

BEFORE THE MINNESOTA PUBLIC UTILITIES COMMISSION

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In the Matter of Establishing Generic Standards for Utility Tariffs for Interconnection and Operation of Distributed Generation Facilities Under Minn. Laws 2001, Ch. 212

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In the Matter of Updating the Generic Standards for the Interconnection and Operation of Distributed Generation Facilities Established Under Minn. Stat. § 216B.1611

ORDER ESTABLISHING UPDATED INTERCONNECTION PROCESS AND STANDARD INTERCONNECTION AGREEMENT

PROCEDURAL HISTORY

I. Adoption of the Existing Interconnection Standards

Enacted in 2001, Minn. Stat. § 216B.1611 directs the Commission to initiate a proceeding to establish generic standards for utilities' tariffs that govern the interconnection and parallel operation of distributed generation with a capacity of up to ten megawatts (MW).

On September 28, 2004, after extensive stakeholder participation, the Commission issued its *Order Establishing Standards*. The September 2004 order adopted with modifications a joint stakeholder proposal that included the following attachments:

1. An interconnection process
2. Technical requirements
3. An interconnection application
4. An engineering-data submittal form
5. A standard interconnection agreement
6. Power-purchase guidelines

Over the next several years, each regulated Minnesota electric utility filed distributed-generation tariffs conforming to the standards.

II. Requests to Update the Standards

In May 2016, the Commission received two requests to update the interconnection standards it had established in 2004.

On May 12, the Environmental Law and Policy Center, Fresh Energy, and the Interstate Renewable Energy Council, (the Joint Movants), filed a *Motion to Reopen and Amend the State Interconnection Standards*.¹ The Joint Movants cited the evolution of national best practices for interconnection, along with a recent increase in interconnection applications in Minnesota, as reasons to revisit the state's standards.

On May 19, Dakota Electric Association (Dakota Electric or Dakota), in consultation with other Minnesota utilities, proposed revisions to the existing interconnection standards.²

Both requests included proposed revisions derived from the Federal Energy Regulatory Commission's Small Generator Interconnection Procedures and Small Generator Interconnection Agreement. In addition, Dakota's filing recommended updates based on IEEE 1457, a national standard for the interconnection and interoperability of distributed generation that had just been released when Minnesota's existing standards were adopted.

III. Distributed-Generation Workgroup Established

On January 24, 2017, the Commission issued its *Order Establishing Workgroup and Process to Update and Improve State Interconnection Standards*. The Commission announced its intent to convene a Distributed Generation Workgroup (workgroup or DGWG), in cooperation with the Minnesota Department of Commerce, to update the state interconnection standards based on the federal Small Generator Interconnection Procedures (SGIP) and Small Generator Interconnection Agreement (SGIA) and incorporating newly revised national technical standards.³

The Commission decided to update the standards in two concurrent phases:

- In Phase I, lasting approximately 18 months, the Commission anticipated updating the interconnection process, application, data submittal, and agreement (replacing Attachments 1, 3, 4, and 5 to the September 2004 order); and
- In Phase II, lasting approximately 24 months, the Commission anticipated updating the technical requirements for interconnection (replacing Attachment 2).

Between April and November 2017, the Distributed Generation Workgroup, including representatives of rate-regulated utilities, cooperatives, municipal utilities, utility customers, and the distributed-generation industry, convened five times to discuss Phase I updates to the statewide interconnection process and agreement.

¹ Docket No. E-999/CI-01-1023.

² Dakota filed the revisions in conjunction with proposed changes to its standby-service tariff required by a prior Commission order. *See In the Matter of a Commission Inquiry into Standby Service Tariffs*, Docket No. E-999/CI-15-115, Order Requiring Tariff Filings (November 19, 2015).

³ The workgroup quickly identified as a priority the incorporation of a significant forthcoming revision to the Institute of Electrical and Electronics Engineers' "Standard for Interconnection and Interoperability of Distributed Energy Resources with Associated Electric Power Systems Interfaces" (IEEE 1547-2018) into Minnesota's standards.

Participants also had several opportunities to submit written comments outside the workgroup process in November 2017 and January and February of 2018.

IV. Draft Standards Issued

On February 27, 2018, the Commission issued a *Distributed Energy Resources Interconnection Process* (DIP), a *Distributed Energy Resource Interconnection Agreement* (DIA), and a notice soliciting public comment on these documents.

On March 29, the following stakeholders, all of them workgroup members, filed comments on the DIP and DIA:

- Dakota Electric Association
- Minnesota Department of Commerce (the Department)
- Energy Freedom Coalition of America (EFCA)
- The Joint Movants
- Minnesota Power
- Minnesota Solar Energy Industries Association (MnSEIA)
- Minnesota Rural Electric Association (MREA)
- Missouri River Energy Services (MRES)
- Otter Tail Power Company
- Donna Pickard
- Wind on the Wires
- Xcel Energy

On April 20, the Commission received reply comments from many of the same parties.

V. Updated Draft Standards Issued

On May 16, the Commission issued updated drafts of the DIP and DIA incorporating feedback received through public comments.⁴

On May 22, Xcel filed a *Comprehensive Proposed Decision Option* (CPDO) reflecting the efforts of several parties to resolve certain remaining issues with the updated draft standards. The following parties generally supported the CPDO:⁵

- Xcel
- Dakota Electric
- The Department
- The Joint Movants
- MREA
- Wind on the Wires

⁴ For the remainder of this order, “MN DIP” and “MN DIA” will refer to the updated drafts issued on May 16 as an attachment to staff briefing papers.

⁵ See DGWG Decision Options (May 23, 2018) (setting forth parties’ final positions).

On May 23, the Joint Movants' *Proposed Additional Decision Options* and Xcel's *New and Revised Decision Options* were filed in the record.⁶ These decision options generally restated previous recommendations that had not been incorporated into the MN DIP and MN DIA, in some cases with changes to effect compromises with other parties' recommended revisions.

On May 24, 2018, the Commission met to consider the matter.

FINDINGS AND CONCLUSIONS

I. Summary of Commission Action

This order marks the culmination of the first phase of the Commission's effort, begun in 2017, to update Minnesota's statewide interconnection standards for distributed generation. A great share of this effort has been shouldered by members of the Distributed Generation Workgroup, who have worked collaboratively for months to inform the drafting of the MN DIP and MN DIA. Many of the same workgroup members are now involved in updating the technical requirements for interconnection.

In this order, the Commission adopts the May 16 updated MN DIP and MN DIA with the modifications described below. The Commission also refers certain issues that are not sufficiently developed for immediate resolution to the workgroup for further development. And it establishes certain short-term reporting requirements for rate-regulated utilities that will allow the Commission and stakeholders to track any issues that may arise under the new standards.

The updated standards include numerous improvements upon Minnesota's existing interconnection procedures, including:

- The option for customers to request a pre-application report with location-specific information about a utility's distribution system;
- Provisions designed to ensure that utilities maintain an orderly queue of interconnection applications, and a requirement that utilities with a high volume of applications maintain publicly available queue data;
- "Simplified" and "fast track" processes for facilities within specified capacity thresholds, as well as screening criteria to help speed engineering review for smaller projects;
- Improved communications procedures, including requirements that utilities accept electronic applications and designate interconnection coordinators to serve as a single point of contact for customers; and
- New financial provisions, including application-fee caps based on facility size and type of review and a requirement that estimated engineering-study costs be paid in advance.

In compiling the updated MN DIP and MN DIA, the Commission carefully considered all comments received on the original draft and synthesized them to create a balanced standard that

⁶ These two documents are attached to Staff's *Revised Decision Options* filed May 23, 2018.

can be applied to a multitude of interconnection scenarios involving a variety of utilities, from large, investor-owned companies to smaller cooperatives and municipal entities.

Below, the Commission addresses the most significant issues that remained in dispute when it met to consider adopting the MN DIP and MN DIA. The Commission recognizes that as work continues in Phase II, certain issues may need to be revisited. In reaching the decisions below, the Commission does not intend to prejudge the final outcome as to the eight outstanding issues identified for further development, identified below.

The Commission will set June 17, 2019, as the standards' effective date and require rate-regulated utilities to file updated tariffs for Commission review and approval under Minn. Stat. § 216B.1611, subd. 3.

II. Background

A. Statutory Background

Most electricity is generated at large power plants and transmitted long distances to where it is needed. "Distributed generation," in contrast, describes electricity that is generated by many small, dispersed power sources. Distributed generation brings numerous benefits, including reducing the demand on long-distance transmission lines, enhancing reliability, and increasing customer choice.

In order to realize the benefits of distributed generation and to promote the safe and reliable parallel operation of these facilities, Minn. Stat. § 216B.1611 requires the Commission to establish generic standards for utility tariffs governing the interconnection of distributed generation with a capacity of up to 10 MW.

At a minimum, these standards must (1) be consistent with industry and other federal and state operational and safety standards, (2) provide for low-cost, safe, and standardized interconnection of facilities, (3) account for differing generator and utility requirements, (4) allow for terms and conditions that reasonably assure the reliable, safe, and efficient operation of the interconnected equipment, and (5) establish a standard interconnection application and a standard interconnection agreement setting forth the terms and conditions of interconnection.⁷

The statute requires public utilities to file distributed-generation tariffs, consistent with the adopted standards, for the Commission's approval. Cooperatives and municipal utilities need only "adopt a distributed generation tariff that addresses the issues included in the commission's order" adopting the standards.⁸

B. The Draft Interconnection Process (DIP) and Agreement (DIA)

The MN DIP and MN DIA replace Attachments 1 and 3–5 to the Commission's September 2004 order adopting the current interconnection standards. They are modelled after the federal SGIP and SGIA and include modifications recommended by the Distributed Generation Workgroup.

⁷ Minn. Stat. § 216B.1611, subd. 2.

⁸ *Id.*, subd. 3.

Additionally, the MN DIP and MN DIA are consistent with the recently updated IEEE Standard for Interconnection and Interoperability of Distributed Energy Resources (IEEE 1547).

1. Common Terminology

The MN DIP consistently refers to distributed-generation facilities as “distributed energy resources,” or “DER.” It defines “DER” as “[a] source of electric power that is not directly connected to a bulk power system . . . includ[ing] both generators and energy storage technologies capable of exporting active power” to a utility’s distribution system.⁹ For consistency with the MN DIP and for brevity’s sake, this order also uses “DER” to refer to generation- and storage-based distributed resources.

The MN DIP and MN DIA use the term “Area Electric Power System (EPS) Operator” to describe “[a]n entity that owns, controls, or operates the electric power distribution systems that are used for the provision of electric service in Minnesota.”¹⁰ This order refers to such entities using the general term “utility” unless a more specific usage is warranted.

Finally, the MN DIP and MN DIA use the term “Interconnection Customer” to describe “[t]he person or entity . . . that proposes to interconnect a DER(s) with the Area EPS Operator’s Distribution System.” This order uses the same term, as well as a shortened form, “customer.”

2. Structure of the MN DIP

The MN DIP consists of five sections, which can be summarized broadly as follows:

- **Section 1. Application** – This section describes the types of facilities to which the MN DIP applies. It specifies application procedures, including required fees, documentation of site control, utility–customer communications, and the option for customers to request a pre-application report to obtain location-specific information about a utility’s system. Finally, it describes the process a customer must follow to modify its interconnection application after submission, and how a utility must maintain its interconnection queue.
- **Section 2. Simplified Process** – This section sets forth a simplified interconnection process for the interconnection of certified, inverter-based DER with a capacity of 20 kilowatts (kW) or less.
- **Section 3. Fast Track Process** – Section 3 sets forth a “fast track” process for the interconnection of larger DER with a capacity of 5 MW or less that do not qualify for the simplified process. Section 3.2 sets forth a series of “initial review screens” that determine whether the proposed DER will require further engineering review and/or updates to the utility’s system.
- **Section 4. Study Process** – If an application does not qualify for either the simplified or fast-track process, it is handled under this section. The study process entails an initial “scoping meeting,” at which the customer and utility discuss the type of engineering studies that will be needed to evaluate the proposed DER’s interconnection costs and

⁹ MN DIP, Attachment 1 (Glossary of Terms), at 1.

¹⁰ MN DIP, Attachment 1, at 1.

system impacts. Typically, a system-impact study would be conducted first to predict what would happen if the DER were connected as proposed. If the system-impact study finds that upgrades will be needed to accommodate the proposed DER, a facilities study is then conducted to determine the nature and estimated cost of those upgrades.

- **Section 5. Provisions that Apply to All Interconnection Applications** – Section 5 contains miscellaneous provisions that apply all applications. These include provisions related to (1) time frames and extensions, (2) dispute resolution, (3) construction of interconnection facilities and upgrades, (4) commissioning of new DER, and (5) insurance requirements.

The MN DIP also includes the following attachments: (1) Glossary of Terms, (2) Simplified Application Form, (3) Interconnection Application Form, (4) Certification Codes and Standards, (5) Certification of Distributed Energy Resource Equipment, (6) System-Impact Study Agreement Template, (7) Facilities-Study Agreement Template, and (8) Flow Charts for Simplified Process, Fast Track Process and Study Processes.

3. Structure of the MN DIA

The MN DIA consists of 12 articles containing the terms and conditions that govern the relationship between a utility and interconnection customer. It covers inspection, testing, and a utility's right to access the customer's premises for testing purposes (article 2), cost responsibility for distribution and network upgrades (articles 4 and 5), and the conditions under which the agreement may be terminated and the DER disconnected (article 3). The MN DIA also covers billing and payment procedures (article 6), liability and insurance requirements (articles 7 and 8), confidentiality (article 9) and disputes (article 10).

III. Measuring DER Capacity

A. Introduction

The capacity of a DER determines its treatment under various provisions of the MN DIP, including eligibility for the simplified or fast-track processes under sections 2.1 and 3.1, and the amount of liability insurance required under section 5.10.

In addition, utilities use a DER's capacity in conducting system-impact studies under section 4.3 and facilities studies under section 4.4. The results of these studies determine whether a DER is able to interconnect and how costly interconnection will be.

The MN DIP defines capacity consistent with the federal Small Generator Interconnection Procedures. Generally, a DER's capacity is equivalent to its "nameplate rating."¹¹ However, the nameplate capacity may, with the utility's agreement, be limited "through use of a control system, power relay(s), or other similar device settings or adjustments."¹² In such situations, a

¹¹ See MN DIP §§ 5.14.1, .2.

¹² *Id.* § 5.14.3.

DER's capacity is the maximum AC capacity that the DER is "capable of injecting into the Area EPS Operator's [utility's] electric system over a sustained time which may be limited."¹³

An interconnection customer must obtain the utility's agreement that the manner in which the DER's capacity is limited will "effectively limit active power output so as to not adversely affect the safety and reliability of the [utility's] system."¹⁴ If the utility does not agree, the interconnection application must be withdrawn or revised to specify the maximum capacity without limitations.

B. Positions of the Parties

Parties advocated for various changes to the definition of DER capacity, but the primary disputed issues were whether, and under what circumstances, a measure other than nameplate rating should be used to determine a DER's capacity and how load is considered.

EFCA argued that, at least for purposes of determining whether a facility qualifies for the simplified or fast-track process, the MN DIP should use its "maximum export capacity," which EFCA would define as follows:

The maximum export capacity of a Distributed Energy Resource to the distribution grid at the [point of common coupling] communicated by the Applicant and studied as such by the Area EPS Operator per their review of the impacts on the utility system based on how the export capability is limited based on the use of a control system, power relay(s), or operating characteristics of the Distributed Energy Resource.

EFCA argued that, in practice, a DER's output might never match its nameplate rating and that maximum export capacity was therefore more reflective of real-world conditions. It contended that DER configurations involving battery storage could experience an inefficient interconnection process if maximum export capacity were not considered.

The Joint Movants also supported defining DER capacity in terms of "maximum export capacity," proffering a slightly different definition than EFCA. However, in their proposed additional decision options,¹⁵ the Joint Movants recommended revisions that would give utilities discretion to consider nameplate capacity when "necessary and more appropriate for evaluating certain technical issues" while the workgroup works toward a final resolution of this issue as part of Phase II.

MnSEIA agreed with EFCA's recommendation to define DER capacity in terms of maximum export capacity, particularly if the DER system involves storage that is not paired with generation. According to MnSEIA, such a system would have the ability to store energy and export it at an appropriate rate, and the resulting limited export should determine its capacity for purposes of interconnection.

¹³ *Id.*

¹⁴ *Id.*

¹⁵ *See* Joint Movants' Proposed Additional Decision Options, at 2.

The four rate-regulated utilities—Xcel, Dakota Electric, Minnesota Power, and Otter Tail—generally supported defining capacity in terms of a DER’s nameplate rating (though Xcel did suggest allowing parties to specify a different capacity by mutual agreement). The utilities opposed the use of “maximum export capacity,” arguing that it would introduce a new definition into the MN DIP that could inappropriately factor load into DER capacity and would require further clarification to avoid confusion. Further, they contended that even non-exporting systems can cause safety and reliability issues for the distribution system, requiring consideration of the nameplate capacity.

C. Commission Action

Given the technical nature of this issue, and the lack of stakeholder consensus, the Commission will refer the issue of DER capacity, including the definition and how it is applied in the interconnection process,¹⁶ to the workgroup for further development as part of the Phase II technical-requirements update.

Parties on both sides of this issue have concerns. EFCA, the Joint Movants, and MnSEIA want to ensure that newer DER technologies, such as solar combined with storage, are able to interconnect efficiently. At the same time, utilities have an interest in maintaining the safety and reliability of their systems, which may be affected even by DER configurations that do not export power.

Successfully defining DER capacity will require careful balancing of the interests at stake in a way that maintains consistency with industry standards—primarily those embodied in IEEE 1547. The Commission is persuaded by the Joint Movants that this effort will benefit from further development through the workgroup process, which will leverage stakeholders’ technical expertise in a setting that is more conducive to collaboration and compromise.

The Commission recognizes that leaving this issue temporarily unresolved may not be ideal from the perspective of some stakeholders. However, the current definition provides ample leeway for utilities to consider nameplate capacity in order to maintain the safety and reliability of their systems.

IV. Simplified-Process Timelines

A. Introduction

Section 2 of the MN DIP sets forth a simplified process for the interconnection of certified, inverter-based DER with a capacity of 20 kW or less.

Under the simplified process, two deadlines run concurrently from the date a customer submits an application. First, the utility has ten business days to determine whether the application is complete.¹⁷ And second, a utility has 15 business days from receipt of a complete application to

¹⁶ MN DIP § 5.14.3.

¹⁷ MN DIP § 2.2. If, prior to the end of the ten-day deadline, the utility informs the customer that its application is incomplete, the customer must submit any additional materials within five business days.

apply certain screening criteria that determine whether the DER can connect safely and reliably and inform the customer of the results.¹⁸

If the application fails the screens, it is referred to the fast-track process for further study.¹⁹

B. Positions of the Parties

The Joint Movants, MnSEIA, and Donna Pickard argued that the simplified process as currently proposed was too long and complicated and recommended a number of changes to streamline it. Among those changes, they recommended that the deadline for the application-completeness determination be shortened from 10 to 5 business days, and the deadline for screening be shortened from 15 to 7 days.

Most utilities who commented on this aspect of the MN DIP supported a simplified process timeline that separated the two steps into 10- and 15-day timeframes, respectively. Dakota Electric emphasized that these numbers would be the maximum time allowed and that utilities would respond to DER interconnection requests more quickly if possible. It also stressed that the deadlines needed to be workable for every utility in the state, whether they be large, investor-owned companies or smaller cooperatives and municipal utilities with limited engineering resources.

As a compromise, Xcel proposed shortening the initial completeness-review period from 10 to 7 days and the screening period from 15 to 13 days and making these periods run consecutively, for a maximum total timeframe of 20 business days.²⁰ In other words, Xcel's proposal would shorten each timeframe but would sequence them so that the technical-screening deadline would begin to run once a utility notifies the customer that its application is complete, rather than on the date when all necessary application materials were submitted.

C. Commission Action

After considering the various recommendations of stakeholders on this issue, the Commission concludes that the most effective solution is to increase the application-screening timeframe from 15 to 20 business days, without altering the completeness-review timeframe, and to retain the concurrent timing of the two periods.

Under the simplified process as drafted, a utility has ten days within which to determine whether an application is complete. However, the 15-day screening deadline begins to run when an application is *actually* complete—which may be before it is *determined* complete. Thus, if a

The utility is allowed up to five business days to review the additional material and notify the customer that the application is complete.

¹⁸ MN DIP § 2.2.3; *see also id.* § 3.2.1 (listing screening criteria for simplified and fast-track processes). The original draft of section 2.2.3 did not specify when the 15-day period would begin to run. At the Department's suggestion, and to increase clarity, the updated draft ties this deadline to the utility's receipt of a complete application.

¹⁹ MN DIP § 2.2.3.

²⁰ Xcel's New and Revised Decision Options, at 2.

utility needs most or all of the allotted ten-day period to determine completeness, its screening review—while nominally fifteen days—may in reality be much shorter.

This reality is the impetus behind Xcel’s suggestion that the two periods be sequenced so that the application-screening clock does not begin to run until the utility finishes its completeness review. However, the Commission concludes that a better way to give utilities more time to screen applications is to simply increase the screening deadline from 15 to 20 business days, still triggered by the submission of a complete application.

Like Xcel’s proposal, this resolution will assure interconnection customers that their applications will be screened no more than 20 business days from when they are actually complete. Moreover, it will ensure that utilities have at least ten days available for screening an application after finishing the completeness review. And, of course, a utility may decide to expedite the completeness review to allow itself more time to screen an application.²¹

V. Certification Criteria for DER

A. Introduction

Attachment 5 to the MN DIP sets forth technical requirements for certifying DER. Generally, a DER is considered certified for interconnected operation if (1) it has been tested by a nationally recognized testing laboratory (NRTL) in accordance with industry standards, (2) it has been labeled and publically listed by a NRTL at the time of the interconnection application, and (3) a NRTL makes readily available all testing standards, procedures, and data.

Whether a proposed DER is certified determines its treatment under several provisions of the MN DIP. For example, only certified DER are eligible to proceed under the simplified process, and fast-track applications involving certified DER are eligible for a reduced processing fee.

B. Positions of the Parties

Xcel and the Joint Movants proposed edits to Attachment 5 designed to make the attachment consistent with recent changes to IEEE 1547.

The Joint Movants’ would also refer certification-related issues to the technical workgroup as part of Phase II. At the Commission hearing, Xcel stated that it is not opposed to addressing certification issues in Phase II.

Xcel and the Joint Movants agreed that two edits could be made to Attachment 5 immediately:

²¹ In addition to application-review timelines, the Joint Movants took issue with the simplified process’s deadline for customers to return a signed interconnection agreement to the utility. *See* Joint Movants’ Proposed Additional Decision Options, at 4–5 (Decision Option 6). The Commission finds that the concerns raised in this decision option should be addressed and resolved through further workgroup discussion.

- 1.0 Distributed Energy Resource (DER) equipment proposed for use ~~separately or packaged with other equipment~~ in an interconnection system shall be considered certified for interconnected operation if
- 2.0 The Interconnection Customer must verify that the ~~intended assembly and~~ use of the equipment falls within the use or uses for which the equipment was tested, labeled, and listed by the NRTL.

C. Commission Action

The Commission will adopt Xcel and the Joint Movants’ agreed edits to MN DIP Attachment 5, at paragraphs 1.0 and 2.0, and refer the remaining edits to the workgroup for further discussion and possible resolution as part of Phase II.

IEEE 1547-2018 is a new standard, and the remaining proposed edits to Attachment 5 have not been vetted or discussed by the workgroup. Moreover, DER certification is a technical topic, and in that sense, it is similar to other issues being worked on Phase II. For these reasons, and because certification is an important threshold question in the MN DIP, it makes sense to refer further edits to Attachment 5 to the technical workgroup to ensure that the record on this issue is fully developed.

VI. Fast-Track Size Threshold

A. The Issue

Section 3 of the MN DIP sets forth a “Fast Track Process,” modeled on the SGIP’s fast-track process, for interconnecting DER that do not qualify for the simplified process and whose capacity falls within the following limits:

Fast Track Eligibility for Distributed Energy Resources ²²		
Line Voltage	Fast Track Eligibility Regardless of Location	Fast Track Eligibility for certified, inverter-based DER on a Mainline and ≤ 2.5 Electrical Circuit Miles from Substation
< 5 kV	≤ 500 kW	≤ 500 kW
≥ 5 kV and < 15 kV	≤ 2 MW	≤ 3 MW
≥ 15 kV and < 30 kV	≤ 3 MW	≤ 4 MW
≥ 30 kV and ≤ 69 kV	≤ 4 MW	≤ 5 MW

Dakota Electric recommended that the capacity threshold for DER on 5–15 kV lines be reduced from 2 MW to 1 MW for the “Regardless of Location” category and from 3 MW to 2 MW for the “Mainline and ≤ 2.5 Electrical Circuit Miles from Substation” category.

²² MN DIP § 3.1.1 (footnotes omitted).

Although it acknowledged that these figures are merely eligibility screens, Dakota stated that the listed thresholds are significantly higher than what its distribution system can handle. The utility contended that the current figures would give customers the false impression that these sizes can be handled in the fast-track process.

MnSEIA took issue with Dakota’s proposal to reduce these fast-track eligibility thresholds, asserting that the current figures are workable for other utilities and better balance utility and developer interests.

B. Commission Action

The Commission will reduce the fast-track size threshold for DER systems connected to 5–15 kV lines as recommended by Dakota Electric:

Fast Track Eligibility for Distributed Energy Resources		
Line Voltage	Fast Track Eligibility Regardless of Location	Fast Track Eligibility for certified, inverter-based DER on a Mainline and ≤ 2.5 Electrical Circuit Miles from Substation
≥ 5 kV and < 15 kV	≤ 2 MW	≤ 3 MW

The Commission agrees with Dakota that it is undesirable to have an eligibility screen set at a level that may not work for some utilities in practice. This situation is likely to give false hope to customers and result in interconnection delays and inefficiencies. While the current thresholds may work for some larger utilities, such as Xcel, the Commission is mindful that the MN DIP is the standard for all Minnesota utilities. A comprehensive standard necessarily requires compromises.

As discussed in Part XIII of this order, the Commission is establishing a process to keep the standards updated once they are finalized. If experience shows that, in fact, a higher (or lower) threshold is appropriate, this can be addressed through the update process.

VII. Facilities-Study Agreement

A. Introduction

Attachment 7 to the MN DIP is a “Facilities Study Agreement” that contains the terms and conditions under which a utility will undertake a facilities study to specify, and estimate the cost of, the equipment, engineering, procurement, and construction work needed to integrate a proposed DER into its electrical system.

The facilities-study agreement includes an “Attachment A” that lists the data an interconnection customer must provide the utility before it will begin the study. Among the information the customer must provide are a site map, an engineering drawing of the proposed DER, and a schedule for construction and testing of the DER.

B. Positions of the Parties

Xcel proposed a number of revisions to the facilities-study agreement, most of them designed to ensure that utilities are able to meet the 45-business-day timeframe for completing a facilities study under the MN DIP.²³ The bulk of Xcel's proposed revisions are to Attachment A and include, among others:

- Requiring that one-line and site-plan drawings be finalized before the study begins;
- Requiring that land-use permits and site control be secured before the study begins;
- Requiring, within the first five business days, a site visit to finalize the precise location of key components; and
- Tolling the 45-day timeframe if a lack of proper data from the customer prevents the utility from performing the necessary design work.

Subsequently, Xcel filed the Comprehensive Proposed Decision Option (CPDO), which includes the same revisions Xcel had previously proposed to the facilities-study agreement, with minor edits. Moreover, the CPDO inserts the proposed revisions into the agreement itself, rather than Attachment A. And it proposes related revisions to section 4.4.5 of the MN DIP, article 6.2 of the MN DIA, and Attachment 4 to the MN DIA.

C. Commission Action

The Commission agrees with and will adopt the CPDO's proposed changes regarding the parties' rights and duties under the facilities-study agreement.

According to Xcel, 12 to 16 weeks is required to complete a facilities study for proposed projects in its community-solar-garden program.²⁴ The company also stated that a significant portion of this period is spent waiting for developers to respond to data requests or schedule site visits.

By comparison, the MN DIP imposes a relatively speedy nine-week (45-business-day) timeframe for a utility to complete the facilities study, suggesting a need to streamline the study process. The Commission concludes that the CPDO proposes measures likely to reduce the time required to complete a facilities study, benefitting utilities and interconnection customers alike.

Moreover, the Commission concludes that it is appropriate to toll the facilities-study deadline while a utility waits for required customer data, as proposed by the CPDO. Utilities should not be held responsible for study delays where the delay is attributable to the customer.

For the foregoing reasons, the Commission will adopt the CPDO's proposed revisions to the facilities-study agreement, section 4.4.5 of the MN DIP, article 6.2 of the MN DIA, and Attachment 4 to the MN DIA ("Milestones").

²³ See MN DIP § 4.4.6 (providing that the facilities study must be completed within 45 business days in cases where system upgrades are required).

²⁴ See generally *In the Matter of Xcel Energy's Petition for Approval of Its Proposed Community Solar Garden Program*, Docket No. E-002/M-13-867.

VIII. Party Amendments to the Interconnection Agreement (MN DIA)

The MN DIP states that a utility and its customer may seek approval of an amendment to the MN DIA for use specifically between them by filing a petition with the Commission.²⁵ However, the MN DIA simply provides that parties may amend it “by a written instrument duly executed by both Parties.”²⁶

The Comprehensive Proposed Decision Option would add to the MN DIP, as an alternative to a formal petition, the option for parties to file a notice of the proposed amendment with the Commission showing in redline format how the amendment would alter the MN DIA. The amendment would be considered approved if no one files an objection or notice of intent to object within 30 days. The CPDO would also modify article 12.2 of the MN DIA to include an amendment process matching the one in the MN DIP.

The Commission agrees with and will adopt the proposed changes to the MN DIP and MN DIA regarding amendments to the MN DIA.

The Commission is confident that the workgroup has anticipated interconnection issues that are likely to arise and that the draft standards address them. But there will inevitably be times when a utility and its customer will encounter unique circumstances or a system configuration that is not addressed by the standard interconnection agreement. In such cases, the parties should be able to present agreed-upon amendments to the Commission for approval.

Allowing parties to file notice of a proposed amendment, and deeming that amendment approved after 30 days absent any objection, will improve the efficiency of the approval process while maintaining transparency for all stakeholders. As Xcel points out, this same notice–objection–approval process for contract amendments has been used successfully in Xcel’s community-solar-garden and small-solar-incentive programs.²⁷

IX. MN DIA Indemnification Provisions

Article 7.4 of the MN DIA specifies the conditions under which one party to the MN DIA must indemnify the other from third-party damage claims resulting from the indemnifying party’s action, or failure to meet its obligations, under the agreement.

Xcel and Otter Tail proposed adding two new provisions to article 7.4. The new provisions would specify that (1) the indemnified party’s negligence or intentional misconduct reduces the indemnifying party’s liability and (2) no party may be indemnified for damages resulting from its sole negligence or intentional misconduct:

²⁵ MN DIP § 1.1.6.

²⁶ MN DIA art. 12.2.

²⁷ See *In the Matter of Xcel Energy’s Petition for Approval of Its Proposed Community Solar Garden Program*, Docket No. E-002/M-13-867, Order Rejecting Xcel’s Solar-Garden Tariff Filing and Requiring the Company to File a Revised Solar-Garden Plan, at 23–24, 32 (April 7, 2014) (approving contract-amendment process for solar-garden program); *In the Matter of a Petition by Xcel Energy for Approval of an Amendment to a Solar*Rewards Customer Contract with Murphy Warehouse*, Docket No. E-002/M-15-650, Order (September 25, 2015) (approving contract-amendment process for Solar*Rewards program).

- 7.4.3. This indemnification obligation shall apply notwithstanding any negligent or intentional acts, errors or omissions of the Indemnified Party, but the Indemnifying Party's liability to indemnify the Indemnified Party shall be reduced in proportion to the percentage by which the Indemnified Party's negligent or intentional acts, errors or omissions caused the damages.
- 7.4.4. Neither Party shall be indemnified for its damages resulting from its sole negligence, intentional acts or willful misconduct. These indemnity provisions shall not be construed to relieve any insurer of its obligation to pay claims consistent with the provisions of a valid insurance policy.²⁸

The utilities argued that the additional indemnification provisions contain commercially reasonable terms, are common in other industry contexts, such as negotiated power-purchase agreements, and help achieve a balanced interconnection agreement. The Commission agrees, will adopt the proposed revisions to article 7.4, and will make corresponding revisions to Exhibit C of the Simplified Application Form in the MN DIP.

X. Additional Revisions to the MN DIA

Xcel's New and Revised Decision Options repeat an earlier request for four MN DIA revisions that Xcel first included in an attachment to its initial comments on the draft recommendations. Xcel asks the Commission to add two new provisions to article 3.4 of the MN DIA, which governs temporary disconnections of a DER:

3.4.6. Treatment Similar to Other Retail Customers

If the Interconnection Customer receives retail electrical service at the same site as the Distributed Energy Resource, it may also be disconnected consistent with the rules and practices for disconnecting other retail electrical customers.²⁹

3.4.7. Disconnection for Default

If the Interconnection Customer is in Default it may be disconnected after a 60 day written notice is provided and

²⁸ Xcel also proposed adding all of the indemnification provisions from article 7.4 to the "Terms and Conditions for Interconnecting an Inverter-Based Distributed Energy Resource No Larger than 20 kW" document that is part of the simplified-process application. MN DIP, Attachment 2 (Simplified Application Form), Exhibit C.

²⁹ Xcel New Decision Option 5(f).

the Default is not cured during this 60 day notice. This provision does not apply to disconnection based on Emergency Conditions.³⁰

Additionally, Xcel requests the following edit to article 5.2.1.2, which relates to repayment of amounts advanced for network upgrades by the interconnection customer:

5.2.1.2 If the Distributed Energy Resource fails to achieve commercial operation, but it or another Distributed Energy Resource is later constructed and requires use of the Network Upgrades, the Area EPS Operator and Affected System operator (after receiving payment in the amount of the cost to build these Network Upgrades from the other Distributed Energy Resource who is expected to use the Network Upgrades) shall at that time reimburse the Interconnection Customer for the amounts advanced for the Network Upgrades. Before any such reimbursement can occur, the Interconnection Customer, or the entity that ultimately constructs the Distributed Energy Resource, if different, is responsible for identifying the entity to which reimbursement must be made.³¹

Finally, Xcel would insert the following sentence into article 11.2, which governs the parties' efforts to maintain each other's tax status:

11.2. Each Party shall cooperate with the other to maintain the other Party's tax status. It is incumbent on the Party seeking to maintain its tax status to provide formal written notice to the other Party detailing what exact cooperation it is seeking from the other Party well prior to any deadline by which any such action would need to be taken. Nothing in this Agreement is intended to adversely affect, if applicable, the Area EPS Operator's tax exempt status with respect to the issuance of bonds including, but not limited to, local furnishing bonds.

The Commission will adopt the last of these proposed revisions, adding Xcel's requested admonishment that a party seeking to maintain its tax status must provide clear notice as to what actions it is requesting of a counterparty. However, the Commission will not adopt the other three DIA revisions at this time.

While the edit to article 11.2 is a straightforward, common-sense addition, the others are less clear-cut and appear to be opposed by the Department. Given that these revisions originally appeared in an attachment to Xcel's initial comments and have not been addressed in any detail

³⁰ Xcel New Decision Option 5(g).

³¹ Xcel New Decision Option 5(h).

by other stakeholders, the most prudent course of action is to refer these revisions to the workgroup for further development.

XI. Outstanding Issues

In the preceding sections, the Commission identified several issues that require referral to the distributed-generation workgroup for further development:

- The definition of DER capacity (MN DIP § 5.14);
- Certification of DER equipment (MN DIP, Attachment 5);
- Simplified-process deadline for the customer to sign and return an interconnection agreement (Joint Movants' Proposed Additional Decision Option 6); and
- Xcel's proposed edits to the MN DIA (New Decision Option 5(f)–(h)).

In addition, the following documents will be part of the final MN DIP and/or MN DIA and need to be created or revised before the Commission takes action on them:

- A standardized pre-application request form;
- Updated flow charts;
- A certificate of completion; and
- Fillable-PDF interconnection applications and agreements.

The Commission will delegate to its Executive Secretary the authority to develop, with workgroup input, all of the foregoing items and issues.

XII. Transitioning to the New Standards

A. Effective Date of the MN DIP and MN DIA

Stakeholders supported transitioning to the MN DIP and MN DIA before the workgroup completes its update of the technical requirements in Phase II. However, parties differed as to how quickly this transition could be accomplished.

Some, such as Wind on the Wires, argued for a 60-day window following the Commission's approval of the MN DIP and MN DIA to allow utilities to update their tariffs consistent with the new standards. The Joint Movants initially recommended a 60-business-day window, but later offered a compromise of April 1, 2019, for Xcel, and February 1, 2019, for all other utilities, to transition to the new standard.

Others, Xcel in particular, advocated for a much greater period of time to transition to using the MN DIP and MN DIA. Xcel recommended that the Commission set a date certain in mid 2019 to give utilities enough time to make tariff changes, modify their computer systems, prepare public documents, and train staff on the new processes and standards, among other tasks.

The Commission will set the effective date in MN DIP § 1.1.3 as June 17, 2019.

The Commission will be asking most rate-regulated utilities to file updated tariffs within 90 days of the date of this order, but tariffs are only one of many documents and processes that will need to be revised as part of utilities' transition to the new standards. Setting an effective date in mid 2019 will allow utilities, and in particular Xcel, sufficient time to complete the myriad steps necessary to update both internal and external documents and processes to implement the new standards.

The Commission will establish additional measures to aid Xcel's transition to the MN DIP and MN DIA as discussed in part C below.

B. Treatment of Existing Applications

A second transition-related issue is how interconnection applications pending at the time the standards take effect should be treated.

As currently drafted, the MN DIP does not apply to "Interconnection Applications deemed complete" before the MN DIP's effective date, unless the utility and an interconnection customer mutually agree otherwise.³²

The Joint Movants recommended revising MN DIP § 1.1.3 to clarify that an interconnection application *submitted* prior to the MN DIP's effective date will be governed by the existing standards. They argued that using an application's submission date would provide greater certainty for customers: Customers can control when they submit their applications, but they have little control over how quickly utilities process them.

Xcel did not oppose this change but recommended adding a caveat that applications submitted prior to the MN DIP's effective date will be governed by the existing standards, *provided that* an application is deemed complete within 60 days of that date.

The Commission agrees with the Joint Movants that an application's submission date provides a clearer line than the date an application is deemed complete. Additionally, Xcel's proposed caveat will encourage customers who wish to have their applications processed under the existing standards to not only submit them prior to the MN DIP's effective date but also ensure that they are as complete as possible so that the utility is able to make a completeness determination within the 60-day timeframe.

For these reasons, the Commission will adopt the revisions to section 1.1.3 set forth in Xcel's Revised Decision Option 2(c), which includes the Joint Movants' "submitted" change.

C. Xcel Energy

Compared to its peer utilities in Minnesota, Xcel has far greater installed DER capacity, receives more interconnection applications, and offers more specialized DER programs that will need to be addressed in the transition to the new standards.

To take just one example, Xcel's solar-garden program, Solar*Rewards Community, has 300 MW of interconnected solar gardens and nearly 400 MW of projects in design and construction, and

³² MN DIP § 1.1.3.

implicates two sections of Xcel’s existing tariff (sections 9 and 10). Xcel anticipates transitioning this and other “legacy” programs to one common interconnection process under the new standards.

The Joint Movants recommended that a subgroup of the DGWG, including the Department, meet to discuss issues specific to Xcel’s transition to the new standards. They also suggested that Xcel file a transition plan but did not recommend any specific timeframe for doing so.

Given the likely complexity of Xcel’s transition to using the MN DIP and MN DIA, the Commission agrees with the Joint Movants that the process would benefit from the input of other stakeholders. The Commission will therefore require Xcel to convene a subgroup of the DGWG, to include the Department and other non-DGWG stakeholders as appropriate, to inform Xcel’s plan for transitioning to the MN DIP and MN DIA.

Finally, the Commission is requiring rate-regulated utilities to file updated tariffs within 90 days. Due to the complexity of Xcel’s transition effort, however, the company is likely to need more time to update its tariffs. Accordingly, the Commission will give Xcel an additional 45 days to file updated tariffs, for a total of 135 days.

XIII. Keeping the Standards Updated

At a meeting November 3, 2017, workgroup members voiced broad support for a proposal to maintain a standing interconnection workgroup, convened on a periodic basis, to address any technical or other issues that may arise under the new standards.³³ Members generally preferred that any updates to the standards occur on an *ad hoc* basis—in response to a formal motion by an interested party—rather than on a regular schedule.

The Commission recognizes that, despite the best efforts of workgroup participants to address all reasonable contingencies, unforeseen issues will arise under the new standards. Therefore, the Commission agrees that it would make sense to maintain a standing workgroup to review implementation and technical issues that arise under the MN DIP or MN DIA through experience with emerging DER technology.

The Commission will delegate to its Executive Secretary authority to establish and maintain such a workgroup, which may meet annually, or more frequently as needed. 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.

XIV. Reporting Requirements

A. Introduction

Under Minn. Stat. § 216B.1611, subd. 4, each electric utility must maintain records of DER interconnection applications it receives and must file, annually, a report identifying each facility interconnected to its distribution system. The report must specify:

- Facilities that have interconnected or disconnected since the previous year’s report;

³³ See Summary of DGWG Meeting #5, at 14 (December 14, 2017).

- The capacity of each facility;
- The interconnection point of each facility, and
- All interconnection applications received since the previous report and their disposition.

In its February 27, 2018 *Notice of Comment Period* that accompanied the initial draft standards, the Commission requested comment from stakeholders on additional proposed reporting requirements.³⁴

Under the proposal, each of Minnesota’s four rate-regulated electric utilities—Minnesota Power, Otter Tail, Xcel, and Dakota—would file an annual report in each of the first three years in which the updated interconnection standards are in effect. The reports would provide, at minimum, the following information on all interconnections (i.e. completed interconnections and submitted applications) that occurred during the preceding calendar year:

- Facility capacity;
- DER type (technology);
- Date of application submittal;
- Date application deemed complete;
- Date and disposition at applicable milestones in the interconnection process:
 - Initial review,
 - Supplemental review,
 - System-impact study,
 - Facilities study,
 - Interconnection agreement, and
 - Permission to operate;
- Final process track (simplified, fast track, or full study);
- Number of pre-application reports requested and processed; and
- A narrative of how the process is working and where there is potential for improvement by the utility or interconnection applicants.

B. Positions of the Parties

By and large, stakeholders supported requiring rate-regulated utilities to provide additional annual DER reporting for a three-year period.

Several parties, including Xcel and the Department, recommended that the additional reporting be combined with the annual reporting already required by Minn. Stat. § 216B.1611 to avoid unnecessary duplication and administrative burden.

The Joint Movants recommended requiring these reports twice yearly and making them permanent. Moreover, they suggested that the Commission add several more items to the list of required data:

³⁴ See Notice of Comment Period, Attachment C (staff reporting recommendation).

- The variance between estimated and final system-upgrade costs, and an explanation for that variance, if the variance falls outside a +/-20% range of the estimate provided in the facilities-study report;
- The time required for each project to go through the study process;
- The time between submission of an interconnection application and issuance of an interconnection agreement;
- Whether the final construction milestone was reached by the date specified in the interconnection agreement; and
- In addition to the number of pre-application reports requested and processed, the number of pre-application reports processed within the timeline required by the MN DIP.

Xcel did not object to reporting upgrade-cost variance information as outlined by the Joint Movants, provided that the reporting is limited to projects larger than 20 kW. However, Xcel opposed providing the other items. It argued that reporting on project milestones would present an incomplete picture of the queue process because such milestones are heavily dependent on the actions of developers, who often modify planned interconnection timelines for reasons outside of a utility's control.

C. Commission Action

The Commission appreciates the parties' careful review of, and helpful feedback on, its proposal for DER-interconnection reporting.

After considering commenters' proposals to (1) merge the additional reporting into utilities' existing annual reports under section 216B.1611, (2) require reporting twice a year, and/or (3) make the reporting permanent, the Commission concludes that it is reasonable to require reporting in the manner outlined in the Commission's February 2018 notice.

Requiring the additional data on DER interconnections (i.e. completed interconnections and submitted applications) to be provided separately from the existing reports will make that data easier to review. Moreover, requiring this extra reporting annually for the first three years that the new standards are in effect will provide valuable information to stakeholders as they work to address the challenges and opportunities involved in implementing a new set of rules for DER interconnections. The additional reporting will end after this initial period unless renewed by the Commission.

Finally, as to Joint Movants' suggestions for additional data requirements, the Commission agrees that utilities should provide data on upgrade-cost variances for facilities with a capacity greater than 20 kW, and will so require. However, for the reasons given by Xcel, the Commission declines to require reporting on interconnection milestones at this time.

The Commission will delegate to its Executive Secretary the authority to determine the formatting and docket for the additional annual reporting.

XV. Conclusion

For the foregoing reasons, the Commission adopts the MN DIP and MN DIA with the modifications set forth in the ordering paragraphs. A clean copy of the standards is attached to this order.

ORDER

1. The Commission adopts the *Distributed Energy Resources Interconnection Process* (MN DIP) and *Distributed Energy Resource Interconnection Agreement* (MN DIA) in the form attached, which includes the revisions described below and edits to ensure consistency between the documents' glossaries of terms.

2. Section 2.2.3 of the MN DIP is revised as follows:

The Area EPS Operator shall determine if the DER can be interconnected safely and reliably using the Initial Review Screens contained in the Fast Track Process at 3.2.1, and without construction of facilities by the Area EPS Operator. The Area EPS Operator has ~~fifteen~~ twenty (~~15~~ 20) Business Days from receipt of a complete Simplified Process Application to complete this process and inform the Interconnection Customer of the results. . . .

3. Attachment 5 to the MN DIP is revised as follows:

1.0 Distributed Energy Resource (DER) equipment proposed for use ~~separately or packaged with other equipment~~ in an interconnection system shall be considered certified for interconnected operation if

2.0 The Interconnection Customer must verify that the ~~intended~~ assembly and use of the equipment falls within the use or uses for which the equipment was tested, labeled, and listed by the NRTL.

4. The fast-track size threshold in MN DIP § 3.1.1 for DER on 5–15 kV lines is revised as follows:

≥ 5 kV and < 15 kV	\leq 2 <u>1</u> MW	\leq 3 <u>2</u> MW
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5. Attachment 7 to the MN DIP (Facilities-Study Agreement) is modified as follows:

a. Attachment A to the Facilities-Study Agreement, “Data to Be Provided by the Interconnection Customer with the Facilities Study Agreement,” is removed.

b. A new section, “17.0 Data to be provided by the Interconnection Customer with the Facilities Study Agreement,” is added to the Facilities-Study Agreement:

- 17.1 The Interconnection Customer shall be available to meet on site with the Area EPS Operator within 5 business days of signing the Facilities Study Agreement. The personnel furnished by the Interconnection Customer for this site meeting shall bring detailed information on the site layout. The Area EPS Operator may request the Interconnection Customer physically places stakes at the location of major components.
- 17.2 The Interconnection Customer shall furnish a final site plan detailing the location of major equipment at the time this agreement is returned. The Point of Common Coupling (PCC) and Point of Distributed Resource Connection (PoC) shall be clearly marked. The site plan shall depict any nearby roads and be labeled with the road name. Accurate dimensions shall be included on the site plan. The proper emergency (911) address, corresponding to the site, shall be labeled on the site plan.
- 17.3 The Interconnection Customer shall furnish a final oneline diagram detailing the electrical connections between major components. The oneline shall be returned with the signed Facilities Study Agreement.
- 17.4 Technical cut sheets on all equipment related to metering shall be provided by the Interconnection Customer along with the signed Facilities Study Agreement.
- 17.5 If available, copies of Conditional Use Permit(s) from all necessary authorities shall be returned by the Interconnection Customer with the signed facilities agreement.
- 17.6 The Interconnection Customer shall secure any necessary easements from private land owners prior to signing the Facilities Study Agreement. Documentation of any such agreements shall be provided to the Area EPS Operator.
- 17.7 In the event that the Area EPS Operator determines a site survey is necessary in order to complete a Facilities Study, the Interconnection Customer shall make good faith efforts to complete the site survey in a timely manner.
- 17.8 The Facilities Study assumes all land use permits required for the interconnection will be approved by the proper authorities. Permits are submitted after the Interconnection Agreement is signed and may impact project costs (i.e. overhead to underground requirement).

17.9 The Interconnection Customer and Area EPS shall provide a single point of contact for design and construction related matters. The Interconnection Customer single point of contact shall respond in a timely manner to Area EPS Operator questions during the Facilities Study.

17.10 In the event that an Interconnection Customer does not provide the necessary information described in this agreement, or if the Interconnection Customer takes more than 5 business days to respond to a question during the Facilities Study, the Facilities Study timeframe shall pause until the question is resolved.

6. The following explanatory statement is added at the top of Attachment 4 to the MN DIA (Milestones):

The Milestone in line (1) below may be a calendar date. All other dates in this Attachment 4 may be number of Business Days from the calendar date in line (1) or from the completion of a different Milestone described in a specified line number. Similarly, the anticipated In-Service Date may be based on the number of Business Days from the completion of a specified line number.

7. Article 6.2 of the MN DIA is revised as follows:

Pursuant to the MN DIP 4.4.5, 5.6.2 and 5.6.3, the Parties shall agree on milestones for which each Party is responsible and list them in Attachment 4 of this Agreement.

8. Section 4.4.5 of the MN DIP is revised as follows:

Design for any required Interconnection Facilities and/or Upgrades shall be performed under the facilities study agreement unless the Interconnection Application is processed under the provisions of section 3.2.2.2. However, in the event that the Interconnection Customer did not provide to the Area EPS Operator all required Conditional Use Permits at the time of entering into the facilities study agreement, any such Design and/or Upgrades by the Area EPS Operator may be delayed until after the Interconnection Customer has provided to the Area EPS Operator all required Conditional Use Permits or provided a final design. The information in the Conditional Use Permits, or changes to the design, may result in significant modifications to the planned design and/or Upgrades. The Interconnection Customer may send to the Area EPS Operator a redacted version the Conditional Use Permit to ensure confidentiality, but any and all information that the Area EPS Operator would reasonably need to perform an accurate facilities study shall not be redacted. If necessary to comply with these requirements, a confidential version of the Conditional Use Permit may be provided to the Area EPS Operator, with the confidential

information being clearly marked and subject to the Confidentiality provisions of MN DIP section 5.9. . . .

9. Section 1.1.6 of the MN DIP is revised as follows:

The Area EPS Operator and Interconnection Customer may jointly seek Commission approval of an amendment to the MN DIA for use between them for a specific Interconnection Application ~~by filing a petition with the Commission.~~ in the following ways:

1.1.6.1 File a Petition with the Commission, or

1.1.6.2 File a Notice with the Commission of the proposed amendment. The Notice should include a copy of the amendment showing in redline format how the amendment would alter the MN DIA between the Area EPS Operator and Interconnection Customer for the Interconnection Application at issue. If no objection or notice of intent to object is filed within 30 days, then the proposed amendment would be considered to be approved by the Commission. If there is a timely filed objection of notice of intent to object, then the proposed amendment would not be considered to have been approved by the Commission and could only be used if the Commission subsequently issues a written order authorizing its use.

10. Article 12.2 of the MN DIA is revised as follows:

The Parties may amend this Agreement by a written instrument duly executed by both Parties under the process described below, or under article 12.12 of this Agreement.

If the Parties seek to amend this Agreement by a written instrument duly executed by both Parties, this amendment will need to receive Commission approval prior to it being effective. The Area EPS Operator and Interconnection Customer may seek Commission approval of an amendment to the Interconnection Agreement for use between them for a specific Interconnection Application in the following ways:

12.2.1 File a Petition with the Commission, or

12.2.2 File a Notice with the Commission of the proposed amendment. The Notice should include a copy of the amendment showing in redline format how the amendment would alter the MN DIA between the Area EPS Operator and Interconnection Customer for the Interconnection Application at issue. If no objection or notice of intent to object is filed within 30 days, then the proposed amendment would be considered to be approved by the Commission. If

there is a timely filed objection of notice of intent to object, then the proposed amendment would not be considered to have been approved by the Commission and could only be used if the Commission subsequently issues a written order authorizing its use.

12.2.3 Commission approval of an amendment to the Interconnection Agreement is not needed where such an amendment only addresses updating or correcting: 1) information specified in the Interconnection Application; 2) exhibits or attachments to the Interconnection Agreement as long as they are not additional agreements or requirements not covered in the MN DIP on MN Technical Requirements; or 3) information provided in the blank lines to the MN DIA or Uniform Statewide Contract forms.

11. The following two provisions are added to article 7.4 of the MN DIA:

7.4.3. This indemnification obligation shall apply notwithstanding any negligent or intentional acts, errors or omissions of the Indemnified Party, but the Indemnifying Party's liability to indemnify the Indemnified Party shall be reduced in proportion to the percentage by which the Indemnified Party's negligent or intentional acts, errors or omissions caused the damages.

7.4.4. Neither Party shall be indemnified for its damages resulting from its sole negligence, intentional acts or willful misconduct. These indemnity provisions shall not be construed to relieve any insurer of its obligation to pay claims consistent with the provisions of a valid insurance policy.

12. Section 6.0 of MN DIP Attachment 2, Exhibit C, is revised as follows:

6.1. This provision protects each Party from liability incurred to third parties as a result of carrying out the provisions of this Agreement.

6.2. The Parties shall at all times indemnify, defend, and save the other Party harmless from, any and all damages, losses, claims, including claims and actions relating to injury to or death of any person or damage to property, demand, suits, recoveries, costs and expenses, court costs, attorney fees, and all other obligations by or to third parties, arising out of or resulting from the other Party's action or inactions of its obligations under this agreement on behalf of the indemnifying Party, except in cases of gross negligence or intentional wrongdoing by the indemnified Party.

- 6.3. This indemnification obligation shall apply notwithstanding any negligent or intentional acts, errors or omissions of the Indemnified Party, but the Indemnifying Party's liability to indemnify the Indemnified Party shall be reduced in proportion to the percentage by which the Indemnified Party's negligent or intentional acts, errors or omissions caused the damages.
- 6.4. Neither Party shall be indemnified for its damages resulting from its sole negligence, intentional acts or willful misconduct. These indemnity provisions shall not be construed to relieve any insurer of its obligation to pay claims consistent with the provisions of a valid insurance policy.
- 6.5. If an indemnified person is entitled to indemnification under this article as a result of a claim by a third party, and the indemnifying Party fails, after notice and reasonable opportunity to proceed under this article, to assume the defense of such claim, such indemnified person may at the expense of the indemnifying Party contest, settle or consent to the entry of any judgment with respect to, or pay in full, such claim.
- 6.6. If an indemnifying party is obligated to indemnify and hold any indemnified person harmless under this article, the amount owing to the indemnified person shall be the amount of such indemnified person's actual loss, net of any insurance or other recovery.
- 6.7. Promptly after receipt by an indemnified person of any claim or notice of the commencement of any action or administrative or legal proceeding or investigation as to which the indemnity provided for in this article may apply, the indemnified person shall notify the indemnifying party of such fact. Any failure of or delay in such notification shall not affect a Party's indemnification obligation unless such failure or delay is materially prejudicial to the indemnifying party.

13. Article 11.2 of the MN DIA is revised as follows:

Each Party shall cooperate with the other to maintain the other Party's tax status. It is incumbent on the Party seeking to maintain its tax status to provide formal written notice to the other Party detailing what exact cooperation it is seeking from the other Party well prior to any deadline by which any such action would need to be taken. Nothing in this Agreement is intended to adversely affect, if applicable, the Area EPS Operator's tax exempt status with

respect to the issuance of bonds including, but not limited to, local furnishing bonds.

14. Section 1.1.3 of the MN DIP is revised as follows:

Neither these procedures nor the requirements included hereunder unless by mutual agreement of the Area EPS Operator and the Interconnection Customer apply to DERs interconnected, approved for interconnection or Interconnection Applications submitted to deemed complete by the Area EPS Operator prior to ~~insert applicable date determined by the Commission~~ June 17, 2019, and later deemed complete (provided these application are later deemed complete following any applicable revisions no later than 60 days following this date) unless by mutual agreement of the Area EPS Operator and the Interconnection Customer. These procedures and the requirements hereunder shall apply to applications to modify existing DERs if the application to modify is submitted on or after ~~insert same date as above~~ June 17, 2019.

15. The Commission adopts “Joint Movants’ Clarifying Edits for Simplified” as described in Joint Movants’ *Proposed Additional Decision Options*:

- a. Edit the second paragraph of MN DIP § 2.2.3 as follows:

Unless the Area EPS Operator determines and demonstrates that the DER cannot be interconnected safely and reliably or requires construction of facilities by the Area EPS Operator, the Area EPS Operator approves the Application and ~~returns a copy to~~ provides the Interconnection Customer ~~with~~ an executable Uniform Statewide Contract or MN DIA within five (5) days as described in sections 1.1.5.1 and 5.1.1.

- b. Edit MN DIP § 2.3.3 as follows:

Within three (3) Business Days of inspection or waiver of inspection, the Area EPS Operator shall notify the Interconnection Customer in writing that interconnection of the Distributed Energy Resource has permission to operate. If the witness test is not satisfactory, the Area EPS Operator has the right to disconnect the DER. The Interconnection Customer has no right to operate in parallel, except for optional testing not to exceed two hours, until a witness test has been performed and passed, or is waived permission to operate is granted by the Area EPS Operator.

- c. Edit MN DIP Attachment 2: Simplified Application Form as follows:

This Application is deemed complete when it provides all applicable and correct information required below. The following additional information must be submitted with an application:

- Single Line Diagram
- Site Plan with site owner signature if different than Interconnection Customer
- Inverter Specification Sheet(s)
- Insurance Document

- d. Edit the customer section of MN DIP Attachment 2: Simplified Application Form as follows:

~~Check here to request a MN DIA (optional pursuant to MN DIP 1.1.5):~~ The simpler Uniform Statewide Contract replaces the longer Interconnection Agreement (MN DIA) if the conditions of MN DIP 1.1.5 are met. A qualifying customer signing a Uniform Statewide Contract may elect to be additionally provided the MN DIA. Request a MN DIA? No Yes

- e. Remove the entirety of Attachment 2, Exhibit A – For Certified Equipment Packages
- f. Edit Exhibit C: Terms and Conditions, Section 1.0 as follows:

The Interconnection Customer (the “Customer”) may proceed to construct (including operational testing not to exceed two hours) the Distributed Energy Resource(s) when the Area EPS Operator (the “Company”) approves the Interconnection Application (the “Application”) ~~and returns it to the Customer.~~

- g. Edit Exhibit C: Terms and Conditions, Section 2.3.1 as follows:

Shall have the opportunity to witness testing as described in MN Technical Requirements, but takes no liability for the results of the test. . . . The Company shall provide a written permission to operate authorization that the Distributed Energy Resource(s) has passed inspection or shall notify the Customer of what steps it must take to pass inspection ~~as soon as practicable after the inspection takes place~~ within three (3) Business Days.

16. Section 5.9.1 of the MN DIP and article 9 of the MN DIA are revised as follows:

. . . Parties providing a Governmental Authority trade secret, privileged, or otherwise not public or nonpublic data under the Minnesota Government Data Practices ~~Privacy~~ Act, Minnesota Statutes Chapter 13, shall identify such data ~~must provide information~~ consistent with the Commission’s September 1, 1999 Revised Procedures for Handling Trade Secret and Privileged Data, available online at: <https://mn.gov/puc/puc-documents/#4>

17. The Commission delegates to its Executive Secretary the authority to develop, with Distributed Generation Workgroup (DGWG) input, the following outstanding issues:
 - a. A standardized pre-application request form;
 - b. An updated version of flow charts based on Xcel's initial edit;
 - c. A certificate of completion;
 - d. Fillable-PDF interconnection applications and agreements;
 - e. The definition of DER capacity (MN DIP § 5.14);
 - f. Certification of DER equipment (MN DIP, Attachment 5);
 - g. Simplified-process deadline for customers to sign and return an interconnection agreement (Joint Movants' Proposed Additional Decision Option 6); and
 - h. Proposed edits to the MN DIA in Xcel's New and Revised Decision Options 5(f)–(h).
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.
19. Xcel shall convene a subgroup of the DGWG, including the Department of Commerce and other non-DGWG stakeholders as appropriate, to inform Xcel's plan for transitioning to the MN DIP and MN DIA.
20. On March 1, until at least 2022, Minnesota Power, Otter Tail Power, Xcel Energy, and Dakota Electric shall each file a report with the Commission on interconnections that occurred during the preceding calendar year. This report shall include, at minimum:
 - a. Facility capacity;
 - b. DER type (technology);
 - c. Date of application submittal;
 - d. Date application deemed complete;
 - e. Date and disposition at applicable milestones in the interconnection process:
 - i. Initial review,
 - ii. Supplemental review,
 - iii. System-impact study,
 - iv. Facilities study,
 - v. Interconnection agreement, and
 - vi. Permission to operate;
 - f. Final process track (simplified, fast-track, or study);
 - g. Number of pre-application reports requested and processed;
 - h. A narrative of how the process is working and where there is potential for improvement by the utility or interconnection applicants; and

- i. For facilities of greater than 20 kW, the variance between the cost estimate provided in the facilities-study report and the actual cost of upgrades, including an explanation for variances that fall outside a +/- 20% range.

The Commission delegates to its Executive Secretary the authority to determine the formatting and docket for the annual reporting.

21. The Commission delegates to its Executive Secretary the authority to establish and maintain an ongoing Distributed Generation Workgroup to meet annually, or more frequently as needed, to review implementation and technical issues that arise with implementation of the MN DIP, MN DIA, or emerging DER technology. Updates to the MN DIP and/or MN DIA may be accomplished by Commission order in response to a petition.
22. This order shall become effective immediately.

BY ORDER OF THE COMMISSION

Daniel P. Wolf
Executive Secretary



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