STATE OF NORTH DAKOTA
BEFORE THE
PUBLIC SERVICE COMMISSION

Otter Tail Power Company Advance Prudence – Merricourt Wind Application	Case No. PU-17-
Otter Tail Power Company PC&N – Merricourt Wind Application	Case No. PU-17-

DIRECT TESTIMONY

OF

HARVEY MCMAHON

ON BEHALF OF

OTTER TAIL COMPANY

Project Development Testimony

PUBLIC DOCUMENT – NOT PUBLIC DATA HAS BEEN EXCISED

April 10, 2017

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I. INTRODUCTION AND QUALIFICATIONS

Q. PLEASE STATE YOUR NAME AND TITLE

A. My name is Harvey McMahon. I am Manager of Renewable Energy Generation Construction and Operation for Otter Tail Power Company (the Company or Otter Tail).

Q. PLEASE DESCRIBE YOUR QUALIFICATIONS AND EXPERIENCE.

A. I have a Bachelor of Science degree in Electrical Engineering from the University of North Dakota and I am a registered Professional Engineer in the state of North Dakota. My past roles have included substation engineer, Division Engineer, and Manager of Sourcing and Supply Chain. In my present role I manage the operations and maintenance of our existing three wind plants as well as our Frame 5 gas plants. Additionally, I was the lead in the construction of our last three wind plants.

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY IN THIS PROCEEDING?

A. The purpose of my testimony is to support the Company's application for an Advance Determination of Prudence (ADP) and Certificate of Public Convenience and Necessity (CPCN) for the 150 MW Merricourt Wind Farm (the Merricourt Project or Project). I describe the Company's plan to purchase the Project from subsidiaries of EDF Renewable Energy, Inc. (EDF), and to engage a subsidiary of EDF to construct the Project on the Company's behalf. I describe the contractual relationships between the Company and EDF, and explain how those contracts result in a commercially reasonable allocation of the rights and responsibilities for deploying 150 MW of cost-effective wind generation on behalf of Otter Tail's customers.

Q. PLEASE PROVIDE A SUMMARY OF THE TOPICS FOR YOUR TESTIMONY.

A. My testimony covers the following topics:

- I describe the overall transaction and budget.
- I describe the Asset Purchase Agreement (APA) with EDF, under which the Company is proposing to purchase the development assets of the Merricourt Project.

- I describe the Turnkey Engineering, Procurement, and Construction (TEPC) agreement, under which Otter Tail is proposing to contract with EDF to construct the Project on behalf of Otter Tail.
- I describe EDF's separate Turbine Supply Agreement (TSA) and Service & Maintenance Agreement (SMA) with Vestas (the wind turbine supplier), which will later be assumed by the Company as part of the overall transaction.
- I briefly describe EDF's intention to separately enter into a balance of plant (BOP) construction contract with a general contractor for construction of the Project.
- I describe some of the key commercial issues the Company has identified in its analysis of the Project and the Company's commercially reasonable and prudent response to those issues.

II. PROJECT OVERVIEW

Q. PLEASE DESCRIBE THE MERRICOURT PROJECT.

A. The Project is a 150 MW wind energy generation facility that will be located near Merricourt, North Dakota. The Project will consist of seventy-five two-MW V110 Vestas wind turbine generators and associated infrastructure. The Project will have an estimated output of approximately 666,000 megawatt hours (MWh) per year at an expected net capacity factor of 50.7%.

Q. PLEASE DESCRIBE THE WIND TURBINES THAT WILL BE USED FOR THIS PROJECT.

A. EDF chose Vestas to supply the wind turbines for this Project. Vestas has over 35 years of experience in the wind energy field worldwide. During that time, Vestas turbines represent 82 GW (82,000 MW) of installed capacity from over 33,000 turbines. Vestas' two-MW platform is a durable and dependable machine, built on technology that has been repeatedly used in the field for more than a decade. Vestas has advised that it has more than 18,000 two-MW machines installed since 2000, making this a highly-reliable platform with a proven track record.

The V110 two-MW Vestas wind turbine that has been selected for the Merricourt Project is a commercially-proven and reliable turbine, with a strong availability and performance track record. This turbine features a 110-meter rotor diameter, on towers 80-95 meters (about 260-310 feet) in height. These turbines feature blades that are 54 meters in length to help capture the maximum amount of wind potential at a given site. These turbines have advantageous operating features, including a relatively low (3 meters per second) "cut in speed," meaning that these turbines will produce energy even at relatively low wind speeds, thereby enhancing the net capacity factor of the Project. This turbine model delivers an advantageous rotor-to-generator ratio, enhancing the turbine's capacity and maximizing the potential of the site.

Q. WHAT IS THE EXPECTED LIFE OF THE TURBINES?

A. Industry standards have generally assumed a 25-year useful life for wind turbines and associated facilities. As wind turbine technology has continued to evolve, Otter Tail has investigated the potential useful life of the Vestas wind turbines used for the Project. Based on information provided by Vestas and an independent engineering firm, Otter Tail believes the Merricourt Project's wind turbines could have a useful life of up to 40 years when appropriately operated and maintained, and provided that prudent capital expenditures are made throughout the Project's life.

Q. BRIEFLY DESCRIBE THE SITE FOR THE MERRICOURT PROJECT.

A. The Project will be located near Merricourt, North Dakota, approximately fifteen miles south of Edgeley in McIntosh and Dickey Counties. The project footprint covers approximately 13,000 acres of land. The Project will interconnect to Montana-Dakota Utilities Company's Merricourt 230 kV substation located approximately 13 miles southwest of Kulm, North Dakota. EDF has prepared a proposed site layout for placement of the wind turbines and associated infrastructure. EDF has obtained a Certificate of Site Compatibility (CSC) from the Commission in Case No. PU-08-932 and is currently seeking to amend the CSC to reflect the anticipated turbine technology.

Q. WHAT OTHER INFRASTRUCTURE WILL NEED TO BE DEVELOPED AS PART OF THE OVERALL PROJECT?

A. A variety of associated facilities will be required for the Project. EDF will need to construct site access roads sufficient for delivery of the component parts, associated construction cranes, and other equipment. A collector system and on-site collector substation will be built to efficiently aggregate generation from the turbines. Additional infrastructure will include communications systems; meteorological towers; an operations and maintenance (O&M) building; and monitoring, safety, lighting and measuring systems. Such infrastructure is standard for wind farm installations of this type and the associated costs are included in Otter Tail's overall Project cost estimates.

III. PROJECT COSTS AND SCHEDULE

Q. WHAT IS THE ESTIMATED PROJECT COST?

A. Otter Tail has budgeted approximately **[NOT PUBLIC DATA BEGINS… …NOT PUBLIC DATA ENDS]** for the Merricourt Project. As with any project of this size and complexity, there is a risk that costs will increase. Otter Tail has prudently mitigated such risk through the transactional structure. As discussed in Mr. Synstelien's Testimony, Otter Tail has analyzed the cost effectiveness of the Merricourt Project at up to **[NOT PUBLIC DATA BEGINS… …NOT PUBLIC DATA ENDS]**.

Q. PLEASE PROVIDE A HIGH-LEVEL CATEGORIZATION OF THIS ESTIMATED PROJECT COST.

A. The following categories of costs are in the Project estimate:

Category	Cost Estimate
APA Costs	$34.7 million
TEPC Costs	$200.5 million
Otter Tail Direct Costs	**[NOT PUBLIC DATA BEGINS… …NOT PUBLIC DATA ENDS]**
Total	**[NOT PUBLIC DATA BEGINS… …NOT PUBLIC DATA ENDS]**

Q. PLEASE SUMMARIZE THE COSTS TO BE INCURRED UNDER THE APA.

A. Costs to be incurred under the APA will be approximately $34.7 million, of which Otter Tail has already made a **[NOT PUBLIC DATA BEGINS… …NOT PUBLIC DATA ENDS]** payment at signing of the APA. This signing milestone payment is nonrefundable except in limited circumstances. APA costs are for Otter Tail's purchase of the development assets from EDF. These include the costs for **[NOT PUBLIC DATA BEGINS… …NOT PUBLIC DATA ENDS]** 5% safe harbor wind turbines necessary to ensure the Project qualifies for the full value 100% PTC. The costs also represent payment for the site, permits and associated contracts necessary for completion of the Project.

Q. PLEASE SUMMARIZE THE COSTS TO BE INCURRED UNDER THE TEPC.

A. Costs to be incurred under the TEPC will be approximately $200.5 million. TEPC costs are for EDF's provision of the balance of the turbines (i.e., all but the 5% safe harbor turbines), balance of plant construction, the collector substation, and the O&M building. At completion of EDF's work under the TEPC, Otter Tail will be taking possession of a turnkey wind farm.

Q. PLEASE SUMMARIZE THE COSTS THAT MAKE UP THE OTTER TAIL DIRECT COSTS CATEGORY.

A. Otter Tail's direct costs for the Project include: (1) internal management costs; (2) taxes; (3) interconnection costs; and (4) project contingency.

Q. PLEASE DESCRIBE OTTER TAIL'S DIRECT COSTS FOR INTERNAL MANAGEMENT.

A. With any project of this size and complexity, Otter Tail will incur internal management costs. These include costs for due diligence, legal fees, transactional matters, engineering, and internal capital labor and loadings. Otter Tail currently estimates its internal management costs to be approximately **[NOT PUBLIC DATA BEGINS… …NOT PUBLIC DATA ENDS]**.

Q. PLEASE DESCRIBE OTTER TAIL'S DIRECT COSTS FOR TAXES.

A. As a purchase and sale transaction, Otter Tail is liable for sales and use taxes on its purchase of the Merricourt Project assets. North Dakota previously had afforded a sales and use tax exemption for materials used in the construction of a wind-powered electric generation facility, which Otter Tail supported as beneficial to customers. However, the sales and use tax exemption expired on January 1, 2017 after legislation to retroactively extend it was defeated during the 2017 legislative session. Consequently, Otter Tail's cost estimates include a sales and use tax liability of approximately **[NOT PUBLIC DATA BEGINS… …NOT PUBLIC DATA ENDS]**.

Q. PLEASE DESCRIBE OTTER TAIL'S DIRECT COSTS FOR INTERCONNECTION.

A. Otter Tail's current cost estimates assume Project interconnection costs of **[NOT PUBLIC DATA BEGINS… …NOT PUBLIC DATA ENDS]**. Given the Merricourt Project's current status in MISO's interconnection queue, potential interconnection costs are uncertain at this time. Otter Tail's cost estimates are based on internal analysis by the Company's transmission engineering department.

Q. PLEASE SUMMARIZE THE CURRENT ESTIMATED RANGE OF COSTS FOR INTERCONNECTING THE PROJECT TO THE MISO SYSTEM.

A. Otter Tail estimates that final interconnection costs for the Project could be in the range of **[NOT PUBLIC DATA BEGINS… …NOT PUBLIC DATA ENDS]**.

Q. WHY IS THERE A RELATIVELY BROAD RANGE OF POTENTIAL INTERCONNECTION COSTS?

A. The relatively broad cost range is due to the new MISO queue process and the large number of new generation projects in the August 2016 definitive planning phase. Indeed, the general vicinity of the Merricourt Project includes several thousand megawatts of new generation interconnection requests. If most or all of these requests move forward in the definitive planning phase, the interconnection costs may be on the higher end of the estimated range. However, many of the generation projects in the queue may not have

counterparties willing to buy power from the projects and, thus, may drop out of the queue rather than make additional milestone payments necessary to remain in it. If many of the proposed generation projects do not continue in the MISO interconnection queue, the Merricourt Project's interconnection costs may be on the lower end of the range.

Q. PLEASE DESCRIBE THE MERRICOURT PROJECT'S CURRENT STATUS WITH REGARD TO INTERCONNECTION COSTS.

A. EDF has entered the MISO interconnection queue for this Project and has been assigned a queue number. The interconnection request is in the August 2016 MISO study group. The Company currently estimates that studies for the August 2016 MISO study group will begin in the summer of 2017, with initial identification of necessary interconnection costs becoming available in late fall of 2017. No sooner than approximately September 2018, a Project Generator Interconnection Agreement (GIA) or a Provisional Interconnection Agreement (PIA) is likely to be entered into with MISO. Because it is in the best interests of our customers to build a Project that qualifies for the full value 100% PTC, it is not feasible to wait until there is more interconnection cost certainty to move forward with a transaction. Consequently, we are moving forward with a transaction based on high-level estimates and prudent contractual allocation of interconnection cost risk (as discussed below).

Q. PLEASE DESCRIBE OTTER TAIL'S DIRECT COSTS FOR PROJECT CONTINGENCY.

A. Development of a large wind project requires contingency planning and budgeting. Otter Tail's direct costs for Project contingency include balance of plant items such as the O&M building and meteorological tower placement. Construction weather contingencies and potential costs for underground facilities are also included. As previously indicated, Project interconnection is the subject of a broad range of cost. Uncertainty about final interconnection costs has been prudently mitigated in the contractual agreements with EDF. To help ensure that Otter Tail's cost estimates are sufficiently robust to address contingencies and interconnection cost uncertainty, the Company included **[NOT PUBLIC DATA BEGINS… …NOT PUBLIC DATA ENDS]** of

contingency in its Project cost estimate. Should Project costs exceed this amount, Otter Tail will be in a position to reassess the Project consistent with Mr. Synstelien's economic analysis.

Q. WHAT IS THE PROJECT SCHEDULE?

A. In 2017 EDF will be pursuing a number of permits and conducting several activities, including:

1. Seeking an amended CSC;
2. Obtaining a determination of no hazard from the Federal Aviation Administration (FAA);
3. Finalizing easement and lease amendments;
4. Conducting a cultural resource survey;
5. Completing a Phase 1 Environmental Site Assessment (ESA);
6. Conducting an acoustics study; and
7. Taking delivery of **[NOT PUBLIC DATA BEGINS… …NOT PUBLIC DATA ENDS]** 5% safe harbor turbines in order to qualify the Project for the full value 100% PTC.

Upon receipt of regulatory approvals, EDF's satisfaction of conditions precedent, and execution of a Project GIA or PIA, the Company anticipates closing on the purchase of development assets under the APA. Thereafter, pursuant to the TEPC, EDF and the prime contractor engaged by EDF will begin construction of the collection system, roads, foundations, substation, and O&M building. It is anticipated that construction will pause in December of 2018, depending on weather, and resume with turbine delivery and erection starting in June of 2019. Completion of the project is expected on or about October 31, 2019.

Q. WAS THE PROJECT SCHEDULE PRUDENTLY DEVELOPED TO ENSURE THE COMPANY'S CUSTOMERS BENEFIT FROM THE PROJECT'S QUALIFICATION FOR THE FULL VALUE 100% PTC?

A. Yes. To qualify for the full value 100% PTC, construction of a qualifying facility must have begun before January 1, 2017. IRS guidance allows different methods for PTC qualification. One way in which wind projects can be considered to have begun construction is if a minimum of 5% of a project's total capital cost is incurred before January 1, 2017. This is known as the "5% safe harbor." The Project must also be placed in service by December 31, 2020 to qualify for the full value 100% PTC benefit. As described in more detail below, the Project is positioned well to meet these requirements. Moreover, our agreements with EDF place much of the risk of failure to qualify on EDF.

IV. DESCRIPTION OF THE TRANSACTION AND AGREEMENTS

A. Transaction Structure

Q. PLEASE PROVIDE AN OVERVIEW OF THE TRANSACTION.

A. At a high level, EDF will develop and construct the Merricourt Project on Otter Tail's behalf. EDF is required to provide the Company with a fully-developed Project that includes all necessary land rights and permits, and qualification for the full value 100% PTC.

Thereafter, EDF will be responsible for the Project's construction on a turnkey basis. This type of transaction provides Otter Tail with a commercially reasonable structure, while mitigating many of the commercial risks associated with development and construction of a major infrastructure project.

Q. WHY DID THE COMPANY CHOOSE THIS TYPE OF TRANSACTION STRUCTURE?

A. Purchasing the development assets and then requiring the developer to construct the Project on a turnkey basis is the most prudent transaction structure for this type of development and is consistent with industry standards. First, this transaction structure facilitates PTC eligibility for the Project. Second, this transaction structure properly

allocates price and risk. Finally, this transaction structure has previously been used successfully by other utilities.

This transaction structure makes particular sense with EDF, because it is a large and experienced wind developer with significant experience deploying Vestas turbines. EDF was the 2015 leader in U.S. wind energy projects, with 12% of the market share in installed capacity. It is reasonable and prudent to contractually rely on a large and experienced developer to provide a turnkey, fully operational wind farm under agreements that appropriately allocate risk.

Q. WHAT ARE THE KEY AGREEMENTS FOR THE SELECTED TRANSACTION STRUCTURE?

A. The commercial relationship between EDF and the Company is structured around a series of key agreements that address the Company's fundamental goal of obtaining a least-cost Project, while placing a substantial amount of the commercial risk on the developer.

The first major contract is the APA between four EDF entities, as Sellers, and the Company, as Buyer, for the proposed purchase of development assets associated with the Project. The second major contract is the TEPC, under which the Company is proposing to contract with a subsidiary of EDF to construct the Project. Once Otter Tail closes on its purchase of the Project's development assets under the APA, EDF will have the obligation to engineer, procure and construct the Project under the TEPC. Pursuant to the TEPC, the EDF subsidiary must supply the balance of turbines (i.e., all but the 5% safe harbor turbines purchased by Otter Tail under the APA) necessary for the Project. Additionally, the EDF subsidiary agrees to construct a fully integrated, turnkey facility.

In addition to the two key agreements between Otter Tail and EDF, the transaction will include major agreements relating to the construction, operation and maintenance of the Project. Otter Tail will have collateral rights under each of these agreements in order to protect the Company.

Upon closing of the APA, EDF will execute a balance of plant (BOP) agreement with a major contractor to provide construction services for collector roads, an underground collector system, the substation, the operations and maintenance building, and erection of the turbines.

EDF also has a Project turbine supply agreement (TSA) with the turbine supplier, Vestas. Turbines are the single largest capital expense for the Project. Finally, in order to enforce the wind turbines' warranties, EDF has a Service and Maintenance Agreement (SMA) with Vestas covering five years of wind turbine operation and maintenance. Both the TSA and SMA will assigned by EDF to the Company upon final completion of the Project.

B. APA Description

Q. WHAT IS THE APA?

A. This is the agreement under which the Company will purchase the Project's development assets. Pricing under the APA is discussed earlier in my testimony.

Q. PLEASE DESCRIBE HOW THE APA WORKS.

A. The Merricourt Project has been under development for some time. EDF has obtained land rights necessary for the Project and continues its work on permitting, interconnection and other major activities. Essentially, the APA calls for EDF to complete all of the development activities necessary prior to construction of the Project. Once these activities have been completed as required by the APA, the parties will close on Otter Tail's acquisition of the development assets, contingent upon regulatory approvals and conditions precedent to closing.

Q. ARE THERE PROVISIONS IN THE APA THAT LIMIT OTTER TAIL'S OBLIGATION TO CLOSE IF EDF DOES NOT COMPLETE ITS WORK?

A. Yes. There is an extensive list of closing conditions that allow the Company to terminate the transaction upon a failure to achieve any one of the conditions. These closing

conditions are industry standard requirements that are meant to ensure the Project has a reasonable likelihood of successful completion.

Q. PLEASE DESCRIBE THE MATERIAL CLOSING CONDITIONS.

A. First and foremost, Otter Tail is not required to close on the asset purchase unless the required regulatory approvals, including the Commission's approval of this application, have been obtained. In addition, Otter Tail is not required to close unless the Commission authorizes EDF's amendment of the CSC and approves a transfer of the CSC from EDF to Otter Tail (for which EDF is obliged to seek regulatory approvals).

The Project must also have entered into a final and binding GIA. It is EDF's responsibility to obtain the GIA.

Other closing conditions include EDF's transfer to Otter Tail of all contracts and land rights necessary to complete the Project; EDF's provision of all purchased assets free and clear of material liens (other than those allowed by the APA); and EDF's confirmation that no material adverse event has occurred that would materially interfere with the Company's rights in the purchased assets. Finally, the APA contains a series of customary conditions for a transaction of this type.

Q. WHAT HAPPENS IF REGULATORY APPROVALS ARE NOT RECEIVED?

A. If regulatory approvals are not received, the Company has the right not to close on the asset purchase under the APA and to terminate its involvement in the Project. In this case the signing milestone payment of **[NOT PUBLIC DATA BEGINS… …NOT PUBLIC DATA ENDS]** would be forfeited. Between signing and closing, EDF expects that [**NOT PUBLIC DATA BEGINS… …NOT PUBLIC DATA ENDS]** to achieve the requisite closing conditions. EDF has already spent approximately [**NOT PUBLIC DATA BEGINS… …NOT PUBLIC DATA ENDS]** on PTC-qualified turbines before December 31, 2016.

Q. DOES THE APA PROTECT OTTER TAIL IF EDF FAILS TO COMPLETE ITS WORK?

A. Yes. Because the APA is critical to the Company's success in deploying cost-effective wind generation on the system, Otter Tail insisted on a parent guarantee of EDF's obligations under the APA. I describe this in greater detail in the next section regarding the TEPC, since this protection is included in both agreements.

C. TEPC Description

Q. WHAT IS THE TEPC?

A. This is the "turnkey" engineering, procurement, and construction agreement that provides the Company with contractual assurances that the Project will be constructed in a timely and cost-effective manner. It addresses EDF's obligation for the design engineering, procurement, construction, commissioning and start-up of the infrastructure facilities and the procurement, delivery, assembly, erection, installation, commissioning and start-up of the wind turbine generators. In other words, the TEPC calls for the infrastructure facilities to be fully integrated and operational, and for the wind turbine generators to be fully assembled, installed, tested and operational, all on a fixed-price, turnkey basis. EDF will, in turn, hire a major contractor to undertake the actual construction of the Project. Pricing under the TEPC is discussed earlier in my testimony.

Q. WHAT IS THE PROPOSED TIMING OF THE WORK UNDER THE TEPC AND WHAT ARE THE CONSEQUENCES FOR DELAY?

A. The work under the TEPC is scheduled to begin after closing of the asset purchase under the APA. Timing is dependent on the MISO interconnection process and completion of the GIA for the Project. Otter Tail currently expects to close on the asset purchase in approximately September 2018. EDF would then construct roads, foundations, the underground collector system, and the collector substation between September and December of 2018. Starting in June of 2019, delivery of turbines would begin with erection and commissioning of turbines occurring between June and October of 2019. Final completion of the project is expected by December 31, 2019.

This schedule was formulated to mitigate key risks for the Project. Delaying the closing of the APA and construction under the TEPC was designed to allow the new MISO interconnection process to unfold, and to afford the Company greater certainty on interconnection timing and cost.

A second risk minimized by this schedule is the potential failure by EDF to ensure the Project is able to avail itself of the full value 100% PTC. EDF safe harbored 5% of the Project cost in December of 2016. However, to qualify for the full value 100% PTC, construction needs to be completed by December 31, 2020. In order to minimize risk, the Project schedule calls for Project completion a full year before that deadline. EDF is also required to pay delay liquidated damages for turbines that are not commissioned and operational by a date certain provided for in the agreements. In addition, the Company insisted that EDF agree to indemnity obligations and guarantees to further minimize this risk. Additional detail on these matters follows.

Q. HOW MANY CONSTRUCTION WORKERS WILL BE USED TO CONSTRUCT THE MERRICOURT PROJECT?

A. The number of workers will vary during construction. Depending on the particular construction phase, there may be anywhere from 50 and 150 workers on site. Post-construction there will be approximately 10 permanent employees to operate and maintain the facility.

D. <u>Financial Security Considerations</u>

Q. DO THE TRANSACTION DOCUMENTS PROTECT OTTER TAIL IF EDF FAILS TO COMPLETE ITS WORK?

A. Yes. Because the APA and TEPC are critical to the success of the Project, the Company insisted upon a guarantee from EDF Energy Nouvelles S.A., EDF's parent and a large French utility. EDF is a subsidiary of companies associated with Electricite de France, a French electric utility company headquartered in Paris and largely owned by the French state. Currently, EDF Energy Nouvelles S.A. is providing a **[NOT PUBLIC DATA BEGINS…**

…NOT PUBLIC DATA ENDS]. At completion, EDF Renewable Energy will provide an additional **[NOT PUBLIC DATA BEGINS…**

…NOT PUBLIC DATA ENDS]. The **[NOT PUBLIC DATA BEGINS…**

…NOT PUBLIC DATA ENDS] is to mitigate the risk that EDF fails to complete construction in time to capture 100% of the PTC, before it is phased-down under existing federal law. If EDF failed to complete construction in time to capture 100% of the PTC, the Project would likely still be eligible for the application of the phase-down portion of the PTC. This also serves to mitigate risk.

E. TSA, SMA and BOP Agreements

Q. PLEASE DESCRIBE THE TSA, SMA AND BOP AGREEMENTS.

A. As discussed briefly above, to develop the Merricourt Project, EDF has entered or will enter into three key agreements: a Project-specific Turbine Supply Agreement (TSA); a Service and Maintenance Agreement (SMA) to enforce Vestas' warranty and obtain wind turbine operation and maintenance; and a Balance of Plant Agreement (BOP) to construct the facility.

Q. PLEASE EXPLAIN HOW THE TSA WILL WORK AND HOW EDF CAN UTILIZE THE PTC QUALIFIED TURBINES.

A. EDF has a master TSA with Vestas. EDF also has a Project-specific TSA with Vestas for this particular Project. The Project-specific TSA includes both the **[NOT PUBLIC DATA BEGINS… …NOT PUBLIC DATA ENDS]** safe harbor PTC turbines and the **[NOT PUBLIC DATA BEGINS… …NOT PUBLIC DATA ENDS]** remaining turbines. It was essential for EDF to enter into the Project-specific TSA rather than the Company, so that the PTC turbines could stay with the Project if the Company does not close on the asset purchase called for by the APA. If the Company was party to the Project-specific TSA and the APA did not close, the Company would have been required to find another project to ensure the turbines were eligible for the full value 100% PTC.

Under the TSA, Vestas will construct, deliver, and commission all of the turbines. The Company has reviewed the Project-specific TSA and has confirmed that the terms are equal or better than industry standard. Additionally, if EDF defaults on its obligations to Vestas, the Company has step-in rights under the TEPC and the Project-specific TSA will then be assignable to the Company.

Q. PLEASE DESCRIBE THE SMA.

A. The SMA is a contract that calls for Vestas to provide service and maintenance for the Project's wind turbines. Under the SMA, Vestas will provide five years of operation and maintenance services. The SMA is required in order to enforce the TSA warranties and other favorable terms and conditions that EDF was able to negotiate as a national developer. The SMA was entered into with EDF because it is a party to the TSA, and those two agreements are closely related.

Q. DOES THE COMPANY HAVE RIGHTS UNDER THE TSA AND SMA?

A. The Company had an opportunity to review the TSA and SMA and found the terms and conditions to be reasonable and consistent with industry standard. While Otter Tail has only collateral rights in the agreements, under the structure of the transaction, both the TSA and the SMA will be assigned to the Company upon final completion of the Project.

Q. WHAT IS THE ROLE OF THE BOP CONTRACT?

A. Upon closing of the APA, EDF will also execute a BOP agreement with a major contractor. The BOP contractor will construct the collector roads, underground collector system, the substation, the O&M building, and erect the turbines. The BOP contractor will be selected prior to closing of the APA and the Company will have the right to review and approve the design criteria prior to final selection of the BOP contractor. Additionally, the Company has approved a qualified bidders list for the BOP contractor. Since the Company has a fixed-price TEPC agreement with EDF, having EDF separately enter into the BOP contract reduces the Company's risk of cost escalation. The Company will have step-in rights to the BOP contract if EDF defaults.

V. REASONABLE RISK MITIGATION

Q. WHAT ARE THE MATERIAL RISKS THE COMPANY HAS IDENTIFIED RELATIVE TO IMPLEMENTATION OF THE MERRICOURT PROJECT?

A. The Company has identified several material risks that need to be managed in implementing this Project. They are as follows:

- Counterparty risk;
- Interconnection cost risk;
- The risk that the Project might not qualify for the full value 100% PTC; and
- Real estate and environmental risk.

Otter Tail has addressed each risk in a prudent and reasonable fashion.

A. Counterparty Risk

Q. HOW HAS OTTER TAIL MITIGATED COUNTERPARTY RISK?

A. While EDF is a strong and experienced developer, counterparty risk is inherent with a transaction of this size. To that end, Otter Tail has secured a guarantee from EDF's parent and contractual terms that will serve to mitigate the risk of performance failure. Additionally, Otter Tail has step-in rights in the event of EDF contractual defaults under the Project TSA, SMA, and BOP agreements, in order to be able to complete construction of the Project. I previously discussed these provisions in more detail.

B. Interconnection Cost Risk and Mitigation

Q. PLEASE SUMMARIZE THE INTERCONNECTION COST RISK ASSOCIATED WITH THIS PROJECT.

A. Generation projects inherently face interconnection cost risks. At this time, it is not possible to definitively know the actual Project interconnection costs that will be imposed by MISO. This reality yields uncertainty and interconnection cost risk for the Project.

Q. WHY IS IT NOT POSSIBLE TO PREDICT INTERCONNECTION COSTS AT THIS TIME?

A. As I noted above, the MISO queue is currently congested with many potential wind projects. If many of these projects drop out of the queue, it will substantially change the interconnection costs that may be allocated to remaining projects.

Q. HAS THE COMPANY MITIGATED INTERCONNECTION COST UNCERTAINTY IN ITS AGREEMENTS WITH EDF?

A. Yes. The Company negotiated APA contractual provisions to mitigate interconnection cost uncertainty. Earlier in my testimony, I discussed the specific contractual provisions and other measures Otter Tail has taken to prudently mitigate these risks.

Q. ARE THERE ADDITIONAL WAYS EDF AND THE COMPANY ARE MITIGATING INTERCONNECTION COSTS?

A. Yes. The Company is working closely with EDF on other potential opportunities to reduce interconnection costs. For example, during the MISO generator interconnection process, the Project may elect an alternative form of generator interconnection service likely to result in lower interconnection costs. This alternative has proven to be cost-effective and operationally sound for the Company in past wind projects with third party developers.

C. PTC Compliance Risk

Q. WHAT IS THE PTC COMPLIANCE RISK?

A. A significant element of Project value to the Company and its customers is the economic value associated with the PTC. In our negotiations with EDF, we included provisions that will maximize the likelihood that the full value 100% PTC is available.

Q. WHAT HAS THE COMPANY DONE TO ENSURE THE PROJECT QUALIFIES FOR THE FULL VALUE 100% PTC?

A. Above, I described the requirements to qualify for the full value 100% PTC. I also described efforts to ensure that the 100% full value PTC is captured for the Merricourt Project: the purchase of the safe harbor turbines; a construction schedule calling for Project completion a full year before the PTC deadline; and contractual provisions between the Company and EDF. In addition, it is a condition to closing that Otter Tail have a tax lawyer opine that the Project will qualify for the full value 100% PTC.

It is also important to note that even if the Project did not qualify for the full value 100% PTC, it could still qualify for a phased-down value of 80%, 60%, or 40%. In addition, if EDF fails to timely complete the Project to ensure full value 100% PTC qualification, EDF faces liquidated damages for delay. Moreover, EDF has a contractual indemnity obligation (backed by corporate guarantees) to mitigate this risk.

We believe these provisions prudently manage the PTC compliance risk.

D. <u>Real Estate and Environmental Risk</u>

Q. HOW HAS OTTER TAIL MITIGATED REAL ESTATE AND ENVIRONMENTAL RISK?

A. Risk associated with real estate and environmental issues will largely be mitigated by actions EDF is contractually obliged to take. In order to address these risks, the Company negotiated prudent contractual terms and engaged in significant due diligence, which included the assistance of an engineering firm specializing in environmental issues. Additionally, Otter Tail will comply with all terms of the Project's CSC and other permits. Through this work, Otter Tail is confident these risks have been prudently mitigated.

VI. CONCLUSION

Q. DOES THIS CONCLUDE YOUR TESTIMONY?

A. Yes.

STATE OF NORTH DAKOTA

PUBLIC SERVICE COMMISSION

Otter Tail Power Company
Advance Prudence – Merricourt Wind
Application

Case No. PU-17-___

Otter Tail Power Company
PC&N – Merricourt Wind Application

Case No. PU-17-___

VERIFICATION

STATE OF MINNESOTA)
) ss.
COUNTY OF OTTER TAIL)

Harvey McMahon, being first duly sworn on oath, deposes and says that he is the Manager of Renewable Energy Generation Construction and Operation for Applicant Otter Tail Power Company; that the testimony and schedules submitted in the above-captioned matter under his name were prepared under his direction; and that he knows and verifies the contents thereof, and that the same is true and correct to the best of his knowledge and belief.

Dated this 10th day of April, 2017

Harvey McMahon

Subscribed and sworn to before
me on this 10 day of April, 2017.

Notary Public
My Commission expires 1-31-22

KIMBERLY ANN WARD
NOTARY PUBLIC
MINNESOTA
My Commission Expires Jan. 31, 2022