

Staff Briefing Papers

Meeting Date March 5, 2019 Agenda Item 3*

Company All Electric Utilities, Dakota Electric Association,
Otter Tail Power, Minnesota Power

Docket **E999/CI-16-521** (All Electric Utilities), **E111/M-18-711** (Dakota Electric), **E017/**
No. **M-18-712** (Otter Tail Power), **E015/M-18-713** (Minnesota Power)

In the Matter of Utility Compliance to Order Establishing Updated Interconnection Process and Standard Interconnection Agreement in E999/CI-16-521

Issues Should the Commission approve the updated Minnesota Distributed Energy Resource Interconnection Process and Agreement (MN DIP and MN DIA)?
Should the Commission approve or modify Dakota Electric Association, Otter Tail Power and Minnesota Power’s updated tariffs and interconnection standards?

Staff Michelle Rosier Michelle.rosier@state.mn.us 651-201-2212

 **Relevant Documents**

Date

16-521 Update of Statewide Interconnection Standards

MN PUC

Order Establishing Updated Interconnection Process and Standard Interconnection Agreement	August 13, 2018
Draft DGWG Meeting Summary #7 and Packet	November 30, 2018
Notice of Updated Draft MN DIP and MN DIA	November 30, 2018

To request this document in another format such as large print or audio, call 651.296.0406 (voice). Persons with a hearing or speech impairment may call using their preferred Telecommunications Relay Service or email consumer.puc@state.mn.us for assistance.

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.



Relevant Documents

Date

18-711 Dakota Electric Association

Dakota Electric Association	November 9, 2018
Initial Filing – Part 1	January 3, 2019
Compliance Filing – Updated MN DIP and MN DIA	January 4, 2019
Compliance Filing	February 5, 2019
Response to PUC Information Requests 1-4	January 29, 2019
Department of Commerce Comments	

18-712 Otter Tail Power

Otter Tail Power	
Supplemental Compliance Filing	January 4, 2019
Response to PUC Information Requests 1-2	February 7, 2019
Reply	February 14, 2019
Department of Commerce Comments	February 1, 2019

18-713 Minnesota Power

Minnesota Power	
Initial Filing	November 13, 2018
Response to PUC Information Requests 1-4	January 28, 2019
Department of Commerce Comments	February 1, 2019

I. Statement of the Issues

1. Should the Commission approve the updated Minnesota Distributed Energy Resource Interconnection Process and Agreement (MN DIP and MN DIA)?
2. Should the Commission approve or modify Dakota Electric Association, Otter Tail Power and Minnesota Power's updated tariffs and interconnection standards?

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. The Order deferred the following issues to the Distributed Generation Workgroup (DGWG) and Technical Subgroup (TSG) to resolve²:

- Pre-application report form (*New*)
- Certification of DER Equipment (MN DIP Att. 5)
- Simplified Process Timeline (MN DIP 2.3)
- MN DIA amendments (*New*)
- Certificate of Completion Template (*New*)
- Attachment 8: MN DIP flow charts (*New*)
- Fillable electronic forms for applications and agreements (MN DIP Att. 1-3, 6-7, and MN DIA)
- Definition of DER Capacity (MN DIP 5.14.3)

In addition, the DGWG identified two other issues as part of the final review:

- Assignment Form for MN DIA (*New*)
- Treatment of the Uniform Statewide Contract and Simplified Application's terms and conditions as MN DIA substitute

The Department of Commerce established subgroups of the DGWG on seven of the ten topics. The TSG resolved the definition of capacity and MN DIP 5.14.3.³ Commission staff developed responses to the treatment of the Uniform Statewide Contract and Simplified Application terms and conditions; as well as, fillable electronic forms for applications and agreements.

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 Order point 17.

³ Draft DGWG Meeting Summary #7, pp. 2-3

The DGWG discussed and resolved these topics at two in-person meetings (June 1, 2018 and November 9, 2018.)⁴ The Commission issued a Notice of Updated MN DIP and MN DIA and associated utility tariff dockets on November 30, 2018 with the final drafts as drafted by the DGWG. The Commission must still adopt this updated, draft MN DIP/DIA (**Decision Option 1.**)

As discussed in the Commission's August 13, 2018 Order⁵, updates or changes to the MN DIP/MN DIA require a Commission Order. As discussed below, utilities are adopting the MN DIP/DIA in tariffs differently and, in the case of Dakota Electric, editing the MN DIP/DIA to be more relevant for the cooperative's situation subject to Commission approval. (**Decision Option 2.**)

18-711 Dakota Electric Association

On November 9, 2018, Dakota Electric Association (DEA) submitted an initial compliance filing - the same day as the final DGWG meeting to resolve the outstanding topics identified in the August 13, 2018 Order.⁶

On January 4, 2019, Dakota Electric Association filed a revised compliance filing using the draft MN DIP and MN DIA incorporating the DGWG resolutions to the outstanding issues as attached to the Commission's November 30, 2018 Notice.

On January 23, 2019, Commission staff issued Information Requests 1 -4 to clarify: 1) how proposed edits in the DIP/DIA – DEA compared to the MN DIP/DIA⁷; 2) DEA's intent in updating distributed generation tariffs containing references to interconnection requirements⁸; and 3) implementation of the new online portal that DEA proposes to require for all DER Interconnection Customers.⁹

On January 29, 2019, the Department of Commerce filed comments recommending approval of Dakota Electric Association's MN DIP-DEA and MN DIA-DEA.

On February 5, 2019, Dakota Electric Association filed responses to the PUC information requests including proposed edits to the January 4, 2019 compliance filing enumerated in Attachment A to these briefing papers.

⁴ DGWG Meeting Summary #6 (June 1, 2018) and Draft DGWG Meeting Summary #7 (November 9, 2018); e-filed in E999/CI-16-521 on November 30, 2018. Staff briefing papers do not repeat the explanation of the DGWG resolutions provided in these summaries.

⁵ August 13, 2018 ORDER ESTABLISHING UPDATED INTERCONNECTION PROCESS AND STANDARD AGREEMENT (E999/CI-16-521), p. 20: "Any updates to the MN DIP and/or MN DIA would only occur through a Commission order after the filing of a formal petition by workgroup members or other stakeholders."

⁶ DEA, Initial Filing, pts. 1-3 (November 9, 2018). DEA Initial filing pt. 1 describes changes DEA is proposing in the current version of their MN DIP-DEA and MN DIA-DEA as filed on January 4, 2019.

⁷ DEA, IR Response #1-2

⁸ DEA, IR Response #3

⁹ DEA, IR Response #4

Neither party filed reply comments.

18-712 Otter Tail Power

On November 13, 2018, Otter Tail Power filed a letter noting the Company would file a "... supplement this filing with the updated draft MN DIP and MN DIA after the Executive Secretary incorporates the revised language from the Commission's order and DGWG's edits on the outstanding issues in the August 13, 2018 version of these documents."

On November 30, 2018, the Commission issued a Notice of Updated MN DIP and MN DIA and associated utility tariff dockets with the final drafts as drafted by the DGWG.

On January 4, 2019, Otter Tail Power filed its supplemental compliance filing that consisted of the MN DIP and MN DIA changed only to include reference to the Company and its contact information.

On January 23, 2019, Commission Staff issued Information Requests 1-2 to clarify Otter Tail Power's intent in updating distributed generation tariffs containing references to interconnection requirements¹⁰ and contact information provided in Otter Tail Power's proposed MN DIP/DIA.¹¹

On February 1, 2019, the Department of Commerce filed comments recommending Otter Tail Power submit a revised tariff including details of the MN DIP/DIA.

On February 7, 2019, Otter Tail Power filed responses to the PUC information request.

On February 14, 2019, Otter Tail Power filed reply comments reaffirming the Company's intent to file tariff revisions at an unspecified later date.

18-713 Minnesota Power

On November 13, 2018, Minnesota Power filed proposed tariff revisions¹² for consistency with the MN DIP/DIA and requested to extend the size threshold for when the Uniform Statewide Contract can replace the Interconnection Agreement from 20 kW to 40 kW.

On January 14, 2019, Commission Staff issued Information Requests 1-4 to clarify how the proposed edits in the tariffs were consistent with the MN DIP/DIA¹³ and if Minnesota Power would file the Company's applicable MN DIP/DIA with the Commission.¹⁴

¹⁰ MN PUC, Information Request #1

¹¹ MN PUC, Information Request #2

¹² Section V, pp. 60.0 – 60.7 Rider for Parallel Generation; Section V, pp. Rider for Standby Service, pp. 61.0 -61.9; Section V, pp. 82.0-82.3 Rider for Distributed Generation; Section VI, pp. Electric Service Regulation.

¹³ MN PUC, Information Request #1-#3

¹⁴ MN PUC, Information Request #4

On January 28, 2019, Minnesota Power filed responses to the PUC information requests including proposed edits to the November 13, 2018 filed proposed tariff revisions shown in Attachment B and C to these briefing papers.

On February 1, 2019, the Department of Commerce filed comments recommending Minnesota Power file a revised tariff with details of the MN DIP/DIA.

Neither Minnesota Power nor the Department filed reply comments.

III. Parties' Comments

18-711 Dakota Electric Association

The Department recommends approval of Dakota Electric Association's filing (**Decision Option 3**). The Department states that the MN DIP/DIA – DEA mirrors the MN DIP and MN DIA, and complies with the August 13, 2018 Order. Further, the Department supports Dakota Electric's proposal to expand eligibility for when the Uniform Statewide Contract may replace the MN DIA from 20 kW to 40 kW (MN DIP-DEA 1.1.5.1.2).¹⁵

Additional Edits Proposed in Response to PUC Information Request (DEA IR Response)

DEA proposes to further amend MN DIP-DEA to allow the interconnection terms and conditions attached to the Simplified Application to apply for projects > 20 kWac up to 40 kWac:

“If the DER application is for a qualifying DER which is 40kWac or less, utilizes a certified inverter and the Applicant chooses to use only the Uniform Statewide Contract, then the terms and conditions for the simplified process shall apply.”¹⁶

Staff believes DEA should clarify if this proposal intends to extend the Simplified Application, as suggested in the proposed DIP – DEA 1.1.5.1.4, to these projects; or, if these projects will complete a full Interconnection Application and may be eligible proceed through the Fast Track; rather than the Simplified Process. Staff propose an alternative¹⁷ if the latter applies:

Staff Alternative: Move MN DIP-DEA 1.1.5.1.5 to 1.1.5.2 consistent with the MN DIP, and amend MN DIP-DEA 1.1.5.1.4 as follows:

¹⁵ Department Comments, pp. 1-3

¹⁶ DEA, IR Response #1, p. 1. Staff note: Response suggests this language replaces “existing 1.1.5.1.5”; which is a change in formatting of MN DIP 1.1.5.2. Staff recommends this language amend, not replace, MN DIP-DEA 1.1.5.1.4 not 1.1.5.1.5, and that the MN DIP-DEA move 1.1.5.1.5 back to 1.1.5.2.

¹⁷ Attachment A (1.a) to these briefing papers

Signed Uniform Statewide Contract and either Attachment 2: Simplified Application or Attachment 3: Interconnection Application with the terms and conditions as found in Exhibit A of the Simplified Application which shall apply for projects eligible to replace the DIA with the Uniform Statewide Contract that do not qualify for the Simplified Process.

DEA proposes a number of minor edits to the proposed MN DIP-DEA for consistency with the utility-specific changes proposed in converting the MN DIP to the MN DIP-DEA (e.g. clarifying Upgrades as Distribution Upgrades since DEA is a distribution-only utility) and is willing to revert some of the proposed edits for more consistency with the MN DIP.¹⁸ Attachment A to these briefing papers summarizes DEA's proposed edits to the January 4, 2019 MN DIP-DEA and MN DIA-DEA filing (**Decision Option 4**). The Department did not comment on the edits proposed in DEA's IR Response.

DEA also offered further clarification of some of the proposed edits and the intended implementation of the MN DIP-DEA in the IR Response.¹⁹ For example, DEA proposes removing some of the information requested on the Interconnection Application template (MN DIP Attachment 3) stating the information is likely not needed and can be obtained during a Facilities Study (MN DIP 4.4; Att. 7) if required. Another change on the application is replacing "Requested In-Service Date" with "Estimated Installed Date" which DEA sees as similar terms, but could differ by months for larger DER. "Dakota Electric would like to know when to expect the physical installation to begin, so if the installation goes faster than expected, Dakota Electric can be ready to support the installation."²⁰

A notable implementation update is DEA will require electronic submission of interconnection applications utilizing an online portal created for Minnesota's cooperative utilities that allows customers to submit materials, signatures and payment electronically.²¹ DEA will begin testing the online portal in May 2019.

DEA will update the interconnection standards reference in the Association's Distributed Generation tariffs²² to the MN DIP-DEA and MN DIA-DEA, and will apply the tariffs consistent to the approved MN DIP-DEA and MN DIA-DEA.²³ (See IV. Staff Analysis for discussion of **Decision Option 5**).

18-712 Otter Tail Power

¹⁸ DEA, IR Response #1-#2.

¹⁹ DEA, IR Response #1-2, #4.

²⁰ DEA, IR Response #1(s)

²¹ DEA, IR Response #4

²² Schedule 55: Parallel Generation; Schedule 60: Standby Service; and Schedule 61: Distributed Generation.

²³ DEA, IR Response #3

Otter Tail Power requests approval of the January 4, 2019 supplemental filing which contains the MN DIP/DIA with edits to reflect the Company's contact information and fees. **(Decision Option 6)**. In response to Commission staff's information request, Otter Tail Power is open to revising its MN DIP/MN DIA to provide a single title referenced and establishing a separate email for distributed generation that will automatically forward to the correct individual.²⁴ **(Decision Option 7)**.

The Department notes Otter Tail Power did not provide tariff revisions, and requests submission of "... a revised tariff including, at a minimum, sufficient details of the MN DIP and MN DIA to inform customers of the various processes, timelines and fees, and incorporating the standard MN DIA."²⁵ Otter Tail Power is waiting until the MN DIP/DIA is approved to update its tariffs²⁶, and will include copies of the MN DIP/DIA and guides on their website. "OTP does not disagree with the Department that appropriate references to the MN DIP and MN DIA should be included in OTP's tariffs."²⁷ However, Otter Tail Power does not support putting the entire MN DIP/DIA or summaries of the standards in its tariff. Further, Otter Tail Power responds²⁸:

... OTP believes that each utility should have reasonable discretion on the amount of detail to include in its tariffs because each utility has a different tariff structure. We believe this approach is better than adopting specific topics or issues that must be addressed in a particular tariff.

A compliance filing that includes changes to tariff language is subject to a comment period. **(Decision Option 8)**.

18-713 Minnesota Power

Unlike Otter Tail Power, Minnesota Power did not submit a copy of the MN DIP with the Company specific contact information and fees; rather, the Company updated distributed generation tariffs for consistency with the MN DIP in its November 13, 2018 filing.²⁹ Further, the company, like Dakota Electric, proposed to expand the size threshold for when the Uniform Statewide Contract can replace the MN DIA from 20 kW to 40 kW.

The Department recommends approval of Minnesota Power's request to increase the size threshold for when the Uniform Statewide Contract can replace the MN DIA from 20 kW to 40 kW. **(Decision Option 9)**. Further, the Department recommends Minnesota Power file "... a

²⁴ OTP, IR Response #2

²⁵ Department Comments (18-712), pp.2-3

²⁶ OTP, IR Response #X, OTP

²⁷ OTP Reply, p. 1

²⁸ *Id.*

²⁹ See Attachment C to staff briefing papers for the red-line edits proposed in Minnesota Power's November 13, 2018 filing to the Rider for Parallel Generation (Sec. V, pp. 60.0-60.7), Rider for Standby Service (Sec. V, pp. 61.0- 61.9), Rider for Distributed Generation (Sec. V, pp. 82.0-82.3), and Electric Service Regulations of Minnesota Power (Sec. VI, pp. 3.0-3.23).

revised tariff including sufficient details of the MN DIP and the MN DIA to inform customers of the various processes, timelines, and fees, and incorporating the standard MN DIA.”³⁰ The Department did not comment on the proposed tariff revisions discussed below:

Rider for Parallel Generation (Sec. V, pp. 60.0-60.7)

Minnesota Power proposed an edit to the Terms and Conditions of this rider at Sec. V, p. 60.7 at #6 to address the Company’s proposal to allow customers with up to 40 kW DER interconnections to sign only the Uniform Statewide Contract. The proposed edit inadvertently removed the requirement that qualifying customers between 40 kW and 1000 kW sign the Uniform Statewide Contract that assigns the rates for these customers pursuant to Minn. Stat. 216B.164. In response to the PUC Information Request, Minnesota Power offered to correct this issue.³¹ Minnesota Power offered a number of additional edits to the November 13, 2018 proposed revision of this rider shown in Attachment B to staff briefing paper to: 1) be consistent with the MN DIP/DIA; or 2) update outdated references.³² **(Decision Option 10).**

Minnesota Power utilizes the terms "generators", "distributed generation systems", and "facilities" interchangeably. Minnesota Power is open to updating the tariff language so it consistently refers to "Distributed Energy Resource", in alignment with the MN DIP.³³ Staff does not recommend Minnesota Power make this change (see IV. Staff Analysis Tariff Revisions Consistent with MN DIP/DIA.)

Rider for Standby Service (Sec. V, pp. 61.0- 61.9)

Minnesota Power proposes updating the title reference to an interconnection agreement for the application of this rider at Sec. V. p. 61.0. **(Decision Option 11).** Staff recommends using a more general term like “Minnesota Power’s standard interconnection agreement” to account for existing customers who have interconnection agreements that are not titled “Minnesota Distributed Energy Resource Interconnection Agreement” **(Decision Option 11a)**, or otherwise clarify the reference to the MN DIA encapsulates existing interconnection agreements.

Rider for Distributed Generation (Sec. V, pp. 82.0-82.3)

Minnesota Power proposed three additional edits in response to PUC Information requests³⁴: 1) clarify application is for reference “the on-site interconnection of a Distributed Energy Resource operating in parallel with the Company’s distribution system”³⁵; 2) change “distributed generation system” to “Distributed Energy Resources”³⁶; and 3) updated the reference for

³⁰ Department Comments (18-713), p. 3

³¹ Minnesota Power, Response to PUC IR #1

³² *Id.*

³³ Minnesota Power, Response to PUC IR #1(c.iv)

³⁴ Minnesota Power, Response to PUC IR #2

³⁵ Sec. V, p. 82.0

³⁶ Sec. V, p. 82.0-82.3

capacity accreditation from “Mid-Continent Area Power Pool” to “Midcontinent Independent System Operator (MISO).”³⁷ **(Decision Option 12.)**

Similar to the Rider for Standby Service, Minnesota Power proposes to update the title reference to an interconnection agreement for application of this rider at Sec. V., p. 82.0. Staff recommends similar action to clarify this rider applies to both existing and future interconnection agreements. **(Decision Option 12a).**

Electric Service Regulations of Minnesota Power (Sec. VI, pp. 3.0-3.23)

Minnesota Power proposes two edits to Electric Service Regulations of Minnesota Power under the Section VII. Parallel Generation:

- 1) Under Design³⁸, allows for mutual agreement between the customer and Company, which could allow the DER to not operate in synchronization with the Company’s grid nor automatically disconnect when the grid de-energized (e.g. intentional islanding or black start service); and,
- 2) Under Customer Responsibility³⁹, updates the reference for the interconnection standards and includes “... or the most recent version of the interconnection standards.” **(Decision Option 13).**

For consistency, Minnesota Power is open to amending its Electric Service Regulations at IX. Deposits and Guarantees⁴⁰ to require guarantees for all type of services under the MN DIP/MN DIA.⁴¹ Minnesota Power addresses whether the MN DIP/MN DIA treatment of deposits and guarantees is consistent with Section IX of Electric Service Regulations:

The proposed treatment of deposits and guarantees in the MN DIP / MN DIA covers more than Minnesota Power Section IX Deposits and Guarantees. Minnesota Power’s Section IX refers to outstanding bills resulting from prior service that were not paid and/or disconnected, as well as poor credit history. The guarantee required in the MN DIP / MN DIA is required for all requested services.

³⁷ Sec. V, p. 82.1

³⁸ Section VI, p. 3.9; Sec. VII (39)

³⁹ Section VI, p.3.10; Sec. VII (41)

⁴⁰ Section VI. p. 3.14

⁴¹ Minnesota Power, Response to PUC IR #3

IV. Staff Analysis

Terms and Conditions When Uniform Statewide Contract is Interconnection Agreement (MN DIP 1.1.5.1.4)

As explained in the Dakota Electric docket, there is an issue with the MN DIP/MN DIA as proposed in the November 30, 2018 Notice when a utility increases the size threshold for when an eligible customer can elect to sign the Uniform Statewide Contract as the Interconnection Agreement (rather than also signing the DIA.) As written, one of the requirements listed in MN DIP 1.1.5.1.4 is that the customer also signs a Simplified Application (MN DIP Att. 2) which contains in Exhibit A Terms and Conditions for the interconnection. These terms and conditions are a simplified version of the MN DIA terms and conditions. Staff is not recommending adopting the solution proposed in the Dakota Electric docket for the statewide MN DIP/MN DIA because the DGWG has not discussed it. Minnesota Power will need to address this in the Company's MN DIP if the Commission approves the size threshold request. (**Decision Option 9a**).

Detail Needed for Tariff Revisions Consistent with MN DIP/DIA

The three utilities, at least initially, interpreted compliance with Minn. Stat. 216B.1611; Subd. 3. in different ways. Minnesota Power only filed revisions to their existing tariffs that attempted to align the tariffs with the MN DIP and MN DIA for consistency. Dakota Electric Association offered no revisions to existing tariffs, but did revise the MN DIP and MN DIA in an effort to maintain its consistency while aligning it with the rate-regulated cooperative's specific circumstances. Otter Tail Power did not offer revisions to existing tariffs, and provided only minimal revisions to and consistent with the MN DIP and MN DIA to identify contact information and fees.

The Department was the only party to comment in the utility's dockets, and appeared to interpret compliance with Minn. Stat. 216B.1611; Subd. 3 for both Minnesota Power and Otter Tail Power as "... a revised tariff including, at a minimum, sufficient details of the MN DIP and MN DIA to inform customers of the various processes, timelines and fees, and incorporating the standard MN DIA." The Department did not make a similar request of Dakota Electric Association. Minn. Stat. 216B.1611; Subd 3 reads:

Subd. 3. Distributed generation tariff.

Within 90 days of the issuance of an order under subdivision 2:

- (1) each public utility providing electric service at retail shall file a distributed generation tariff consistent with that order, for commission approval or approval with modification; and
- (2) each municipal utility and cooperative electric association shall adopt a distributed generation tariff that addresses the issues included in the commission's order.

If the Commission and/or Dakota Electric interprets (1) to apply, the Association should file a distributed generation tariff consistent with the approved MN DIP/DIA. **(Decision Option 5)**. If the Commission and/or Dakota Electric interprets (2) to apply, the Association's Board should adopt a distributed generation tariff that addresses the issues included in the MN DIP/DIA.

The Commission may wish to consider the role of the utility tariff and the MN DIP/DIA for the customer and the utility. In a past docket dealing with the level of detail that should be filed in a tariff, the Commission's January 26, 2010 Order⁴² discusses the importance of updating tariffs when there is a change in statute or rules, and refers to the utility tariff as "a single, comprehensive and accurate source of customer information."⁴³ Further, the Order states updating the tariff "affirms the utilities are aware of these changes and will change their practices to conform to them."⁴⁴ The MN DIP and MN DIA are comprehensive, statewide standards, developed by a workgroup of the utilities and other stakeholders and provided in full on the utility's webpage, which may be unique to the statutes and rules discussed in this Order.

Finally, a challenge in updating distributed generation tariffs for consistency with statewide interconnection standards as envisioned in Minn. Stat. 216B.1611 is reconciling with Minn. Stat. 216B.164 and related rules (Minn. Rules Ch. 7835) and the Commission's Orders on related programs and tariffs. This has come up at least twice in the DGWG: 1) Xcel's Community Solar Garden (CSG) Program; and 2) technical requirements for storage when the customer is net metered. In the first case, Xcel's CSG program tariff began to update interconnection requirements for the Company beyond what was required in the existing statewide interconnection standards through Commission Orders in Docket No. E002/M-13-867. The MN DIP/DIA and Xcel Energy's proposed tariff revisions incorporates several, but not all, of the CSG interconnection requirements.⁴⁵ The Technical Subgroup is still drafting the draft technical interconnection and interoperability requirements, and has discussed the difference between technical and programmatic requirements. For example, program requirement may include Net Energy Metering Integrity for net-metered customers with storage or production meters at the Company's expense for production-based incentives.

Tracking Tariff Changes

Utility ratebooks include footers that include the date and docket of the latest revision on each tariff page. Some utilities treat this tracking by the page; whereas, others appear to treat it by the entire rider. These footers are helpful when considering the history of the tariff; more so, when the footer identifies the date and docket where the last round of edits on that page were made. This also helps avoid confusion as to whether the Commission reviewed and approved specific tariff language in that docket. Staff requests changes to tariffs made in these dockets be recorded only on the page of the tariff where a red-lined edit has occurred. Minnesota Power is

⁴² January 26, 2010 ORDER APPROVING TARIFFS, REQUIRING TARIFFS, AND DIRECTING ON GOING TARIFF UPDATES TO REFLECT STATUTE AND RULE CHANGES (Docket No. 09-970)

⁴³ *Id.*, p. 3

⁴⁴ *Id.*

⁴⁵ E002/M-18-714 and E002/M-13-867

the only utility in these three dockets to have provided tariff revisions for consideration, so staff offer a decision option for Minnesota Power to capture this request (**Decision Option 13**).

Timing of Compliance Filings

The Commission's standard practice is for compliance filings to be due within 10 days of the issuance of the Order unless otherwise ordered by the Commission.⁴⁶ With an effective date for the MN DIP/MN DIA of June 17, 2019, the Commission and utilities may wish to consider compliance filings within 10 days "of the decision" (i.e. Agenda Meeting.) This is especially true for any tariff revisions not expressly ordered by the Commission to give time for the comment period review. For this reason, staff has proposed in compliance filing decision options the timeframe of "within 10 days of this decision."

⁴⁶ Minn. Rules 7829.2900; Subp. 2

V. Decision Options

Statewide MN DIP and MN DIA (16-521)

1. Approve the MN DIP and MN DIA attached to the Commission's November 30, 2018 Notice.
2. Affirm changes to the MN DIP and MN DIA require Commission approval; including how it is adopted by Dakota Electric, Otter Tail Power and Minnesota Power.

Dakota Electric Association (18-711)

3. Approve the MN DIP – DEA and MN DIA – DEA as filed in the January 4, 2019 Compliance Filing.
4. Approve the MN DIP – DEA and MN DIA – DEA as filed in the January 4, 2019 Compliance Filing with format corrections and Dakota Electric's proposed modifications.⁴⁷
 - a) Replace Dakota's proposed language with Staff Alternative (replace 1 with 1a in Attachment A to these briefing papers)
5. Require Dakota Electric Association to file a compliance filing within 10 days of this decision with the modified MN DIP-DEA, MN DIA-DEA and references updated in Schedule 55: Parallel Generation; Schedule 60: Standby Service; and Schedule 61: Distributed Generation.

Otter Tail Power (18-712)

6. Approve the MN DIP and MN DIA as filed in the January 4, 2019 Supplemental Filing.
7. Approve the MN DIP and MN DIA as filed in the January 4, 2019 Supplemental Filing modified to include a single title for the Interconnection Coordinator and a separate email for distributed generation that may be forwarded to the appropriate employee.
8. Require Otter Tail Power to file a compliance filing within 10 days of this decision; including:
 - a) At a minimum, the following tariff revisions consistent with the MN DIP/DIA: Section 11.01: Standby Service; Section 12.01-.03 Small Power Producer Rider; Section 12.04 Distributed Generation Service Rider
 - b) A copy of the MN DIP/MN DIA with Otter Tail Power's contact information, fee amounts, and consistent with this order.

⁴⁷ See Attachment A to these briefing papers. This decision options includes approving Dakota Electric's request to extend the size threshold from 20 kWac to 40 kWac for when the Uniform Statewide Contract with the terms and conditions provided in MN DIP Att. 2, Exhibit A replaces the MN DIA.

Minnesota Power (18-713)

9. Approve Minnesota Power's request to extend the size threshold from 20 kWac to 40 kWac for when the Uniform Statewide Contract with the terms and conditions provided in MN DIP Att. 2, Exhibit A replaces the MN DIA.
 - a) Require Minnesota Power to add language at MN DIP 1.1.5.1.4 to address the size threshold increase for when the Uniform Statewide Contract replaces the MN DIA.
10. Approve the November 13, 2018 filed revisions to Minnesota Power's Rider for Parallel Generation (Sec. V, pp. 60.0, 60.7) with Minnesota Power's proposed modifications from IR Response #1.⁴⁸
11. Approve the November 13, 2018 filed revisions to Minnesota Power's Rider for Standby Service (Sec. V; p. 61.0).⁴⁹
 - a) Replace the proposed edit "Minnesota Distributed Energy Resource Interconnect Agreement" with "Minnesota Power's standard interconnection agreement."
12. Approve the November 13, 2018 filed revisions to Minnesota Power's Rider for Distributed Generation (Sec. V, 82.0-82.3) with Minnesota Power's proposed modifications from IR Response #2.⁵⁰
 - a) Replace the proposed edit "Minnesota Distributed Energy Resource Interconnect Agreement" at Sec. V, p. 82.0 with "Minnesota Power's standard interconnection agreement."
13. Approve the November 13, 2018 revisions to Minnesota Power's Electric Service Regulations of Minnesota Power (Section VI, p. 3.9-3.10).
14. Require Minnesota Power to update the footers of the revised tariffs to show this docket and date only on pages of the tariff that included edits approved by this order.
15. Require Minnesota Power to file a compliance filing within 10 days of this decision that includes:
 - a) Rider for Parallel Generation, Rider for Standby Service, Rider for Distributed Generation, and Minnesota Power's Electric Service Regulations of Minnesota Power consistent with this order;
 - b) A copy of the MN DIP/MN DIA with Minnesota Power's contact information, fee amounts, and consistent with this order.

Staff recommends: 1, 2, 4, 7-15. Includes all lettered options. No position on 5.

⁴⁸ See Attachment B and C to these briefing papers.

⁴⁹ See Att. C

⁵⁰ See Att. B and C

Dakota Electric Association's Proposed Edits to January 4, 2019 MN DIP-DEA and MN DIA-DEA⁵¹

1. Replace MN DIP-DEA 1.1.5.1.5 with: "If the DER application is for a qualifying DER which is 40kWac or less, utilizes a certified inverter and the Applicant chooses to use only the Uniform Statewide Contract, then the terms and conditions for the simplified process shall apply."

Staff Alternative: Move MN DIP-DEA 1.1.5.1.5 to 1.1.5.2 consistent with the MN DIP, and amend MN DIP-DEA 1.1.5.1.4 as follows:

Signed Uniform Statewide Contract and either Attachment 2: Simplified Application or Attachment 3: Interconnection Application with the terms and conditions as found in Exhibit A of the Simplified Application which shall apply for projects eligible to replace the DIA with the Uniform Statewide Contract that do not qualify for the Simplified Process.

2. MN DIP-DEA 4.4.1: Change the "local transmission supplier" to the defined term of "Transmission Provider."
3. MN DIP-DEA 5.6.5 and 5.6.6: Add the word "Distribution" before the word "Upgrades" in three different locations within 5.6.6. Add the word "Distribution" before the word "Upgrades" in 5.6.5.
4. DIP – DEA; Att. 1 Pre-Application Report Request Form.
 - a. Include the question about existing DER from MN DIP; Att. 1 Pre-Application Report Request Form.
 - b. Replace references to "Point of Interconnection" with "Point of Common Coupling."
5. DIP – DEA; Att. 2 & 3 Simplified Application and Interconnection Application:
 - a. Replace references to "Utility's Agreement for Cogeneration and Small Power Production" with "Uniform Statewide Contract."
 - b. Replace references to "Utility's Distribution Interconnection Agreement" with "Utility's Distributed Energy Resource⁵² Interconnection Agreement."
6. DIP – DEA; Att. 2.Simplified Application: Remove non-applicable reference to when a licensed Minnesota Professional Engineer is required.
7. DIP – DEA; Exhibit B: Energy Storage
 - a. Add: "Additional information in the application may be required. See Minnesota Technical Requirements. (An application to interconnect is required only for storage designed to operate in parallel with the grid. Backup generators and electric vehicles that do not parallel need not apply.)"
 - b. Replace "Address of Generating Facility" with "Address of DER"

⁵¹ DEA, Response to PUC IR #1

⁵² Staff notes using DER for Distributed Energy Resource is consistent with the rest of the document.

Minnesota Power's Proposed Edits to November 13, 2018 Filing⁵³ (Proposed Tariff Revisions)

Rider for Parallel Generation

- a. **Section V, pg. no. 60.0. I.** Minnesota Power will update the term "rated" to read "AC capacity."
- b. **Section V, pg. no. 60.7.**
 - i. Minnesota Power will refer to the Rider for Standby Service rather than referring to "public utility's commission approved standby tariff."
 - ii. Minnesota Power will remove "B. for a utility not subject to the commission's rate authority, the service associated with the applicable tariff in effect under Minnesota Statutes, section 216B.1611; subdivision 3, clause (2)."
- c. **Section V, pg no. 60.7, Terms and Conditions**
 - i. Minnesota Power will update "interconnection contract" to reference "Interconnection Agreement" consistent with MN DIP 1.1.5.
 - ii. Minnesota Power will update the document to recognize a qualifying customer up to 1 MW is entitled to sign a Uniform Statewide Contract (Minn. R. 7835.9910; Minn. Stat. 216B.164; Subd. 6) and elect eligible rates.
 - iii. Minnesota Power will change "disput" to "dispute."

Rider for Distributed Generation

- a. **Section V, pg no. 82.0. Application.** Minnesota Power will update the applicability of the tariff to reference "the on-site interconnection of a Distributed Energy Resource operating in parallel with the Company's distribution system" for consistency with the MN DIP and Minn. Stat. Sec. 216B.1611, subd. 1(1).
- b. **Section V, pp. 82.0 – 82.3.** Minnesota Power will update the tariff language to reference Distributed Energy Resource, as opposed to distributed generation system.
- c. **Section V, pg. no. 82.1. Capacity/Energy Credits.** Minnesota Power will update the tariff language to reference Midcontinent Independent System Operator (MISO) as opposed to Mid-Continent Area Power Pool.

⁵³ Minnesota Power, Response to PUC IR #1-#2

**Minnesota Power's November 13, 2018
filed Proposed Tariff Revisions**
includes only red-lined edit and IR response edit pages

MINNESOTA POWER
ELECTRIC RATE BOOK - VOLUME I

SECTION V **PAGE NO.** 60.0
REVISION 3738

RIDER FOR PARALLEL GENERATION

APPLICATION

Applicable to cogenerator or small power producers rated at less than 1,000 kW. To any customer taking single or three phase service under one of the Company's standard electric rate schedules and who has entered into a contract with the Company for the sale of electricity as a cogenerator or small power producer (Seller) as defined under State or Federal Law.

RATE (Monthly)

The following charges and credits are applicable in addition to all charges for service being taken under Company's standard rate schedule:

- I. Sellers with facilities rated at less than 40 kW shall have the option of selling to Company under either the Average Retail Energy Rate, the Simultaneous Purchase and Sale Rate or the Time-of-Day Purchase Rate. The Rate selected shall be as specified in the Cogeneration and/or Small Power Production Facilities Agreement between Seller and Minnesota Power.

A. Average Retail Energy Rate

The Seller shall be billed according to the Company's applicable standard rate schedule for the energy (kWh) supplied by the Company that exceeds the amount of energy supplied by the Seller to the Company's distribution system during each billing period. The Seller will be subject to the following Meter Aggregation Charge. When energy supplied by the Seller exceeds the amount of energy supplied by the Company, the Seller shall be subject to the following Average Retail Energy Rate Credit:

Meter Aggregation Charge (Monthly, if option selected by Customer)

\$0.00

Average Retail Energy Rate Credit

9.60¢ per kWh of Net Energy - Residential Customers

10.32¢ per kWh of Net Energy - General Service Customers

8.28¢ per kWh of Net Energy - Large Light & Power Customers

B. Simultaneous Purchase and Sale Rate

The Seller shall be billed for all energy and capacity it consumes during each billing period according to the Company's applicable retail rate schedule. The Company shall purchase all energy and capacity which is made available to it by the Seller. The Seller will be subject to the following Meter Aggregation Charge and applicable Credit:

Meter Aggregation Charge (Monthly, if option selected by Customer)

\$0.00

Energy Credit

2.49¢ per kWh delivered to Company.

Filing Date ~~July 21, 2017~~ November 13, 2018 **MPUC Docket No.** E-999/CI-16-521
Effective Date ~~December 1, 2017~~ **Order Date** ~~October 31, 2017~~

Approved by: Marcia A. Podratz
Marcia A. Podratz
Director - Rates

MINNESOTA POWER
ELECTRIC RATE BOOK - VOLUME I

SECTION V **PAGE NO.** 60.7
REVISION 3738

RIDER FOR PARALLEL GENERATION

- A. for public utilities, service or power that includes backup or maintenance services, as described in the public utility's commission-approved standby tariff, necessary to make electricity service available to the distributed generation facility; and
- B. for a utility not subject to the commission's rate authority, the service associated with the applicable tariff in effect under Minnesota Statutes, section 216B.1611, subdivision 3, clause (2).

TERMS AND CONDITIONS

1. The interconnection between the QF and the Company must comply with the requirements in the most recently published edition of the National Electrical Safety Code issued by the Institute of Electrical and Electronics Engineers.
2. The QF is responsible for complying with all applicable local, state, and federal codes, including building codes, the National Electrical Code (NEC), the National Electrical Safety Code (NESC), and noise and emissions standards. The Company requires proof that the QF is in compliance with the NEC before the interconnection is made. The QF must obtain installation approval from an electrical inspector recognized by the Minnesota State Board of Electricity.
3. The QF's generation system and installation must comply with the American National Standards Institute/Institute of Electrical and Electronics Engineers (ANSI/IEEE) standards applicable to the installation.
4. Any existing interconnection contract executed between the Company and a QF with capacity of less than 40 kilowatts remains in force until terminated by mutual agreement of the parties or as otherwise specified in the contract.
5. In accordance with Minnesota Rules 7835.5950, generators own all renewable energy credits unless other ownership is expressly provided for by a contract between the generator and the Company, state law specifies a different outcome, or specific commission orders or rules specify a different outcome.
6. Customers with generators under ~~1,000~~ 40 kW ac shall execute the Uniform Statewide Contract with the Company in the form prescribed by Minn. Rules 7835.9910. [Customers with generators 40 kW ac or greater and less than 10,000 kW ac shall execute the Minnesota Distributed Energy Resource Interconnection Agreement with the Company.](#) Before the Customer signs the Uniform Statewide Contract [or the Minnesota Distributed Energy Resource Interconnection Agreement](#), the Company shall provide the Customer a copy of, or link to current interconnection standards in accordance with Minnesota Rules 7835.4750.
7. In accordance with Minnesota Rules 7835.4500, in case of a dispute between the Company and a QF or an impasse in the negotiations between them, either party may request the Minnesota Public Utilities Commission (MPUC) to determine the issue. When the MPUC makes the determination, the burden of proof must be on the utility. Fees and costs for dispute resolution shall be in accordance with Minnesota Rules 7835.4550.
8. QFs with distributed generation systems rated at more than 100 kW may be required to take service under the Company's Rider for Standby Service, as described in the tariff.
9. Customers with generators sized between 40 kW and 1,000 kW taking service under the Rider for Parallel Generation will be required to install a separate production meter to record generation.

Filing Date ~~July 21, 2017~~ [November 13, 2018](#) **MPUC Docket No.** E-999/CI-16-521
Effective Date ~~December 1, 2017~~ **Order Date** ~~October 31, 2017~~

Approved by: Marcia A. Podratz
Marcia A. Podratz
Director - Rates

**MINNESOTA POWER
ELECTRIC RATE BOOK - VOLUME I**

SECTION V **PAGE NO.** 61.0
REVISION 6 TBD

RIDER FOR STANDBY SERVICE

APPLICATION

Applicable to any customer with on-site generation of 10 MW or less and taking service under one of Company's following standard rate schedules: General Service (Schedule 25), Large Light and Power Service (Schedule 55, 75), Municipal Pumping Service (Schedule 87) and Large Power Service (Schedule 54, 74) who has a distributed generation system which is able to generate on a continuous basis and who has entered into the "[Minnesota Distributed Energy Resource Interconnection Agreement](#)~~State of Minnesota Interconnection Agreement for the Interconnection of Extended Parallel Distributed Generation Systems with Electric Utilities~~" with [the](#) Company.

Service under this Rider shall be required for a customer who has a distributed generation system that is run on a continuous basis and for non-emergency purposes which normally serves all or a portion of that customer's electric load requirements, and who desires use of the Company's electric service for temporary backup. Exceptions to this Application include: (i) For any customers with distributed generation systems rated at 100 kW or less, standby service will be available through their standard rate schedules; or (ii) any customer, in lieu of service under this Rider, who provides physical assurance that standby service is not taken. A customer requesting physical assurance shall agree to furnish and install an approved load limiting device which shall be set and sealed by the Company to prevent the customer from utilizing standby service. The cost of the load limiting device shall be paid by the customer.

The Customer shall execute a Standby Service Agreement with the Company for service under this Rider. The initial minimum term of service taken under this Rider shall be one (1) year. At the end of the initial term the contract will be automatically renewed on an annual basis, unless written notice from either party is delivered to the other party no later than 180 days prior to the end of the initial term or any subsequent renewal thereof.

Energy provided to the Customer under this rider is limited to energy for Scheduled and Unscheduled Outages as defined below. The Customer shall not generate and allow energy flow onto the Company's system unless it is separately metered and permitted in accordance with the Company's Electric Service Regulations.

All provisions of the applicable standard rate schedule shall apply to service under this Rider except as noted below.

TYPE OF SERVICE

Service shall be taken at 60 hertz and at the voltage and phase relationship specified under the Company's applicable standard rate schedule for service to the Customer.

Filing Date ~~May 19, 2016~~ November 13, 2018 **MPUC Docket No.** E-999/CI-16-521
Effective Date ~~December 1, 2017~~ **Order Date** ~~October 3, 2017~~

Approved by: Marcia A. Podratz
Marcia A. Podratz
Director - Rates

MINNESOTA POWER
ELECTRIC RATE BOOK - VOLUME I

SECTION V PAGE NO. 82.0
REVISION 3 TBD

RIDER FOR DISTRIBUTED GENERATION SERVICE

APPLICATION

To any Customer taking service under one of Company's following standard rate schedules: Residential Service (Schedule 20), Residential Dual Fuel Interruptible (Schedule 21), Commercial/Industrial Dual Fuel Interruptible (Schedule 26), General Service (Schedule 25), Large Light and Power Service (Schedule 55, 75), Municipal Pumping Service (Schedule 87) and Large Power Service (Schedule 54, 74) and who has entered into the "~~Minnesota Distributed Energy Resource Interconnection Agreement~~~~State of Minnesota Interconnection Agreement for the Interconnection of Extended Parallel Distributed Generation Systems with Electric Utilities~~" with the Company for the interconnection and operation of an on-site extended parallel distributed generation system. The distributed generation system must be:

- a. an operable, permanently installed or mobile generation facility serving the customer receiving retail electric service at the same site; and
- b. fueled by natural gas or a renewable fuel, or another similarly clean fuel or combination of fuels of no more than 10 MW of interconnected capacity at a point of common coupling to Company's distribution system. The interconnection and operation of distributed generation systems at each point of common coupling shall be considered as a separate application of the Rider.

Service under this Rider shall be required for any Customer who meets the Application criteria in the previous paragraph, subject to the following exceptions: (i) any Customer who takes service, as applicable, under Company's Rider for Parallel Generation as established under Minnesota Rules Chapter 7835 – Cogeneration and Small Power Production; or (ii) any Customer, in lieu of service under this Rider, who pursues reasonable transactions outside this Rider as agreed to by Company and Customer.

Customer shall execute an electric service agreement and a power purchase agreement with Company for service under this Rider. The minimum term of service taken under this Rider shall be one (1) year or such longer period as may be required under the electric service agreement. Service under this Rider is subject to Company's Electric Service Regulations and any other rules as applicable. All provisions of the applicable standard rate schedule shall apply to service under this Rider except as noted below.

TYPE OF SERVICE

Output of the distributed generation system shall be provided at 60 hertz and at the voltage and phase relationship specified under Company's applicable standard rate schedule for service to Customer or as agreed to by Company and Customer.

RATE (Monthly)

The following charges and credits are applicable in addition to all charges for service being taken under Company's standard rate schedule:

Filing Date ~~November 2, 2009~~ November 13, 2018 MPUC Docket No. E-999/CI-16-521
Effective Date June 1, 2014 Order Date November 2, 2010

Approved by: Marcia A. Podratz
Marcia A. Podratz
Director - Rates

MINNESOTA POWER
ELECTRIC RATE BOOK - VOLUME I

SECTION V PAGE NO. 82.1
REVISION 3 TBD

RIDER FOR DISTRIBUTED GENERATION SERVICE

Service Charge: \$15.83

Capacity/Energy Credits:

Customer may sell all the energy produced by the distributed generation system to Company, use all the distributed generation system energy to meet its own electric load requirements or use a portion of the energy from the distributed generation system and sell the remaining to Company.

Company shall purchase all capacity and energy made available by Customer from the distributed generation system. Such capacity and energy shall be purchased by Company under the rates, terms and conditions for such purchases as established by Company in a power purchase agreement with Customer.

Capacity Credits shall only be provided on that capacity available to Company which meets the accreditation requirements of the Mid-Continent Area Power Pool or successor organization.

Capacity and Energy Credits shall be based on Company's calculation of avoided capacity and energy costs. The Capacity Credits in effect at the time Customer enters into a power purchase agreement with Company shall remain in effect for the length of the agreement. Energy Credits for use under the power purchase agreement shall vary by month and time period (on-peak and off-peak) and shall be updated annually for the upcoming calendar year. Upon written request by Customer and after Customer signs a confidentiality agreement, Company shall provide Customer the current schedule of Capacity and Energy Credits.

Delivery Charge (\$/kw):

Company may require any Customer with a distributed generation system of 1 MW or greater nameplate capacity rating to pay a Delivery Charge for all capacity and energy made available by Customer from the distributed generation system. Such Delivery Charge shall compensate Company for any additional distribution, transmission and ancillary services not included under this Rider provided by Company to Customer through Company's participation in the Midwest Independent Transmission System Operator or successor organization. For applying the Delivery Charge, the capacity shall be determined during the 15-minute period of Customer's greatest capacity delivered to Company during the billing month.

Distribution Credits:

If the installation of the distributed generation system results in Company delaying or avoiding distribution investment, Company shall provide Distribution Credits to Customer that reflect the avoided distribution cost.

Filing Date ~~November 2, 2009~~ November 13, 2018 MPUC Docket No. E-999/CI-16-521
Effective Date June 1, 2014 Order Date November 2, 2010

Approved by: Marcia A. Podratz
Marcia A. Podratz
Director - Rates

MINNESOTA POWER
ELECTRIC RATE BOOK - VOLUME I

SECTION V PAGE NO. 82.2
REVISION 3 TBD

RIDER FOR DISTRIBUTED GENERATION SERVICE

Company shall provide, upon Customer's written request, a list of substation areas or feeders that could be likely candidates for Distribution Credits as determined through Company's normal distribution planning process. Upon receiving an application from Customer for the interconnection and operation of a distributed generation system, Company shall perform an initial screening study to determine if the project has the potential to receive Distribution Credits. Customer shall be responsible for the cost of such screening study. If Company's initial study shows that there exists potential for Distribution Credits, Company shall, at its own expense, pursue further study to determine the Distribution Credits, as part of its annual distribution capacity study.

Line Loss Credits:

If the installation of the distributed generation system results in Company avoiding additional line losses, Company shall provide Line Loss Credits to Customer that reflect the additional line loss savings.

Company shall perform, upon Customer's written request, a specific line loss study to determine if the project has the potential to receive Line Loss Credits. Customer shall be responsible for the cost of such line loss study.

Renewable Credits:

If Company's purchase of capacity and energy from the distributed generation system results in Company meeting a requirement to obtain renewable capacity and energy, Company shall provide Renewable Credits to Customer that equal the additional avoided cost of the renewable addition or purchase. The purchase price of such Renewable Credits shall be net of payment for capacity and energy identified above.

In the event that Customer producing the power receives renewable credits, (that is, the Customer is paid by the Company the avoided cost of renewable energy purchases), then the transaction represented by the power purchase agreement will constitute a transfer from the Customer to the Company of the property rights, for those renewable attributes specific to the renewable energy generated by the Customer and for which the Company paid renewable credits.

Customer may receive either renewable credits or tradable emission credits but not both.

Tradable Emission Credits:

If Company's purchase of capacity and energy from the distributed generation system results in Company receiving an economic value associated with tradable emissions, Company shall provide Tradable Emission Credits to Customer that equal the credit revenues associated with the distributed generation system of such Tradable Emission

Filing Date ~~November 2, 2009~~ November 13, 2018 MPUC Docket No. E-999/CI-16-521
Effective Date June 1, 2014 Order Date November 2, 2010

Approved by: Marcia A. Podratz
Marcia A. Podratz
Director - Rates

MINNESOTA POWER
ELECTRIC RATE BOOK - VOLUME I

SECTION V PAGE NO. 82.3

REVISION 3 TBD

RIDER FOR DISTRIBUTED GENERATION SERVICE

Credits received by Company. Customer may receive either renewable credits or tradable emission credits but not both.

In the event that Customer producing the power receives tradable emission credits, then the transaction represented by the power purchase agreement will constitute a transfer from the Customer to Company of the property rights, if any, for those tradable emission credits received by Customer and for which Company paid tradable emission credits.

SERVICE CONDITIONS

1. All electricity delivered to Company by Customer shall be measured by one or more meters installed at a single point of common coupling or as determined by Company. Company's meter for distributed generation service shall measure the flow of capacity and energy from Customer to Company only. Any flow of capacity and energy from Company to Customer shall be separately metered.

2. Service shall be provided under this Rider if Company has sufficient capacity available in existing transmission and distribution facilities to provide such service at the location where service is requested.

3. Customer shall pay Company the installed cost of any additional required facilities which are not supported by this Rider.

4. Company shall not be liable for any loss or damage, including consequential damages, caused by or resulting from any limitation in providing service under this Rider.

PROCESS AND TECHNICAL DOCUMENTS AVAILABILITY

Company distributed generation system process and technical documents are available at www.mnpower.com or by contacting Company at [218-722-2625](tel:218-722-2625) [1-800-228-4966](tel:1-800-228-4966) or 30 West Superior Street, Duluth, MN 55802.

Filing Date ~~November 2, 2009~~ November 13, 2018 MPUC Docket No. E-999/CI-16-521

Effective Date June 1, 2014 Order Date November 2, 2010

Approved by: Marcia A. Podratz
Marcia A. Podratz
Director - Rates

ELECTRIC SERVICE REGULATIONS of MINNESOTA POWER

35. **Alteration of Facilities:** Company will, at its discretion, alter, relocate, convert to underground, or remove Company's facilities as may be requested in writing by Customer. Customer shall pay Company for all costs, except as limited below, associated with such alteration, relocation, conversion to underground, or removal including any new facilities required to provide service after the alteration, relocation, conversion, or removal.

Customers requesting the alteration, relocation, conversion, or removal shall pay the estimated cost for the change, less salvage, of the facilities required to effect such change prior to Company committing funds for the work. Where the actual cost is different from the estimated cost upon which the advance payment was based, as determined upon completion of the requested alteration, relocation, or removal, Company will refund any excess payment made by Customer or render a bill for any additional amount due. However, where Company's estimated cost is less than \$5,000, and actual cost exceeds such estimate, the additional amount due by Customer shall not exceed 15 percent of the estimate, regardless of the amount of actual cost.

SECTION VI - METERING

36. **Installation:** Company shall furnish and install the necessary meter or meters, and Customer shall provide and maintain a location, free of expense and satisfactory to Company, all in accordance with Company's Metering Standards.

37. **Evidence of Consumption:** Unless proven to be inaccurate, the registration of Company's meter shall be accepted and received at all times and places as prima facie evidence of the amount of power and energy taken by Customer.

38. **Tests:** Company tests its meters and maintains their accuracy of registration in accordance with good practice. On request of Customer, Company will make a special test which will be done at the expense of the Company. If the Customer requests another test before the expiration of a twelve-month period, the Customer shall bear the cost of the test if the meter is found to be in error by less than 2%, fast or slow. The average registration accuracy of a meter is taken as the mean of full load (100% of rated load) accuracy, and light load (5-10% of rated load) accuracy. At Company's discretion, tests may be made under average load conditions.

SECTION VII - PARALLEL GENERATION

39. **Design:** Customer's electric generating equipment shall be designed (1) to operate in synchronization with Company's system and (2) to automatically disconnect the facility from Company's system in the event Company's system becomes de-energized unless by mutual agreement between the Customer and Company. All synchronizing and protective devices to accomplish this mode of operation shall be provided and maintained by Customer.

40. **Disconnection:** Customer shall provide and maintain a manual, lockable disconnect switch providing a visible open and capable of isolating the Customer's generator from the

Filing Date August 9, 2013 November 13, 2018 MPUC Docket No. E-999/CI-16-521
Effective Date August 9, 2013 Order Date July 23, 2013

Approved by: Marcia A. Podratz
Marcia A. Podratz
Director - Rates

ELECTRIC SERVICE REGULATIONS of MINNESOTA POWER

Company's electrical system. This disconnect switch shall be readily accessible to Company personnel at all times, shall include a provision for padlocking it in the open position, and shall meet all other reasonable requirements established by Company.

41. **Customer Responsibility:** Customer shall pay for the cost of rebuilding and/or modifying Company facilities to provide adequate capacity for the parallel generation system and adequate protection for the Company's electrical system.

Customer shall be subject to ~~Company's Safety Standards and Interconnection Requirements Applicable to Cogenerators and/or Small Power Producers of Minnesota Power as filed annually with the Commission~~ [the State of Minnesota Distributed Energy Resources Interconnection Process and Minnesota Distributed Energy Resource Technical Interconnection and Interoperability Requirements or the most recent version of Minnesota's interconnection standards](#). Copies of such standards shall be made available to Customer upon request and are available at www.mnpower.com.

SECTION VIII - BILLING

42. **Billing Periods:** Bills ordinarily are rendered regularly at monthly intervals, but may be rendered more or less frequently at Company's option. Non-receipt of bills by Customer does not release or diminish the obligation of Customer with respect to payment thereof.

43. **Separate Billing for Each Point of Delivery:** At each point of delivery the use of service is metered separately for each Customer served. Whenever for any reason Company furnishes two or more meter installations for a single Customer, or supplies service under a Rate Schedule which does not require a meter, each point of metering and/or point of delivery where no meter is required is considered as a separate service. A separate Service Agreement is required, and bills are separately calculated, for each such separate service, except where Company may, under special circumstances, waive this requirement.

44. **Adjustment for Inaccurate Meter Registration:**

Meter too fast or too slow: In the event that any routine or special test of a Company meter discloses its average accuracy of registration to be in error by more than 2%, fast or slow, Company will refund the overcharge for a fast meter or charge for electricity consumed, but not included in the bills previously rendered for a slow meter. The refund or charge for both fast and slow meters will be based on corrected meter readings for a period equal to one-half the time elapsed since the last previous test but not to exceed six (6) months, unless it can be established that the error was due to some cause, the date of which can be fixed with reasonable certainty, in which case the refund or charge will be computed to that date, but in no event for a period longer than one (1) year.

Whenever any bill or bills have been adjusted or corrected as provided above, the Company will refund to existing Customer any amount due when the amount due exceeds one

Filing Date August 9, 2013 November 13, 2018 MPUC Docket No. E-999/CI-16-521
 Effective Date August 9, 2013 Order Date July 23, 2013

Approved by: Marcia A. Podratz
Marcia A. Podratz
 Director - Rates