Minneapolis
City of Lakes

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Daniel P. Wolf
Executive Secretary
Minnesota Public Utilities Commission
121 7th Place East, Suite 350
Saint Paul, MN 55101

RE: Docket No. E002/CI-18-251 Xcel Energy 2019-2028 Integrated Distribution Plan (IDP)

Dear Mr. Wolf:

The City of Minneapolis appreciates the Commission's efforts to implement a distribution planning process that includes stakeholder engagement. A regularly updated, publicly accessible distribution plan informed by stakeholders is an essential tool to cost effectively achieve the City's goals including:

- Ten percent local energy
- Electrification of transportation and heating
- 100% renewable energy community-wide by 2030
- GHG reductions of 30 percent by 2025 and 80 percent by 2050

We believe that the Commission's effort will similarly support the climate and renewable energy objectives of the State and other local jurisdictions as well. The IDP is urgently needed as energy transformation is already underway, including distributed generation and electrification.

1. ***Should the Commission accept or reject Xcel Energy's Integrated Distribution Plan (IDP)?***

The City of Minneapolis appreciates Xcel's compilation of its first Integrated Distribution Plan for its Minnesota territory. We recommend the Commission accept the Company's 2019-2028 plan and outline opportunities for enhancements in future plans.

2. ***Does the IDP filed by Xcel Energy achieve the planning objectives outlined in the filing requirements approved in the Commission's August 30, 2018 Order in this docket?***

The City is very supportive of the Commission's objectives to "Maintain and enhance the safety, security, reliability, and resilience of the electricity grid, at fair and reasonable costs, consistent with the state's energy policies." The City believes that Xcel can build on this first IDP in a way that more fully meets the objectives outlined in the Commission Order in future IDP filings.

Some areas the IDP could more comprehensively address include:

Grid Resilience

The City is interested in resiliency throughout its communities and appreciates the Company is planning an "incremental customer investment initiative" that could help improve system resiliency. Given the changing nature of weather events, building a robust distribution system that can withstand stresses is important to the health and safety of electricity customers everywhere. The City also appreciates that the Company plans to include DER adoption potential as a component of this initiative that is intended to:

> ...identify and prioritize areas based on reliability, history, age and condition, storm-related outages and total restoration time, numbers of customers, potential for O&M cost savings, and DER adoption potential; our primary goal will be to create multiple benefits for customers that includes a more reliable, safe, cost-effective and resilient system that enables integration of DER.[1]

The City encourages expanded discussion of this initiative in future filings.

Fair and Reasonable Costs

Distribution Deferral strategies to reduce costs

Opportunities for cost effective Distribution Deferral (referred to in the IDP as non-wire alternatives or NWA) were not included in the IDP. Yet, there is increasing awareness that solutions like energy storage, solar paired with storage and targeted demand response are viable, cost-effective and available today. Distribution Deferral should be an integral part of an IDP. In addition to saving money, including these strategies as part of standard decision-making for infrastructure solutions increases fairness and allows for cost-effective customer participation that can save all customers money.

Electrification to lower costs for all customers

The recent Vibrant Clean Energy report, *Minnesota's Smarter Grid: Pathways Toward a Clean, Reliable, and Affordable Transportation and Energy Future*[2] highlighted the importance of electrification for cost savings:

> All the decarbonization pathways involve deeper energy efficiency of existing electric demands (particularly in the industrial sector), *heavy electrification of transportation, transitioning heating of space and water from natural gas and resistive heating to heat pumps*, ... [emphasis added]
>
> The electrification of other sectors provides the electricity sector with new demands, which have different load profiles to existing demands and have greater flexibility potential. These new loads provide increasing sales for the electricity sector to invest against. Further, the greater flexibility allows the electricity grid to incorporate more variable resources, which are low-cost and near-zero emissions. Further, the *electrification provides net cost savings for consumers* [emphasis added] because the reduction in spending on other energy supplies (natural gas for heating and gasoline for transportation) outweighs the additional spending in the electricity sector for the electrified loads.

Further, during a presentation at a PUC special planning session, the study's lead author, Dr. Chris Clack, emphasized the report's conclusion that heavy electrification is essential for overall energy cost savings when decarbonizing to the level outlined in the State's goals.[3],[4]

Due to the absence of opportunities for Distribution Deferral and heavy electrification scenarios, the City believes that the IDP missed opportunities to address cost effectiveness and fairness.

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[1] Docket No. E002/CI-18-251 Xcel Energy 2019-2028 Integrated Distribution Plan. Nov 1, 2018.
[2] Vibrant Clean Energy. Minnesota's Smarter Grid: Pathways Toward a Clean, Reliable, and Affordable Transportation and Energy Future. Page 3. Jul. 31, 2018.
[3] Id. pages 39
[4] Vibrant Clean Energy presentation of Minnesota's Smarter Grid: Pathways Toward a Clean, Reliable, and Affordable Transportation and Energy Future to MPUC at a special planning meeting on Oct. 31, 2018.

Consistency with State Energy Policies

Electrification sufficient to meet the State's GHG reduction goals

The State has a goal of reducing GHG emissions statewide by 30 percent by 2025 and 80 percent by 2050 compared to 2005 levels[5]. To achieve this level of economy-wide reductions will require extensive electrification of heating, domestic hot water, and transportation. This was emphasized in *Minnesota's Smarter Grid report*.[6] Given the 10-year timeline of the IDP, this should have been addressed in the utility's assumptions as there will be impacts to the distribution grid if heavy electrification occurs. It isn't clear that corresponding levels of electrification was contemplated within the IDP.

3. What, if any, adjustments should be made to future filing requirements?

Cost effective integration of both 1) electrification and 2) distribution level improvements like solar and electric vehicle charging will require effective distribution planning to avoid investing in assets that are undersized for the service required during the equipment's expected life.

The City notes that some of the recommendations from the Smarter Grid study referenced in the previous section are relevant to distribution planning. [7] We encourage the following be considered for future filings with appropriate metrics:

- Consider planning Minnesota's electricity systems with consideration of storage, EVs, DSM, DR impacts included.
- Update plans frequently, on the order of every year, to capture the changing economics and technologies that can be included in the evolution of the electricity system.
- Encourage electrification of transportation (particularly light-duty vehicles) and new construction with heat pumps for space and water heating. Retrofit old furnaces and water heaters with heat pump alternatives.
- Consider the value of electrification with respect to emission reductions, load growth potential, and the added flexibility it can bring.
- Make accommodations for and install at least 1,000 MW of rooftop solar by 2030.
- Plan for connecting 1,000 MW of electric storage by 2030.
- Expect installed [generation] capacity in Minnesota to approximately double by 2050 if electrification has taken place to enable decarbonization with variable generation.

4. Are there other issues or concerns related to this matter?

The City has a community-wide goal of obtaining 10 percent of our electricity from local generation by 2025. Our ability to achieve this goal depends in part on effective distribution planning. Xcel noted that there are barriers to distributed generation as follows:

> *Potential Barriers to DER Integration*
> *Minnesota has a cost-causation regulatory construct for DER, which requires the "cost causer" to pay the costs – shielding other customers from the costs. As such, individuals or developers proposing to interconnect DER to the system may incur costs for necessary system changes to accommodate the DER. Based on our regulatory requirements in our Section 10 tariff, the customer or developer who causes this system pays for the cost of the upgrade or modification for DER integration. In some cases the developer or customer chooses not to pursue the modification and the project does not move forward.*

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[5] Minn. Statutes 216H. 02.
[6] Vibrant Clean Energy. Minnesota's Smarter Grid: Pathways Toward a Clean, Reliable, and Affordable Transportation and Energy Future. Page 3, 10-12. Jul. 31, 2018.
[7] Vibrant Clean Energy. Minnesota's Smarter Grid: Pathways Toward a Clean, Reliable, and Affordable Transportation and Energy Future. Page 61. Jul. 31, 2018.

This construct limits the amount of negative impacts that DER can cause on the distribution system, enabling the Company to continue to provide safe and reliable service. It also protects the majority of customers from incurring costs generated by a few.[8]

The City wishes to emphasize that customer investments in DER need not be problematic, and in fact, can strengthen such attributes as energy affordability, reliability, resiliency, and GHG emissions reductions for the benefit of everyone. To the extent that the IDP process can anticipate customer DER investments and include opportunities for distribution deferral (non-wires alternatives), the City believes that the barriers described by Xcel can be satisfactorily addressed in a way that benefits all customers.

Additionally, the Company states:

The good news – from a distribution planning perspective – is that Minnesota is presently at comparatively low levels of DER penetration that can reasonably be expected to remain stable in the near-term. Further, our present tariffs require interconnecting parties to mitigate adverse impacts identified in the interconnection application process. This means that we have time to take the measured approach that is necessary to properly address this issue – and develop or acquire the necessary capabilities, methodologies, and tools that will facilitate this type of complex analysis.[9]

The City appreciates that there are some advantages for system planners if DER penetration remains low. However, the City's clean energy goals, including the 10% local generation goal, are of an urgent nature as driven by the urgency of climate change and equity needs. We urge the Company and the Commission to utilize this important IDP process to identify ways to cost-effectively implement public policy and customer goals for increased adoption of DERs and electrification.

In conclusion, the City appreciates the ability to review and offer input into the Company's distribution systems planning. We look forward to the evolving development of a comprehensive and effective IDP process that results in grid planning and management strategies that cost effectively uphold system reliability and safety standards without limiting the pace of solar resource expansion[10] and electrification.

Respectfully submitted,

K. W. Havey

Mr. Kim W. Havey, LEED AP, AICP
Division of Sustainability

[8] p. 228 of Xcel's Integrated Distribution Plan. Nov. 1, 2018.
[9] Ibid. p. 188.
[10] Utility Strategies for Influencing Locational Deployment of Distributed Solar from the Solar Electric Power Association (SEPA) and the Electric Power Research Institute. 2014.