STATE OF MINNESOTA
BEFORE THE
PUBLIC UTILITIES COMMISSION

Katie J. Sieben	Chair
Dan Lipschultz	Commissioner
Matthew Schuerger	Commissioner
Valerie Means	Commissioner
John Tuma	Commissioner

In the Matter of Xcel Energy's 2019 Distribution System Hosting Capacity Study	Docket No. E002/M-19-685

RESPONSE COMMENTS OF THE INTERSTATE RENEWABLE ENERGY COUNCIL, INC. ON XCEL ENERGY'S 2019 HOSTING CAPACITY ANALYSIS

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I. Introduction and Recommendations

The Commission's January 14, 2020 Notice of Supplemental Comment Period on Xcel Energy's 2019 Distribution System Hosting Analysis Report (Xcel's 2019 HCA)[1] requested that parties submit response comments. The Interstate Renewable Energy Council, Inc. (IREC) hereby submits these comments highlighting two key themes.

First, Xcel uses ratepayer funds to collect a significant amount of data that can be used to help identify suitable locations for deploying distributed energy resources (DERs). The Commission should require Xcel to publish the full scope of this data so all customers can benefit from the increased transparency, and the more widespread utilization of DERs due to improved efficiencies and reduced costs of connecting DERs.

Second, performing monthly HCA updates and publishing more granular HCA results will provide Minnesotans updated and detailed information to guide the interconnection of new DERs. Despite requests from stakeholders over multiple years,[2] Xcel has not considered how to implement these improvements. It proposes again delaying consideration of these issues—as well a standard for withholding data—for another year. The Commission should reject Xcel's proposed delays and instead require monthly updates and publication of available distribution system data because they will produce a truly useful HCA tool for customers.

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[1] Xcel Energy, Dkt. E002/M-19-685, Distribution System – Hosting Capacity Analysis Report (Nov. 1, 2019).

[2] *See e.g.*, Comments of the Minnesota Department of Commerce, Division of Energy Resources, Docket No. E002/M-19-685, at 28 (Dec. 30, 2019) (Department Comments) (recommendations 2 and 6 requesting specific plans for improvements in Xcel's reply comments); Comments of the Interstate Renewable Energy Council, Inc. on Xcel's 2017 Distribution System Hosting Capacity Report, Docket No. E002/M-17-777 (Feb. 2, 2018) (requesting more frequent updates and more granular results in response to Xcel's 2017 HCA).

IREC's opening comments discussed these and several other ways that Xcel can improve its HCA.[3] In sum, IREC recommends that the Commission adopt the following twelve recommendations requiring Xcel to:

A. Provide More Frequent Updates and More Granular Results.

1. On a monthly basis,
    i. identify feeders where significant changes in load, configuration, or generation occurred,
    ii. update or rebuild the model of those feeders, and then
    iii. publish updated HCA data and results for those feeders.[4]
2. Publish the criteria violation values for each HCA model run and location.[5]
3. Publish HCA results using peak load for each month of the year, daytime minimum load in each month of the year and absolute minimum load in each month of the year.[6]
4. Include a unique name or number for each line segment in the map's pop-up boxes.[7]
5. Show the actual locations of distribution system lines instead of broad blocks of color on the HCA map.[8]
6. Include on the HCA map and in downloadable spreadsheet format the following data: Transformer Name, Transformer Absolute Min, Load Tap Changer (LTC) or Regulator, Feeder Absolute Min, and Network or Radial.[9]

B. Enable Reasonable Information Sharing and Transparency, Without Adversely Impacting Customer Privacy and Security.

7. When the 15/15 standard calls for the redaction of customer energy use data (CEUD) at the substation or feeder level to protect customer privacy, it is only

[3] Dkt. E002/M-19-685, Comments of the Interstate Renewable Energy Council, Inc. on Xcel Energy's 2019 Hosting Capacity Analysis (Dec. 30, 2019) (IREC Opening Comments).

[4] IREC Opening Comments at 6-12.

[5] IREC Opening Comments at 12-15, 16-17. The criteria that Xcel used in 2019 analysis are: Primary Over-Voltage, Primary Voltage Deviation, Regulator Voltage Deviation, Thermal for Discharging DER, Additional Element Fault Current, Breaker Relay Reduction of Reach, Reverse Power Flow, and Unintentional Islanding.

[6] IREC Opening Comments at 15-16.

[7] IREC Opening Comments at 16-17.

[8] IREC Opening Comments at 28-29.

[9] IREC Opening Comments at 34-35.

appropriate to redact load data at that individual level.[10] All other HCA data should be published on Xcel's map, and in a downloadable spreadsheet.

8. Publish monthly peak load, monthly absolute minimum load, and monthly daytime minimum load, by substation and feeder, unless that data violates the 15/15 standard.[11]
9. Before withholding any HCA data for security reasons, Xcel must demonstrate that publishing data for a specific site creates a significant risk that is substantial enough to outweigh the benefits of providing this transparency to facilitate optimal siting of distributed energy resources (DERs).[12]

C. Address Load Analysis, Stakeholder Feedback on Technical Assumptions, and Data Validation.

10. Provide an HCA that is useful for identifying how much new DER load a feeder, or sections of a feeder, can feasibly accommodate without additional study, upgrades, or cost.[13]
11. Develop a written data validation plan for HCA results, accept written feedback from stakeholders on a draft of the written plan, and then include the final plan in the next HCA report.[14]

Finally, IREC recommends that the Commission:

12. Oversee and facilitate a discussion with Xcel and stakeholders regarding the technical assumptions, limiting criteria, and thresholds used in Xcel's HCA. After this discussion, the Commission should issue an order setting the thresholds and assumptions for Xcel to use in its HCA.[15] This discussion should address:
    i. thresholds for what constitutes a significant change in configuration, load, or generation to warrant rebuilding a feeder model;
    ii. use of the Maximum Tap Regulators in Over/Under-Voltage Analysis setting;
    iii. analysis assumptions for Primary Voltage Deviation;
    iv. other voltage analysis issues identified in IREC's opening comments;
    v. limitations on Unintentional Islanding; and
    vi. other topics identified by stakeholders for review.

[10] IREC Opening Comments at 17-22. Xcel's 2019 HCA includes the following load data: annual peak load and annual daytime minimum load.

[11] IREC Opening Comments at 22-23.

[12] IREC Opening Comments at 24-28.

[13] IREC Opening Comments at 29-30.

[14] IREC Opening Comments at 35-37.

[15] IREC Opening Comments at 30-34.

II. Xcel should publish HCA data to help customers design and site distributed energy resources.

Xcel has, and the DRIVE model produces, a considerable amount of HCA data that Xcel does not currently publish. Some of this data would make the HCA results considerably more useful in helping customers design and site distributed energy resources in a manner that benefits Minnesota ratepayers. Since Xcel uses ratepayer dollars to produce this data, the Commission should require Xcel to provide all customers access to this data so they can get the greatest benefit from it.

A. Xcel's HCA should provide pre-application report data that it identified as having "no limitation" to immediate publication.

In Xcel's survey regarding HCA improvements, stakeholders most often requested including basic distribution system data provided in the pre-application report.[16] In response to this feedback, Xcel now publishes some of this data in its HCA. This is a welcome improvement, however in the 2019 HCA report Xcel argues that it does not want to provide all basic distribution system data to customers.[17] This led the Minnesota Department of Commerce (Department) to find that "the level of discussion pertaining to integrating the pre-application data report and the HCA that was provided in the 2019 Report is inadequate and insufficient."[18] IREC agrees with the Department that Xcel's report is insufficient.

Xcel should have offered to provide as much basic distribution system data as possible rather than arguing against combining the HCA and pre-application report. Xcel argues against

[16] Xcel's 2019 HCA, Attachment A, at 47 (all citations to Attachment A use the numbering in the upper right corner of the page).

[17] Xcel's 2019 HCA, Attachment A, at 46-50.

[18] Department Comments at 10-11.

combining them because the "HCA should provide a generalized analysis of all locations,"[19] while the pre-application report is for a "specific location on our system."[20] To the contrary, the HCA is an analysis thousands of specific locations, called nodes, on each feeder. Xcel acknowledges that "we perform the [HCA] analysis at each node on the feeder[s]" of the distribution system.[21] The HCA is the opposite of a generalized analysis. The Commission should disregard this argument because it is erroneous.

Xcel also argues against combining the HCA and pre-application report because it collects fees for the pre-application report.[22] Customers should not have to pay a fee to access data that Xcel has readily available and can simply upload to a public map. Moreover, customers always have access to the HCA map, while customers must wait 15 business days after requesting a pre-application report for Xcel to gather and send the data.[23]

Xcel's response to IREC Information Request No. 6[24] demonstrates that Xcel can provide more basic distribution system data without any technology upgrades, customer privacy concerns, or security concerns. Xcel states there is there is "No Limitation" to publishing Transformer Name, Transformer Absolute Min, Load Tap Changer (LTC) or Regulator, Feeder Absolute Min, and Network or Radial.[25] The Commission should order Xcel to immediately

[19] Xcel Reply Comments at 28.

[20] Xcel Reply Comments at 8.

[21] Xcel Reply Comments at 10.

[22] Xcel Reply Comments at 8.

[23] Docket No. E999/CI-16-521, State of Minnesota Distributed Energy Resources Interconnection Process § 1.4 (April 19, 2019).

[24] Xcel's responses to IREC's information requests were provided as Attachment A to IREC's opening comments: Xcel Energy's Response to IREC Information Requests Nos. 1-6 (Dec. 17, 2019); Xcel Energy's Response to IREC Information Request No. 7 (Dec. 23, 2019); Xcel Energy's Response to IREC Information Requests Nos. 8-26 (Dec. 17, 2019).

[25] Xcel Energy's Response to IREC Information Request No. 6.

publish this basic system data in its map and tabular spreadsheet because it provides real value to customers and Xcel cannot identify a reason for withholding this information.

B. Xcel should publish more granular HCA results.

Further, when Xcel uses DRIVE—a tool funded with ratepayer dollars—it provides more results than Xcel publishes.

DRIVE provides eight criteria violations, yet Xcel publishes only the single most limiting criteria violation. This leaves customers without access to important information about the system constraints at their proposed point of interconnection. In IREC's opening comments, we described how a customer could use the other criteria violations to design a new DER that avoids costly upgrades.[26] Xcel acknowledges that all the criteria violation values are available to it, yet it does not commit to providing more detailed results.[27] Instead, Xcel suggests that providing these results may mislead customers.[28] Xcel demeans its customers' sophistication. Customers and developers are smart market participants that can understand and use every relevant data point that is available to them.

DRIVE also provides line segment (also known as sub-feeder level) results in tabular format, yet Xcel only publishes a summary spreadsheet at the feeder level. Xcel acknowledges that its spreadsheet does "not specifically point out where on a particular feeder the capacity is."[29] Without knowing where on the feeder specific results correlate to, the results in the spreadsheet are much less valuable. To allow users identify specific locations on a feeder, IREC

[26] IREC Opening Comments at 13-14.

[27] Xcel Reply Comments at 12.

[28] Xcel Reply Comments at 13.

[29] Xcel Reply Comments at 12.

recommends that the downloadable spreadsheet and the map's pop-up boxes include a unique name or number for each line segment. Further, IREC recommends that Xcel provide all the criteria violation values for each line segment in a downloadable spreadsheet. Xcel argues that "providing a spreadsheet for over a thousand feeders with thousands of nodes per feeder would be cumbersome, at best, for individuals to utilize and overly complicate the tabular results."[30] With this argument, Xcel seems to suggest that its customers are not sophisticated enough to use this information, and then uses this to justify not publishing readily available data. Not only are the two issues are unrelated, the former is belittling and also untrue given the availability of data processing software, advanced analytical capabilities, and other tools that customers and developers can and do use to make more informed decisions about DER system design.

As such, the Commission should order Xcel to publish all of the criteria violations, and basic distribution system data, to ensure the greatest value is extracted from the HCA results.

III. Monthly updates would make Xcel's HCA a useful tool.

Xcel agrees with IREC and other stakeholders "that a more frequent cadence of HCA information would increase the accuracy and relevance of the information."[31]

Stakeholders further find that it is reasonable for Xcel to incur additional costs to provide up to date and useful HCA results. IREC agrees with the Department that: "It is reasonable to expect that the Company will incur additional expenses to develop the HCA into a more meaningful tool for stakeholders."[32] Moreover, IREC's opening comments demonstrate that more frequent updates may not actually result in significantly increased costs. Xcel agrees "that

[30] Xcel Reply Comments at 12.

[31] Xcel Reply Comments at 10.

[32] Department Comments at 11.

targeted updates where changes are occurring on the distribution system may reduce the overall cost of more frequent HCA reports."[33]

IREC also pointed out that Xcel included inappropriate calculations in its cost estimates.[34] Like IREC, the Department criticizes Xcel's cost estimate for including one-fourth of the DRIVE software's acquisition cost.[35] Xcel paid a one-time cost to acquire DRIVE, used DRIVE in four annual HCAs since, and plans to use DRIVE in the future.[36] The Department notes that Xcel typically uses a 3-15 year useful life for capitalized software assets in general utility accounting, and failed to provide "information that would support a 4-year amortization period for the DRIVE Tool."[37] Therefore, the Department concludes that "the cost to perform the 2019 Report may actually be less than what Xcel represented in the instant filing."[38] IREC agrees that Xcel did not sufficiently support its decision to include one-fourth of the total acquisition costs in its estimate. In addition, IREC noted that Xcel was unable to find costs that add up to the $300,000 estimate included in its report, and it is not reasonable to include the $50,000 that Xcel paid EPRI to perform the analysis of feeders with zero hosting capacity in an annual cost estimate. For these reasons, the annual cost is likely much less than Xcel's estimate.

Xcel does not contest that performing monthly updates is the best practice for HCA. Instead, Xcel incorrectly argues that this best practice is "rooted in non-traditional regulatory

[33] Xcel Reply Comments at 10.

[34] IREC Opening Comments at 8-12.

[35] Department Comments at 21-22.

[36] Xcel Energy's Response to IREC Information Request No. 7.D.ii.; Xcel's 2019 HCA, Attachment A, at 6-7.

[37] Department Comments at 21-22 citing Docket No. E,G002/D-19-490.

[38] Department Comments at 21-22.

paradigms" that "may not directly transfer to Minnesota."[39] Minnesota statutes include the traditional requirement that this Commission regulate utilities "in the public interest."[40] "This command necessarily presumes that private interests, absent regulation's constraints and inducements, will diverge from the public interest," observed regulatory expert Scott Hempling.[41] The traditional regulatory paradigm set by Minnesota law and explained by Mr. Hempling requires this Commission to align Xcel's actions with the interest of the public, not merely the interests of Xcel's private shareholders.

In this case, Xcel's shareholders have an interest in discouraging DER deployment so that Xcel can own, and earn a return on, investments in utility-scale generation resources. Providing monthly updates to the HCA will provide DER developers the information necessary to more efficiently site generation that displaces a portion of shareholders' planned generation investments. There is nothing more fundamental to the traditional regulatory paradigm that requiring a utility to act in the public interest. The Commission should find that more frequent HCA updates provide an important public benefit, and require Xcel to perform monthly updates.

IV. Providing monthly results would help customers design photovoltaic systems to avoid seasonal limitations.

Customers, when provided monthly HCA results, can design DERs that benefit instead of hinder grid operations.[42] For example, a customer that knows the feeder's peak load for each month of the year and the daytime minimum load for each month of the year understands the

[39] Xcel Reply Comments at 10.

[40] See, *e.g.*, Minn. Stat. § 216B.01, 216B.045(5), 216B.16(1a)(b), 216B.16(7b)(b)(8)-(10), 216B.16(7c), 216B.16(7e)(d), 216B.162(7)(b)(1), 216B.1635(4)-(6), 216B.1636(2)(b)(2)(v)-(xi).

[41] Scott Hempling, *Regulating Public Utility Performance*, American Bar Association, at 3 (2013).

[42] IREC Opening Comments at 15-16.

seasonal load profile of the feeder. Based on monthly load data, she might be able to discern that a new photovoltaic system could operate without reverse power flow for ten months of the year, but that for two months of a year the project would not risk reverse power flow. With this information, the customer and developer could then design the project to include mitigations, such as a lower export limit or increased on-site load for those two months, that would allow the project to interconnect without grid impacts or associated upgrade costs. Xcel should provide monthly HCA results so customers can design DERs that avoid seasonal limitations. This will benefit interconnection customers and will also allow the state to take greater advantage of existing grid resources.

V. The Commission should set the technical assumptions, limiting criteria, and thresholds used in Xcel's HCA.

IREC recommends that the Commission oversee and facilitate a discussion regarding the technical assumptions, limiting criteria, and thresholds used in Xcel's HCA and then set those assumptions and thresholders by order. This will allow stakeholders to discuss with Xcel the technical assumptions it uses while allowing the Commission to retain oversight of these important choices.

Xcel acknowledges that "that in order to incorporate stakeholder feedback into our future HCA iterations, we will need to engage stakeholders sooner than we have in the past, which has largely waited until the Commission has taken action on the current HCA."[43] IREC thanks Xcel for acknowledging that its previous HCA cycles were not designed to allow meaningful stakeholder input. IREC welcomes the opportunity to discuss the technical assumptions with Xcel in the coming month. IREC's opening comments pointed out several ways that Xcel's

[43] Xcel Reply Comments at 23.

technical assumptions may produce inaccurate HCA results. In order to address these concerns, the Commission should convene stakeholders for these discussions then issue a decision fixing the HCA's technical assumptions.

VI. Xcel should perform a hosting capacity analysis to facilitate interconnection of new DER load.

Another way that the HCA could provide customers value and support the state's energy goals is by including a load analysis. Fresh Energy explains that new DER load, including energy storage and electric vehicles, and heating electrification are necessary to meet Minnesota's energy goals.[44] Performing an HCA for new load can help meet those goals by providing the best locations on the distribution gird for new DER load. Xcel argues that its traditional load analysis process is sufficient, therefore there is no need for a load HCA.[45] Xcel misses the point. Under the traditional process, Xcel can require a time-intensive study and a customer will not know if a particular site will trigger costly upgrades until after that study. In contrast, a load HCA will unlock the ability to site new DER load without trigging time-incentive studies or costly upgrades. For example, a local business chain seeking to locate electric vehicle chargers at its various locations could review the available load capacity at all its stores and install chargers only in locations least likely to trigger costly upgrades to Xcel's system.

Additionally, it is IREC's understanding that such an analysis would not require any additional updates to feeder models, which is the most time-intensive part of the HCA. Instead, performing HCA for new DER load only requires taking the feeder models that are already in the

[44] Comments of Fresh Energy at 3.

[45] Xcel's Reply Comments at 14.

DRIVE tool, providing appropriate load data, and requesting the results. Xcel suggests that performing this analysis will be onerous because it uses different load data.[46] Using different load data is not onerous; it is the exact same process, using the same software tools, as the HCA today.

IREC supports the Department's expectation that Xcel "engage additional stakeholders during the inception of the next iteration of the HCA" and that it be required to publish an HCA that is "responsive to the stakeholder processes."[47] As noted in IREC's opening comments, Xcel's outreach likely did not reach a sufficient number of stakeholders that work on battery storage and electric vehicles.[48] There is a whole host of other entities besides solar developers that could benefit greatly from having access to a robust HCA that includes both load and generation analyses. Deployment of DERs to benefit the system requires a full range of DERs to be deployed, including demand response, electric vehicles, and dynamic energy storage. Xcel should perform a complete HCA that includes both load and generation analyses so that customers can help deploy smart DERs that avoid system impacts while also offering system benefits.

VII. The Commission should individually evaluate each privacy and security concern raised by Xcel.

IREC takes grid security seriously and does not support the publication of data that puts customers or the grid itself at greater risk. The Commission should separately evaluate each privacy and security concern raised by Xcel to determine if it justifies withholding data that would allow customers to optimize the design and siting of DERs. Unfortunately, Xcel does not

[46] Xcel's Reply Comments at 14.

[47] Department Comments at 9-10.

[48] IREC Opening Comments at 23.

clearly delineate when it makes claims of customer privacy and claims of security risk. It also does not differentiate between physical security concerns and cybersecurity concerns. By conflating its concerns and describing broad and generalized risks, Xcel ignores the Commission's direction to provide "a full description and *specific basis* for withholding the information"[49] and makes the Commission's evaluation of Xcel's concerns more difficult. IREC's earlier comments untangled Xcel's arguments.[50] We identified each concern raised by Xcel, the applicable standard the Commission should use to evaluate the concern, and evaluated the concern. The Commission should also examine each of Xcel's claims individually.

Xcel makes claims of customer privacy and security to support withholding data from customers. Earlier, IREC identified that Xcel withholds more data than is necessary to protect customer privacy.[51] Xcel's reply comments do not even attempt to refute IREC's arguments regarding the scope of data that should be withheld to protect customer energy use data.

Xcel and IREC describe similar standards that the Commission should use to guide its evaluation of each security concern. Following the Commission's direction that "*Xcel must provide* the Commission with a full description and specific basis for withholding that information,"[52] IREC's standard places the burden on Xcel to "demonstrate that the risk is substantial enough that it would outweigh the well documented benefits of providing this transparency to facilitate optimal siting of DERs in accordance with the state's clean energy

[49] Order Accepting Study and Setting Further Requirements, Dkt. E-002/M-18-684 at 14 (Aug. 15, 2019) (Ordering Paragraph 2.C) (emphasis added).

[50] IREC Opening Comments at 17-29; IREC Reply Comments at 3-6.

[51] IREC Opening Comments at 17-22.

[52] Order Accepting Study and Setting Further Requirements, Dkt. E-002/M-18-684 at 11 (emphasis added).

goals."[53] Xcel posits a similar standard, but shifts the burden to stakeholders to make "a clear demonstration that the public interest outweighs the risks."[54] IREC believes that it is appropriate to place the burden on utilities because they have knowledge of their systems and the resources to articulate their concerns. Regardless, there is a substantial public benefit to publishing a detailed and useful HCA to support the efficient interconnection of DERs.

IREC does not take the position that there is no case where certain information in the HCA maps might warrant protection, but broad and generalized claims of security risk are inadequate in light of the value that distribution system transparency can have to customers, the grid, and Minnesota's clean energy market. The fact that a facility is "critical" does not mean that the best way to protect it is to hide all information about it. Not all information is going to increase the vulnerability of the facility and some information (such as the location) is likely already available via other public means. As we noted earlier, some security experts found that there are better methods to protect the electric power system from attack.[55] A nuanced consideration of these security issues does not necessarily lead to the conclusion that redacting vast swaths of information is actually the best way to protect the grid and its customers.

Finally, Xcel's reply comments argue that the Commission should not even consider security risks in this proceeding. Xcel proposes to delay consideration of any security risks to a

[53] IREC Opening Comments at 24.

[54] Xcel's Reply Comments at 2.

[55] National Research Council, Terrorism and the Electric Power Delivery System, 2012, Washington, DC, The National Academies Press, at 33-36, https://doi.org/10.17226/12050 (prepared by the Committee on Enhancing the Robustness and Resilience of Future Electrical Transmission and Distribution in the United States to Terrorist Attack) (Concluding that due to the fact that electric facilities can be easily located on the ground and online, it is ineffective to try to control access to their locations, and rather better to focus on other types of security techniques).

different proceeding involving other utilities.[56] IREC disagrees. The Commission clearly teed up these issues for consideration now in its order requiring Xcel to explain why it wants to withhold data.[57] Xcel has been on notice since that order was issued in August 2019 that these issues would be resolved in this docket. Xcel could have invited other utilities to participate in this docket or provided testimony to support its positions. Xcel chose not to. Further, IREC has used substantial resources responding to Xcel's security concerns. Delay in issuing a decision on security issues would result in unnecessary duplication of effort and unnecessary waste of the state's administrative resources. The Commission should reject Xcel's request to delay its consideration of security issues and address the arguments raised in this proceeding.

VIII. Conclusion

IREC appreciates that a lot of effort, resources, and time (on the part of all parties, including the Commission) has gone into developing and improving the HCA, and we are pleased to see incremental progress being made. However, there are further improvements to make that will substantially improve the HCA as a useful tool, and the Commission should build on this progress by directing further enhancements to Xcel's analysis. These reply comments include twelve recommendations that the Commission should adopt to improve Xcel's HCA and resolve the need for data redaction in the HCA.

There is no need to delay in implementing further improvements to the HCA or resolving security issues. Under Xcel's proposal, tangible improvements to the HCA—including more frequent updates, establishing a data redaction policy, and publishing distribution system data that is readily available to Xcel—are not considered by Xcel until the next HCA report is filed,

[56] Xcel Reply Comments at 3.

[57] Order Accepting Study and Setting Further Requirements, Dkt. E-002/M-18-684 at 11.

and would not be required by the Commission until 2021.[58] Yet stakeholders suggested these improvements to Xcel and the Commission repeatedly over the years, and their need is thoroughly supported by the record in this docket. The Commission should reject Xcel's proposed delays and instead require monthly updates and publication of available distribution system data this year.

The best way to increase the value of Xcel's HCA for customers is to implement monthly updates and provide more granular results. Implementing IREC's recommended HCA improvements will go a long way towards helping customers achieve Minnesota's goals for more clean energy and increased DER deployment.

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Respectfully submitted,

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[58] Xcel Reply Comments at 9.

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