cooling fluid, handling and disposal of fluids, non-aqueous fluid disclosure including hazardous characteristics, fluid life and disposal, scheduled flushing and fluid-replacement intervals with per-event refill volumes, which count against the consumption ceiling of subsection (D), and spill prevention and containment sufficient that no release to soil, groundwater, or surface water is possible — sealed by a professional engineer, with efficiency assessment across the County's ambient range (minus 30 degrees F to 105 degrees F) and heat-plume characterization. The plan shall comply with all Iowa DNR water use and discharge requirements, with continuous usage monitoring and monthly reporting to the County. Any overage shall be reported within forty-eight (48) hours and corrected within one (1) month, or the use authorization terminates until corrective action is fully implemented.

D. Consumption Ceiling. The permit shall state maximum annual and peak-day water consumption, which shall not exceed [5,000] gallons per day cumulative for all operations, including server cooling, building climate control, and site maintenance, unless the Board makes written findings supporting a different ceiling. Exceedance of any ceiling is a violation. Water for server and computing rack cooling is restricted under subsection (B); this ceiling governs all other water use and total cumulative facility consumption in any event.

E. Verification. Before operations commence, a licensed professional engineer shall verify by pressure testing or equivalent inspection that all Closed-Loop systems are leak-tight. Cooling system integrity shall be re-verified upon any Material Change to the cooling plant.

F. Supplier Certification. Water and wastewater supplier certifications shall meet Sec. 16-606.

G. Waste Heat. Thermal discharge, venting, or exhaust shall not raise the ambient temperature at any Property Line above naturally occurring conditions, measured at four (4) feet above ground. A Thermal Impact Mitigation Plan shall accompany the application.

H. Reporting. Water use shall be metered and reported monthly to the County, broken out as minimum, average, and peak daily use and as potable versus non-potable supply, and posted on the Public Dashboard, together with an annual energy and water report via ENERGY STAR Portfolio Manager, including Power Usage Effectiveness (PUE) and Water Usage Effectiveness (WUE) metrics and Scope 1 and Scope 2 greenhouse gas emissions, including generator carbon dioxide, calculated per the EPA Greenhouse Gas Reporting Program methodology or equivalent.

I. Refrigerants. All cooling and refrigeration systems shall use refrigerants with zero Ozone Depletion Potential and Global Warming Potential compliant with the EPA phasedown in effect at application;

chlorofluorocarbons and halons are prohibited. Any system containing fifteen (15) pounds or more of refrigerant shall be continuously monitored by automated leak detection; detected leaks shall be repaired within fourteen (14) days with follow-up verification; refrigerant purchase, disposal, and leak records shall be retained five (5) years and produced on request; and at decommissioning all refrigerants shall be recovered and recycled by EPA-certified technicians and equipment.

J. Water Shortage Response. The water and wastewater management plan shall include a drought and water-shortage response plan providing that, upon any drought or water-shortage declaration by the State of Iowa, the Iowa Department of Natural Resources, the County, or the serving water supplier, or upon any supplier-imposed conservation measure, the facility shall curtail water use before, and to a greater degree than, any restriction imposed on residential, agricultural, or essential public uses, following a tiered schedule ending at zero non-sanitary withdrawal. Compliance with the consumption ceiling of subsection (D) does not excuse curtailment under this subsection.

Sec. 16-704. Stormwater.

A. The site shall retain all stormwater associated with a three (3) inch daily rainfall on non-absorptive surfaces, in addition to all otherwise applicable County stormwater requirements, per a detailed Stormwater Pollution Prevention Plan filed with the application. Post-development peak stormwater release rates shall not exceed pre-development peak rates for the 2-year, 10-year, 50-year, and 100-year storm events. For runoff calculation under the Iowa Stormwater Management Manual, all compacted gravel switchyards, substation and transformer pads, battery storage foundations, and similar outdoor infrastructure shall be treated as one hundred percent (100%) impervious.

B. Within five (5) statute miles of the Dubuque Regional Airport, no open-water retention pond or other standing-water feature shall be constructed or maintained, and required retention shall be met by underground or dry systems; stormwater design shall avoid hazardous wildlife attractants per Article IX. Elsewhere, detention shall use dry basins designed to drain fully within forty-eight (48) hours.

C. There shall be no discharge of process water, cooling blowdown, or contact stormwater to surface water or groundwater except after treatment in full compliance with applicable permits.

D. Erosion, Sediment, and NPDES Compliance. All roadwork and site development shall comply with the applicant's National Pollutant Discharge Elimination System (NPDES) permit as required by the Iowa Department of Natural Resources and with the Dubuque County Erosion and Sediment Control and Stormwater Ordinance; the Stormwater Pollution Prevention Plan shall be filed with the County before any construction and kept current through construction.

Sec. 16-705. Air Quality; Generators.

A. All generators shall meet EPA Tier 4 standards or the most stringent EPA standard in effect at the time of application, whichever is more protective, and operate at the lowest available sound levels. The backup power plan shall disclose the number, size, fuel source, storage, delivery methods, testing frequency and duration, and noise and emission controls of all units.

B. Diesel and other combustion generators are permitted only for use during an Emergency as defined in Article II. Operation as a primary, parallel, or routine power source is prohibited. Non-emergency operation — including peak-shaving, demand response, market participation, operation during any declared overload or capacity event, operation to avoid high-cost energy periods, and operation as bridge power pending utility interconnection — is prohibited. Diesel and other fuel deliveries shall occur during non-peak daytime hours, with storage conforming to all fire and safety standards and secondary containment.

C. Generator readiness testing is limited to once per week per unit, with a single unit tested at a time, weekdays between 10:00 a.m. and 3:00 p.m., within the sound caps of Sec. 16-701(H). Annual certified testing reports shall be filed with the County demonstrating performance as designed and

emissions within permitted limits, and emissions and run-hours shall be reported monthly under Article XI. The Operator shall publish an annual testing calendar on the Public Dashboard and the project website; shall provide written notice of the testing schedule, and of any change to it, to all owners and occupants of property within one (1) mile of the Property Lines at least seven (7) days in advance, by mail or by electronic means the recipient elects; and shall post notice of any non-routine test not less than forty-eight (48) hours in advance. Notice is not required for operation during an actual Emergency. No individual test shall exceed [thirty (30)] minutes, no more than [one (1)] unit shall be tested at a time, and no testing shall occur on Saturdays, Sundays, or legal holidays observed by Dubuque County, other than post-repair verification testing noticed under this subsection.

D. Continuous real-time air quality monitoring against National Ambient Air Quality Standards, including dust and combustion by-products, shall stream to the Public Dashboard from before groundbreaking through decommissioning. Notice of corrective action for any exceedance is due to the County within twenty-four (24) hours.

E. Exhaust and Emission Points shall meet the setback of Sec. 16-502.

F. Ambient Air Quality and Dispersion Modeling Study. The applicant shall submit a comprehensive Ambient Air Quality and Dispersion Modeling Study for review and approval, with all costs of compilation, submission, and independent third-party peer review borne entirely by the applicant. The Study shall use the most current version of the EPA-approved AERMOD modeling system (or an alternative advanced multi-source dispersion model expressly approved in writing by the EPA and the Iowa Department of Natural Resources); shall model a worst-case operational scenario of simultaneous operation of one hundred percent (100%) of all proposed on-site emergency backup generation at peak continuous output for a continuous twenty-four (24) hours, using not less than five (5) consecutive years of recent, locally representative National Weather Service meteorological data; and shall conclusively demonstrate that cumulative emissions — including nitrogen oxides (NO_x), carbon monoxide (CO), fine particulate matter (PM_{2.5} and PM₁₀), sulfur dioxide (SO₂), volatile organic compounds (VOCs), and ammonia (NH₃, including catalyst slip from selective catalytic reduction systems) — will not cause an exceedance of the National Ambient Air Quality Standards, 40 CFR Part 50, at or beyond the facility's legal property boundaries or at any off-site Sensitive Receptor, as defined in Article II, within a two (2) mile radius of the property. The Air Study shall additionally report modeled concentrations against the World Health Organization 2021 Global Air Quality Guidelines for disclosure; the National Ambient Air Quality Standards remain the compliance standard. Copies of all state air permit and construction permit applications shall be filed with the County concurrently for review and comment.

G. Opacity. Visible emissions shall not exceed five percent (5%) opacity at any Property Line at any time, during construction or operations, determined by EPA visual observation methods.

H. Exhaust Stack Engineering. The applicant shall submit detailed, site-specific engineering drawings and construction schematics of the physical geometry, layout, and placement of all engine exhaust stacks, bearing the seal, signature, and date of an Iowa-licensed professional engineer, specifying for every stack: the exact physical height from finished grade to the highest exit lip, conforming to Good Engineering Practice stack height formulas under 40 CFR § 51.100(ii) to prevent building wake downwash; the internal diameter of the stack exit; and the minimum exhaust gas exit velocity (meters per second) and minimum exhaust temperature (degrees Fahrenheit) under both 50% and 100% engine load. All stacks associated with emergency power generation shall discharge exhaust gases strictly in a vertical, upward direction; horizontal discharge vents, angled exit caps, and restrictive structural rain caps that deflect or impede vertical velocity or trajectory are prohibited; only automatic, velocity-activated vertical flap-valves (counterweighted rain dampers) or approved open-top vertical stack designs are permitted. Within the Airport Influence Overlay, stack and plume design is additionally subject to Sec. 16-903, and where requirements conflict, the design protecting air navigation governs.

I. Backup Generation Capacity; Zero-Emission Share. 1. Total installed combustion-based backup generation capacity shall not exceed [fifteen (15)] megawatts on any Project Site — the Medium classification's total-facility-power ceiling under Article II — measured across all facilities and equipment under common Control within the aggregation area of the classification rules. 2. Not less than [twenty-five percent (25%)] of total installed backup power capacity shall be zero-emission — battery energy storage or renewable-paired systems — subject to the battery safety and stewardship provisions of Secs. 16-706(C) and 16-1103(C). 3. At each periodic review under Sec. 16-108, the [Zoning Commission] shall evaluate then-current zero-emission backup technology and costs and recommend whether the cap and share of this subsection should be tightened, including whether combustion backup should be prohibited entirely.

Sec. 16-706. Fire Protection and Hazardous Materials.

A. Suppression Design. Data halls and electrical rooms shall be protected per NFPA 75 by: aspirating very-early-warning smoke detection; clean-agent or inert-gas suppression per NFPA 2001 suitable for energized electronics and occupied spaces; and double-interlock pre-action sprinkler systems as the water backstop. Generator, fuel, and liquid-hazard areas shall carry fixed protection matched to the hazard class. Suppression adequacy shall be determined by a County-selected independent fire protection engineer at applicant expense, and the full suppression design shall be reviewed and approved by the serving fire district before permit issuance. Areas within twenty-five (25) feet of any structure housing data center equipment shall be kept clear of combustible vegetation and other combustible growth.

B. Prohibited Agents; Firewater. PFAS-containing suppression agents, including aqueous film-forming foams, are prohibited anywhere on the site; any foam application shall use fluorine-free agents. Firewater runoff containment sized to the largest design discharge shall be provided so that no suppression water or fire-event runoff reaches soil, groundwater, or any karst feature.

C. Battery Energy Storage. Any battery energy storage shall demonstrate compliance with NFPA 855, shall include fire suppression systems designed specifically for battery storage, and shall provide its technical and test data to the serving fire district and County emergency management. Every battery enclosure area shall include independent, continuous air-sampling gas detection engineered to identify hydrogen, carbon monoxide, and off-gassing at the first chemical signature of cell distress, before visible smoke, and every structure housing batteries shall incorporate engineered deflagration panels or explosion-venting pathways oriented upward or toward unoccupied setback areas, away from Property Lines. Per-enclosure clean-agent systems may serve as early-stage suppression but shall not be relied upon to arrest thermal runaway.

D. Emergency Response Plan. An emergency response plan prepared by a qualified professional shall be reviewed and accepted by the serving fire district, County emergency management, and County public health before occupancy, covering natural disaster, fire, security, capacity and transmission, environmental, chemical, and medical contingencies, evacuation routes and staging, and a stand-alone battery-storage section where applicable. The plan shall identify the specific firefighting water sources and available fire flow and pressure and demonstrate adequacy for a worst-case facility fire; where the serving fire district determines that water-based suppression is warranted by the approved suppression design and that supply is inadequate for its worst-case demand, a dedicated on-site fire-suppression water reserve of not less than [1,000,000] gallons, or such greater amount as the fire district certifies, shall be provided at applicant expense, isolated from municipal and rural water networks and held in static reserve, in enclosed storage within the Airport Influence Overlay, with the reserve and its drainage apron lined with a chemically resistant impermeable geomembrane engineered to capture one hundred percent (100%) of fire-incident runoff and prevent leaching toward the Silurian, Cambrian-Ordovician (Jordan), Mt. Simon, or Alluvial aquifers or local soils. Fire suppression water demand shall be itemized in the water plan. The emergency response plan shall be

reviewed and updated not less than annually and after any Emergency activation or Material Change, with each update filed with the serving fire district and County emergency management.

E. Training; Disclosure. First responders must receive applicant-funded training specific to the installed systems, with full disclosure of construction materials and suppression methods. Because standard structural firefighting techniques do not apply safely to high-density technology environments, all emergency responders within a seventy-five (75) mile radius of the site must be provided appropriate training as deemed necessary by the closest serving emergency responder, funded by the applicant, including specialized training on lithium-ion battery and energy storage systems, high-voltage electrical safety, clean-agent gas suppression systems, and pre-incident facility coordination, together with tactics for managing smoke and heat containment without drawing toxic gases or particulate matter into sensitive electronic arrays. Responders must perform facility walk-throughs mapping secure perimeters, server layouts, and hot/cold aisle containment, with cross-training and communication drills conducted directly with on-site security, facilities engineers, and building management systems. Complete hazardous-materials inventories shall be filed with the fire district and County emergency management and kept current.

F. Reimbursement. Emergency-services cost reimbursement, including any necessary new equipment, shall be secured through the Development Agreement under Article XV.

Sec. 16-707. Electrical Infrastructure and Energy.

A. Substations, transmission facilities, and all Data Center Energy Systems serving the site are part of the facility for every noise, setback, screening, and siting standard of this Chapter. Any Data Center Electrical Substation shall additionally comply with Sec. 16-501, measured from the edge of the substation compound.

B. Any energy generation system designed or used to supply the facility during normal operations is a separate principal use requiring its own approval and is not authorized by a permit under this Chapter.

C. All roofs shall be solar-ready, and on-site solar generation sufficient to offset not less than twenty-five percent (25%) of projected annual electricity consumption shall be installed within twelve (12) months of the certificate of occupancy, per a Solar Energy Plan by a qualified professional. Within the Airport Influence Overlay, no solar installation shall be constructed except in compliance with Sec. 16-906; where Sec. 16-906 precludes rooftop or on-site installation in whole or in part, the offset shall instead be satisfied by ground-mounted generation outside the Overlay on the Project Site, or by regional off-site generation or power purchase under the mechanism of Sec. 16-1502(7), and the twenty-five percent (25%) requirement is not thereby reduced.

D. Undergrounding. All private, non-utility-owned electrical distribution conduits operating below thirty-four and one-half (34.5) kilovolts, communication lines, dedicated fiber-optic arrays, and auxiliary secondary conduits owned by the applicant or located on the private side of the primary substation interconnection shall be placed entirely underground.

E. Utility Boundary Safe Harbor. The standards of this Chapter apply strictly to the applicant's private on-site infrastructure. Nothing in this Chapter shall be interpreted to apply to, restrict, or regulate high-voltage transmission assets, terminal switchyards, or distribution equipment franchised, permitted, and regulated by the Iowa Utilities Commission under Iowa Code chapter 478.

F. Annual energy reporting per Sec. 16-703(H) applies.

G. Stray Voltage. All facility electrical systems, including grounding grids and neutral systems, shall be designed and maintained so that no facility-attributable stray voltage or ground current occurs at any adjoining or nearby agricultural operation. Before construction, the applicant shall fund pre-construction stray-voltage baseline testing, using the protocols of the USDA Agricultural Research Service or an equivalent recognized standard, at every livestock operation within [one (1)]

mile of the Property Lines whose owner consents; testing shall be repeated after energization and thereafter upon complaint. A facility-attributable increase of [0.5] volt or more, steady-state at animal contact points, above the pre-construction baseline shall be mitigated immediately and corrected within thirty (30) days at the Operator's sole expense, and the automatic curtailment of Sec. 16-1102 applies.

Sec. 16-708. Wildlife and Habitat.

A. A survey of bald eagle winter roosts and nests within the study radius, by a qualified biologist using accepted protocols, shall be filed. No construction or operation shall disturb eagle roosting or nesting in violation of the Bald and Golden Eagle Protection Act; relocation of a nest is not mitigation.

B. Documentation of state and federal threatened and endangered species review shall be filed. Buffer and screening plantings shall use native species and restore pollinator habitat.

Sec. 16-709. Karst and Groundwater Protection.

A. A site-specific karst and geotechnical investigation by an Iowa-licensed professional shall map sinkholes, fractures, voids, losing streams, and karst features on the site and within the study buffer.

B. Groundwater monitoring wells shall be installed up-gradient and down-gradient, sampled per the approved plan, with results posted monthly to the Public Dashboard. Existing County surface water monitoring points shall be expanded to include all potentially affected surface waters, using the County's surface water monitoring program as applicable; all additional planning, monitoring equipment, and installation costs shall be paid by the applicant, with installation complete before any construction permit issues.

C. All fuels and chemicals shall be stored with secondary containment designed so that no release to soil, groundwater, or surface water is possible.

D. Discovery of any sinkhole, void, or karst feature during earthwork or operations triggers immediate stop-work and a remediation plan approved by the County before resumption.

E. Well Mitigation and Replacement. If monitoring under this Section, the Study under Sec. 16-611, or complaint investigation shows facility-attributable impairment of any active domestic, municipal, or agricultural livestock well — including drawdown exceeding the limits of Sec. 16-611(2), loss of yield, or degradation of water quality — the Operator shall provide a temporary potable water supply to each affected user within seventy-two (72) hours and shall, within ninety (90) days, restore, deepen, or replace the affected well or provide a permanent equivalent water supply, all at the Operator's sole expense. Attribution disputes shall be resolved by a County-selected hydrogeologist at Operator expense under Sec. 16-602. Impairment first manifesting within two (2) miles of the parcel boundaries after commencement of facility pumping is rebuttably presumed attributable to the facility.

ARTICLE VIII — FARMLAND PROTECTION

Sec. 16-801. Prohibition.

Consistent with the Dubuque County Regional Comprehensive Plan, Chapter 9 (Agriculture and Natural Resources), and its goals and objectives: no Data Center, Data Center Accessory Use, or Data Center Energy System shall be sited on Prime Farmland or Farmland of Statewide Importance. This prohibition applies to every conditional prime subclass whether or not the stated condition is satisfied, and is not subject to variance, waiver, or mitigation.

Sec. 16-802. Soil Productivity Ceiling.

A. No approval shall issue unless all three of the following are satisfied: the area-weighted average CSR2 of the Development Footprint does not exceed fifty-five (55); the area-weighted average CSR2 of the Project Site does not exceed fifty-five (55); and no individual soil map unit rated above fifty-five (55) is disturbed in any manner.

B. CSR2 values are drawn exclusively from published SSURGO and NRCS Web Soil Survey data; applicant-generated or re-sampled soil values are not accepted; results shall not be rounded into compliance; and the Project Site average shall not be diluted by inclusion of rights-of-way, water bodies, unbuildable land, or land the applicant does not control.

Sec. 16-803. Anti-Gaming Baseline.

Soil classifications and ratings are evaluated using published data as of the application date or as of five (5) years before the application date, whichever is more restrictive, and any land physically altered within the five (5) years preceding application — graded, stripped, compacted, excavated, or quarried — is evaluated as though the alteration had not occurred. Parcels, phases, and Affiliates aggregate under Article II for every threshold of this Article.

Sec. 16-804. Independent Verification.

All soil classifications, CSR2 computations, and Development Footprint delineations shall be verified by a qualified soil scientist or professional selected and retained by the County under Sec. 16-602, at the applicant's sole expense.

Sec. 16-805. Required Findings.

No approval shall issue without written findings that the project is consistent with the Dubuque County Regional Comprehensive Plan and with the purposes of Iowa Code chapters 331 and 335 and the smart planning principles of Iowa Code chapter 18B, addressing agricultural land protection expressly, including minimization of severance and fragmentation of remaining farmland, preservation of field access, and protection of drainage tile.

Sec. 16-806. Agricultural Restoration.

Decommissioning on agricultural land means restoration of agricultural capability: topsoil segregated at construction and replaced in like horizons, compaction relieved, drainage and tile repaired, and the site restored toward its documented pre-construction CSR2 condition. These obligations are part of the decommissioning plan under Sec. 16-1202, are secured under Article XIII, and run with the land under Sec. 16-1204.

ARTICLE IX — AIRPORT COMPATIBILITY

Sec. 16-901. Airport Influence Overlay.

An Airport Influence Overlay applies to all land within the greater of: five (5) statute miles of the Dubuque Regional Airport reference point (42°24'07"N, 90°42'34"W, field elevation 1,076 feet MSL) below 2,500 feet above ground level; any surface established under 14 CFR Part 77 as depicted on the current Airport Layout Plan; and any airport hazard area established under Iowa Code chapter 329.

Sec. 16-902. Airspace and Height.

Within the Overlay, no permit shall issue before the applicant files FAA Form 7460-1 and obtains a Determination of No Hazard for every structure and appurtenance. No structure, equipment, or temporary construction apparatus shall penetrate any Part 77 surface. Aviation-required lighting shall conform to FAA standards and be shielded to the minimum required, consistent with Sec. 16-702.

Sec. 16-903. Thermal Plume Analysis.

Within the Overlay, heat-rejection and exhaust systems shall be sited and designed so that plume-induced turbulence cannot endanger aircraft. The application shall include the Dubuque Regional Airport Project Development Questionnaire (Exhibit 3); an FAA thermal-plume assessment addressing plume rise, vertical velocity, and turbulence indicators; a MITRE Exhaust Plume Analyzer analysis for any site within five (5) miles; and computational fluid dynamics modeling of worst-case stable atmospheric conditions and simultaneous N+1 operation where geometry or multiple sources warrant. The 4.3 m/s average vertical velocity figure is a screening reference only; the FAA methodology and the Determination of No Hazard control. The Airport Commission may require a Safety Risk Management panel at applicant expense.

Sec. 16-904. Wildlife Hazards.

Within the Overlay, stormwater and site design shall avoid hazardous wildlife attractants, assessed by a USDA-certified Wildlife Biologist. No open-water feature shall be located within 10,000 feet (turbine aircraft) or 5,000 feet (piston aircraft) of any air operations area, and the five-mile standing-water prohibition of Sec. 16-704(B) governs where more restrictive.

Sec. 16-905. Airport Review.

The Airport Commission, acting through the Airport Director, shall review every application within the Overlay and issue its recommendation before the [Zoning Commission] acts, per the sequence of Sec. 16-605.

Sec. 16-906. Solar Glint and Glare.

Within the Overlay, no solar energy installation shall be approved or constructed until a solar glint and glare analysis, prepared using the Solar Glare Hazard Analysis Tool (SGHAT) or a successor methodology accepted by the FAA, demonstrates, consistent with current FAA policy on solar glare at airports: no potential for glint or glare at the airport traffic control tower, and no glare with greater than a low potential for temporary after-image along any final approach path, departure corridor, or traffic pattern of the Dubuque Regional Airport, across all analyzed sun angles and panel orientations. The analysis shall be reviewed under Sec. 16-905. Any post-construction glare attributable to the facility and verified through the Airport Commission or the complaint process of Sec. 16-1106 shall be remediated — by repositioning, retrofit, screening, or removal — within ninety (90) days at the Operator's sole expense.

Sec. 16-907. Electromagnetic Interference.

Within the Overlay, and for any facility whose substation, transmission interconnection, or generation equipment lies within [five (5)] miles of any aviation navigation aid, surveillance or weather radar, or public-safety communications site, the application shall include an electromagnetic interference study by a qualified electrical engineer demonstrating that facility equipment — including substations, switchyards, transmission interconnections, generators, variable-frequency drives, and radiofrequency-emitting equipment — will not interfere with aviation navigation aids, radar, weather radar, aviation communications, or public-safety communications. FAA and FCC coordination documentation shall be filed where either agency's processes apply. Operations shall cause no harmful interference, as defined by FCC rules, to any such system; verified interference shall be corrected within thirty (30) days, and the automatic curtailment of Sec. 16-1102 applies to the offending equipment until compliance is independently verified.

ARTICLE X — CONSTRUCTION

Sec. 16-1001. Construction Management Plan.

A detailed construction management plan shall be filed with the application, covering phasing, staging, worker parking, construction workforce housing (addressing anticipated demand and consistency with Comprehensive Plan Chapter 8 housing goals, including rental availability), a construction waste management plan (estimated amounts and types of construction waste, reuse and recycling targets, and disposal destinations), haul routes under the Road Use Agreement, erosion and sediment control, dust control, construction lighting in conformance with Sec. 16-702, and expected project duration. All setbacks, floodplain limits, wetland and Sensitive Area buffers, and preserved-canopy areas shall be physically demarcated with fencing or markers before any grading, verified by County inspection. Construction laydown and staging areas shall be located to minimize impacts and set back not less than five hundred (500) feet from any Occupied Structure not owned by the applicant.

Sec. 16-1002. Hours.

Construction, equipment testing, and maintenance activities generating elevated noise are limited to 8:00 a.m. to 5:00 p.m., Monday through Friday, and shall not occur on Saturdays, Sundays, or legal holidays observed by Dubuque County. Heavy deliveries and non-Emergency maintenance generating elevated off-site noise are subject to the same limits. The County may impose additional restrictions as conditions of approval.

Sec. 16-1003. Baseline Before Disturbance.

The pre-construction noise study of Sec. 16-701(A) and the pre-construction road conditions survey under the Road Use Agreement shall be completed before application acceptance and before any site disturbance.

Sec. 16-1004. Construction Air Quality.

Continuous air quality monitoring with real-time data and instant actionable alerts on the Public Dashboard shall be operating before groundbreaking and shall remain in place through construction, operation, and decommissioning. If air quality limits remain exceeded for a sustained twelve (12) hours during construction, construction operations shall terminate until corrective action is approved by the County.

Fugitive dust controls shall include, at minimum: scheduled watering of haul routes and disturbed areas; covered or tarped loads with not less than six (6) inches of freeboard; wheel-wash or track-out control devices at every construction exit; removal of visible track-out at least daily using PM10-efficient street sweepers only; and no use of blowers for dust removal. Operational air quality is governed at all times by Sec. 16-705 and Article XI; this Section adds construction-phase controls.

Sec. 16-1005. Blasting.

Where blasting is proposed: pre-blast structural surveys shall be offered to all owners within one (1) mile; written notice shall be given to nearby residents, including registered sensitive receptors, not less than forty-eight (48) hours in advance; ground vibration shall be monitored by seismograph and shall not exceed limits established by the County Engineer based on U.S. Bureau of Mines Report of Investigations 8507; and results shall be posted to the Public Dashboard.

Sec. 16-1006. Karst During Construction.

Earthwork shall be inspected for karst features, and Sec. 16-709(D) stop-work applies throughout construction.

Sec. 16-1007. Road Use.

The Road Use Agreement under Sec. 16-605 — including designated haul routes, traffic control, weight and size permits, seasonal load restrictions (including spring frost-law embargoes, which shall not be

waived for the project), dust control, pre- and post-construction surveys documenting all road, right-of-way, and public drainage infrastructure (ditches, culverts, and drainage structures), and repair to pre-construction condition or better within nine (9) months at applicant expense — applies to the full construction period and remains in effect after construction for ongoing service, delivery, and fuel-truck traffic. All required oversize-load, weight, and access permits shall be obtained from the County Engineer or other road authority not less than sixty (60) days before mobilization. The County Engineer shall re-document road conditions within thirty (30) days after construction completion using the same methods as the baseline survey. The Owner and Operator are responsible for repair of damage to public drainage systems arising from construction, operation, or maintenance, and shall acknowledge any such damage and the responsibility for its repair within seventy-two (72) hours of discovery. Road security shall be posted in the greater of: one hundred thirty percent (130%) of the cost of all required road and bridge restoration and improvements; or a Continuous Performance and Repair Surety Bond calculated by the County Engineer at not less than [\$500,000] per linear mile of paved haul route — adjustable to [\$1,000,000] per mile where the Engineer determines reconstruction or widening is required — and [\$150,000] per linear mile of granular haul route. Security shall be in a form approved by the County Attorney's Office (irrevocable letter of credit, bond, cash, or escrow, with the parent guarantee of Sec. 16-1303 in addition), issued by a surety authorized in Iowa and naming the County as sole beneficiary; no waiver of this security is available. The Owner and Operator shall initiate required repairs within forty-eight (48) hours of notice; on failure, the County may execute repairs and draw one hundred percent (100%) of remediation costs, including administrative overhead, directly from the security.

Sec. 16-1008. Maintenance, Repair, and Replacement.

The facility shall be continuously maintained, including painting, structural repairs, and the integrity of security measures, and site access shall be maintained at a level acceptable to emergency response officials. Any retrofit, replacement, or refurbishment shall meet all applicable local, state, and federal requirements and the current-standards rule of Sec. 16-1104.

ARTICLE XI — MONITORING, REPORTING, AND CONTINUING COMPLIANCE

Sec. 16-1101. Public Dashboard.

The Owner and Operator shall install, maintain, and pay for continuous instrumented monitoring of: sound and vibration in dB(A), dB(C), and dB(Z); water withdrawal, consumption, and every effluent stream; real-time air quality against National Ambient Air Quality Standards, including dust and combustion by-products; electricity consumption; and generator run-hours. All monitoring shall stream to a public, continuously updated internet dashboard that is fully operational before groundbreaking and is maintained through construction, operation, and until twelve (12) months after any cessation of operations, with County read access at all times.

Sec. 16-1102. Automatic Curtailment.

Any exceedance of any monitored limit shall flag on the Public Dashboard immediately and shall automatically curtail the offending operation. The curtailed operation shall not resume until compliance is independently verified by the County or its retained expert. Corrective-action notice is due to the County within twenty-four (24) hours of any exceedance. Sustained or repeated exceedances are grounds for suspension or revocation under Article XIV.

Sec. 16-1103. Reports and Certification.

A. Monthly monitoring reports, including every overage, shall be filed with the County and posted to the Public Dashboard.

B. An annual thermal-performance audit by a County-approved independent firm verifying compliance with Sec. 16-703(G), together with an annual compliance certification of the Owner and Operator, covering the permit, site plan, operations plan, noise and vibration standards, cooling and water standards, emergency contacts, continuous insurance coverage under Sec. 16-1304, financial assurance status, and every condition of approval, shall be filed each year by January 31 fixed in the permit, together with annual third-party daytime and nighttime noise reports and the ENERGY STAR report of Sec. 16-703(H).

C. Battery Stewardship. A Battery Stewardship and Lifecycle Management Plan shall be maintained for every UPS and battery energy storage unit — serial-level inventory, deployment dates, expected service life, and end-of-life chain-of-custody through the certified recyclers of Article XII — reported annually, with recycling and disposal costs included in the Article XIII financial assurance, calculated on active battery tonnage.

D. As-built plans for all on-site infrastructure — fencing, structures, screening, equipment, drives, and monitoring stations — certified by an Iowa-licensed professional engineer, shall be filed within sixty (60) days after End of Construction.

Sec. 16-1104. Current Standards on Replacement.

Replacement equipment, including generators, chillers, cooling and heat-rejection equipment, and screening, shall meet the standards of this Chapter in effect at the time of replacement.

Sec. 16-1105. Inspection; Records.

The County may inspect and independently test at any time. All records supporting any report under this Chapter shall be retained for not less than ten (10) years and shall be subject to County audit.

Sec. 16-1106. Complaint Line; Adverse-Event Portal.

A. The Operator shall maintain a 24-hour complaint line, with a public log of all complaints and responses posted monthly to the Public Dashboard. Complaint-triggered sound testing may be ordered by the [Zoning Administrator] at Operator expense. The Operator shall acknowledge each complaint within two (2) business days, complete its investigation within ten (10) business days, and issue a written resolution or corrective-action plan within thirty (30) days, all logged to the Public Dashboard.

B. The County or the County Board of Health shall establish and maintain a public adverse-event reporting portal, funded through Operator fees, permitting residents to log health, property, noise, and environmental changes over time, with a monthly public summary.

ARTICLE XII — DECOMMISSIONING AND SITE RESTORATION

Sec. 16-1201. Trigger; Deadline.

Upon Abandonment or Discontinuation, or upon permit revocation, the Owner and Operator shall complete decommissioning and full site restoration within two hundred seventy (270) days, with one written extension of up to ninety (90) days for good cause shown.

Sec. 16-1202. Decommissioning Plan.

A decommissioning plan prepared and sealed by an Iowa-licensed professional engineer shall be filed with the application and updated upon any Material Change and any transfer. The plan shall include: a step-by-step sequence for dismantling, removal, recycling, and disposal of buildings, equipment, chillers, generators, foundations, wiring, conduits, fencing, lighting, impervious surfaces, and accessory facilities; battery cell removal and disposal with chain of custody; site restoration actions including regrading and

revegetation; an itemized current-dollar cost estimate excluding salvage value; responsible parties; and safe, lawful execution. All electronic waste shall be processed through certified electronics recyclers (R2 or e-Stewards certified), with no landfill disposal of electronic components and chain-of-custody manifests retained and summarized in the annual report under Article XI. The plan shall state the method for ensuring that funds will be available for decommissioning and restoration.

Sec. 16-1203. Standards of Restoration.

A. Foundations, pads, and below-grade structures that create hazards, impede agricultural use, or conflict with the approved after-use shall be removed or mitigated. Building-shell reuse may be approved only where a subsequent permitted use is identified and approved.

B. On agricultural land, restoration means restoration of agricultural capability in accordance with Sec. 16-806.

C. Electronic waste and hazardous materials shall not accumulate beyond reasonable operational needs and shall be removed in compliance with law.

Sec. 16-1204. Obligations Run With the Land.

Decommissioning, restoration, and assurance obligations run with the land, bind all successors and Affiliates, and shall be acknowledged in a recorded instrument executed by the landowner. No transfer relieves any obligation.

ARTICLE XIII — FINANCIAL ASSURANCE

Sec. 16-1301. Assurance Required Before Permit.

Before issuance of any permit and before any construction, the Owner and Operator, jointly and severally, shall provide and thereafter maintain financial assurance for full decommissioning and restoration in an amount equal to one hundred twenty-five percent (125%) of the itemized, salvage-free cost estimate of Sec. 16-1202 as reviewed and accepted by the County through its selected professional engineer. The assurance amount shall include a mechanism for calculating adjusted costs over the life of the facility: it shall be adjusted annually, beginning on the first anniversary of the effective date of this Chapter, by not less than the annual change in the Consumer Price Index for All Urban Consumers (CPI-U), U.S. City Average, All Items, Not Seasonally Adjusted, published by the United States Department of Labor, Bureau of Labor Statistics [, or the Engineering News-Record Construction Cost Index if greater]; the assurance amount shall never be adjusted downward; and it shall be re-established upon each periodic re-estimate required by this Chapter.

Sec. 16-1302. Form; Indexing; Recalculation.

A. Assurance shall be an irrevocable letter of credit, surety bond, cash, or escrow issued by a surety or financial institution authorized to do business in Iowa and rated acceptable to the County, naming the County as beneficiary or obligee.

B. The assurance amount shall adjust automatically each year by the Consumer Price Index, and the underlying estimate shall be re-prepared at the Owner's and Operator's expense at least every three (3) years, upon any Material Change, and upon any transfer.

C. Assurance shall remain in effect until the County confirms in writing, following inspection, that decommissioning and restoration are complete. Failure to maintain required assurance is a violation and a breach of permit conditions.

Sec. 16-1303. Parent Guarantee.

In addition to, and never in place of, the assurance of this Article, a written guarantee of the ultimate corporate parent of the Owner and Operator, in a form approved by the County Attorney and filed with the County, shall make the parent jointly and severally responsible for all bonds, penalties, liquidated amounts, decommissioning, and restoration obligations under this Chapter and any Development Agreement. The guarantee may take the form of, or be accompanied by, the parent's co-signature or backstop of each surety instrument, so that no single-asset entity can default and leave obligations unsecured.

Sec. 16-1304. Insurance.

Throughout construction, operations, and decommissioning, the Owner and Operator shall maintain, from insurers authorized to transact business in Iowa and rated A- (Excellent) or better by A.M. Best: commercial general liability insurance of not less than [\$10,000,000] per occurrence and [\$20,000,000] aggregate; pollution legal liability coverage of not less than [\$25,000,000]; and commercial automobile liability of not less than [\$5,000,000]. Dubuque County shall be named as additional insured on all liability policies; certificates of insurance shall be filed annually with the [Zoning Administrator]; each policy shall provide thirty (30) days' prior written notice of cancellation or material change to the County; and no required coverage may lapse. A lapse in required coverage is an Event of Default under Sec. 16-608(E) and grounds for suspension under Article XIV.

ARTICLE XIV — ENFORCEMENT

Sec. 16-1401. Violations.

Each single calendar day that a violation continues, and each provision violated, and each separate instrumentality or item of equipment in violation, constitutes a separate, distinct, and standalone municipal infraction, punishable to the maximum extent permitted by Iowa Code section 331.307 and other applicable law. Each day after the first shall constitute a repeat offense within the meaning of that section. Fines accumulate automatically until a licensed professional engineer submits a certified remediation report verifying compliance and the County accepts it. The remedies of this Article are cumulative.

Sec. 16-1402. Inspections; Automatic Citations; Stop-Work.

A. The [Zoning Administrator], a designated code enforcement officer, or a qualified third-party inspector retained by the County at the Owner's and Operator's sole expense shall conduct unannounced field inspections of the site not less than bi-weekly during construction and periodically during operations, and shall issue an immediate municipal infraction citation upon identifying any deviation from the approved site plan or any violation of this Chapter.

B. If a cited violation is not fully corrected within forty-eight (48) hours of citation issuance, the [Zoning Administrator] shall issue an automatic stop-work and permit-suspension order requiring immediate cessation of the offending construction or facility operations, in addition to the automatic curtailment of Sec. 16-1102.

Sec. 16-1403. Remedies.

A. The automatic curtailment of Sec. 16-1102 applies to every monitored standard.

B. The County may issue stop-work orders, and may suspend or revoke any permit after written notice and an opportunity to cure not exceeding thirty (30) days, or such shorter period as an imminent threat requires; upon revocation, operations shall cease until compliance is demonstrated and the permit is reinstated or reissued.

C. Upon default in decommissioning or any obligation of this Chapter, the County may enter and perform, may draw upon the financial assurance for all reasonable costs — contractors, engineering, inspection, administration, recording, and legal — and may recover all remaining costs from the Owner, Operator, and parent guarantor, jointly and severally. As a condition of every permit, the Owner and landowner shall execute a recorded Consent to Removal authorizing the County, upon uncured default, to remove the facility and assess all removal and disposal costs against the property.

D. Liquidated compliance amounts under any Development Agreement are in addition to the remedies of this Article.

ARTICLE XV — DEVELOPMENT AGREEMENT

Sec. 16-1501. Agreement Required.

Where any tax abatement, incentive, public expenditure, or public costs and impacts, fiscal and non-fiscal — including loss of agricultural land and productivity, wildlife habitat, and community character — is associated with a project, the Board of Supervisors shall require a Development Agreement executed concurrently with permit issuance. No abatement or incentive shall be granted absent an agreement meeting this Article. The affidavit of agreement to this Article's terms, together with funding for the County's independent expert review, is a completeness requirement under Sec. 16-601.

Sec. 16-1502. Required Terms.

The Development Agreement shall be consistent with the Dubuque County Regional Comprehensive Plan, Chapter 7, including Goal 5: "Recruit businesses that are suited to the region, require a highly skilled work force or are willing to train an entry-level work force and are experiencing growth." The Development Agreement shall include, at minimum:

1. Guaranteed minimum employment at the facility, commencing not later than twelve (12) months after completion of construction, with clawbacks for shortfall;
2. Guaranteed minimum annual revenue to the County, with reconciliation and clawbacks;
3. A liquidated compliance schedule of [\$1,000] per megawatt of approved capacity per day for each day of violation of this Chapter or the agreement, drawn upon the escrow and assurance, the parties stipulating such amounts to be a reasonable pre-estimate of public harm and enforcement burden and not a penalty;
4. Reimbursement of emergency-services and public-safety costs of the County and serving fire district;
5. Road, utility, and infrastructure cost responsibility consistent with this Chapter;
6. A community incentive package — contributions to public safety, health, education, community amenities, or infrastructure — proportional to project scope and impact;
7. For facilities over fifty (50) megawatts, procurement of not less than ten percent (10%) of facility power from renewable generation within the region through a power purchase agreement, renewable-energy pact, or similar mechanism, not through renewable energy credits alone;
8. An energy- and water-efficiency plan with PUE and WUE targets, economizer and containment practices, and waste-heat reuse where applicable;
9. Annual reporting of all commitments, with employment reported quarterly during the first five (5) years of operations;
10. Workforce commitments negotiated by the Board, which may include local-hiring goals, prevailing or area-standard wages, apprenticeship utilization, and construction-workforce standards, to the extent permitted by law; and

11. Cross-default, so that a breach of the agreement is a violation of the permit and a violation of the permit is a breach of the agreement.

ARTICLE XVI — ANNEXATION AND INTERGOVERNMENTAL COORDINATION

Sec. 16-1601. Fringe Disclosure; Consultation.

Any application for a site within two (2) miles of the corporate limits of any city shall disclose all annexation discussions, agreements, and intentions of the applicant and landowner, and the County shall request consultation with the affected city, including under Iowa Code chapter 28E, before decision. This Section operates in addition to the locational prohibition of Sec. 16-401(7).

Sec. 16-1602. Conditions Intended to Survive.

The Development Agreement and a recorded covenant shall state that all conditions of approval are intended to survive any annexation of the site to the fullest extent permitted by law, with the recorded acknowledgment of the applicant and landowner.

— END OF CHAPTER 16 —

SECTION 2. SEVERABILITY. If any sentence, clause, section, or part of this ordinance is for any reason held invalid, unconstitutional, or preempted by a court of competent jurisdiction or a state regulatory commission, such portion shall be deemed a separate, distinct, and independent provision, and such holding shall not affect or impair any of the remaining provisions; the Board declares that it would have adopted this ordinance without any such invalid part.

SECTION 3. CONFLICTS; REPEALER. All ordinances or parts of ordinances in conflict with this ordinance are repealed to the extent of the conflict; provided that where this ordinance is more restrictive than any other applicable provision, this ordinance governs.

SECTION 4. SAVINGS. Except as amended by this ordinance, the Dubuque County Code of Ordinances, including Chapter 1 (Zoning), remains in full force and effect.

SECTION 5. EFFECTIVE DATE. This ordinance is effective upon its final passage, approval, and publication as provided by law.