

A carbon-free grid by 2040 — and 1,120 MW of new data-center load already lining up.

Minnesota's 2023 law puts the whole sector on a legislated clock to 100% carbon-free power, just as data centers, electrification, and industry stack new gigawatts onto the system. Coal is retiring, nuclear is being extended, and a generational transmission build is under way at once. Invizion helps electric utilities re-sequence a capital portfolio in a click — and defend every decision.

1,120 MW¹ Proposed data-center capacity in Minnesota as of January 2026 — versus about 43 MW operating today.	\$20.1B² NSP-Minnesota's (Xcel) capital plan for 2026–2030.	100% by 2040³ Minnesota's carbon-free electricity mandate — with 80% carbon-free required of large utilities by 2030.	\$10.3B⁴ MISO's first Long Range Transmission tranche now building across the Upper Midwest.
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THE MINNESOTA LANDSCAPE

Four forces are moving your project list at once

None of these is theoretical, and none of them waits for your next budget cycle. Together they mean the capital plan you approved last year may already be the wrong plan.

DEMAND — LOAD GROWTH

Data centers arrive as the grid is being rebuilt

As of January 2026, Minnesota had 13 operating data centers drawing about 43 MW — and 12 more proposed that would add roughly 1,120 MW.¹ Across the MISO Midwest footprint, studies suggest the region could absorb as much as 15 GW of data centers if they stay flexible.¹

Xcel already projects weather-normalized retail electric sales up about 3% as this load builds² and every large new customer is a firm capacity commitment competing for the same capital.

RELIABILITY — RESOURCE ADEQUACY

Thinner margins in a MISO-dependent grid

Minnesota generated about 58.6 million MWh in 2024 on roughly 18,213 MW of summer capacity, with natural gas now the leading in-state source as coal retires.⁵

The state sits inside MISO, the grid operator for 15 states and Manitoba, which has warned repeatedly of tightening reserve margins as dispatchable plants retire faster than replacements interconnect.⁶ Reliability now depends on projects landing on schedule.

GENERATION — THE TRANSITION

Coal out, nuclear extended, solar in — on a legislated clock

The 2023 law requires large utilities to be 80% carbon-free by 2030, all utilities 90% by 2035, and 100% by 2040.³ Xcel's 2,238 MW Sherco coal plant is closing in stages — Unit 2 retired in 2023, Unit 1 by 2026, Unit 3 by 2030 — with a roughly 460 MW solar project rising on the same Becker site.⁷

Carbon-free baseload is being preserved: Monticello (671 MW) has a renewed license running to 2050⁸ while Prairie Island (~1,041 MW) runs on licenses through 2033–2034 that Xcel plans to extend.⁹

CAPITAL — GRID & TRANSMISSION

A generational build, funded across a decade

NSP-Minnesota alone plans about \$20.1 billion of capital over 2026–2030 — roughly \$5.6B renewables, \$4.95B distribution, \$3.88B transmission, and \$3.0B generation.²

On top of utility capex, MISO's Long Range Transmission Plan is adding a \$10.3 billion first tranche and an even larger 765-kV second portfolio across the Midwest, targeted for service in the early 2030s.^{4,6} New obligations stack on the backlog; something on the list has to move.

WHO RUNS MINNESOTA'S GRID

Investor-owned utilities led by Xcel, plus a deep co-op and municipal sector

Minnesota's grid is carried by PUC-regulated investor-owned utilities led by Xcel Energy, alongside large generation-and-transmission cooperatives and municipal systems governed by boards and members. The pressures are shared; the accountability path differs.

Investor-owned utilities

Rates & capital recovery regulated by the Minnesota PUC

Xcel Energy (Northern States Power – Minnesota) ~1.6M electric customers · Twin Cities & statewide²

Minnesota Power (ALLETE) Northeastern Minnesota · large taconite & paper industrial load

Otter Tail Power MN, ND & SD · ~128,500 customers³⁰

NSP-Minnesota plans roughly \$20.1 billion of capital over

2026–2030; system-wide Xcel plans about \$60 billion²

Cooperatives & municipal utilities

Governed by member boards & city councils, not PUC rates

Great River Energy 26 member co-ops · ~1.7M people · 950+ MW wind¹¹

Dairyland Power Cooperative Wholesale to co-ops in SE Minnesota & the Upper Midwest

Minnkota Power Cooperative Wholesale G&T serving NW Minnesota & eastern North Dakota

Municipal utilities (Rochester, Austin & others) City-owned systems across the state

Great River Energy applied for nearly \$1 billion in USDA New ERA funding to accelerate its clean-energy transition.¹²

Every capital dollar has to be defensible

Whether you answer to the Public Utilities Commission or an elected co-op board, the question is the same: why this project, why now, why at this cost?

Minnesota Public Utilities Commission (MPUC) sets rates and reviews Integrated Resource Plans and capital recovery for investor-owned utilities such as Xcel, Minnesota Power, and Otter Tail¹³

Xcel's 2025–2026 electric rate case (dockets 24–320/24–321) requested about \$490.7 million over two years; the Commission set interim rates of \$192 million (5.2%) effective January 1, 2025, with a final order due by July 31, 2026 — approvals are not a formality¹⁴

The 2023 carbon-free standard is now the backdrop to every resource plan: 80% carbon-free by 2030 for large utilities, 90% by 2035, 100% by 2040, plus 55% renewable by 2035³

Cooperatives and municipals set their own rates through member boards and city councils — but face the same 2040 carbon-free obligation and the same capital math³

The money is moving — can your plan absorb it?

Minnesota utilities have more grid and clean-energy capital in play than in any prior generation. The constraint is readiness: which projects qualify, which are shovel-ready, and how the timing lines up.

MISO LRTP Tranche 1: \$10.3B of new transmission across the Upper Midwest, approved in 2022, with a much larger 765-kV second portfolio following⁴⁶

NSP–Minnesota capital plan: ~\$20.1B for 2026–2030, including about \$5.6B of renewables and \$3.9B of transmission²

USDA New ERA: Great River Energy applied for nearly \$1 billion to fund clean-energy resources for its 26 member cooperatives¹²

IRA direct-pay tax credits put utility-scale solar, storage, and nuclear uprates within reach for cooperatives and municipals that previously could not monetize them.

MINNESOTA'S GRID, IN BRIEF

Questions Minnesota utility leaders are asking

Short, sourced answers — the same facts we dig into with utilities looking at their capital programs.

How fast is electricity demand growing in Minnesota?

Data-center interest is the fastest-moving driver: about 43 MW operates today, but 12 proposed projects would add roughly 1,120 MW, and Xcel projects weather-normalized retail electric sales up about 3% as new load builds¹²

What does Minnesota's 100% carbon-free law require?

The 2023 standard requires large investor-owned utilities to be 80% carbon-free by 2030 (60% for other utilities), all utilities 90% by 2035, and 100% carbon-free by 2040, plus 55% renewable by 2035³

What's happening to Minnesota's coal and nuclear plants?

Xcel's Sherco coal units are retiring between 2023 and 2030, with a large solar project replacing them on site; the two nuclear plants stay in the mix, with Monticello's license renewed to 2050 and Prairie Island licensed through 2033–2034 with an extension planned⁷⁸⁹

Does the Public Utilities Commission set my utility's rates?

The MPUC regulates rates and resource plans for investor-owned utilities such as Xcel, Minnesota Power, and Otter Tail. Cooperatives and municipal utilities set their own rates through member boards and city councils¹³

What grid funding is available in Minnesota?

MISO's Long Range Transmission Plan is building a \$10.3 billion first tranche across the Upper Midwest, Great River Energy applied for nearly \$1 billion in USDA New ERA funding, and IRA direct-pay credits are open to co-ops and municipals⁴¹²

How does Invizion help Minnesota electric utilities plan capital?

Invizion is scenario-based capital portfolio optimization for utilities. It lets you model how a data-center load surge, a New ERA award, or a coal-retirement date reshuffles your whole project list, re-sequence the portfolio automatically, and keep a defensible record of every decision for the PUC or your board.

REFERENCES

Sources

Every figure in this briefing is tied to a primary or authoritative source.

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14. Minnesota PUC — Xcel Energy electric rate case, dockets 24-320/24-321: ~\$490.7M requested over 2025–2026; interim rates \$192M (5.2%) from January 1, 2025; order due July 31, 2026. mn.gov/puc

ABOUT INVIZION

Capital program optimization for utilities

Invizion is a purpose-built capital lifecycle management platform for utilities. It integrates budgeting, CIP, scenario analysis, and funding-source tracking in one system — so utilities can re-sequence a capital portfolio in a click and demonstrate audit-ready, defensible decisions to regulators, boards, and rating agencies.

See how utilities keep capital plans current and defensible with Invizion.

Explore Invizion →