# Increasing electricity demand driven by AI poses challenges for energy planners



The Northwest Power and Conservation Council, based in Portland, Oregon, has emphasised the increasing demand for electricity driven by artificial intelligence (AI), which is outpacing traditional data centre operations. The council, established in 1980 following the Pacific Northwest Electric Power Planning and Conservation Act, is currently preparing to commence work on its Ninth Power Plan, scheduled for February 2025. This plan aims to provide recommendations regarding the acquisition of new energy resources to the Bonneville Power Administration and address the broader energy requirements of the Pacific Northwest.

As AI technologies become more prevalent, the electricity needs of large data centres and semiconductor manufacturing facilities are rising significantly. According to a recent report from the U.S. Department of Energy, data centre electricity load is projected to double or even triple by 2028. This surge in demand poses a considerable challenge for the council, which is responsible for energy load forecasting over the next two decades, as it seeks to ensure a reliable and cost-effective energy supply.

Robert Cromwell, a consultant and former vice president of Power Supply at Central Oregon’s Umatilla Electric Cooperative, addressed the council members earlier this month, reflecting on the extreme weather events that struck the region in January, which included severe cold, windstorms, flooding, and landslides. These events resulted in an estimated $32 million in damages statewide. "Traditional planning did not prepare us for what we experienced," Cromwell stated during the council meeting.

The recent conditions led Puget Sound Energy to set records for electricity and natural gas demand, with peak loads occurring on January 12 and again the following day, prompting the utility to request that customers conserve energy. Cromwell highlighted the close call the region faced, saying it was "almost a miracle that we didn’t have rotating load shedding." He noted that the region relied heavily on imports from the southwest and intermountain regions to maintain stability in the electrical grid.

Cromwell expressed concern regarding current forecasting methods, suggesting that projections for peak demand may be too conservative. He stated, "Honestly, when I first saw your forecast coming out last summer, my immediate impression was that your median case was not high enough." He placed significant emphasis on the necessity of enhancing transmission capabilities to connect large energy resources with high demand areas efficiently.

"Transmission, transmission, transmission," Cromwell urged, reiterating that the region must expedite the development of its transmission infrastructure swiftly, to meet the escalating energy demands of the coming years. He underlined the universally held desire for clean, affordable, and reliable power, while acknowledging diverse opinions on how to prioritise these factors.

Cromwell remarked, "Over 30 plus years, I’ve never heard anyone not articulate those things, but they very often differ on where they rank those three." He maintained that reliability should be the foremost priority moving forward, warning that significant public backlash could result from power outages leading to unnecessary hardships.

In concluding his address, Cromwell called for a rapid response from the council and stakeholders, stating, "We do not have the time for everyone to continue executing their functions in the way that they historically have. We need a much faster turnaround." His remarks highlight an urgent need for the region to adapt its energy strategies to meet the rapidly evolving demands placed on its electrical grid due to advances in AI and other energy-intensive technologies.

Source: [Noah Wire Services](https://www.noahwire.com)

## Bibliography

1. <https://www.washingtonexaminer.com/news/3271688/northwest-power-planners-challenged-by-increasing-demand-of-data-centers/> - Corroborates the increasing demand for electricity driven by AI and the Northwest Power and Conservation Council's preparation for the Ninth Power Plan.
2. <https://www.nwcouncil.org/fs/18661/2024-1.pdf> - Details the Northwest Power and Conservation Council's responsibilities, the Ninth Power Plan timeline, and the process of developing the plan.
3. <https://newstalk870.am/northwest-power-planners-challenged-by-increasing-demand-of-data-centers/> - Supports the information about the council's challenges with data center demand and the upcoming Ninth Power Plan.
4. <https://www.washingtonexaminer.com/news/3271688/northwest-power-planners-challenged-by-increasing-demand-of-data-centers/> - Provides details on the projected increase in data center electricity load by 2028 according to a U.S. Department of Energy report.
5. <https://www.nwcouncil.org/fs/18661/2024-1.pdf> - Outlines the council's responsibility for energy load forecasting over the next 20 years.
6. <https://newstalk870.am/northwest-power-planners-challenged-by-increasing-demand-of-data-centers/> - Corroborates Robert Cromwell's comments on the extreme weather events and their impact on the electrical grid.
7. <https://www.washingtonexaminer.com/news/3271688/northwest-power-planners-challenged-by-increasing-demand-of-data-centers/> - Supports Cromwell's concerns about traditional planning and the need for enhanced transmission capabilities.
8. [https://www.chronline.com/stories/pacific-northwest-power-planners-challenged-by-increasing-demand-of-data-centers,372726](https://www.chronline.com/stories/pacific-northwest-power-planners-challenged-by-increasing-demand-of-data-centers%2C372726) - Reiterates the importance of transmission infrastructure to meet escalating energy demands.
9. <https://www.nwcouncil.org/fs/18661/2024-1.pdf> - Details the council's focus on ensuring a reliable, cost-effective, and clean energy supply.
10. <https://newstalk870.am/northwest-power-planners-challenged-by-increasing-demand-of-data-centers/> - Corroborates the need for rapid adaptation of energy strategies to meet evolving demands due to AI and other technologies.
11. [https://www.chronline.com/stories/pacific-northwest-power-planners-challenged-by-increasing-demand-of-data-centers,372726](https://www.chronline.com/stories/pacific-northwest-power-planners-challenged-by-increasing-demand-of-data-centers%2C372726) - Supports the urgency and the need for a faster response from the council and stakeholders as emphasized by Cromwell.
12. <https://washingtonstatenews.net/ixp/136/p/northwest-power-planners-challenged-by-increasing-demand-of-data-centers/> - Please view link - unable to able to access data