

Before the South Dakota Public Utilities Commission
State of South Dakota

In the Matter of the Application of Otter Tail Power Company
For Authority to Increase Rates for Electric Utility
Service in South Dakota

Docket No. EL18-___

Exhibit ___

MERRICOURT WIND PROJECT

Direct Testimony and Schedules of

BRADLEY E. TOLLERSON

PUBLIC – TRADE SECRET DATA HAS BEEN EXCISED

April 20, 2018

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ATTACHED SCHEDULES

Schedule 1 – Merricourt Wind Project ADP Initial Filing PUBLIC

1 **I. INTRODUCTION AND QUALIFICATIONS**

2 Q. PLEASE STATE YOUR NAME AND TITLE.

3 A. My name is Bradley E. Tollerson, and I am the Vice President of Energy Supply for
4 Otter Tail Power Company (OTP or the Company).

5
6 Q. PLEASE DESCRIBE YOUR QUALIFICATIONS AND EXPERIENCE.

7 A. I have a Bachelor of Science degree in Electrical Engineering and a master's degree in
8 business administration from North Dakota State University. I have worked for OTP
9 for 21 years in various positions, including as an Electrical Engineer, Senior Project
10 Engineer, Manager of Power Services, and Director, Power Services & Resource
11 Planning. I have served in my current position as Vice President Energy Supply since
12 October of 2017 and served as Vice President of Planning and Strategy from June of
13 2014 until being named to my current position.

14
15 Q. WHAT IS THE PURPOSE OF YOUR DIRECT TESTIMONY IN THIS
16 PROCEEDING?

17 A. The purpose of my Direct Testimony is to provide support for the inclusion of the
18 Merricourt Wind Farm in OTP's South Dakota Rate Case Application. In my Direct
19 Testimony, I provide an overview of the Merricourt Wind Project and explain why it
20 is a necessary and prudent resource addition.

21
22 Q. DO OTHER WITNESSES DESCRIBE OTP's PROPOSAL FOR RECOVERY OF
23 THE PROJECT COSTS, THE REVENUE REQUIREMENT IMPACT AND RATE
24 IMPACT OF THE MERRICOURT PROJECT?

25 A. Yes. OTP witness Mr. Stuart D. Tommerdahl describes OTP's proposal for a step-in
26 rate starting in late 2019. OTP witness Mr. Tyler A. Akerman describes the revenue
27 requirement impact of the project. OTP witness Mr. Bryce C. Haugen describes the
28 class revenue requirement impact and corresponding revenue increase and OTP
29 witness Mr. David G. Prazak describes OTP's proposed step-in rates for the Project.

1 **II. OVERVIEW OF THE PROJECT**

2 Q. PLEASE DESCRIBE THE MERRICOURT PROJECT.

3 A. The Merricourt Project is a 150 MW wind energy generation facility that will be
4 located near the small town of Merricourt, North Dakota, approximately 15 miles
5 south of Edgeley in McIntosh and Dickey Counties. The Project will consist of 75
6 two-MW Vestas V110 wind turbine generators and associated infrastructure, on a
7 footprint comprising approximately 13,000 acres of land. The Project's energy output
8 is expected to be approximately 666,000 megawatt hours (MWh) annually, at a
9 projected net capacity factor of 50.7%. We expect that the net capacity factor may
10 increase as we update the Project. The Project will interconnect to Montana-Dakota
11 Utilities Company's Merricourt 230 kV substation located approximately 13 miles
12 southwest of Kulm, North Dakota.

13
14 Q. HOW IS THE PROJECT BEING DEVELOPED?

15 A. The project is being developed and constructed by subsidiaries of EDF Renewable
16 Energy, Inc. (EDF) as a turnkey project. Under an Asset Purchase Agreement (APA),
17 OTP will, upon closing of the agreement, become owner of the development assets.
18 Upon closing, pursuant to a corresponding Turnkey Engineering, Procurement, and
19 Construction (TEPC) Agreement, EDF will design and construct the Project on a
20 turnkey basis. Upon EDF's completion of construction, the Company will take
21 delivery of a fully operational 150 MW wind farm. The Project is expected to be
22 placed in service in 2019 ahead of the time frame for capturing the full value 100%
23 federal production tax credit (PTC).

24
25 Q. WHY IS THE COMPANY PROPOSING TO OWN, OPERATE, AND MAINTAIN
26 THE MERRICOURT PROJECT RATHER THAN PURCHASE ENERGY UNDER
27 A POWER PURCHASE AGREEMENT (PPA)?

28 A. The Company engaged in an analysis to assess the benefits and risks of Company
29 ownership of the Merricourt Project. That analysis was also informed by the
30 Company's previous ownership of wind generation. Under the scenarios analyzed, the

1 Merricourt Project is expected to result in net savings for our customers over the
2 Project's life. Ownership of the Project allows our customers to reap these benefits
3 over a longer period of time than would be possible under a PPA, thereby providing
4 additional cost savings to OTP customers.

5
6 Q. WHAT ARE THE ESTIMATED COSTS FOR THE PROJECT?

7 A. The total cost of the Project is estimated to be approximately **[PROTECTED DATA**
8 **BEGINS... ...PROTECTED DATA ENDS]**, which includes the
9 Company's payments to EDF as well as reasonable oversight costs, taxes, anticipated
10 interconnection costs, and a reasonable contingency fund.

11
12 Q. PLEASE PROVIDE A HIGH-LEVEL CATEGORIZATION OF ESTIMATED
13 PROJECT COSTS.

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

Category	Cost Estimate
APA Costs	\$34.7 million
TEPC Costs	\$200.5 million
OTP Direct Costs	[PROTECTED DATA BEGINS... ...PROTECTED DATA ENDS]
Total	[PROTECTED DATA BEGINS... ...PROTECTED DATA ENDS]

15
16
17 Q. WHAT COSTS ARE INCLUDED IN OTP'S DIRECT COST ESTIMATES?

18 A. OTP's direct costs for the Project include: (1) estimated internal management costs of
19 approximately **[PROTECTED DATA BEGINS... ...PROTECTED**
20 **DATA ENDS]**; (2) estimated sales and use tax liability of approximately
21 **[PROTECTED DATA BEGINS... ...PROTECTED DATA ENDS]**; (3)
22 estimated interconnection costs of **[PROTECTED DATA BEGINS...**
23

1 ...PROTECTED DATA ENDS]; and (4) project contingency of approximately
2 [PROTECTED DATA BEGINS... ...PROTECTED DATA ENDS];
3

4 Q. IS THE MERRICOURT PROJECT NEEDED?

5 A. Yes. OTP has forecasted a need for both capacity and energy as a result of:
6 (1) forecasted load growth; (2) the expiration of capacity purchase agreements; and
7 (3) the anticipated 2021 retirement of the Company's Hoot Lake Plant Units 2 and 3.
8 The Company's current analysis shows that without adding replacement capacity and
9 energy, OTP will have a capacity deficit of approximately 273 MW in 2021. Under
10 such a scenario, we would need to source between 26% and 31% of energy from the
11 energy market.
12

13 As discussed in the Company's most recent Minnesota Integrated Resource Plan
14 (IRP),¹ the Merricourt Project is the initial component of the Company's two-part plan
15 to meet our customers' growing energy needs. The other component of this plan is the
16 construction of an approximately 250 MW frame-style, natural gas-fired, simple cycle
17 generating facility known as Astoria Station.
18

19 Q. HOW DID THE COMPANY SELECT THE MERRICOURT PROJECT?

20 A. As part of the Company's 2013 resource planning cycle, OTP analyzed potential
21 replacement scenarios in anticipation of the retirement of Hoot Lake Plant. This
22 analysis indicated that market purchases should be made to meet the Company's
23 energy needs when wind was offered for selection by the model at \$45/MWh. When
24 wind was offered to the model at \$30/MWh it was selected, which showed that at that
25 price or below, acquiring 150 MW of wind in 2021 was the most economic choice to
26 meet OTP's energy needs. In the Company's most recent, 2016, resource planning
27 cycle, Strategist continued to select a wind-plus-gas configuration under updated
28 assumptions in all scenarios analyzed. This confirmed the prudence of moving
29 forward with the two-part plan.

¹ OTP's most recent IRP was submitted to the Commission on June 15, 2016.

1 Once the Company determined to move forward with a wind resource, and after the
2 federal PTC was extended in December 2015, the Company undertook a solicitation
3 process to probe the market and assess project options. Based on an analysis of ten
4 proposals received in response to that solicitation, the Merricourt Project had the
5 lowest levelized price of any project proposed during the solicitation process. On this
6 basis, the Merricourt Project was selected to provide the wind component of the
7 Company's wind-plus-gas resource addition.

8
9 Q. HOW WILL THE MERRICOURT PROJECT MEET CUSTOMER NEEDS?

10 A. The Merricourt Project will help keep energy prices for Otter Tail Power Company's
11 customers as low as possible. The Merricourt Project is a needed and cost-effective
12 opportunity for the Company that provides numerous benefits including a hedge
13 against future MISO energy market volatility and prices, a hedge against increases in
14 future natural gas prices, provide greater fuel source diversity in the Company's
15 generation mix, and give the Company and by extension its customers the ability to
16 capture value from available tax incentives.

17
18 Q. WHAT IS THE CURRENT STATUS OF THE PROJECT?

19 A. The Merricourt project is in the MISO August 2016 definitive planning phase group
20 study. OTP expects the system impact study process to continue through 2018, with
21 the interconnection agreement to be in place in 2019.

22 **III. PRUDENCE OF THE RESOURCE ADDITION**

23 Q. IS THE PROJECT A PRUDENT RESOURCE ADDITION?

24 A. Yes. The Project will provide significant quantitative and qualitative benefits to our
25 customers and will result in customer net savings. The Company has negotiated
26 agreements with EDF that create an appropriate balance of the benefits and risks
27 associated with our eventual ownership of the Project.

28

1 Q. PLEASE SUMMARIZE THE QUALITATIVE BENEFITS OF THE RESOURCE
2 ADDITIONS.

3 A. The Project will increase the diversity of OTP's overall resource mix, reduce reliance
4 on energy markets, and provide a hedge against natural gas price fluctuations.
5 Moreover, the cost of wind energy is at all-time lows and can be locked-in for the life
6 of the facility, providing a long-term stable energy market price hedge. OTP's service
7 territory includes some of the best wind resources in the country, providing an
8 economical generation resource with low potential for transmission congestion due to
9 its proximity to OTP load.

10

11 Further, the Merricourt Project, paired with Astoria Station, represents remarkable
12 energy value for customers and prudently mitigates financial risk associated with
13 exposure to the market. By pairing Astoria Station and the Merricourt Project we are
14 also adding a dispatchable, load-following resource to provide reliability support and
15 energy market hedging.

16

17 Q. ARE THERE RISKS ASSOCIATED WITH THE MERRICOURT PROJECT?

18 A. There are risks associated with the Project, just as there are risks with any project.
19 Risks associated with this particular project include interconnection cost risk, tax risk,
20 real estate and environmental risks, and counterparty risk.

21

22 Q. WHAT RISKS EXIST WITH RESPECT TO INTERCONNECTION COSTS FOR
23 THE PROJECT?

24 A. The Company is subject to interconnection cost risk due to the potential for higher
25 than anticipated costs. Final interconnection costs have not yet been determined. The
26 Project is in the Midcontinent Independent System Operator Inc. (MISO)
27 interconnection queue, in the August 2016 study group.

28

29 Q. WHY NOT DELAY THE PROJECT UNTIL FINAL INTERCONNECTION COSTS
30 ARE KNOWN?

1 A. Because it is in the best interests of our customers to build a project that qualifies for
2 the full value 100% PTC, it is not feasible to wait for complete interconnection cost
3 certainty. Consequently, we continue to move forward through the transaction process
4 based on high-level estimates and prudent contractual allocation of risks.

5

6 Q. WHAT STEPS DID THE COMPANY TAKE TO MITIGATE THE RISKS
7 RELATED TO INTERCONNECTION FOR THE PROJECT?

8 A. To address interconnection cost risk generally, the Company has **[PROTECTED**
9 **DATA BEGINS...**

10 **...PROTECTED DATA ENDS]**. Additionally, we have negotiated contractual
11 provisions designed to mitigate this cost risk.

12

13 Q. HOW DOES THE COMPANY'S STEP-IN REQUEST RELATE TO THIS RISK?

14 A. Our step-in request for Merricourt is based on the current project estimate. If
15 interconnection costs, or any other estimated cost, exceed our initial estimated range,
16 we would verify whether the additional costs were prudent. If so, we would
17 demonstrate the prudence of additional costs to the Commission, whether in a
18 subsequent rate case or rider proceeding.

19

20 Q. WHAT RISK EXISTS WITH RESPECT TO THE PROJECT'S QUALIFICATION
21 FOR THE PTC?

22 A. To be eligible for 100% of the PTC, without phase down, tax laws require that
23 construction of a qualifying facility must have begun before January 1, 2017.
24 Additionally, project construction must be completed by 2020. The IRS issued
25 guidance providing two alternative tests under which a project may qualify for the
26 100% PTC: the "physical work test" and the "5% safe harbor." The Project is using
27 the 5% safe harbor.

28

29 Q. WHAT STEPS HAS THE COMPANY TAKEN TO MITIGATE THE RISK OF THE
30 PROJECT NOT QUALIFYING FOR THE PTC?

1 A. The Company negotiated contractual provisions to help ensure the Project will qualify
2 for 100% of the PTC and has conducted due diligence to help ensure the Project will
3 qualify.

4
5 Q. WHAT ARE THE REAL ESTATE AND ENVIRONMENTAL RISKS RELATED
6 TO THE PROJECT AND WHAT STEPS WERE TAKEN TO MITIGATE THOSE
7 RISKS?

8 A. Before moving forward with the Project, the Company engaged in significant due
9 diligence to identify potential risks and seek ways to mitigate those risks. Potential
10 environmental and real estate risks include permitting, land use, siting, threatened and
11 endangered species impacts, avian impacts, wetlands, and construction-related
12 permitting requirements. Based upon its investigation, the Company determined that
13 risk associated with real estate and environmental issues could largely be mitigated by
14 actions EDF is contractually obliged to undertake.

15
16 Q. HAS THE COMPANY TAKEN STEPS TO MITIGATE ITS COUNTERPARTY
17 RISK?

18 A. Yes. EDF is a strong partner with a long track record and proven, significant
19 experience with wind development, especially from origination through design and
20 construction. Partnering with such an experienced developer is reasonable and
21 prudent. That said, OTP's contracts with EDF have several provisions to mitigate
22 counterparty risk and construction risk, including indemnities, guarantees from EDF's
23 parent, and the ability for the Company to step into key agreements for turbines and
24 balance of plant construction. OTP believes this balanced approach is the best way to
25 mitigate risks such as with schedule, materials, and labor away from the Company and
26 its customers, while ensuring that the Project is completed on-time and on-budget.

27
28 Q. IS THE COMPANY FIT, WILLING, AND ABLE TO ASSUME OWNERSHIP AND
29 OPERATE THE PROJECT?

30 A. Yes. The Company owns, operates, and maintains similar wind generation facilities.
31 The Company has operated these very successfully and our customers have been well-
32 served by these generation additions.

1 Q. HAS THE COMPANY REQUESTED APPROVAL OF THE MERRICOURT
2 PROJECT IN ANY OTHER JURISDICTIONS?

3 A. Yes. OTP requested and received an Advanced Determination of Prudence (ADP) for
4 the Merricourt Wind Project from the North Dakota Public Service Commission in
5 Case No. PU-17-141. The North Dakota Public Service Commission issued its order
6 granting the Company an ADP on November 3, 2017. As part of a consolidated
7 proceeding the North Dakota Commission also granted OTP's request for a Certificate
8 of Public Convenience and Necessity in Case No. PU-17-141. The Company also
9 sought and received permission from the Minnesota Public Utilities Commission to
10 seek recover of Project costs through the Company's Renewable Resource Cost
11 Recovery Rider in Docket No. E017/M-17-279.

12
13 Q. WHAT DID THE NORTH DAKOTA COMMISSION DETERMINE IN ITS ADP
14 ORDER?

15 A. The North Dakota Public Service Commission determined that the Merricourt Wind
16 Project is reasonable and prudent up to a total capital expenditure cost of
17 **[PROTECTED DATA BEGINS...**
18 **...PROTECTED DATA ENDS]**. Costs above that amount would be subject to an
19 additional demonstration of prudence.

20
21 Q. DID THE COMPANY PROVIDE DETAILED TESTIMONY AND SUPPORTING
22 SCHEDULES IN THE NORTH DAKOTA ADP PROCEEDING THAT MAY BE
23 HELPFUL IN THIS PROCEEDING?

24 A. Yes, the Company's ADP Application, testimony and exhibits are provided as
25 PUBLIC Exhibit ___ (BET-1), Schedule 1.

26 **IV. CONCLUSION**

27 Q. PLEASE SUMMARIZE YOUR TESTIMONY.

28 A. The Merricourt Project is a low-cost generation resource. It is an essential component
29 of a two-part plan to meet our customers' growing energy needs from diverse

1 generation resources, replace expiring capacity purchase agreements, and prepare for
2 the 2021 retirement of Hoot Lake Plant. The Merricourt resource addition is prudent
3 because it is least-cost and the risks associated with the Company's ownership, and
4 EDF's further development and construction, have been appropriately mitigated.

5

6 Q. DOES THIS CONCLUDE YOUR PRE-FILED DIRECT TESTIMONY?

7 A. Yes, it does.