STATE OF MINNESOTA
BEFORE THE PUBLIC UTILITIES COMMISSION

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In the Matter of the Petition by Northern States Power Company d/b/a Xcel Energy for Approval of the Acquisition of the Mankato Energy Center (MEC)	DOCKET NOS. IP-6949, E-002/PA-18-702, IP-6949/GS-15-620 **SUPPLEMENTAL COMMENTS OF THE OFFICE OF THE ATTORNEY GENERAL**

INTRODUCTION

The Office of the Attorney General—Residential Utilities and Antitrust Division ("OAG") submits the following Supplemental Comments to the Minnesota Public Utilities Commission ("Commission" or "PUC") regarding the Petition of Northern States Power Company d/b/a/ Xcel Energy ("Xcel" or "Company") for Approval of the Acquisition of the Mankato Energy Center ("Petition").[1]

Xcel's Petition is a watershed moment for the Commission with regard to the integrity and future viability of Xcel's two-track resource acquisition process ("Two-Track Bidding"). Xcel's Petition seeks to add $650 million to its rate base without following the "fair, predictable, and transparent" Two-Track Bidding requirements. Instead, Xcel and Southern Power Company ("Southern") negotiated and structured the proposed acquisition in an opaque backroom deal and in the absence of any competition, transparency or meaningful need or alternatives analysis.

[1] The facility is comprised of two components, which the OAG collectively refers to as the "MEC Facility." The term "MEC I" refers to the 375 MW one-on-one combined cycle natural gas facility and the term "MEC II" refers to the 345 MW expansion project.

Even more troubling, Xcel's Petition relies on the power purchase agreement ("PPA") for MEC II—specifically the right of first offer ("ROFO") provision—to acquire the MEC Facility. The Company and Southern, however, improperly and impermissibly negotiated and structured the proposed acquisition contrary to, and in violation of, the ROFO's express and unambiguous substantive and procedural requirements.

Because Xcel's Petition is anathema to the purpose underlying Two-Track Bidding, its proposed acquisition of the MEC Facility cannot further the public interest. Accordingly, the OAG respectfully requests that the Commission reject Xcel's Petition.

BACKGROUND

The Commission's decision on Xcel's Petition must be informed by the PUC's past orders establishing, analyzing and refining Xcel's resource planning and acquisition processes.

I. THE RESOURCE PLANNING PROCESS.

The Commission's order modifying the Company's 2016-2030 Resource Plan succinctly summarizes the resource plan requirements imposed on electric utilities such as Xcel.[2] In short, "[a] resource plan or report generally details the projected need for electricity in [the utility's] service territory for [the 15-year] forecasted planning period, and the utility's plans for meeting projected need, including the actions it will take in the next five years."[3] The resource planning statute and rules allow a utility to "identify the least-expensive reliable combination of resources that will meet the utility's requirements, consistent with state and federal law and public

[2] *See generally ITMO Xcel Energy's 2016-2030 Integrated Resource Plan*, Docket No. E-002/RP-15-21, Order Approving Plan with Modifications and Establishing Requirements for Future Resource Plan Filings (January 11, 2017) (hereinafter "2015 IRP Order").
[3] *Id.* at p. 3.

policy."[4] In other words, the resource planning process seeks "[t]o help Xcel acquire the best resources at least cost."[5]

Generally speaking, after the Commission approves Xcel's resource plan, the Company acquires resources to meet that identified need using the Two-Track Bidding process. When Xcel seeks to acquire resources in between IRP proceedings, the Department compares the analysis supporting the proposed acquisition with the prior IRP analysis and performs "a limited re-analysis" if "updates are required."[6]

II. PUC'S PURPOSE IN ESTABLISHING XCEL'S RESOURCE ACQUISITION PROCESS.

As explained more fully below, the Commission established the Two-Track Bidding process to ensure Xcel's resource acquisition is conducted in a manner that maximizes transparency, fairness, consistency and competition. The Commission established these requirements as a way of ensuring that Xcel's resource acquisitions further the public interest by protecting ratepayers from imprudent costs.

A. The PUC's 1994 Order Establishes Xcel's First Bidding Process.

In 1994, the Commission established Xcel's first competitive bidding process.[7] The PUC explained this was "a reasonable step towards objective, open, efficient selection of the Company's resource options" while allowing Xcel to "have the opportunity to compete as a bidder (so long as sufficient system safeguards are included)."[8] The 1994 Order recognized that

[4] *ITMO the Petition of Northern States Power Company d/b/a Xcel Energy for Approval of Competitive Resource Acquisition Proposal and Certificate of Need*, Docket No. E-002/CN-12-1240, Order Directing Xcel to Negotiate Draft Agreements with Selected Parties (May 23, 2014) at p. 4 (hereinafter "May 2014 Order").
[5] *Id.* at p. 7.
[6] The Department's Comments filed in this docket, dated March 5, 2019 (hereinafter the "Department's 2019 Comments") at p. 19.
[7] *See generally ITMO Northern States Power Company's Application for Resource Plan Approval 1994-2008*, Docket No. E-002/CI-93-6, Order Accepting Company's Proposal with Modifications and Requiring further Filings (August 19, 1994) (hereinafter "1994 Order").
[8] *Id.* at pp. 2-3.

"[t]he competitive bidding process is a fairly new concept nationwide."[9] Accordingly, the PUC expected that process to "undergo change as it develops"[10] especially since that process "can have a significant impact on rates, reliability of service, and the environment."[11]

B. The PUC's 1998 Order Establishing The All-Source Bidding Process.

In 1998, Xcel petitioned the Commission to modify the process established by the 1994 Order arguing that process "was too lengthy," "required a significant amount of resources," and "was not flexible enough."[12] In response, the PUC developed the All-Source Bidding process which anticipated "expected benefits," including:

- minimizing the amount of excess capacity and related costs;
- allowing the widest range of proposals to meet the expected need;
- creating a market for independent power producers; and
- providing the best check on reasonableness of utility costs.[13]

C. The Failure Of The All-Source Bidding Process.

In 1999 and 2001, Xcel's first two All-Source Bidding resource acquisition processes encountered issues related to transparency, timing and project selection.[14] Xcel's All-Source Bidding processes acquired less than half the expected capacity, in addition to other problems:

- the process had little transparency–outsiders, including regulators, often did not know what was taking place; . . . [and]
- projects ultimately acquired were not on the finalist list–undermining the credibility of selection process[15]

Xcel's failure to acquire sufficient capacity culminated in a January 2004 emergency CON application to construct two peaking units (Blue Lakes 7 and 8) to avoid reliability threats.

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[9] *Id.* at p. 9.
[10] *Id.*
[11] *Id.*
[12] *ITMO Xcel Energy's 2016-2030 Integrated Resource Plan*, Docket No. E-002/RP-15-21, Department's Comments (July 8, 2016) (hereinafter "Department's July 2016 Comments") at p. 47.
[13] *Id.*
[14] *Id.* at pp. 48-49.
[15] *Id.*

Xcel requested a Commission decision within seven months due to pressing construction timelines and likewise sought an exemption from the All-Source Bidding requirements.[16] Almost six months later, the PUC granted Xcel's CON application and waived the All-Source Bidding requirements because "the ratepayers' interests in reliability and cost have been adequately protected by the [CON] process followed in this matter."[17]

D. The PUC's 2006 Order Establishing The Two-Track Bidding Process.

Reacting to the failure of All-Source Bidding, in 2006 the Commission concluded that process "must be overhauled if the Company is to continue using a competitive process to acquire new generation."[18] The PUC explained that the foundational purpose underlying any competitive acquisition process—"getting the best overall price for ratepayers"—necessitates "robust competition."[19] The PUC found that robust competition requires "widespread agreement" that resource acquisition is conducted in "a fair, predictable, and transparent competitive process."[20] The PUC reasoned that "it may matter less what the rules are — assuming fundamental rationality and basic fairness — than whether all potential players know the rules and know that they will be enforced evenhandedly."[21]

[16] *Id.*
[17] *ITMO Application of Northern States Power Company d/b/a Xcel Energy for a Certificate of Need for a Large Electric Generating Facility,* Docket No. E-002/CN-04-76, Order Granting Certificate of Need and Requiring Discussion with the Department (June 25, 2004) at p. 5.
[18] *ITMO Northern States Power Company d/b/a Xcel Energy's Application for Approval of its 2004 Resource Plan*, Docket No. E-002/RP-04-1752, Order Establishing Resource Acquisition Process, Establishing Bidding Process Under Minn. Stat. § 216B.2422, subd. 5 and Requiring Compliance Filing (May 31, 2006) (hereinafter "2006 Order") at p. 6.
[19] *Id.*
[20] *Id.*
[21] *Id.*

The Commission's Two-Track Bidding process employs "the framework of the [CON] process when Xcel submits a self-build proposal" (Track 2) and relies on "a formal, competitive bidding process when Xcel does not" (Track 1).[22]

The Track 1 process includes three requirements: (1) an independent auditor's report; (2) a standard contract; and (3) an Xcel contingency plan if the bidding process fails. The PUC found that those components would "add clarity and accountability to every bidding process and to the competitive procurement enterprise as a whole."[23]

The Track 2 process relies on CON-like criteria to compare competing resource options. The PUC found such criteria "clear, comprehensive, directly relevant to resource procurement, and easily transferrable to the resource procurement process."[24] The Commission found the Track 2 process was needed to reduce Xcel's inherent advantages:

> The Company simply . . . has too much control over resource selection to use the standard process when it is a bidder. It has much more reliable and complete information about its needs than its competitors. It also has superior information about its existing generation portfolio, the configuration of its transmission system, and any synergies that would result from adding different resources . . . .
>
> All these advantages, combined with a clear and unavoidable conflict of interest, point to a need to use the more stringent [CON]-like process whenever [Xcel] submits its own proposal in the competitive resource procurement process.[25]

III. THE PUC'S 2015 IRP ORDER FURTHER REFINED XCEL'S RESOURCE ACQUISITION PROCESS.

Xcel's 2015 IRP proceeding further clarified both the Company's understanding, and the Commission's expectations, regarding the resource planning and acquisition processes.

[22] 2006 Order at p. 8.
[23] *Id.* at p. 7.
[24] *Id.*
[25] *Id.*

During the 2015 IRP, the Department urged Xcel to explain both its resource acquisition process and how it intended to modify that process while ensuring a "fair and transparent manner that minimizes costs and protects ratepayers from imprudent costs."[26] Xcel's reply comments acknowledged the PUC's "strong preference" for Two-Track Bidding "or at least a process demonstrating the equivalent rigor and analysis."[27] The Company's reply likewise recognized that the PUC only approves cost recovery for the "most cost-effective" resources.[28] Finally, Xcel explained that it acquired certain resources—but importantly, not generating facilities—through standing tariff offerings instead of a competitive process.[29]

The 2015 IRP Order approved a limited version of Xcel's proposed Two-Track Bidding modifications because it "contained features of both track 1 and track 2 acquisition processes."[30] That order also further refined Xcel's resource planning and acquisition process related to its mid-2020s intermediate capacity needs. For example, the PUC declined to approve Xcel's proposed construction of a location-fuel-and-MW-specific resource to meet intermediate capacity needs.[31] Instead, the Commission found that the "rapidly changing costs among potential energy and capacity sources" compelled Xcel "to evaluate and pursue [a broad range of] resource options between 2023 and 2030," including "combinations of supply-side, demand-side, and transmission alternatives."[32] The Commission remarked that such "alternatives to the reliability concerns raised by Xcel have not been fully considered" despite "adequate time."[33] For these reasons, the PUC found that Xcel's "[r]esource acquisitions beyond the five-year plan

[26] The Department's 2019 Comments at p. 51.
[27] *ITMO Xcel Energy's 2016-2030 Integrated Resource Plan*, Docket No. E-002/RP-15-21, Xcel Reply Comments (August 12, 2016) at Attachment A, p. 2.
[28] *Id.*
[29] *Id.*
[30] 2015 IRP Order at p. 6.
[31] *Id.* at p. 10.
[32] *Id.*
[33] *Id.* at 9.

should be subject to a more contemporaneous demonstration of need," especially given the Department's "doubts" over the "usefulness" of Xcel's energy and demand forecasts. In sum, the 2015 IRP Order "conclude[d] that a plan that does not specify location or generation type" will "be more consistent with the public and ratepayer interests."[34]

LEGAL STANDARD & SUMMARY OF ARGUMENT

In addition to the authorities previously identified by the parties' comments, the OAG underscores several additional points. First, the 2006 Order establishing the Two-Track Bidding process is final, binding and mandates Xcel's compliance.[35] Relatedly, Xcel must first formally seek and obtain the PUC's approval before acquiring resources in derogation of the Two-Track Bidding requirements.[36]

In other words, without a formal request by Xcel to modify the Two-Track Bidding process, the PUC is legally obligated to deny the Petition. Nevertheless, even if the Petition is construed as seeking a modification, the PUC still should reject Xcel's Petition. The Commission's historic competitive bidding past practices suggest that a modification is appropriate if an alternative, but equally vigorous, acquisition process is proposed.

Here, Xcel's Petition neither requested a modification to Two-Track Bidding nor offered an equivalently robust process ensuring transparency, competition and fairness, or a satisfaction of the CON-like criteria. Instead, the Company negotiated its proposed acquisition with Southern behind closed doors, without competition and in violation of the express procedural and substantive terms of the ROFO provision—the very same provision relied upon by Xcel as its

[34] *Id.* at p. 10
[35] Minn. Stat. § 216B.26 (finality of PUC order); *see also id.* at § 216B.09, subd. 1 (PUC authority to "fix just and reasonable standards . . . or practices to be observed and followed by any or all public utilities.").
[36] Minn. Stat. § 216B.25 (requiring an interested party to move the Commission to "rescind, alter, or amend any [PUC] order."); *see also id.* at § 216B.56 (noting where "the modification or vacation of any order of the [PUC] is sought, the burden of proof shall be on the person seeking such modification or vacation.").

principal legal basis to acquire the MEC Facility. The Commission should deny the Petition given Xcel's failure to seek a modification to Two-Track Bidding, or otherwise propose an alternative process demonstrating such a modification was warranted.

Finally, even if Xcel's Petition is properly before the Commission, the Company nevertheless fails to demonstrate that its proposed acquisition furthers the public interest. The PUC should apply similar public interest reasoning in this docket as it did in the 2015 IRP Order. In 2017, the Commission modified Xcel's proposed resource plan by declining to include the location-and-fuel-specific generating facility that the Company proposed to construct to meet its intermediate capacity need in 2027. The PUC's modified resource plan required a more generic resource comparison along with a contemporaneous demonstration of need, which it determined to "be more consistent with the public and ratepayer interests." The Commission's 2015 IRP Order relied on three important considerations: (1) Xcel's failure to conduct meaningful alternatives analysis; (2) rapidly changing generation and capacity costs; and (3) the Department's "doubts" over the "usefulness" of Xcel's forecasting analysis to support acquisitions beyond the five-year plan.

These three same factors (or substantively similar versions) that drove the PUC's public interest analysis in the 2015 IRP Order apply with equal force here. The Company seeks approval in 2019 to acquire an already-sited generating facility to meet an intermediate capacity need in 2026 without conducting meaningful alternatives analysis or demonstrating need under the CON-like criteria. Moreover, the Department has expressed grave concerns about the integrity of Xcel's data underlying its modeling to support the Petition. The Department could not follow its typical protocol of relying on Xcel's 2015 IRP database (which the Department has already questioned) and filling in the gaps with limited additional data provided by the

Company. Instead, the Department and Xcel have engaged in a two-entity analysis of Xcel's supporting data in attempt to recreate a new database from whole cloth. The Department may ultimately recommend rejecting Xcel's Petition. Regardless, the PUC should find such level of analysis insufficient in scope and breadth to make a meaningful determination, one way or the other, regarding whether Xcel's proposed acquisition furthers the public interest.

ANALYSIS

I. THE TWO-TRACK BIDDING PROCESS GOVERNS XCEL'S PROPOSED ACQUISITION UNLESS THE PUC MODIFIES THOSE REQUIREMENTS.

Xcel's reply comments suggest that it "must retain some amount of flexibility to respond to opportunities that were not anticipated in prior IRPs and [that] present themselves between or during IRP proceedings."[37] After all, as the Company points out, "acquisition proceedings nearly always occur outside the IRP process." In such scenarios, Xcel agrees that "the Department typically compares the resource planning analysis in support of the acquisition with the latest IRP analysis" and performs "a limited re-analysis" in the event the Department determines that "updates are required." Xcel "therefore view[s] this proceeding as similar to the 2013 wind dockets referenced by the Department." Generally speaking, the OAG agrees.

The OAG, however, takes issue to the extent the Company insinuates that Two-Track Bidding need not apply to resource acquisition proposals arising between IRPs that add capacity beyond the levels of need identified in prior IRPs. Neither contingency impacts the applicability of the Two-Track Bidding process, of course, as evidenced by an examination of Xcel's 2013 wind dockets. Those dockets were initiated by Xcel between IRPs and sought PUC approval to acquire capacity "far above" the need determined in the 2010 IRP. Instead of suggesting that

[37] Xcel's Reply Comments filed in this docket, dated March 29, 2019 (hereinafter "Xcel's Reply Comments") at p. 4.

these factors weighed in favor of ignoring the Two-Track Bidding process, the Commission instead found the projects to be in the public interest given that they were selected from a "rigorous [Track 1] bidding process" that "[a]n independent auditor reviewed" and found to be "fair and transparent." Moreover, the PUC concluded that Xcel's proposed projects were the most cost effective after comparing those projects with "all potential resources on an equivalent basis, regardless of the resources' ownership structures"

In sum, the Commission should find that Xcel's proposed acquisition of the MEC Facility must comply with the Two-Track Bidding process even though the Petition falls between IRPs and does not arise from any need identified in an IRP. In the event Xcel wanted to acquire the MEC Facility in a manner other than prescribed by the PUC's 2006 Order, it was incumbent on the Company to affirmatively move the PUC for such relief.

A. Xcel Did Not Move For A Modification To The Two-Track Bidding Process.

Xcel's reply comments express "agree[ment] with the Department's comment that '[o]verall, a well-run bidding process should create the best results for ratepayers.'"[38] Xcel's Petition, however, failed to request that the PUC modify the Two-Track Bidding requirements.[39] As discussed in greater detail above, Xcel has, in the past, sought and obtained such a modification from both the Two-Track Bidding and All-Source Bidding processes.[40] The Commission should find that Xcel's failure to move for a modification is fatal to its Petition.

[38] Xcel's Reply Comments at p. 6.
[39] Minn. Stat. § 216B.25 (requiring an interested party to move the Commission to "rescind, alter, or amend any [PUC] order.").
[40] *See supra* Background; *see also generally* the Department's July 2016 Comments (discussing Docket Nos. 04-76 and 05-1887).

B. The Commission Only Modifies The Two-Track Bidding Process For Equally Vigorous Alternative Approaches.

Even if Xcel had formally moved the PUC for a modification, Xcel's Petition fails to establish "a process demonstrating the equivalent rigor and analysis" of Two-Track Bidding—a prerequisite relied on by the Commission in granting such modifications.[41] Instead, Xcel seeks to eviscerate the "fair, predictable, and transparent competitive"[42] purpose underlying the PUC-approved process. The Commission should deny Xcel's Petition because it cannot carry its burden of demonstrating that the PUC should relax the Two-Track Bidding requirements.[43]

II. THE PETITION IS NOT EXEMPT FROM THE TWO-TRACK BIDDING PROCESS.

The Department's comments offer "support[] [for] a bidding process as the primary tool for resource acquisition."[44] Indeed, the Department notes that "a well-run bidding process should create the best result for ratepayers" and explains that a process "[r]equire[s] . . . numerous, qualified, project developers; a fair, rigorous process for evaluating proposals; a defined need to be met; and so forth."[45] Despite its endorsement of the Commission's Two-Track Bidding process, the Department suggests that "there are other considerations" to analyze.

The Department and Xcel offer three justifications for why the Petition may be exempt from the Two-Track Bidding process: (1) Southern "controls the timing" regarding the sale of the MEC Facility; (2) the MEC Facility is an existing resource on Xcel's system; and (3) the Commission-approved PPA for MEC II includes the ROFO provision.[46] None of these justifications warrant exempting the Company from Two-Track Bidding.

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[41] *See, e.g.,* Background section *supra*.
[42] 2006 Order at p. 6.
[43] Minn. Stat. § 216B.56 (noting where "the modification or vacation of any order of the [PUC] is sought, the burden of proof shall be on the person seeking such modification or vacation.").
[44] The Department's 2019 Comments at p. 29.
[45] *Id.*
[46] *Id.*

A. Southern's Fiscal Planning Is Not A PUC-Recognized Exemption.

Xcel contends that the timing of its Petition "was driven entirely by [Southern's] decision in [August] 2018 to sell MEC as part of its broader strategy to raise capital."[47] As a result, the Company suggests that the Commission must approve Xcel's Petition now or risk the "virtually certain" scenario that a third-party IPP outside the PUC's oversight would purchase the MEC Facility and operate it "well into the 2050s."[48] Xcel suggests that "[t]here simply was no opportunity to run a competitive bidding process under these circumstances, as [Southern] would have sold the plant to a third party had we not moved forward with the negotiations and agreement that is currently before the Commission."[49]

There are several reasons why Xcel's arguments are unpersuasive and incorrect.

First and foremost, the OAG is unaware of a Commission-recognized exemption to Xcel's Two-Track Bidding predicated on an IPP's desire to raise capital. The Department, too, declined to recognize such an exemption.

Second, Xcel incorrectly interprets the ROFO provision by contending there is a "virtually certain" risk "that another third-party power producer would take ownership of" the MEC Facility without another opportunity for Xcel to invoke its ROFO rights. In essence, Xcel suggests that if the PUC fails to approve the Petition, Xcel will never get another opportunity to acquire the MEC Facility. This is patently untrue and contrary to the explicit terms of the ROFO provision. Indeed, even if the Commission fails to approve Xcel's Petition, Southern cannot sell the MEC Facility (or MEC I or II) without first providing Xcel with another ROFO opportunity.

[47] Xcel's Reply Comments at p. 3.
[48] *Id.* at p. 3.
[49] *Id.* at p. 6.

Third, Xcel had sufficient time to run a PUC-compliant Two-Track Bidding process for its proposed acquisition. Xcel had over a year after learning of Southern's desire to sell the MEC Facility to run a Two-Track Bidding process. Past Commission orders routinely have demonstrated that Xcel can satisfactorily complete the Two-Track Bidding and/or CON processes in less than a year,[50] and even in as little as six months.[51]

Finally, Xcel's lack of diligence in securing a PUC-approved modification to the Two-Track Bidding process is another reason behind the purported time-crunch. The Commission should not reward Xcel's procedurally and legally deficient Petition with an exemption from Two-Track Bidding. Doing so would present concerns similar to those the PUC experienced during the failure of the All-Source Bidding process. In fact, as cautioned by the 2006 Order,[52] "if the Commission is not firmly in control of the timing of the resource acquisition process the Commission once again may face the unwanted scenario of being backed into a corner and given the 'choice' to approve Xcel's proposed project" or not.

B. The PUC Does Not Recognize The "Existing Resource" Exemption.

Xcel adopts the Department's reasoning that the Petition is exempt from the Two-Track Bidding process because the PPAs for the MEC Facility are an "existing resource" in the Company's energy portfolio. The Department suggests that the Commission's "original bidding

[50] *See, e.g., ITMO Northern States Power Company d/b/a Xcel Energy's Application for Approval of its 2004 Resource Plan*, Docket No. E-002/RP-04-1752, Department's Supplemental Comments (November 23, 2005) at p. 9. In 2006 Order establishing Two-Track Bidding adopted the "operational details of both tracks of this process" as set forth in the Department's January 30, 3006 comments. *See* 2006 Order at p. 8. The Department's January 30, 2006 comments, in turn, recommended that the "Commission approve the Department's proposed resource acquisition process as discussed in detail in the Department's November 23, 2005, supplemental comments" as slightly modified by the Department's January 30, 2006 comments. *See* Department's July 2016 Comments.
[51] Department's July 2016 Comments at p. 49.
[52] *See* 2006 Order; *see also supra* n.50.

process specifically included an exemption for capacity decisions involving existing generating units."[53] This argument fails for a multitude of reasons.

First, the Department ultimately determined that "***[i]ssues regarding the potential exemption for existing units are not relevant.***"[54] Xcel may suggest that the Department did not unequivocally disavow such exemption, citing to the Department's comments that the Commission's 2006 Order failed to "contain a clear discussion of continuing or discontinuing the exemption for capacity decisions involving existing generating units."[55] Nevertheless, past Department comments have concluded that "[b]ased upon the lack of a clear discussion of such an exemption by the Department, and the Commission's 2006 Order, the Department concludes that the exemption for modifications to existing facilities ***was not carried forward to the new process***."[56]

Next, as the Department notes, the "existing resource" exemption was historically available "for capacity decisions involving existing generating units such as re-powering existing facilities, recapturing of capacity of existing facilities, capacity enhancements to existing facilities, and retention of the capacity of an existing facility (i.e., plant life extension)."[57] These are all Company-owned generating facilities, not IPP-owned facilities for which Xcel has a PPA. The PUC has never recognized an executed PPA as an existing resource exemption to Two-Track Bidding.

After all, if that were the case, Xcel would have sought and received an exemption from Two-Track Bidding when it proposed its Black Dog Generating Plant repowering project to meet

[53] The Department's 2019 Comments at p. 29.
[54] *Id.* at p. 30.
[55] *Id.* at p. 29.
[56] The Department's July 2016 Comments at p. 50.
[57] The Department's 2019 Comments at p. 29.

the need identified in the Company's 2010 IRP proceeding. Similarly, the Commission would have exempted the MEC II expansion project from Two-Track Bidding based on Xcel's already-executed PPA for MEC I.

C. The PUC Should Reject Xcel's ROFO-Based Exemption.

The Department's comments conclude that the PPA for MEC II contains a Commission-approved ROFO provision that exempts Xcel from acquiring the MEC Facility in compliance with Two-Track Bidding. The Department's reasoning, however, is entirely predicated on a strained exegesis of the ROFO provision through which it concludes that the term "MEC I" actually "refers to the entire facility (MEC I and MEC II)."[58] Xcel adopts the Department's reasoning in its reply comments. The Company suggests that because the PUC approved the ROFO Provision, Xcel "arrived at the transaction and our proposal in an appropriate fashion that is consistent with prior Commission Orders."[59] But the ROFO provision does not exempt Xcel from the Commission's current two-track bidding process for at least four reasons.

First, and most importantly, contrary to the insinuations by Xcel and the Department, the Commission never understood the ROFO provision to apply to the entire MEC Facility. Instead, the PUC specifically understood that term to grant a ROFO "in the event [Southern] ***were to propose to sell the original Mankato Energy Center I***."[60] The Commission never understood the ROFO provision to apply to the entire MEC Facility as a whole, but only to MEC I. The ROFO provision cannot exempt Xcel from Two-Track Bidding.

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[58] *Id.* at p. 30 n.30.
[59] Xcel's Reply Comments at p. 6.
[60] *ITMO the Petition of Northern States Power Company d/b/a Xcel Energy for Approval of Competitive Resource Acquisition Proposal and Certificate of Need*, Docket No. E-002/CN-12-1240, Order Approving Power Purchase Agreement with Calpine, Approving Power Purchase Agreement with Geronimo, And Approving Price Terms with Xcel (February 5, 2015) at p. 14.

Second, recognizing a ROFO exemption would eviscerate the PUC's rationale for developing Two-Track Bidding. In fact, an exemption would promote an Xcel resource acquisition protocol that ironically eschews transparency, fairness, consistency and competition while simultaneously promoting opacity, partiality, irregularity, and backroom collusion.

Third, in the event the PUC adopts such an exemption, it will effectively create the blueprint for Xcel to add billions worth of generating facilities subject to PPAs to the Company's rate base. And these are not just the OAG's suspicions. Instead, Xcel confirmed that plan during its June 2019 Midwest Investor Meetings. In fact, Xcel's own presentation at those meetings highlighted "buyout and repowering opportunities" and "capital opportunities" as opportunities arising from "PPA roll-off."[61] In other words, Xcel is seeing opportunities to buy out existing PPAs and replace them with Company-owned generation that it could eventually rate base, thereby allowing Xcel to earn a return on those assets.

Finally, and even if the Commission finds that the ROFO provision applies to the MEC Facility as a whole, Xcel's proposed transaction is null and void pursuant to the terms and conditions of the Commission-approved PPA. Section 19.1 states that "[a]ny Change of Control or sale, transfer, or assignment of any interest in the Facility . . . ***made without fulfilling the requirements of this PPA shall be null and void and a breach of this PPA.***"[62]

The PPA for MEC II requires that at least two procedural steps be followed to properly invoke the ROFO provision. First, Xcel's ROFO is not available until "[a]t any time ***after*** the Commercial Operation Date" for MEC II.[63] Additionally, Section 19.2 requires Southern—and not Xcel—to furnish the terms and price Southern "is willing to accept in connection" with the

[61] Sustainable Long-Term Growth: Midwest Investor Meetings, June 13-21, 2019, p. 25, attached hereto as Exhibit 1.
[62] Xcel's Petition in this docket, Attachment C, p. 61.
[63] *Id.* at Attachment C, p. 63.

proposed sale. The undisputed facts in the Petition demonstrate that Xcel and Southern violated the express terms of the ROFO provision by not complying with the timing or offer requirements.[64] In fact, Xcel confirmed to the OAG that: (1) that Southern and Xcel "entered into the [MIPA] for the purchase of the [MEC Facility] prior to the MEC II COD," and (2) the Company had not "received any notice from [Southern] which would give rise to [Xcel's ROFO] pursuant to MEC II PPA Section 19.2."[65] Accordingly, the PUC should find that the MIPA is null and void and in breach of the express terms of the PPA for MEC II.

III. XCEL FAILS TO DEMONSTRATE THAT ITS PROPOSED ACQUISITION FURTHERS THE PUBLIC AND RATEPAYER INTERESTS.

A. Xcel's Concession That The Petition's Timing "Was Driven Entirely" By Southern Is Reason Enough To Reject Xcel's Petition.

Xcel's reply comments agree that the "[IRP] process is crucially important to ensuring that the Company's plans are informed by the desires and policies of our customers, stakeholders, the Commission, and the state."[66] Xcel further expressly "clarif[ies] at the outset" that it "had no intention of sidestepping the [IRP] process in connection with" the Petition.[67] Instead, Xcel concedes that its Petition "was driven entirely by [Southern's] decision . . . to sell MEC as part of its broader strategy to raise capital."[68] The Commission should reject Xcel's Petition as it was "driven entirely" by Southern—not the public or ratepayer interests.

B. The Department's Unsuccessful "Attempt To Perform" Additional Modeling Is Yet Another Reason To Reject Xcel's Petition.

The Department's comments demonstrate that it failed to perform a "limited re-analysis" of changes to Xcel's prior IRP database because of "large number and wide range" of required

[64] *Compare id. with e.g.,* Xcel's Reply Comments at pp. 3-5.
[65] Xcel's Response to the OAG's Information Request No. 134 (public version), attached hereto as Exhibit 2.
[66] Xcel's Reply Comments at p. 4.
[67] *Id.* at p. 3.
[68] *Id.*

changes would have amounted to a complete "re-build of that database."[69] Accordingly, the Department "attempted to perform modeling" using the new database Xcel provided in conjunction with its Petition. The PUC cannot be certain that Xcel's Petition furthers the public interest given the Department's concerns about the validity of Xcel's 2015 IRP database and difficulty in adequately scrutinizing the analytical data supporting Xcel's Petition.

C. Even If The "Significant Issues" Plaguing Xcel's Resource Planning Analysis Are Resolved To The Department's Satisfaction, Xcel Cannot Demonstrate Its Proposed Acquisition Furthers The Public Interest Outside the 2019 IRP.

The Department's recent extension request explained that it "worked with [Xcel] to obtain additional resource planning (Strategist) files to evaluate Xcel's [Petition] *in a resource planning framework*."[70] It appears to the OAG that the Department and Xcel are the only two entities involved in that analysis. Regardless of the Department's ultimate recommendation, the Commission should find such analysis insufficient to confirm that the proposed acquisition is in the public interest.

The OAG recognizes the PUC's reliance on the Department's output during resource planning proceedings. That said, the Department's analysis—no matter how thorough and comprehensive—pales in comparison to the scope and breadth of the forthcoming analysis to be developed in Xcel's 2019 IRP proceeding. The Commission has recognized the comprehensive, evolving and iterative process through which Xcel's resource planning is conducted, noting:

> The Commission has often described the resource planning process as collaborative and iterative. The process is collaborative because there are few hard facts dictating resource choices or deployment timetables, and full understanding of the relevant facts requires exposure to the views of engaged and knowledgeable stakeholders.

[69] The Department's 2019 Comments at p. 20.
[70] The Department's Extension Request in this docket, dated April 26, 2019.

> The process is iterative because analyzing future energy needs and preparing to meet them is not a static process; strategies for meeting future needs are always evolving in response to changing conditions in the service area. When demographics, economics, technologies, or environmental regulations change, so do a utility's resource needs and its strategies for meeting them.[71]

In light of the collaborative and iterative nature of resource planning analysis, it would be imprudent to rely on a single party's analysis as the sole basis for deciding whether Xcel's proposal to add $650 million to the Company's rate base is in the public interest.

D. The PUC's 2015 IRP Order Suggests That Xcel's Proposed Acquisition Is Not In The Public Interest.

Whether Xcel's proposed acquisition furthers the public interest is largely dependent on a rigorous analysis of the Company's long-term resource mix, comparison of alternative resources, and a contemporaneous determination of need. In 2017, the Commission modified Xcel's proposed resource plan by declining to include the location-and-fuel-specific generating facility that the Company proposed to construct to meet its intermediate capacity need in 2027. The 2015 IRP Order found that a more generic resource comparison along with a contemporaneous demonstration of need would "be more consistent with the public and ratepayer interests."

Although the PUC's reasoning related to the resource planning context, it is likewise applicable to the resource acquisition context. Here, the Company's Petition seeks approval in 2019 to acquire an already-sited generating facility to meet an intermediate capacity need in 2026 without conducting meaningful alternatives analysis or complying with Two-Track Bidding by demonstrating need under the CON-like criteria. The Commission should find that the public interest is not furthered through Xcel's acquisition of the MEC Facility.

[71] 2015 IRP Order at p. 4.

E. Questionable Modeling Assumptions In Xcel's Analyses Likewise Dictate That The Proposed Acquisition Is Not In The Public Interest.

The OAG has several concerns with the assumptions used by Xcel in its Strategist modeling. In some cases, these assumptions are not justified. In others, the assumptions might later be vindicated, but only after a more fulsome 2019 IRP analysis. This is yet another reason why the Commission should reject Xcel's Petition, finding that it has failed to demonstrate its proposal furthers the public interest.

1. Xcel's future energy storage cost assumptions are flawed.

Xcel's Strategist model includes assumptions for the future cost of energy storage. It is imperative that those assumptions are objective, comprehensive and accurate given that storage technology undoubtedly has the potential to impact the MEC Facility. If storage (and renewable) costs continue to decline quickly, it could limit the usefulness of the MEC Facility on Xcel's system before ratepayers realize any cumulative cost savings, which Xcel does not expect to materialize for more than a decade. Xcel's analysis of storage costs has several important flaws.

First, Xcel's analysis only considers *battery* storage. While batteries represent one form of energy storage, Xcel should have evaluated the myriad non-battery storage technologies currently available.[72]

Second, Xcel's storage cost analysis uses a variety of assumptions that tend to overstate both the costs of storage and the benefits experienced by acquiring the MEC Facility. For example, Xcel's base case estimates that battery costs will decline by 10% annually.[73] Despite its estimate, Xcel also recently referenced analysis conducted by Bloomberg New Energy

[72] For instance, the Energy Storage Associations break the storage technologies "currently being deployed around the world" into six main categories: Solid State Batteries, Flow Batteries, Flywheels, Compressed Air Energy Storage, Thermal Storage, and Pumped Hydro-Power. *See* Energy Storage Technologies, attached hereto as Exhibit 3.

[73] Xcel's Reply Comments at Attachment A, p. 15.

Finance estimating 18% declines.[74] Even Xcel's "low technology cost scenario" was more conservative, presuming an annual 15% drop in battery costs.[75]

Third, Xcel's analysis relies on 2017 data that may be antiquated given the rapid evolution of battery storage technology and associated price reductions. The Commission found this consideration noteworthy in its 2015 IRP Order, finding the public interest test was not met due to Xcel's failure to fully consider alternatives given rapidly changing generation and capacity costs.

Finally, the OAG is unclear why Xcel's Strategist assumptions fail to analyze battery storage until 2023.[76] An analysis contemplating immediate battery installation would provide a more accurate picture of potential impacts to the MEC Facility.

2. Xcel's assumptions about the level of future renewable energy adoption are likely flawed and overstate the MEC facility's benefits.

Xcel recognizes that the "high renewables scenario represents the more likely future."[77] Xcel's modeling, however, does not fully reflect a future in which renewable energy is adopted at high levels.

First, Xcel's Distributed Solar Forecast assumes that when distributed facilities reach the end of their useful lives, only 90% of the capacity will be replaced.[78] It seems more plausible to the OAG that these systems would be replaced with equivalent capacity. In fact, renewable generation's continual cost and efficiency improvements may even present a scenario under which Xcel's replacement resources generate greater capacity.

[74] Xcel's Response to the OAG's Information Request No. 106, attached hereto as Exhibit 4.
[75] *Id.*
[76] Xcel's Reply Comments at Attachment A, p. 18 (Levelized Capacity Costs by In-Service Year).
[77] *Id.* at Attachment A, p. 1.
[78] *Id.* at Attachment A, p. 13.

Second, Xcel's high renewables scenario fails to make wind and solar available to the Strategist model in every year, but instead only includes those resources in 19 of the 39 years.[79] Xcel's artificial limitation on its renewable additions significantly impacts the possible benefits of the MEC Facility. Moreover, by limiting the selection of new renewables in future years, Xcel's model likely inflates the value of the MEC Facility.

3. Xcel's sensitivity combinations are internally inconsistent.

Xcel's supplemental modeling results are impacted by two internally inconsistent "Sensitivity Combinations."[80] The Company relies on these Sensitivity Combinations to show the benefits associated with the proposed acquisition under both early MEC retirement scenarios (either 2040 or 2050) and Xcel's early coal retirement scenarios.

Xcel's first Sensitivity Combination (High Electrification & Fuel Costs, Low Tech Costs) assumes that high electrification coincides with high fuel costs. The OAG does not find this scenario likely given that fuel costs are a significant driver of electricity costs.[81] In other words, high fuel costs tend to produce high electric costs. This would encourage customers to *limit* their electricity use. Xcel, however, assumes in its first Sensitivity Combination that it will experience a high degree of electrification during a time when fuel prices (and therefore electric prices) are also high. This is not a logical assumption.

Xcel's second Sensitivity Combination (High Distributed Solar Deployment, Low Tech Costs and Fuel Costs) assumes low fuel costs with a high rate of distributed solar deployment. If electricity costs are low (because fuel costs are low), customers will have less incentive to offset their electricity costs by installing solar panels.

[79] Xcel's Response to the OAG's Information Request No. 36.1, attached hereto as Exhibit 5.
[80] Xcel's Reply Comments at p. 26, Tables 6-7.
[81] *Id.* at Attachment A, p. 10, Table 9 (Fuel and Market Price Forecasts).

Most troubling, however, is Xcel's refusal to accommodate the OAG's request to provide a Sensitivity Combination that assumes a high fuel cost, low load, and low cost renewable resources. The OAG sought to analyze the potential future value of the MEC Facility under Xcel's renewables trajectory,[82] while accounting for low load growth[83] and fuel costs.[84] Xcel asserted that the OAG's request was "overly broad and unduly burdensome" and not "relevant to a reasonable evaluation of our petition in this docket."[85] The Commission should require that this analysis be provided before it acts on Xcel's Petition.

4. Xcel's analyses fail to demonstrate that the proposed acquisition is consistent with cost-effectively meeting its climate goals.

Xcel's proposed acquisition is neither prudent nor in the public interest given that Xcel's individual scenarios fail to demonstrate that its proposed acquisition of the MEC Facility allow the Company to cost-effectively meet both its intermediate[86] and long-term[87] climate goals.

First, the Company provided one scenario that purports to show that purchasing the MEC Facility would allow Xcel to cost-effectively close its King and Sherco 3 coal plants by 2030 while meeting its intermediate goals. The problem, however, is that Xcel assumes that the MEC Facility continues to operate until 2054. In other words, Xcel's scenario demonstrates that it can only cost-effectively meet its intermediate carbon-reduction goal if it likewise fails to comply with its long-term goal. The Company's explanation that it intends to meet its long-term goals while operating the MEC Facility past 2050 relies entirely on yet-to-be-developed carbon capture and sequestration technology. The PUC should find such reasoning specious.

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[82] *Id.* at Attachment A, p. 20.
[83] *Id.* at Attachment A, pp. 3-6.
[84] *Id.* at Attachment A, p. 10.
[85] Xcel's Response to the OAG's Information Request No. 114, attached hereto as Exhibit 6.
[86] Xcel's intermediate climate goal is 85% carbon-free generation and 80% reduction in GHG emissions by 2030.
[87] Xcel's long-term climate goal is generating carbon-free energy by 2050.

Second, the Company provided another scenario assuming the MEC Facility is closed by 2050, rather than 2054. This scenario also assumes that Xcel would continue operating King and Sherco 3 until the end of their useful lives in 2037 and 2040. Xcel's scenario demonstrates that the proposed acquisition would help the Company meet its long-term climate goals but only if it does not meet its intermediate climate targets.

Third, the Company provided a scenario that purports to show that it could purchase the MEC Facility and close it by 2040 with a "very modest incremental cost" of $25 million on a PVRR basis.[88] Xcel does not state why it chose to provide this scenario, but suggests that it shows how the proposed transaction could allow for "aggressive" carbon reduction at a "very modest" cost.[89] Notably, Xcel's "aggressive" carbon reduction scenario still assumes that King and Sherco 3 would operate throughout their remaining lives. In any event, the $25 million cost that Xcel presents is misleading, because it is based on the Company depreciating the MEC Facility through 2054, even though it would close the plant in 2040. This means that Xcel's scenario does not include the full cost of the MEC Facility by its closing, meaning that a portion of this cost would be left to address later.

The OAG asked Xcel to identify the 2040 net book value under this scenario. The Company's response indicates that it would be **[TRADE SECRET BEGINS]**

[TRADE SECRET ENDS]. The remaining plant balance would likely be *in addition* to the supposed "very modest" $25 million PVRR estimate resulting from Xcel's underlying assumptions, unless a future Commission disallowed recovery. This does not suggest that purchasing MEC would help the Company cost-effectively implement an aggressive carbon-

[88] *See* Xcel's Reply Comments at 10.
[89] *Id.*

reduction scenario. Instead, it demonstrates that future PUC attempts to reduce carbon could be hindered due to the high cost of stranded assets.

None of the scenarios Xcel presents demonstrate that it could cost-effectively meet all of the carbon-reduction goals it has set for itself, and therefore the Petition does not promote the public interest.

CONCLUSION

For the reasons set forth above, the new analysis that Xcel presented in its reply comments does not demonstrate that its proposed acquisition promotes the public interest. Accordingly, the OAG continues to recommend that the Commission reject Xcel's Petition without prejudice and consider its proposal in the forthcoming IRP proceeding. If the Commission somehow finds that Xcel's Petition would further the public interest, the OAG

respectfully requests that the PUC impose the stringent ratepayer protections set forth the OAG's its initial comments.

Dated: July 26, 2019

Respectfully submitted,

KEITH ELLISON
Attorney General
State of Minnesota

s/ **Brian Lebens**
BRIAN LEBENS
Financial Analyst

s/ **Max Kieley**
MAX KIELEY
Assistant Attorney General
Atty. Reg. No. 0389363

445 Minnesota Street, Suite 1400
St. Paul, Minnesota 55101-2127
(651) 757-1244 (Voice)
(651) 296-9663 (Fax)
max.kieley@ag.state.mn.us

OFFICE OF THE ATTORNEY GENERAL—
RESIDENTIAL UTILITIES AND ANTITRUST
DIVISION

Xcel Energy®

Sustainable Long-Term Growth

Midwest Investor Meetings

June 19-21, 2019

Safe Harbor

Except for the historical statements contained in this presentation, the matters discussed herein are forward-looking statements that are subject to certain risks, uncertainties and assumptions. Such forward-looking statements, including our 2019 earnings per share (EPS) guidance, long-term earnings per share and dividend growth rate, as well as assumptions and other statements are intended to be identified in this document by the words “anticipate,” “believe,” “could,” “estimate,” “expect,” “intend,” “may,” “objective,” “outlook,” “plan,” “project,” “possible,” “potential,” “should,” “will,” “would” and similar expressions. Actual results may vary materially. Forward-looking statements speak only as of the date they are made and we expressly disclaim any obligation to update any forward-looking information. The following factors, in addition to those discussed in Xcel Energy’s Annual Report on Form 10-K for the fiscal year ended Dec. 31, 2018 and subsequent securities filings, could cause actual results to differ materially from management expectations as suggested by such forward-looking information: changes in environmental laws and regulations; unusual weather and climate change, including compliance with any accompanying legislative and regulatory changes; ability of subsidiaries to recover costs from customers; actions of credit rating agencies; general economic conditions, including inflation rates, monetary fluctuations and their impact on capital expenditures and the ability of Xcel Energy Inc. and its subsidiaries to obtain financing on favorable terms; availability or cost of capital; our customers’ and counterparties’ ability to pay their debts to us; assumptions and costs relating to funding our employee benefit plans and health care benefits; our subsidiaries’ ability to make dividend payments; tax laws; operational safety, including our nuclear generation facilities; successful long-term operational planning; commodity risks associated with energy markets and production; costs of potential regulatory penalties; effects of geopolitical events, including war and acts of terrorism; cyber security threats and data security breaches; fuel costs; and employee workforce factors. See note 7 in our 2018 year end earnings report for more information about our use of non-GAAP numbers and a reconciliation of ongoing earnings to GAAP earnings.

Xcel Energy®

Our Investment Merits

TRANSPARENT GROWTH

LEADING ESG PROFILE

INVESTMENT PIPELINE

LOW PAYOUT RATIO

STEEL FOR FUEL

LOW BETA

BALANCE SHEET STRENGTH

~3%

DIVIDEND YIELD
5-7% CAGR

~8-10%

TOTAL SHAREHOLDER RETURN

5-7%

EPS GROWTH

ROE IMPROVEMENT

LOW RISK, REGULATED ASSETS

Xcel Energy®

Our Operating Profile

FOUR
Operating companies

EIGHT
States

3.6 M
Electric customers

2.0 M
Natural gas customers

$27 B
Rate base

18 GW
Generating capacity

11,100
Employees

As of 12/31/2018

NSP-MINNESOTA

Minnesota, South Dakota, North Dakota

- YE18 Rate Base: $10.6 billion
- 2018 Ongoing EPS: $0.96
- 2019-2023 Cap Ex: $8.3 billion

NSP-WISCONSIN

Wisconsin, Michigan

- YE18 Rate Base: $1.6 billion
- 2018 Ongoing EPS: $0.19
- 2019-2023 Cap Ex: $1.4 billion

PSCO

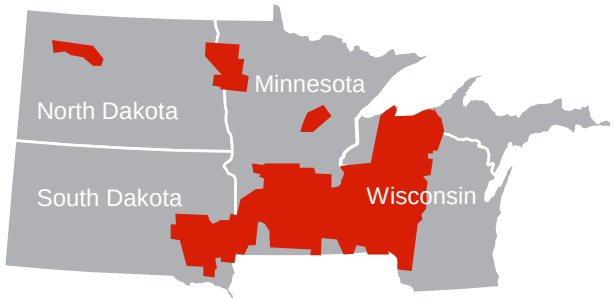
Colorado

- YE18 Rate Base: $11.3 billion
- 2018 Ongoing EPS: $1.08
- 2019-2023 Cap Ex: $7.0 billion

SPS

Texas, New Mexico

- YE18 Rate Base: $3.9 billion
- 2018 Ongoing EPS: $0.42
- 2019-2023 Cap Ex: $3.5 billion



Xcel Energy®

Our Vision, Mission and Values

OUR VISION

We will be the preferred and trusted provider of the energy our customers need.

OUR MISSION

We provide our customers the safe, clean, reliable energy services they want and value at a competitive price.

OUR VALUES

We are:

TRUSTWORTHY

CONNECTED

SAFE

COMMITTED

Xcel Energy®

Our Strategic Priorities

Leverage competitive advantages to reduce emissions improve grid performance and provide customer value

LEAD THE CLEAN ENERGY TRANSITION	ENHANCE THE CUSTOMER EXPERIENCE	KEEP BILLS LOW

BROADEN
Economic growth and use of clean energy

HELP
Customers be more efficient and lower energy use

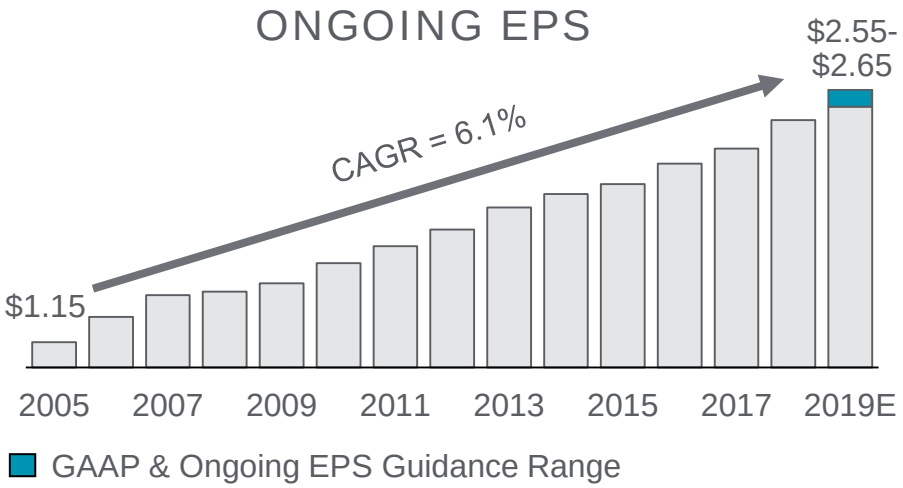
LOWER
Total cost, effort, and time to serve customers

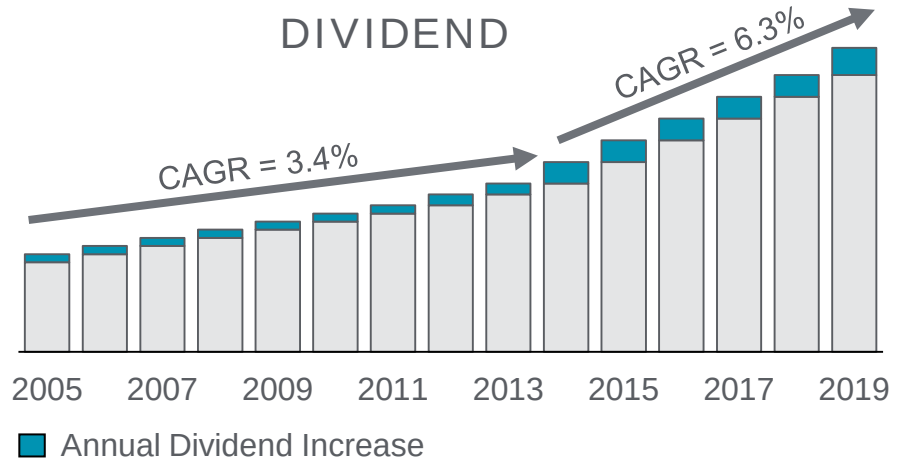
IMPROVE
Grid utilization, effectiveness, and economics

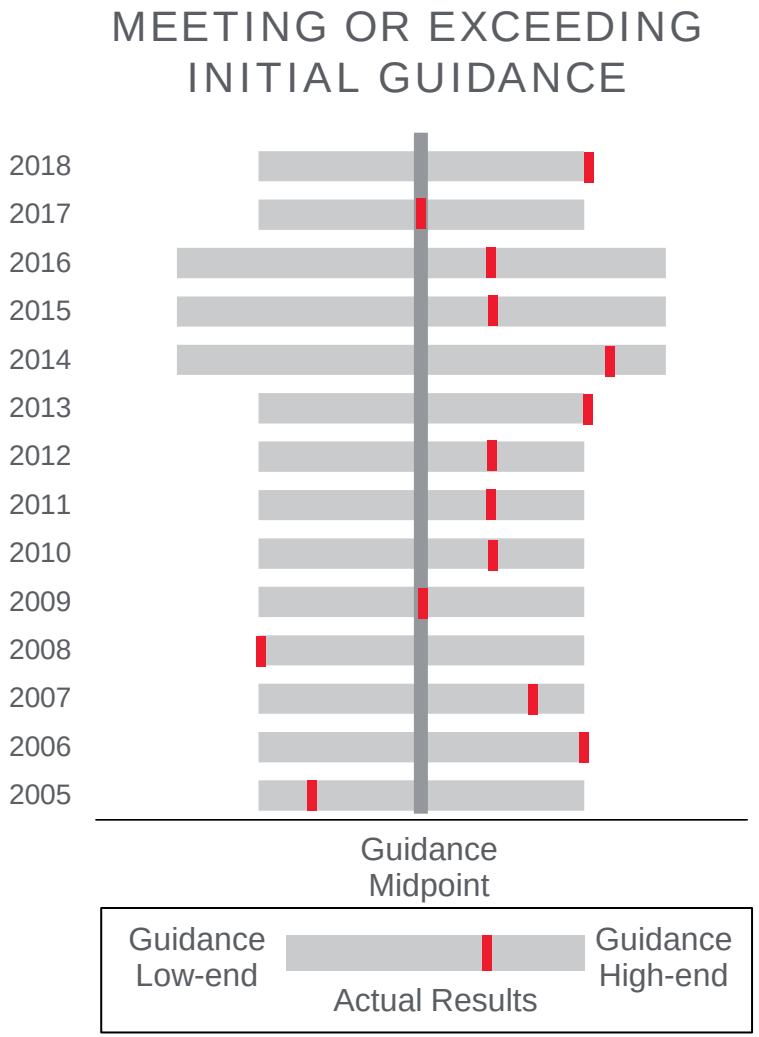
EXPAND
Role and scope of propositions we offer

Xcel Energy®

Our Performance Track Record





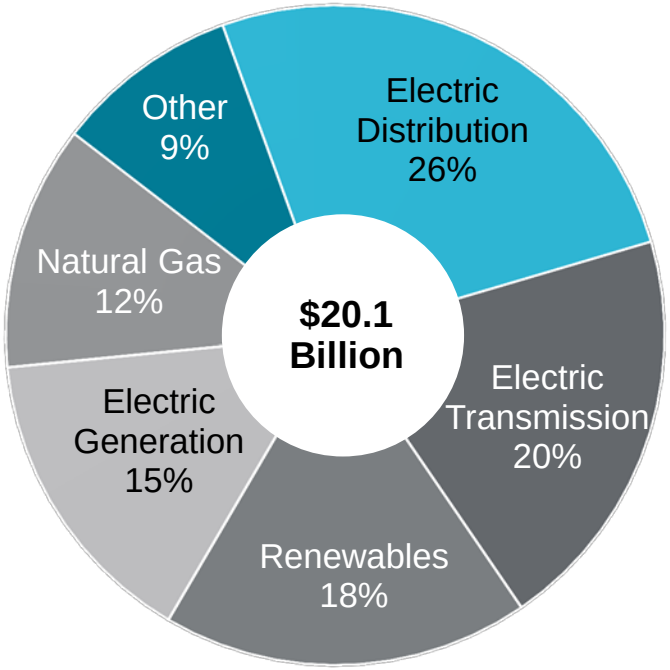


Our Transparent Growth

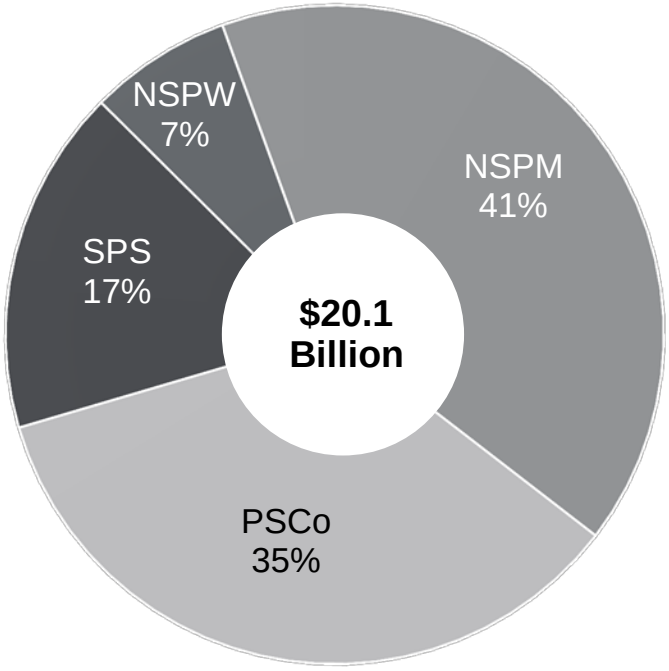
Xcel Energy®

Our Infrastructure Investments

CAPITAL INVESTMENT PROFILE 2019-2023



BASE PLAN



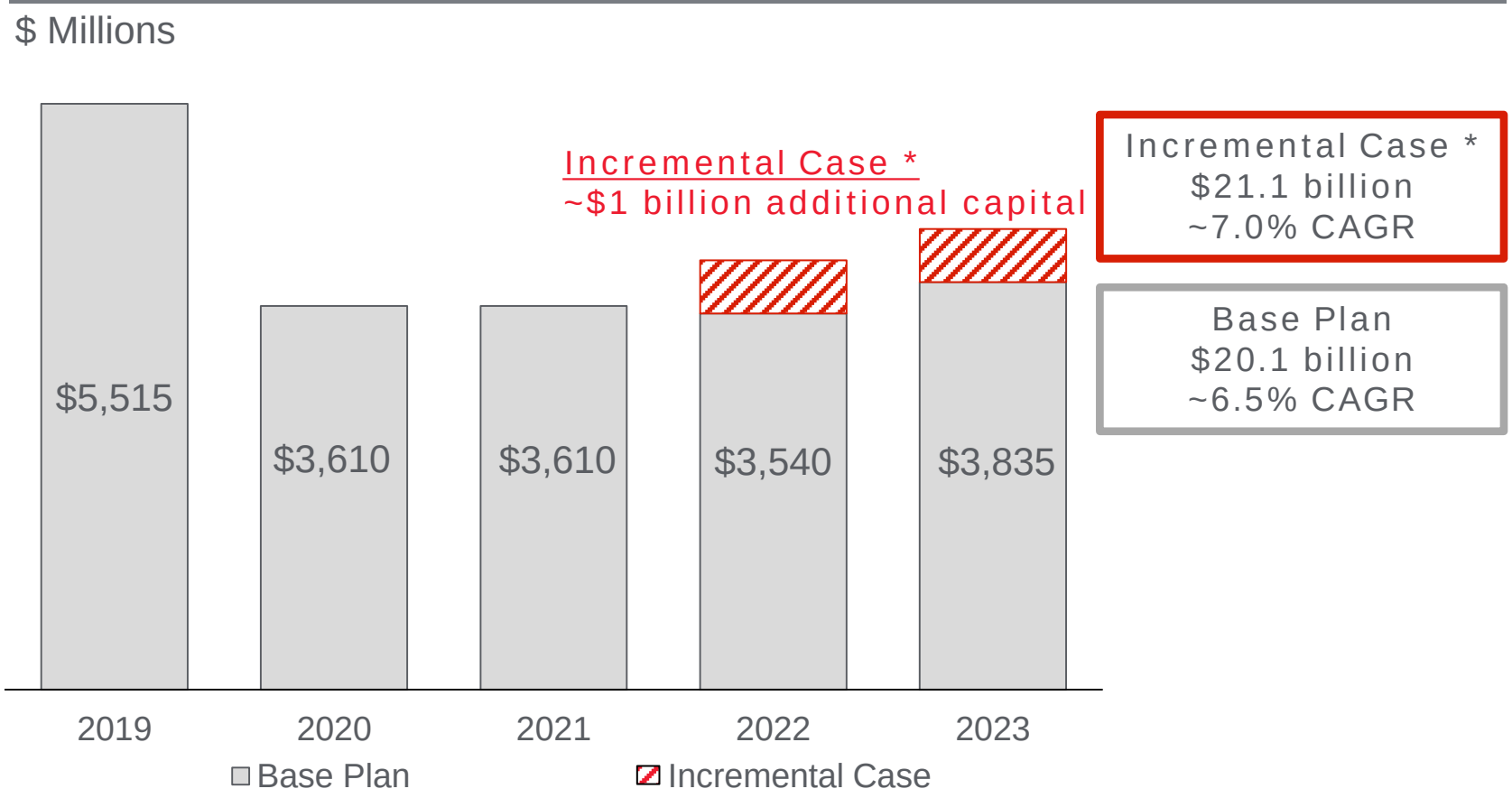
BASE PLAN

Base capital plan includes Mankato acquisition and Jeffers & Community Wind North repowering

Xcel Energy®

Our Infrastructure Investments

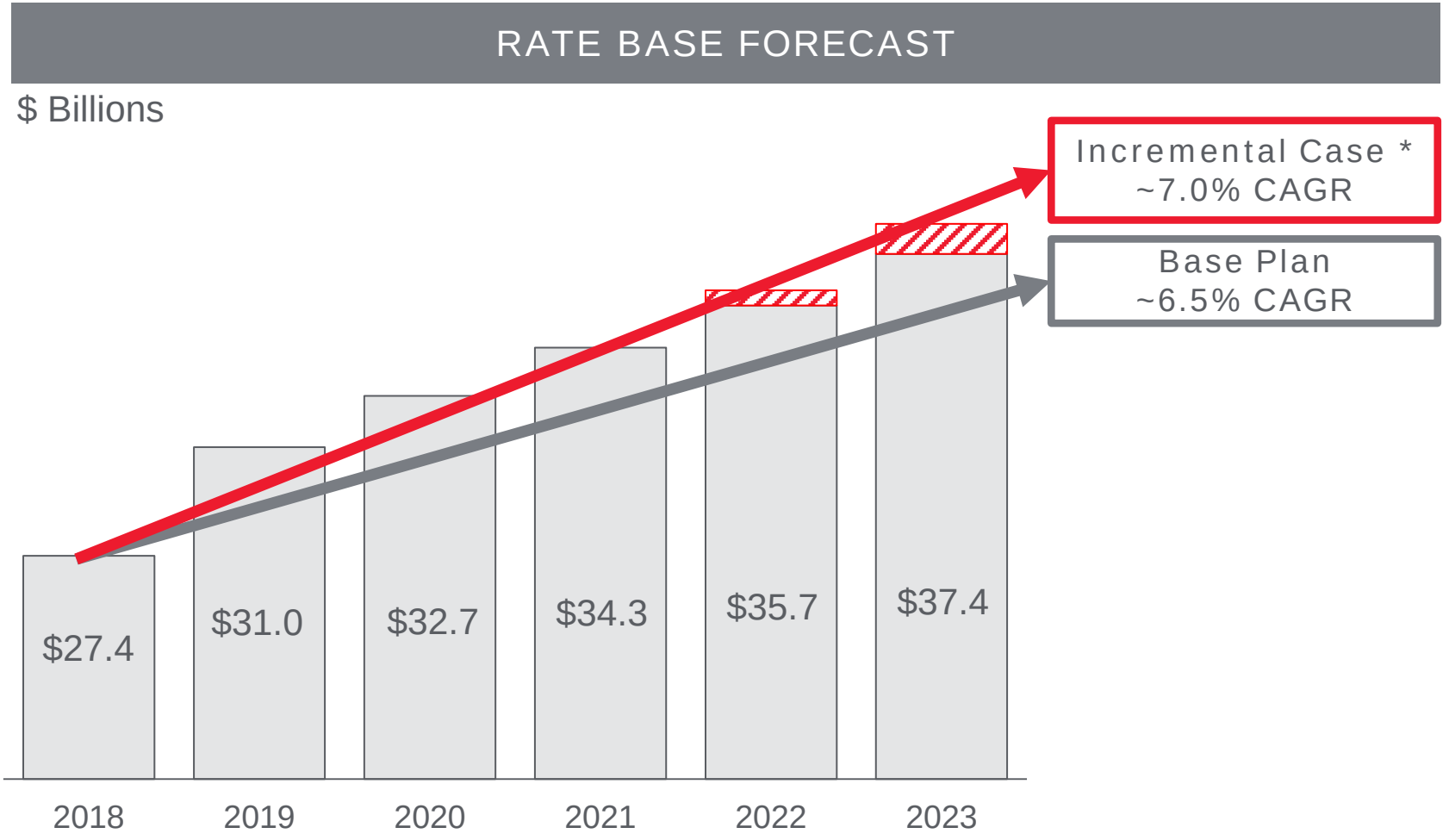
CAPITAL INVESTMENT FORECAST 2019-2023



* Represents unidentified projects that could come to fruition during the forecast period

Xcel Energy®

Our Robust Rate Base Growth

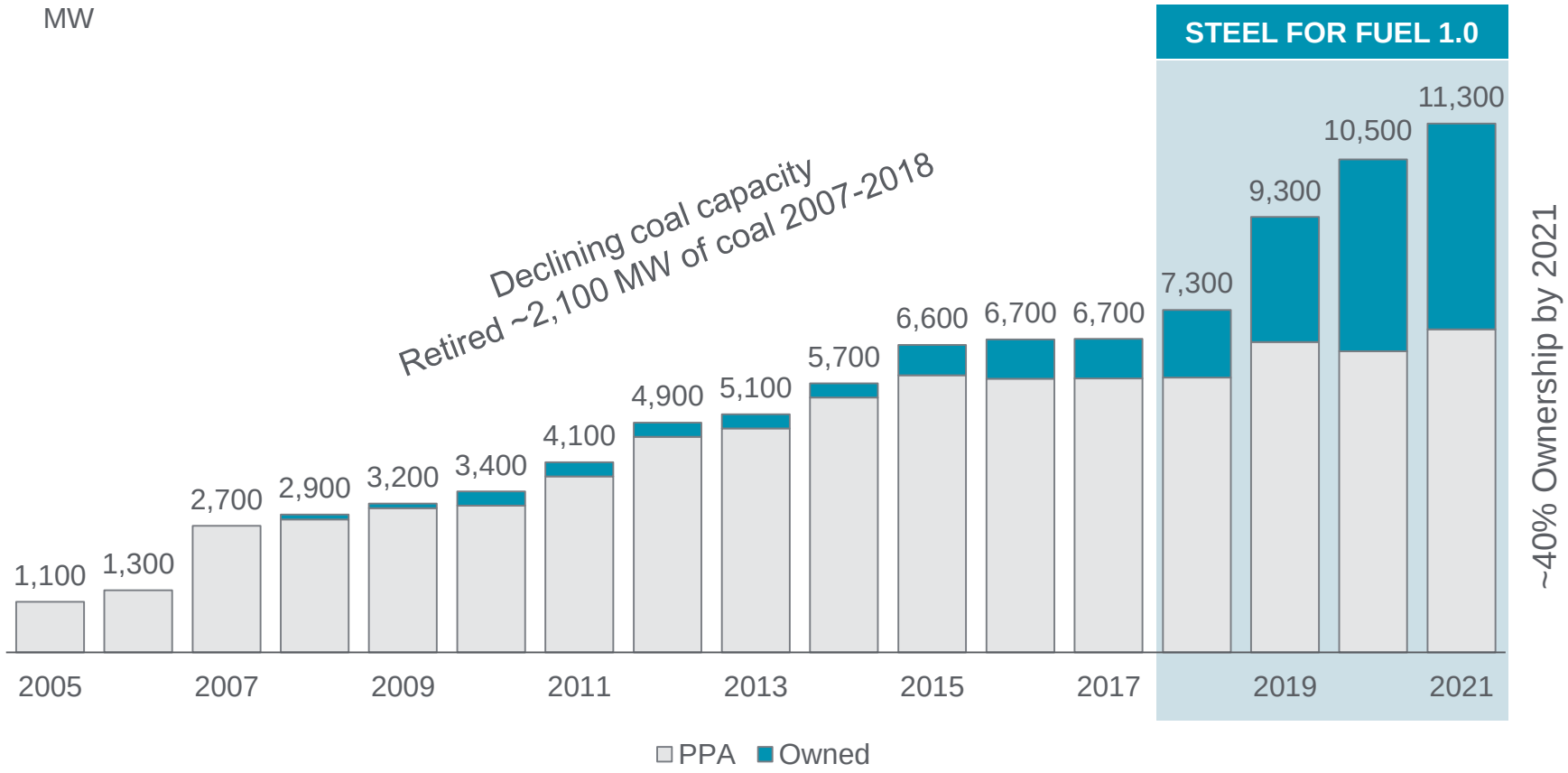


* Represents $1 billion of additional capital for unidentified projects that could come to fruition during the forecast period

Xcel Energy®

Our Wind Ownership Profile

CHANGING COMPOSITION OF WIND CAPACITY



Xcel Energy®

Our Wind Projects in the Capital Plan

Project	Capacity	Est. Completion
(1) Freeborn	200 MW	2020
(2) Blazing Star 1	200 MW	2019
(2) Blazing Star 2	200 MW	2020
(3) Lake Benton *	100 MW	2019
(4) Foxtail	150 MW	2019
(5) Crowned Ridge *	300 MW	2020
(6) Dakota Range	300 MW	2021
(7) Hale	478 MW	2019
(8) Sagamore	522 MW	2020
(9) Cheyenne Ridge	500 MW	2020
Approved **	**2,950 MW**	

* Build-own-transfer wind projects

** Excludes 600 MW Rush Creek (completed in 2018)

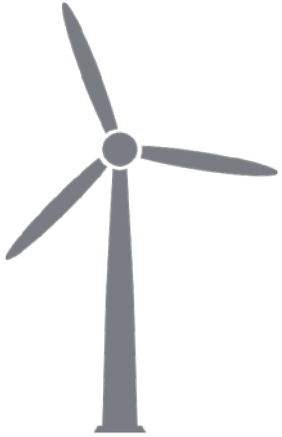
= Operational owned wind facilities ~1,450 MW

Our Expanding Pipeline

MANKATO ENERGY CENTER

- ~760 MW CCGT
- Regulatory filing 2018 Q4
- Partial settlement reached 2019 Q2
- Closing expected 2019 Q3
- Investing to save customers money

$650 Million



JEFFERS AND COMMUNITY WIND NORTH WIND REPOWERING & PPA BUYOUTS

- 70 MW total wind PPAs
- Regulatory filing 2018 Q4
- Closing expected 2019 Q4
- Investing to save customers money

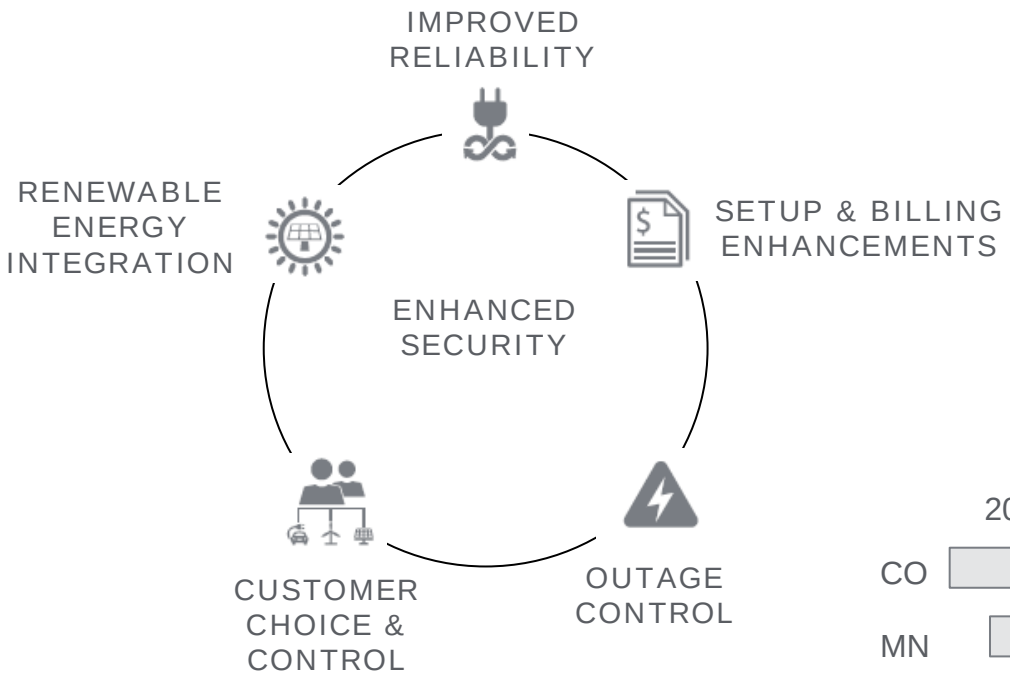
$135 Million

Xcel Energy®

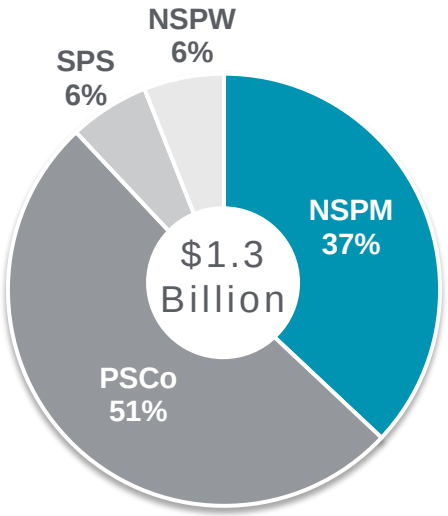
Our Advanced Grid Programs

CHANGING COMPOSITION OF THE ENERGY GRID

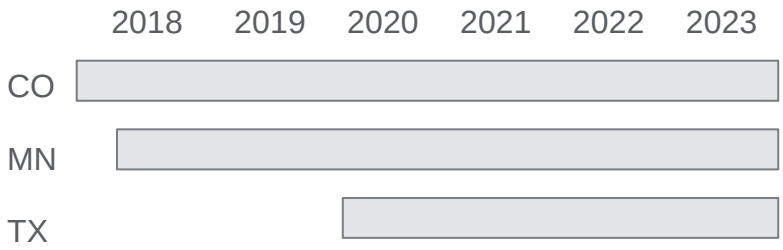
- Interactive, modern and efficient grid
- Sophisticated monitoring, controls and integration



2019-2023 CAPITAL EXPENDITURES



ANTICIPATED TIMELINE



Xcel Energy®

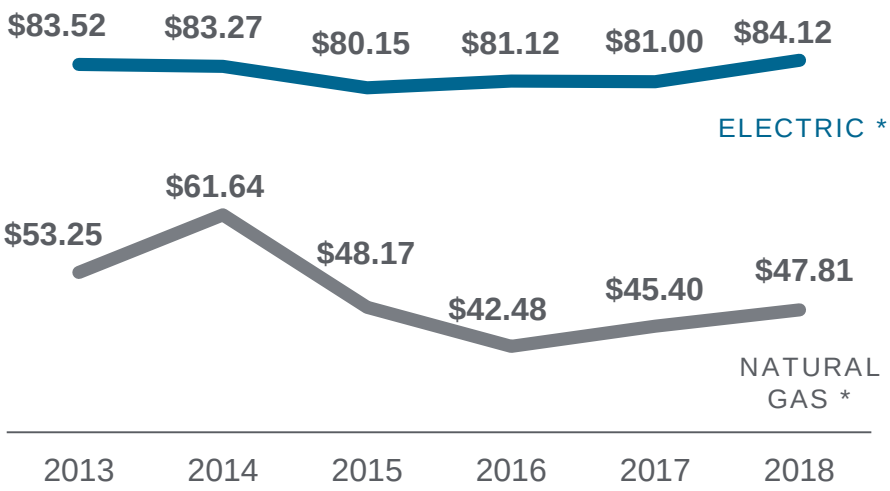
Keep Bills Low

DECLINING RESIDENTIAL BILLS

STEEL FOR FUEL

OUT-OF-THE MONEY PPA ROLL OFFS

CAP EX FOR OP EX



COAL PLANT RETIREMENTS

BIOMASS BUYOUTS

CUSTOMER OPTIONS

PRODUCTIVITY THROUGH TECHNOLOGY

DSM & CONSERVATION

O&M COST MANAGEMENT

TAX REFORM

Forecasted bill increases < CPI

** Source: Based on EIA data. Figures are annual average of monthly bills, excluding taxes and franchise fees.*

Long-term Growth Opportunities

Xcel Energy®

Steel for Fuel Basics

CUSTOMER AFFORDABILITY IS THE FOUNDATION OF STEEL FOR FUEL

Renewable Generation
Displace Fossil Generation
Drive Capital Investment

PPA Buyouts and Increasing Generation Ownership
Diversify Ownership Portfolio
Drive Capital Investment

Enables

Lower Fuel and Capacity Costs

Lower O&M

Lower Environmental Compliance Costs

Production Tax Credits

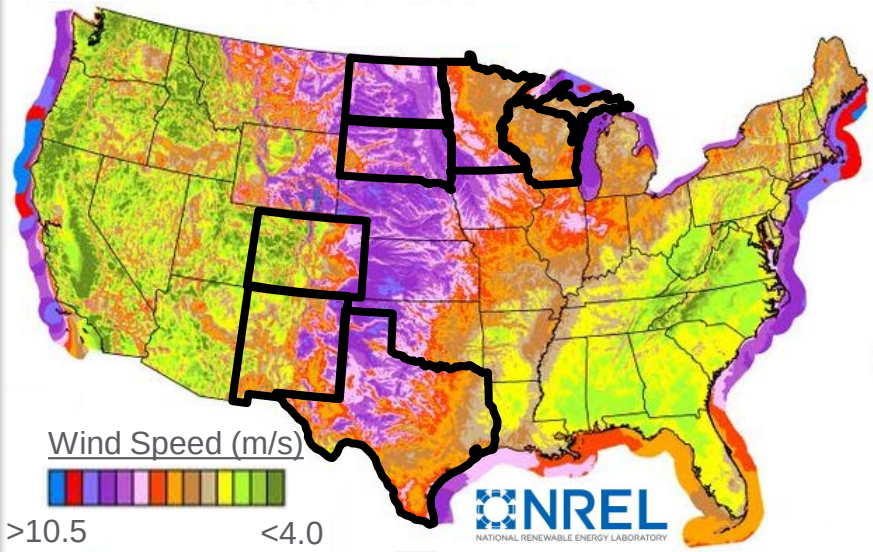
Capital investments that reduce total customer costs provide headroom for infrastructure investment that benefits our customers

Xcel Energy®

Advantaged Geography

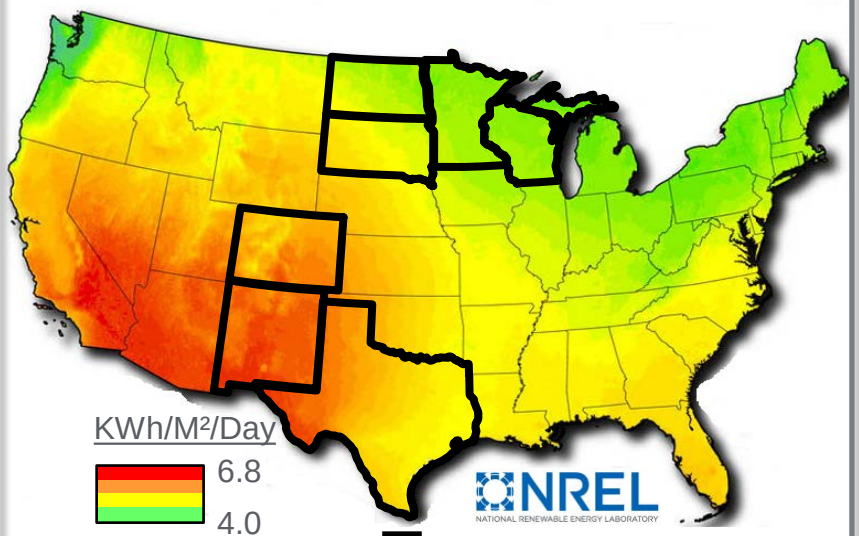
COST EFFECTIVE CLEAN ENERGY TRANSITION

Wind Resource – Annual Average Wind Speed
(at 100 meters)



This map was created by the National Renewable Energy Laboratory for the U.S. Department of Energy with data provided by AWS TruePower, but includes modifications by Xcel Energy.

Solar Resource – Photovoltaic



This map was created by the National Renewable Energy Laboratory for the U.S. Department of Energy, but includes modifications by Xcel Energy.

WIND RESOURCES LCOE BELOW FOSSIL FUEL COSTS

Xcel Energy®

Expansion of Steel for Fuel

SUPPORTS 5-7% LONG-TERM EPS GROWTH

STEEL FOR FUEL 1.0

Adding 3,550 MW of owned wind by 2021

STEEL FOR FUEL 2.0

Coal Retirement
4,400 MW

PPA Roll-off / Replacement
11,600 MW

WHAT'S NEXT?

Grid Modernization	Electric Vehicles	Solar	Storage	Customer Experience

Customer driven, cost effective investments improving reliability and experience

Xcel Energy®

New Legislative Initiatives

- **Colorado Carbon Reduction Bill:**
  - Provides a path to carbon reduction of 80% by 2030 and 100% by 2050
  - Targets 50% utility ownership of new generation, if costs are reasonable
  - Allows voluntary securitization of generation assets at utilities' discretion
  - Provides a rate moderation rider at 1.5%
- **Colorado Electric Vehicles Bill** – Allows utilities to own EV infrastructure
- **Texas Generation Rider Bill** – Rider recovery for new generation projects
- **Texas AMI Bill** – Rider recovery for advanced meters and networks
- **Texas ROFR Bill** – Requires that transmission projects be awarded to the owners of the substation end points
- **New Mexico Energy Transition Act:** 50% RPS by 2030; 80% RPS by 2040; 100% carbon-free by 2050

STEEL FOR FUEL 2.0

Xcel Energy®

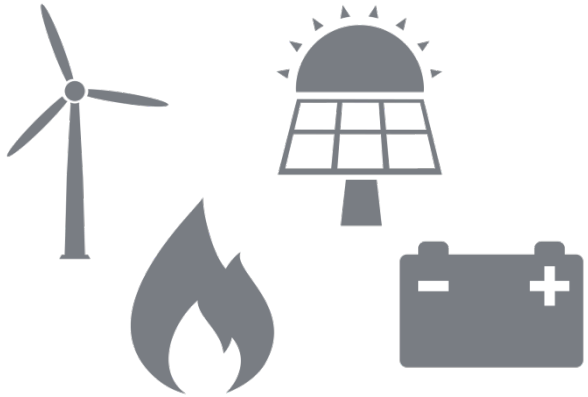
Potential Generation Replacement

TODAY'S SOLID FUEL ASSETS

~ $5 Billion
Rate Base

~ 6 GW *
Generating capacity

TOMORROW'S INVESTMENT OPPORTUNITY



~ $20-$30 Billion
Incremental investment needed

~ 12-18 GW
Wind, Solar, Storage,
Natural Gas, or New Technology

* Nuclear and remaining coal assets after announced early retirements. Nuclear operating licenses expire in 2030, 2033 and 2034 and 20-year extensions are available.

STEEL FOR FUEL 2.0

Preliminary MN Preferred IRP

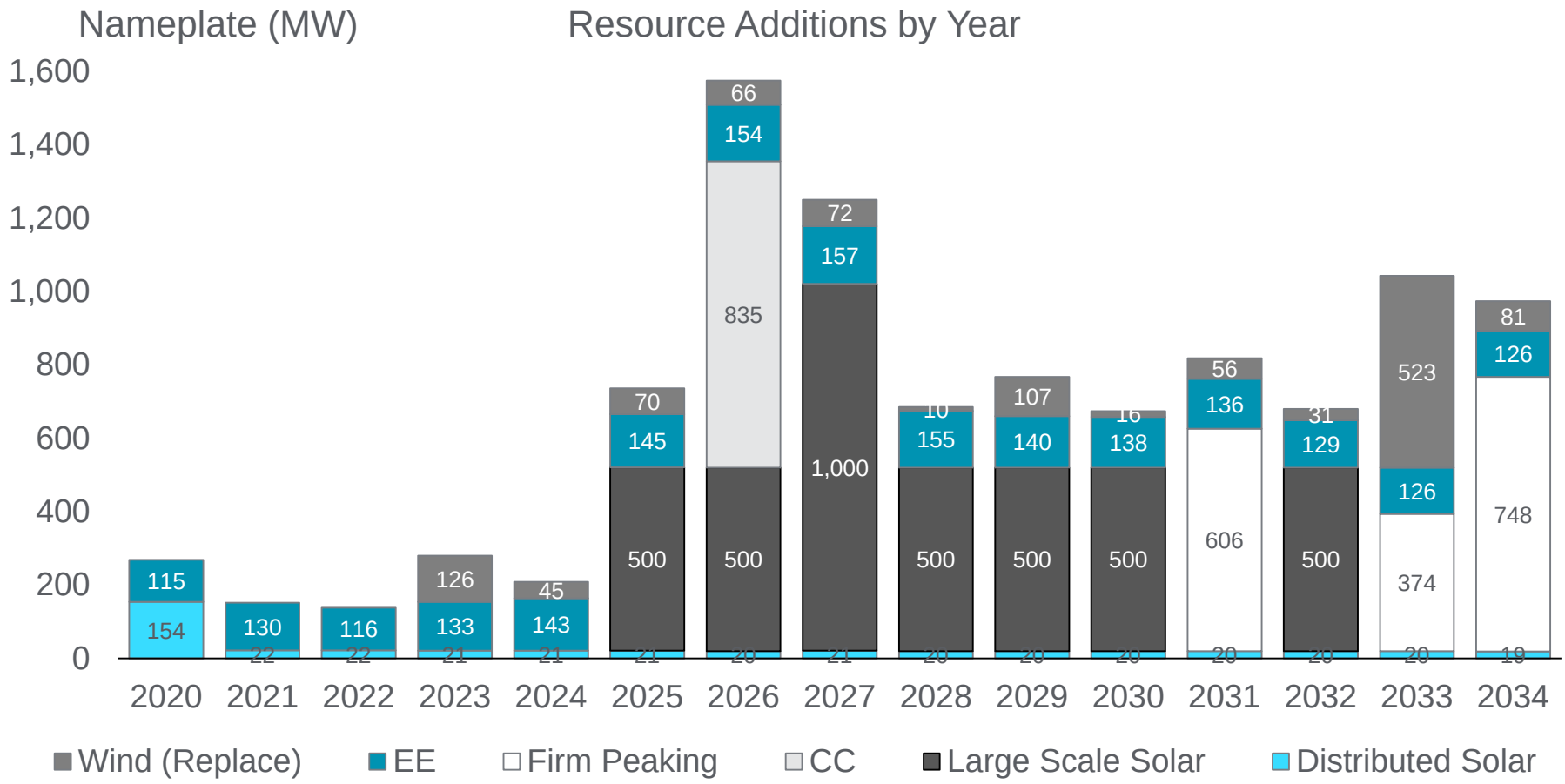
Resource	Plan Detail
Nuclear	Extend Monticello from 2030 to 2040, Prairie Island to end of life (2033 & 2034)
Coal	Early King retirement (2028), Early Sherco 3 retirement (2030)
Gas CC	Mankato CC acquisition, new Sherco CC
Firm Peaking	~1,700 MW of additional firm peaking (CT, pumped hydro, storage, DR, etc.)
Wind	~1,200 MW of wind replacement
Solar	~4,000 MW of additional utility scale solar
Carbon	>80% reduction by 2030 achieved & maintained, on path to 100% carbon-free by 2050

* Preliminary MN Preferred IRP is subject to change prior to filing of the resource plan in July 2019

STEEL FOR FUEL 2.0

Preliminary MN Preferred IRP

EARLY KING 2028, EARLY SHERCO 2030, EXTEND MONTI TO 2040



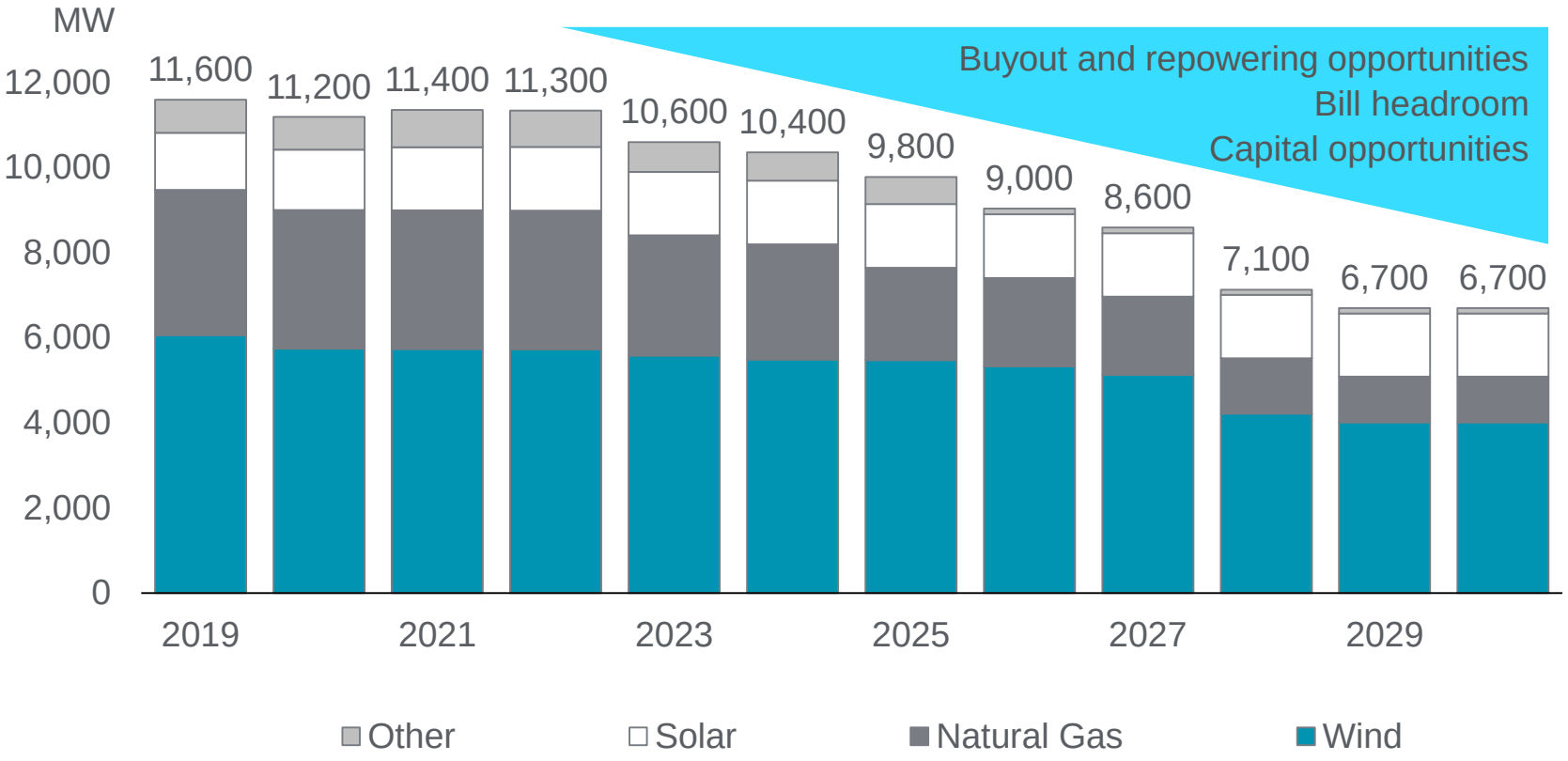
* Preliminary MN Preferred IRP is subject to change prior to filing of the resource plan in July 2019

STEEL FOR FUEL 2.0

PPA Roll-off Opportunity

WIND PPAs
2,300 MW over $40/MWh

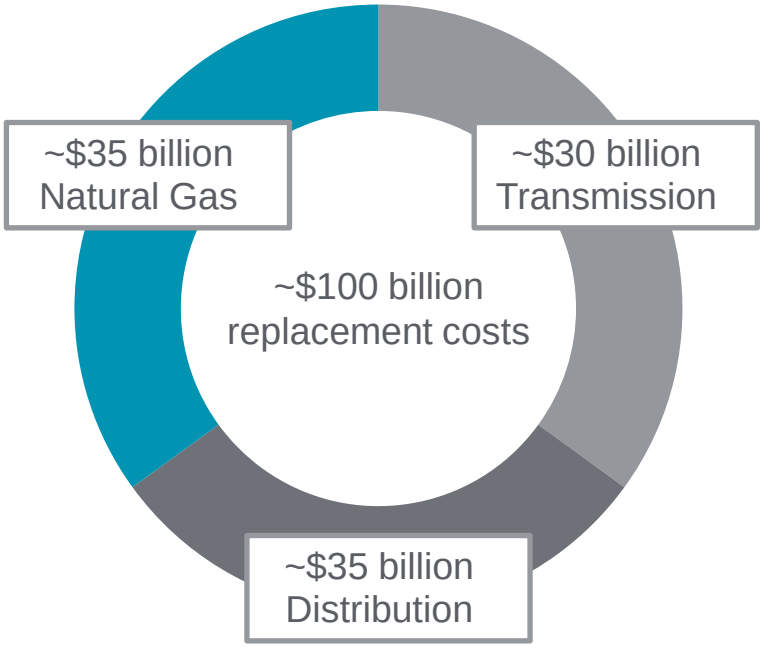
NATURAL GAS PPAs
2,400 MW over $50/MWh



Xcel Energy®

Grid Modernization

Natural Gas	60,700 miles of natural gas pipelines
	Rate base $2.8 billion
	Est. replacement cost ~$35 billion
Transmission	20,000 miles of electric transmission
	467 substations
	Rate base $6.3 billion
	Est. replacement cost ~$30 billion
Distribution	74,300 miles of distribution lines
	836 substations
	Rate base $5.3 billion
	Est. replacement cost ~$35 billion



Xcel Energy®

Electric Vehicle Opportunities

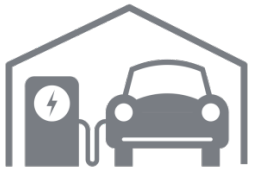
~2 million EVs projected in Xcel Energy territories by 2035

Distribution "Make Ready"	Charging Stations	Sales Growth
EV penetration would require installation of additional electric distribution equipment	One home charging station costs $500-$1,500	One EV uses ~4 MWh annually *
~$1 Billion Investment	**~$2 Billion Investment ****	**~0.4% sales CAGR 2018-2035**

* Assuming average mileage of 15,000 miles/year
** Home charging may be funded by EV owners

Xcel Energy®

EV Implementation Plan



Home Charging

Public Charging

Fleet Operations

Minnesota

Existing

- Residential Pilot to install residential charger and provide TOU service

Filed October 2018

- Portfolio of EV initiatives
- MPUC approved pilot programs ($26 million)

Colorado

Filings expected in 2019

- Working with the Commission on future EV initiatives and utility role
- Engaging customers and stakeholders in various EV programs
- Legislature passed bill allowing utility ownership of EV infrastructure

Fleet EV Service	Residential Charging	Vehicle-to-Grid
Public Charging	Workplace Charging	EV Online Advisor

Xcel Energy®

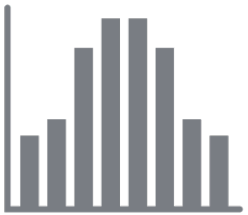
Enhance Customer Experience

Renewable*Connect®

- "Crowd source" renewables
- Customer driven
- Available in Minnesota, Colorado and Wisconsin
- Regulatory approvals received for initial tranches

HomeSmart

- Appliance, system maintenance, plumbing and sewer repair and replacement service
- ~74,000 customers
- Available in Minnesota, Colorado and North Dakota



Demand Side Management

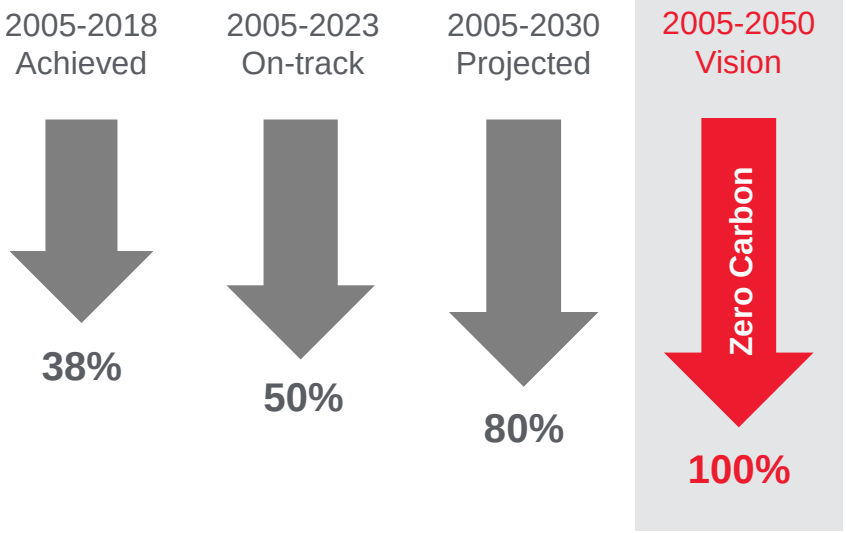
- 150+ programs promoting energy efficiency, conservation, and demand response
- Annual spend of ~$250 million; saving 1 TWh of electricity
- Offered in all service territories

Strong ESG Profile

Xcel Energy®

Strong ESG Profile – Environmental

INDUSTRY LEADING CARBON REDUCTION



100 Best Corporate Citizens

by Corporate Responsibility Magazine

Rated AA for ESG by MSCI

A "leader" rating and among top 20% in the industry

Excellence in Greenhouse Gas Management

EPA 2016 Climate Leadership Award

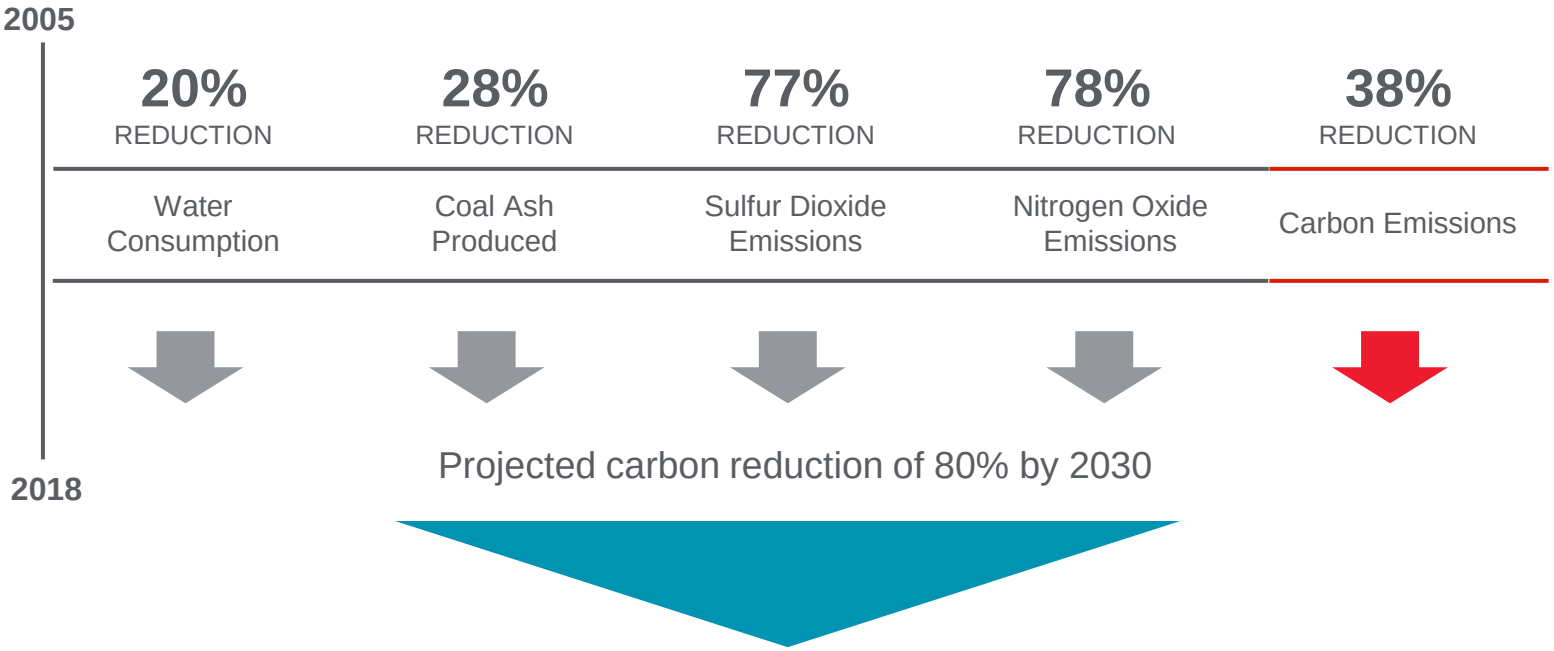
$1 billion of Green first mortgage bonds issued

PSCo 2018
SPS 2019

Xcel Energy®

Strong ESG Profile – Environmental

DELIVERING FOR THE ENVIRONMENT



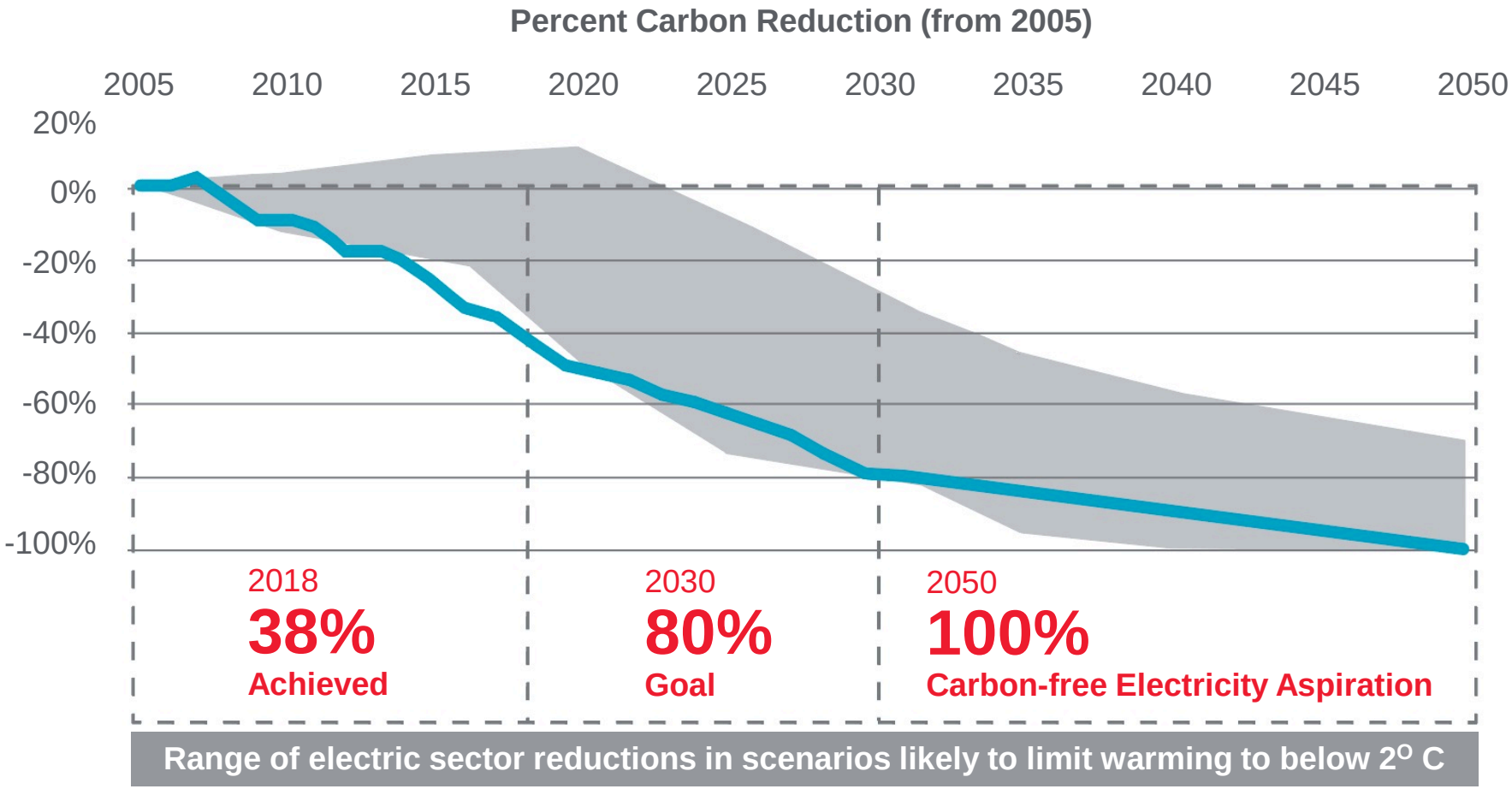
2018 Carbon reduction of 38% exceeds:

- Paris Accord commitment of 26%-28% reduction by 2025
- EPA Clean Power Plan goal of 32% reduction by 2030

Xcel Energy®

Strong ESG Profile – Environmental

CARBON REDUCTION PLANS ALIGN WITH 2° C GOALS



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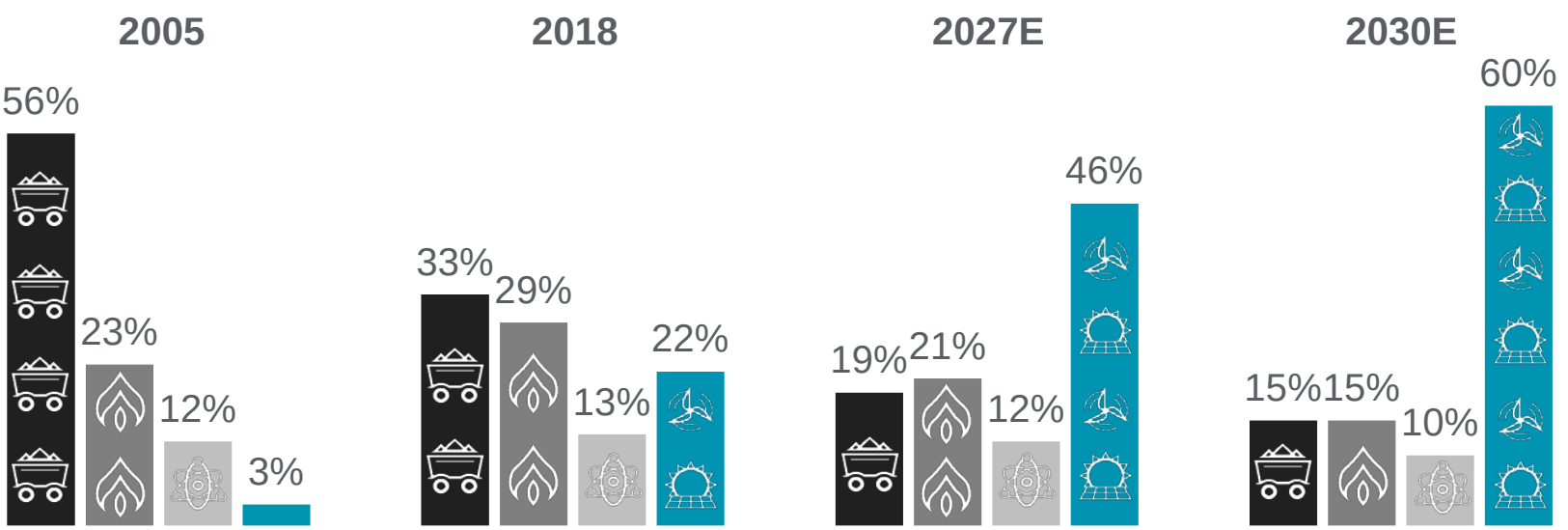
Strong ESG Profile – Environmental

EVOLVING ENERGY MIX



Remainder of 6% includes hydro, biomass and other

Remainder of 3% includes hydro, biomass and other

Remainder of 2% includes hydro, biomass and other

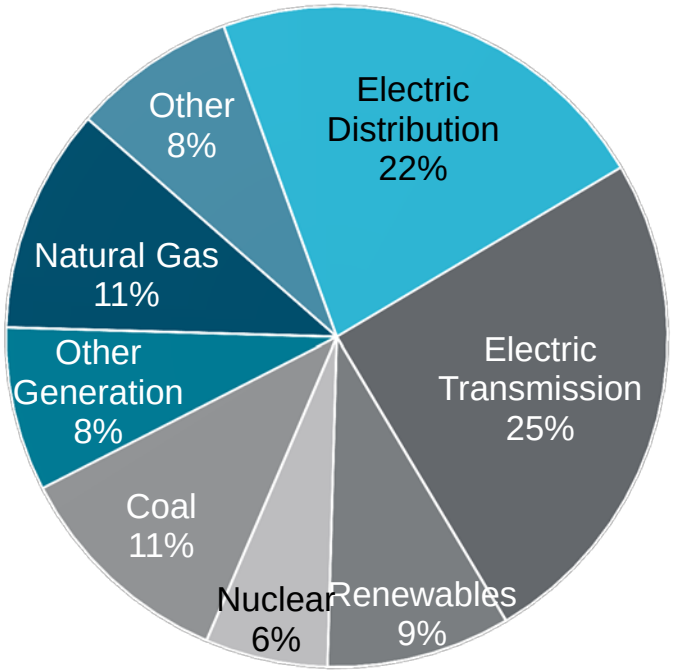
These are estimates that reflect potential scenarios that achieve 80% carbon reduction by 2030; actual system depends on various factors, including regulatory approval of future plans.

Coal Natural Gas Nuclear Renewables

Xcel Energy®

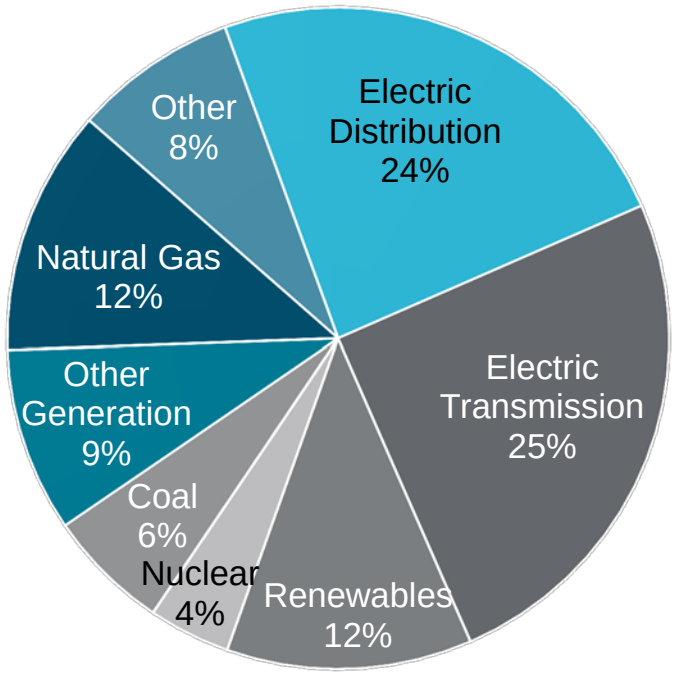
Strong ESG Profile – Environmental

CHANGING COMPOSITION OF RATE BASE



2018 RATE BASE

$27 BILLION



2023 PROJECTED RATE BASE

$37 BILLION

Xcel Energy®

Strong ESG Profile – Environmental

DECLINING COAL RELIANCE ENABLES SIGNIFICANT CARBON REDUCTIONS

~8,100 MW

2007-2018 Retirements

Year	Plant	Capacity
2007	High Bridge 3-6	353 MW
2008	Riverside 6-8	371 MW
2010	Cameo 1-2	73 MW
2011	Cherokee 2	106 MW
2012	Cherokee 1	107 MW
2013	Arapahoe 3-4	144 MW
2015	Cherokee 3	152 MW
2015	Black Dog 3-4	282 MW
2017	Cherokee 4	352 MW
2017	Valmont 5	184 MW

~6,500 MW

2019-2027 Planned Retirements

Year	Plant	Capacity
2022	Comanche 1	325 MW
2023	Sherco 2	682 MW
2025	Craig 1*	42 MW
2025	Comanche 2	335 MW
2026	Sherco 1	680 MW

~4,400 MW

2028-2030 Proposed Retirements

Year	Plant	Capacity
2028	King	511 MW
2030	Sherco 3*	517 MW

~3,400 MW

2006 2018 2027E 2031E

* Based on Xcel Energy's ownership interest

Strong ESG Profile – Social

CONNECTED

Safe and Rewarding Workplace

- Ethnically diverse new hires = 23%
- Veteran new hires = 10%
- Employee volunteer hours = 90,000
- 400 community boards
- Reduced work injuries 58% since 2009
- Best Places to Work for LGBT equality by Human Rights Campaign

COMMITTED

Sustaining Communities

- Total community giving = ~$73 million
- Provide energy assistance of ~$60 million
- Local spending on goods and services = 71%; 10% with businesses owned by women, minorities or veterans
- Annual conservation/DSM spend of ~$250 million, helping to avoid building 20 average sized power plants since 1992

Forbes' America's Best Employers in 2018
Forbes' Global 2000: World's Best Employers in 2018
U.S. Veterans Magazine's Top Veteran-Friendly Companies in 2018
Corporate Responsibility Magazine's 100 Best Corporate Citizens

Xcel Energy®

Strong ESG Profile – Governance

BOARD COMPOSITION

9	92%	38%	54%	62%
YEARS AVERAGE TENURE	INDEPENDENT	FEMALE AND/OR MINORITY	PUBLIC COMPANY C-SUITE EXPERIENCE	ENVIRONMENTAL EXPERIENCE

- 12 of 13 directors are independent
- Annual election of directors by majority vote
- Lead independent director elected annually
- No supermajority approval provisions
- Proxy access adopted
- Annual advisory vote on compensation
- Tenure and overboarding policies

Long-term incentive compensation based on:

- Relative total shareholder return (50%)
- Carbon reduction goal achievement (30%)
- Continued service timeframe (20%)

Financial Supplement

Base Plan
Capital Expenditures by Function

$ Millions

	2019	2020	2021	2022	2023	Total
Electric Distribution	$775	$865	$1,150	$1,245	$1,270	$5,305
Electric Transmission	$580	$560	$950	$870	$1,055	$4,015
Renewables	$2,315	$1,105	$240	$0	$0	$3,660
Electric Generation	$1,070	$310	$480	$560	$545	$2,965
Natural Gas	$430	$415	$420	$510	$595	$2,370
Other	$345	$355	$370	$355	$370	$1,795
Total	**$5,515**	**$3,610**	**$3,610**	**$3,540**	**$3,835**	**$20,110**

Base plan includes the $650 million acquisition of the 760 MW Mankato Energy Center CCGT and the $135 million acquisition/repowering of Jeffers & Community Wind North, totaling 70 MW

Base Plan
Capital Expenditures by Company

$ Millions

	2019	2020	2021	2022	2023	Total
NSPM	$2,825	$1,290	$1,540	$1,300	$1,380	$8,335
PSCo	$1,370	$1,380	$1,335	$1,395	$1,530	$7,010
SPS	$1,130	$770	$460	$530	$635	$3,525
NSPW	$240	$240	$300	$305	$275	$1,360
Other *	($50)	($70)	($25)	$10	$15	($120)
Total	**$5,515**	**$3,610**	**$3,610**	**$3,540**	**$3,835**	**$20,110**

Base plan includes the $650 million acquisition of the 760 MW Mankato Energy Center CCGT and the $135 million acquisition/repowering of Jeffers & Community Wind North, totaling 70 MW

* Other category includes intercompany transfers for safe harbor wind turbines.

Xcel Energy®

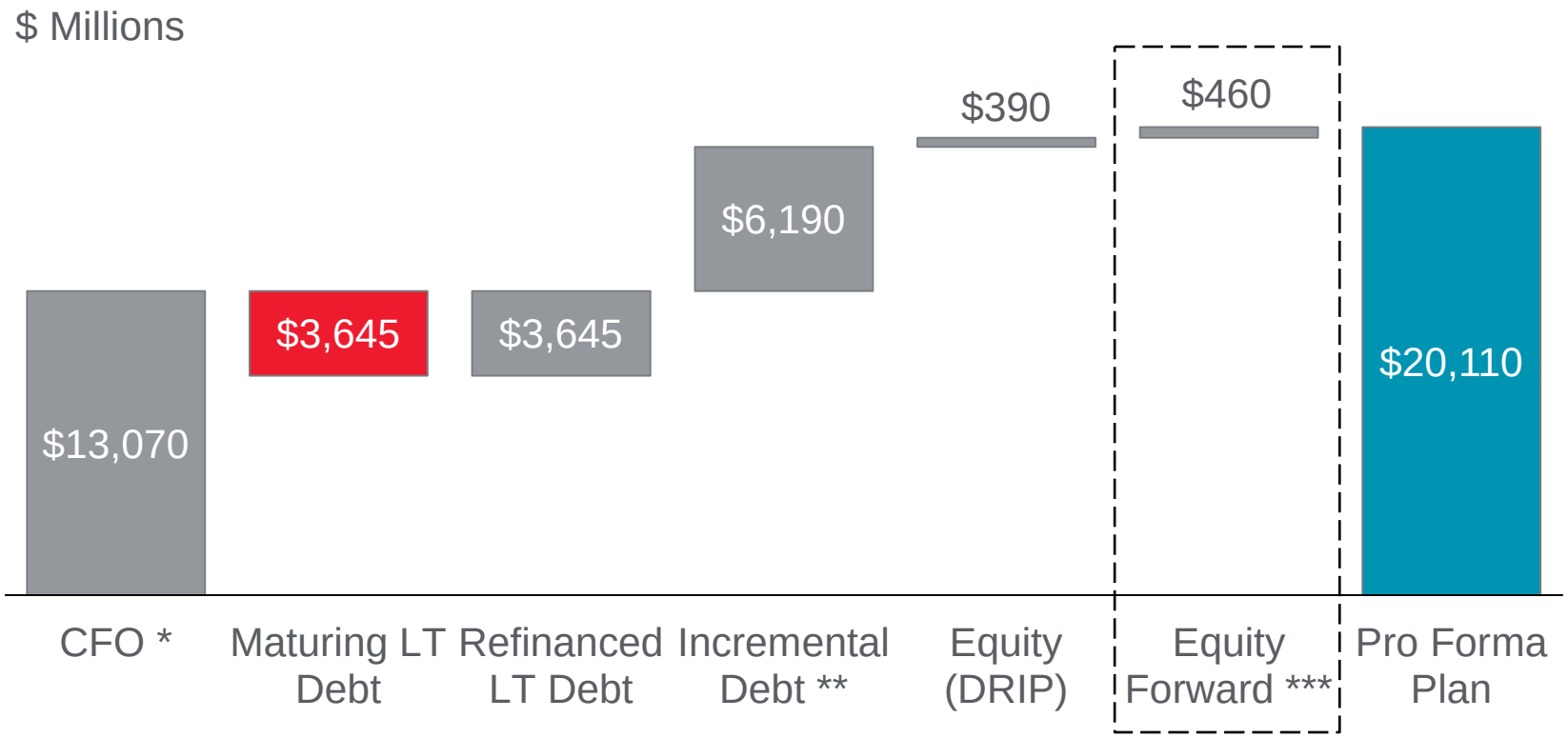
Strong Credit Metrics

Base Plan	2019	2020	2021	2022	2023
FFO/Debt	~18%	~17%	~17%	~17%	~17%
Debt/EBITDA	4.7x	4.9x	4.9x	4.8x	4.8x
Equity Ratio	41%	40%	40%	40%	40%
Hold Co Debt/Total Debt	24%	24%	24%	24%	24%

Current Credit Ratings	Moody's	S&P	Fitch
Xcel Energy Unsecured	Baa1	BBB+	BBB+
NSPM Secured	Aa3	A	A+
NSPW Secured	Aa3	A	A+
PSCo Secured	A1	A	A+
SPS Secured	A3	A	A-

Credit metrics do not reflect rating agency adjustments

Base Plan
Financing Plan 2019-2023



* Cash from operations is net of dividends and pension funding

** Incremental debt reflects a combination of short and long-term debt

*** Forward equity issued in 2018, but has not yet settled

Financing plans are subject to change

Base Plan
2019 Long-term Debt Financing Plan

$ Millions

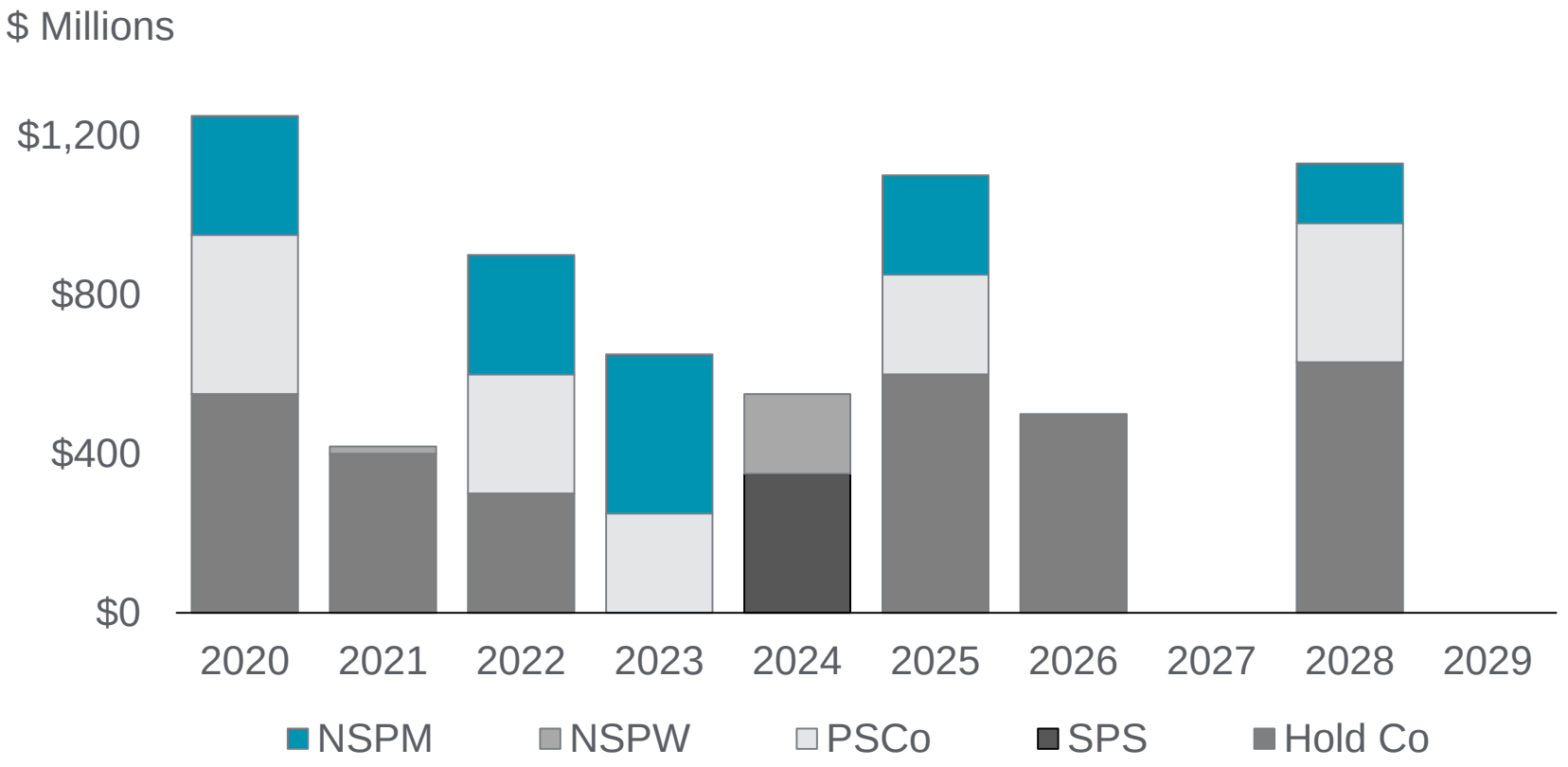
Issuer	Security	Amount	Status	Tenor	Coupon
PSCo	First Mortgage Bonds	$400	Completed	30 Yr	4.05%
Hold Co	Senior Unsecured Bonds	$130	Completed	9 Yr	4.00%
SPS	Green First Mortgage Bonds	$300	Completed	30 Yr	3.75%
NSPM	First Mortgage Bonds	~$900	Pending	N/A	N/A
PSCo	First Mortgage Bonds	~$500	Pending	N/A	N/A
Hold Co	Senior Unsecured Bonds	~$600	Pending	N/A	N/A

Financing plans are subject to change, depending on capital expenditures, regulatory outcomes, internal cash generation, market conditions and other factors.

Xcel Energy®

Manageable Debt Maturities

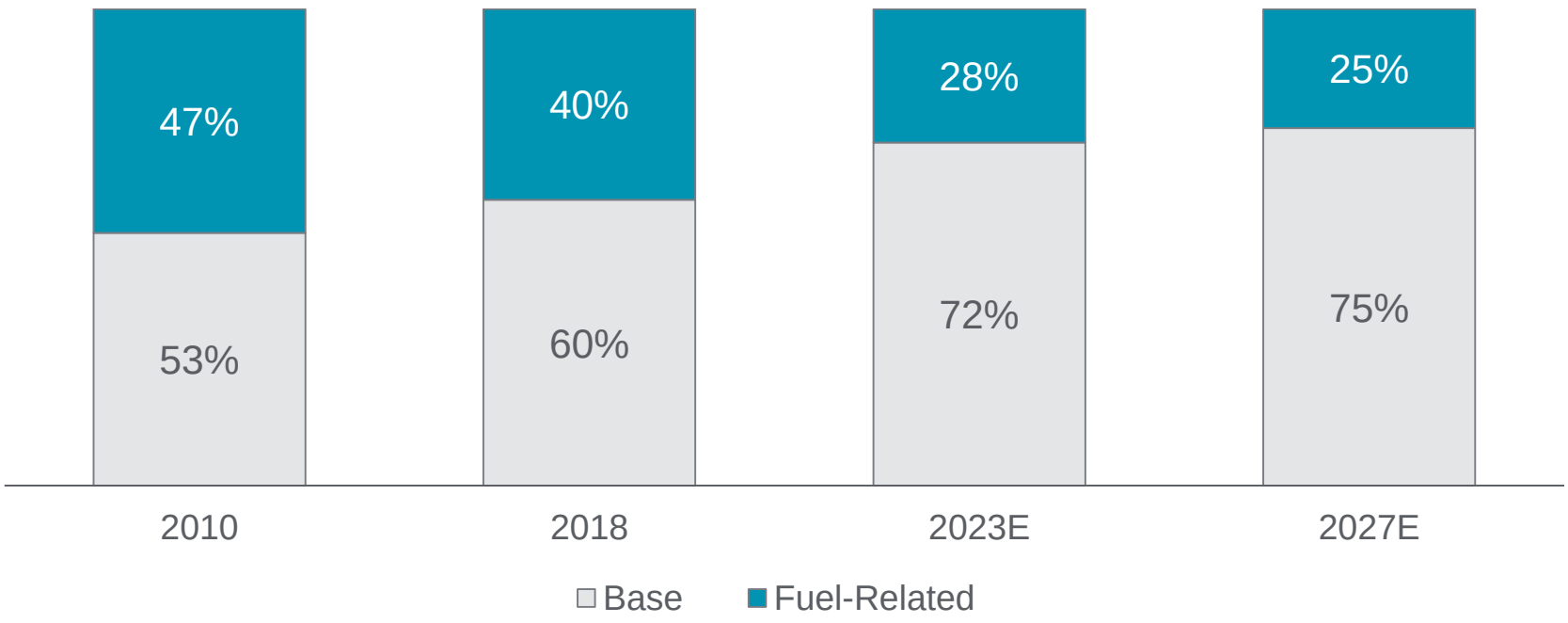
LOWERED WEIGHTED AVERAGE COUPON FROM 4.8% TO 4.1% OVER PAST 5 YEARS



Xcel Energy®

Keep Bills Low

LOWERING FUEL EXPENSE TO OFFSET CAPITAL INVESTMENT

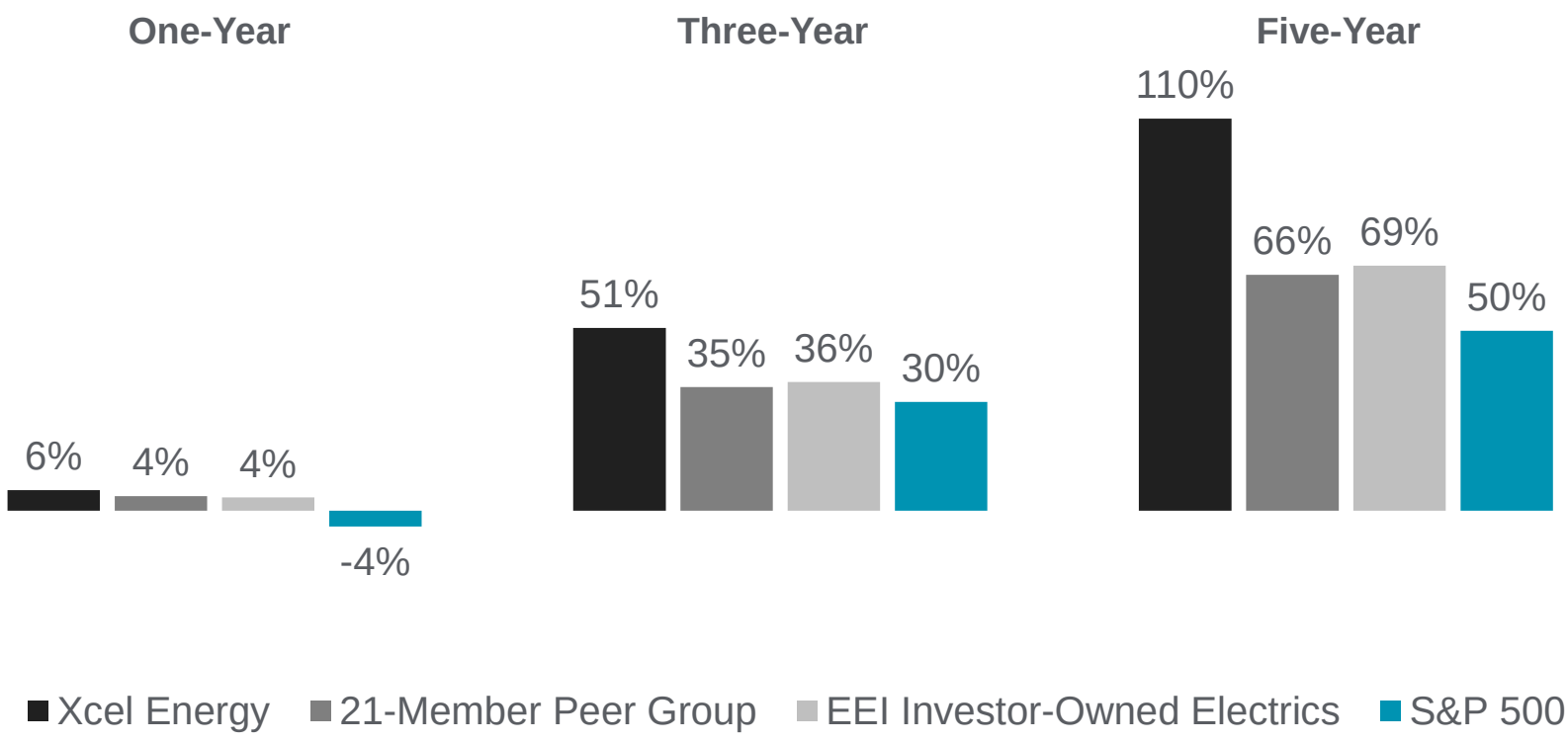


CHANGING COMPOSITION OF CUSTOMER BILL

Xcel Energy®

Strong Performance

STRONG TOTAL SHAREHOLDER RETURN



For periods ending December 31, 2018

Reconciliation Ongoing EPS to GAAP EPS

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Ongoing EPS	**$1.15**	**$1.30**	**$1.43**	**$1.45**	**$1.50**	**$1.62**	**$1.72**	**$1.82**	**$1.95**	**$2.03**	**$2.09**	**$2.21**	**$2.30**	**$2.47**
PSRI-COLI	0.05	0.05	(0.08)	0.01	(0.01)	0.03	-	-	-	-	-	-	-	-
Prescription Drug Tax Benefit	-	-	-	-	-	(0.04)	-	0.03	-	-	-	-	-	-
SPS FERC Order	-	-	-	-	-	-	-	-	(0.04)	-	-	-	-	-
Loss on Monticello LCM/EPU Project	-	-	-	-	-	-	-	-	-	-	(0.16)	-	-	-
Impact of Tax Cuts and Jobs Act	-	-	-	-	-	-	-	-	-	-	-	-	(0.05)	-
Cont. Ops.	**1.20**	**1.35**	**1.35**	**1.46**	**1.49**	**1.61**	**1.72**	**1.85**	**1.91**	**2.03**	**1.94**	**2.21**	**2.25**	**2.47**
Discont. Ops.	0.03	0.01	-	-	(0.01)	0.01	-	-	-	-	-	-	-	-
GAAP EPS	**$1.23**	**$1.36**	**$1.35**	**$1.46**	**$1.48**	**$1.62**	**$1.72**	**$1.85**	**$1.91**	**$2.03**	**$1.94**	**$2.21**	**$2.25**	**$2.47**

Amounts may not sum due to rounding

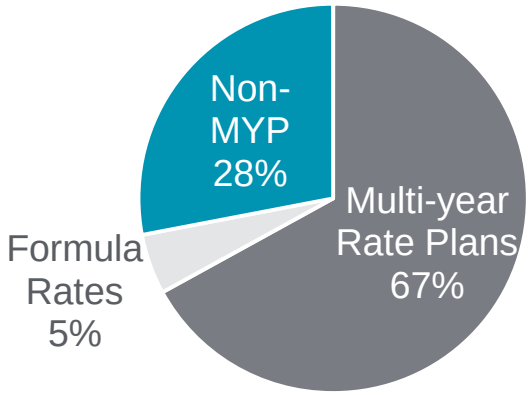
Xcel Energy's management believes that ongoing earnings reflects management's performance in operating the company and provides a meaningful representation of the performance of Xcel Energy's core business. In addition, Xcel Energy's management uses ongoing earnings internally for financial planning and analysis, for reporting of results to the Board of Directors and when communicating its earnings outlook to analysts and investors.

Regulatory Supplement

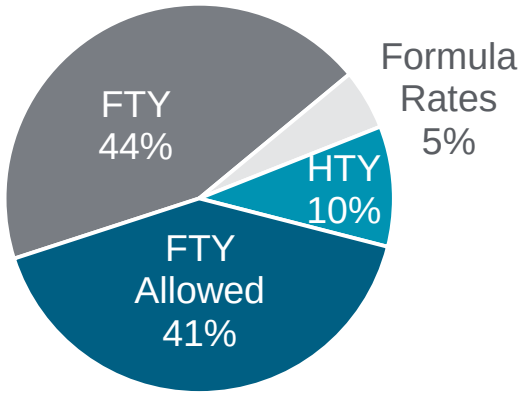
Xcel Energy®

Regulatory Framework

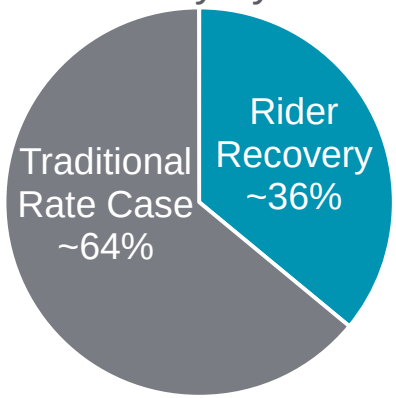
Rate Base Covered by MYP



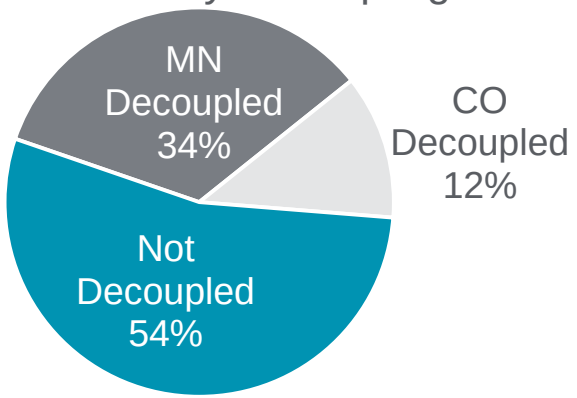
Rate Base Recovered Under Forward Test Year (FTY)



Cap Ex Eligible for Recovery by Rider



Retail Electric Sales Covered by Decoupling



Xcel Energy®

Regulatory Framework

	NSPM	NSPW	PSCo	SPS
Multi-year rate plans	✓	✓	✓	
Forward test year	✓ MN & ND	✓	Allowed	✓ NM Allowed
Interim rates	✓		Allowed	*
Fuel recovery mechanism	✓	✓	✓	✓
Capacity recovery mechanism			✓	
Renewable rider	✓ MN & ND		✓	✓ NM
Transmission rider	✓		✓	✓ TX
Distribution recovery mechanism	✓ MN			✓ TX
Generation rider				✓ TX
Pension deferral mechanism	✓ MN		✓	✓
Property tax deferral/true-up	✓ MN		✓	
Decoupling	✓ MN		✓	

* Wind settlement in TX reduced regulatory lag for the wind projects

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Regulatory vs Authorized – 2018

OpCo	Jurisdiction	YE Rate Base ($ millions)	Authorized ROE	W/A Earned ROE	Regulatory Plan
NSPM	MN Electric	$8,687	9.20%	8.88%	2016-2019 MYP; Planned 2019 Filing
	MN Natural Gas	631	10.09	9.81	
	ND Electric	524	10.25	9.93	TCJA Settlement 2019-2020
	ND Natural Gas	64	10.75	10.32	TCJA Settlement 2019-2020
	SD Electric	675	Blackbox	6.79	TCJA Settlement 2019-2020
PSCo	CO Electric	8,349	9.83	8.93	Filed in May 2019
	CO Natural Gas	2,482	9.35	8.68	2018 Rate Case
	PSCo Wholesale	516	*	*	
SPS	TX Electric	2,031	Blackbox	7.98**	2018 Rate Case; Planned 2019 Filing
	NM Electric	972	Blackbox	8.45**	2018 Rate Case; Planned 2019 Filing
	SPS Wholesale	868	***	***	
NSPW	WI Electric	1,421	9.80	10.65	Proposed Settlement 2020-2021
	WI Natural Gas	144	9.80	7.83	Proposed Settlement 2020-2021
	MI Elec. & Nat. Gas	39	9.80(e)/10.00(g)	7.46	2018 Rate Case (e)

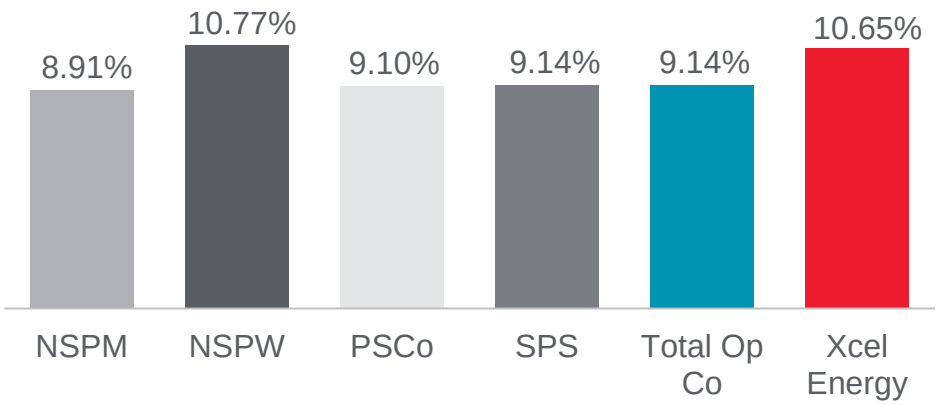
* The authorized ROE for PSCo transmission and production formula = 9.72%

** Actual ROE, not weather-normalized

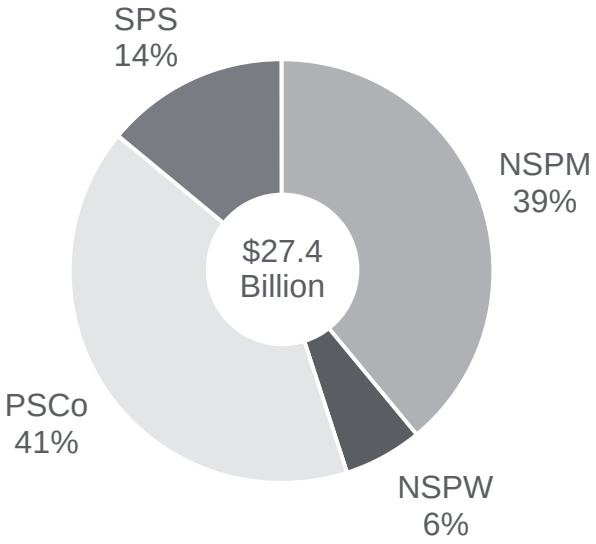
*** The transmission ROE = 10.50% and production formula ROE = 10.00%

ROE Results
GAAP & Ongoing Earnings

2018 GAAP AND ONGOING ROE



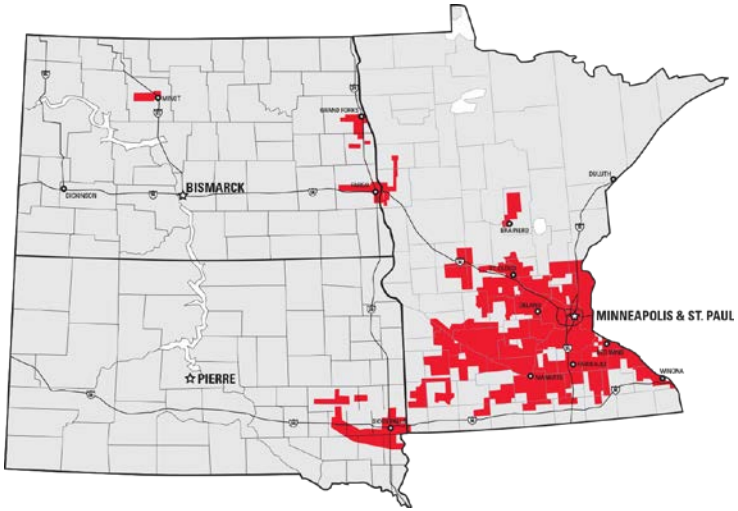
2018 RATE BASE



Operating Company Profiles

Xcel Energy®

NSP-Minnesota Profile

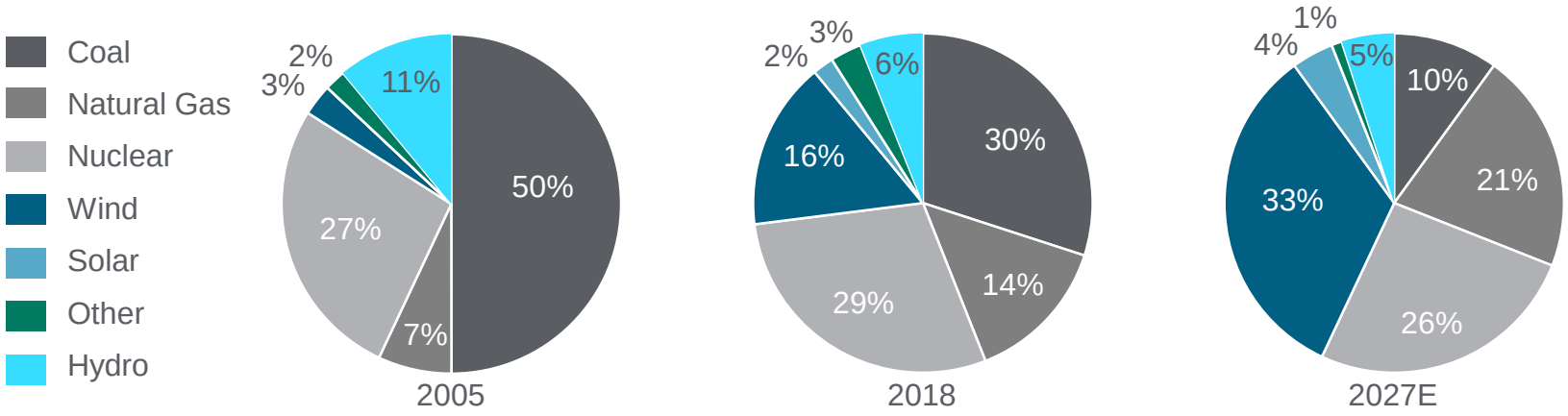


ELECTRIC – RETAIL	NATURAL GAS – RETAIL
1.5 million customers	520,000 customers
35 million MWh	90 million MMBtu

2018 FINANCIALS	GAAP & ONGOING
Net Income	$492 million
Assets	$18.5 billion
ROE	8.91%
Equity Ratio	52.3%

CREDIT RATINGS (SEC./UNSEC.)	
Moody's	Aa3 / A2
S&P	A / A-
Fitch	A+ / A

NSP SYSTEM ENERGY MIX



NSPM Base Plan
Capital Expenditures by Function

$ Millions

	2019	2020	2021	2022	2023	Total
Renewables	$1,375	$450	$265	$0	$0	$2,090
Electric Distribution	$230	$270	$485	$495	$435	$1,915
Electric Generation	$875	$185	$285	$305	$425	$2,075
Electric Transmission	$95	$135	$230	$225	$235	$920
Other	$145	$150	$160	$155	$145	$755
Natural Gas	$105	$100	$115	$120	$140	$580
Total	**$2,825**	**$1,290**	**$1,540**	**$1,300**	**$1,380**	**$8,335**

Base plan includes the $650 million acquisition of the 760 MW Mankato Energy Center CCGT and the $135 million acquisition/repowering of Jeffers & Community Wind North, totaling 70 MW

Minnesota Recovery Mechanisms

- Forward test year with interim rates
- Transmission rider
- Renewable energy rider
- Natural gas infrastructure rider
- Environmental improvement rider
- DSM incentive mechanism
- Fuel clause adjustment
- Electric decoupling/sale true-up for all classes (2016-2019)
- Multi-year rate plan legislation
  - Allows for multi-year plans for up to five years
  - Recovery of capital investments
  - Recovery of O&M expenses
  - Recovery of early plant closure costs
  - Recovery of grid modernization through transmission rider
  - Interim rates for the first two years of a multi-year rate plan

North Dakota and South Dakota Recovery Mechanisms

- Forward test year with interim rates (ND)
- Historic test year (SD)
- Transmission rider (ND & SD)
- Renewable energy rider (ND)
- Infrastructure rider for capital projects (SD)
- Fuel clause adjustment (ND & SD)

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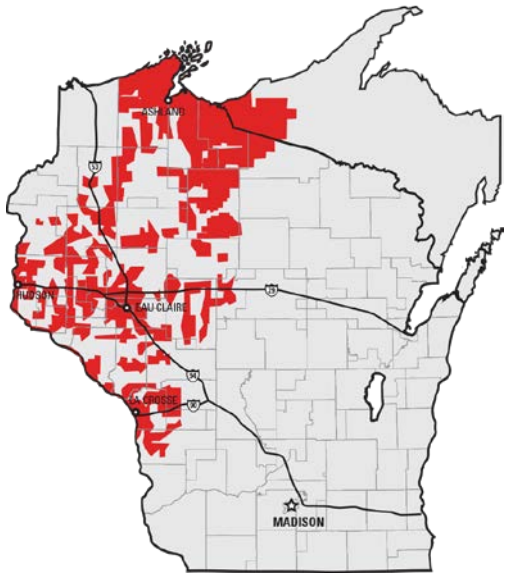
NSP-Wisconsin Profile

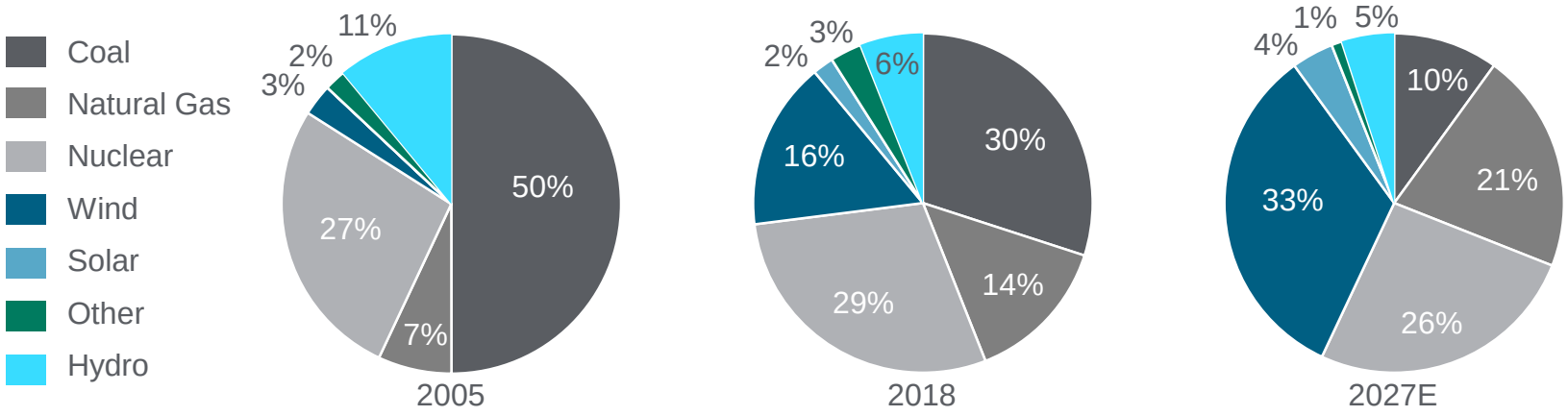


ELECTRIC – RETAIL	NATURAL GAS – RETAIL
260,000 customers	115,000 customers
7 million MWh	18 million MMBtu

2018 FINANCIALS	GAAP & ONGOING
Net Income	$98 million
Assets	$2.7 billion
ROE	10.77%
Equity Ratio	52.3%

CREDIT RATINGS (SEC./UNSEC.)	
Moody's	Aa3 / A2
S&P	A / A-
Fitch	A+ / A

NSP SYSTEM ENERGY MIX



NSPW Base Plan
Capital Expenditures by Function

$ Millions

	2019	2020	2021	2022	2023	Total
Electric Transmission	$100	$100	$140	$140	$110	$590
Electric Distribution	$75	$80	$85	$85	$85	$410
Other	$25	$25	$35	$40	$30	$155
Natural Gas	$20	$20	$20	$20	$30	$110
Electric Generation	$20	$15	$20	$20	$20	$95
Total	**$240**	**$240**	**$300**	**$305**	**$275**	**$1,360**

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NSPW Recovery Mechanisms

- Forward test year (WI & MI)
- Biennial rate case (WI)
- Annual electric fuel plan with reconciliation (WI)
- Purchased natural gas adjustment (WI)
- Natural gas cost recovery mechanism (MI)
- Power supply cost recovery (MI)

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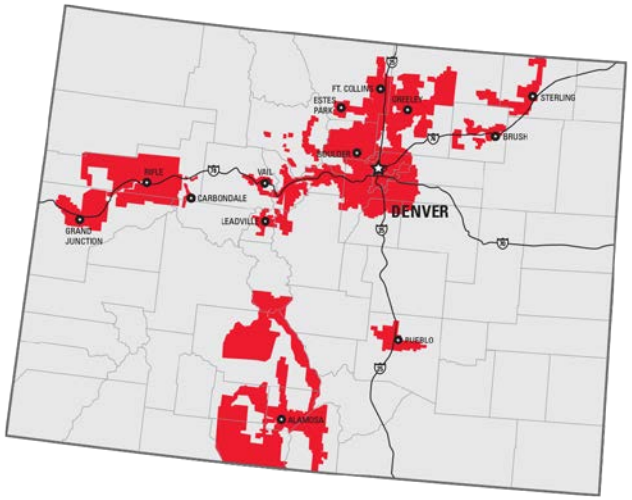
PSCo Profile

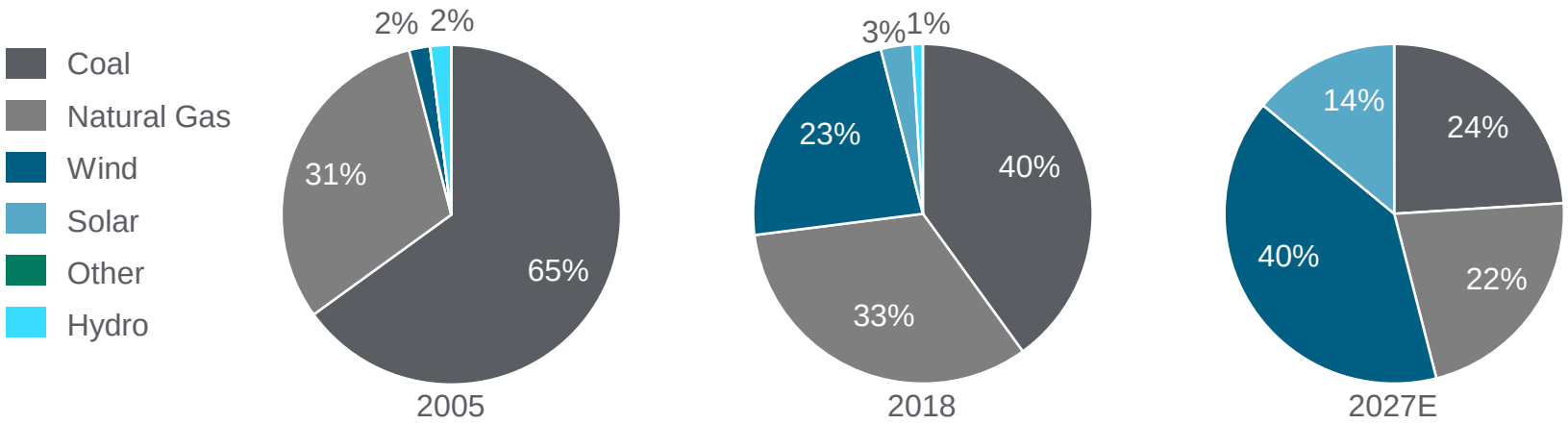


ELECTRIC – RETAIL	NATURAL GAS – RETAIL
1.5 million customers	1.4 million customers
29 million MWh	138 million MMBtu

2018 FINANCIALS	GAAP & ONGOING
Net Income	$552 million
Assets	$17.3 billion
ROE	9.10%
Equity Ratio	54.3%

CREDIT RATINGS (SEC./UNSEC.)	
Moody's	A1 / A3
S&P	A / A-
Fitch	A+ / A

PSCO SYSTEM ENERGY MIX



PSCo Base Plan
Capital Expenditures by Function

$ Millions

	2019	2020	2021	2022	2023	Total
Electric Distribution	$355	$395	$445	$495	$540	$2,230
Natural Gas	$305	$295	$285	$360	$410	$1,655
Electric Transmission	$125	$110	$335	$255	$400	$1,225
Renewables	$350	$380	$0	$0	$0	$730
Other	$135	$140	$140	$100	$120	$635
Electric Generation	$100	$60	$130	$185	$60	$535
Total	**$1,370**	**$1,380**	**$1,335**	**$1,395**	**$1,530**	**$7,010**

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2019 Colorado Electric Rate Case

- PSCo filed an electric rate case in May 2019 requesting:
  - Net rate increase of $158.3 million (5.7%)
  - ROE of 10.35% and equity ratio of 56.46%
  - December 31, 2018 HTY with adjustments for 2019 capital
  - Incorporates the full impact of tax reform
- New rates are expected to be effective January 1, 2020

Revenue Request (millions of dollars)	2020
Plant-related growth 2013-2018	$85.3
O&M savings, sales growth and other cost reductions	($89.1)
Forecasted 2019 capital additions	$48.9
AGIS and grid modernization	$39.1
Updated cost of capital	$31.7
Previously approved depreciation rates	$28.1
Incremental wildfire mitigation	$14.3
Net increase to revenue	**$158.3**
Previously authorized cost recovery: CACJA, TCA and Rush Creek (a)	$249.4
Total base revenue request	**$407.7**

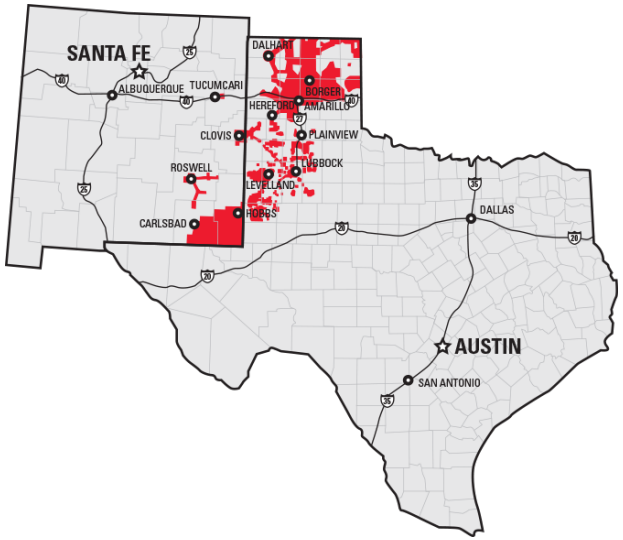
(a) Roll-in of CACJA, TCA and Rush Creek Wind Project (excluding PTCs) into base rates will not impact revenue or customer bills as costs are currently being recovered through riders or the fuel clause.

Colorado Recovery Mechanisms

- Ability to file multi-year requests
- Ability to file either historic or forward test years
- Purchased capacity cost adjustment
- Clean Air Clean Jobs Act rider (forward looking)
- Transmission rider (forward looking)
- Natural gas pipeline integrity rider
- Renewable energy rider
- DSM incentive mechanism
- Energy cost adjustment
- Natural gas cost adjustment
- Decoupling for residential and non-demand SC&I classes

Xcel Energy®

SPS Profile



ELECTRIC – RETAIL

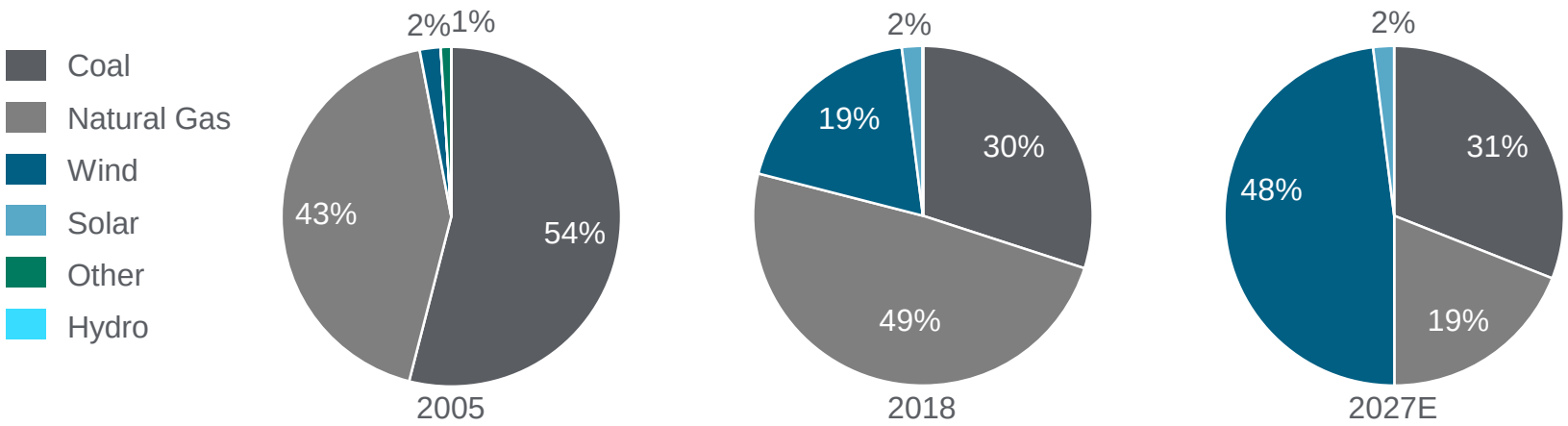
393,000 customers
20 million MWh

2018 FINANCIALS	GAAP & ONGOING
Net Income	$213 million
Assets	$6.7 billion
ROE	9.14%
Equity Ratio	53.9%

CREDIT RATINGS (SEC./UNSEC.)

Moody's	A3 / Baa2
S&P	A / A-
Fitch	A- / BBB+

SPS SYSTEM ENERGY MIX



SPS Base Plan
Capital Expenditures by Function

$ Millions

	2019	2020	2021	2022	2023	Total
Electric Transmission	$260	$215	$245	$250	$310	$1,280
Renewables	$640	$345	$0	$0	$0	$985
Electric Distribution	$115	$120	$135	$170	$210	$750
Electric Generation	$75	$50	$45	$50	$40	$260
Other	$40	$40	$35	$60	$75	$250
Total	**$1,130**	**$770**	**$460**	**$530**	**$635**	**$3,525**

Xcel Energy®

SPS Recovery Mechanisms

- Historic test year (TX) (wind settlement reduced regulatory lag)
- Ability to file forward test year (NM)
- DSM incentive mechanism (TX & NM)
- Fuel clause adjustment (TX & NM)
- Purchased Capacity Cost Recovery Factor (TX)
- Transmission Cost Recovery Factor (TX)
- Distribution Cost Recovery Factor (TX)
- AMI rider (TX)
- Generation rider (TX)

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☐ **Public Document**

Xcel Energy Information Request No. 134
Docket No.: E002/PA-18-702
Response To: MN Office of the Attorney General
Requestor: Max Kieley
Date Received: June 24, 2019

Question:
Reference: PPA for MEC II

For the following terms and phrases please identify and explain: (a) a chronological overview of past actions taken by Xcel, Southern Power, and/or those entities' affiliates to comply with or otherwise satisfy the PPA's requirements; (b) the present status for each such term or phrase; and (c) whether Xcel, Southern Power, and/or those entities' affiliates are in compliance with the procedures set forth in the PPA governing such term or phrase in light of a response to (a) and/or (b).

(1) Commercial Operation Date;
(2) Commercial Operation;
(3) Commercial Operation Milestones;
(4) Notice(s), written certifications and/or written confirmations related to the completion of all COD Conditions under Section 4.3, including all such Notice(s) sent on an incremental or individual basis;
(5) Southern Power's written confirmations pertaining to all Notice(s) of completion of all COD Conditions per Section 4.3(A);
(6) The independent registered professional engineer's certification that MEC II has been completed in all material respects per Section 4.3(B);
(7) Southern Power's written confirmations per Section 4.3(C);
(8) Any and all Commercially Reasonable objections by Xcel to Southern pertaining to all Notice(s) of completion of all COD Conditions per Section 4.3(A);
(9) Any and all Proposed Transactions per Section 19.2(A)
(10) Any and all ROFO Notice(s) Southern provided to Xcel per Section 19.2(A);
(11) Any and all decisions by Xcel to either cancel or exercise its ROFO rights in response to a ROFO Notice.

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Response:
The Company objects to this information request as overly broad, unduly burdensome, and ambiguous as to the information requested. Notwithstanding these objections, the Company responds as follows.

Since acquiring the Mankato Energy Center (MEC) in from Calpine Corporation, Southern Power's primary obligation was to operate the Mankato I facility pursuant to the Commission approved Mankato Energy Center Purchased Power Agreement dated March 11, 2004 (Mankato I PPA) and to construct and achieve commercial operation of the Mankato II facility pursuant to the Commission approved Mankato Energy Center II Power Purchase Agreement dated April 28, 2015 (Mankato II PPA or PPA).

(1) (2) (3): "Commercial Operation" and "Commercial Operation Date" (COD) are nearly synonymous terms tied to the satisfaction of COD conditions defined in Section 4.3 of the PPA. Southern Power was obligated to meet the "Commercial Operation Milestones" in Exhibit B and the COD Conditions in order to meet the primary objective, which was the PPA's Commercial Operation Date of June 1st, 2019 (COD).

On May 30, 2019, Jeffrey Klein of Xcel Energy provided Southern Power with a letter that confirmed the Mankato Energy Center II successfully met its COD Conditions and that the Commercial Operation Date was June 1, 2019. (See Attachment A). Mankato Energy Center II is currently in commercial operation.

Pursuant to Section 4.3 of the Mankato II PPA, Southern Power was required to provide notice that it satisfied the occurrence of all COD Conditions. NSP had 10 Business Days to review such submission and to raise a Commercially Reasonable objection. The PPA provided that Southern Power could provide its notices of completion on an individual basis. Southern Power did provide such individual notices (see item (4) through (7) below).

(4) (5) (6) (7) Included as Attachment B are the individual notices provided by Southern Power in support of Mankato II meeting the COD of June 1st, 2019, along with Southern Power's certification that it has the right and access to use to use all electric generating facilities and associated balance of plant, parts, equipment and property pursuant to PPA Section 4.3 (C). Included as Attachment C is the independent registered professional engineer's certification pursuant to PPA Section 4.3(B).

(8)Included as Attachment D is an email from Jeanette Schuck of Xcel Energy to John Trawick, Joshua Hale, and Dean Sorrell of Southern Power dated November 26,

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2018, in which NSP rejected Southern Power's written confirmation that it met Section 4.3, Condition No 4.3(A)(6). Southern Power subsequently resubmitted its original November 12, 2018 request for approval of Condition 4.1(A)(6) on April 29, 2019 (see Attachment B). There were no other rejections of Mankato II's COD Conditions by NSP.

(9), (10) & (11) To NSP's knowledge, we are not aware that Southern Power has solicited or received a unsolicited offer for the sale of MEC II following the Commercial Operation Date, nor has NSP received any notice from Southern Power which would give rise to NSP's right of first offer (ROFO) pursuant to MEC II PPA Section 19.2. It is noted that Southern Power and NSP entered into the Agreement for NSP's purchase of the Mankato Energy Center I and II prior to the MEC II COD, and Southern Power is prohibited from proceeding with such offers.

Please note the attachments to this response include Trade Secret information pursuant to Minnesota Statute § 13.37, subd, 1(b). In particular, the information designated as Trade Secret derives independent economic value, actual or potential, from not being generally known to, and not being readily ascertainable by proper means by, other persons who can obtain economic value from its disclosure or use.

Attachments A, B and D are marked as "Non-Public" in their entirety. Pursuant to Minnesota Rule 7829.0500, subp. 3, we provide the following descriptions of the excised material:

Attachment A:

1. **Nature of the Material**: Letter from Xcel Energy to Southern Power.
2. **Authors**: Jeffrey Klein
3. **Importance**: Confidential communications between the Company and Southern Power.
4. **Date the Information was Prepared**: May 2019.

Attachment B:

1. **Nature of the Material**: Individual notices provided by Southern Power in support of Mankato II meeting the COD of June 1st, 2019, along with Southern Power's certification that it has the right and access to use to use all electric generating facilities and associated balance of plant, parts, equipment and property pursuant to PPA Section 4.3 (C).
2. **Authors**: Southern Power.
3. **Importance**: Confidential communications between the Company and Southern Power.
4. **Date the Information was Prepared**: November 2018 – May 2019

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Attachment D:

1. **Nature of the Material**: Email from Jeanette Schuck of Xcel Energy to John Trawick, Joshua Hale, and Dean Sorrell of Southern Power.
2. **Authors**: Jeanette Schuck
3. **Importance**: Confidential communications between the Company and Southern Power.
4. **Date the Information was Prepared**: November 2018.

Preparer:	Jeff Klein
Title:	Manager, Structured Purchases
Department:	Purchased Power
Telephone:	303.571.2732
Date:	July 8, 2019

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2. **Authors**: Jeffrey Klein
3. **Importance**: Confidential communications between the Company and Southern Power.
4. **Date the Information was Prepared**: May 2019.

[TRADE SECRET BEGINS

TRADE SECRET ENDS]

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2. **Authors**: Southern Power.
3. **Importance**: Confidential communications between the Company and Southern Power.
4. **Date the Information was Prepared**: November 2018 – May 2019

[TRADE SECRET BEGINS

TRADE SECRET ENDS]

Worley
energy | chemicals | resources

2675 Morgantown Road
Reading, PA 19607
USA
Telephone +1 610 855 2000
Facsimile +1 610 855 2001
www.worley.com

Date: 06 May 2019

Xcel Energy Services
1800 Larimer Street, Suite 10000
Denver, CO 80202

REFERENCE: MANKATO ENERGY CENTER EXPANSION PROJECT – INDEPENDENT PE CERTIFICATION

Ladies and Gentlemen:

As required by the provisions of Section 4.3B of the Power Purchase Agreement between Northern States Power Company, a Minnesota Corporation ("Company") and Mankato Energy Center II, LLC a Delaware Limited Liability Company ("Seller")" effective as of April 28, 2015, consider this an independent registered professional engineer's certification that the Facility has been completed in all material respects, except for punch list items that do not have a Material Adverse Effect on the ability of the Facility to operate for its intended purpose.

The documentation of Worley's observations and verifications are detailed in the site visit reports referenced in the attached list. These reports have been previously provided to Southern Company.

This independent certification does not constitute a warranty, either expressed or implied.

Please contact Cynthia Manning at 610-855-2038 or Cynthia.manning@worleyparsons.com should you have any questions.

Sincerely,

Nena M. Evans

Nena M. Evans, P.E.
Technical Consultant

Attached: Site Visit Report Listing

I hereby certify that this certification letter was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the state of Minnesota.
Signature Nena M. Evans
Printed Name: Nena M. Evans
Date: May 6, 2019 License #: 52508

Independent Engineer Site Visit Mankato Energy Center CC Expansion

Title	Doc ID	Revision	Date Issued
Independent Engineer Site Visit Mankato Energy Center CC Expansion – November 2017	MANK-1-LI-012-0001	Rev. 0	December 5, 2017
Independent Engineer Site Visit Mankato Energy Center CC Expansion – December 2017	MANK-1-LI-012-0002	Rev. 0	January 8, 2018
Independent Engineer Site Visit Mankato Energy Center CC Expansion – January 2018	MANK-1-LI-012-0003	Rev. 0	February 5, 2018
Independent Engineer Site Visit Mankato Energy Center CC Expansion – February 2018	MANK-1-LI-012-0004	Rev. 0	March 8, 2018
Independent Engineer Site Visit Mankato Energy Center CC Expansion – March 2018	MANK-1-LI-012-0005	Rev. 0	March 29, 2018
Independent Engineer Site Visit Mankato Energy Center CC Expansion – April 2018	MANK-1-LI-012-0006	Rev. 0	May 14, 2018
Independent Engineer Site Visit Mankato Energy Center CC Expansion – June 2018	MANK-1-LI-012-0007	Rev. 0	June 22, 2018
Independent Engineer Site Visit Mankato Energy Center CC Expansion – July 2018	MANK-1-LI-012-0008	Rev. 0	July 27, 2018
Independent Engineer Site Visit Mankato Energy Center CC Expansion – August 2018	MANK-1-LI-012-0009	Rev. 0	September 17, 2018
Independent Engineer Site Visit Mankato Energy Center CC Expansion – October 2018	MANK-1-LI-012-0010	Rev. 0	October 5, 2018
Independent Engineer Site Visit Mankato Energy Center CC Expansion – November 2018	MANK-1-LI-012-0011	Rev. 0	November 19, 2018
Independent Engineer Site Visit Mankato Energy Center CC Expansion – February 2019	MANK-1-LI-012-0012	Rev. 0	February 21, 2019
Independent Engineer Site Visit Mankato Energy Center CC Expansion – April 2019	MANK-1-LI-012-0013	Rev. 0	April 30, 2019

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Attachments A, B and D are marked as "Non-Public" in their entirety. Pursuant to Minnesota Rule 7829.0500, subp. 3, we provide the following descriptions of the excised material:

Attachment D:

1. **Nature of the Material**: Email from Jeanette Schuck of Xcel Energy to John Trawick, Joshua Hale, and Dean Sorrell of Southern Power.
2. **Authors**: Jeanette Schuck
3. **Importance**: Confidential communications between the Company and Southern Power.
4. **Date the Information was Prepared**: November 2018.

[TRADE SECRET BEGINS

TRADE SECRET ENDS]

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OAG Supplemental Comments - July 26, 2019
Exhibit 3, Page 1 of 2

Energy Storage Technologies

Since the discovery of electricity, we have sought effective methods to store that energy for use on demand. Over the last century, the energy storage industry has continued to evolve and adapt to changing energy requirements and advances in technology.

Energy storage systems provide a wide array of technological approaches to managing our power supply in order to create a more resilient energy infrastructure and bring cost savings to utilities and consumers. To help understand the diverse approaches currently being deployed around the world, we have divided them into six main categories:

- **Solid State Batteries** - a range of electrochemical storage solutions, including advanced chemistry batteries and capacitors
- **Flow Batteries** - batteries where the energy is stored directly in the electrolyte solution for longer cycle life, and quick response times
- **Flywheels** - mechanical devices that harness rotational energy to deliver instantaneous electricity
- **Compressed Air Energy Storage** - utilizing compressed air to create a potent energy reserve
- **Thermal** - capturing heat and cold to create energy on demand
- **Pumped Hydro-Power** - creating large-scale reservoirs of energy with water

You can learn more about each of these technologies by using our navigation on the right hand side of this page, and each category includes real-world examples of how these approaches being deployed in the field.

ENERGY STORAGE

CORPORATE RESPONSIBILITY INITIATIVE

STORAGE PLUS NETWORK

STORAGE 101

BENEFITS

TECHNOLOGIES

SOLID STATE BATTERIES

FLOW BATTERIES

FLYWHEELS

COMPRESSED AIR ENERGY STORAGE

THERMAL

PUMPED HYDRO-POWER

TECHNOLOGY APPLICATIONS

FACTS & FIGURES

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INDUSTRY RESOURCES

FREQUENTLY ASKED QUESTIONS

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- Case Studies
- Industry Resources
- Frequently Asked Questions
- Glossary
- U.S. Energy Storage Monitor
- Privacy Policy
- Terms and Conditions

POLICY

- Federal
- Wholesale Markets and FERC
- State Policy

MEMBERSHIP

- Overview
- Benefits
- Members List
- Ways to Join ESA
- Awards

CONTACT

Energy Storage Association

Address:
901 New York Avenue, Suite 510
Washington, DC 20001 USA
202-293-0537
info@energystorage.org

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Xcel Energy Information Request No. 106
Docket No.: IP6949,E002/PA-18-702
Response To: Office of Attorney General
Requestor: Ian Dobson
Date Received: April 8, 2019

Question:
Re: Xcel's Reply Comments of March 29, 2019 at 22; battery storage costs.

Provide all evidence in the company's possession supporting the 10 percent annual improvement rate.

Response:
There is a significant amount of uncertainty associated with the future price of all resource types and particularly with battery storage as it is still a relatively nascent technology. As a point of comparison, Bloomberg New Energy Finance (BNEF) projects that Lithium Ion battery prices will decrease at an 18 percent learning rate or improvement rate. For the low technology cost scenario that we developed, we assume a 15 percent improvement rate which is very similar to the BNEF projection.

Preparer: P.J. Martin
Title: Director, Resource Planning
Department: Resource Planning
Telephone: 612-321-3065
Date: April 18, 2019

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Xcel Energy — Information Request No. 36.1
Docket No.: IP6949,E002/PA-18-702
Response To: Office of Attorney General
Requestor: Ian Dobson
Date Received: April 8, 2019

Question:
Re: The Company's response to OAG IR 36

The Company explained that "…in general wind and solar were made available in alternating years."

Explain the extent to which the company made wind and solar available to the Strategist model in the sensitivities for which it provided results in its March 29, 2019 reply comments.

Response:
Please see Attachment A to this response.

Preparer: Jon Landrum
Title: Manager, Resource Planning Analytics
Department: Resource Planning
Telephone: 303.571.2765
Date: April 18, 2019

Docket No. IP6949,E002/PA-18-702
OAG IR No. 36.1
Attachment A - Page 1 of 1

MW Available for Optimization

	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054	2055	2056	2057
MANKATO BASE_IRP																																							
Wind	0	0	0	0	750	0	750	0	750	750	750	1500	0	750	750	0	1500	0	750	0	750	0	750	0	750	0	0	1500	0	1500	1500	0	750	0	0	1500	0	750	0
Solar	0	0	0	0	500	0	500	0	500	500	500	1000	0	500	500	0	1000	0	500	0	500	0	500	0	500	0	0	1000	0	1000	1000	0	500	0	0	1000	0	500	0
MANKATO OWN_IRP																																							
Wind	0	0	0	0	750	0	750	0	750	750	750	1500	0	750	750	0	1500	0	750	0	750	0	750	0	750	0	0	1500	0	1500	1500	0	750	0	0	1500	0	750	0
Solar	0	0	0	0	500	0	500	0	500	500	500	1000	0	500	500	0	1000	0	500	0	500	0	500	0	500	0	0	1000	0	1000	1000	0	500	0	0	1000	0	500	0
MANKATO OWN_2050_IRP																																							
Wind	0	0	0	0	750	0	750	0	750	750	750	1500	0	750	750	0	1500	0	750	0	750	0	750	0	750	0	0	1500	0	1500	1500	0	750	0	0	1500	0	750	0
Solar	0	0	0	0	500	0	500	0	500	500	500	1000	0	500	500	0	1000	0	500	0	500	0	500	0	500	0	0	1000	0	1000	1000	0	500	0	0	1000	0	500	0
MANKATO OWN_2040_IRP																																							
Wind	0	0	0	0	750	0	750	0	750	750	750	1500	0	750	750	0	1500	0	750	0	750	0	750	0	750	0	0	1500	0	1500	1500	0	750	0	0	1500	0	750	0
Solar	0	0	0	0	500	0	500	0	500	500	500	1000	0	500	500	0	1000	0	500	0	500	0	500	0	500	0	0	1000	0	1000	1000	0	500	0	0	1000	0	500	0
MANKATO BASE_EARLY COAL_IRP																																							
Wind	0	0	0	0	750	0	750	0	750	750	750	1500	0	750	750	0	1500	0	750	0	750	0	750	0	750	0	0	1500	0	1500	1500	0	750	0	0	1500	0	750	0
Solar	0	0	0	0	500	0	500	0	500	500	500	1000	0	500	500	0	1000	0	500	0	500	0	500	0	500	0	0	1000	0	1000	1000	0	500	0	0	1000	0	500	0
MANKATO OWN_EARLY COAL_IRP																																							
Wind	0	0	0	0	750	0	750	0	750	750	750	1500	0	750	750	0	1500	0	750	0	750	0	750	0	750	0	0	1500	0	1500	1500	0	750	0	0	1500	0	750	0
Solar	0	0	0	0	500	0	500	0	500	500	500	1000	0	500	500	0	1000	0	500	0	500	0	500	0	500	0	0	1000	0	1000	1000	0	500	0	0	1000	0	500	0

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Xcel Energy Information Request No. 114
Docket No.: IP6949,E002/PA-18-702
Response To: Office of Attorney General
Requestor: Ian Dobson
Date Received: April 8, 2019

Question:
Re: Xcel's Reply Comments of March 29, 2019 at 26, Tables 6 and 7.
Provide two tables similar to Table 7 with PVSC and PVRR results for the following sensitivity combination: high fuel cost, low load, and low cost renewable resources and the following scenario: MEC Ownership and 2040 shutdown and Xcel's early Coal Retirement Scenario of King and Sherco 3. That is, fill in the following Table:

	Market Sales On	Market Sales Off
	High fuel cost, low load, and low cost renewable resources	High fuel cost, low load, and low cost renewable resources
MEC Ownership with 2040 shutdown and Early Coal Retirement	$?	$?

Response:
The Company objects to this request as overly broad and unduly burdensome. The Company has not conducted this modeling as part of its analysis related to the MEC transaction and does not believe it is relevant to a reasonable evaluation of our petition in this docket. Notwithstanding the Company's objection, we note that the stacking of sensitives that in isolation reduce the benefits associated with a transaction will result in a greater combined reduction to those benefits.

Preparer: Ryan Long
Title: Lead Assistant General Counsel
Department: General Counsel
Telephone: 612-215-4659
Date: April 18, 2019