

October 19, 2019

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

RE: **PUBLIC Comments of the Minnesota Department of Commerce, Division of Energy Resources**
Docket No. E015/M-18-600

Dear Mr. Wolf:

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

Minnesota Power's Petition for Approval of Amendments to FPL Energy Oliver Wind I, LLC and FPL Energy Oliver Wind II, LLC Power Purchase Agreements.

The Petition was filed on September 19, 2018 by:

David R. Moeller
Senior Attorney
Minnesota Power
30 West Superior Street
Duluth, MN 55802

The Department recommends that the Minnesota Public Utilities Commission (Commission) **approve the petition**. The Department is available to respond to any questions the Commission may have.

Sincerely,

/s/ STEVE RAKOW
Analyst Coordinator

SR/jl

Before the Minnesota Public Utilities Commission

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

Docket No. E015/M-18-600

I. INTRODUCTION

On December 20, 2005 in Docket No. E015/M-05-975 the Minnesota Public Utilities Commission (Commission) issued its Order Approving Wind Purchase Power Agreement, Including the Request for Variances, Revised Rider for Fuel Adjustment and Deferral to the Resource Plan approving the petition of ALLETE, Inc., doing business as Minnesota Power (MP or the Company) regarding a power purchase agreement (PPA) between MP and FPL Energy Burleigh County Wind, LLC for the purchase of energy, capacity, and associated services (Original Oliver I PPA) from the Burleigh County Wind Energy Center.¹

On May 11, 2007 in Docket No. E015/M-07-216 the Commission issued an order approving MP's petition regarding a PPA between MP and FPL Energy Oliver Wind II, LLC for the purchase of energy, capacity, and associated services (Original Oliver II PPA) from the Oliver II project.²

On September 19, 2018 MP filed with the Commission the Company's Petition for Approval of Amendments to FPL Energy Oliver Wind I, LLC and FPL Energy Oliver Wind II, LLC Power Purchase Agreements (Petition). The Petition requests Commission approval of:

- the *Third Amendment of Power Purchase Agreement* (Oliver I Amendment), which makes changes to the Original Oliver I PPA; and
- the *Second Amendment of Power Purchase Agreement* (Oliver II Amendment), which makes changes to the Original Oliver II PPA.

The Oliver I Amendment and the Oliver II Amendment (collectively, Oliver PPA Amendments) alter terms of MP's purchase of energy, capacity, and associated services from FPL Energy Oliver Wind I, LLC and FPL Energy Oliver Wind II, LLC (collectively, NextEra). The two Oliver PPA Amendments are nearly identical and, for purposes of this analysis, create the same overall types of impacts. The Amendments extend the terms of the original PPAs and reduce the price. The term extensions would be made possible by NextEra repowering Oliver I and II, which would also increase the annual generation. The Petition requests that the Commission confirm that the Oliver PPA Amendments continue to be a reasonable and prudent way for the Company to continue to meet its obligations under Minnesota Statutes § 216B.1691. The

¹ The Burleigh County Wind Energy Center facility is now known as Oliver I.

² Collectively, the Original Oliver I PPA and Original Oliver II PPA are referred to as Original Oliver PPAs.

Petition also requests Commission approval of the Oliver PPA Amendments under Minnesota Statutes § 216B.1645. Lastly, the Petition notes that a condition precedent in Oliver PPA Amendments is approval by the Commission within ten months of filing the Petition.

Below are the Comments of the Minnesota Department of Commerce, Division of Energy Resources (Department) regarding the Petition.

II. DEPARTMENT ANALYSIS

A. GOVERNING STATUTES AND RULES

The Company filed the Petition pursuant to Minnesota Statutes § 216B.1691 (Renewable Energy Objectives Statute, or RES), which states in part:

... each electric utility shall generate or procure sufficient electricity generated by an eligible energy technology to provide its retail customers in Minnesota, or the retail customers of a distribution utility to which the electric utility provides wholesale electric service, so that at least the following standard percentages of the electric utility's total retail electric sales to retail customers in Minnesota are generated by eligible energy technologies by the end of the year indicated:

- | | | |
|-----|------|-------------|
| (1) | 2012 | 12 percent |
| (2) | 2016 | 17 percent |
| (3) | 2020 | 20 percent |
| (4) | 2025 | 25 percent. |

The Company also filed the Petition pursuant to Minnesota Statutes § 216B.1645, which states in part:

Subdivision 1. Commission authority. Upon the petition of a public utility, the Public Utilities Commission shall approve or disapprove power purchase contracts, investments, or expenditures entered into or made by the utility to satisfy the wind and biomass mandates contained in sections 216B.169, 216B.2423, and 216B.2424, and to satisfy the renewable energy objectives and standards set forth in section 216B.1691 ...

Subd. 2a. Cost recovery for utility's renewable facilities. (a) A utility may petition the Commission to approve a rate schedule that provides for the automatic adjustment of charges to recover prudently incurred investments, expenses, or costs associated with facilities constructed, owned, or operated by a utility to satisfy the requirements of section 216B.1691, provided those facilities were previously approved by the Commission under section 216B.2422 or 216B.243, or were determined by the Commission to be reasonable and prudent under section 216B.243, subdivision 9. For facilities not subject to review by the Commission under section 216B.2422 or 216B.243, a utility shall petition the Commission for eligibility for cost recovery under this section prior to requesting cost recovery for the facility.

- (b) A petition filed under this subdivision must include:
- (1) a description of the facilities for which costs are to be recovered;
 - (2) an implementation schedule for the facilities;
 - (3) the utility's costs for the facilities;
 - (4) a description of the utility's efforts to ensure that costs of the facilities are reasonable and were prudently incurred; and
 - (5) a description of the benefits of the project in promoting the development of renewable energy in a manner consistent with this chapter.

The Company requests that the Commission confirm that the Oliver PPA Amendments are a reasonable and prudent way for the Company to meet its obligations under the RES Statute.

Finally, MP's Petition falls within the definition of a miscellaneous tariff filing under Minnesota Rules 7829.0100, subp. 11. Minnesota Rules part 7829.1300 contains the completeness requirements for miscellaneous tariff filings. The Department reviewed the Petition for compliance with the completeness requirements of Minnesota Rules and Minnesota Statutes and concludes that the Petition is complete. In particular, while the "description of the utility's efforts to ensure that costs of the facilities are reasonable and were prudently incurred" is somewhat weak—generally confined to a discussion of lower PPA prices—the Department concludes that the information provided is sufficient to begin the analysis.

B. NEED ANALYSIS—CONSISTENCY WITH INTEGRATED RESOURCE PLAN

1. Expansion Plan

The Company filed its most recent integrated resource plan in Docket No. E015/RP-15-690 (2015 IRP). In the 2015 IRP the Department's modeling analyzed MP's system through 2030. Therefore, the Oliver PPA Amendments' extended terms, beginning in 2032 and 2033, are after the 2015 IRP planning period, but would be included in the end effects period. However, the Oliver PPA Amendments would **[TRADE SECRET DATA HAS BEEN EXCISED]** In the Company's 2015 IRP the Commission directed MP to begin a process to acquire 100 to 300 MW of additional wind capacity and associated energy. In the Petition MP did not provide additional analysis regarding the potential for changed circumstances since the 2015 IRP that would impact the Commission's conclusion that additional wind energy and capacity should be part of MP's expansion plan.

The Department did not perform new capacity expansion modeling in this proceeding because the Company, the Clean Energy Organizations, and the Department all provided new modeling information

quite recently in the proceeding regarding MP's Nemadji Trail Energy Center proposal.³ The result of all three modeling approaches was that additional wind resources were consistently selected. Given the Oliver PPAs' prices and the robust, recent modeling results the Department concluded that additional IRP analysis in this proceeding was unnecessary.

2. *RES Compliance*

The Department reviewed MP's long-term compliance with the RES as presented in the 2015 IRP. The Department's analysis indicated that, on a cumulative basis, MP had sufficient Renewable Energy Credits (RECs) for compliance with the RES through the end of the IRP—2028. However, the IRP analysis determined that MP's existing annual renewable generation would be less than the annual RES requirement beginning in 2020. Further, the ending cumulative REC balance, while positive, was minimal. Therefore, the Department's IRP analysis demonstrated that MP would need additional renewable resources for compliance beyond 2028.

Under Minnesota Statutes § 216B.1691, subd. 1 NextEra's Oliver I and Oliver II facilities would qualify as an "eligible energy technology" and thus could provide RECs that contribute towards RES compliance. Under section 2.2 of the Original Oliver PPAs MP would receive the RECs. The Oliver PPA Amendments do not change this section. Therefore, the Department concludes that the Oliver PPA Amendments would enable the Company to continue to meet its obligations under the RES subsequent to 2028. The Department recommends that the Commission confirm that the NextEra's Oliver I and Oliver II facilities continue to be a reasonable and prudent way for the Company to continue to meet its obligations under the RES Statute.

C. *ALTERNATIVES ANALYSIS—ACQUISITION PROCESS*

Regarding the acquisition process, Department Information Request No. 1 requested that MP explain the process used to identify the Oliver PPA Amendments as superior to other alternatives. MP's reply explained that:

In late 2017, NextEra approached Minnesota Power regarding the potential to repower Oliver I and Oliver II, which according to the terms of the existing Power Purchase Agreements would require Minnesota Power's consent. In considering whether to agree to the repowering and resulting PPA extension, Minnesota Power evaluated the benefit to customers over the remaining term of the existing PPAs, as well as the benefit of securing cost effective renewable wind power beyond the term of the existing PPAs.

Minnesota Power evaluated the two components of the transaction. First, the existing PPAs have terms running through 2031 and 2032, respectively. For the remainder of those terms, the availability of alternative resources was irrelevant because MP did not

³ See the *Direct Testimony of Eric Palmer* on behalf of MP, the *Direct Testimony of Anna Sommer* on behalf of the Clean Energy Organizations, and the *Direct Testimony and Attachments of Dr. Steve Rakow* on behalf of the Department in Docket No. E015/AI-17-568.

have the choice to terminate the existing PPAs – if MP did not move forward with consent to the repower project, customers would still be receiving the energy from Oliver I and II at a higher price – the only choice was whether to move to the new purchase price. The lower purchase price provided by NextEra through the repower project has substantial customer benefit, as shown in the Petition.

Second, for the extension portion of the term, MP worked with NextEra to identify a reasonable price structure for continued use of an existing resource through 2040. With this extension, Minnesota Power secured a renewable resource that meets MP's requirements under the Minnesota Renewable Energy Standard and provides carbon free energy into the future without requiring another wind farm or new transmission infrastructure to be built. The price during the extended term was lower than projected new build renewable energy alternatives and competitive to market price outlooks. The Oliver I and II resources use existing transmission assets that include MP's HVDC line, further enhancing their unique competitiveness as a renewable alternative as we continue to optimize transmission assets for customers. These factors combined to demonstrate that the extension of this valuable renewable resource was well positioned in comparison to alternatives while also enabling all the near term benefits described above.

Overall, the Department agrees with MP that a request for proposals (RFP) process, in these unique circumstances, is not necessary. The choice facing MP and the Company's ratepayers is whether to continue with the Original Oliver PPAs and replace them with other resources when the Original Oliver PPAs terminate or to move forward with the Oliver PPA Amendments. While an RFP process is typically used to provide information on the price of wind energy today, an RFP could be used to provide information on the price of wind energy in the future. However, as shown below, any PPA to replace the Original Oliver PPAs would require a rather low price.

In addition, access to transmission in a timely manner and at a reasonable cost is a significant barrier for new generation projects at this time. For example, the September 20, 2018 *MISO DPP [Definitive Planning Phase] 2016 August West Area Phase 1 Study* (DPP1-2016-AUG) analyzes interconnection costs of the most recent study group for generation projects in and around Minnesota. DPP1-2016-AUG at page xvii, provides a total interconnection cost of about \$3.3 billion for a study group of 31 generation projects with a combined nameplate rating of 5,618 MW or about \$587,000 per MW.⁴

⁴ For comparison, the U.S. Energy Information Administration provides a total overnight cost of about \$1.65 million per MW for new wind facilities. Note that generation projects undergo three consecutive interconnection studies. The equivalent (phase 1) study for the prior study group for generation projects in and around Minnesota, the *MISO DPP 2016 February West Area Phase 1 Study* provides a total cost of about \$2.3 billion for a study group of 28 generation projects with a combined nameplate rating of 5,690 MW or about \$404,000 per MW. The third study for this group: *MISO DPP 2016 February West Area Phase 3 Study* provided a much lower total cost, about \$0.3 billion for 23 generation projects with a combined nameplate rating of 4,686 MW or about \$60,000 per MW.

Further, many of the projects require upgrades that might take significant time. For example, a typical project in DPP1-2016-AUG is “J512.”⁵ Project J512 requires the following upgrades, each of which has an estimated cost of over \$100 million:

- Big Stone South—Alexandria 345 kV;
- J510—Hazel Creek—Scott County 345 kV;
- Franklin—Morgan Valley & Beverly—Sub 92 345 kV;
- Webster—Franklin 345 kV; and
- N Rochester—S Rocky Run (also 345 kV).⁶

J512’s share of the total transmission upgrade costs is about \$78.6 million. While the number of projects and total cost is likely to decrease in future phases of the process, it is unknown how much the decrease might be and which upgrades will no longer be necessary. Thus, the ability of the Oliver PPA Amendments to re-use existing transmission provides a significant benefit in terms of risk reduction.

D. ALTERNATIVES ANALYSIS—LEVELIZED COST OF ENERGY (LCOE)

1. LCOE Analysis

a) Oliver I—Replacement Approach

At page 5 the Petition indicates that, if the Oliver PPA Amendments are not approved, then operation of the Oliver I and Oliver II facilities would continue under the Original Oliver PPAs until they expire. Table 1 compares the estimated annual total cost of energy under the Oliver I Amendment compared to the cost of energy under the Original Oliver I PPA. However, for the comparison to show similar durations, the Original Oliver I PPA must be supplemented with the cost of a generic wind replacement added after the Original Oliver I PPA expires.⁷

The price of the generic wind replacement available to replace the Original Oliver I PPA when it expires is not known. Therefore, the Department calculated that only if the price of energy from a wind replacement PPA was **[TRADE SECRET DATA HAS BEEN EXCISED]** then the alternative of allowing the Original Oliver I PPA to continue to its expiration date and replacing it would have the same overall levelized cost of energy (LCOE) as the Oliver I Amendment. Given the apparent unlikelihood of such an LCOE being available in 2032, the Department concludes that, economically, the Oliver I Amendment is preferred to continuing with the Original Oliver I PPA. Finally, note that Table 1 assumes that both alternatives result in the same amount of wind energy over the duration of the analysis.

⁵ Project J512 is a 250 MW wind project in Nobles County, Minnesota with the point of interconnection being the Nobles—Fenton 115 kV line.

⁶ Note that J512 would share the cost with other generation projects that require these transmission upgrades.

⁷ Note that this equalizing of the duration of the two alternatives assumes the resource plan assumes wind to be a least cost replacement for the Original Oliver I PPA in 2032 (as opposed to other size, type, and timing alternatives such as natural gas combustion turbines, conservation, load management, and so on). This may not be the case. However, given Minnesota energy policy and the prices in Tables 1 and 2, the option to explore other alternatives when the Original Oliver I PPA expires does not appear to be a valuable factor.

Table 1: Alternative to Oliver I Amendment

Year	Original Oliver I PPA			Oliver I Amendment		
	Price	Energy	Total Cost	Price	Energy	Total Cost
2021	[TRADE SECRET DATA HAS BEEN EXCISED]					
2022						
2023						
2024						
2025						
2026						
2027						
2028						
2029						
2030						
2031						
2032						
2033						
2034						
2035						
2036						
2037						
2038						
2039						
2040						
LCOE						

b) Oliver II—Replacement Approach

Table 2 below compares the estimated annual cost of energy under the Oliver II Amendment compared to the cost of energy under the Original Oliver II PPA. Again, for the comparison to show similar durations, the Original Oliver II PPA must be supplemented with the cost of a generic wind replacement added after the Original Oliver II PPA expires.

As stated above, the price of the generic wind replacement available to replace the Original Oliver II PPA when it expires is not known. Therefore, the Department calculated that only if the price of energy from a wind replacement PPA was **[TRADE SECRET DATA HAS BEEN EXCISED]** then the alternative of allowing the Original Oliver II PPA to continue to its expiration date and replacing it would have the same overall LCOE as the Oliver II Amendment. Given the apparent unlikelihood of such an LCOE being available in 2032, the Department concludes that, economically, the Oliver II Amendment is preferred to continuing

with the Original Oliver II PPA. Finally, note that Table 2 assumes that both alternatives result in the same amount of energy over the duration of the analysis.

Table 2: Alternative to Oliver II Amendment

Year	Original Oliver II PPA			Oliver II Amendment		
	Price	Energy	Total Cost	Price	Energy	Total Cost
2021	[TRADE SECRET DATA HAS BEEN EXCISED]					
2022						
2023						
2024						
2025						
2026						
2027						
2028						
2029						
2030						
2031						
2032						
2033						
2034						
2035						
2036						
2037						
2038						
2039						
2040						
LCOE						

2. *Price Risk*

As shown in Tables 1 and 2 above, both of the Oliver PPA Amendments **[TRADE SECRET DATA HAS BEEN EXCISED]** Normally, the Department views **[TRADE SECRET DATA HAS BEEN EXCISED]** as a significant problem because **[TRADE SECRET DATA HAS BEEN EXCISED]** Thus, there is a lesser probability of ratepayers **[TRADE SECRET DATA HAS BEEN EXCISED]** However, **[TRADE SECRET DATA HAS BEEN EXCISED]** Thus, the Company's ratepayers are better off under the Oliver PPA Amendments even if **[TRADE SECRET DATA HAS BEEN EXCISED]**

E. PROTECTION OF RATEPAYERS FROM RISKS

1. Financial Risks

For PPAs, there are two main financial risks that may have negative impacts on MP's ratepayers. They are:

- a seller default and termination of the Oliver PPA Amendments before the expiration of the contract period, and
- entitlement by a lender or other party, as a result of the seller's failure to pay debt, to take over the project and terminate the Oliver PPA Amendments and the underlying Original Oliver PPAs.

Under these events, MP may be forced to find more costly replacement power when the PPAs are terminated. Further, under both events, the repowering projects may be terminated and jeopardize MP's compliance with various statutory requirements and Commission orders. The analysis below is confined to the incremental impact of the Oliver PPA Amendments.

Regarding the risk of a seller's default and the risk of a lender taking over the project and terminating the PPAs, the Oliver PPA Amendments extend the contract period. Thus, one incremental impact is a continuation of the current risks for the extension period. The Department is not aware of any reason continuation of the current risks for additional years would represent a significant issue.

A second incremental impact is that the Oliver PPA Amendments might introduce a risk that was not present in the Original Oliver PPAs. The Department's review noted the following incremental impacts. First, there is a reduction in the insurance requirements under the changes to section 13.2. Second, NextEra has the ability, under section 16.1.2 (c) to assign the agreement to an affiliate without MP's consent. However, there does not appear to be any limit regarding the credit ratings and so forth of the affiliate assignee.⁸ Both of these changes appear to the Department to be relatively minor in terms of the risk created. After reviewing the features of the Oliver PPA Amendments, the Department concludes that MP's ratepayers would continue to be reasonably protected from the financial risks.

2. Operational Risks

As is typically true of PPAs, the operational risks are the risks that the repowering projects will not be built and operated as expected. These risks include a complete shutdown, a partial shutdown, or a reversion to the original project configuration (termination of the upgrades) due to technical problems. In the case of reversion to the original configuration, ratepayers must be assured that their payments remain reasonable. In the case of a partial shutdown, ratepayers must be assured that their payments for the wind energy are reduced accordingly. In the case of a complete shutdown, once again MP may face the risk of non-compliance with the various legislative or Commission requirements, and may need to find what is likely to be more expensive replacement power. Again, the analysis below is confined to the incremental impact of the Oliver PPA Amendments.

⁸ Note that section 16.1.2 (e) allows MP to assign the PPAs to an affiliate as well. However, Commission approval would be required for such a transaction.

The Department's review noted the following incremental impacts in the Oliver PPA Amendments. First, the Oliver PPA Amendments **[TRADE SECRET DATA HAS BEEN EXCISED]** This provides a reduction in the risk of **[TRADE SECRET DATA HAS BEEN EXCISED]** Offsetting this change is the fact that the new section 2.1.4 provides a rather broad condition precedent on behalf of NextEra. This creates a risk that the repowering projects will not be built and operated as expected. After reviewing the features of the Oliver PPA Amendments, given the offsetting, and apparently relatively small risks created, the Department concludes that MP's ratepayers would continue to be reasonably protected from the operational risks.

III. DEPARTMENT RECOMMENDATION

The Department recommends that the Commission approve the Oliver PPA Amendments under Minnesota Statutes § 216B.1645 subd. 1. The Department also recommends that the Commission confirm that the Oliver PPA Amendments continue to be reasonable and prudent ways for the Company to continue to meet its obligations under the RES Statute.

/jl