

Interconnection Cost Sharing Proposal for Small, Behind the Meter Projects

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Background:

An increasing number of Xcel's customers that want to install on-site solar are facing interconnection costs that they cannot afford. Projects that are assessed high upgrade costs appear to be located in areas with a specific combination of factors – less density than the Twin Cities and a significant number of community solar gardens already operating. Due to the frequency of untenable upgrade costs for residents in these areas, many solar installers no longer take clients who live in affected areas or warn them upfront about the likely interconnection costs. The local governments of several of these communities are concerned about the impact this situation will have on their ability to meet climate and sustainability goals.

Solar customers, developers, and advocates are also concerned about the functionality of the interconnection portal, the Xcel team's ability to meet MNDIP timelines, and the requirement that (on capacity constrained feeders) small projects wait "on hold" until all projects ahead have signed an interconnection agreement or been cancelled. We appreciate the Xcel team's continued work to improve the portal and speed of process turn-arounds. However, we believe a larger solution is needed to facilitate an efficient and functional interconnection process for customers and Xcel.

Benefits of Introducing a Cost-Sharing Approach to Upgrades for $\leq 40\text{kW}$

We are proposing that Xcel administer a cost-sharing program for interconnection upgrades for projects up to 40kW, which would help to mitigate several of the larger challenges Xcel's customers are facing related to DER integration. Spreading upgrade costs among eligible projects up to 40kW would:

- Reduce the geographic disparities that currently exist in DER costs for Xcel customers.
- Reduce the impact of interconnection upgrades as a cost barrier and thus help to reduce income/wealth disparities in DER access.
- Enable streamlining of several interconnection process steps by reducing customer concerns, facilitating a simpler decision-making process, and reducing some administrative tasks for the majority of Xcel's DER Applications. The steps that will be impacted include: moving to supplemental review, moving to facilities study, completion of facilities studies and/or upgrade cost estimates, the interconnection agreement signature process. Construction processes may also be able to be streamlined.
- Facilitate a faster-moving queue, less queue churn, and enable small projects to be screened in parallel with ahead-in-queue projects in a greater number of locations.

Impact of Cost Sharing on the Interconnection Queue

In addition to addressing the issue of high project costs, we believe moving to a flat fee approach for DER upgrades would enable an expansion of the parallel screening process for projects up to 40kW. Specifically, we propose that if and when the Cost Sharing program goes into effect, Xcel allow parallel screening on at least a portion of Known Capacity Constraint feeders and substations (e.g. all but those with Phase 2 notices). Parallel screening presents a small risk that a customer-sited project may be charged for upgrades that would otherwise have been constructed by an ahead-in-queue community solar garden. We do not have evidence this has happened so far. Regardless, the Cost Share program would reduce the risk to customers of this possibility. As noted below, not all Distribution Upgrades would be eligible for the Cost Share program as proposed, so parallel screening would not result in extreme high-cost upgrades being shared among this group of projects.

Cost-Sharing Proposal Details:

Eligibility:

- Applications up to 40kW (AC) would be eligible to participate.
 - Nameplate capacity would be used to determine eligibility unless a project established a different maximum export capability.
- Applications would pay for their own metering and site-specific equipment
- Upgrades that are routinely or occasionally needed would be eligible. This includes:
 - All upgrades to the secondary system
 - Primary conductor extensions and upgrades
 - Primary transformer upgrades
 - Full list to be determined
- Upgrades beyond these would typically not be eligible for the cost share program. Whenever an eligible project is determined to require an upgrade that is not eligible, Xcel would file a letter with the Commission¹ explaining the relevant facility study results and including all supporting documentation.

Calculating the Per-Project Upgrade Charge

- In Year 1, Xcel would calculate the Upgrade Charge as follows:
 - Sum the upgrade costs that were assessed to applications up to 40kW (including interconnected, in progress, and withdrawn projects) *deemed complete the prior calendar year*.
 - Only include costs for projects that received a cost estimate
 - For interconnected projects, use final costs paid per the IA
 - For other projects, use cost estimates from facilities studies

¹ Docket 16-521 or Docket 18-714 or other?

- *NOTE: We recommend including costs from withdrawn applications because more projects that receive bills for distribution upgrades are likely to move forward under a cost-share approach.*
 - Sum the Supplemental Screening fee (\$200 per project) paid by applications up to 40kW (interconnected, in progress, and withdrawn) *deemed complete the prior calendar year.*
 - Sum the number of applications included in the above total OR forecast the number of applications likely to reach the facilities study stage during the coming program year.
 - Divide (Upgrade Costs Assessed + Supplemental Screening Fees) by (Number of Applications) to arrive at a Per-Project Upgrade Charge to assess to each eligible project during *the coming program year.*
- In Years 2 and beyond, Xcel would calculate the Upgrade Charge as follows:
 - Sum the upgrade costs that were incurred by eligible applications during the program year (excluding withdrawn applications), plus expected upgrade costs for in-progress eligible projects.
 - Given that some projects in the program year will not have final upgrade costs by the end of year, Xcel would need to add expected remaining disbursements to the upgrade costs already identified.
 - Expected remaining disbursements would be calculated using a transparent process informed by data on the historical percent of Applications that receive PTO, and assuming the Per-Project Upgrade Cost for that program year for each anticipated project.
 - Sum the number of applications included in the above total OR forecast the number of applications likely to reach the facilities study stage during the coming program year.
 - Forecast the balance in the DER Cost Share Account for the prior year's participants: total actual collections, subtract actual disbursements, subtract expected disbursements.
 - Subtract the forecasted account balance from total actual-plus-expected disbursements, and divide this cost by the above number of projects (actual or forecast) to arrive at a Per-Project Upgrade Charge to assess to each eligible project for *the coming program year.*
- As needed, Xcel and/or stakeholders can propose modifications to these formulas to the Commission.
- Xcel would make an annual filing with data on the performance of the cost-share program, proposing the following year's Upgrade Charge, and demonstrating how the proposed Upgrade Charge was calculated.
 - If Xcel used slight modifications to inputs or methodology during the annual update process, it would need to specify those in the annual report.

Program Operations

- Xcel would create a DER Cost Share Account into which projects would pay their Upgrade Charge, and which would be used to pay for any upgrades required for eligible interconnections.
- Xcel would track applications, Upgrade Charges, upgrade costs assessed during facilities studies, and actual disbursements on a calendar year basis.
- Eligible Applications would be assessed the Upgrade Charge after their applications are Deemed Complete.
 - *NOTE: We considered whether the fee should be assessed at the beginning of the process, or during the IA process. Assessing the fee at the beginning may facilitate more streamlining and is more reasonable to do under the flat fee approach. If a per-kW fee were used, it may be preferable to assess the fee at the time of IA instead.*
- Eligible Applications would *not* be assessed a fee to cover Supplemental Screens on top of the Upgrade Charge, because these costs are included in the Upgrade Charge calculation.
- Eligible Applications that cancel/withdraw before signing the IA would receive a refund or credit toward a future project.
 - *NOTE: We considered whether refunds should be offered, and whether they should be for the full amount. We believe a full refund up to the IA stage is fair but are open to discussion.*
- The Upgrade Charge for the current calendar year would be available on Xcel's website and the interconnection portal. After Commission approval, the Upgrade Charge for the coming year would also be listed on Xcel's website and the portal.
- Eligible Projects for which Xcel had identified ineligible upgrades would be assessed the cost of the ineligible upgrades instead. Xcel would provide the customer with detailed information about why the ineligible upgrade was needed, and file this with the Commission (see above). Customers in this position could work through dispute resolution channels if they wanted to challenge the outcome, but would otherwise need to pay the full upgrade cost or withdraw the project unless the Commission determined otherwise.
- Projects would not be eligible for Permission to Operate until they had paid the appropriate Upgrade Charge.
- Under- and over-collections would roll into the subsequent year's Upgrade Charge, by including the forecasted balance for a prior year in the calculation of the next year's Upgrade Charge.
- Xcel would make annual compliance filings to the Commission to report on program performance, account balance, impact of the cost-share program on timely completion of process steps, and potentially other metrics. In these reports, Xcel could request that

more significant under- or over-collections be addressed through a direct charge or refund to the relevant participants.

Procedural Matters

- This may require an amendment to MN DIP sections 5.6.1 and 5.6.5, and MN DIA 4.1.1, 4.2 and 6.1.1 (re: “actual costs of Distribution Upgrades”)
- It could also be accomplished by adding to MNDIP the *option* of adopting a cost-sharing program for DER up to 40kW, as an alternative to charging each project its actual costs.
- Greater transparency into distribution upgrade costs would be required for this process to work. Before implementation, and in the annual reports for this program, Xcel would need to demonstrate that the distribution upgrade costs it is charging customers are reasonable. At minimum, we believe it would be reasonable for Xcel to:
 - Develop (or provide publicly if already existing) a Cost Guide that documents standard cost estimates for Distribution Upgrades that projects up to 40kW routinely or occasionally require, in advance of the program’s implementation. We would expect Xcel to file this with the Commission and file any updates to the guide over time as well.
 - Record information about Distribution Upgrades that are completed for Eligible Applications each year, including: the equipment installed, equipment replaced, labor time, transportation, etc.
 - Record initial and final cost estimates prepared for each customer in Salesforce for ease of reporting.
 - Make it clear to Applications that fail screens what project size (and inverter settings) would allow the project to connect without construction of distribution facilities.