


Staff Briefing Papers

Meeting Date	March 28, 2019	Agenda Item **3A
Company	Xcel Energy	
Docket No.	E002/M-18-714	
	In the Matter of Tariff Revisions to Implement Updated DER Interconnection Process and Standard Interconnection Agreement in E999/CI-16-521	
Issues	Should the Commission approve or modify Xcel Energy's proposed tariff revisions to implement the updated interconnection standards (MN DIP/DIA)?	
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 Relevant Documents	Date
MN PUC	
Notice of Updated Draft MN DIP and MN DIA	November 30, 2018
Informational Notice on Process	January 10, 2019
ExParte Communication Report	March 11, 2019
Xcel Energy	
Initial Petition	December 14, 2018
MN PUC IR #1-7 Response	February 19, 2019
Reply	February 22, 2019
Department of Commerce	
Initial	February 4, 2019
Reply	February 22, 2019
City of Minneapolis, Comments	February 4, 2019
Institute for Local Self Reliance, Comments	February 22, 2019

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The attached materials are work papers of the Commission Staff. They are intended for use by the Public Utilities Commission and are based upon information already in the record unless noted otherwise.

I. Statement of the Issues

1. Should the Commission approve or modify Xcel Energy's proposed tariff revisions to implement the updated interconnection standards (MN DIP/DIA)?

II. Background

The Commission's August 13, 2018 Order Establishing Updated Interconnection Process and Standard Interconnection Agreement in E999/CI-16-521 approved a near-final version of the Minnesota Distributed Energy Resource Interconnection (DER) Process and Agreement (MN DIP and MN DIA) with a 90-day timeframe for rate-regulated utilities to file updated tariffs per Minn. Stat. 216B.1611; Subd. 3¹ and established an effective date of June 17, 2019.

On November 30, 2018, the Commission issued a Notice of Updated MN DIP/DIA incorporating the additional details from the Distributed Generation Workgroup requested in the Commission's August 13, 2018 Order.

On December 14, 2018, Xcel Energy filed a comprehensive package of tariff revisions to: 1) implement the updated MN DIP/DIA (this docket); and 2) make changes to the Solar*Rewards Community and Solar*Rewards programs that do not arise directly from the changes to the MN DIP/DIA (Docket Nos. E002/M-13-867 and E002/M-13-1015² respectively.) The second set of changes are addressed as separate agenda items and briefing papers.

On January 10, 2019, the Commission issued an Informational Notice on Process describing how the Commission would address the multiple, concurrent proposals; specifically, the red-lined edits to the Solar*Rewards program to comply with the Department of Commerce's November 21, 2018 Decision and the blue-lined edits would be addressed in this docket.

On February 4, 2019, the Department of Commerce filed comments recommending approval with minor modifications to clean up formatting issues.

On the same day, the City of Minneapolis filed comments focused on how depreciation is considered in interconnection costs borne by customers.

On February 7, 2019, Commission staff issued Information Requests 1-7 to clarify: 1) Xcel Energy's proposed tariff revisions; 2) potentially out-of-date language in the tariff; and 3) consistency with the MN DIP/DIA.

¹ Order point 18: "Within 90 days, all rate-regulated utilities except Xcel shall file updated tariffs for Commission review and approval under Minn. Stat. § 216B.1611, subd. 3. Xcel shall file updated tariffs within 135 days." Xcel Energy's tariff revisions were filed on December 14, 2018 in E002/M-18-714 and will be considered separately by the Commission at a later date.

² E002/M-16-222 is also cited in Xcel's other petition.

On February 19, 2019, Xcel Energy filed responses to the PUC information requests #1-7.

On February 22, 2019, Xcel Energy, the Department, and Institute for Local Self Reliance filed reply comments.

On March 5, 2019, the Commission approved the final version of the MN DIP and MN DIA³ and took action on the proposed tariff revisions and MN DIP/DIA edits of the following utilities: Dakota Electric Association, Otter Tail Power, and Minnesota Power.⁴

III. Parties' Comments

Xcel Energy requests the Commission address the three petitions concurrently to allow the Company to "...enable the most efficient and cost-effective [IT] system upgrades required to comply with the order and facilitate other changes."⁵ These briefing papers address the proposed tariff revisions to comply with the MN DIP/DIA.

Xcel Energy's petition summarizes the edits to three sections of the Company's ratebook to comply with the updated MN DIP/DIA and includes a chart of annotations explaining the changes⁶:

Section	Summary of Changes in Initial Petition
7	<ul style="list-style-type: none"> • Closes a federal agency interconnection agreement to new applicants
9	<ul style="list-style-type: none"> • Cogeneration and Small Power Production (Net Metering) <ul style="list-style-type: none"> ○ Add definitions for MN DIP, MN DIA, MN Technical Requirements. • Solar*Rewards <ul style="list-style-type: none"> ○ Third generation contract removes interconnection process and requirements no longer applicable under MN DIP/DIA. ○ Solar Rewards customers must now sign the Uniform Statewide Contract and may need to sign the MN DIA in addition to the Solar* Rewards Standard Contract. • Solar Rewards Community⁷ <ul style="list-style-type: none"> ○ Clarifies interconnection process and requirements no longer applicable under MN DIP/DIA. Ex. interconnection timelines, study requirements and capacity screens. ○ Eliminates the Independent Engineer Dispute Resolution Process (Sheet Nos. 68.18 – 68.20) ○ 24-month clock for Mechanical Completion begins with signing MN DIA; rather than becoming "Expedited Ready"

³ As attached to the Commission's November 30, 2018 Notice in this docket.

⁴ Order forthcoming in Docket Nos. E999/CI-16-521; E111/M-18-711; E017/M-18-712; E015/M-18-713.

⁵ Xcel Energy, Initial Petition, p. 2

⁶ *Id.* Attachment B.

⁷ The contested tariff changes for this program are addressed in staff briefing papers in E002/M-13-867 with corresponding edits in Attachment B to these briefing papers.

Section	Summary of Changes in Initial Petition
	<ul style="list-style-type: none"> ○ Definition of “Mechanical Completion is changed (Sheet No. 64)
10	<ul style="list-style-type: none"> ● Add definitions for MN DIP, MN DIA, MN Technical Requirements. ● Keep the current interconnection process and agreement for pre- MN DIP applications; specify when MN DIP/DIA apply ● Include the entirety of the MN DIP and MN DIA
MN DIP/DIA	<ul style="list-style-type: none"> ● Specify what rates/fees apply ● Company specific contact information ● Move the Assignment form for the MN DIA to a stand-alone document; rather than an attachment to the MN DIA. ● Minor clean up edits

These staff briefing papers defer discussion of the changes to the Community Solar Garden Program to the briefing papers in Docket No. E002/M-13-867. However, Xcel Energy’s filing breaks down the tariff pages for the CSG program between the two dockets as follows:

Xcel Proposed Changes to Community Solar Garden Program Tariff Sheets	
Both 18-714 and 13-867	66.1, 67.3, 75, 77
Only in 13-867	65, 70, 73
Only in 18-714	64, 64.1-.2, 67, 67.1-.2, 68, 68.1-.21, 69.1, 71, 76, 76.1, 87

If the Commission chooses to modify Xcel’s proposed edits related to the IE dispute resolution process, the Commission will need to address Xcel’s proposed edits in this docket (see Attachment B to these briefing papers consistent with Appendix B in Staff Briefing Papers in E002/M-13-867.

Additional Edits Proposed in Response to PUC Information Request (Xcel IR Response 1-7)

In response to Commission Staff’s information requests, Xcel Energy identified a number of additional clean up edits in Sections 9 and 10⁸ (see Attachment A to these briefing papers.) **(Decision Option 2).**

Under Xcel Energy’s Rules and Regulations Applicable to Cogeneration and Small Power Production Facilities (Section No. 9, Sheet No. 5), Xcel proposes to add:

APPLICATION OF THE MN DIP

To the extent that an application or interconnection is subject to the MN DIP, and there is any inconsistency between the provisions of this Section 9 and the MN DIP as set forth in the Section 10 tariff or the MN Technical Requirements, the provisions of the MN DIP and MN Technical Requirements shall control over the provisions of this Section 9 tariff.

⁸ Xcel, MN PUC IR Response #1-7

Xcel Energy explains “[t]he intent of the language is to make it clear that in the event of conflicts between current tariffs and the MN DIP, then the MN DIP should control.”⁹ No parties commented on this; however, see **IV. Staff Analysis** for further considerations.

City of Minneapolis

The City of Minneapolis filed initial comments requesting interconnection costs to customers be net cost *after depreciation*. Minneapolis argues this change would allow the utility to capture “... the financial benefits associated with depreciating the asset during its time in service, and the interconnecting party’s contribution may be greatly reduced depending on the age of the equipment being replaced, resulting in more distributed energy projects at a lower, but fair, cost to the customer or developer.”¹⁰

Institute for Local Self Reliance (ILSR)

ILSR supports approval of Xcel Energy’s tariff revisions and agrees with the City of Minneapolis that “... customers [should] not be charged the full, undepreciated cost for existing or upgraded equipment.”¹¹

Department of Commerce

The Department recommends approval of Xcel Energy’s proposed tariff revisions with two modifications which Xcel supports¹²:

- Remove the Pre-application Report Request Form and related language in Section 10 Sheets 168 and 169; and
- Correct the definitions of Interconnection Agreement and Interconnection Application contained in the Glossary of Terms (Section 10, Sheet 206) to remove the error messages.

Xcel Energy

The Company does not support the City of Minneapolis recommendation, argues it is out of scope, and points to several MN DIP/DIA sections that require the Interconnection Customer to pay for the actual costs of Distribution Upgrades.¹³ Further, the Company provides a description of the current accounting treatment of the costs of distribution upgrades.¹⁴

⁹ Xcel, MN PUC IR Response #1, p. 1

¹⁰ City of Minneapolis, p. 1

¹¹ ILSR, p. 3

¹² Xcel Reply, p. 2

¹³ *Id.*

¹⁴ *Id.* Attachment A, pp. 1-2

IV. Staff Analysis

Interconnection Cost Considerations

The City of Minneapolis and ILSR raise important considerations about accounting and costs as customers and developers pay for upgrades to Xcel Energy's distribution system; however, the specific question of how to account for depreciation was not in focus for the update of the statewide interconnection standards (MN DIP/DIA) nor this implementation stage. Xcel raises two additional issues for consideration: 1) how to treat actual net salvage value for the equipment being replaced by the Interconnection Customer's upgrades; and 2) the time value of money related to the amortization of the deferred tax asset resulting from the taxable Contribution in Aid of Construction (CIAC) revenue (i.e. Interconnection Customer's payment of Distribution Upgrades.)¹⁵ The latter, if Xcel's practice changed to account for the 20-year deferment, could result in 20-35% higher costs¹⁶ for Interconnection Customer. The Commission has not addressed these issues in determining actual costs of interconnection to-date. If the Commission is interested in further consideration, this topic could be referred to the Distributed Generation Workgroup. **(Decision Option #4).**

Interconnection Standards and Program Specific Requirements

One of the goals in updating Minnesota's statewide interconnection standards was to create transparency and consistency. During Distributed Generation Workgroup meetings, this involved evaluating interconnection process and technical requirements that were incorporated into a program's tariff over time for possible inclusion in the statewide standards and/or elimination from the program tariff.

As such, Staff appreciates the intent behind Xcel Energy's proposed language at Section 9; Sheet No. 5 Application of the MN DIP; however, in the Company's own IR responses one can see the tension between when interconnection or program details should apply. In Xcel Energy's MN PUC IR Response in E002/M-13-1015, the Company describes how the description of maximum AC capacity at MN DIP 5.14.3 is not appropriate for determining a qualifying facilities' AC capacity for determining net metering eligibility.¹⁷ Staff does not comment on the appropriateness of this claim; rather, uses it to illustrate the inconsistency between this claim and the language proposed in Xcel's Rules and Regulations Applicable to Cogeneration and Small Power Production at Section 9; Sheet No. 5 Application of the MN DIP. As staff understands Xcel's proposed language, the MN DIP shall control over the provisions in Section 9 that would lead the Company to calculate a qualifying facility's AC differently than what is allowed under MN DIP 5.14.3; however, that is clearly not the Company's intent. A similar challenge could arise when considering what constitutes a DER system under interconnection standards versus program terms and conditions (i.e. having a qualifying facility and a separate

¹⁵ *Id.*

¹⁶ Xcel estimates 20%; however, at 3% annual inflation over 20 years, staff estimate the present value increase at approximately 35%.

¹⁷ Xcel, MN PUC IR #1 (E002/M-13-1015), (a), pp. 1-3

DER behind the same point of common coupling as described in the Company's same IR response.)¹⁸

Staff raised this issue with the Company in a permissible ex parte communication¹⁹, and the Company responded with the following red-line addition to the proposed language at Section 9; Sheet No. 5 Application of the MN DIP (**Decision Option 3**):

APPLICATION OF THE MN DIP

To the extent that an application or interconnection is subject to the MN DIP, and there is any inconsistency between the provisions of this Section 9 and the MN DIP as set forth in the Section 10 tariff or the MN Technical Requirements, the provisions of the MN DIP and MN Technical Requirements shall control over the provisions of this Section 9 tariff. Notwithstanding this, for purposes of interpreting this Section 9 tariff the MN DIP or MN Technical Requirements will not control over the provisions of this Section 9 tariff that define the terms "Qualifying Facility" and "Generation System".

This proposed change makes the language consistent with Xcel Energy's IR responses related to the business practice change proposed for how the company proposes to calculate capacity for net metering eligibility in Docket No. E002/M-13-1015. As staff discusses in the briefing papers in that docket, this could be interpreted as a policy change to net metering with little party comment. If the Commission approves Xcel's proposed business practice change and/or this edit, it may be worthwhile to acknowledge this as approving non-contested tariff language and not necessarily weighing in on net metering policy more broadly.

Another complication with this proposed language is clarity on how it is to be applied to the rest of Section 9 tariffs; i.e. how is "this Section 9 tariff" interpreted. It is located under Rules and Regulations Applicable to Cogeneration and Small Power Production (traditionally understood as qualifying facilities for net metering or PURPA); however, Section 9 also includes the Community Solar Garden program and Solar*Rewards Incentive contracts. Before adopting this language, the Commission may wish to seek clarification on how this language is to be applied in the context of CSG and Solar*Rewards.

Lastly, Xcel has made a number of proposed edits to these tariffs to make them consistent with the MN DIP. This language can be interpreted to clarify that the MN DIP controls or may be viewed as obscuring the tariffs for customers by a lack of clarity on what specifically applies.

Size Threshold for when Uniform Statewide Contract May Replace MN DIA

Xcel Energy currently allows projects up to 250 kW to use the Uniform Statewide Contract as the Interconnection Agreement; however, with the proposed revisions this will change to 20 kW or below. Xcel explains this is because that size threshold aligns with the Simplified Process. Both Dakota Electric Association and Minnesota Power increased this size threshold to 40 kW.

¹⁸ *Id.* (b), pp. 3-4

¹⁹ MN PUC, Ex Parte Communication Report (March 11, 2019), e-filed in E002/M-18-714, E002/M-16-222 and E002/M-13-1015

If Xcel Energy chooses to increase this size threshold in the future, an edit under MN DIP 1.1.5 is needed to align the terms and conditions currently attached to the Simplified Application with the higher threshold projects.²⁰

Compliance Filing

Assuming the Commission modifies Xcel Energy's Initial Petition tariff sheets as recommended by the Company and Department, Xcel Energy will need to make a compliance filing reflecting the final proposed tariff sheets. Minn. Rules 7829.2900; Subp. 2 states: "Unless otherwise ordered by the commission, utilities shall file a compliance filing within ten days of the effective date of a commission order requiring it." Staff offer a decision option for the compliance filing to be submitted no later than 10 days from the issuance of the Order. **(Decision Option #5).** Staff encourages the Company to be expeditious with the compliance filing to ensure adequate time for review and possible objections prior to the June 17th effective date.

V. Decision Options

1. Approve Xcel Energy's Initial Petition as filed on December 14, 2018 in this docket with an effective date of June 17, 2019.
2. Approve Xcel Energy's tariff revisions as proposed in the December 14, 2018 Initial Petition with the modifications proposed by the Company's Response to MN PUC Information Request #1-7 and Reply Comments with an effective date of June 17, 2019.²¹ *(Note: If the Commission adopted Decision Option 2 or 3 in 13-867 related to the Independent Engineer Dispute Resolution Process, additional action is needed in this decision option (see Attachment B.))*
3. Adopt Xcel Energy's proposed addition under "Application of the MN DIP" at Section No. 9; Sheet No. 5.²²
4. Refer the issue of how interconnection costs are treated to the Distributed Generation Workgroup for further consideration *(Staff modification to City of Minneapolis/ILSR.)*
5. Require Xcel Energy to file a compliance filing consistent with the Commission's decisions in this matter no later than 10 days from the issuance of the Order.

Staff recommends: 2, 4, 5. No position on 3.

²⁰ See Staff Briefing Papers (February 21, 2019) in E111/M-18-711, pp. 5-6

²¹ See Attachment A to these briefing papers; Items 1-11.

²² See Attachment A, Item 12.

Xcel Energy's Proposed Edits to December 14, 2018 Filing²³

Section 9: Cogeneration and Small Power Production

1. **Section No. 9; Sheet No. 1.1.** The Company would agree to have the definitions of MN DIP and MN DIA on Sheet 9-1.1 refer to the tariffed versions of the MN DIP and MN DIA in the Company's Section 10 tariff instead of to Docket No. E999/CI-16-521.
2. **Section No. 9; Sheet No. 6.** We would agree that the current tariff provisions on Sheet 9-6 regarding Lighting Protection, Backfeed Prevention, and Additional Safety Devices can be removed from the tariff because the issues align with other technical topics in the Minnesota Technical Requirements as necessary.

Section 9: Solar*Rewards Contract

3. **Section No. 9; Sheet No. 49.04. 5(b).** Reference should have been to Section 2(b) rather than Section 2(c).

Section 9: Solar*Rewards Community Contract For Those Receiving Solar*Rewards Incentive

4. **Section No. 9; Sheet No. 59.01 1(e) and Sheet No. 59.04 4(h).** References to "Made in Minnesota" in our Solar*Rewards Community Contract for Those Receiving Solar*Rewards incentive should have been removed from the tariff. We are willing to remove par. 1(e) from Sheet 59.01 and par. 4(h) from Sheet 59.04.

Section 9: Standard Contract for Solar*Rewards Community

5. **Section 9; Sheet No. 71.** The Company would agree to have the definitions of MN DIP and MN DIA on Sheet 9-71 refer to the tariffed versions of the MN DIP and MN DIA in the Company's Section 10 tariff instead of to Docket No. E999/CI-16-521.

Sec. 10 Distributed Generation Standard Interconnection and Power Purchase Tariff

6. **Section 10; Sheet No. 78-79. TERMS AND CONDITIONS OF SERVICES (6).** The sentence on Sheet 78, item 6, could be modified to state: "The appropriate metering options available are determined by the Minnesota Technical Requirements or utility requirements."
7. **Section 10; Sheet No. 78-79. TERMS AND CONDITIONS OF SERVICES.** Company proposes modifying language on Section 10, Sheet 78 to state "be consistent with the MN Technical Requirements and MN DIA, including the Operating Agreement attached to the MN DIA or Uniform Statewide Contract."

²³ Xcel Energy, MN PUC IR #1-7 Response; Reply Comments at p. 2; MN PUC Ex Parte Communication Report (Mar. 11, 2019) at p. 3

8. **Section 10; Sheet No. 78-79. TERMS AND CONDITIONS OF SERVICES (9).** The following sentence relating to a P.E. signature can be removed from this instance so that MN DIP 1.5.1.4 governs when a P.E. signature is required.

If the interconnecting device is not Type-Certified or if multiple devices are operated in parallel at the facility, review and approval of the interconnecting devices and protection systems by a Professional Electrical Engineer, registered in the State of Minnesota, is required.

9. **Section 10; Sheet No. 10.80-82. TYPICAL COSTS.** We would support removing this provision because our Section 9 tariff has current metering rates for smaller sized systems.

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10. **Section 10; Sheet No. 168-169.** Remove the Pre-application Report Request Form and related language.²⁴

11. **Section 10; Sheet No. 206.** Correct error message references. For Interconnection Agreement, reference MN DIP Section 1.1.5. For Interconnection Amendment, reference MN DIP Section 1.6.²⁵

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12. **Section 9; Sheet No. 5.** Include the following red-line to proposed language under “Application of the MN DIP.”²⁶

APPLICATION OF THE MN DIP

To the extent that an application or interconnection is subject to the MN DIP, and there is any inconsistency between the provisions of this Section 9 and the MN DIP as set forth in the Section 10 tariff or the MN Technical Requirements, the provisions of the MN DIP and MN Technical Requirements shall control over the provisions of this Section 9 tariff. Notwithstanding this, for purposes of interpreting this Section 9 tariff the MN DIP or MN Technical Requirements will not control over the provisions of this Section 9 tariff that define the terms “Qualifying Facility” and “Generation System”.

²⁴ Xcel Reply, p. 2

²⁵ *Id.*

²⁶ MN PUC Ex Parte Report, p. 3

Edits related to Docket No. E002/M-13-867 Decision Options

Independent Engineer Dispute Resolution

If the Commission adopts 13-867 Decision Option #2, make the following changes:

Section 9: Community Solar Garden Program

1. **Section No. 9; Sheet No. 68.19, sub. 9.**²⁷ Replace “[Intentionally Omitted].” with the following:

9. **Requests for Independent Engineer to Resolve Material Disputes Affecting Interconnection Application**
 - a. Any applicant may submit interconnection disputes materially affecting the application to an independent engineering mediator selected or approved by the Department to ensure neutrality, under MN DIP Section 5.3.6. A Company challenge over the suitability of the applicant’s selected mediator shall be decided in the first instance by the Department, with a time-limited right of appeal to the Commission. The independent engineering mediator may request additional information from parties necessary to resolve the dispute. The independent engineering mediator will make a determination of the issues in a written report which provides a description of the pertinent facts, the **ADDITIONAL TERMS AND CONDITIONS – FOR APPLICATIONS NOT SUBJECT TO THE MN DIP** conclusions and basis for the conclusions.

If the Commission adopts 13-867 Decision Option #3, make the following changes²⁸:

2. **Section No. 10; Sheet Nos. 195-196 at MN DIP 5.3.6.** Reference or incorporate the Independent Engineer Dispute Resolution process (*CHOOSE EITHER: Continue current IE dispute resolution process outlined in Section 9; Sheet Nos. 68.11-68.13 or MNSEIA proposed revised IE Dispute Mediation at Section 9; Sheet No. 68.19, sub. 9*) applies for (*CHOOSE EITHER: all CSG interconnection customers or all Xcel Energy interconnection customers.*)
 - a. If **Section 9, Sheet Nos. 68.11-68.13** is the reference, make the following edit:

Section No. 9; Sheet Nos. 68.11 – 68.12. Remove the header “**ADDITIONAL TERMS AND CONDITIONS – FOR APPLICATIONS NOT SUBJECT TO THE MN DIP**”

Section No. 9; Sheet No. 68.13. Move header “**ADDITIONAL TERMS AND CONDITIONS – FOR APPLICATIONS NOT SUBJECT TO THE MN DIP**” below 9(i).

²⁷ *Id.*, VII. black line version

²⁸ This is staff’s attempt to capture the CSG developer recommendation as a tariff edit. Staff recommend the Commission adopt specific edits to the tariff to reduce the risk of objections to the compliance filing given the deadline of the MN DIP effective date (June 17, 2019.) Staff also cautions that the working assumption in Docket No. E999/CI-16-521 was that public utilities would not make changes to the statewide MN DIP/DIA