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In the Matter of Minnesota Power's Petition
for Approval of the Energy*Forward* Resource
Package

MPUC Docket No. E015/AI-17-568
OAH Docket No. 68-2500-34672

**REPLY BRIEF OF THE MINNESOTA
DEPARTMENT OF COMMERCE,
DIVISION OF ENERGY RESOURCES**

May 22, 2018

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INTRODUCTION

In its Initial Brief, the Minnesota Department of Commerce, Division of Energy Resources (Department or DOC DER) concluded that Minnesota Power, a public utility operating division of ALLETE, Inc. (MP or Company), met its burden of proof of demonstrating that its proposed acquisition of a share in the 525 MW Nemadji Trail Energy Center (NTEC or Project) combined-cycle (CC) natural gas power plant as part of its *EnergyForward* resource package is necessary and reasonable. In particular, the Department recommended approval with conditions of the affiliated interest agreements and associated tariff changes pertaining to the NTEC resource acquisition because MP demonstrated that they were in the public interest. The Department continues to support the analyses and conclusions provided in its Initial Brief.

ANALYSIS

I. MP HAS DEMONSTRATED THAT THE NTEC RESOURCE ACQUISITION IS REASONABLE AND IN THE PUBLIC INTEREST.

A. The Department's Analysis Concluded That The Proposed Resource Acquisition Is Reasonably Tied To MP's Integrated Resource Plan (IRP).

The Commission stated in its *Notice Referring Gas Plant for Contested Case Proceedings, and Notice and Order for Hearings* that the overall issue in this matter “is whether Minnesota Power’s proposed gas plant is necessary and reasonable.”¹ In evaluating whether the NTEC resource acquisition is “necessary and reasonable,” the Department’s analysis took place in four steps.² The first step was a review of the analysis and outcome in MP’s most recent integrated resource plan (IRP).³ The second step was a review of MP’s exposure to spot market

¹ *In re Minn. Power’s Petition for Approval of the EnergyForward Res. Package*, Docket No. E-015/AI-17-568, Notice Referring Gas Plant for Contested Case Proceedings, and Notice and Order for Hearings at 5 (MPUC Sept. 19, 2017).

² Ex. DER-8 at 19 (Rakow Direct).

³ *Id.*

energy prices.⁴ The third step was a review of MP's analysis of the bidding process.⁵ Finally, the fourth step was a review of the affiliated-interest (AI) agreements at issue under the AI statute.⁶ As the Department summarized in its Initial Brief, acquisition of the NTEC presents several benefits overall, and the Department concluded that, with certain conditions, the NTEC's benefits outweigh its potential costs.⁷ Those benefits include:

- NTEC will reduce overall system societal costs;
- NTEC will diversify MP's resource portfolio;
- NTEC will reduce ratepayer exposure to spot market price risk; and
- NTEC will displace more CO₂-intensive generation.⁸

In its Initial Brief, MP accurately assessed the Department's position that MP adequately demonstrated the reasonableness of the size, type, and timing of its proposed need for the NTEC resource.⁹ MP's Initial Brief states that "[t]he Department analyzed the Company's resource need using its own modified assumptions and concluded that the Company needs 'about 250 MW of intermediate resources by 2025.'"¹⁰ The Department generally agrees with MP's summary of the Department's analysis in its Initial Brief:

The Department conducted a thorough analysis to determine whether the proposed 250 MW NTEC resource acquisition is reasonably tied to the Company's IRP outcomes. Rather than relying on the Company's base case analysis, Department witness Dr. Rakow assessed the accuracy of the Company's analysis by developing his own model that started with the base case from Minnesota Power's 2015 Plan and analyzed whether the key inputs

⁴ Ex. DER-8 at 19 (Rakow Direct).

⁵ *Id.*

⁶ *Id.*; *see also* Minn. Stat. § 216B.48, subd. 3.

⁷ *See* Ex. DER-11 at 67 (Rakow Surrebuttal).

⁸ *Id.*

⁹ *See* MP Initial Br. at 2 (Nov. 1, 2018) (eDocket No. 20185-142665-02).

¹⁰ *Id.* at 14 (quoting Ex. DER-8 at 20, SRR-3 at 20 (Rakow Direct)).

changed outside of the bounds of the Company's integrated resource process. Dr. Rakow then reviewed the Company's IRP outputs to determine whether they support the acquisition of a resource of the general size, type, and timing proposed by the Company. Based on Dr. Rakow's analysis, the Department supports the "pursuit of about 250 MW of intermediate resources by 2025" along with up to 400 MW of wind resources by 2020 and possible pursuit of up to 100 MW of solar resources by 2020.¹¹

The Department agrees that Dr. Rakow assessed the accuracy of MP's analysis by developing his own model and that Dr. Rakow started with the base case from MP's 2015 Plan. To be clear, however, Dr. Rakow analyzed whether the key inputs changed outside of the bounds of the Department's IRP model (not MP's IRP model) and contingencies, not MP's resource process.¹² Further, Dr. Rakow reviewed the Department's IRP outputs (not the Company's IRP outputs) to determine whether they support the acquisition of a resource of the general size, type, and timing proposed by MP.¹³ As provided in more detail in its Initial Brief, the Department's analysis concluded that the revised IRP results supported the pursuit of about 250 MW of intermediate resources by 2025, assuming that project-specific information revealed by the bidding process indicated that the specific project is reasonable.¹⁴ Nevertheless, these observations about MP's Initial Brief do not affect the Department's ultimate conclusions.

The Department also agrees with other aspects of MP's review of the Department's analysis of resource planning issues:

- MP's Initial Brief states that "As the Department correctly recognized, a robust forecasting process that covers a broad range of outcomes is appropriate and is

¹¹ MP Initial Br. at 46–47 (Nov. 1, 2018) (citations omitted).

¹² See DOC DER Initial Br. at 12–13, 15–27 (Nov. 1, 2018) (eDocket No. 20185-142676-01).

¹³ *Id.*

¹⁴ *Id.*

indicative of an appropriate forecast.”¹⁵ MP has accurately described the Department’s position regarding forecasting; that in resource planning, a robust forecasting process that covers a broad range of outcomes is reasonable and that MP’s forecast produces the required inputs in this proceeding. Regarding the impact of newer forecasts, MP’s Initial Brief states that “[t]he analysis of Department witness, Dr. Steve Rakow, likewise confirms the 2017 AFR [Annual Forecast Report] does not alter the need for the Project.”¹⁶ MP has accurately described the Department’s position regarding the 2017 AFR.

- MP’s Initial Brief states that “Minnesota Power’s and the Department’s analyses already include reasonable energy efficiency assumptions.”¹⁷ The Department agrees with MP that the Department’s analyses include reasonable energy efficiency assumptions because the underlying energy efficiency assumptions were the same as those applied in MP’s most recent resource plan and provide a spectrum of potential futures for energy efficiency achievement.
- MP’s Initial Brief states that “Department witness Dr. Steve Rakow confirms that MP’s needs are broader than just a capacity need, and that the Clean Energy Organizations’ (CEO) analysis overlooks these broader needs.”¹⁸ The Department agrees with MP’s characterization of its position.
- MP’s Initial Brief states that “as the Department recognized, Large Power Intervenors’ (LPI) demand response proposal does not provide the same necessary

¹⁵ MP Initial Br. at 5 (Nov. 1, 2018).

¹⁶ *Id.* at 27.

¹⁷ *Id.* at 51.

¹⁸ *Id.* at 22.

resource as the proposed 250 MW supply-side NTEC purchase proposed by the Company and is not a reasonable substitute for it.”¹⁹ Further, MP’s Initial Brief states “the Company and Department both found that demand response does not meet the need for intermediate capacity, even if all 300 MW were utilized (which LPI does not support).”²⁰ In this case, MP has proposed to purchase an “intermediate resource,” whereas the proposed LPI demand response is a “peaking resource.”²¹ The Department agrees with MP’s characterization that LPI’s proposed demand response proposal does not provide the same resource as MP’s proposed NTEC resource acquisition, which as indicated above is reasonably tied to its IRP outcomes.

- MP’s Initial Brief states that LPI proposed that the Company analyze in the resource planning model “a smaller 100-MW CT [combustion turbine] facility” and “consider the smaller-size CT in 2025 that is designed to convert to combined-cycle in 2031.”²² MP’s Initial Brief then concludes that:

[A] 100 MW CT in 2025 is not a viable option to meet the resource need. As discussed above, the Company’s need is for an intermediate resource (and the Department’s analysis confirms this), and a 100 MW CT would serve as a peaking resource.²³

The Department agrees that it confirmed that at issue is MP’s need for an intermediate resource and that a smaller CT unit would not be able to meet the claimed need. Further, the Department analyzed both small and large peaking

¹⁹ *Id.* at 7.

²⁰ *Id.* at 57.

²¹ DOC DER Initial Br. at 44–45 (Nov. 1, 2018).

²² MP Initial Br. at 64 (Nov. 1, 2018).

²³ *Id.*

additions. The Department, however, did not specifically analyze a 100 MW CT resource to be available in 2025.

B. While The Department Had Concerns With MP’s Resource Acquisition Process, The Department Ultimately Concluded That The Benefits Of The Proposed NTEC Resource Acquisition Outweighed The Potential Costs Imposed By The Resource Acquisition Process.

1. MP and the Department agree that fifty percent of the NTEC resource should be dedicated to MP, rather than forty-eight percent.

MP’s Initial Brief states that “the Department and the Company agree that it would be less complicated if Minnesota Power takes South Shore’s entire fifty percent of the NTEC facility.”²⁴ Further, MP’s Initial Brief also states that the Department “recommends that the Company should take a fifty percent, rather than a forty-eight percent, share of the NTEC project.”²⁵ Finally, MP’s Initial Brief states “the Department correctly observed, the difference between 48 and fifty percent is within the margin of error and taking South Shore’s entire position would make the transaction more straightforward and easier to administer.”²⁶

MP has accurately assessed the Department’s position regarding the percent share of the NTEC facility that MP should take from its affiliate, South Shore Energy, LLC (South Shore). The Department agrees with MP’s characterization that the simplicity benefits of acquiring South Shore’s entire fifty percent of the NTEC facility outweigh any potential costs.

2. MP and the Department agree on improvements to MP’s bidding process for resource acquisitions.

In the Department’s direct testimony, Dr. Rakow requested that MP explain the steps it would take to improve its request for proposal (RFP) process.²⁷ In response, MP provided six

²⁴ MP Initial Br. at 3 n.3 (Nov. 1, 2018).

²⁵ *Id.* at 56–57.

²⁶ *Id.* at 73.

²⁷ Ex. DER-8 at 55 (Rakow Direct).

steps it would commit to take going forward for supply-side purchases of 200 MW or more lasting longer than five years.²⁸ The six steps are:

- Ensure that the RFP is consistent with the Commission’s then-most-recent IRP order and direction regarding size, type, and timing;
- Provide the Department and other stakeholders with notice of RFP issuances;
- Notify the Department and other stakeholders of material deviations from those timelines;
- Update the Commission, the Department, and other stakeholders regarding changes in the timing or need that occur between IRP proceedings;
- Where Minnesota Power or an affiliate proposes a project, the Company will engage an independent evaluator to oversee the bid process and provide a report for the Commission; and
- Request that the independent evaluator specifically address the impact of material delays or changes of circumstances on the bid process.

The Department agreed that MP’s proposed steps to improve its bidding process is a reasonable outline, but the Department testified that the threshold for applicability should be reduced to 100 MW given MP’s size.²⁹ The Department recommended that the Commission require MP to include, in the Company’s next IRP, a proposed bidding process for the Commission’s consideration and potential approval under Minn. Stat. § 216B.2422, subd. 5.³⁰

MP’s Initial Brief confirmed that it has agreed to the Department’s recommended RFP improvements.³¹ In addition, MP’s brief states: “While the Department closely analyzed the bidding process, the Department accepted the Company’s selection of South Shore as most appropriate under the circumstances and confined its bidding recommendations to future process improvements in the Company’s next resource plan, recommendations with which the Company agrees.”³² The Department agrees that the overall benefits of NTEC outweigh the costs and that

²⁸ Ex. MP-24 at 14–16 (Frederickson Rebuttal).

²⁹ Ex. DER-11 at 37 (Rakow Surrebuttal).

³⁰ *Id.*

³¹ MP Initial Br. at 71–72 (Nov. 1, 2018).

³² *Id.* at 3 n.14.

the Department's proposed bidding recommendations are intended to produce future bidding process improvements.

3. MP and the Department agree that the AI agreements are reasonable and in the public interest but only with certain Department-recommended conditions.

As summarized in its Initial Brief, the Department ultimately concluded that the AI agreements for NTEC are reasonable and in the public interest under Minn. Stat. § 216B.48, subd. 3, which includes a Guaranty Agreement, under certain conditions.³³ MP's Initial Brief stated that "[t]he Department ultimately concluded that while, in its judgment, Minnesota Power's 'execution of the bidding process could have been better,' 'considering the overall benefits and costs . . . the Commission [should] determine that the affiliated interest agreements are reasonable and in the public interest,' subject to the conditions agreed to by the Company."³⁴ While the Department noted that it might have executed the bidding process differently than MP did, it concluded that the potential costs created by the difference in judgment (including delays in the bidding process)³⁵ were not enough to outweigh the benefits presented by NTEC. Therefore, the Department focused on future improvements to MP's bidding processes, which as indicated above, MP agreed to implement. Nonetheless, the Department agreed with MP that the

³³ For a detailed explanation of the AI agreements at issue in this matter, see DOC DER Initial Br. at 11–12 (Nov. 1, 2018). The AI agreements are the Development and Construction Management Agreement (D&C Agreement), the Ownership and Operating Agreement (O&O Agreement), and the Unit Contingent Capacity Dedication Agreement (CDA).

³⁴ MP Initial Br. at 71 (Nov. 1, 2018).

³⁵ MP's Initial Brief states that "while the Department suggested that the Company's RFP process took a long time and could have been revised, Dr. Rakow also concludes that alternative offers likely would not have been competitive with the 250 MW NTEC purchase." *Id.* at 69. The Department agrees with MP's summary.

AI agreements, with the Department's conditions, provide appropriate protections for MP's customers and should be approved.³⁶

Regarding a particular concern with the reasonableness of a declining balance payment structure for the NTEC, MP made it clear that the Commission would have ongoing regulatory oversight over MP's actions and cost recovery.³⁷ The Department agrees with LPI that it would have been preferable for MP to provide a levelized fixed cost PPA for analysis by parties.³⁸ But such a pricing structure did not appear to be available. Based upon the available facts, the Department concluded that the declining price revenue requirement method is reasonable.³⁹

Finally, regarding a proposed Guaranty Agreement, the Department initially recommended that the Commission approve the Guaranty Agreement with the express condition that MP's ratepayers shall not be charged for any obligations or payments made by MP under the Guaranty Agreement.⁴⁰ The Department ultimately concluded that if MP incurs costs under the Guaranty Agreement, MP must not recover any such costs from its ratepayers unless and until MP demonstrates to the Commission that the incurrence of such costs is rare, unforeseen, and reasonable to charge to its ratepayers.⁴¹ The Department concluded that this approach would protect MP's ratepayers from undue exposure to risks regarding MP's unregulated affiliate,

³⁶ DOC DER Initial Br. at 45 (Nov. 1, 2018). MP's Initial Brief states that "Minnesota Power has also proposed to submit a revised version of the CDA, reflecting the corrections that have been identified during this proceeding as well as the modifications recommended by the Department, as a compliance filing on approval of the affiliated interest agreements." MP Initial Br. at 85 (Nov. 1, 2018). The Department agrees that MP should submit these corrections.

³⁷ Ex. DER-11 at 6 (Rakow Surrebuttal); *see also* DOC DER Initial Br. at 60–61 (Nov. 1, 2018).

³⁸ *See* LPI Initial Br. at 29 (Nov. 1, 2018) (eDocket No. 20185-142696-03 (public)).

³⁹ DOC DER Initial Br. at 60–61 (Nov. 1, 2018).

⁴⁰ Ex. DER-1 at 6 (Amit Direct).

⁴¹ Ex. DER-3 at 2 (Amit Surrebuttal).

South Shore.⁴² MP's Initial Brief stated that "Minnesota Power has committed that it will not seek to pass on to its customers any costs incurred under the guaranty (if any) without Commission approval, and Minnesota Power recognizes that the Company will bear the burden of proving both the recoverability and reasonableness of any such costs (in the unlikely event they occur)."⁴³ While the Department appreciates MP's agreement, the Department wishes to make its recommendation clear: in order for MP to recover any costs from ratepayers incurred under the Guaranty Agreement, it must demonstrate that such costs 1) were rare and unforeseen, and 2) would be reasonable to recover from ratepayers.⁴⁴

4. Recovery of costs associated with the proposed NTEC resource acquisition.

In its Initial Brief, the Department presented Ms. Campbell's recommendations regarding accounting and rate recovery mechanisms for the NTEC.⁴⁵ Ms. Campbell made recommendations regarding the following issues:

- Capital costs and related transmission upgrades for the proposed gas facility;
- Review of underlying revenue requirement assumptions for capital costs;
- Rate recovery mechanisms; and
- Future accounting and reporting requirements including potential increase of MP's share of the proposed gas facility from forty-eight percent to fifty percent for MP ratepayers.⁴⁶

⁴² *Id.*

⁴³ MP Initial Br. at 87 (Nov. 1, 2018).

⁴⁴ DOC DER Initial Br. at 55–56 (Nov. 1, 2018); Ex. DER-3 at 2 (Amit Surrebuttal).

⁴⁵ See DOC DER Initial Br. at 62–70 (Nov. 1, 2018).

⁴⁶ Ex. DER-4 at 3–4 (Campbell Direct).

MP generally presented these issues in its Initial Brief at pages 79–89. The Department appreciates MP’s agreement on these issues, and in particular, clarifying that “[r]ate recovery for the 250 MW NTEC purchase will be determined in a future rate case once this asset is placed into service (anticipated 2024) based on actual capital costs and other updated inputs in the CDA revenue requirements calculation.”⁴⁷ While the Department does not believe that these financial issues remain in dispute with MP, after review of MP’s Initial Brief, the Department notes the following concern regarding proposed decommissioning costs, which the Department noted in its Initial Brief.⁴⁸

MP’s Initial Brief states that “Minnesota Power also accepted the Department’s recommendation that decommissioning costs related to Minnesota Power’s share of the NTEC facility be included in the overall soft cap.”⁴⁹ The Department recommended, and MP agreed, that the baseline for decommissioning costs should be set at \$10 million for purposes of establishing the soft cap in this proceeding.⁵⁰ The Department agrees with MP’s characterization of the treatment of decommissioning costs in the soft cap. MP claims in its Initial Brief, however, that the decommissioning costs of approximately \$5 million in Ms. Supinski’s Rebuttal Testimony, on Schedule 5 in column (C) or “potential Exhibit C-1 to the CDA,” is correct because this amount reflects MP’s dedicated fifty percent resource share of NTEC.⁵¹ The Department does not agree. The Department testified that the CDA should reflect \$10 million, not \$5 million, as the requisite amount for decommissioning MP’s fifty percent share of the NTEC in order to get to the 3.1 to 11.3 percent negative salvage rates for other comparable

⁴⁷ MP Initial Br. at 84 (Nov. 1, 2018).

⁴⁸ See DOC DER Initial Br. at 65 (Nov. 1, 2018)

⁴⁹ MP Initial Br. at 84 (Nov. 1, 2018).

⁵⁰ DOC Initial Br. at 65 (Nov. 1, 2018); MP Initial Br. at 84–85 (Nov. 1, 2018).

⁵¹ MP Initial Br. at 85 n.320 (Nov. 1, 2018).

Minnesota gas plants.⁵² As noted, \$10 million in decommissioning costs was included in the soft cap, which represents MP's fifty percent resource share of the NTEC. As a result, footnotes A to C of Schedule 5, or the "potential Exhibit C-1," as MP states,⁵³ shows that this schedule reflects MP's fifty percent share of the plant, and therefore, this schedule must also include in column (C) the \$10 million in decommissioning costs for MP's share, not the approximate \$5 million noted by MP. That is, for consistency, and for the CDA to be deemed reasonable and in the public interest, both the soft cap *and* the "potential Exhibit C-1 to the CDA [Schedule 5]" need to reflect the \$10 million in decommissioning costs because both detail MP's fifty percent dedicated resource.

II. THE DEPARTMENT'S REPLY TO THE CEO INITIAL BRIEF.

A. The Department Generally Did Not Agree With The CEO's View Of The Decision Criteria In This Matter.

Of concern to the Department in reviewing CEO testimony, which continues after review of the CEO Initial Brief, is what appears to be a fundamentally different understanding of evaluating the reasonableness of the proposed NTEC. As indicated above, the Department's analysis took place in four steps, beginning with whether MP's proposed resource acquisition is reasonably tied to MP's most-recent IRP outcome. At times, for instance, CEO appeared to make arguments that were more appropriate for the IRP process, not in this resource acquisition matter, as the Department discusses in its Initial Brief.⁵⁴

⁵² Ex. DER-6 at 12–13 (Campbell Surrebuttal).

⁵³ MP Initial Br. at 85 n.320 (Nov. 1, 2018).

⁵⁴ See, e.g., DOC DER Initial Br. at 30 (Nov. 1, 2018) (discussing consideration of battery storage).

An important concern, however, is that CEO continues to disregard MP's need to replace about 700 MW in lost *energy* due to the upcoming retirement of certain coal plants, as noted in MP's most recent IRP.⁵⁵ The Commission's 2015 IRP Order stated that:

7. Minnesota Power may pursue an RFP to investigate the possible procurement of combined-cycle natural gas generation to meet its energy and capacity needs in the absence of Boswell Units 1 and 2 and Taconite Harbor Units 1 and 2, with no presumption that any or all of the generation identified in that bidding process will be approved by the Commission.⁵⁶

In its Initial Brief, CEO appears to reference MP's retiring coal plant capital only once, and only in reference to MP's goal of meeting Minnesota's environmental standards.⁵⁷ That is, CEO appears to frame the issue in this matter as how the proposed NTEC compares to potential renewable resources.⁵⁸ But as the Department stated in the opening paragraphs of its Initial Brief, Strategist, a resource planning model, consistently picked renewable resources and a 250 MW natural gas plant.⁵⁹ Again, the Department ran over 300 scenarios varying numerous inputs such as the demand and energy forecasts; the cost externalities, CO₂ costs, new unit construction costs, coal prices, natural gas prices, cost of new wind and solar; access to and the price of spot market energy; the overall discount rate; and the level of energy efficiency.⁶⁰ Strategist consistently selected 300 to 400 MW of wind, zero to 100 MW of solar, and a 250 MW natural

⁵⁵ See MP Initial Br. at 14–16 (Nov. 1, 2018).

⁵⁶ *In re Minn. Power's 2016–2030 Integrated Resource Plan*, Docket No. E-015/RP-15-690, Order Approving Resource Plan with Modifications at 15 (MPUC July 18, 2016) (hereinafter 2015 IRP Order).

⁵⁷ CEO Initial Br. at 47 (Nov. 1, 2018) (eDocket No. 20185-142674-02).

⁵⁸ See *id.*

⁵⁹ DOC DER Initial Br. at 1 (Nov. 1, 2018).

⁶⁰ Ex. DER-8, SRR-3 at 21–22 (Rakow Direct).

gas fired, combined cycle unit as a package.⁶¹ The package is needed to replace the energy⁶² lost due to MP removing about 700 MW⁶³ of coal units from its system by 2025.

Moreover, the CEO Initial Brief states: “Because there is little-to-no capacity deficit in 2025, Minnesota Power would have to show that the reduction in overall societal costs identified by Dr. Rakow outweighs the policy preferences against non-renewable facilities.”⁶⁴ The Department disagrees with the CEO characterization of the decision criteria. The considerations for the Commission are far broader than the simplistic, cost versus renewable-preference trade-off that CEO appears to portray. Generally speaking, the Commission considers four broad issues—reliability, cost, impact, and risk—in resource planning and resource acquisition proceedings.⁶⁵

B. How NTEC Addresses The Capacity Needs Of MP’s System.

Regarding this issue, the CEO Initial Brief states: “The Department of Commerce—through witness Dr. Steve Rakow—also determined that there is no capacity need for NTEC. . . . Dr. Rakow noted that when the NTEC was not labeled as superfluous, it was not selected very often.”⁶⁶

In response, the Department notes that CEO appears to misunderstand Strategist’s operation. The statement “when the NTEC was not labeled as superfluous, it was not selected very often” does not mean that there is not a capacity need.⁶⁷ In fact, as CEO quoted, the Department testified that “a unit that is not superfluous can only be added to the resource

⁶¹ *Id.*, SRR-3 at 20, 23–40.

⁶² Ex. DER-11 at 10 (Rakow Surrebuttal).

⁶³ Ex. DER-8, SRR-3 at 8 (Rakow Direct).

⁶⁴ CEO Initial Br. at 11–12 (Nov. 1, 2018).

⁶⁵ *See* Ex. DER-8, SRR-2 (Rakow Direct).

⁶⁶ CEO Initial Br. at 11 (Nov. 1, 2018).

⁶⁷ *Id.*

portfolio in a particular year if there is a capacity deficit.”⁶⁸ Therefore, the fact that NTEC, when not labeled as superfluous, was selected at any time means that there is a capacity deficit.⁶⁹ In addition, once NTEC was labeled as superfluous, NTEC was selected in virtually every case.⁷⁰ These results indicated that NTEC is being added to MP’s system because NTEC’s energy output reduces overall societal costs, not because NTEC is necessarily filling a capacity need, although a capacity need does exist.⁷¹

C. Spot Market Risk.

1. Overall conclusion.

The CEO Initial Brief states that “the Department of Commerce approached Minnesota Power’s purported need for flexibility as a question of whether Minnesota Power would be unduly exposed to risk from the spot market without NTEC and concluded that it would not.”⁷² In general, the Department agrees with the CEO characterization of the Department’s conclusion regarding MP’s exposure to spot market risk without NTEC. It must be kept in mind, however, that the Department’s risk analysis assumed that all factors would remain the same and identified several factors, such as volatility in spot market prices, retirement of further dispatchable capacity, or significant load increases, that could change the Department’s conclusion.⁷³

⁶⁸ *Id.*

⁶⁹ Ex. DER-11 at 42 (Rakow Surrebuttal).

⁷⁰ *Id.*

⁷¹ *Id.*

⁷² CEO Initial Br. at 26 (Nov. 1, 2018).

⁷³ See DOC DER Initial Br. at 27–28 (Nov. 1, 2018).

2. Non-dispatchable capacity exclusion.

The CEO Initial Brief states “Dr. Rakow’s analysis . . . should be considered very conservative as it excludes nearly 900 MW of Minnesota Power’s resources from consideration”⁷⁴ Later, CEO reiterates the same point, in more detail:

Dr. Rakow excludes Minnesota Power’s wind, solar, demand response, and non-dispatchable hydro resources from his comparison between the Company’s forecasted supply and demand. Dr. Rakow “makes no attempt to determine how these resources perform on an hourly basis or quantify their actual hour-by-hour contribution to meeting Minnesota Power’s demand. He simply credits them at zero, essentially assuming they provide no energy at all over the course of his hypothetical year.”⁷⁵

The Department believes CEO’s point to be in error. The Department’s analysis did not exclude nearly 900 MW of Minnesota Power’s resources from consideration. Rather, the resources were considered qualitatively rather than quantitatively.⁷⁶ Furthermore, it is generally not possible to determine how wind and non-dispatchable hydro resources might perform on an hourly basis a decade in the future.⁷⁷ The Department does not believe that quantification of their actual hour-by-hour contribution to be feasible.⁷⁸

3. Battery storage as a potential risk-mitigation measure.

The CEO Initial Brief states: “Dr. Rakow’s analysis . . . also fails to consider battery storage as a potential resource.”⁷⁹ CEO is correct that the Department did not discuss energy storage as a risk-mitigation measure other than noting the effects of storage on increasing

⁷⁴ CEO Initial Br. at 37 (Nov. 1, 2018).

⁷⁵ *Id.* at 39.

⁷⁶ DOC DER Initial Br. at 28–29 (Nov. 1, 2018).

⁷⁷ *See id.*

⁷⁸ *See id.*

⁷⁹ CEO Initial Br. at 37 (Nov. 1, 2018).

demand during off-peak periods and decreasing demand during on-peak periods.⁸⁰ The Department’s analysis, however, was part of the NTEC resource acquisition analysis and was confined to MP’s existing system and the potential risk-mitigation benefits of MP’s proposed NTEC acquisition.⁸¹ A broader consideration, as proposed by CEO, would likely be more appropriate for an IRP proceeding.⁸²

4. Small benefit compared to no benefit for NTEC’s role in spot market price mitigation.

Regarding this issue, the CEO Initial Brief states:

As a result of this analysis, Dr. Rakow concludes that “until volatility in spot market prices increases, further dispatchable capacity is removed from [Minnesota Power]’s system, or load increases significantly, the level of risk appears to be manageable with the current resource mix.” Nevertheless, in his Surrebuttal, Dr. Rakow appears to support the purchase of NTEC at least in part from a price mitigation standpoint, stating that “NTEC will reduce ratepayer exposure to spot market price risk to a small degree”⁸³

While it is true that, given the facts today, the level of risk appears manageable, it is also true that, due to uncertainty regarding whether today’s trends will hold true in 2025, additional risk mitigation measures will have some, non-zero, value.⁸⁴ That is why Dr. Rakow concluded that “[f]urther mitigation risk measures, such as load management, energy storage, and so forth would have to be relatively low cost.”⁸⁵

5. Reliability versus risk.

The CEO Initial Brief states:

⁸⁰ See DOC DER Initial Br. at 29–30 (Nov. 1, 2018).

⁸¹ *Id.*

⁸² *Id.*

⁸³ CEO Initial Br. at 39 (Nov. 1, 2018) (citations omitted).

⁸⁴ Ex. DER-11 at 59–60 (Rakow Surrebuttal).

⁸⁵ See DOC DER Initial Br. at 31 (Nov. 1, 2018).

Minnesota has developed well-established best practices for quantitatively modeling wind power production, as outlined in Mr. Jacobs' testimony regarding Minnesota's wind integration studies. Those studies illustrate proven methodologies for assessing the "contribution of variable resources to meeting loads that are relevant to Minnesota Power's potential exposure to spot market prices." Those studies in fact show that contributions from wind and solar would reduce the risk of Minnesota Power having an exposure to spot market prices if those resources were included in the analysis.⁸⁶

The studies to which CEO refers are reliability-based studies. There is a fundamental difference between reliability studies—which are used to determine the portion of wind capacity that can be expected during the peak hour—and risk analyses, which must consider all hours and not just the peak hour.⁸⁷ Therefore, the reliability studies are not critical to a risk analysis of MP's exposure to spot market prices with or without the NTEC resource addition.⁸⁸

CONCLUSIONS AND RECOMMENDATIONS

The Department continues to recommend that the Commission:

1. Approve MP's affiliated interest agreements as being reasonable and in the public interest under Minn. Stat. § 216B.48, subd. 3;
2. Grant MP's requested variance to Minnesota Rules part 7825.1400, items E to J;
3. Determine that MP has met the requirements of Minn. Stat. § 216B.50;
4. Determine that MP has met the requirements of Minn. Stat. § 216B.1694, subd. 2(4);
5. Determine that MP has met the requirements of Minn. Stat. § 216B.2422, subd. 3(a);

⁸⁶ CEO Initial Br. at 40–41 (Nov. 1, 2018) (citations omitted).

⁸⁷ Ex. DER-11 at 53 (Rakow Surrebuttal).

⁸⁸ *Id.* at 56–57.

6. Order MP to include, in the Company's next IRP, a proposed bidding process for Commission consideration and potential approval under Minn. Stat. § 216B.2422, subd. 5; the process should:
 - a. apply to supply-side acquisitions of 100 MW or more and lasting longer than five years; and
 - b. include the six reforms provided by Mr. Frederickson.
7. Include MP's commitment regarding at least 250 MW of dedicated capacity in the approval;
8. Include MP's commitment regarding amendments to the D&C Agreement in the approval;
9. Include MP's commitment regarding amendments to the O&O Agreement in the approval;
10. Include MP's commitment regarding abandoned plant in the approval;
11. Require MP to make a compliance filing to address the following issues in the CDA:
 - a. the definition of ANUC in section 6.1.2;
 - b. clarification of "it" in section 11.6;
 - c. clarification of "either" in section 13.1; and
 - d. the footnotes in Appendix H;
12. State that the capital costs for the NTEC and related interconnection costs including capitalized interest or AFUDC are approved in today's dollars without escalation, at a certain amount assuming fifty percent ownership.

13. Include an additional \$10 million in decommissioning costs in capital costs. In addition, it would be reasonable to use the Handy-Whitman index for purposes of escalating total gas plant and related interconnection costs, within the soft cap, at the time of a future rate case.
14. Regarding costs of third-party transmission upgrades, the amounts MP provided give a reasonable soft cap amount that should be used to evaluate the costs in future rate recovery proceedings. Specifically, the costs of third-party transmission upgrades should be set at a certain soft cap assuming fifty percent ownership, which reflects fifty percent of the negotiated amount, plus capitalized interest.
15. Find that MP agreed that only fuel costs, MISO market costs, and MISO market revenues will be recovered through MP's FPE Rider. Recovery of all other costs may not occur until the first rate case after NTEC is in service.
16. Find that MP did not demonstrate the reasonableness, or authority, to recover or true up recovery of capacity costs including capital costs and non-fuel operating and maintenance O&M expenses outside of a rate case.
17. The Commission should require MP to provide its independent engineering study and that decommissioning costs should be estimated at \$10 million, at a minimum. Require MP to provide the updated Exhibit C-1 with \$10 million in decommissioning (rather than the \$5 million) costs and Exhibit D-1 with updated numbers electronically with formulas intact.

18. Require MP to set up locational or resource center accounting to ensure that all costs related to this gas facility and related transmission are directly tracked and directly assigned and allocated.
19. Require MP to provide full access to MP's/South Shore's books and records including all billings related to the NTEC gas facility and transmission and all related costs.
20. Determine that a fifty percent assignment of output (instead of forty-eight percent) on the NTEC plant is consistent with MP's approved IRP and provides for less complex accounting and reporting.
21. Determine that, if MP incurs costs under the Guaranty Agreement, MP must not recover any such costs from its ratepayers unless and until the Company demonstrates to the Commission that the incurrence of such costs is rare, unforeseen, and reasonable to charge to its ratepayers. In addition, MP has the burden of demonstrating that it would be reasonable to recover any such rare and unforeseen costs from its customers.

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Respectfully submitted,

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