STATE OF MINNESOTA
BEFORE THE PUBLIC UTILITIES COMMISSION

Katie J. Sieben	Chair
Joseph K. Sullivan	Vice-Chair
Audrey Partridge	Commissioner
Hwikwon Ham	Commissioner
John Tuma	Commissioner

In the Matter of Northern States Power Company, dba Xcel Energy, Petition for Approval of Capacity*Connect, a Distributed Capacity Procurement (DCP) program	MPUC DOCKET NO. E002/M-25-378

SUPPLEMENTAL COMMENTS OF COOPERATIVE ENERGY FUTURES, ENVIRONMENTAL LAW AND POLICY CENTER, INSTITUTE FOR LOCAL SELF-RELIANCE, SOLAR UNITED NEIGHBORS, AND VOTE SOLAR

I. INTRODUCTION

After reviewing initial and reply comments, our organizations continue to feel hopeful and enthusiastic about the potential for Xcel's proposed Distributed Capacity Procurement (DCP) program, Capacity*Connect (C*C). As expressed in our initial comments, we continue to view it as an important and logical next step in the Company's and the Commission's progress towards leveraging distributed energy resources (DER), including specifically distributed solar and energy storage, as distribution system resources. To realize its potential, however, we continue to recommend modifications to the proposed Capacity*Connect program prior to Commission approval.

We appreciate efforts by the Department of Commerce (Department) to work with us and other stakeholders to develop recommendations, capturing recommended modifications to Xcel's proposal prior to approval (Department Recommendations). As discussed further below in Section II, we support these Department Recommendations, which we understand the Department will file

with its supplemental comments. In addition, we discuss our support for the Joint Solar Parties' (JSP) Recommendation related to alternative ownership structures. In Section III, we respond to other parties' comments and explain how we believe the Department Recommendations and JSP Recommendation properly address them.

II. RECOMMENDED MODIFICATIONS PRIOR TO APPROVAL

A. Department Recommendations

Recognizing the various commonalities in many parties' comments in this proceeding, the Department worked with stakeholders to develop the Department Recommendations anticipated as an attachment to the Department's supplemental comments. We support these Department Recommendations and appreciate the Department's efforts to consolidate parties' positions to the extent possible.

We highlight the following recommendations, which address core issues that we raised in our initial comments:

- **Recommendation 1**, particularly Recommendation 1.2, requires Xcel to prioritize exploration of distribution system and other values through Capacity*Connect during Phase 2, consistent with our initial comments emphasizing the importance of prioritizing distribution value in Phase 2.
- **Recommendation 2** requires Xcel to develop methodologies and other information necessary to realize distribution benefits through Capacity*Connect, as we recommended in our initial comments.
- **Recommendation 4** provides a reasonable approach to applying MN DIP to Capacity*Connect resources, consistent with our initial comments opposing wholly exempting Capacity*Connect resources from MN DIP.

- **Recommendation 5** requires Xcel to implement a DERMS that can integrate third parties, which could eventually enable third-party participation in Capacity*Connect as we recommended in our initial comments.
- **Recommendation 7** requires Xcel to file a separate, complementary behind-the-meter (BTM) Distributed Power Plant (DPP)[1] program by a date certain, consistent with our initial comments, and to include a community-owned model in its filing, as recommended in our reply comments.
- **Recommendations 9-11** require various reports, including specifically reporting related to DERMS implementation and dispatch decisions that we recommended in our initial comments.

We also note that the Department Recommendations depart from our initial comments in certain key ways. For example, Department Recommendation 6 would authorize Phase 2 cost recovery through the RES Rider, which we opposed in our initial comments. We have compromised on this and other issues to reach agreement with the Department and other stakeholders and present unified recommendations to the Commission for consideration. We believe the Department Recommendations include the most important modifications necessary to realize the potential of Xcel's proposed Distributed Capacity Procurement Program.

B. Joint Solar Parties' Recommendation

In addition, we support the Joint Solar Parties' Recommendation, which we understand JSP intends to file with their supplemental comments. We believe the quantitative economic evaluation of alternative ownerships structures that it envisions would satisfy the Commission's 2024 IRP Order Point No. 23, which Xcel's initial filing did not fulfill, as discussed in our initial comments.

[1] As in our initial comments, we refer to a "DPP" here but note that it is interchangeable with the term Virtual Power Plant (VPP).

In addition, JSP Recommendation 1.1 captures our recommendation in initial comments for the Commission to establish a timeline and formal requirements for third-party-owned resources to participate in Capacity*Connect.

III. RESPONSES TO OTHER PARTIES' COMMENTS

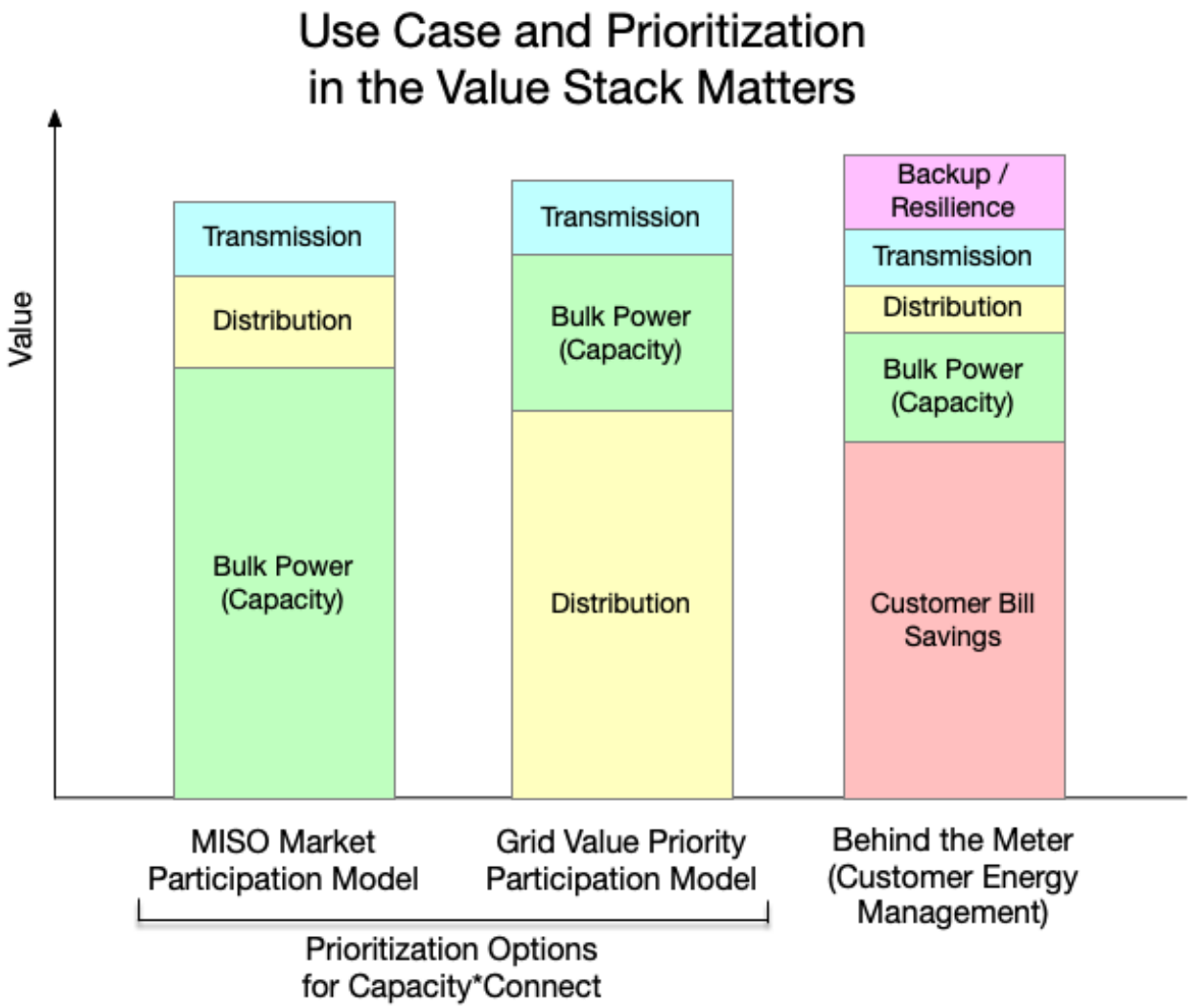
A. Prioritizing Distribution Value in Phase 2

In its initial proposal and again in its reply comments, Xcel proposes to prioritize bulk system value in siting and discharging Capacity*Connect batteries during Phase 2.[2] Although Xcel recognizes that there may be coincidental distribution benefits in this approach, it does not propose to prioritize such benefits in Phase 2.[3] Instead, the Company indicates that it may undertake such exploration in Phase 3, although it does not provide detail on how it plans to do so.[4] Consistent with our initial comments, we continue to disagree fundamentally with this approach to prioritization in Phase 2. We note that Xcel can already achieve this bulk-system value without customer siting, e.g., through installing utility-owned batteries on substations near key LMP nodes. Its proposed prioritization of bulk power value in Capacity*Connect compromises its ability to test and demonstrate distribution value, as explained below. We emphasize the importance of using Phase 2 to explore additional value streams, namely distribution value, to move towards a program that can ultimately optimize the full potential value stack in Phase 3 and beyond.

How Xcel prioritizes the value stack will materially shape, and in some cases limit, the total value customers can realize from Capacity*Connect, as shown in the illustrative graphic below. Put differently, the *order* in which Xcel stacks the "blocks" in the value stack matters. Xcel has recognized that distribution value exists.[5] However, under Xcel's proposal to optimize bulk

[2] *See, e.g.*, Xcel Petition at 8-11; Xcel Reply Comments at 5.
[3] *See, e.g.*, Xcel Petition at 18; Xcel Reply Comments at 7.
[4] Xcel Petition at 12-13.
[5] Xcel Reply Comments at 22.

power value—that is, commit the resource (battery) to wholesale-market participation through MISO—it is questionable whether it will capture any distribution (and transmission) value at all. As Xcel emphasized in its reply comments, dispatch obligations associated with wholesale-market participation can materially constrain operational flexibility. Those obligations can leave limited ability for energy storage to address distribution constraints or to target specific feeders for non-wires outcomes. In practical terms, Xcel's proposed bulk-power-first structure can crowd out grid value because the battery must reserve and operate to satisfy market performance requirements even when local conditions would otherwise call for charging or discharging to realize distribution value.



In contrast, if the Commission directs Xcel to prioritize distribution value in the Capacity*Connect value stack, as shown in the middle bar in the illustrative graphic above and described in Department Recommendation 1.2, then Xcel would operate the resource primarily as a distribution asset—reducing local peaks, deferring upgrades, mitigating reliability issues, relieving transmission constraints, and increasing DER hosting capacity. Under this approach, the Capacity*Connect program could secure those grid benefits while still capturing incidental bulk power value when the resource is available. Even if the bulk power component is smaller, it is not zero. The resource can still contribute capacity value during infrequent peak conditions and

provide system benefit in hours when distribution needs are not binding. In addition, treating C*C resources as Load Modifying Resources (LMR) to avoid MISO capacity obligations can preserve flexibility because it generally does not impose the same continuous availability and dispatchability expectations that apply to participation in wholesale energy and ancillary service markets. This makes it more feasible for Xcel to prioritize distribution objectives while still contributing to broader system needs.

We recognize that realizing and valuing these distribution benefits will be a new undertaking for Xcel and we further recognize that doing so is complex, as Xcel emphasized in its reply comments. However, Capacity*Connect presents an opportunity for the Company to learn how to dispatch C*C resources to realize these benefits and how to value them. We appreciate Fresh Energy's suggestion in reply comments to establish "secondary siting criteria" related to distribution value, in an attempt to establish test cases for the company to learn from and report on.[6] Nonetheless, we continue to believe that *prioritizing* distribution value (rather than keeping it as a secondary consideration) is necessary to realize the full value of Capacity*Connect resources. With growing loads, escalating distribution costs, and increasing customer rates, we encourage Xcel and the Commission to act more ambitiously now to leverage storage and other DERs as cost-effective distribution resources. Department Recommendations 1 and 2 would require Xcel to make meaningful progress towards this goal.

Related to valuing distribution benefits, we acknowledge Xcel's commitment in reply comments "to conduct analysis on C*C Phase 2 projects using specific data and context to estimate the distribution benefit provided by these projects" with its 2027 IDP.[7] We appreciate the Company's recognition of the existence of these benefits and the need to develop a distribution

[6] Fresh Energy Reply Comments at 2-3.
[7] Xcel Reply Comments at 22.

benefit valuation analysis, which we understand to be consistent with the marginal distribution cost analysis and power flow analysis in our initial comments. We also agree with the implication of proposing an IDP filing that such an analysis will be relevant beyond Capacity*Connect. However, we do not agree with the Company's proposed timeline. If the Company files the analysis with its 2027 IDP, it is likely that the Commission would approve it in Summer 2028, based on the Commission's resolution of its previous IDPs. At that point, Xcel indicates that the analysis "may" guide future Capacity*Connect siting, a process that would presumably involve an additional filing from Xcel, party comments, and another Commission decision, likely postponing any action within Capacity*Connect well into 2029—at least three years from now and at Xcel's discretion. In the meantime, under Xcel's proposal, the Company would not be using Capacity*Connect to learn how to prioritize distribution value in its resource siting and operation.

Instead of Xcel's three-year process, as stated in Department Recommendation 2, we recommend the Commission require Xcel to file its proposed distribution benefit valuation and other specified methodologies and information within 180 days of the Commission's Order in this proceeding. In this way, the Company and the Commission can make progress in the nearer term towards distribution valuation and other relevant analysis. In the meantime, we reiterate our recommendation that Xcel should prioritize distribution benefits in its deployment of Capacity*Connect resources in Phase 2, as discussed above and in our initial comments.

We recognize—and agree with Xcel—that bulk power system needs and resource adequacy are real and pressing, and that energy storage will be an important part of meeting those needs. We support continued expansion of storage to address Xcel's resource adequacy requirements, particularly in light of load growth. But Xcel also has other, potentially more cost-effective tools for procuring bulk-system capacity from storage resources that do not require

customer siting or the operational constraints that come with using distribution-connected, customer-sited assets as wholesale market resources. In other words, Xcel can obtain bulk-system storage through more direct utility planning and procurement pathways without asking Phase 2 of Capacity*Connect to carry that burden.

For that reason, we continue to believe Capacity*Connect should focus on learning and demonstrating distribution value—how storage can be sited and dispatched to defer distribution upgrades, improve feeder reliability, relieve local constraints, and increase hosting capacity—while the Company and the Commission can continue to address resource adequacy storage procurement through the IRP process and, if necessary, interim resource acquisition to meet near-term load growth. Energy storage is often described as the "Swiss Army knife" of the grid, but it does not need to be all things in every program at every moment. It is both reasonable and cost-effective for Capacity*Connect assets to prioritize distribution value and treat bulk-system value as secondary or incidental when compatible with distribution needs, while Xcel separately pursues additional storage to satisfy system-level resource adequacy objectives. Critically, we do not want to compromise the effectiveness of C*C assets by overcommitting them to wholesale market participation in ways that crowd out the very distribution outcomes this program should test.

B. Third-Party Ownership in Capacity*Connect

In our initial comments, we recommended that the Commission establish a timeline and requirements for participation by third-party-owned resources in Capacity*Connect. Among other things, we noted that third-party participation and ownership could both serve as a check on the Company's inherent incentive to build infrastructure and also offload performance risk from ratepayers to third parties. Xcel disagreed with our initial recommendation and emphasized the

various other programs and opportunities available for third-party DERs in its service territory.[8] We recognize these opportunities exist. Nonetheless, allowing for third-party ownership in Capacity*Connect would not only present third parties with another market pathway, as Xcel emphasizes through cataloging these various existing pathways; it would also help to drive down costs through competitive pressure, while still allowing Xcel to monitor and control the assets as necessary. We appreciate that there may be additional layers of complexity, such as the issues Xcel raises in its reply comments. Nonetheless, we continue to believe third-party ownership would improve the program and benefit customers. We believe that Department Recommendation 5 is an important step towards this goal. However, we believe that the JSP Recommendation, particularly JSP Recommendation 1.1, is also necessary to ensure the goal is achieved.

C. Separate Behind-the-Meter Distributed Power Plant Program

Consistent with our initial and reply comments, we emphasize that a BTM DPP program would function as a separate but complementary program to Xcel's proposed Capacity*Connect program. As demonstrated in the illustrative graphic included above in Section III.A, a BTM DPP would present its own unique value stack, allowing customers to realize a benefit stream directly through bill savings and resilience/back-up power benefits, and allowing the Company to realize system benefits, as well. Because third parties or customers own these resources, a BTM DPP also presents a more significant opportunity to advance equity. As explained in our reply comments, we view a cooperative DPP model as a particularly promising way to promote equity through low-income customer cooperative ownership. While we support the incorporation of equity components in Capacity*Connect,[9] and also support Fresh Energy's recommendations related to

[8] Xcel Reply Comments at 33-40.
[9] Xcel Petition at 49-50; Xcel Reply Comments at 40-46.

metrics and tracking for and other improvements to these components,[10] we again underscore the importance of a separate BTM DPP program to enable a broader equity vision. We reiterate our support for Department Recommendation 7, which would require Xcel to file such a program by July 1, 2027.

Alternatively, we note that, in its reply comments, Xcel indicated that its Energy Conservation and Optimization (ECO) portfolio is the "established venue for demand response programs (virtual power plants) and it will file its next Triennial Plan on June 1, 2026.[11] We note that this is close to our recommended timeline in initial comments for a BTM DPP filing (July 1, 2026), and therefore suggest that the Commission could require Xcel to file a BTM DPP proposal with its next ECO Plan. Regardless, we support Fresh Energy's recommendation for development of a BTM DPP in a separate proceeding, whether the ECO proceeding or another proceeding, and that the Commission should require Xcel to report on its Colorado Aggregator Virtual Power Plant (AVPP) program and its relevance to Minnesota in that proceeding.[12]

D. MNDIP Queue and Future Capacity Impacts

The Company's proposal and reply comments leave major questions unanswered about the impact of the proposed Capacity*Connect program on existing queued DER interconnections through MN DIP and the impacts to future load and DER growth.

The Company proposes to exclude C*C resources from the MN DIP but does not clearly articulate how existing queued resources will be impacted by the interconnection of new C*C resources. The Company's proposed plan to "consider queue length and avoid feeders with long queues"[13] does not provide assurance that the Company will not simply bypass existing queued

[10] Fresh Energy Initial Comments at 3-9.
[11] Xcel Reply Comments, Att. C at 3.
[12] Fresh Energy Reply Comments at 5.
[13] Xcel Reply Comments at 9.

resources with its own C*C resources. The Company also cannot confirm that the C*C resources will not consume available hosting capacity. With these statements taken together, allowing the Company's proposed C*C resources to bypass MN DIP and existing queued applicants may create new system constraints (and associated interconnection costs) for queued third-party applicants that would not otherwise have impacted those applicants.

There are also significant concerns about how the proposed C*C resources will be treated during future planning analyses for load and DER capacity and future load and additions. While the Company includes distribution capacity value as part of its benefit-cost analysis, the Company does not appear to be planning to utilize that capacity within future planning and interconnection studies. The Company's statement that it "must always hold that asset ready to comply with MISO's market rules"[14] points to operating assumptions that the C*C assets must be able to meet their full nameplate charging capability during peak load periods, effectively consuming existing available capacity. This is further evidenced by the Company's minimum feeder selection criteria requiring that an eligible feeder "does not exceed feeder native loading standard," which they are using to "ensure that the BESS can interconnect safely without the need for large system upgrades" because the BESS "will act as a load while charging."[15] A similar requirement of at least 1 MW of available hosting capacity is also part of the minimum feeder requirements, presumably for the same reason. The Company also states that the uncertainty of dispatch requirements for bulk system capacity "forces planners to assume worst case operating conditions."[16] In effect, rather than the proposed C*C resources providing new distribution load capacity, the Company currently appears to be assuming that they will consume existing available load capacity and DER hosting

[14] Xcel Reply Comments at 14.
[15] Xcel Petition at 17.
[16] Xcel Reply Comments at 25.

capacity, negatively impacting interconnection costs and timelines for future applicants and further exacerbating forecasted grid capacity constraints.

Department Recommendation 4, in combination with the other Department Recommendations, provides a reasonable pathway for treating C*C resources under MN DIP. Nonetheless, we encourage the Commission to remain cognizant of the concerns on this front and to require the Company to modify its approach in the future if needed.

IV. CONCLUSION

We reiterate our recommendation that the Commission modify Capacity*Connect consistent with the Department Recommendations and the JSP Recommendation prior to approval. With these changes, Xcel will be able to use the new program to test and better understand various new value streams for distributed energy resources, specifically distributed batteries. They will also require Xcel to move forward with a separate BTM DPP program, which can realize additional value for customers and the Company and advance equity a meaningful way, particularly through a cooperative ownership model.

Respectfully submitted,

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