Yankton County Data Center Community Report

Prepared for Yankton Thrive

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Executive Summary

Yankton Thrive asked DataVator to answer three questions. Is a data center a good fit for Yankton? If it is, where should it go? And how do we help the community understand the digital infrastructure that is shaping its future? This study presents the research team's findings and the sources behind them.

Is a data center a good fit for Yankton?

The evidence gathered in this study supports a conditional yes at a right-sized scale. This study evaluated the 5 to 25 megawatt (MW) range, which is the size of a large regional facility rather than a hyperscale campus. For comparison, the Gemini project approved in Sioux Falls in January 2026 is planned at up to 500 MW, roughly 20 to 100 times larger than the range studied here. Whether Yankton writes a formal size ceiling into its ordinances, and what number it chooses, is a community policy decision. The options are laid out in the zoning and ownership sections of this report.

Five findings underlie that conclusion. First, the county has the electrical infrastructure. Candidate sites each anchor to an existing transmission-class substation. NorthWestern Energy has provided screening-level capacity answers for its substations. One site can reach the full 25 MW with transformer upgrades, and one site has high long-term potential. Both utilities that responded give the same practical guidance: timelines are set by transformer availability, roughly a two-year lead where new units are needed, not by transmission capacity. These are planning opinions, not reservations. Formal interconnection studies are still required.

Second, fiber is strong. Midco has confirmed fiber within one mile of the two top-ranked sites, and Yankton has hosted a working data center for more than 17 years. SDN Communications member cooperatives, including Golden West and Santel, are actively extending rural fiber across the county under state broadband grants.

Third, water is manageable if the right cooling design is required. Even a 25 MW facility with efficient closed-loop cooling draws roughly what 100 households use in a day, well under 1 percent of the city system's capacity. The B-Y Water District's engineering review rates the top-ranked site the best-positioned location on its rural system. Two more sites are serviceable through defined extensions or agreements, and two have current capacity limits. Any required system improvements would come at the developer's cost.

Fourth, the economic effects are quantified from the county's own records. The assessment method is confirmed by the county Director of Equalization, and South Dakota assesses the building, not the equipment inside it. Annual property tax reaches roughly $175,000 to $275,000 for a 5 to 7 MW build and up to about $1.2 million at 25 MW, phasing in over five years under the county's adopted discretionary formula, with utility taxes on top. Construction brings 50 to 350 workers depending on scale. Permanent staffing is modest at 3 to 35 jobs, at wages roughly 1.5 to 2.5 times the regional average.

Fifth, South Dakota law now protects ratepayers. Senate Bill 135 requires data centers of 10 MW or more to pay their own utility costs, including costs left behind if they leave.

Where would it go?

The study screened all 14,443 county parcels and identified candidate sites. They're all located near existing infrastructure in places suitable to host a data center. They fall within existing regulations or would have the capacity to be controlled by new ordinances.

How do we demystify the digital age for the community?

Demystifying starts with the document itself. This study is written in plain language so that a resident with no technology background can follow every finding. Technical terms are defined and measurements are compared to everyday references such as household noise levels and city water capacity. For definitions of common terms, please see Appendix A "Common terms". The study includes a community transparency plan (a public dashboard concept for power, water, and noise data) and a community education program that demystifies data centers for Yankton residents. Community engagement began with the June 24, 2026 public meeting and the community forum and question-gathering session committed in the proposal. Residents also spoke at the county's July 21 public hearing on the moratorium. Engagement continues along multiple avenues. Finally, if a project advances, the public transparency dashboard will be available.

Current policy timing

On July 7, 2026, the Yankton County Commission voted unanimously to schedule a public hearing on a proposed data center moratorium rather than adopt one immediately. Following the noticed public hearing on July 21, 2026, the commission adopted a six-month moratorium on data center development in the county (Ordinance 26-08). This study is directly relevant to that window. Neither the county nor the city ordinance currently defines a data center use. The moratorium period is the time to adopt clear ordinance language with scale caps.

Community and Environmental Alignment

Economic Impact

Construction. Staffing estimates follow construction crew profiles from comparable data center builds. A 5 to 7 MW build supports a peak construction crew of 50 to 120 workers over a 12-to-18-month build, reaching about 150 only when site work, foundations, mechanical and electrical, and utility tie-ins stack at the same time. Scaling that profile, a 10 MW build peaks near 90 to 180 workers over 14 to 20 months, and a 25 MW build, phased over 18 to 30 months, peaks near 175 to 350. Much of that work (electrical, concrete, steel, HVAC, plumbing) can be sourced from southeast South Dakota, northeast Nebraska, and northwest Iowa.

Operations. Permanent staffing is modest. Uptime Institute Global Data Center Survey staffing data (roughly 0.5 to 1.5 full-time positions per MW for automated facilities) puts a modern automated colocation facility at 5 to 7 MW at 3 to 5 permanent full-time positions, rising to 7 to 10 if the operator runs an enterprise or full managed-service model with its own network operations center, security, and engineering staff. Scaling those ratios, a 10 MW facility supports roughly 5 to 8 positions (colocation) up to 12 to 18 (enterprise), and a 25 MW facility roughly 12 to 20 (colocation) up to 25 to 35 (enterprise). The jobs pay well. Critical facilities technicians in this market earn about $85,000 to $120,000 per year, roughly 1.5 to 2.5 times the regional all-occupation average. Annual payroll runs from roughly $300,000 to $1 million at the small end up to roughly $1.5 to 3.5 million at 25 MW depending on the operating model. Independent research supports keeping job expectations grounded. A Brookings study of 770 US data centers found counties hosting their first large data center gain 4 to 5 percent total private employment over 5 to 6 years, while a Ball State analysis found facilities under 100,000 square feet produce almost no measurable local employment effect. The community benefit case rests more on taxes and local spending than on job counts.

Property tax. This study uses the assessment method described by the SD Department of Revenue (South Dakota Property Tax Basics 2025) and applied by county equalization offices. South Dakota assesses commercial and industrial property on the building itself (square footage, walls, office buildout), not on the Information Technology (IT) equipment, generators, or cooling systems inside. A data center representing $50 million of total investment assesses at a fraction of that number. As a verified southeast South Dakota benchmark, a 66,000 square foot building comparable to a 6 MW data center assesses at about $16.8 million per county equalization records, which generates roughly $307,000 per year at a combined levy of 18.251 per $1,000 (school district, city, and county combined). The Yankton County Director of Equalization confirms the approach: the county classifies a data center as commercial property under a Computer Center use, taxed on the Other levy class, the commercial class on the county levy sheet. The county's one existing data center, the roughly 5,000 square foot Midco facility built in 2008 and 2009 at about 1 MW scale, assesses at $595,800, a figure that reflects nearly two decades of depreciation on a small legacy building rather than what new construction would assess. A new purpose-built facility is assessed near its much higher construction value, which is why this study benchmarks from the $16.8 million assessment of a comparable modern 66,000 square foot facility. Yankton County's actual levies are confirmed from the county Auditor's official levy sheet (PT-74, 2025 taxes payable 2026). For commercial (Other class) property, the composite at the rural candidate sites runs about 13.2 to 14.2 per $1,000, comprised of Yankton County at 2.977 and the Yankton School District at 9.870 (Scotland School District, at 10.075, covers the north-county sites), plus township levies of roughly 0 to 1.0 and rural fire levies of 0.18 to 0.33. A site inside Yankton city limits adds the city levy of 3.350 for a composite near 16.2. None of the sites lie within city limits. One site sits within the city's extraterritorial jurisdiction, where city zoning applies but city taxes do not, so the rural composite applies at all sites, and the city composite would apply only to a site actually inside city limits. Applying those rates by building size, a 5 to 7 MW facility (roughly 50,000 to 66,000 square feet, assessing near $13 to 17 million) would generate roughly $175,000 to $240,000 per year at a rural site, or up to about $275,000 inside city limits; a 10 MW facility (roughly 91,000 square feet, near $23 million) roughly $300,000 to $330,000; and a 25 MW facility (roughly 220,000 to 300,000 square feet, near $56 to 76 million) roughly $750,000 to $1.1 million at a rural site, up to about $1.2 million in the city. The revenue follows the levy shares on the county levy sheet, with the school district and the county receiving most of it. Two additions strengthen the picture. First, if a rural electric cooperative serves the facility, South Dakota law (SDCL 10-36-6) adds a tax of $0.0016 per kilowatt-hour delivered, collected by the county for the school district. That adds roughly $90,000 to $125,000 per year at 5 to 7 MW and on the order of $450,000 per year at 25 MW. Bon Homme Yankton Electric holds the mapped retail territory at four of the sites, so this tax stream is a likely outcome wherever the cooperative wins the competitive bid process, at any of the sites. Second, South Dakota applies its 4.2 percent state sales tax to electricity, an estimated $240,000 to $650,000 per year on the power purchases of a 5 to 7 MW facility, scaling with size. Per the state Department of Revenue, that revenue goes to the state general fund rather than to local governments, and a rural facility pays only the state rate. A 2026 law creates a local option: under Senate Bill 96, counties may enact a sales tax of up to 0.5 percent dedicated to property tax relief, effective as early as January 1, 2027. If Yankton County adopted one, a data center's electricity purchases alone would contribute roughly $22,000 to $160,000 per year, depending on facility size, to the county's property tax reduction fund. One-time construction sales tax and permit fees add roughly $2 million or more on a $50 million build. Builders should also plan for South Dakota's 2 percent contractor's excise tax on construction receipts, roughly $700,000 to $900,000 at this scale; it is a project cost that flows to the state, not to local coffers. These figures assume standard taxation with no abatement. South Dakota declined to create data center tax exemptions in the 2026 session (House Bill 1005 failed in committee 9-3 in February 2026).

One more South Dakota mechanism affects the timing of this revenue. Under SDCL 10-6-137, Yankton County has adopted a discretionary formula that phases qualifying new commercial and industrial construction (anything adding more than $30,000 in value) into the tax rolls over five years, at 20, 40, 60, and 80 percent of assessed value and then 100 percent, beginning once the structure is complete. The formula applies automatically unless the owner requests full assessment, and it cannot be combined with a tax increment finance district, which matters for the financing options in the Commercials and Ownership Models section. In practice this means the annual property tax figures above phase in over a project's first five tax years, reaching the full amounts in year five, per the Yankton County Director of Equalization.

Local vendors. Industry operating cost benchmarks put local vendor spending (electrical, Heating, Ventilation, and Air Conditioning (HVAC), security, janitorial, landscaping and snow removal, catering, IT services) at 5 to 8 percent of operating expenses, or roughly $200,000 to $900,000 per year for a 5 to 7 MW site. Scaled up, a 25 MW facility supports roughly $1 to 4 million per year in local vendor opportunity. Yankton already has qualified firms in each category, including established local electrical, HVAC, security, janitorial, landscaping, and IT providers identified during the study.

Community Compatibility

Fit with the Comprehensive Plan

The team's compatibility review draws on the City of Yankton's newly adopted comprehensive plan (Ideas Flow Here: Yankton 2045), the city zoning code (Chapter 27), and the Yankton County Zoning Ordinance (adopted 2020, most recently amended December 16, 2025). A properly sited 5 to 25 MW data center rates as compatible, roughly 8 out of 10. Yankton 2045's first development principle calls for growth that uses land, infrastructure, and utilities as efficiently as possible, and its Job Center land use category anticipates large-footprint employers, including technology centers, along arterial corridors and rail lines. The compatibility concerns come down to siting. A data center placed on land intended for housing, mixed use, riverfront, recreation, or tourism would conflict with the plan, so those areas should be off the table.

Noise

A well-designed facility in the 5 to 25 MW range studied here typically measures 55 to 65 decibels (dBA) at the property line, 50 to 60 dBA at 100 feet, and 40 to 50 dBA at 500 feet. For reference, 60 dBA is a normal conversation level and 50 dBA is a refrigerator hum. Neither the city nor the county currently sets a numeric noise limit for industrial uses; both rely on conditional use standards prohibiting undue noise. The nearest local benchmarks are the wind energy rules. The city allows 60 dBA at the property line for wind systems, and the county requires 45 dBA at the nearest non-participating property line. A practical, achievable standard for a data center is 55 dBA daytime and 45 dBA nighttime at the nearest residential property line. Generators are the loudest equipment (about 105 dBA untreated) but modern enclosures and silencers reduce that by up to 40 dBA, and generators run only during weekly daytime testing and outages. A documented mitigation case study showed predicted property-line noise cut from 79 to 58 dBA through barriers and equipment choices. Requiring a pre-construction noise study and post-construction verification would provide assurance and accountability.

Visual character

A 5 to 25 MW facility is a low-rise industrial building, roughly 50,000 square feet at 5 MW up to about 300,000 square feet at 25 MW, generally 28 to 39 feet tall, with 1 to 4 loading docks and only 15 to 75 parking spaces. It is quieter-looking than most industrial uses, with no smokestacks, little truck traffic, and screened rooftop equipment. The study reviewed photo references from six comparable facilities, including SDN's 6 MW La Mesa facility in Sioux Falls, which also shows that heavy perimeter fencing is not always necessary.

A modular or pod-based facility, the form the phase-one concept in the Commercials and Ownership Models section would take, looks different again, and smaller. Instead of one large building, a pod deployment is a campus of prefabricated units, each comparable in size to a shipping container or small equipment shed, arranged in rows with cooling built into each unit. The units typically stand 12 to 20 feet tall, roughly half the height of the conventional building described above, so a 3 to 5 MW pod campus reads on the landscape more like a farmstead or a small utility yard than a warehouse, and perimeter fencing and landscaping can screen it almost completely. Because pods arrive factory-built and are added only as demand grows, the visual footprint starts small and expands in steps rather than appearing at full scale on day one.

Emergency services

Yankton Fire and Emergency Medical Services (EMS) can handle the conventional risks of structure fire, electrical fire, and generator and fuel incidents. The specialized risk is lithium-ion batteries (UPS rooms and any battery energy storage), which can enter thermal runaway, produce toxic and flammable gases, and reignite hours later. National Fire Protection Association (NFPA) standards NFPA 75 (IT equipment fire protection) and NFPA 855 (energy storage) regulate design. The study recommends the development agreement require a site-specific emergency plan, operator-funded training for Yankton Fire on battery incidents, pre-incident planning walkthroughs, and mutual aid coordination through county emergency management.

Emergency service arrangements differ between the city and the rural candidate sites, and the difference matters for planning. The city fire department serves Yankton, while the rural candidate sites are served by volunteer fire departments organized under rural fire districts, each funded by its own property tax levy (0.178 to 0.333 per $1,000 at the candidate sites, per the county levy sheet). Ambulance service runs on a different model: Yankton County EMS provides paramedic-level 911 response around the clock countywide, and Yankton County is the only county in South Dakota that fully funds its ambulance service. Two practical implications follow. First, a rural data center becomes a taxpayer of its serving fire district, so the facility's assessed value directly increases that department's funding. Second, the city and rural departments are volunteer forces, with many of the same firefighters serving both, and rural distances mean longer response times, which raises the importance of the on-site measures described above: automatic suppression, battery-room design to national standards, on-site fire water storage, and pre-incident planning and training with the serving department. Developer support for the local fire district, such as equipment contributions and lithium-ion response training, is a common community benefit commitment and belongs in the development agreement.

What neighbors elsewhere experienced

Evidence from comparable communities is mixed but mostly reassuring at this scale. In South Dakota, Sully County officials publicly welcome more data center development around the state's largest facility (a crypto mining site currently about 30 MW with announced expansion plans toward 300 MW, contributing roughly $850,000 a year to the local school district). Sioux Falls approved the 500 MW Gemini rezoning unanimously but only after hours of opposing testimony focused on power, water, noise, and land use. Deuel County's proposed hyperscale project collapsed after the state declined tax exemptions, and rural residents there raised transparency concerns. Iowa and Minnesota tell the same story. Communities value the tax base and jobs, and opposition concentrates on electricity use, water, noise, and process transparency. The lesson for Yankton is that a right-sized project with early public engagement, hard numbers, and enforceable caps addresses the specific concerns that have generated opposition elsewhere.

Organized local opposition

Yankton also has organized, committed local opposition to data center development, and this study treats it as a planning consideration in its own right. Some community members oppose data centers on principle, whether from concern for rural character, resource use, or distrust of the industry generally, and additional technical data is unlikely to change a values-based position. That is a legitimate part of the civic process, and it has been visible in the county moratorium discussion this summer. There are three practical implications. First, the engagement plan should aim for an informed community decision, not unanimous support; facts alone are unlikely to produce consensus. Second, process integrity and accountability serve residents on every side of the question. Enforceable megawatt caps, the public transparency dashboard, annual reporting, and the community forum give every resident, supportive or opposed, the same verified numbers and a way to hold an operator accountable. Third, elected officials weighed this opposition at the July 21 hearing and adopted a six-month moratorium, and they will weigh it again as the ordinance work proceeds, so the decision framework in this study is built to serve the community whichever way it decides.

Home values

The best current research does not support the fear that a data center lowers nearby home values. The George Mason University Center for Regional Analysis studied 2023 home sales across Northern Virginia, the largest data center market in the world, and found homes closer to data centers sold for more, not less, across single-family homes, townhomes, and condos. An Indiana analysis of four counties found homes within 1.5 miles of data centers appreciated 42 percent over four years versus 41 percent countywide. Some caveats include that homes within a few hundred feet face noise and visual risk, results vary by market, and the research is young. Setbacks, buffering, and noise limits are the tools that protect the nearest neighbors.

Environmental Considerations

Climate and hazards

Yankton's climate poses no barrier to data center operation, and the cold winters are an asset because outside air can provide free cooling much of the year. Design must handle the extremes, including recorded temperatures from minus 27 to 106 degrees, average snowfall around 37 inches with heavy years above 70, and an active severe weather climate (since 2020, National Oceanic and Atmospheric Administration (NOAA) records for Yankton County include 46 thunderstorm wind events, 29 hail events, and multiple blizzards; the county's most recent tornado was 2014). As such, standard hardening such as wind-rated envelopes, hail-resistant roofing, cold-weather generator packages, and snow load design should be implemented. Flooding is an additional site-specific hazard. The 2011 Missouri River flood is the modern benchmark, and every candidate parcel has already been screened against Federal Emergency Management Agency (FEMA) flood layers, with flood-affected parcels excluded or flagged.

Permits

A 5 to 25 MW facility in South Dakota would need a construction stormwater permit from Department of Agriculture and Natural Resources (DANR), likely an air quality review for generators (with exemptions available for certified emergency units), and depending on design and location, industrial stormwater and wastewater permits. A city-served site returning cooling water to the city system needs discharge and pretreatment permits, while a rural site needs DANR permitting for its on-site septic system and any holding or evaporation pond. None of these are unusual for an industrial project of this size.

Efficiency benchmarks the community should expect

Power Usage Effectiveness (PUE) measures how much total power a facility uses per unit of computing power; lower is better and 1.0 is perfect. Recent industry surveys put the global average around 1.5, facilities commissioned in the last five years around 1.48, and a capacity-weighted US average near 1.32. The European industry pact requires new facilities in cool climates to hit 1.3. Yankton should expect a new facility to commit to a PUE of 1.4 or better, with 1.3 achievable in this climate, and a Water Usage

Effectiveness (WUE) consistent with closed-loop cooling as described in the water section. These commitments should be included in the development agreement, with annual public reporting.

Heat reuse

Nearly all electricity a data center consumes becomes low-grade heat, about 17 million British Thermal Units (BTU) per hour at 5 MW and 85 million at 25 MW, continuously. The practical opportunity is a nearby partner within about a mile, such as a greenhouse, grain drying or food processing operation, aquaculture, or the wastewater plant. Operating examples exist at Meta's Odense facility, STACK's Oslo campus, and Green Mountain's Norwegian site that heats a fish farm 800 meters away. Recovery equipment is a real cost (roughly $460,000 to $810,000 per MW on the data center side), so the recommendation is to require a heat reuse feasibility study during planning rather than mandate reuse.

Community transparency (DCIM dashboard)

Data Center Infrastructure Management (DCIM) is the software and instrumentation that monitors a facility's power, water, cooling, and environmental conditions in real time. A community-facing DCIM dashboard typically publishes PUE, WUE, instantaneous power draw, daily water draw, cooling load, generator run hours, renewable energy share, and fence-line noise. Sunbird dcTrack and Schneider Electric EcoStruxure IT are standard DCIM platforms in this space, and Microsoft and Meta both publish public-facing sustainability dashboards that serve as precedent.

The study proposes the dashboard as a standing condition of approval, with contract language along these lines: the operator shall publish regularly updated metrics covering PUE, WUE, water draw, cooling load, generator run hours, and fence-line noise, and shall provide an annual public report to the county and city commissions. This is the mechanism that keeps the operator accountable, in public, to the numbers promised in this report, and it is the backbone of the community education program described in the full study.

DVI2 brings direct expertise here. Scott Sandal is VP of Client Services and Support for Sunbird Software, a leading DCIM platform provider, and leads DCIM projects around the world. He is the study's subject-matter expert on DCIM platform selection and monitoring design, and he is available for consultation on anything DCIM related as the community defines its transparency requirements.

Commercials and Ownership Models

What kind of data center fits Yankton

Of the five types in the proposal scope (enterprise, colocation, AI training, edge or inference, and modular), the research points to a regional colocation or enterprise facility, possibly built in modular phases, as the right fit. Realistic anchor customers are regional, including healthcare systems (Sanford, Avera, which already colocates with SDN), regional banks and credit unions, manufacturers, ag-tech firms, and edge compute operators serving the Sioux Falls, Sioux City, and Omaha triangle. Hyperscale AI training campuses need 100 MW and up and are the worst fit for Yankton's scale and stated community preference. The demand outlook is roughly 5 to 10 MW of realistic regional demand in the first three years, growing toward 20 to 30 MW over a decade if a Sioux Falls operator adopts Yankton as a secondary site. The demand outlook is the study team's judgment based on the regional customer landscape rather than a commissioned market study; validating it with letters of interest from two or three anchor candidates is part of the prospect consultation work described in the full study.

The five types compared

Type	Typical size	Typical customers	Permanent staff	Fit for Yankton
Enterprise (single owner)	2 to 10 MW	Healthcare systems, banks, manufacturers	About 7 to 10 at this scale	Strong. Sanford, Avera, FNBO, and regional manufacturers match this profile.
Colocation (multi-tenant)	5 to 20 MW	Regional enterprises, government, telecom	About 3 to 8 for an automated facility, growing with size	Very strong. SDN operates a 6 MW cooperative-owned colocation facility in Sioux Falls as a direct regional precedent.
AI training / hyperscale	100 to 300+ MW	Hyperscalers, AI labs	20 to 40	Very poor. Power, fiber, and scale are far beyond Yankton, and the community has signaled against this scale.
Edge / inference node	1 to 5 MW per pod, scalable to 10 to 20 MW	Content delivery, telecom, IoT, industrial automation	3 to 10	Strong. Yankton sits between Sioux Falls, Sioux City, and Omaha, a natural tri-metro edge position.
Modular / prefabricated	1 to 10 MW	Enterprise, government, industrial IoT	3 to 8	Moderate to strong. Best understood as the build method for a phased start rather than a separate market.

On cost, the current industry benchmark for building a conventional data center in the United States is roughly $8 to 12 million per megawatt (Turner and Townsend data center construction cost index, 2025 to 2026; the global benchmark is $11.3 million per MW). That is consistent with the roughly $50 million total investment for a 6 MW facility used in the economic sections of this report. Modular and edge approaches do not change the per-megawatt cost much, but they let a project start small and add capacity in funded increments.

For scale on the hyperscale comparison, Google reports its average data center campus consumes about 450,000 gallons of water per day, its largest campus (Council Bluffs, Iowa) consumed about 2.8 million gallons per day in 2024, and a planned Virginia campus has been reported at up to 8 million gallons per day. Set against local water systems, such as the City of Yankton's entire treatment capacity of 8 million gallons per day, this study excludes hyperscale and requires closed-loop cooling at the recommended scale.

Recommendation

The primary recommendation is a regional colocation facility of 5 to 15 MW, scalable toward 25 MW within whatever ordinance cap the community adopts. It has the strongest alignment with Yankton's infrastructure, the broadest regional customer base, and a working in-state precedent. The secondary path is an enterprise plus modular hybrid, starting with a 3 to 5 MW modular build anchored by a healthcare or manufacturing tenant and expanding to 10 to 15 MW as demand proves out.

Ownership structures

Five ownership models were evaluated. Three fit Yankton. A locally owned facility (local investors, bank debt, possible state REDI Fund support) keeps control and profits local but needs significant equity and contracted operations expertise. A regional colocation operator as owner (SDN, Midco, or similar) brings immediate expertise and customers with lower risk to the city, at the cost of local control. A public-private partnership (the city or county contributes land or infrastructure; a private developer builds and operates) spreads risk and is the strongest fit when incentives like Tax Increment Financing (TIF) are involved. Community cooperative ownership is possible but harder without a municipal utility. A hyperscale subsidiary is a poor fit at this scale. Working examples at this size include Bluebird Underground in Missouri, DC BLOX across the Southeast, SDN's own La Mesa facility in Sioux Falls (6 MW, cooperative-owned by 17 member companies), and rural electric cooperative data centers in neighboring states.

Who pays for what

The standard answer, and now largely the legal answer in South Dakota, is that the developer pays. Industry practice puts 100 percent of dedicated substation, transformer, and feeder costs on the customer that causes them. The SD Public Utilities Commission (PUC) applies cost-causation principles that bar shifting a single customer's costs onto other ratepayers. Senate Bill 135, effective July 1, 2026, requires data centers of 10 MW and above must cover the costs of meeting their power demands, including costs left behind if the facility closes, and must show their water use will not overburden local resources. The bill also preserves local government authority over data center ordinances. The community explanation fits in one sentence. Under state law and PUC rules, a Yankton data center will not raise your electric bill.

Financing structures available to a project here include private equity plus debt (most likely), corporate balance sheet financing if a regional operator builds it, tax increment financing for public infrastructure, and payment-in-lieu-of-taxes agreements if predictability matters to both sides. Each carries tradeoffs for the timing of the community's tax revenue. TIF redirects new tax revenue to infrastructure for a period of years, and a payment-in-lieu agreement trades some early-year revenue for predictability. On the state side, South Dakota offers no sales or use tax exemption for data center equipment or electricity, but the Governor's Office of Economic Development administers a Reinvestment Payment Program that can provide discretionary sales and use tax rebates to qualifying projects.

Keeping it right-sized: caps and long-term protections

South Dakota law (SDCL chapters 11-2 and 11-4) gives the county and city clear authority to cap scale through zoning. The durable approach is layered and works at two levels. The ordinance sets the community-wide ceiling through the tiered framework described in the zoning section, with conditional use up to 10 MW, enhanced standards from 10 to 50 MW, and nothing above 50 MW without rezoning. The development agreement then sets a project-specific cap matched to what is approved, binds successors, requires consent for any sale or expansion, and carries penalties. Deed restrictions add a third layer when public land is conveyed. For a project at the scale this study recommends, sample cap language reads: "The facility shall not exceed a maximum connected electrical load of 25 megawatts. Expansion beyond 25 megawatts shall require a new conditional use permit and full site plan review." This is model language only; final drafting is to be decided by the county and city attorneys. Where to set each number is the community's choice. A lower cap is the strongest protection against scale creep, and a higher ceiling widens the pool of prospects and the potential tax base. Loudoun County, Virginia's 2025 zoning amendment eliminating by-right data center development (approval without a public hearing) is the national precedent.

End-of-life protections belong in the development agreement because South Dakota has no e-waste statute. The recommended package is a decommissioning bond or escrow sized to full demolition and hazardous material removal, adjusted every five years, that survives bankruptcy; an abandonment trigger (for example, 12 months of non-operation) with reversion rights or right of first refusal for the county or city, whichever jurisdiction approves the project; successor-binding use restrictions and assignment consent; certified data destruction (National Institute of Standards and Technology (NIST) 800-88, R2v3, or Secure Enterprise Asset Management (SEAM) certification, with SEAM based in Sioux Falls); environmental indemnity backed by insurance covering batteries, refrigerants, and fuel systems; and annual compliance reporting. If the operator walks away, the money to tear the facility down is already in the bank.

Does it pay its own way?

The proposal committed this study to a simple test. Does the project generate more in taxes, jobs, and local spending than it costs the community in services? The operating model completed for this study answers yes at every size in the range.

The facility side: costs and revenue

Annual operating costs are dominated by power, at roughly $4.5 to 6.5 million per year at 5 MW, $13 to 19 million at 15 MW, and $22 to 32 million at 25 MW, assuming an 85 to 95 percent load factor and regional commercial rates of 7 to 10 cents per kilowatt-hour, consistent with EIA state electricity price data for South Dakota commercial and industrial customers. Staffing adds roughly $300,000 to $1 million per year at the small end and up to $3.5 million at 25 MW depending on the operating model. Maintenance and repairs run $500,000 to $1.5 million per year (HVAC, UPS, generators, switchgear, security systems). Insurance runs $300,000 to $800,000. Water for an efficient air-cooled or hybrid design runs only $50,000 to $250,000, and property tax completes the cost stack at the figures in the economic impact section.

On the revenue side, retail colocation pricing in regional markets of roughly $150 to $250 per kilowatt per month (wholesale rates run lower, and actual pricing depends on tenant mix and term) supports roughly $9 to 15 million per year at a fully leased 5 MW facility, $27 to 45 million at 15 MW, and $45 to 75 million at 25 MW. Enterprise suites for healthcare and finance customers typically add a 10 to 20 percent pricing premium, power pass-through arrangements can add $500,000 to $2 million, and cross-connects and managed services add $250,000 to $1 million. At typical occupancy the operating margin is strongly positive, which is what makes a project of this size financeable on private capital without public subsidy.

The community side: benefits against costs

Benefits at 5 to 7 MW include roughly $175,000 to $275,000 in annual property tax, payroll of $300,000 to $1 million with a regional multiplier of roughly 1.4 to 1.8 (typical regional economic modeling ranges) as those wages circulate, $200,000 to $900,000 in capturable local vendor spending, plus utility sales taxes and, where a cooperative serves the load, the per-kilowatt-hour school district tax. At 25 MW the figures grow to roughly $750,000 to $1.2 million in property tax, up to $3.5 million in payroll, and $1 to 4 million in vendor spending. Against that, the incremental public service cost of hosting the facility (fire and police response readiness, road maintenance, planning and zoning staff time, utility coordination) is estimated at $75,000 to $250,000 per year. This service cost figure is a study estimate rather than a city or county calculation. The conclusion is not sensitive to the estimate. Even at three or four times the estimate, the net community benefit remains positive at every size studied. The facility requires no schools, generates little traffic, and with the required cooling design uses modest water. The net is strongly positive at 5 MW and grows to a multi-million-dollar annual community benefit at 25 MW.

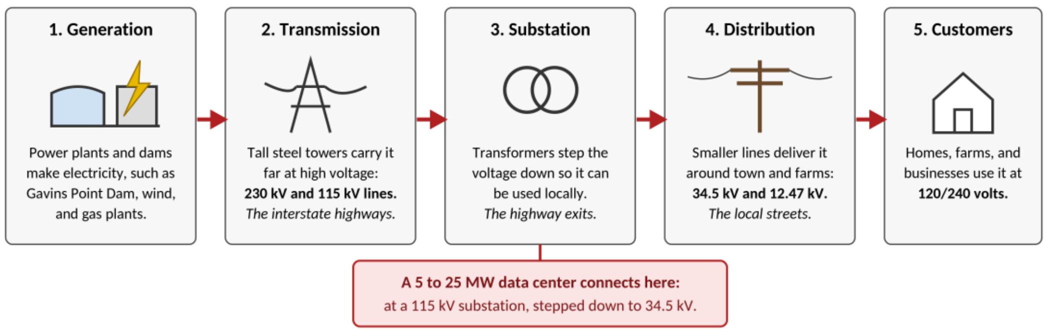
Securing the commitments

The development agreement is what will make the suggestions into a commitment. Regional precedent (South Dakota industrial projects under cost-causation rules, Iowa and Minnesota mid-market data centers with payment-in-lieu agreements, Nebraska enterprise facilities with developer-funded substations) supports a standard package: the developer funds all utility upgrades, no costs shift to ratepayers (now statutory under SB 135 for facilities of 10 MW and above), performance standards cover noise, water, and fuel storage, a megawatt cap holds the project at community scale, and, if the community wants certainty, a guaranteed minimum annual payment.

Appendix A: Understanding the Power System

This appendix explains the units and vocabulary of this study in plain language, followed by a glossary of other terms.

How Electricity Reaches a Yankton County Customer



Reading the Power Numbers in This Study

Picture a garden hose. Pressure is kV. Flow right now is MW. Total gallons by day's end is MWh.

kV **kilovolt = 1,000 volts**

The pressure. How hard electricity is pushed, not how much is flowing. Higher kV travels farther with less lost. Yankton has 230 and 115 kV transmission and 34.5/12.47 kV local lines.

MW **megawatt = 1,000 kW**

The amount flowing right now, which is the size of the load. When this study says a 5 MW data center, that is how much power the building draws while it is running.

MWh **megawatt-hour**

Energy over time, which is what shows up on a utility bill. One MW for one hour is 1 MWh. A 5 MW facility running around the clock uses roughly 43,800 MWh in a year.

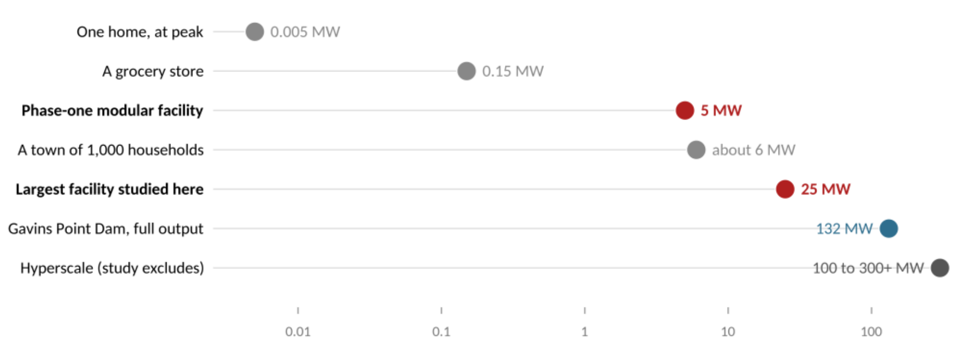
One more that matters for substations:

MVA **megavolt-ampere**

The size rating of a transformer, closely related to MW. When this study says a substation has a 60 MVA transformer, that is roughly how much load it can deliver. More MVA means more room.

Putting megawatts in context

Each step to the right is ten times more power.



Megawatts, logarithmic scale. Gavins Point figure is generating capacity, shown for scale.

Common terms

Closed-loop cooling. A design where the cooling water circulates in a sealed system, like a car's radiator, rather than being evaporated away. It is why the recommended design uses a small fraction of the water an evaporative facility does.

Colocation. A data center that rents space and power to many tenants, each running its own equipment.

Conditional use permit. A zoning approval that requires a public hearing, where the county can attach conditions to the project or deny it.

Data Center. A building that houses computer servers along with the power, cooling, backup, and network equipment that keeps them running around the clock.

DCIM. Data center infrastructure management, the software that monitors a facility's power, water, cooling, and environment in real time.

Decibels (dBA). A measure of loudness as the human ear hears it. Normal conversation is about 60 dBA; a refrigerator hum is about 50.

Development agreement. A contract between the developer and the approving jurisdiction that binds the project to specific terms, such as cooling design, megawatt caps, and decommissioning obligations.

Edge facility. A small data center placed close to users so responses are fast, often 1 to 5 MW.

Enterprise facility. A data center owned and run by a single company for its own operations, with its own staff, in contrast to colocation.

ETJ. Extraterritorial jurisdiction, the area outside city limits where the city administers zoning but city taxes do not apply.

Fiber. Fiber-optic cable, strands of glass that carry data as pulses of light. It provides the high-capacity network connections a data center requires, ideally from two independent providers.

Hyperscale. The largest class of data center, typically 100 MW and far beyond, built by global cloud and AI companies. This study excludes it.

IoT. The internet of things, everyday equipment such as sensors, machines, and vehicles connected to networks.

Modular or pod construction. A facility assembled from factory-built units, each roughly the size of a shipping container, added in steps as demand grows.

N+1. A redundancy standard: enough equipment to carry the full load, plus one spare unit.

Node. A point where power lines meet on the grid, such as a substation or switchyard. Higher-voltage nodes can serve larger loads.

PUE. Power usage effectiveness, total facility power divided by computing power. Lower is better; 1.0 is perfect.

SB 135. Senate Bill 135, the 2026 South Dakota law requiring data centers of 10 MW or more to pay their own utility costs, including costs left behind if they leave, and to show their water use will not overburden local resources.

Substation. Equipment that steps electricity down from transmission voltage so it can be used locally. Data centers connect at substations.

> **Distribution Substation.** A smaller substation that serves homes, farms, and businesses at local voltages rather than transmission-scale customers.

Switchyard. A facility that routes power between transmission lines but has no transformers, so it cannot serve customers until transformation is added.

Tie-In. The point where a new line, substation, or customer physically connects to the existing electrical network.

TIF. Tax increment financing, which redirects new property tax revenue to pay for infrastructure for a period of years.

Transformer. The equipment in a substation that changes voltage. Its size, measured in MVA, largely sets how much load the substation can deliver, and new units typically carry a two-year lead time.

Transmission Capacity. The amount of power the high-voltage network can carry into an area. Utility screening for this study indicates project timelines are set by transformer availability, not transmission capacity.

UPS. Uninterruptible power supply, the battery system that carries a facility for the seconds between a utility outage and generator start.

WUE. Water usage effectiveness, liters of water used per kilowatt-hour of computing. Lower is better; closed-loop designs run near 0.2.