



January 17, 2023  
**House File 7 (Long)**

Dear Members of the House Climate and Energy Finance and Policy Committee,

My name is Isaac Orr, and I am a policy fellow specializing in energy and environmental policy at the Center of the American Experiment.

In September of 2022, I coauthored the attached 61-page report that concluded that a 100 percent carbon-free electricity mandate by 2040 that did not lift Minnesota's entirely unscientific moratorium on building new nuclear power plants would lead to skyrocketing electricity prices and deadly winter blackouts.

This bill makes a welcome improvement over previous versions by counting large hydroelectric generators as "carbon-free," but the legislation, as written, will force low-income families like the one I grew up in to pay much higher electric bills and put the lives of Minnesotans in danger.

The negative consequences of this legislation are entirely foreseeable, and if this bill is passed, those who voted for it will own them.

**Costs:** Minnesota families are already struggling to pay the proposed 20 percent increase in electricity rates that Xcel Energy is seeking, and the PUC is already resorting to accounting gimmicks to soften the blow to consumers.

The massive amount of money utility companies will be required to spend on wind turbines, solar panels, and battery storage facilities because of this legislation will make Xcel's current price hikes of \$222.67 per year feel like the good old days.

In fact, our research found the average Minnesota residential electricity customer would pay an additional \$1,600 per year for their electric bills every year through 2050. Industrial customers, like manufacturers and iron mines, would see even higher increases.

Our analysis found large industrial consumers would pay an additional \$222,000 per year, making it harder for job creators to do business in our state. These local economic engines will eventually leave our communities, destroying more than 79,000 jobs, or taxpayers will be forced to subsidize their energy costs. This is happening right now in Germany. Either way, regular Minnesotans pay more.

**Reliability:** Last summer, the North American Electric Reliability Corporation (NERC) said that the grid to which Minnesota belongs, the Midcontinent Independent Systems Operator (MISO) was at the highest high risk of rolling blackouts in the country because reliable coal,

nuclear, and natural gas plants have been shut down without enough reliable capacity being built to replace them.

NERC's Winter Reliability Assessment said MISO was at risk of blackouts during extreme weather events. Luckily, we didn't have blackouts when the Christmas cold front rolled in like they did in North Carolina, but we are trending in the wrong direction, and this legislation will accelerate that trend.

To reduce the risk of blackouts, NERC recommended:

**“State and provincial regulators and independent system operators (ISO)/regional transmission operators (RTO) should have mechanisms they can employ to prevent the retirement of generators that they determine are needed for reliability, including the management of energy shortfall risks (emphasis added).”**

Minnesota should be taking steps to preserve the existing dispatchable power plants on its grid, not adopting ill-conceived energy mandates that will hasten their retirement.

**All blackouts are bad, but winter blackouts in Minnesota are an existential crisis that boosters of this bill are not taking seriously.**

Some advocates of this bill argue that it preserves the reliability of the grid by allowing the members of the Minnesota Public Utilities Commission (PUC) to delay its implementation if they determine the legislation would impair electric reliability.

This sounds good in theory, but it does not materialize in practice. In California, the California Independent Systems Operator (CAISO), issued several reports warning of rolling blackouts due to a lack of reliable power plant capacity that were ignored by policymakers. Then in 2020, rolling blackouts hit the state. The state only narrowly avoided them again in September of 2022.

My main concern with this legislation stems from how it will affect the utility resource planning process in Minnesota at the PUC. Green groups will pressure the PUC to close down reliable coal and gas assets as soon as possible to comply with the law and pretend that imports from other states will be available when the sun isn't shining, or the wind isn't blowing. This is the exact same strategy that California took, with unenviable results.

There must be a hard stop written into this legislation that gets triggered if there is a capacity shortfall on the MISO system. This stop would prohibit the closure of dispatchable power plants until that capacity shortfall is alleviated. Furthermore, there must be a clause in this legislation stating that no Minnesota electricity provider is allowed to have a native capacity shortfall for their projected peak demand that is not met with firm capacity contracts.

Our research concludes that these mandates would cause a devastating 55-hour blackout in January of 2040 if we have the same wind speeds as we had in January 2020.

**The way forward: Nuclear or bust**

If the members of this committee think climate change is an existential crisis, then they should think the current bill is a huge waste of money *and time* because it does not lift Minnesota's moratorium on building new nuclear power plants.

If you look at the App Electricity Maps, you'll see that the areas with the lowest emissions always have high penetrations of nuclear and hydroelectric power. Nuclear power is the only reliable, scalable emissions-free source of electricity available to us and they last for 80 years.

In contrast, wind turbines and solar panels don't last very long. The National Renewable Energy Laboratory (NREL) says wind turbines last for 20 years, and solar panel warranties last for 25 years. Many wind facilities, like the Nobles wind farm in Southern Minnesota, only last for 12 years. This means some of the wind facilities built today will be scrap metal by 2040.

The best time to start building a new nuclear power plant was 20 years ago. The next best time is today.

The most realistic course of action would be to utilize Minnesota's reliable, low-cost coal plants until 2040 or beyond while building new nuclear power plants to gradually replace them. This would give Minnesota a lower cost, "plug and play" alternative to fossil fuels while not jeopardizing our reliability by gambling with the unreliable output of wind and solar facilities.

In closing, **the greenest thing lawmakers could legalize this session is new nuclear power.**

I urge lawmakers on this committee to place objective measures of reliability into this legislation, such as not allowing the closure of dispatchable power plant capacity if there is a shortfall on the MISO system and requiring electricity rates for all Minnesota electricity classes to be 5 percent below the national average.

Sincerely,



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