

South Dakota already makes most of its power from wind. Now the load is coming for the grid.

Renewables supply roughly 84% of the state's electricity, and South Dakota generates far more than it uses. But data centers and other large loads are now arriving, NorthWestern is putting \$3.2 billion into its system through 2030, and the co-op sector is retooling at the same time. Each of those forces reshuffles the projects on your list — Invizion helps electric utilities re-sequence a capital portfolio in a click, and defend every decision.

~84%¹	\$3.2B²	3,000 MW²	\$9.7B³
Share of South Dakota's in-state electricity generation from renewables in 2022 — mostly wind.	NorthWestern Energy's 2026–2030 capital plan — a 17% increase, tied partly to South Dakota load growth.	North Plains Connector HVDC line proposed to link the MISO, SPP, and Western grids across the northern plains.	USDA New ERA program; Basin Electric, the wholesale supplier to South Dakota's co-ops, was a Category 1 finalist.

THE SOUTH DAKOTA LANDSCAPE

Four forces are moving your project list at once

South Dakota's grid has long been a low-cost, wind-rich exporter. That is changing as new load, tight capacity, generation turnover, and a transmission build-out all land on the capital plan at the same time.

DEMAND — LOAD GROWTH

Large loads arrive in a small system

NorthWestern issued an all-source capacity request for proposals for its South Dakota electric system in 2025 to meet growing demand, and in 2026 filed a Large New Load Tariff governing service to new loads of 5 MW or greater — the class that includes data centers²

The co-op side is bracing too: Basin Electric launched a Large Load Commercial Program in 2025 to insulate its existing members from the cost and risk of new large loads³ In a system this size, one hyperscale customer is a capacity commitment that competes for the same capital.

RELIABILITY — CAPACITY

An exporter, but with thinning margins

South Dakota generated about 20.9 million MWh in 2024 against roughly 13.6 million MWh of retail sales — a net exporter — at an average retail price near 10.87 cents/kWh⁵

But SPP only cleared its long generator-interconnection backlog in 2025 as it moved to a Consolidated Planning Process⁶ and NorthWestern is procuring new capacity for South Dakota rather than counting on the queue² Reliability now depends on projects landing on schedule.

GENERATION — THE TRANSITION

Wind-led, but coal still anchors baseload

Renewables supplied about 84% of the state's generation in 2022, led by wind,¹ yet Otter Tail Power's 1970s-era coal units at Big Stone and Coyote Station still carry baseload⁷

Otter Tail's 2027–2041 integrated resource plan proposes new natural gas, wind, solar, and battery storage⁸ and Basin Electric — 5,779 MW operated across a nine-state footprint that includes South Dakota — is adding gas alongside wind⁴ Each turnover date reshuffles the plan.

CAPITAL — GRID & TRANSMISSION

Build the grid the new load needs

NorthWestern's 2026–2030 capital plan runs about \$3.2 billion, a 17% increase,² and Otter Tail plans roughly \$2.05 billion of capital over the same window.⁸

On top of utility capex, the proposed 3,000 MW North Plains Connector would tie the MISO, SPP, and Western grids together across the northern plains — a multi-billion-dollar line targeting service around 2032² New obligations stack on the backlog; something has to move.

WHO RUNS SOUTH DAKOTA'S GRID

A few investor-owned utilities and a very large cooperative sector

South Dakota is unusual: a handful of PUC-regulated investor-owned utilities serve the cities, while member-owned generation-and-transmission and distribution cooperatives — supplied by Basin Electric through East River and Rushmore — cover much of the state. The pressures are shared; the accountability path differs.

Investor-owned utilities

Rates & capital recovery regulated by the SD PUC

NorthWestern Energy ~850,300 customers across MT, SD & NE; HQ in Sioux Falls⁹

Otter Tail Power Serves eastern SD across MN / ND / SD⁷

Black Hills Energy (Black Hills Power) ~64,200 customers around Rapid City¹⁰

Xcel Energy (NSP) Serves the Sioux Falls area of southeastern SD¹¹

NorthWestern plans ~\$3.2 billion of capital over 2026–2030² Otter Tail plans ~\$2.05 billion.⁸

Cooperatives & public power

Governed by boards & members, not PUC rates

Basin Electric Power Cooperative G&T wholesaler; 138 member systems, 3M consumers, 9 states⁴

East River Electric (Madison, SD) Regional transmission co-op delivering Basin power in eastern SD⁴

Rushmore Electric (Rapid City) Regional transmission co-op serving western SD distribution co-ops⁴

Cooperatives set their own rates through member boards — but still answer for every capital dollar.

Every capital dollar has to be defensible

Whether you answer to the Public Utilities Commission or a member board, the question is the same: why this project, why now, why at this cost?

South Dakota PUC — three elected commissioners regulate rates and capital recovery for the state's investor-owned electric utilities¹²

Otter Tail Power's SD rate case settled in March 2026 for a \$3.3 million net revenue increase at a 7.09% return on rate base, effective April 1, 2026, with a rate moratorium through December 1, 2029⁸

NorthWestern's Large New Load Tariff (filed 2026) sets terms for new loads of 5 MW or greater — the mechanism that decides who pays for data-center-scale growth²

Cooperatives & municipals largely set their own rates through boards and members rather than the PUC — the accountability is direct, not lighter.¹²

The money is moving — can your plan absorb it?

South Dakota's utilities and co-ops have more capital and federal support in play than in a generation. The constraint is readiness: which projects qualify, which are shovel-ready, and how the timing lines up.

USDA New ERA — \$9.7B program Basin Electric, the wholesale supplier behind South Dakota's cooperatives, was a Category 1 finalist for this rural clean-energy funding³

North Plains Connector — a multi-billion-dollar, 3,000 MW HVDC line that would link the MISO, SPP, and Western grids, targeting service around 2032²

SPP transmission planning — with its interconnection backlog cleared in 2025, SPP's Integrated / Consolidated Planning Process shapes cost-shared regional upgrades in the Dakotas⁵

IRA elective-pay (direct-pay) tax credits let cooperatives and public power — Basin, East River, Rushmore — capture clean-energy credits they historically could not use.

SOUTH DAKOTA'S GRID, IN BRIEF

Questions South Dakota utility leaders are asking

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

How fast is South Dakota's electricity demand growing?

Large loads are arriving in a small system. NorthWestern issued an all-source capacity RFP for its South Dakota system in 2025 and filed a Large New Load Tariff for loads of 5 MW or greater, and Basin Electric launched a Large Load Commercial Program to manage new large loads for its co-op member³³

Where does South Dakota's electricity come from?

Wind is the state's primary energy source; renewables supplied about 84% of in-state generation in 2022, and South Dakota generates far more electricity than it consumes.¹⁵

Who sets my utility's rates in South Dakota?

The South Dakota PUC — three elected commissioners — regulates rates and capital recovery for investor-owned utilities like NorthWestern, Otter Tail, Black Hills, and Xcel. Cooperatives and municipals largely set their own rates through boards and members³²

What's happening to South Dakota's coal plants?

Otter Tail's 1970s-era Big Stone and Coyote Station coal units still carry baseload, while Otter Tail's 2027–2041 resource plan proposes new natural gas, wind, solar, and storage to replace and supplement them over time⁷⁸

What grid funding is available in South Dakota?

Basin Electric was a finalist in USDA's \$9.7 billion New ERA clean-energy program, and the multi-billion-dollar North Plains Connector would add 3,000 MW of interregional transmission across the northern plains³²

How does Invizion help South Dakota electric utilities plan capital?

Invizion is scenario-based capital portfolio optimization for utilities and cooperatives. It lets you model how a large-load request, a federal 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 member board.

REFERENCES

Sources

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

1. Wikipedia (citing EIA) — ~84% of South Dakota's electricity generation renewable in 2022, mostly wind. en.wikipedia.org
2. StockTitan (NWE) — NorthWestern Energy \$3.2B 2026–2030 capital plan (+17%), Large New Load Tariff (loads ≥5 MW), South Dakota all-source capacity RFP, and 3,000 MW North Plains Connector. www.stocktitan.net
3. Basin Electric Power Cooperative — USDA New ERA \$9.7B program, Basin a Category 1 finalist; Large Load Commercial Program launched 2025. www.basinelectric.com
4. Basin Electric Power Cooperative — At a Glance: 5,779 MW operated, 138 member systems, 3 million consumers, nine states, 2,600+ miles of transmission. www.basinelectric.com
5. U.S. Energy Information Administration — South Dakota Electricity Profile 2024: 20,871,994 MWh net generation, 13,637,204 MWh retail sales, 10.87 cents/kWh, primary source wind. www.eia.gov
6. Southwest Power Pool — interconnection queue backlog cleared (2025), Consolidated / Integrated Transmission Planning. www.spp.org
7. Wikipedia — Otter Tail Power Company: serves MN, ND, and SD; Big Stone and Coyote Station coal units. en.wikipedia.org
8. StockTitan (OTTR) — Otter Tail ~\$2.05B 2026–2030 capex; SD rate case settled Mar 2026 (\$3.3M, 7.09% return on rate base, moratorium to Dec 1, 2029); 2027–2041 IRP. www.stocktitan.net
9. NorthWestern Energy — About Us: ~850,300 customers in MT, SD, NE and Yellowstone; headquartered in Sioux Falls. www.northwesternenergy.com
10. Wikipedia — Black Hills Corporation: Black Hills Power serves ~64,200 electric customers around Rapid City. en.wikipedia.org
11. Wikipedia — Northern States Power Company (Xcel Energy) serves the Sioux Falls area of southeastern South Dakota. en.wikipedia.org
12. South Dakota Public Utilities Commission — three elected commissioners regulating investor-owned electric utilities. puc.sd.gov

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 →