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June 25, 2021

Via Electronic Service

Will Seuffert, Executive Secretary
Minnesota Public Utilities Commission
121 7th Pl. E #350
St. Paul, MN 55101

RE: Docket No. 19-368, Xcel Energy 2020-2034 Upper Midwest Integrated Resource Plan

Dear Mr. Seuffert:

Enclosed please find the Reply Comments of the Citizen Utility Board of Minnesota's (CUB) for filing in this docket.

Thank you for your attention to this matter.

Sincerely,

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Encl.: CUB Reply Comments

State of Minnesota
Before the Public Utilities Commission

Katie Sieben	Chair
Valerie Means	Commissioner
Matthew Schuerger	Commissioner
Joseph Sullivan	Commissioner
John Tuma	Commissioner

In the Matter of Northern States Power Company's, d/b/a Xcel Energy, 2020-2034 Upper Midwest Integrated Resource Plan

Docket No. E002/RP-19-368

Reply Comments of the Citizens Utility Board of Minnesota

I. Introduction and Executive Summary

The Citizens Utility Board of Minnesota (CUB) thanks the Public Utilities Commission (PUC or the Commission) for the opportunity to provide these reply comments. CUB also thanks the other parties for their thoughtful analyses and comments on Xcel Energy's (Xcel or the Company) Integrated Resource Plan (IRP).

CUB has organized these reply comments in two main sections. First, we address the factors listed in Minnesota Rule by which the Commission must evaluate the IRP. Next, these comments provide recommendations for the Commission to implement the Consumers Plan.

CUB's Consumers Plan, based on modeling conducted for CUB by Vibrant Clean Energy (VCE), represents an optimal resource plan under the criteria provided in Minnesota Rule 7843.0500, subpart 3.[1] The plan finds that load can reliably be met in all hours – indeed, at every 5-minute interval – of the planning period without the need for new fossil fuel resources and the long-term financial risk such investments entail. With a substantial buildout of renewable resources on both the transmission and distribution systems, the Consumers Plan results in a reduction of carbon emissions by 86% by 2030 (from 2005 levels) and achieves 89% carbon-free energy in 2035. Finally, the Consumers Plan reduces Xcel's Present Value Revenue Requirement (PVRR) by $1 billion per year by 2035, resulting in cumulative cost savings for Xcel customers of $6.45 billion by 2040. These cost savings, in combination with high levels of electrification putting downward pressure on rates, reduce retail rates by 36% by 2040.

[1] These comments were prepared with support from Taylor McNair and Ric O'Connell of GridLab, a nonprofit organization that provides technical grid expertise to enhance policy decision-making and to ensure a rapid transition to a reliable, cost-effective, and low-carbon future.

II. Factors by which the Commission must evaluate Xcel's IRP

Pursuant to Minn. R. 7843.0500, subpart 3, the Commission must assess the available resource options and proposed resource plans based on their ability to:

A. maintain or improve the adequacy and reliability of utility service;
B. keep the customers' bills and the utility's rates as low as practicable, given regulatory and other constraints;
C. minimize adverse socioeconomic effects and adverse effects upon the environment;
D. enhance the utility's ability to respond to changes in the financial, social, and technological factors affecting its operations; and
E. limit the risk of adverse effects on the utility and its customers from financial, social, and technological factors that the utility cannot control.

In comparison with Xcel's Preferred Plan, the Consumers Plan better achieves each of these objectives.

A. Maintain or improve the adequacy and reliability of utility service.

The Consumers Plan ensures reliability and resource adequacy in accordance with both Xcel's and the North American Electric Reliability Council's (NERC) reliability standards. Even while operating with over 75% variable renewable capacity by the end of the modeled period (2040), power needs are met at every five-minute interval of the planning period. The Consumers Plan supports reliable utility service even while retiring all of Xcel's coal plants by 2025, increasing the amount of utility-scale and distributed renewable generation, and without building Xcel's proposed 835-MW gas combined-cycle plant in Sherburne County (the Sherco CC). CUB's modeling, along with the modeling of Sierra Club and the Clean Energy Organizations (CEOs), demonstrates that the Commission should be highly skeptical of claims that the Sherco CC is needed to maintain reliability.

A key factor in maintaining reliability in the Consumers Plan is a reliance on increasing amounts of distributed solar, distributed storage, and optimization of the distribution system. This approach demonstrates that the traditional utility paradigm of large, centralized fossil-fuel generators is not required to maintain reliability. Consistent with VCE's modeling, the modeling undertaken by Sierra Club and the CEOs also demonstrates that the Sherco CC is not needed to maintain reliability.[2] CUB further

[2] Sierra Club, Initial Comments, 2020-2034 UPPER MIDWEST INTEGRATED RESOURCE PLAN, Docket No. E002/RP-19-368 (Feb. 11, 2021) ("Sierra Club Initial Comments") pp. 85-87; Clean Energy Organizations, Initial Comments, 2020-2034 UPPER MIDWEST INTEGRATED RESOURCE PLAN, Docket No. E002/RP-19-368 (Feb. 11, 2021) ("CEOs Initial Comments"), pp. 21-33.

agrees with Sierra Club and CEOs that Xcel has not justified its suggestion that the Sherco CC might provide useful black start services, as Xcel's black start planning is still ongoing.[3]

As the Department of Commerce (Department or DOC) points out, the Midwest Independent System Operator (MISO) ensures that load is served, so reliability concerns do not justify a new dispatchable resource like the Sherco CC.[4] The Department, therefore, argues that the value of dispatchable resources like the Sherco CC arises from the potential need to hedge against Spot Market LMP risk.[5] However, there is no reason that a fossil fuel generator must provide such hedging value; other resources, including dispatchable storage resources, may be able to provide comparable hedging value without the emissions that accompany fossil fuel generators. The Department's analysis indicated that the Sherco CC had a relatively high modeled capacity factor, but that much of the Sherco CC's generation is due to Spot Market sales, not to serve Xcel's native load.[6] The Department highlights the balance between market-risk and self-generating risk, which is a reasonable concern. However, relying on the market is important, cost-effective, and a standard practice of utilities operating in RTOs. Self-reliance can also be risky and costly for ratepayers. In fact, self-generating risk is potentially more pressing, given the potential for new assets such as the Sherco CC to become stranded due to carbon constraints, as well as the risk that gas prices will increase in the future while the cost of renewable and energy storage alternatives continue to decrease.

Moreover, it is not reasonable to assume that no new transmission development will occur over the planning period. Rather, we can expect – and Xcel should use its influence to ensure – that new transmission will be built. The Commission should not assume, as the Department recommends, that Xcel will only be able to add new resources outside the MISO Generation Interconnection Queue (GIQ).[7] While the MISO GIQ has a significant backlog and challenges, transmission planning is a core function of MISO and is receiving particular attention at this time. The MISO Transmission Expansion Planning (MTEP) process is moving forward. Similarly, there is renewed federal interest in transmission expansion across the country. The Biden Administration recently released a fact sheet on federal support for transmission expansion.[8] The Federal Energy Regulatory Commission (FERC) recently announced the creation of a new Joint Federal-State Task Force on Transmission, in partnership with the National Association of Regulatory Utility

[3] Xcel Energy, Supplement, 2020-2034 UPPER MIDWEST INTEGRATED RESOURCE PLAN, Docket No. E002/RP-19-368 (June 30, 2021) ("Xcel Supplement"), pp. 5, 116; Sierra Club Initial Comments, pp. 84-85; CEO Initial Comments, pp. 33-35.
[4] Minnesota Department of Commerce, Initial Comments, 2020-2034 UPPER MIDWEST INTEGRATED RESOURCE PLAN, Docket No. E002/RP-19-368 (Feb. 11, 2021) ("DOC Initial Comments"), pp. 34-36.
[5] *Id*., pp. 35-36.
[6] *Id*., p. 66.
[7] *Id*., p. 44.
[8] The White House, *FACT SHEET: Biden Administration Advances Expansion & Modernization of the Electric Grid* (Apr. 27, 2021), available at https://www.whitehouse.gov/briefing-room/statements-releases/2021/04/27/fact-sheet-biden-administration-advances-expansion-modernization-of-the-electric-grid/ (last accessed Jun. 24, 2021).

Commissioners (NARUC), on topics related to planning and paying for new transmission developments.[9] Finally, Xcel is a transmission owner and a significant member of MISO and should use its influence at MISO to push for the new transmission development that is needed to achieve the Company's clean energy targets.

The Consumers Plan reasonably relies on cost-effective transmission development occurring both within Minnesota and between Minnesota and the rest of MISO.[10] By relying on a regional modeling approach with VCE's WIS:dom model, the Consumers Plan evaluates reliability across a broader footprint than Strategist or EnCompass, reflecting the fact that no utility operates as an island but is part of the entire Eastern Interconnection and allowing Xcel's resource plan to more fully benefit from ratepayers' investment in its MISO membership.

B. Keep the customers' bills and the utility's rates as low as practicable, given regulatory and other constraints

As mentioned above, the annual cost (PVRR) of the Consumers Plan is $1 billion less than Xcel's Preferred Plan by 2035. Xcel's customers will save money if Xcel pursues the Consumers Plan instead of its Preferred Plan.

The Consumers Plan's $1 billion in projected annual savings also serves another purpose in the resource planning process: as a risk mitigator. To the extent the Commission perceives any risk or uncertainty in pursuing the resource path presented by the Consumers Plan, there is a cushion of at least $1 billion annually to protect consumers. CUB believes that VCE's cost estimates in the Consumers Plan are reasonable – and in fact are conservative, as discussed below, due to its treatment of distributed resources as a utility cost – but if it turns out that the cost assumptions were too optimistic, costs would have to exceed estimates by over $1 billion each year in order for the Consumers Plan to exceed the cost of Xcel's Preferred Plan.[11]

The modeled savings that would result from the Consumers Plan are consistent with findings by other parties that including the Sherco CC would increase costs. The modeling by Sierra Club found that a resource portfolio that does not include the Sherco CC or any other new gas generation will save customers over $1 billion compared to Xcel's Preferred Plan over the planning period.[12] Similarly, the Clean Energy Organizations'

[9] U.S. Federal Energy Regulatory Commission (FERC), Order Establishing Task Force and Soliciting Nominations, Docket No. AD21-15-000 (June 17, 2021), available at https://ferc.gov/media/e-1-ad21-15-000 (last accessed Jun. 24, 2021).

[10] Citizens Utility Board of Minnesota, Initial Comments, 2020-2034 UPPER MIDWEST INTEGRATED RESOURCE PLAN, Docket No. E002/RP-19-368 (Feb. 11, 2021) ("CUB Initial Comments"), p. 20.

[11] For completeness of the record, CUB wishes to note two typographical errors in VCE's report on its modeling results, which was attached to CUB's Initial Comments as Appendix A. First, on page 36 of Appendix A, the reference to interconnection costs of "$149/MW" should have read: "$149/kW." Second, on page 57 of Appendix A, in Figures 4.9 and 4.10, the reference to "NREL Mid ATB 2020" should have read: "NREL Low ATB 2020."

[12] Sierra Club Initial Comments, p. 52.

modeling showed that the Sherco CC is not a least-cost resource under Xcel's own assumptions, and that the only reason the Sherco CC appears as a resource in Xcel's model is that Xcel included it as a "fixed" resource in all of its modeling runs.[13] And the Department of Commerce's modeling run without the Sherco CC resulted in a lower PVRR than the run that included the Sherco CC in every year but one and a savings of more than $265 million over the planning period, with savings continuing in later years.[14]

The Commission should find that allowing Xcel to build the Sherco CC will not keep customers' bills as low as possible in the near-term compared to meeting load with increased renewables and storage, as demonstrated by CUB's modeling. The bill impacts of the Sherco CC are likely to be exacerbated in the long-term if carbon constraints – from future federal or state policy (discussed in more detail below) or Xcel's own stated carbon reduction goals – eventually require the plant to be retired early or run at a low capacity factor, because customers would be paying for a plant that is no longer used and useful. However, as discussed in CUB's initial comments, if the Commission allows Xcel to move forward with the Sherco CC, the Commission should put Xcel on notice that the Commission will not permit the Company to recover any undepreciated costs of the plant if and when the plant is no longer used and useful, nor any costs attributable to oversizing the plant if it is run at a low capacity factor. Further, if Xcel ever needs to retrofit the Sherco plant to use carbon-free fuels such as hydrogen or otherwise modify the plant to reduce emissions, Xcel will not be permitted to recover any costs that could have been avoided had Xcel invested in carbon-neutral resources from the outset, and the plant will be required to meet the ordinary certificate of need and permitting requirements. If a resource plan that includes the Sherco CC is ultimately approved, such directives are essential to mitigate the significant bill impacts that are likely to arise from building an unnecessary fossil fuel generation resource.

CUB's finding that significant utilization of distributed resources will reduce costs is similarly supported by findings by the Distributed Solar Parties (DSP). DSP pointed out that Xcel's modeling is biased against distributed solar because Xcel does not allow its expansion model to select distributed generation, but instead forces DER into its model at specified levels.[15] As the Distributed Solar Parties explain, Xcel's treatment overstates the cost of distributed solar because it ignores the fact that private investments typically cover the capital cost of distributed solar. While it is true that the owners of distributed solar pay the cost of their systems, not the utility, WIS:dom only builds new distributed solar systems when it is cost effective to do so from a societal perspective. Further, when

[13] CEOs Initial Comments, p. 9.

[14] Minnesota Department of Commerce, Response to Minnesota Office of the Attorney General Informal Information Request # 1, 2020-2034 UPPER MIDWEST INTEGRATED RESOURCE PLAN, Docket No. E002/RP-19-368 (March 12, 2021).

[15] Vote Solar, Institute for Local Self Reliance, The Environmental Law & Policy Center, and Cooperative Energy Futures (collectively, the "Distributed Solar Parties"), Joint Initial Comments, 2020-2034 UPPER MIDWEST INTEGRATED RESOURCE PLAN, Docket No. E002/RP-19-368 (Feb. 11, 2021) ("Distributed Solar Parties Initial Comments"), pp. 2 and 12.

calculating the PVRR of the Consumers Plan, VCE assigned the cost of distributed solar built by the model to ratepayers, even though in practice the system owners would pay these costs. There are two implications of treating distributed solar costs in this manner. First, the Consumers Plan's $1 billion in PVRR savings compared to Xcel's Preferred Plan is a conservative estimate, because, apart from any utility incentives, ratepayers would not be responsible for the cost of many distributed solar systems. Second, the costs WIS:dom assigns to ratepayers that would in fact be borne by private system owners represents "headroom" that can be used for ratepayer-funded incentives for distributed solar without increasing the PVRR of the Consumers Plan. As will be discussed later, CUB recommends that the Commission set distributed solar and storage targets for Xcel and direct the Company to enable the adoption of increased amounts of both. CUB's modeling and this discussion demonstrate that distributed solar is cost effective for ratepayers, even if ratepayers contribute significantly to the cost of distributed solar and storage systems.

Further, the high levels of electrification recommended by the Consumers Plan will put additional downward pressure on Xcel's electric rates by increasing Xcel's throughput sales. Not only does increased electrification reduce economy-wide emissions, as discussed in more detail below; electrification of vehicles and space and water heating also provides savings for consumers in the form of reduced vehicle fuel costs and more efficient utilization of the electric system.

For all of these reasons, the Commission should find that the Consumers Plan keeps customers' bills and utility rates lower than Xcel's Preferred Plan.

C. Minimize adverse socioeconomic effects and adverse effects upon the environment

CUB's Consumers Plan identifies a resource plan for Xcel that minimizes adverse socioeconomic and environmental effects through the reduction of carbon emissions and air pollutants, reduced energy costs, and increased job creation.

The Consumers Plan not only meets Xcel's stated carbon goals[16] but accelerates carbon emissions reductions and simultaneously supports emissions reductions throughout other sectors of the economy. Avoiding development of new fossil fuel plants is critical to reducing adverse environmental effects through increased carbon emissions. As discussed above, Xcel's Preferred Plan calls for the addition of the Sherco CC gas plant. The Preferred Plan also calls for the utility to continue to operate some coal units through the late 2020s. The Consumers Plan, alternatively, demonstrates that the addition of new fossil fuel resources is not necessary and that the utility can retire all coal units far earlier than anticipated in Xcel's Preferred Plan. While Xcel's Preferred Plan achieves a laudable 81% carbon reduction by 2030 relative to 2005 levels, CUB's Consumers Plan achieves an 86% carbon reduction by 2030 in the electricity sector.

For utility companies, minimizing adverse effects on the environment is generally viewed narrowly, focused on carbon reductions in the electricity sector. However, Xcel's contribution to economy-wide emissions reductions is increasingly intertwined in its obligations as a utility service provider. While the Preferred Plan does not consider (with some exceptions) economy-wide decarbonization efforts, the Consumers Plan does model economy-wide emissions throughout Xcel's Minnesota service territory, mainly through the electrification of other end-uses in buildings and transportation. By law, Minnesota has a goal to reduce economy-wide carbon emissions 80% by 2050 from 2005 levels, a goal that is likely unachievable without Xcel and other utilities pursuing electrification and other decarbonization strategies in adjacent sectors.[17] The Consumers Plan electrifies large portions of the building and transportation sectors, resulting in emissions reductions of 564.7 million metric tons of carbon dioxide over the planning period. Xcel's efforts to minimize adverse effects on the environment are increasingly tied to the electrification and decarbonization of other sectors, particularly as Xcel serves new consumer loads such as electric vehicles and electric home appliances. The Consumers Plan details a path to further reduce these environmental impacts, while Xcel's Preferred Plan does not.

[16] See Xcel Energy, "Your Clean Energy Future," https://www.xcelenergy.com/carbon_free_2050 (last accessed June 25, 2021) (showing Xcel has set goals of reducing carbon by 80% from 2005 levels by 2030 and to be 100% carbon free by 2050).

[17] Minn. Stat. § 216H.02, subd. 1. See also, Vibrant Clean Energy, LLC, *Minnesota's Smarter Grid*, prepared for McKnight Foundation (July 31, 2018), available at https://www.mcknight.org/wp-content/uploads/Minnesotas-SmarterGrid_FullReport_NewFormat.pdf (last accessed Jun. 24, 2021).

The Consumers Plan's retirement of legacy fossil fuel assets and its reliance on new clean energy resources helps dramatically reduce the environmental and human health impacts of other major air pollutants, beyond carbon dioxide. As a result of the accelerated coal retirements, SO2 and fine particulate matter emissions are nearly eliminated, which will help reduce major respiratory illness and other human health issues among populations exposed to these emissions.[18] The reductions of these and other major air and human health pollutants not only minimizes adverse environmental impacts, but likely also reduces health care spending and human mortality associated with exposure to SO2 and particulate matter.[19]

As discussed above, the Consumers Plan will significantly reduce energy costs for Xcel customers compared with Xcel's Preferred Plan. These savings are important for minimizing adverse effects on all customers but are especially crucial for lower-income households. Unsurprisingly, as other parties have commented, energy burden – the portion of household income spent on energy – is highest for low-income households. DSP cites US Department of Energy statistics showing that the average Minnesotan household whose income is below 30% of the area median spends "an unsustainable 12% of their annual income on energy."[20] Moreover, American households of color are likely to bear higher energy burdens, and not only because they are likely to have lower incomes.[21] At least one study has concluded that Black households have higher energy expenditures than White households in the US, even after controlling for income, household size, homeowner status, and city of residence.[22] By significantly reducing system costs compared with the Preferred Plan, the Consumers Plan reduces the negative impacts of energy costs for Xcel's energy-burdened customers.

Xcel's Preferred Plan and the Consumers Plan both rely heavily on energy efficiency as a low-cost energy resource. Achieving high levels of efficiency will keep customer bills down. However, it can, as Xcel notes, create some "upward pressure on ... electricity rates."[23] Thus, ensuring that the promised bill savings reach those households who need them most requires that energy efficiency opportunities be accessible to all customers – and, in particular, to those customers who are most price sensitive, including low- and moderate-income households. However, energy efficiency can often be difficult for lower-

[18] See, e.g., Joan A. Casey et al., *Improved Asthma Outcomes Observed in the Vicinity of Coal Power Plant Retirement, Retrofit and Conversion to Natural Gas*, 5 Nature Energy 398 (2020).
[19] See, e.g., U.S. Environmental Protection Agency, *Health and Environmental Effects of Particulate Matter*, https://www.epa.gov/pm-pollution/health-and-environmental-effects-particulate-matter-pm (last accessed Jun. 24, 2021) ("Numerous scientific studies have linked particle pollution exposure to a variety of [health] problems").
[20] Distributed Solar Parties Initial Comments, p. 13.
[21] See generally, Minnesota Compass, *All Minnesotans: By Race & Ethnicity*, www.mncompass.org , available at https://www.mncompass.org/topics/demographics/race-ethnicity#1-9530-g (last accessed June 24, 2021) (providing data showing that American Indian, Black, and Hispanic Minnesotans on average are 3.4%, 3.0%, and 1.7%, respectively, more likely to live in poverty than non-Hispanic White Minnesotans).
[22] See generally, Eva Lyubich, *The Race Gap in Residential Energy Expenditures,* Energy Institute at Haas (June 2020), available at https://haas.berkeley.edu/wp-content/uploads/WP306.pdf (last accessed June 24, 2021).
[23] Xcel Supplement, p. 165.

income households to access because of the upfront investment often required, customers not owning their own homes, customers having more difficulty in accessing attractive financing, and other reasons. If disparities persist in Xcel's energy efficiency programs, it will result in bills rising faster than average for the very customers who most need their bills to remain affordable. We appreciate Xcel's acknowledgement of the importance of this issue and their work to address it, including by increasing investment in low-income energy efficiency programs and participating in CUB's Department of Commerce-funded analysis of best practices for energy efficiency programs to meet the needs of renters; low- and moderate-income households; and Black, Indigenous, and households of color.

Broader macroeconomic considerations, including consumer spending and job creation, are also important to the Commission's consideration of the socioeconomic impacts of the proposed IRP. With an annual PVRR $1 billion lower than Xcel's Preferred Plan, the Consumers Plan results in substantial savings for Xcel's consumers. Consumers can reinvest these savings in Minnesota's economy for other purposes. At the same time, the Consumers Plan supports over 72,000 full-time jobs in the electric sector, a 350% *increase* over the 20,000 full time jobs that are currently supported by today's electricity sector in Xcel's territory.[24] The majority of the job gains come from increased employment in the solar sector.

For these reasons, the Commission should find that the Consumers Plan minimizes adverse socioeconomic effects and adverse effects upon the environment to a greater extent than Xcel's Preferred Plan.

D. Enhance the utility's ability to respond to changes in the financial, social, and technological factors affecting its operations.

In contrast to Xcel's Preferred Plan, CUB's Consumers Plan details a lower-carbon, flexible, affordable, and lower-risk resource pathway for the utility over the next 15 years. The utility planning landscape is fundamentally changing, and the emergence of new financial, political, regulatory, and other considerations means that Xcel must be prepared to respond rapidly and beneficially to these external pressures. Xcel's Preferred Plan severely limits the utility's ability to respond to these changes.

The core component of Xcel's proposed resource plan is the 835-MW Sherco CC. While recognizing the need for new capacity, particularly in light of additional or accelerated coal retirements, a large gas power plant (for which the Company will presumably need to recover costs over multiple decades) seriously limits the Company's ability to be responsive to future financial, social, and technological changes.

[24] Vibrant Clean Energy, LLC, *A "Consumers Plan" For Clean Energy Across NSPM By 2035* (Jan. 22, 2021), p. 19.

Avoiding investment in new fossil resources will allow Xcel to better respond to potential changes affecting its operations. As the cost of clean energy continues to fall, including battery storage that can serve as a dispatchable capacity resource, new natural gas power plants are increasingly uncompetitive and thus a risky investment. As noted in CUB's initial comments, a recent report from RMI concludes that "by 2035, over 90 percent of proposed combined-cycle gas plants, if built, would be uneconomic to run compared to the cost of building a new clean energy portfolio."[25]

Similarly, it is increasingly likely that new emissions regulations and/or clean electricity standards will be introduced at the state and federal level. In 2021, the Minnesota House of Representatives passed a bill requiring 100% clean electricity by 2040, with the support of Governor Walz and minority-party leaders in the State Senate.[26] On the federal level, the Biden Administration has expressed support for achieving 100% carbon-free electricity by 2035.[27] If either of these were to be put in place through law or regulation, any new fossil fuel resource built today would have to be retired or repowered to operate on 100% renewable fuel well before the end of its useful life, at an additional cost. Even if the proposed Sherco CC could be retrofitted with a zero-carbon technology in the future, such a plan would be far more expensive than simply procuring cheap solar, wind, and battery storage today.

The Consumers Plan's reliance on distribution-sited battery storage and solar photovoltaics (PV), as well as increased beneficial electrification through responsive building loads and vehicles, enables the grid to respond far quicker and more cheaply to changes in consumer demand and weather. The optimized distribution system allows the utility to avoid major new investments in large-scale generating capacity, while increasing adaptability through increased flexible loads, reducing overall system costs and long-term obligations, and better preparing the utility for potential changes in technology costs or carbon regulation.

Perhaps most importantly, the Consumers Plan relies on proven and affordable technologies today, allowing the utility to achieve its interim carbon goals without relying on future, unproven technology. Xcel's IRP articulates the need for future "low-carbon firm peaking" resources and defers a decision on what these resources will be or should

[25] Mark Dyson, *A Bridge Backward? The Risky Economics of New Natural Gas Infrastructure in the United States*, www.RMI.org (Sept. 9, 2019), available at https://rmi.org/a-bridge-backward-the-risky-economics-of-new-natural-gas-infrastructure-in-the-united-states/ (last accessed June 24, 2021).

[26] See Minnesota House of Representatives, H.F. 1031, 92nd Legislature (2021 - 2022); Minnesota Senate, S.F. 643, 92nd Legislature (2021 - 2022); Minnesota Senate, S.F. 1713, 92nd Legislature (2021 - 2022). See also, Minnesota Department of Commerce, "Walz, Flanagan propose plan to achieve 100 percent clean energy in Minnesota by 2050" (Mar. 4, 2019), available at https://mn.gov/commerce/media/news/?id=17-374074 (last accessed Jun. 24, 2021).

[27] The White House, *FACT SHEET: President Biden Sets 2030 Greenhouse Gas Pollution Reduction Target Aimed at Creating Good-Paying Union Jobs and Securing U.S. Leadership on Clean Energy Technologies* (Apr. 22, 2021), available at https://www.whitehouse.gov/briefing-room/statements-releases/2021/04/22/fact-sheet-president-biden-sets-2030-greenhouse-gas-pollution-reduction-target-aimed-at-creating-good-paying-union-jobs-and-securing-u-s-leadership-on-clean-energy-technologies/ (last accessed June 24, 2021).

be. Assuming that unidentified technologies will develop to meet future resource needs is inherently risky. By contrast, the Consumers Plan relies on wind, solar, battery storage, distribution optimization, and transmission investments to achieve the same goals – delivering reliable, affordable service to consumers – as Xcel's Preferred Plan but with existing, well-established technologies.

In this sense, the Consumers Plan and Xcel's Preferred Plan dictate two fundamentally different paradigms of resource planning. While Xcel's plan relies on large-scale, new fossil fuel resources in the near-term and unknown, possibly expensive low-carbon technologies in the future, the Consumers Plan relies on a rapid retirement of costly, high-emitting resources coupled with a large-scale deployment of proven, zero-carbon technologies and robust demand-side measures. In order for Xcel to be responsive to future changes in financial, social, or technological factors, the Consumers Plan would prevent Xcel's procurement of new fossil fuel resources and double down on proven clean energy technologies.

For these reasons, the Commission should find that the Consumers Plan better enhances Xcel's ability to respond to changes in the financial, social, and technological factors affecting its operations than does Xcel's Preferred Plan.

E. Limit the risk of adverse effects on the utility and its customers from financial, social, and technological factors that the utility cannot control.

Climate change is the single most significant adverse risk to Xcel and its customers that Xcel cannot control. The *Consumer Plan*'s reliance on distributed generation, battery storage, and distribution system optimization as opposed to centralized fossil fuel plants will enhance Xcel's adaptability and resilience in a changing and warming climate. As recent events around the country have shown, today's electric grid is particularly susceptible to extreme weather that will become increasingly common due to climate change. The reliance on large-scale, centralized fossil fuel generators leaves a single unit susceptible to fuel or weather disruptions. The *Consumers Plan,* in contrast, relies on a suite of resources, both on the bulk power side and distribution system, that give the grid more flexibility in responding to changing energy use, extreme weather conditions, or outages. The *Consumers Plan* also relies on extending Xcel's existing nuclear fleet through at least 2040, ensuring that year-round, carbon-free, baseload generation will be available to serve customers.

Critically, as a weather-based model, WIS:dom accounts for the changing climate during the planning horizon. WIS:dom models the impact of climate change on both the generation and demand side, which allows the model to effectively capture potential future impacts to Xcel's generating fleet or electricity demand. WIS:dom does so by incorporating such factors as how climate change may impact wind or solar energy

production potential, how climate change may impact thermal unit heat rates, and how climate change may affect water or space heating demands, among other climate impacts.[28] This capability is another important distinction between WIS:dom and both Strategist and Encompass. By modeling both historical weather patterns and weather patterns as they can be expected to change in the future, WIS:dom demonstrates that the Consumers Plan will allow Xcel to serve load as the climate warms and changes.

The Commission should find that the most effective way for Xcel to limit the risk of adverse effects from climate change is to invest in a more flexible, more dynamic grid, which is what the Consumers Plan will achieve.

III. Recommendations

For the reasons articulated above, CUB respectfully recommends that the Commission direct Xcel to implement the Consumers Plan. Some of the steps that the Consumers Plan indicates are fairly straightforward, typical actions for the Commission in a resource plan. However, fully implementing the Consumers Plan also requires actions in areas that have traditionally been procedurally separate and/or are emerging areas of utility planning and regulation, including distribution system topics and electrification. A more holistic approach to what are typically distinct dockets will help capture the significant opportunities for consumer savings and environmental benefits, avoid duplicative investments, and ensure that the full value of utility investments on the bulk power and distribution systems are captured. Alternatively, failing to integrate resource planning and distribution system planning is likely to result in redundant investments and unnecessary costs to consumers. To make the most of opportunities across Xcel's system, CUB respectfully makes the following recommendations.

A. Direct Xcel to retire its remaining coal plants in the next five years and to move to economic commitment of all units as quickly as possible.

As discussed in CUB's Initial Comments, VCE's WIS:dom modeling retires each of Xcel's coal plants by 2025, demonstrating that the coal fleet is not cost competitive and can be economically replaced primarily with utility-scale wind, plus utility-scale solar and distributed solar.[29] WIS:dom does not specify exact retirement dates, and CUB does not recommend any specific retirement dates. Given the current timing of this docket, CUB also recognizes that it may not be feasible to retire all of Xcel's coal plants by 2025. Accordingly, CUB recommends that the Commission direct Xcel to retire each of its coal plants as soon as reasonably practical and no later than five years from the date of the Commission's final decision in this docket.

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[28] See generally, Vibrant Clean Energy, LLC, *WIS:dom® - P v9.0 - Weather-Informed energy Systems: for design, operations and markets (Planning Version)* (Aug. 1, 2020), available at https://vibrantcleanenergy.com/wp-content/uploads/2020/08/WISdomP-Model_Description(August2020).pdf (last accessed Jun. 24, 2021).

[29] CUB Initial Comments, p. 4.

VCE's modeling also demonstrates that Xcel should ramp down coal generation by transitioning to seasonal operations in advance of retiring its coal fleet. CUB understands and appreciates that Xcel has already transitioned its King and Sherco 2 units to seasonal operation and is planning to similarly move to economic commitment of the Sherco 3 unit within the next couple of years. Our modeling confirms the economic benefit from this transition, and we recommend that Xcel transition all units to economic commitment as soon as possible.

B. Direct Xcel to retire or allow the expiration of PPAs for at least 550 MW of gas combustion turbine power plants in the next five years.

VCE's modeling demonstrates that Xcel can cost-effectively maintain system reliability by retiring or allowing the expiration of power purchase agreements (PPAs) for 559 MW of gas combustion turbine (CT) power plants by 2025 (and can do so without adding any new gas generation capacity). As with coal plant retirements, we recognize that this timeline may no longer be feasible. Therefore, CUB recommends that the Commission direct Xcel to retire this capacity within the next five years.

C. Direct Xcel to issue one or more RFPs for approximately 3,000 MW of new wind capacity in the next five years.

To ensure Xcel is maximizing its procurement of clean, affordable energy, we recommend that Xcel increase (from the amount proposed in Xcel's Preferred Plan) the amount of wind power it procures by 2035. Specifically, we find that Xcel should add approximately 4,500 MW of new wind power by 2035, including approximately 3,000 MW in the next five years.

To procure wind power on this scale, we recommend that Xcel engage in one or more competitive, robust, and transparent request for proposals (RFP) processes. To ensure such processes are competitive, robust, and transparent, we specifically recommend they be structured to *not* resemble the RFP process Xcel conducted when soliciting bids for its Sherco Solar Project.[30] As noted by the Office of the Attorney General (OAG) in comments submitted in Docket No. 20-891, the Sherco Solar RFP was flawed by artificially limiting bids to "build-transfer" projects interconnecting at the Sherco site.[31] Effectively, this caused the RFP to elicit only two competing proposals (other than Xcel's own proposal), which were quickly eliminated. By "put[ting] its thumb on the scale in a

[30] See, Minnesota Public Utilities Commission, IN THE MATTER OF XCEL ENERGY'S PETITION FOR APPROVAL OF THE SHERCO SOLAR PROJECT, Docket No. E-002/M-20-891.

[31] See generally, Minnesota Office of the Attorney General, Initial Comments, IN THE MATTER OF XCEL ENERGY'S PETITION FOR APPROVAL OF THE SHERCO SOLAR PROJECT, Docket No. E-002/M-20-891 (April 30, 2021).

way that favored its own proposal,"[32] Xcel acted in its own best interest, but not necessarily that of its customers.

Mirroring and expanding upon OAGs recommendations in Docket No. 20-891,[33] we recommend that the Commission require future wind procurement RFP processes to meet, at minimum, the following conditions:

- The competitive-bidding process should be administered by an independent third-party.

- The competitive-bidding process should include a request for proposals that is posted publicly and open to any interested developer.

- The request for proposals should not include geographic limitations.

- The request for proposals should be open to power purchase agreements, build-transfer proposals, and utility self-build projects.

- Xcel's proposed bidding process, timeline, evaluation criteria, and request for proposals language should be filed with the Commission at least one month prior to the issuance of the request for proposals. This filing should also include a contingency plan describing the subsequent process should the bidding process fail to elicit a meaningful number of bids.

D. Direct Xcel to issue one or more RFPs to procure approximately 1,400 MW of new utility-scale solar capacity in the next five years

Similarly to Recommendation C, above, we recommend that Xcel increase (from the amount proposed in Xcel's Preferred Plan) the amount of utility scale solar power it procures by 2035. Specifically, we find Xcel should add approximately 4,000 MW of utility scale solar by 2035, including 1,400 MW in the next five years.

To ensure such utility scale solar power is procured in the most cost-effective way possible, we recommend that the Commission require Xcel to engage in one or more competitive, robust, and transparent RFP processes that meet, at minimum, the following conditions:

- The competitive-bidding process should be administered by an independent third-party.

[32] *Id.*, p. 5.
[33] *Id.*, p. 7.

- The competitive-bidding process should include a request for proposals that is posted publicly and open to any interested developer.

- The request for proposals should not include geographic limitations.

- The request for proposals should be open to power purchase agreements, build-transfer proposals, and utility self-build projects.

- Xcel's proposed bidding process, timeline, evaluation criteria, and request for proposals language should be filed with the Commission at least one month prior to the issuance of the request for proposals. This filing should also include a contingency plan describing the subsequent process should the bidding process fail to elicit a meaningful number of bids.

E. Direct Xcel to pursue robust in-state and intrastate transmission expansion. Require Xcel to report on activities and progress to expand intrastate transmission capacity in its next IRP.

Transmission expansion remains a critical component to Xcel achieving its clean energy goals. The Consumers Plan demonstrated the need for 227 MW of additional in-state transmission capacity in order to connect renewable resource-rich regions in Minnesota with the Xcel service territory. The Consumers Plan also identified the need for an additional 1,800 MW of transmission capacity connecting Xcel's territory to neighboring Iowa by 2035. While Xcel does not have sole authority and discretion to build transmission across MISO, and the Commission cannot simply order Xcel to build transmission to another state, Xcel is an influential member in MISO's planning processes.

The Commission should direct Xcel to use all options available to it to develop additional transmission capacity, including spur line capacity, to enable the Company to bring more in-state renewables online, and using its considerable sway within MISO to pursue robust region-wide transmission expansion, to export and import additional renewable energy over the next decade. The Commission should require Xcel to report on its activities and progress to expand intrastate transmission capacity in its next IRP.

F. Approve Xcel's proposal to operate the Monticello nuclear unit through 2040, including initiating a Certificate of Need proceeding in Minnesota and a Supplemental License Renewal process with the Nuclear Regulatory Commission in the next five years.

CUB's Consumers Plan relies on Xcel's existing nuclear fleet to provide significant, year-round energy generation. The Monticello and Prairie Island units are retained in our plan through 2040. Therefore, CUB supports Xcel's request to "[o]perate our Monticello unit through 2040 (10 years longer than its current license) and operate both Prairie Island

units at least through the end of their current licenses (PI Unit 1 to 2033 and PI Unit 2 to 2034)."[34] Xcel's five-year action plan includes initiating a Certificate of Need proceeding in Minnesota and a Supplemental License Renewal process with the Nuclear Regulatory Commission to extend the operation of the Monticello plant.[35] CUB supports this request.

G. Approve Xcel's proposal to achieve 780 GWh/year savings from energy efficiency programs through 2034.

CUB supports Xcel's proposal to implement energy efficiency investments that achieve savings levels of 2-2.5% annually, which represents average savings of over 780 GWh of energy savings each year during the planning period.[36] We wish to clarify that our use of a lower annual savings figure (622 GWh/year) as an assumption in our modeling should not be interpreted as a recommendation that Xcel reduce its energy efficiency targets. CUB believes that economic energy efficiency measures are a highly effective means of meeting future load and load growth. CUB recommends that the Commission approve Xcel's proposal to achieve an average of 780 GHh/year of energy savings.

H. Advise Xcel that it will not be permitted to recover any undepreciated costs of the Sherco CC if and when the plant is no longer used and useful, any costs due to oversizing the plant, nor any future costs of retrofitting the plant to reduce emissions.

Modeling on the record by CUB, Sierra Club, the Clean Energy Organizations, and the Department all independently demonstrate that the Sherco CC is not the least-cost resource for meeting Xcel's customers' electricity needs, and that investing in the plant would result in unnecessary pollution and costs for Xcel's customers. Though the legislature granted Xcel "sole discretion" to build and own the Sherco plant under the 2017 "Sherco law,"[37] CUB's initial comments laid out several ways in which the law still preserves the Commission's authority to protect ratepayers from bad investments. Specifically, CUB stated:

> The legislature specifically did not exempt the Sherco plant from the typical criteria the Commission applies to determine whether a utility may recover the cost of its investments, including the "used and useful" standard.[38] Crucially, while the law requires the Commission to give due consideration to a utility's costs of providing utility service, … nothing requires the Commission to allow Xcel to recover its

[34] Xcel Supplement, p. 2.
[35] Xcel Supplement, p. 66.
[36] Xcel Supplement, p. 65.
[37] Minnesota Session Laws - 2017, Regular Session, Chapter 5 – H.F. No. 113, section 1.
[38] *Id.* at (b) (citing Minn. Stat. § 216B.16).

> depreciation expenses or a reasonable return on the value of a plant that is not used and useful.[39]

The Department concurs, finding "that the Company's investment in the Sherco CC unit is not risk free. The risk is that Xcel can only recover 'reasonable and prudently incurred costs and investments.'"[40] While the Department recommends the Commission put off any discussion of what "reasonable and prudent" means until Xcel has made a request for cost recovery, we believe this would add unnecessary uncertainty for the Company, the Sherburne County community, and the many other stakeholders interested in this important decision. Rather, it is more fair to advise the Company now, to the extent possible, on the Commission's interpretation of the Sherco law. Moreover, waiting to discuss the law until the Company has started down the path of constructing a major new power plant risks the Commission being more limited in its options to deal with a future cost recovery proposal.

Therefore, the Commission should advise Xcel in this docket that, should the Company move forward with the Sherco CC investment, it will not be permitted to recover any undepreciated costs if and when the plant is no longer used and useful. The Commission should also advise Xcel that it will not be permitted to recover any costs attributable to oversizing the plant or any costs required to retrofit the plant to run on renewable fuels or otherwise reduce plant emissions. Based on such a directive, Xcel can determine whether it would like to exercise its "sole discretion" and build the Sherco CC at significant risk to its future profits.

[39] Minn. Stat. § 216B.16, subd. 6.
[40] DOC Initial Comments, p. 45.

I. Direct Xcel to enable the adoption of approximately 300 MW of new distributed solar – including rooftop, community, and larger-sized, distribution system-tied developments – and 600 MW of new battery storage in the next five years.

As mentioned previously, the *Consumers Plan* relies on a robust expansion and utilization of the distribution system in order to effectively meet energy demand and reduce costs for Xcel consumers. In 2025, the *Consumers Plan* adds 333 MW of new distributed solar and a total of 1,965 MW of distributed solar by 2035. At the same time, the *Consumers Plan* adds 660 MW of new distributed storage by 2025 and a total of 1,260 MW of new distributed storage by 2035. Both resources are dispatched exclusively from behind the distribution system, which has the effect of reducing transmission losses and deferring additional infrastructure upgrades on the bulk power and distribution grids. While WIS:dom sites all battery storage in the *Consumers Plan* on the distribution system, CUB recognizes the value that battery storage may provide regardless of where it is sited, and due to potential financial or regulatory hurdles of siting large amounts of battery storage on the distribution system, CUB recommends Xcel enable the adoption of 600 MW of new battery storage of varying technical specifications.

We recognize, as Xcel notes, that the Company does not control customers' adoption of solar behind the meter nor the development of community solar gardens. However, Xcel certainly can – and does – influence customer adoption levels through its programs and tariffs. Additionally, the Consumers Plan includes a variety of distributed generation systems, including the development of up to 40 MW within a 3-kilometer square in some areas. This suggests that the Company should pursue not only rooftop and community solar but also larger-scale, possibly front-of-meter generation and storage tied to the distribution system. Unlike typical distributed solar projects to date, it is possible that some of these projects could be directly acquired by the Company through competitive bids.

The Commission should direct Xcel to develop programs, tariffs, and/or other offerings to achieve 300 MW of new distributed solar and 600 MW of new battery storage in the next five years. Additionally, CUB supports the recommendations of the DSP that will help to achieve this level of resource development on the distribution system. Specifically, CUB supports DSP's recommendations that:

- The Commission direct Xcel to explain, in its forthcoming Integrated Distribution Plan (IDP), how its distribution plan will put the Company on track to meet the level of distributed energy resource (DER) deployment in its approved IRP.

- Xcel should proactively plan investments in hosting capacity and other necessary system capacity to allow distributed generation and electric vehicle (and, CUB would add, additional beneficial electrification) additions consistent with DER deployment targets.

- Xcel should plan for aggregated DERs to provide system value including energy/capacity during peak hours.[41]

J. Direct Xcel to propose programs for beneficial electrification, including programs for efficient fuel switching under the new Energy Conservation and Optimization Act.

Xcel is already a leader in its efforts to advance transportation electrification. The Consumers Plan demonstrates that beneficial electrification that is both faster (for vehicles) and broader (including space and water heating) will further reduce consumer costs and greenhouse gas emissions.

The Commission should instruct Xcel to develop additional proposals to advance beneficial electrification, particularly in the areas of space and water heating, where Xcel does not currently offer programs (to CUB's knowledge). In particular, the Commission should require Xcel to develop offerings for efficient fuel-switching under the new Energy Conservation and Optimization (ECO) Act, which the Minnesota legislature adopted and Governor Walz signed into law earlier this year.[42] The ECO Act allows Minnesota electric utilities to offer programs that help customers conserve energy and save money by switching to electricity from the use of another fuel, such as providing an incentive for a customer who heats their home or their water with propane to install an electric heat pump appliance. Properly designed, such programs will benefit not only the customers using such incentives but all Xcel customers, as newly electrified loads on appropriate rate designs drive down electricity rates and increase the flexibility of Xcel's system. The ECO Act provides, for the first time, an important pathway for Xcel to include beneficial electrification in its energy conservation programs.

ECO Act programs may not be sufficient to meet the beneficial electrification opportunities that the Consumers Plan identifies (and spending on these programs is capped until 2026 at 0.35% of a public utility's gross annual retail sales).[43] The Commission should encourage Xcel to continue to explore additional opportunities to help its customers convert from fossil fuel use to electricity in ways that reduce participant energy costs, result in net benefits for all Xcel ratepayers, and help reduce emissions in line with the state's economy-wide greenhouse gas goals.[44]

[41] Distributed Solar Parties Initial Comments, pp. 43-44.
[42] Minnesota Session Laws - 2021, Regular Session, Ch. 29 – H.F. No. 164 (Signed by the governor May 25, 2021.)
[43] *Id*. at Sec. 6, subd. 1c(g).
[44] The additional electrification from buildings and transportation included in the Consumers Plan (a load increase of 9% relative to Xcel's Preferred Plan) helps reduce economy-wide emissions in Xcel's territory by 45% by 2035 relative to 2020 levels.

K. Require Xcel to account for anticipated effects of advanced rate design, demand response, and any other efforts to shift customer demand in its next IRP.

Xcel, at the direction of the Commission, is exploring advanced rate design in multiple settings, moving toward time-of-use (TOU) rates and other options to shift customer demand. A residential TOU rate pilot is underway, as is a refresh to the Company's General Service TOU rate, and Xcel is using TOU rates in a number of electric vehicle charging pilot programs.[45] CUB commends Xcel for moving forward with advanced rate designs. By encouraging customers to use electricity at lower-cost times, time-of-use rates and other advanced rate design are crucial to help the Company integrate higher levels of low-cost, variable renewable energy; cost-effectively integrate newly electrified loads such as electric vehicles and space and water heating; and more equitably distribute utility costs among consumers.[46] Indeed, reaping the cost savings from beneficial electrification requires these new electric loads to be added when they do not contribute significantly to system peak demand and can be met largely with existing capacity, spreading the costs of that capacity over a greater number of kilowatt-hours.

In order for the benefits of advanced rate design to materialize as actual savings for customers, a utility must account for their impacts on customer demand as it is planning for its infrastructure needs. If successful, advanced rates will limit the growth of or even reduce customer demand peaks, thereby reducing the need for capacity to meet those peaks. These reductions must be taken into account during resource planning to avoid over-building the system.

In its next IRP, the Commission should require Xcel to account for the anticipated effects of advanced rate design, demand response, and any other efforts to shift load.

IV. Conclusion

In conclusion, CUB respectfully recommends that the Commission:

[45] See generally, Minnesota Public Utilities Commission, RESIDENTIAL TIME OF USE RATE DESIGN PILOT PROGRAM, Docket No. E002/M-17-775; Minnesota Public Utilities Commission, PETITION OF NORTHERN STATES POWER COMPANY FOR APPROVAL OF GENERAL TIME-OF-USE SERVICE TARIFF, Docket No. E002/M-20-86; and Xcel Energy, Draft Rate Design Roadmap, IN THE MATTER OF XCEL ENERGY'S INTEGRATED DISTRIBUTION PLAN AND ADVANCED GRID INTELLIGENCE AND SECURITY CERTIFICATION REQUEST, Docket No.E002/M-19-666 (October 1, 2020).

[46] A detailed analysis conducted by the Citizens Utility Board of Illinois of customer energy use data revealed that – in the Chicago area, at least – lower-income households were likely to pay more than their fair share of system costs under flat electric rates, as these households used relatively little energy at peak hours. Time-of-use electric rates that more accurately reflect system costs would result in lower bills for these households, even if they took no action to shift when they use electricity. (Zethmayr and Singh Makhija, "Six Unique Load Shapes: A Segmentation Analysis of Illinois Residential Electricity Consumers," *The Electricity Journal* (2019).

1. Direct Xcel to retire its remaining coal plants in the next five years and to move to economic commitment of all units as quickly as possible.

2. Direct Xcel to retire or allow the expiration of PPAs for at least 550 MW of gas combustion turbine power plants in the next five years.

3. Direct Xcel to issue one or more RFPs for approximately 3,000 MW of new wind capacity in the next five years.

   To ensure such processes are competitive, robust, and transparent, require future wind procurement RFP processes to meet, at a minimum, the following conditions:

   a. The competitive-bidding process should be administered by an independent third-party.

   b. The competitive-bidding process should include a request for proposals that is posted publicly and open to any interested developer.

   c. The request for proposals should not include geographic limitations.

   d. The request for proposals should be open to power purchase agreements, build-transfer proposals, and utility self-build projects.

   e. Xcel's proposed bidding process, timeline, evaluation criteria, and request for proposals language should be filed with the Commission at least one month prior to the issuance of the request for proposals. This filing should also include a contingency plan describing the subsequent process should the bidding process fail to elicit a meaningful number of bids.

4. Direct Xcel to issue one or more RFPs to procure approximately 1,400 MW of new utility-scale solar capacity in the next five years.

   To ensure such processes are competitive, robust, and transparent, require future solar procurement RFP processes to meet, at a minimum, the following conditions:

   a. The competitive-bidding process should be administered by an independent third-party.

   b. The competitive-bidding process should include a request for proposals that is posted publicly and open to any interested developer.

   c. The request for proposals should not include geographic limitations.

d. The request for proposals should be open to power purchase agreements, build-transfer proposals, and utility self-build projects.

e. Xcel's proposed bidding process, timeline, evaluation criteria, and request for proposals language should be filed with the Commission at least one month prior to the issuance of the request for proposals. This filing should also include a contingency plan describing the subsequent process should the bidding process fail to elicit a meaningful number of bids.

5. Direct Xcel to pursue robust in-state and intrastate transmission expansion. Require Xcel to report on activities and progress to expand intrastate transmission capacity in its next IRP.

6. Approve Xcel's proposal to operate the Monticello nuclear unit through 2040, including initiating a Certificate of Need proceeding in Minnesota and a Supplemental License Renewal process with the Nuclear Regulatory Commission in the next five years.

7. Approve Xcel's proposal to achieve 780 GWh/year savings from energy efficiency programs through 2034.

8. Advise Xcel that it will not be permitted to recover any undepreciated costs of the Sherco CC if and when the plant is no longer used and useful, any costs due to oversizing the plant, nor any future costs of retrofitting the plant to reduce emissions.

9. Direct Xcel to enable the adoption of approximately 300 MW of new distributed solar -- including rooftop, community, and larger-sized, distribution system-tied developments -- and 600 MW of new battery storage in the next five years.

    a. Direct Xcel to explain, in its forthcoming Integrated Distribution Plan (IDP), how its distribution plan will put the Company on track to meet the level of distributed energy resource (DER) deployment in its approved IRP.

    b. Direct Xcel to proactively plan investments in hosting capacity and other necessary system capacity to allow distributed generation and electric vehicle (and, CUB would add, additional beneficial electrification) additions consistent with DER deployment targets.

    c. Direct Xcel to plan for aggregated DERs to provide system value including energy/capacity during peak hours.

10. Direct Xcel to propose programs for beneficial electrification, including programs for efficient fuel switching under the new Energy Conservation and Optimization Act.

11. Require Xcel to account for anticipated effects of advanced rate design, demand response, and any other efforts to shift customer demand in its next IRP.

Thank you for your consideration of these comments.

Respectfully submitted, June 25, 2021

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