

July 20, 2018

PUBLIC DOCUMENT

Daniel P. Wolf
Executive Secretary
Minnesota Public Utilities Commission
121 7th Place East, Suite 350
St. Paul, Minnesota 55101-2147

RE: **PUBLIC Comments of the Minnesota Department of Commerce, Division of Energy Resources**
Docket No. E015/M-18-401

Dear Mr. Wolf:

Attached are the **PUBLIC** Comments of the Minnesota Department of Commerce, Division of Energy Resources (Department) in the following matter:

Petition of Minnesota Power for Approval of a 10 MW Blanchard Solar Power Purchase Agreement

The *Petition* was filed on June 18, 2018 by:

Jenna Warmuth
Senior Public Policy Advisor
Minnesota Power
30 West Superior Street
Duluth, MN 55802

The Department recommends approval of Minnesota Power's requests, contingent on an explanation of certain provisions in reply comments and slight modifications to the PPA or additional explanation of provisions, and is available to respond to any questions the Minnesota Public Utilities Commission may have.

Sincerely,

/s/ MICHAEL LONG
Rate Analyst

ML/ja
Attachment

Before the Minnesota Public Utilities Commission

PUBLIC Comments of the Minnesota Department of Commerce Division of Energy Resources

Docket No. E-015/M-18-401

I. INTRODUCTION

On June 18, 2018, Minnesota Power (MP or the Company) filed the Company's *Petition for Approval of a 10 MW Blanchard Solar Power Purchase Agreement* (Petition) for approval of a 25-year power purchase agreement (PPA) with Cypress Creek Renewables to procure energy and capacity from the Blanchard Solar, LLC (Blanchard Solar) generation facility. The Petition requests that the Minnesota Public Utilities Commission (Commission):

1. Approve the PPA;
2. Find that the PPA is a resource that can be applied by MP to its obligations under the Solar Energy Standard (SES) set forth in Minn. Stat. § 216B.1691, subd. 2f; and
3. Authorize cost recovery for the PPA through MP's Fuel and Purchased Energy Rider (FPE Rider) pursuant to Minn. Stat. § 216B.1645

II. BACKGROUND

On July 18, 2016, the Commission ordered MP to acquire solar units of 11 MW by 2016, 12 MW by 2020 and 10 MW by 2025 to meet MP's SES obligations, and to consider the procurement of up to 100 MW of solar energy by 2022 as an economic resource for MP's system.¹

On August 4, 2016, MP issued a request for proposals (RFP) for up to 300 MW of solar energy with a commercial operation date between January 1, 2018 and December 31, 2022. During its bid evaluation period, MP determined that a 10-MW solar energy procurement was in the best interest of customers and on June 7, 2017, MP executed a PPA for the 10-MW Blanchard Solar Project.

¹ *Order Approving Resource Plan with Modifications* in Docket No. E015/RP-15-690, page 15, order point 10.

On July 28, 2017 in Docket No. E015/AI-17-568 MP filed the Company's *Petition for Approval of the EnergyForward Resource Package and Compliance Filing* requesting approval of its EnergyForward Resource Package, including the executed PPA with Blanchard Solar for 10 MW of solar energy.² On September 19, 2017, the Commission's *Order Referring Gas Plant for Contested Case Proceedings, and Notice and Order for Hearings* (Docket No. E015/AI-17-568) ordered MP to refile its solar PPA in a separate docket. On June 18, 2018, MP filed a petition for the approval of a revised PPA with Blanchard Solar.

III. DEPARTMENT ANALYSIS

The Minnesota Department of Commerce, Division of Energy Resources (Department) organizes its analysis into three sections, corresponding to each of MP's three requests. Section A analyzes whether the Commission should approve the PPA. Section B analyzes whether the energy purchased under the PPA can be applied towards MP's obligations under the SES. Lastly, Section C analyzes whether it is appropriate to allow MP to recover the costs of the PPA through the FPE Rider. The Department also addresses MP's evaluation of larger solar energy resources in Section D.

A. PPA APPROVAL

Consistent with past PPA reviews, the Department determines whether the PPA is in the public interest, and hence whether the Commission should approve the PPA, by answering two questions. First, is the price reasonable, given the context? Second, are ratepayers reasonably protected from potential harm due to early termination, transfer of ownership, operational failures, and curtailment?

1. Price

The PPA sets a levelized price of **[TRADE SECRET DATA HAS BEEN EXCISED]** over a 25-year term. In response to its RFP for up to 300 MW of solar power supplies, MP received proposals for 83 projects, including two proposals from MP.³

To assist in the evaluation of project proposals, MP retained Sedway Consulting (Sedway) to monitor the Company's solicitation, shortlisting of proposals, and proposal selection. Sedway applied a quantitative evaluation process to estimate a net cost for each proposal, **[TRADE SECRET DATA HAS BEEN EXCISED]**.

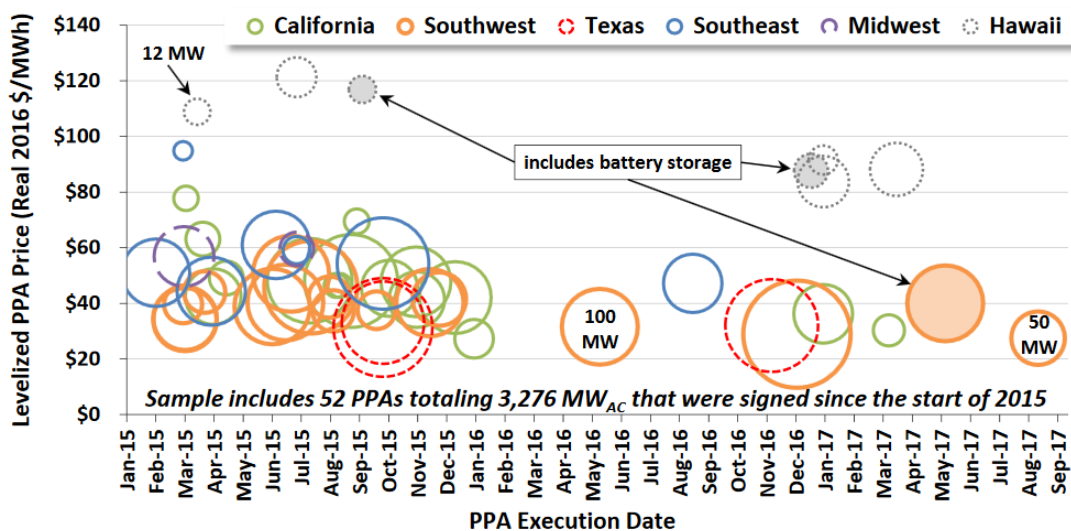
² *Petition for Approval of the EnergyForward Resource Package* in Docket No. E015/AI-17-568

³ 18-401 Petition, page 13

The 10-MW Blanchard Solar Project was selected, representing the proposal with the lowest net cost among the remaining shortlisted proposals. Given that (a) there were a significant number of proposals submitted in response to MP’s RFP, (b) net cost was one of the main criteria used in shortlisting and selecting project proposals, (c) the selected project offers the lowest net cost [TRADE SECRET DATA HAS BEEN EXCISED] among shortlisted proposals, and (d) an independent evaluator was hired to monitor the solicitation and selection of proposals, the Department concludes that the pricing in the PPA is reasonable.

For informational purposes, the Department notes that, in comparison to publicly available data on PPA contracts executed since 2015, the levelized price in the Blanchard Solar 10-MW PPA is [TRADE SECRET DATA HAS BEEN EXCISED]. See Figure 1, below, which illustrates a sample of PPAs executed since 2015 and their levelized PPA price.

Figure 1. Levelized Prices of Solar PPAs from 2015 – 2017⁵



⁵ "Utility-Scale Solar 2016" report, Lawrence Berkeley National Laboratory, Page 33, Figure 19.

2. *Ratepayer Protections*

a. *Early Termination*

Ratepayers are at minimal risk of financial harm from early termination due to the **[TRADE SECRET DATA HAS BEEN EXCISED]** price structure of the PPA. **[TRADE SECRET DATA HAS BEEN EXCISED]**, the Department concludes that risk of early termination under the PPA is minimal.

b. *Transfer of Ownership*

Section 16.1 of the PPA states that the PPA may not be assigned by Blanchard Solar without MP's consent, and that MP will not unreasonably withhold consent provided that the assignee assumes the obligations of Blanchard Solar under the PPA, the assignment is acceptable to any Financier and any subsequent operator of the Facility will have past operational experience of a facility of equal or greater size. Section 16.3 of the PPA, regarding change of control, requires MP's consent for any direct change of control of Blanchard Solar, defined as a transfer of at least 50% of voting rights. Given that MP's consent is required for any assignment of the PPA by Blanchard Solar or for a significant change in Blanchard Solar ownership, the Department concludes that risks related to transfer of ownership are minimal.

c. *Operational Failures*

Section 9.1.2 of the PPA establishes a Performance Security fund that MP may draw upon to satisfy any unpaid obligations from Blanchard Solar, providing a level of security to ratepayers for operational failure. The Performance Security fund must be maintained by Blanchard Solar throughout the term of the PPA in the amount of **[TRADE SECRET DATA HAS BEEN EXCISED]** which equates to **[TRADE SECRET DATA HAS BEEN EXCISED]** for 10 MW of installed capacity.

Section 3.2 of the PPA **[TRADE SECRET DATA HAS BEEN EXCISED]**. However, Exhibit G of the PPA **[TRADE SECRET DATA HAS BEEN EXCISED]**. The Department recommends that the Commission require MP to reconcile these two components in the PPA, and provide clarification regarding the **[TRADE SECRET DATA HAS BEEN EXCISED]**.

Section 3.2 of the PPA defines an **[TRADE SECRET DATA HAS BEEN EXCISED]**. The Department recommends that the Commission require MP to **[TRADE SECRET DATA HAS BEEN EXCISED]**.

Section 4.4 of the PPA requires the Facility to be commercially operational by July 1, 2020, and in the event of a delay past July 1, assesses delay damages in the amount of **[TRADE SECRET DATA HAS BEEN EXCISED]** per day until the Facility becomes operational. If the commercial operation date milestone is not achieved, the delay damages may be used to mitigate higher

replacement power costs to a certain extent. Table 1, below, illustrates the replacement power costs required to be cost-neutral in the event of a delayed commercial operation date for the Blanchard 10-MW solar project.

Table 1. Cost-Neutral Replacement Generation Costs

[TRADE SECRET DATA HAS BEEN EXCISED]

If forecasted prices for replacement power, combined with any renewable energy certificates purchased to meet the SES, are higher than the Cost-Neutral Replacement Power Costs in Table 1, ratepayers may be at risk of increased costs due to operational delays on behalf of the developer. The Department recommends that the Commission require MP to explain how it derived the assessed damages penalty related to a delayed commercial operation date, provide support for the derivation, and explain how the damage penalty amount adequately protects ratepayers.

d. Curtailment

Pursuant to Section 7.6 of the PPA, curtailment payments will be due from MP to Blanchard Solar **[TRADE SECRET DATA HAS BEEN EXCISED]**. The Department notes that these terms related to curtailment and curtailment payments are similar to previous PPAs for solar energy that were approved by the Commission.⁷ Given that (a) **[TRADE SECRET DATA HAS BEEN EXCISED]**, and (b) the curtailment terms under the PPA are similar to the curtailment terms included in previous PPAs that were approved by the Commission, the Department concludes that these curtailment provisions are reasonable and that risks to ratepayers are minimal.

B. SOLAR ENERGY STANDARD ELIGIBILITY

Minnesota's SES requires that each public utility generate or procure enough solar energy to serve at least 1.5 percent of eligible sales by 2020. Since MP would be procuring solar energy and the associated renewable energy certificates under the PPA, the Department concludes that the energy procured under the PPA would count towards the SES.

C. COST RECOVERY THROUGH MP'S FUEL AND PURCHASED ENERGY RIDER

Minn. Stat. §216B.1645, subd. 2, provides that upon petition by a utility, the Commission shall approve an automatic adjustment for the recovery of expenses incurred for an approved PPA to

⁷ See for example, Northern States Power Company's *Petition for Approval of Power Purchase Agreement with Dragonfly Solar, LLC* in Docket No. E002/M-17-561, page 17

satisfy the SES, to the extent those expenses are not offset by revenues received through sale of the power generated under the PPA into the wholesale market. Given that (a) the Department finds that the Blanchard Solar PPA would count towards MP's SES obligations and, therefore, qualifies for the recovery of expenses pursuant to Minn. Stat. §216B.1645, subd. 2, and (b) the proposed cost recovery method aligns to previous orders by the Commission for solar PPAs,⁸ the Department recommends that the Commission authorize recovery through MP's FPE rider of the costs of the PPA, net of any offsetting revenues from power generated under the PPA being sold in the wholesale market.

D. LARGER PROJECTS

For informational purposes, regarding MP's conclusion that a 10-MW PPA for solar energy is in the best interest of customers, as opposed to a larger procurement, the Department recommends further discussion with MP regarding its production modelling of solar energy resources as part of the Company's next Integrated Resource Plan (IRP) proceeding. In the Petition, MP attests that no solar resources were considered cost-effective due to relatively high solar energy costs in comparison to wind resources, and a lack of capacity benefits during MP's winter peak hours.⁹ This conclusion is contrary to the conclusion of the Department as a result of its IRP analysis, which recommended that MP procure an additional 50 MW of solar energy resources as part of a cost-effective replacement package for retiring coal resources¹⁰ as well as the Commission's finding that "up to 100 MW of solar by 2022 is likely an economic resource for Minnesota Power's system."¹¹ The Department also notes that its IRP analyses assumed a **[TRADE SECRET DATA HAS BEEN EXCISED]**.

Furthermore, the Department notes that the inclusion or exclusion of environmental externality values will likely significantly impact the cost-effectiveness of solar energy resources in production modeling. Pursuant to Minn. Stat. § 216B.2422, subd. 3, utilities must use the environmental cost values established by the Commission "when evaluating and selecting resource options in all proceedings before the commission." In the Petition, MP modelled the cost impact of the Blanchard 10-MW solar PPA using ten future scenarios, two of which include environmental externality values and eight that do not.¹² The two futures that include environmental externality values indicate an average decrease in costs of \$2.4 million, compared to an average increase of \$0.9 million for the eight futures that do not include

⁸ See for example, Commission's *Order Approving Solar Portfolio* in Docket No. E002/M-14-162, page 10, order point 1

⁹ 18-401 Petition, page 12.

¹⁰ *Comments of the Minnesota Department of Commerce, Division of Energy Resources* in Docket No. E015/RP-15-690, page 36. Filed January 4, 2016.

¹¹ *Order Approving Resource Plan with Modifications* in Docket No. E015/RP-15-690, page 15, order point 11. Filed July 18, 2016.

¹² 18-401 Petition, page 16.

externalities. While MP calculated the average cost impact across all ten scenarios as a slight increase in power supply costs of \$0.2 million, it should be noted that the average is more heavily weighted towards futures that exclude environmental externality values. While the cost impact analysis provided in the Petition pertains only to the Blanchard PPA, it demonstrates the impact of environmental externality values on production modelling for solar resources. The evaluation report from Sedway Consulting notes that **[TRADE SECRET DATA HAS BEEN EXCISED]**. The assumptions leading to this conclusion are not provided in the report. While the PPA for 10-MW of solar energy will allow MP to comply with SES requirements, further discussion is merited regarding the value of a larger solar resource procurement.

IV. DEPARTMENT RECOMMENDATION

The Department recommends approval of the PPA contingent on MP:

- Reconciling Section 3.2 and Exhibit G of the PPA, and providing clarification regarding the **[TRADE SECRET DATA HAS BEEN EXCISED]**;
- **[TRADE SECRET DATA HAS BEEN EXCISED]**; and
- Explaining how the assessed damages penalty under Section 4.4 was derived, providing support for its derivation, and explaining how the damage penalty amount adequately protects ratepayers.

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