SOLAR UNITED NEIGHBORS ACTION

February 23, 2026

Solar United Neighbors (SUN) Action Testimony in support of HF 2986 (Kraft) - directing a virtual power plant tariff and program

Chair Acomb, Co-Chair Swedzinski, Co-Vice Chair Kraft, Co-Vice Chair Murphy, and members of the committee -

On behalf of our approximately 12,000 supporters in Minnesota, Solar United Neighbors (SUN) Action is pleased to express our support for HF 2986 and its goal of providing solutions for energy affordability and creating energy independence and innovation.

SUN Action is a national nonprofit that represents the needs and interests of solar owners and supporters across the country. We work to create a clean, resilient, and equitable energy system. We work in Minnesota through Solar United Neighbors of Minnesota, where we have helped over 436 families adopt solar energy resulting in over $17 million in energy savings. Our solar projects have created over $10.6 million of investment in the Minnesota economy.

SUN's Minnesota supporters are excited about the opportunity for Virtual Power Plants (VPPs) as a key mechanism to reduce energy costs and to enable market-driven solutions for rising energy demand.

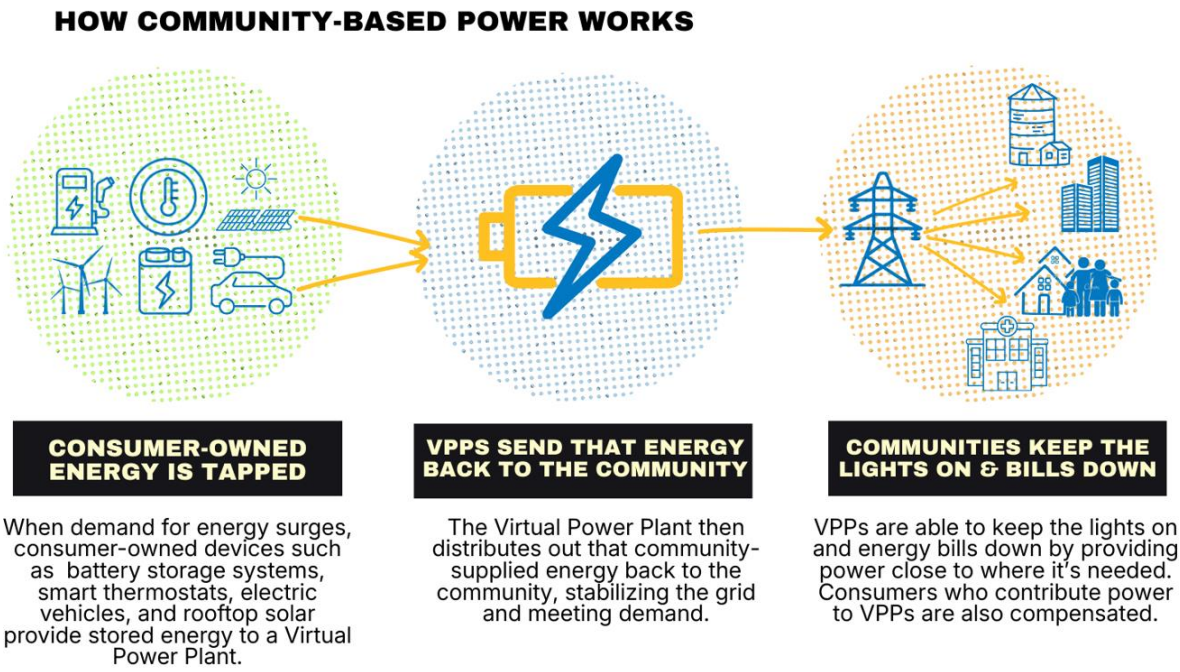
By requiring utilities to create Virtual Power Plant programs, HF 2986 will enable Minnesota to join a line of other leading states, including Virginia, Illinois, Maryland, and Colorado, that have taken the legislative step to enable Virtual Power Plants as a critical grid services and capacity tool.

A Virtual Power Plant is a network of customer-owned energy resources — such as battery storage systems, smart thermostats, electric vehicles, and rooftop solar — that are coordinated to support the electric grid. Together, these distributed technologies function like a traditional power plant, but at a much lower cost, helping to save ratepayers money. When electricity demand surges, participating customers are compensated for sharing stored energy with the grid or reducing their usage. By leveraging existing energy resources, Virtual Power Plants provide community-based energy that lowers costs for all customers and helps prevent power outages caused by resource adequacy shortfalls. Virtual Power Plants

leverage private-sector investment and innovation allowing clean energy resources to scale quickly and cost-effectively.

With around 4 GW of networked capacity around the country, Virtual Power Plants are the fastest growing source of on-demand capacity for utilities across the country.

Here is a basic description of how they work:



From Puerto Rico to Arizona to New England, established Virtual Power Plant programs are proving that they keep bills lower and keep the lights on. Just this summer, hundreds of megawatts of Virtual Power Plants reduced peak demand and lowered bills for Americans across the country. In Massachusetts, one of the nation's leading programs has delivered over $8 million in net benefits to households. In Puerto Rico, the Energy Bureau estimates that for every dollar in incentives paid in the program, residents receive at least $2 in cost saving benefits. In short, Virtual Power Plants are an essential tool for clean energy deployment, reducing energy costs and fostering a more resilient, reliable grid.

Based on comparing the resource adequacy cost of Virtual Power Plants to other generation options available to meet peak demand for utilities, a recent analysis (attached) found that if utilities meet just 10% of peak demand through Virtual Power Plants, this could result in $63.5 million in annual utility system cost savings. (See attached). In essence, by reducing the cost to meet peak demand, Virtual Power Plants can promote affordable electricity for all Minnesotans.

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The time for smart, effective Virtual Power Plant policy in Minnesota is now, with customers installing home batteries at much higher rates than ever before. Wood Mackenzie estimates that 35% of all home solar installations this year will include batteries, and Minnesota is no exception. Thousands of residential customers in Minnesota currently have battery storage installed, with more systems coming online every day. **These battery installations represent significant amounts of already deployed resources *paid for through private investment*, just waiting for the right legislative policy to enable them to benefit the grid.**

Importantly, since Virtual Power Plants create market-based incentives for community-based battery storage, they also create solutions for resilience needs. Virtual Power Plants can catalyze behind-the-meter battery adoption through enabling market-based customer incentives and creating greater opportunities for solar and battery leasing that often allow customers to install batteries at low or no upfront costs.

In short, Minnesota is well positioned to be the next leading state for Virtual Power Plants. We hope you will support legislation to require utilities to create Virtual Power Plant programs to help keep energy affordable for all Minnesotans.

Thank you for your time and consideration of this important legislation.

Sincerely,

Shannon Anderson
Distributed Power Plant Policy Director
Solar United Neighbors Action
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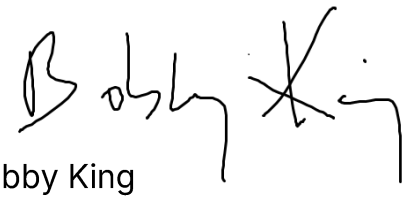

Bobby King
Minnesota State Director
Solar United Neighbors
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Virtual Power Plants mean reliable and affordable electricity for Minnesotans

Virtual Power Plants (VPPs) compensate customers for sharing their energy resources like batteries, smart thermostats, electric vehicles, and flexible heating. Instead of building costly "peaking" power plants and wires to meet a small window of high-demand hours, Minnesota can use Virtual Power Plants to supplement peak demand quickly and lower costs for everyone.

40-60%
Costs are up to 60% less when peak demand is met by VPPs

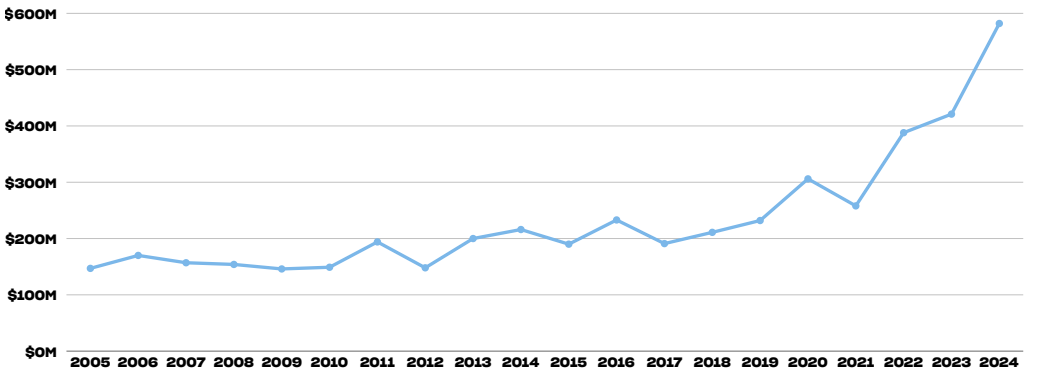
$50
Annual savings to Xcel customers

Why does this matter in Minnesota?

Xcel Energy's Resource Plan for Minnesota projects peak demand will **increase from 9,309 MW in 2024 to 12,414 MW in 2040**.

Xcel Minnesota's electric rate case request totals a 13.2% increase over two years. Virtual Power Plants are the only resource that can come online fast enough at scale to be the solution Minnesota needs.

Annual distribution system investments by Minnesota utilities



Source: FERC Form 1

Amounts adjusted for 2024 dollars.

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mnteam@solarunitedneighbors.org

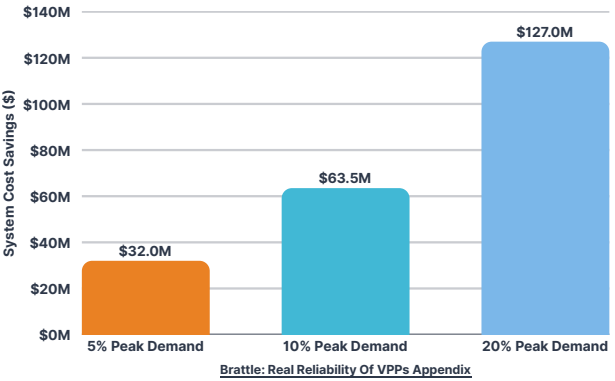
How much could Minnesotans estimate to save from Virtual Power Plants?

Brattle's Real Reliability analysis finds that the net cost to provide electricity from a Virtual Power Plant is **roughly 40%–60% less** than the cost of conventional alternatives.

VPP Cost Savings

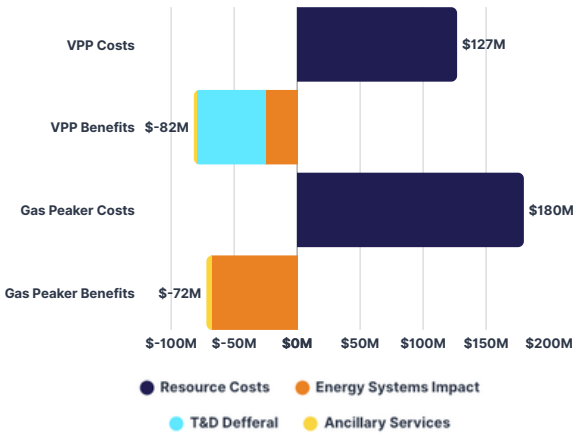
Costs are 60% less when peak demand is met by VPPs. This would save ratepayers in Xcel $50 per year in a 10% peak demand scenario.

Potential system cost savings of a VPP in Minnesota



Brattle: Real Reliability Of VPPs Appendix

System costs & benefits of a VPP vs. gas peaker plant meeting 10% peak demand



VPP System Costs

The net cost of a VPP in a 10% scenario would be approximately $44M, whereas the net cost of the same amount of gas peaking plants would be approximately $108M.

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Minnesota House of Representatives Committee on Energy Finance and Policy
Capitol 123
Saint Paul, MN 55155

February 23, 2026

RE:

HF 2986 (Kraft) - Additional information in a public utility's resource plan required, public utilities directed to file a virtual power plant tariff and program with the Minnesota Public Utilities Commission, cost recovery provided, and reports required.

Revisor Code 26-06795 (Kraft) - regulating the installation and operation of a plug-in solar photovoltaic device

Dear Co-Chairs Acomb and Swedzinski and Committee Members,

Thank you for your work to improve Minnesota's energy future and the opportunity to submit written testimony.

My wife and I live in Cohasset, MN, where last year we significantly improved the energy-efficiency and affordability of our 2015 home by investing in a 12-kWp home solar array paired with a cold-climate air source heat pump; supporting local businesses and helping create a better clean-energy future for our children.

Minnesota needs more affordable clean energy resources ASAP; these must be firm, 24/7 reliable, immediately dispatchable, sustainable and secure. These new resources should be supported by informed policy enabling private citizen investments in distributed energy resources (DERs).

Minnesota faces a major challenge of meeting the 100% clean electricity by 2040 goal; requiring proven clean energy solutions that can be rapidly deployed. Combined with the forecast of dramatic increases in peak energy demand from beneficial electrification of homes, businesses, and industries, charging of EVs, and powering AI and data centers, this means we need every clean energy resource we can build in Minnesota to meet these important goals.

Virtual (distributed) power plants (VPP/DPPs) can deliver on this need by utilizing homeowner's investments in energy efficiency DERs like solar, battery storage, managed EV charging, smart thermostats and appliances to reduce peak energy demand.

Coupling demand-reducing DERs with AI-driven technology and connecting them strategically with our grid offers a new affordable energy paradigm to reduce peak energy demands. It also offers Minnesota families the opportunity to invest in home energy efficiency upgrades that create a modest revenue stream from these investments, allowing them to lower their energy costs and become part of the peak demand solution.

VPP/DPPs improve energy affordability and help pay for homeowner investments in DERs which benefit their communities, their utilities and the environment.

The largest energy costs for Minnesota's electric consumers typically occur during very short periods of peak energy demand, most commonly met with fossil fuel "peaker" generation plants. Minnesota's peaker plants usually operate less than 5% of the time (roughly 100–400 hours per year), rarely more than 4 hours at a time, to meet peak demand periods with very high costs to utilities, consumers and our environment. However, these massive utility infrastructure investments also sit idle for thousands of hours annually, an example of poor return on major utility capital investments with these costs paid for by consumers.

The HF 26-2986 enables the harnessing of distributed energy resources (DERs), and the rapidly scalable VPP/DPP peak power generation they can create, to offer a cost-effective, energy solution for Minnesota. VPP/DPPs are proven firm-power technology that can be rapidly scaled and deployed without delays of permitting, new transmission or interconnection requirements. They lower grid congestion and have no supply chain problems; offering utilities and their customers significant benefits in affordability, reliability, security and sustainability.

An overview of the 2023 US DOE Virtual Power Plant Liftoff Report is found at this link:

> https://www.energy.gov/technologycommercialization/articles/us-department-energy-releases-new-reports-highlighting

This report projected these VPP/DPP immediately dispatchable resources can be rapidly scaled by 2030 and meet up to 20% of our peak energy demand needs while saving US electricity consumers up to $10 billion annually with increased grid reliability, resilience and security.

Numerous energy sector media sources, including Canary Media and Latitude Media, and advocacy groups like Solar United Neighbors, the Brattle Group and RFF have reported on the multiple, important benefits VPP/DPPs offer. Virginia's Governor Youngkin signed bipartisan legislation into law enabling VPP/DPPs in May 2025 with a 450-MW project to be deployed just 7 months later. The example of California's recent success with VPP/DPPs meeting grid challenges offers proof that pairing solar with battery storage increases energy reliability, reduces costs, and decreases harmful greenhouse gas emissions and air pollution.

Affordability, reliability, security, sustainability and resilience are critical for our grid and energy policy experts note that investment now is the key to achieving these goals. At least 38 states and the District of Columbia are actively involved in VPP/DER policy or, according to 2024 data, have engaged in related regulatory actions. This high level of interest shows that utilizing homeowners' clean energy investments in DER's offers a unique peak demand energy resource that is rapidly and cost-effectively deployed without adding costs to other customer's power bills.

Summary: VPP/DPPs also offer a new revenue source for homeowners investing in DERs and support Minnesota's solar and battery manufacturing and installation, and "smart" appliance businesses. They benefit utilities and their customers with major savings for reliable, clean energy while decreasing peak energy costs and the need for costly new peaker plants and transformers that are difficult to source.

HF 26-06795: **Plug-in solar photovoltaics also offers lower energy costs and broader solar access:**

I also support HF 26-06795 authored by Rep. Kraft for Plug-in solar photovoltaic devices serving as DERs which is complementary legislation to HF 26-2986 that will enhance our capacity to meet our peak energy demands with homeowner investments.

Plug-in solar systems are widely deployed in the EU, and are now legal in Utah, with legislation for these systems under consideration in at least 24 states in 2026. Plug-in solar systems typically cost between $500 and $1,200, making them one of the most affordable solar energy options available and they can offset up to 20 percent of a household's average electricity use, significantly lowering grid demand.

Three important related topics for the committee's attention:

1. **Creative financing offers affordable access to energy-efficient DERs for Minnesota families:**

An innovative proposal from Rewiring America supports investments in clean energy DERs to meet additional energy demand from data centers as a cost-effective way to affordably and reliably power these large-demand centers during peak energy demand periods. This unique solution also benefits families with financially assisted deployment of DERs at a total cost to Data Center developers equivalent, or less costly, than building dedicated peak energy infrastructure for their facilities.

https://a-us.storyblok.com/f/1021068/x/7ea6f4dba0/homegrown-energy-report-rewiring-america-dec2025.pdf

2. **Protecting net metering is critical to support homeowner solar and storage investments:**

The proposed HF 25-845 amendment to net metering discourages homeowners from cost-effectively investing in clean energy resources. Minnesota bought and burned $22.7 billion in imported fossil fuel costs in 2024, about 1.5 times more than annual funding for our K-12 education system. This immense fuel expense happens each and every year; instead, we should encourage investing this money in Minnesota assets to create our clean energy economy.
Amending net metering rates makes existing long home solar "payback" periods even worse discouraging important homeowner investments in solar and storage that Minnesota needs. Supporting homeowners' investments in the clean energy infrastructure requires protecting net metering rates to encourage their purchasing of DERs.

3. **Creating a Minnesota state tax credit on new residential solar and storage investments, and net metering and VPP/DPP revenues, would also support critical homeowner investment in DERs.**

These tax credits would offer the benefits of reducing peak energy demand strain on utilities' distribution infrastructure, lowering costs for meeting peak energy demand on our grid and reducing the externalized social costs of fossil fuel emissions contributing to severe weather events and increased health care costs.

Summary:

Legislation enabling optimized VPP/DPPs in Minnesota, and plug-in photovoltaic solar, as well as protecting current net metering, offers an important revenue stream encouraging homeowners to make important DER investments.

Combining these incentives with tax credits on these revenues, similar to the massive state tax credits extended to data centers developments by the wealthiest corporations in the world, would also provide equitable treatment for Minnesotans making these important home clean energy investments.

Respectfully,

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SOLAR UNITED NEIGHBORS • MINNESOTA INTERFAITH POWER & LIGHT

CLEAR Coalition

Advancing a Clean, Local, Equitable, Affordable, and Reliable Energy Future for Minnesota

Contact: Katie Kienbaum
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February 23, 2026

RE: HF 2986 (Kraft) - Virtual Power Plants / Distributed Power Plants

Co-Chair Acomb, Co-Chair Swedzinski, and Members of the House Energy Committee,

The CLEAR Energy Coalition is writing today in regard to HF 2986, which would establish a Virtual Power Plant Program (VPP) program in Minnesota. Our coalition advocates for clean, affordable, and reliable energy for all Minnesotans, including local rooftop solar and energy storage. We are excited about the opportunity for VPPs to lower costs for utility customers, increase grid reliability, and bring direct benefits to Minnesota's families, small businesses, and farms.

The benefits of VPPs include:

- **Cost Efficiency:** By using existing resources, VPPs can save billions in annual grid costs, while costing up to 60% less than traditional energy sources.
- **Grid Reliability:** VPPs reduce strain on the grid and provide fast, flexible power during extreme weather or sudden spikes in demand.
- **Sustainability:** VPPs accelerate the transition to clean energy by facilitating more renewable energy on the grid and reducing the need for fossil-fuel-powered "peaker" plants.
- **Consumer Empowerment:** Participants can save money — earning as much as $1,500 per year — and gain more control over their energy usage.

VPPs work by bundling distributed energy resources such as solar-charged battery storage, smart thermostats, and electric vehicles. Third-party companies, called aggregators, help manage these resources effectively and cost-efficiently, providing a large number of resources to be discharged to the grid when called upon by a utility when it needs the resources the most.

VPPs work best and are most cost-effective when they maximize the market opportunity for third-party aggregators, allowing utilities to keep their own overhead and administrative costs lower. **We believe that any strong VPP policy should enable unrestricted participation from aggregators in order to maximize deployment, grid benefits, and customer bill savings.** Third-party aggregators also assist with customer enrollment and marketing and overall help scale VPP programs. Additionally, third-party aggregators can make distributed energy resources, like battery storage, more affordable and available by offering customers financing arrangements.

Contact: Katie Kienbaum
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SOLAR UNITED NEIGHBORS • MINNESOTA INTERFAITH POWER & LIGHT

We appreciate your consideration of this innovative and cost-effective solution for Minnesota's energy needs.

Sincerely,

The CLEAR Energy Coalition

Black Visions
Cooperative Energy Futures
Minnesota Interfaith Power & Light
Solar United Neighbors
Community Power
Institute for Local Self-Reliance
Sierra Club North Star Chapter
Vote Solar