MONTANA'S DATA CENTER BOOM

Promise or Peril for Power, Water, and Communities?

By Renee Pirtz

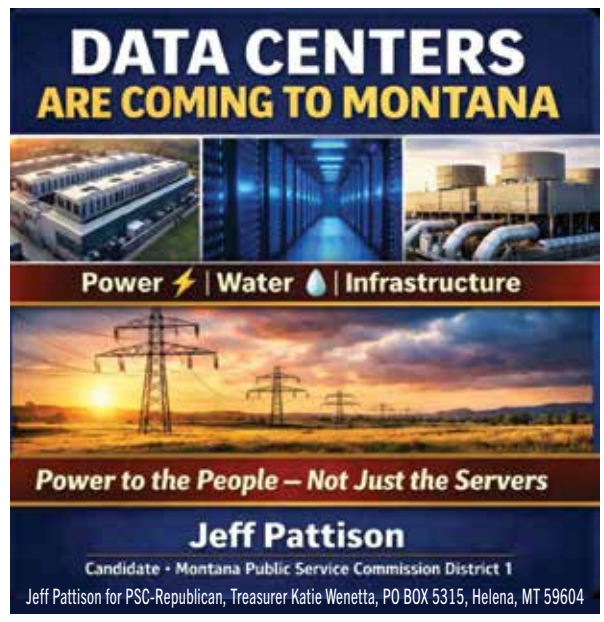
As artificial intelligence, cloud computing, and global tech demand surge, Montana has unexpectedly become a hotspot for hyperscale data centers. Vast open land, naturally cool nights, and access to long-haul fiber optics have drawn major developers scouting the Mountain West. But with proposals accelerating—NorthWestern Energy in talks with at least 11 entities, including signed letters of intent or agreements with companies like Quantica Infrastructure (planning up to 1,000 MW south of Broadview), Sabey Data Centers (250 MW west of Butte), and Atlas Power Group (150 MW expansion in Butte)—Montanans are asking hard questions: Who really benefits, and at what cost to our grid, water, and way of life?

One of the most consequential proposals now driving public concern is the massive **5,000-acre data center planned south of Broadview in Yellowstone County**, led by Quantica Infrastructure through its Big Sky Digital Infrastructure platform. According to reporting from the *Billings Gazette*, NorthWestern Energy has issued a **non-binding letter of intent to supply up to 1,000 MW of electricity** to the project—an extraordinary amount equal to roughly two-thirds of the power NorthWestern currently owns.

At a recent public forum in Billings, hydrologists, environmental experts, and local residents raised concerns about the project's potential water use, noting that a facility of this scale could require **millions of gallons of water per day** for cooling. **A data center of this scale would use between 1–5 million gallons of water per day — the equivalent of a city of 10,000 to 40,000 people. That's more water than many rural communities, including Broadview, use in total.** Others questioned the strain such a load would place on Montana's already-constrained grid, and whether ratepayers could ultimately be saddled with the cost of transmission upgrades needed to serve a single industrial customer.

The Montana Environmental Information Center notes that the Broadview project would be the largest proposed data center in the state, with power demand rivaling that of a major metropolitan area. The organization warns that such a facility could reshape regional energy planning for decades.

Data centers are power hogs. A single hyperscale campus can demand as much electricity as a small city, and Montana's grid—already stretched—isn't fully equipped. Transmission lines near capacity, new load requests outstripping supply, and upgrades potentially costing hundreds of millions raise a core issue: Who foots the bill? In many states, these infrastructure costs get passed to everyday ratepayers, not the tech giants driving the demand.



Jeff Pattison, a third-generation farmer and rancher from Glasgow running for Montana Public Service Commission District 1, sees the stakes clearly. The PSC regulates utilities like NorthWestern Energy and has authority over large-load approvals, ensuring new industrial users don't harm existing customers.

"Are data centers going to power Montana or consume our power. The real question is: will they power Montana's future… or consume the power and water our communities depend on?" Pattison said. "Data centers bring investment and innovation, but they also bring massive demand for electricity and water. As a third-generation farmer and rancher, I know these resources aren't abstract policy ideas—they're the backbone of our farms, ranches, and communities."

One promising solution Pattison proposes to ease grid strain without massive new construction is reconductoring existing transmission lines with advanced conductors, such as Aluminum Conductor Composite Core (ACCC) conductors. These use a lightweight carbon-fiber composite core instead of traditional steel, allowing far less thermal expansion (and thus minimal sag) when lines heat up under heavy loads. This enables roughly double the current-carrying capacity (ampacity) compared to equivalent-diameter steel-core conductors like ACSR, while reducing line losses by up to 25% or more through greater aluminum content and efficiency. For Montana's constrained grid, ACCC could unlock significant hidden capacity on existing rights-of-way—helping accommodate data center loads or other growth without building entirely new lines, towers, or corridors. It also cuts energy waste, lowers long-term costs through reduced losses, and improves resilience against high-demand scenarios.

Despite these advantages, utilities have often been reluctant to adopt ACCC and similar advanced conductors widely. Reasons include higher upfront costs (typically 1.5–3 times more than traditional options), concerns over installation complexity and potential damage to the composite core if mishandled (though Pattison shares that newer designs like InfoCore help verify integrity), limited long-term field data in diverse conditions, and a conservative industry preference for proven technologies with decades of track record.

In the Northwest, adoption remains limited—not because the technology lacks benefits, but because many utilities are still unfamiliar with modern composite-core conductors and how they change project economics. When utilities evaluate only the per-foot conductor price, they often overlook the immediate infrastructure savings that ACCC and similar composite-core systems create through reduced sag, lighter weight, and lower structural loading. These engineering advantages can reduce tower height, shrink foundation size, and cut steel requirements, making advanced conductors competitive or even more affordable on a total-project basis.

Water adds another layer of worry in drought-prone Montana. Most large facilities rely on evaporative cooling, guzzling millions of gallons daily—competing with agriculture, municipalities, and slow-recharging aquifers. Hydrologists warn that industrial-scale use could push regions toward long-term scarcity, especially as drought cycles intensify.

The jobs pitch often falls flat too. Developers tout economic growth, but a typical hyperscale site creates only 20–50 permanent positions—mostly specialized roles like network engineers or high-voltage technicians, rarely filled locally. Construction brings temporary workers from out-of-state, leaving minimal lasting impact compared to the public resources required.

Then there are the everyday nuisances: Backup diesel generators (dozens per site) produce noise, exhaust, and vibrations during tests or outages. Cooling towers and chillers hum constantly, while 24/7 security lighting creates light pollution—disruptions that hit hard in quiet rural communities.

Gov. Greg Gianforte has actively promoted Montana as a data center destination, highlighting our advantages in land, climate, and fiber to attract high-tech investment and diversify the economy. Supporters see tax revenue and prestige. Critics, however, point to generous incentives wiping out much of that revenue, public burdens for power and water, minimal jobs, and lasting environmental strain.

Pattison emphasized protection for Montanans first: "If elected to the Montana Public Service Commission, my priority will remain simple: Power to the People. That means making sure Montana families and businesses are protected first—and that large industrial users pay their fair share for the infrastructure they require. I'm not a career politician. I'm a citizen advocate and statesman who believes the people paying the bills deserve a voice. And when it comes to Montana's power and resources… The people come first."

Recent developments underscore the urgency. NorthWestern has preliminary deals for up to 1,400 MW combined by 2030—enough to power hundreds of thousands of homes—while groups like environmental coalitions petition the PSC for safeguards, including separate rate classes for large loads to prevent cost-shifting to households. Some proposals have stalled (e.g., a Great Falls campus), but others advance amid calls for transparency on water use, emissions, and ratepayer impacts.

Montana faces no easy path forward. Balancing economic diversification with reliable, affordable power and water for residents, farmers, and small businesses will define the debate. As more proposals emerge, communities demand answers: How much power and water? Who pays? What protections exist?

The answers will shape whether data centers become a boon—or a burden—for the Treasure State.