

Before the North Dakota Public Service Commission  
State of North Dakota

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

Case No. PU-17-

Exhibit \_\_\_\_

**POLICY**

Direct Testimony and Schedules of

**BRUCE GERHARDSON**

November 2, 2017

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**ATTACHED SCHEDULES**

Schedule 1 – Qualifications and Experience of Bruce Gerhardson

1 **I. INTRODUCTION AND QUALIFICATIONS**

2 Q. PLEASE STATE YOUR NAME AND OCCUPATION.

3 A. My name is Bruce Gerhardson. I am employed by Otter Tail Power Company (OTP) as  
4 Vice President of Regulatory Affairs.

5  
6 Q. PLEASE SUMMARIZE YOUR QUALIFICATIONS AND EXPERIENCE.

7 A. I have worked for OTP for over 17 years. During my first 16 years, I worked as  
8 Associate General Counsel, representing OTP in numerous regulatory proceedings. In  
9 2009, OTP added management of regulatory services and compliance to my duties. In  
10 2017, I was appointed Vice President, Regulatory Affairs. My current duties include  
11 providing direction and supervision for OTP's Regulatory Services, Regulatory  
12 Compliance, Market Planning and Strategic Planning areas. My qualifications and  
13 experience are more fully described on Exhibit \_\_\_(BGG-1), Schedule 1.

14 **II. PURPOSE AND OVERVIEW OF DIRECT TESTIMONY**

15 Q. WHAT IS THE PURPOSE OF YOUR DIRECT TESTIMONY?

16 A. My Direct Testimony gives an overview of OTP's requests in this case.  
17

18 Q. PLEASE PROVIDE A BRIEF OVERVIEW OF YOUR DIRECT TESTIMONY.

19 A. I provide background on OTP and why OTP is requesting a rate increase. I provide a  
20 summary of information showing the very high levels of customer satisfaction OTP has  
21 achieved, and I describe some of our recent capital expenditures, including the very large  
22 recent projects that OTP successfully completed under budget. I also discuss some of the  
23 significant sources of OTP's revenue deficiency and introduce OTP's other witnesses.  
24

25 Q. HOW IS YOUR DIRECT TESTIMONY ORGANIZED?

26 A. In Section III, I provide a description of OTP, including: facilities, capital expenditures,  
27 OTP's service area, OTP's small size, OTP's rates and customer satisfaction and OTP's  
28 customer information system upgrade. In Section IV, I discuss OTP's capital investments

1 and what we've done to manage our capital costs. In Section V, I discuss cost increases  
2 and mitigation of costs. In Section VI, I discuss other proposals including rate designs. In  
3 Section VII, I introduce the other OTP witnesses and Section VIII presents my  
4 conclusions.

5  
6 Q. PLEASE SUMMARIZE OTP'S REQUEST IN THIS CASE.

7 A. OTP is requesting an increase to non-fuel base revenue. As part of the request, OTP  
8 proposes to revise the Renewable Resource Adjustment Rider (RRAR) and  
9 Environmental Cost Recovery Rider (ECRR) to incorporate OTP's proposed reduced rate  
10 of return and changes in allocation factors and to transition rider recoveries to base rates  
11 at the end of this case. The same treatment for the Transmission Cost Recovery Rider  
12 (TCRR) is being requested in Case No. PU-17-340, which is currently open. The  
13 proposed increase and revisions results in an annual increase of non-fuel base electric  
14 revenues of \$13,138,372 or 8.72 percent. If the rate of return and allocation factor  
15 revisions to the TCRR, RRAR and ECRR were not made, the increase in non-fuel base  
16 revenue would be \$15,715,320, or 10.61 percent.

17 In compliance with the Commission's Order in Cases No. PU-08-862 and 08-742,  
18 OTP is also proposing to transition \$50,727,914 in fuel and purchase power costs that are  
19 currently recovered in base rates to the Energy Adjustment Rider (also called the Fuel  
20 Clause Adjustment or FCA). This transition significantly reduces base revenues, with a  
21 corresponding increase in FCA revenues. The transition will increase FCA revenues by  
22 \$50,727,914, and because FCA revenue is currently a negative \$5,782,727, it will result  
23 in a total of \$45,945,187 of fuel revenues to be recovered through the FCA (with ongoing  
24 variations being reflected as changes to the FCA as previously authorized). It will also  
25 result in a reduction to base revenues of \$50,727,914. This transition to fuel revenue  
26 recovery is merely a change to *how* these fuel costs are recovered, and OTP's overall  
27 revenues will not change as a result of this proposal.

28 The combined effect of the proposed increase to base rates, the transition of rider  
29 recoveries to base rates and the transition of fuel and purchased power costs to the FCA is  
30 a *decrease* in base revenues of \$12,734,647, or 9.89 percent.

1           Our current North Dakota base rates were set in our last North Dakota rate case,  
2 which was filed in 2008 based on a 2007 Test Year (Case No. PU-08-862). We have  
3 made significant system investments since that case in 2008, with net plant in service  
4 doubling from 2007 levels. The cost deficiency relating to increased rate base since that  
5 case is \$19.4 million while net operating income has increased only \$3.7 million,  
6 resulting in a net deficiency of \$15.7 million.

7           Operations and maintenance (O&M) costs have also increased since the 2007 test  
8 year. Despite working to control both capital and O&M costs, including placing the Big  
9 Stone Air Quality Control System (AQCS) project in service on-time and over \$100  
10 million under budget, a rate increase is necessary for OTP to continue providing  
11 electricity in a reliable, economic and environmentally responsible manner.

12           OTP's revenue deficiency reflects a return on equity (ROE) of 10.30 percent, an  
13 equity ratio of 52.5 percent, and an overall rate of return on investment (ROR) of 7.97  
14 percent. This is a reduction from the currently authorized 8.61 percent ROR.

15           As explained in the Direct Testimonies of OTP witnesses in this case, OTP will  
16 have maintained its base rates in North Dakota without increase for 10 years by the time  
17 interim rates and final rates are implemented in this case. OTP has maintained its base  
18 rates despite the fact OTP's sales have only increased by 2.5 percent over the sales used  
19 for setting OTP's rates in the 2007 test year. This is an annual average of only 0.2  
20 percent. OTP's overall rates for electric service in North Dakota are the lowest among  
21 investor-owned utilities and have been so for several years, and OTP's customer  
22 satisfaction is very high. OTP has been able to keep rates low by making cost  
23 containment a priority for capital projects and O&M costs. Given the passage of time,  
24 however, OTP now requires increased base rates to address cost increases that have  
25 occurred since our last general rate case, despite our best efforts.

26  
27 Q.   WHAT ARE SOME OF THE OTHER FEATURES OF OTP'S CURRENT RATE  
28 PROPOSAL IN THIS CASE?

29 A.   OTP's overall revenue deficiency has been calculated using forecast revenues and  
30 expenses for the 2018 Test Year. OTP also proposes to transfer certain costs currently

1 being recovered though OTP's TCRR, RRAR and ECRR to base rates at the conclusion  
2 of the case.

3 Rolling the rider costs into base rates will not materially impact customers' bills,  
4 as the base rate revenue requirement increase caused by the transfer of costs will be offset  
5 by a corresponding decrease to the revenue requirements of the TCRR, RRAR and  
6 ECRR. Other OTP witnesses, including Mr. Stuart D. Tommerdahl and Mr. Bryce C.  
7 Haugen, provide more information on OTP's requested increase and on the transfer of  
8 TCRR, RRAR and ECRR costs to base rates.

9 OTP has applied to the Commission for an advance determination of prudence  
10 (ADP) for the Astoria Natural Gas Project (Case No. PU-17-140) and the Merricourt  
11 Wind Project (Case No. PU-17-141). If approved by the Commission, OTP will file in  
12 the future for recovery of the costs associated with these projects. OTP anticipates the  
13 Merricourt Wind Project will go into service in 2019, and the Astoria Natural Gas Project  
14 will go into service in the spring of 2021. Costs for those proposed facilities are not  
15 included in this case.

16 **III. DESCRIPTION OF OTP**

17 **A. Summary**

18 **Q. PLEASE BRIEFLY DESCRIBE OTP.**

19 **A.** OTP provides retail electric service to approximately 131,500 customers, including  
20 approximately 59,000 customers in North Dakota, 61,000 customers in Minnesota, and  
21 11,500 customers in South Dakota. OTP serves 422 communities and rural areas in the  
22 eastern two-thirds of North Dakota, western Minnesota and northeastern South Dakota.  
23 In North Dakota, OTP serves 245 communities. Our 70,000 square-mile service territory  
24 is roughly the size of Wisconsin. OTP is headquartered in Fergus Falls, Minnesota and is  
25 a subsidiary of Otter Tail Corporation, which has its headquarters in Fargo, North  
26 Dakota.

27

1 Q. HAVE THERE BEEN SOME CHANGES IN OTP'S RELATIONSHIP TO OTTER  
2 TAIL CORPORATION SINCE OTP'S LAST NORTH DAKOTA RATE CASE?

3 A. Yes. On July 1, 2009, OTP became a separate, wholly owned subsidiary of Otter Tail  
4 Corporation in a change approved by the Commission earlier in 2009.<sup>1</sup> Also, since 2009,  
5 Otter Tail Corporation has substantially reduced the number and scope of its non-utility  
6 operations and increased its focus on OTP. In 2009, Otter Tail Corporation had 12 non-  
7 utility operating companies; it now has just 4. In 2009, approximately 70 percent of total  
8 Otter Tail Corporation revenue was derived from non-utility subsidiaries; in 2016, the  
9 proportion had been reduced to 47 percent.

10  
11 Q. HOW MANY PEOPLE DOES OTP EMPLOY?

12 A. In 2018, OTP expects to have an average of 777 full-time equivalent employees,  
13 including approximately 392 union employees and 385 non-union employees (not  
14 adjusted for employees of jointly owned plants).

15  
16 Q. WHAT IS OTP'S MISSION?

17 A. OTP's mission is: "To produce and deliver electricity as reliably, economically, and  
18 environmentally responsibly as possible to the balanced benefit of customers,  
19 shareholders, and employees and to improve the quality of life in the areas in which we  
20 do business."

21 **B. Facilities**

22 Q. PLEASE BRIEFLY DESCRIBE OTP'S GENERATION AND TRANSMISSION  
23 FACILITIES.

24 A. OTP operates three coal-fired base load generating plants: Coyote at 427 megawatts  
25 (MW), Big Stone at 475 MW and Hoot Lake at 138 MW, and three peaking plants:  
26 Jamestown 1 and 2 at 42.5 MW, Lake Preston at 20 MW and Solway at 43.7 MW. The  
27 peaking plants are in each state where we provide service. We also own five

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<sup>1</sup> The Commission approved this change in Case No. PU-08-292.

1 hydroelectric stations on the Otter Tail River near Fergus Falls and one on the Mississippi  
2 River near Bemidji.

3 OTP owns three major wind farms, all located in North Dakota: Langdon at 40.5  
4 MW, Ashtabula at 48 MW, and Luverne at 49.5 MW. OTP also owns several smaller  
5 wind facilities and procures wind energy from other facilities through purchase power  
6 agreements.

7 OTP owns a total of 5,862 miles of transmission line. Our electric system is  
8 interconnected with the facilities of several neighboring suppliers.

9  
10 Q. IS OTP A MEMBER OF A REGIONAL RELIABILITY ORGANIZATION AND  
11 REGIONAL INDEPENDENT SYSTEM OPERATOR?

12 A. Yes. OTP is a member of the Midwest Reliability Organization (MRO), the regional  
13 reliability council of the North American Electric Reliability Corporation (NERC) that  
14 develops and establishes planning and operating reliability standards in the Midwest  
15 region with which utilities must comply. OTP is also a member of the Midcontinent  
16 Independent System Operator (MISO). MISO serves as the operator of the regional  
17 transmission system, performs Balancing Authority functions of the NERC standards,  
18 and implements a regional resource adequacy mechanism for the sharing of generation  
19 reserves, all with the goal of lowering costs.

20 **C. Capital Expenditures**

21 Q. IS OTP ENGAGED IN AN EXTENSIVE CAPITAL EXPENDITURE PROGRAM?

22 A. Yes. OTP has been engaged in an extensive capital expenditure program since 2012 that  
23 is expected to continue through 2021. OTP invested approximately \$672 million (OTP  
24 Total) between 2012 and 2016 and is expected to invest an additional \$821 million (OTP  
25 Total) between 2017 and 2021.<sup>2</sup> OTP's investments between 2012 and 2016 have  
26 focused on upgrading our facilities and environmental compliance at our generating  
27 plants (including the AQCS project at our Big Stone plant ("AQCS Project") and

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<sup>2</sup> Excluding AFUDC.

1 strengthening our transmission system, along with routine replacements, upgrades and  
2 extensions.

3  
4 Q. PLEASE BRIEFLY DESCRIBE THE AQCS PROJECT.

5 A. The AQCS Project is OTP's largest ever single capital expenditure. The AQCS Project  
6 reduces nitrogen oxides and sulfur dioxide emissions at our Big Stone plant by  
7 approximately 90 percent and reduces mercury emissions by approximately 80 percent.  
8 The Commission granted the AQCS Project an Advance Determination of Prudence on  
9 January 23, 2012<sup>3</sup>, with a budget of \$491 million (Total Project).<sup>4</sup> The AQCS Project  
10 came on line on December 29, 2015, more than \$125 million (Total Project) below  
11 budget.

12 The AQCS Project also demonstrates the importance safety plays in our mission.  
13 Constructing the project took over 2.3 million worker hours and the project had only one  
14 lost time accident and an OSHA rate of approximately 0.88. The AQCS Project is  
15 described in detail in the Direct Testimony of OTP witness Mr. Kirk A. Phinney.

16  
17 Q. HAS OTP ALSO COMPLETED OTHER RECENT CAPITAL EXPENDITURES  
18 UNDER BUDGET?

19 A. Yes. For example, OTP was also able to complete its Hoot Lake Plant Mercury and Air  
20 Toxics Standards (MATS) project under budget. This project is also described in greater  
21 detail in the Direct Testimony of Mr. Phinney.

22 **D. Service Area**

23 Q. PLEASE DESCRIBE THE COMMUNITIES OTP SERVES.

24 A. OTP serves very small communities. The average population of our communities in  
25 North Dakota is approximately 400 people, and over sixty percent of OTP's

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<sup>3</sup> Case No. PU-11-165.

<sup>4</sup> \$491 million was the total project budget, inclusive of the AQCS and the activated carbon injection system that was incorporated into that project. They are described in greater detail in Mr. Phinney's Direct Testimony. OTP's share is 53.9 percent, based on its ownership share of the Big Stone Plant.

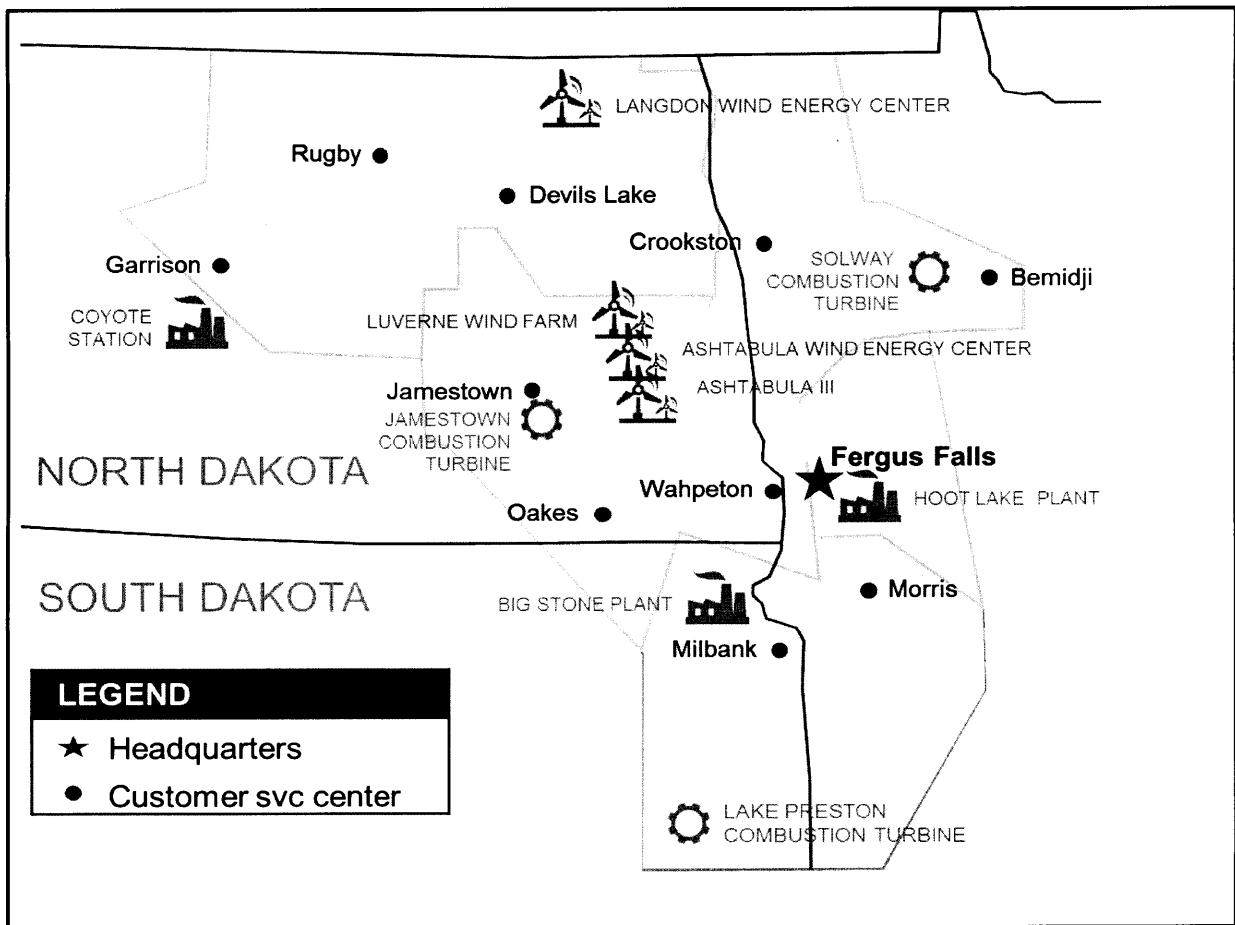
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communities, system wide, have populations of fewer than 200 people. Jamestown is the only community OTP serves in North Dakota with a population over 10,000. It has a population of 14,427.

Q. DO YOU HAVE AN ILLUSTRATION THAT INCLUDES OTP'S SERVICE AREA AND FACILITY LOCATIONS?

A. Yes. Figure 1 provides an overview of OTP's service area, generating facilities and customer service centers.

**Figure 1**  
**Overview of OTP Service Area, Generation Facilities and Customer Service Centers**



13  
14

1           **E.    Small Size**

2    Q.    HOW DOES OTP COMPARE IN SIZE TO OTHER UTILITIES?

3    A.    OTP is very small in terms of number of total retail customers and retail revenues  
4           generated.  OTP is the second smallest investor-owned utility in the United States.

5

6    Q.    HAS GROWTH IN NORTH DAKOTA OIL PRODUCTION SIGNIFICANTLY  
7           IMPACTED OTP?

8    A.    No.  OTP has seen very little impact from the growth in oil production in North Dakota.  
9           This stands in significant contrast to other electric providers in the state.  For example,  
10          McKenzie Electric Co-operative has 28 percent more sales and 16 percent more revenues  
11          than OTP, even though it has one-fifth as many customers as OTP.  Mountrail-Williams  
12          Electric Co-operative has 43 percent more revenues and 95 percent of OTP's kWh sales,  
13          but it has less than one-third as many customers as OTP.

14           **F.    Rates and Customer Satisfaction**

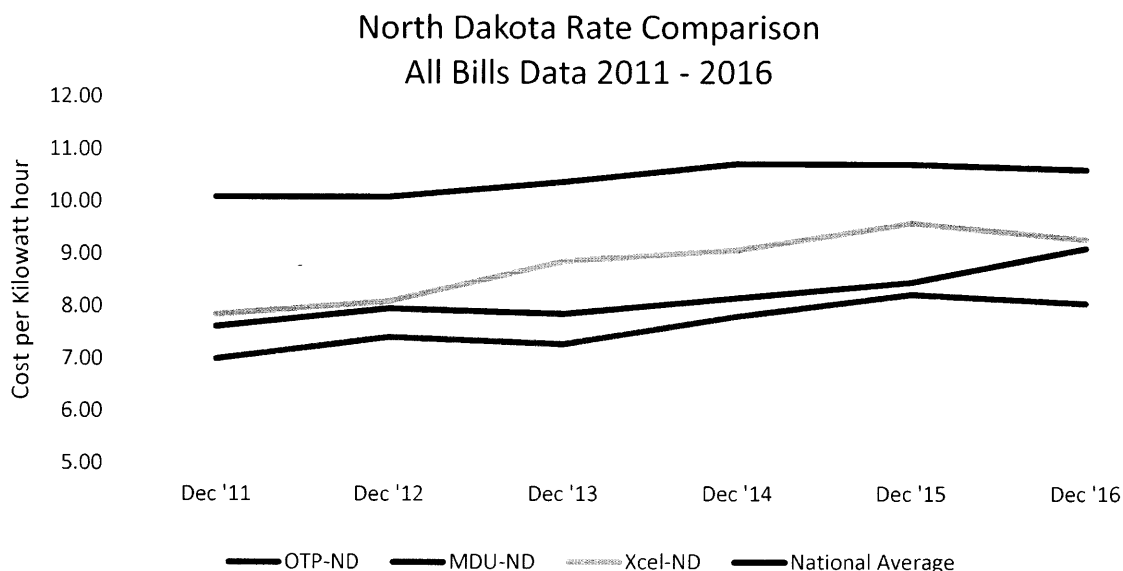
15    Q.    HAS OTP'S SMALL SIZE AND SPARSELY POPULATED SERVICE AREA  
16           PREVENTED OTP FROM DELIVERING ELECTRICITY ECONOMICALLY?

17    A.    No.  Despite the challenges posed by being a very small utility and serving customers in a  
18           very large, sparsely populated service territory with very substantial capital expenditures,  
19           OTP has been successful in maintaining low electric rates.

20                    Figure 2 compares OTP's rates to the rates of other North Dakota investor-owned  
21                    utilities and to the national average since 2011 (the rates reflect an average of all  
22                    customer classes and include all bill components—i.e. all fuel and purchased power and  
23                    all riders).

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**Figure 2**  
**Rates 2011-2016**



3

4

5

Q. HOW HAS OTP BEEN ABLE TO MAINTAIN THESE LOW RATES?

6

A. These low rates are a direct result of successful execution on our capital project investments and our efficient operations. We have recently completed our extensive AQCS Project at the Big Stone Plant on time and we were able to do so more than \$125 million below budget. This is the single largest investment in infrastructure that OTP has ever made. OTP has also been successful in managing the costs of other capital expenditures.

12

13

Q. HAS OTP BEEN RECOGNIZED FOR ITS LOW RATES?

14

A. Yes. In May 2017, Regulatory Research Associates recognized Otter Tail Corporation as the 4<sup>th</sup> lowest price provider among all utility parent companies with a blended rate for all customers of 8.16 cents/kWh.

17

18

Q. PLEASE SUMMARIZE OTP'S CUSTOMER SATISFACTION LEVELS.

19

A. OTP continues to be recognized in the industry as having the highest levels of customer satisfaction. OTP's customers' satisfaction is demonstrated in several ways, including

20

1 the American Customer Satisfaction Index, transaction surveys and, for the first time in  
2 2015, OTP was included in J. D. Power's study of electric utility residential customer  
3 satisfaction.

4

5 Q. HOW WAS OTP RANKED IN THE J.D. POWER STUDY?

6 A. In each of the last three years, OTP has been recognized as one of the top 3 utilities in  
7 customer satisfaction among midsize utilities in the Midwest in the JD Power Electric  
8 Utility Residential Customer Satisfaction Study.<sup>SM</sup> Also, OTP's scores have increased  
9 each year over those three years.

10

11 Q. PLEASE DESCRIBE THE J.D. POWER STUDY.

12 A. The J.D. Power study analyzes the relative performance of major electric utility  
13 companies in the United States in terms of how well they satisfy their residential  
14 customers. In 2015, J.D. Power changed the criteria of its study to include utilities with  
15 as few as 100,000 residential customers, allowing OTP to participate in this study for the  
16 first time.

17 The J.D. Power proprietary study results are based on experiences and perceptions  
18 of consumers surveyed annually over the period from July through May. The study  
19 measures customers' satisfaction with their electric utility companies by looking at six  
20 factors: power quality and reliability, price, billing and payment, corporate citizenship,  
21 communications, and customer service.

22

23 Q. HAS OTP'S HIGH SERVICE BEEN RECOGNIZED BY ANY OTHER STUDIES?

24 A. Yes. The American Customer Satisfaction Index (ACSI) also reflects OTP's high  
25 achievement in customer service. The ACSI measures the satisfaction of consumers  
26 across the U.S. economy. Key metrics include customer satisfaction, customer  
27 expectations, and customer perceptions about the value and quality of their actual  
28 experiences, customer complaints, and customer retention. ACSI captures customer  
29 opinions about critical elements of the residential customer experience including ability  
30 to provide reliable electric service as well as ability to restore electric service following a

1 power outage. For investor-owned utilities, the ACSI conducts additional surveys,  
2 gathering customer perceptions each quarter and analyzing customer satisfaction on a  
3 rolling basis across the entire year.

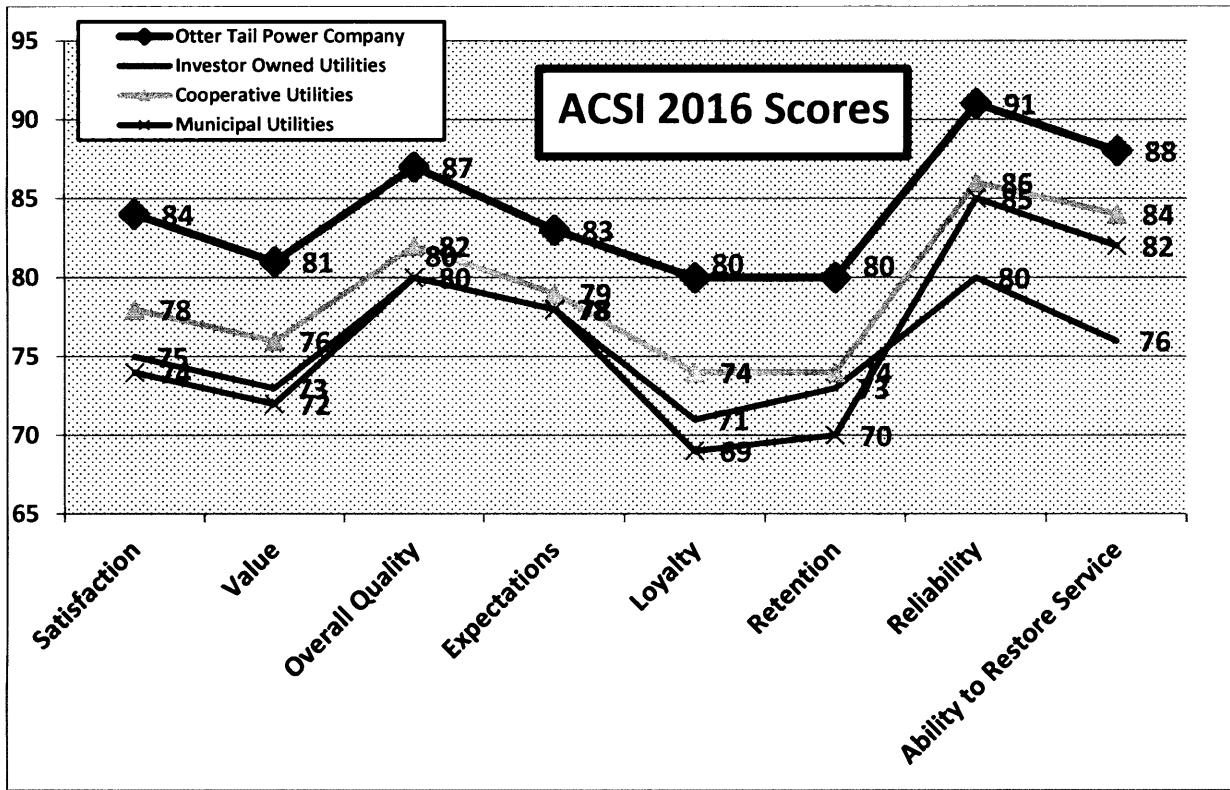
4 ACSI compares our company's customer satisfaction ratings with those of the top  
5 electric and gas investor-owned utilities in the country, which together serve more than  
6 75 percent of all residential customers in the United States.

7  
8 Q. HOW HAS OTP SERVICE BEEN RATED BY ACSI?

9 A. OTP's 2016 score for customer satisfaction was 84 out of 100, which was well above all  
10 classes of utilities, when each is considered as a group. OTP scored high in every key  
11 driver that ACSI measures, including satisfaction, meeting customer expectations,  
12 quality, perceived value, customer loyalty, reliability, and service restoration. OTP also  
13 had top scores in every category of customer satisfaction that was measured. Figure 3  
14 shows that OTP's 2016 ACSI scores are significantly above the average scores of other  
15 investor-owned, cooperative and municipal utilities in every rating category.

1  
2  
3

Figure 3  
2016 ACSI Scores



4

5

6 Q DOES OTP ALSO USE TRANSACTION SURVEYS TO ASSESS ITS CUSTOMER  
7 SATISFACTION ACHIEVEMENT?

8 A. Yes. Bellomy Research, Inc. conducts research to measure customer satisfaction among  
9 OTP's residential and commercial customers that make transaction contacts with OTP.  
10 Specifically, the research measures:

11

- Satisfaction with overall contact experience and contact handling
- Satisfaction with service provided by the Customer Service Representative
- Satisfaction with service provided by the Field Service Technician (where relevant)
- Resolution and number of times called about the same issue
- Overall value for the money

12

13

14

15

1 Since 2012, over 90 percent of both OTP Residential and OTP Commercial customers  
2 have rated Overall Quality of Service as “Very Good” or “Excellent.” Customers also  
3 remain very satisfied with how agents and field service technicians are handling their  
4 requests.  
5

6 Q. ARE THERE OTHER RECENT INDICATORS OF OTP’S QUALITY SERVICE?

7 A. Yes. In June 2017, the Edison Electric Institute presented OTP with the association's  
8 Emergency Recovery Award for its outstanding restoration efforts after a snow and ice  
9 storm hit OTP’s territory on Christmas Day, 2016. EEI's Emergency Recovery Award  
10 recognizes member companies that faced difficult circumstances as a result of  
11 extraordinary events and put forth an outstanding effort to promptly restore service to the  
12 public. The Christmas Day storm produced freezing rain that caused one to two inches of  
13 ice accumulation on roads and power lines, and loss of power to more than 4,000  
14 residences in South Dakota and 2,200 residences in North Dakota. The award recognized  
15 the exceptional performance and achievement of OTP’s crews in restoring power to  
16 customers despite these challenging conditions.

17 **G. Customer Information System Upgrade**

18 Q. IS OTP MAKING ANY CHANGES THAT WILL FURTHER ENHANCE ITS  
19 CUSTOMER SERVICE?

20 A. Yes. We are in the process of replacing our Customer Information System (CIS). OTP’s  
21 current CIS is an older, internally-built system, which has been in service for over 30  
22 years. The capabilities of this legacy system limit OTP’s ability to implement complex  
23 rates and provide services our customers are growing to expect. After an extensive  
24 analysis of replacement options and a request for proposal process, OTP selected Cayenta  
25 Utilities as the vendor for a new CIS.  
26

27 Q. PLEASE DESCRIBE THE STATUS AND FEATURES OF THE NEW CIS.

28 A. OTP is 17 months into implementation of its new CIS, which is sometimes referred to as  
29 “CISone.” CISone will “go live” in 2018.

1 CISone is a foundational system and building block for other technology that OTP  
2 has in its future plans, such as automated metering infrastructure (AMI), mobile work  
3 management (MWM) technologies, and outage management system (OMS) technologies.  
4 The CISone will allow OTP to better align business processes with industry best  
5 practices, allowing quicker and more thorough access to information for both employees  
6 and customers. While the current CIS relies on overnight batch/file runs to complete the  
7 desired processes, the CISone will use application programming interfaces (API) to  
8 process tasks in real-time. Customers will have better access to information through  
9 online and self-service options. Mr. Tommerdahl further describes CISone and OTP's  
10 proposal pertaining to CISone in his Direct Testimony.

11  
12 Q. WHAT IS YOUR CONCLUSION REGARDING CISONE?

13 A. It is reasonable and necessary for OTP to replace the current CIS, and CISone will  
14 provide substantial customer benefits.

15 **IV. CAPITAL INVESTMENTS AND MITIGATION OF CAPITAL**  
16 **COSTS.**

17 Q. PLEASE SUMMARIZE THE CHANGES IN NET PLANT IN SERVICE BETWEEN  
18 OTP'S LAST NORTH DAKOTA RATE CASE AND THIS CASE.

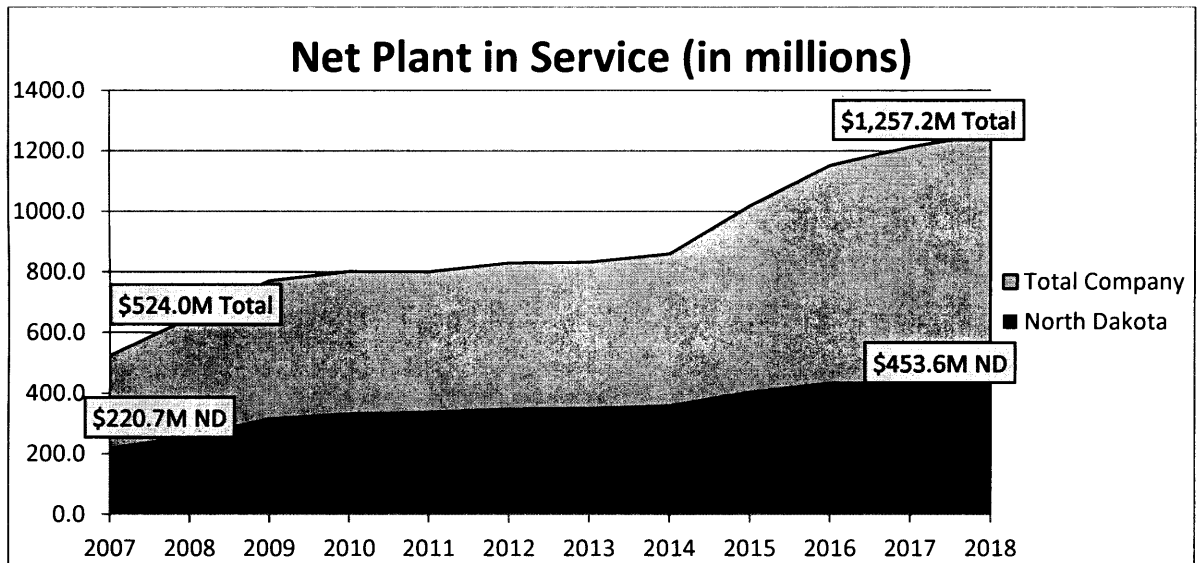
19 A. In 2007, OTP had net plant in service of approximately \$524 million (OTP Total), or  
20 approximately \$221 million (OTP ND). Through 2018, OTP's net plant in service will  
21 grow to approximately \$1.26 billion (OTP Total), or approximately \$453 million (OTP  
22 ND), an increase since 2007 of approximately \$712 million (OTP Total) and  
23 approximately \$232 (OTP ND). This represents an increase of approximately 140  
24 percent (OTP Total) and 105 percent (OTP ND).

25 The growth in OTP's net plant in service in the nine-year period from the 2007  
26 Test Year through the 2018 Test Year is shown on Figure 4:<sup>5</sup>

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<sup>5</sup> Average net plant in service per Otter Tail Power's annual report to the Public Service Commission of North Dakota for 2007-2016 and Otter Tail Power's forecasted average net plant in service for 2017 and 2018.

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**Figure 4**  
**OTP Net Plant In-Service**  
**2007-2018**



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7  
8 Q. PLEASE BRIEFLY DESCRIBE OTP'S RECENT INFRASTRUCTURE ADDITIONS.

9 A. In addition to substantial routine capital expenditures, OTP has made significant capital  
10 expenditures in its existing generation facilities and in transmission facilities. As I  
11 explained earlier, the AQCS Project at the Big Stone Plant is the single largest investment  
12 ever made by OTP. The AQCS Project includes the following equipment: (i) a dry Flue  
13 Gas Desulfurization (FGD) system with a new baghouse; (ii) an ammonia-based  
14 Selective Catalytic Reduction (SCR) system; (iii) a Separated Overfire Air (SOFA)  
15 system; and (iv) an Activated Carbon Injection (ACI) system. The FGD system and  
16 baghouse control sulfur dioxide and particulate matter emissions. The SCR and SOFA  
17 systems control nitrogen oxide compounds emissions. The ACI system controls mercury  
18 emissions.

19 OTP also added the MATS project at the Hoot Lake Plant, which involved the  
20 upgrade of Electrostatic Precipitators and the installation of an ACI. The Hoot Lake  
21 MATS project controls mercury and particulate matter emissions at the plant. Mr.  
22 Phinney describes these projects in his Direct Testimony.

1           OTP has also made substantial investments in new transmission facilities and  
2 upgrades, including investments in the following transmission projects: (a) the Fargo-St.  
3 Cloud-Monticello 345 kV line; (b) the Bemidji-Grand Rapids 230 kV line; and (c) the  
4 Brookings County-Hampton 345 kV line. OTP is also making investments in two 345  
5 kV lines that connect to the Big Stone generating facility.  
6

7 Q.   PLEASE SUMMARIZE OTP'S EXPECTED CAPITAL EXPENDITURES.

8 A.   OTP is expecting to make significant capital expenditures in generation and transmission  
9 facilities and in routine projects. Specifically, OTP expects to invest an additional \$862  
10 million between 2017 and 2021 at a total company level.  
11

12 Q.   WHAT GENERATION INVESTMENTS IS OTP EXPECTING TO MAKE?

13 A.   OTP expects to make significant capital expenditures for the Astoria Natural Gas and  
14 Merricourt Wind Projects that I described earlier in my testimony.  
15

16 Q.   WHAT TRANSMISSION INVESTMENTS IS OTP EXPECTING TO MAKE?

17 A.   In addition to several smaller transmission projects, OTP has completed the Big Stone  
18 South-to-Brookings County 345-kV line (Brookings) in 2017 and will have completed  
19 the Big Stone South-to-Ellendale 345-kV line (Ellendale) by the end of 2019.  
20

21 Q.   PLEASE DESCRIBE THE BROOKINGS AND ELLENDALE PROJECTS.

22 A.   The Brookings 345-kV line extends approximately 70 miles, was put in service in  
23 September 2017, and is estimated to cost approximately \$140 million (Total Project).  
24 Xcel Energy and OTP are joint owners. The Ellendale 345-kV line will extend  
25 approximately 160 to 170 miles and is estimated to cost approximately \$250 million  
26 (Total Project), depending upon the route approved and other factors, and be in service in  
27 2019. OTP and Montana-Dakota Utilities Co. will jointly own the Ellendale line in equal  
28 shares.  
29

1 Q. ARE EITHER OF THESE PROJECTS INCLUDED IN THE 2018 TEST YEAR OR  
2 PROPOSED RATES IN THIS CASE?

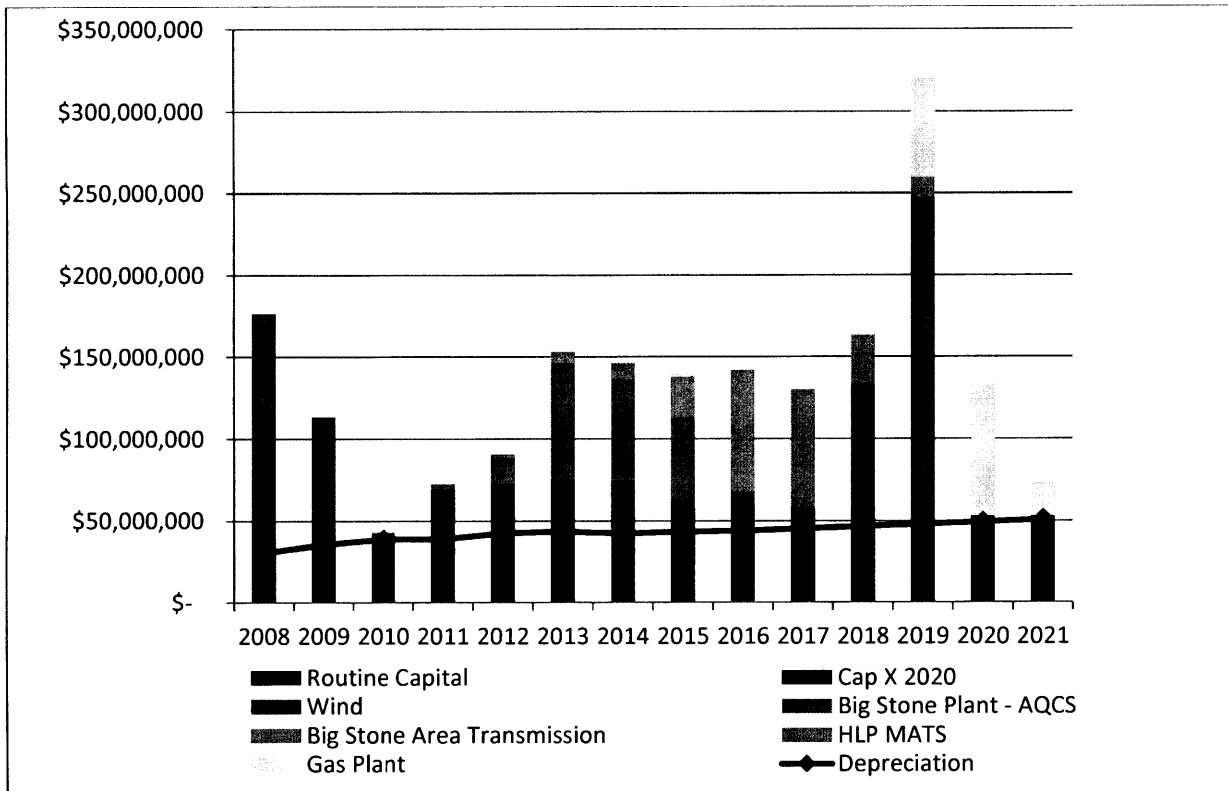
3 A. No. The retail share of these projects is less than 1 percent and will remain in the TCRR  
4 along with the related expenses and revenues.  
5

6 Q. DO YOU HAVE AN ILLUSTRATION THAT SHOWS OTP'S PRIOR AND  
7 EXPECTED INVESTMENTS BY SEGMENT?

8 A. Yes. Figure 5 shows OTP's prior investments from 2008 through 2016 and OTP  
9 projected investments from 2017 through 2021, by segment. We currently expect this  
10 period of significant investment to taper off after that, but given the changing technology  
11 in the electric industry, it is possible that this period of investment could continue.  
12

1  
2  
3  
4

**Figure 5**  
**OTP Prior and Projected Investments by Segment (2008 – 2021)**  
**Total Company Costs**



5  
6

7 Q. WILL THE COMMISSION'S DECISION IN THIS CASE HAVE SIGNIFICANT  
8 IMPACTS ON OTP'S COST OF CAPITAL NEEDED FOR THESE INVESTMENTS?

9 A. Yes. As OTP witness Mr. Kevin G. Moug explains in his Direct Testimony, OTP will  
10 need access to significant levels of external debt and equity financing, as well as  
11 internally generated equity to complete these significant infrastructure investments. The  
12 costs of these external sources of debt and equity financing will be directly affected by  
13 investors' confidence in OTP and in OTP's regulatory environment. The Commission's  
14 decision in this case will have a significant impact on investor confidence because North  
15 Dakota represents a very significant part of OTP's total operations, and investors know  
16 the Commission is aware of OTP's investment levels. Accordingly, the Commission's  
17 decisions will take on added significance and will affect OTP's costs for a long period of

1 time (the life of the investments). Mr. Moug further explains OTP's capital needs and the  
2 importance of this case to meeting those needs in his Direct Testimony

3 **V. COST INCREASES AND MITIGATION OF COSTS**

4 Q. HAVE OTP'S COSTS RELATED TO ITS PLANT IN SERVICE INCREASED SINCE  
5 OTP'S LAST RATE CASE?

6 A. Yes. As I noted earlier, OTP's cost of increased rate base from capital projects since our  
7 last general rate case is \$19.4 million while our net operating income has increased only  
8 \$3.7 million.

9  
10 Q. HAS OTP TAKEN STEPS TO MANAGE AND CONTAIN COST INCREASES  
11 RELATED TO INCREASED CAPITAL EXPENDITURES?

12 A. Yes. In this period of significant capital investment, OTP has paid close attention to the  
13 completion of its large infrastructure projects. By managing these projects well, OTP has  
14 helped to keep its costs low, with customer benefits extending for the full life of the  
15 projects. A good example of this focus is the AQCS Project, which was approved at an  
16 initial budget of \$491 million (Total Project) and completed over \$125 million under  
17 budget. It has a 30-year life. The under-budget completion of the AQCS Project reduced  
18 the 2018 Test Year revenue requirement for North Dakota customers by approximately  
19 \$3.4 million as Mr. Tommerdahl discusses in his Direct Testimony, and it will similarly  
20 reduce OTP's revenue requirement each year for the entire life of the project. Mr.  
21 Phinney provides more information on how the AQCS Project was managed in his Direct  
22 Testimony. He also discusses the Hoot Lake Plant MATS project, which was also  
23 completed under budget.

24  
25 Q. HAVE OTP'S O&M COSTS ALSO INCREASED SINCE OTP'S LAST RATE CASE?

26 A. Yes. OTP's non-fuel O&M costs have increased by approximately \$29 million (OTP  
27 ND), which amounts to a 49 percent increase since 2007, or about a 4.5 percent increase  
28 annually. OTP witness Ms. Christine L. Petersen addresses increases to O&M costs in

1 her Direct Testimony. OTP witness Mr. Peter E. Wasberg also addresses labor-related  
2 cost increases in his Direct Testimony.

3  
4 Q. HAS OTP TAKEN STEPS TO ADDRESS RISING EMPLOYEE BENEFIT COSTS?

5 A. Yes. OTP has taken several steps to manage employee benefit costs. For example, in  
6 2012 OTP moved all employees to a consumer-driven High Deductible Health Plan  
7 (HDHP). OTP also instituted a mechanism that triggers higher employee premiums  
8 when OTP's healthcare spending increases more than six percent over the prior year. In  
9 2017 OTP refined the HDHP with three options and introduced coinsurance. The  
10 employer share/employee share for gross health costs for non-union employees, which  
11 includes total spend for both OTP and employees, moved from approximately 80 percent  
12 employer/20 percent employee to 70 percent employer/30 percent employee on all three  
13 of the new HDHPs. OTP also eliminated health care eligibility for spouses who are able  
14 to obtain health care insurance from their own employer. OTP also negotiated an  
15 increase to the premiums paid for dental coverage by union employees. Mr. Wasberg  
16 explains these actions and other actions OTP has taken to manage employee benefit costs  
17 in his Direct Testimony.

18  
19 Q. HAS OTP ALSO TAKEN STEPS TO CONTROL ITS PENSION AND POST-  
20 RETIREMENT BENEFITS COSTS?

21 A. Yes. As further described by Mr. Wasberg in his Direct Testimony, in 2006 OTP closed  
22 eligibility for defined benefit pension and post-retirement medical benefits to non-union  
23 employees hired after fixed dates, which varied by categories of employees. The pension  
24 plan was closed after 2010 for bargaining unit employees. These steps are often referred  
25 to as "soft freezes" and have been used by many other employers as well.

26  
27 Q. HAS OTP TAKEN OTHER STEPS TO CONTROL ITS PENSION COSTS?

28 A. Yes. As further described by Ms. Petersen in her Direct Testimony, OTP has prefunded  
29 its obligations under its defined pension plan. The prefunding reduces pension expenses  
30 by providing additional pension plan earnings which reduce total pension expense. The

1 prefunding also protects OTP and its customers from the risks of facing a large and  
2 unexpected pension funding obligation at some time in the future when conditions for  
3 providing funding may be unfavorable.  
4

5 Q. CAN YOU GIVE SOME OTHER EXAMPLES OF STEPS OTP HAS TAKEN TO  
6 MANAGE ITS O&M COSTS?

7 A. Yes. We have taken many other actions to manage costs. Some examples of process  
8 improvements we have made in the last several years are: the implementation of a new  
9 workforce planning system to efficiently deploy employees; the implementation of a  
10 financial data warehouse system to monitor labor and non-labor expenditures and  
11 variances from budgets; the implementation of a monthly operating report system to  
12 coordinate among operations managers and customers service center managers to review  
13 reliability, infrastructure issues and labor plans; and the implementation of a new project  
14 management initiative to increase focus on effective execution on capital projects.

15 Some examples of changes to facilities and facility operations we have made are  
16 the installation of variable frequency drives on gas recirculation fan motors at Coyote  
17 Station that have reduced the station service load by 2 to 2.5 MWs, and negotiating with  
18 the union to reduce number of operators required at Hoot Lake Plant to match lower  
19 anticipated generation levels. Finally, OTP was able to engineer the AQCS Project to  
20 operate without any derate due to load caused by the AQCS system. These initiatives are  
21 not all of what OTP has done to manage costs, but they exemplify other steps that OTP  
22 has taken over the past few years to manage costs.

## 23 VI. OTHER PROPOSALS

24 Q. PLEASE DESCRIBE OTP'S PROPOSAL TO TRANSFER RIDER RECOVERIES TO  
25 BASE RATES IN THIS CASE.

26 A. OTP's proposal is to transfer in-service transmission, renewable generation and  
27 environmental project costs from its TCRR, RRAR and ECRR to base rates. OTP  
28 proposes that rider recoveries continue during the current proceeding and the interim rate

1 adjustment excludes any revenue requirement associated with costs being recovered  
2 through riders. OTP proposes to leave the retail share of MISO Schedule 26 and 26A  
3 revenues and expenses for rate base or rider projects in the TCRR (due to the variability  
4 of Schedule 26 and 26A). Mr. Haugen and OTP witness Mr. Tyler A. Akerman discuss  
5 our proposal to move ECRR, RRAR, and TCRR costs from the riders to base rates in  
6 their Direct Testimonies.

7  
8 Q. IS OTP MAKING A PROPOSAL RELATING TO ITS RENEWABLE RIDER?

9 A. Yes. Production Tax Credits (PTCs) for Langdon expire in 2017, and will not be in the  
10 Test Year or affect interim rates. The PTCs for Ashtabula expire in 2018 and have also  
11 been removed from the Test Year. OTP has proposed that the financial impact of the  
12 PTCs remain in the Renewable Rider until their expiration. This will allow the financial  
13 impact to be reflected and prevents any over- or under-collection related to PTCs.

14  
15 Q. IS OTP PROPOSING TO CHANGE ITS CUSTOMER CHARGES IN THIS CASE?

16 A. Yes. OTP witness Mr. David G. Prazak explains in his Direct Testimony that OTP is  
17 proposing increases to customer charges in order to better reflect marginal costs.  
18 Aligning rates with marginal costs is especially important given the nature of OTP's  
19 system and how our customers use electricity.

20  
21 Q. IS OTP'S SYSTEM SOMEWHAT UNIQUE IN THIS REGARD?

22 A. Yes. As I described earlier in my Direct Testimony, OTP's service area is predominately  
23 rural and lacks significant customer density. Mr. Prazak also explains that many of our  
24 customers use electricity for heating, which impacts system design in a way that increases  
25 the kinds of costs a customer charge is intended to recover. Finally, Mr. Prazak explains  
26 that the proposed rate design promotes equity among customers within a class.  
27 Promoting intra-class equity is of particular concern on OTP's system, where low-income  
28 customers are more likely to use electricity for heating.

29  
30 Q. IS OTP MAKING ANY NEW RATE DESIGN PROPOSALS?

1 A. Yes. Mr. Prazak discusses a Residential Time of Day pilot, an LED street lighting rate,  
2 and a Super Large General Service rate. OTP's proposal for a generation cost recovery  
3 rider in anticipation of OTP's Astoria generation station going into service post-test year  
4 is discussed in Mr. Tommerdahl's testimony

5 **VII. INTRODUCTION OF WITNESSES**

6 Q. PLEASE IDENTIFY THE WITNESSES OTP IS SPONSORING IN THIS  
7 PROCEEDING.

8 A. The following individuals will be presenting testimony in this proceeding:

- 9 • Kevin G. Moug addresses OTP's costs of debt and overall cost of capital and rate of  
10 return, the financial requirements related to OTP's prior and planned capital  
11 expenditures, OTP's recent levels of reinvestment in its operations, the significant  
12 differences between OTP and most other investor-owned utilities, and OTP's credit  
13 ratings.
- 14 • Stuart D. Tommerdahl addresses the ratemaking treatment of several capital and  
15 expense items, the accumulated deferred income tax proration, corporate cost  
16 allocations, numerous miscellaneous items and compliance items.
- 17 • Bryce C. Haugen addresses rider roll into base rates and specific regulatory  
18 compliance items.
- 19 • Gina S. Ice addresses the class cost of service study and jurisdictional allocators.
- 20 • Tyler A. Akerman addresses the selection and development of the 2018 Test Year,  
21 the development of the Test Year rate base and the development of the Test Year  
22 operating statement with regulatory adjustments.
- 23 • Christine L. Petersen address OTP's budget processes, pension expense, prepaid  
24 pension and other post-employment benefit expense.
- 25 • Brian H. Draxten addresses the customer sales forecasts.
- 26 • Peter E. Wasberg addresses matters relating to employee compensation and costs.
- 27 • Kirk A. Phinney describes the capital project costs and operating and maintenance  
28 costs of the Big Stone and Hoot Lake environmental compliance projects.

- 1 • David G. Prazak sponsors proposed rate design changes and general tariff changes.
- 2 • Robert B. Hevert explains OTP's cost of equity and presents OTP's recommended
- 3 10.30 percent rate of return.

#### 4 **VIII. CONCLUSION**

5 Q. PLEASE SUMMARIZE YOUR TESTIMONY.

6 A. As reflected in our Mission Statement, we take seriously our responsibility to deliver  
7 electricity as reliably, economically and environmentally responsibly as possible and to  
8 improve the quality of life in the areas we serve. We take pride in fulfilling that mission.  
9 Continuing to fulfill that mission requires adequate financial strength. To maintain that  
10 strength, we require an increase in to non-fuel base revenue of \$13,138,372 or 8.72  
11 percent. This increase is based in part on an ROE of 10.3 percent and an equity ratio of  
12 52.5 percent.

13 OTP is also proposing to revise the Transmission Cost Recovery Rider (TCRR),  
14 Renewable Resource Adjustment Rider (RRAR) and Environmental Cost Recovery Rider  
15 (ECRR) to incorporate OTP's proposed reduced rate of return and changes in allocation  
16 factors and to transition rider recoveries to base rates at the end of this case. If the  
17 revisions to the TCRR, RRAR and ECRR are not made, the increase in non-fuel base  
18 revenue would be \$15,715,320, or 10.61 percent.

19 In compliance with Commission's Order in Cases No. PU-08-862 and 08-742,  
20 OTP is also proposing to transition \$50,727,914 in fuel and purchase power costs that are  
21 currently recovered in base rates to the Energy Adjustment Rider (also called the Fuel  
22 Clause Adjustment or FCA). This transition to fuel revenue recovery is merely a change  
23 to *how* these fuel costs are recovered, and OTP's overall revenues will not change as a  
24 result of this proposal.

25 OTP is facing a growing need to invest in additional infrastructure over at least  
26 the next five years and will need to go to the market to raise additional capital.  
27 Consequently, we need to have reasonable earnings and a competitive ROE.  
28

1 Q. DOES THIS CONCLUDE YOUR TESTIMONY?

2 A. Yes.

## **Qualifications, Duties and Responsibilities of Bruce Gerhardson**

### **EMPLOYMENT**

#### Vice President, Regulatory Affairs – Otter Tail Power Company

October 2017-Present

Executive leadership over regulatory affairs, market planning and strategic planning

#### Director, Regulatory Affairs and Compliance – Otter Tail Power Company

April 2017-October 2017

Executive Leadership over regulatory economics, administration, proceedings and compliance

#### Associate General Counsel - Otter Tail Power Company, Fergus Falls, MN

2000-April 2017

Lead Counsel for regulatory affairs and administrative proceedings. Chief Compliance Counsel. Staff of eight advocacy and compliance personnel, including the Manager of Regulatory Economics and the Manager of Regulatory Proceedings and Compliance.

#### Partner - Svingen, Athens, Russell and Hagstrom Law Firm, Fergus Falls, MN

1995-2000

Comprehensive legal representation of individual clients, with public utility and agribusiness focus. Regulatory proceedings, project development and other transactions.

### **EDUCATION**

#### University of Minnesota Law School

JD Cum Laude 1995. Judicial Extern for the Mille Lacs Band of Ojibwe Tribal Court; Summer Associate at Pemberton, Sorlie, Rufer & Kershner Law Firm, Fergus Falls, Minnesota

#### University of Minnesota-Duluth

Graduate Work, English Literature and Writing 1990-1992; Fellowships and Teaching Assistantships in Writing and Literature

#### St. Olaf College

BA Cum Laude, English 1988; Semester Abroad at University of Aberdeen, Scotland

#### Fergus Falls Community College

AA Liberal Arts 1985

### **INDUSTRY CERTIFICATIONS**

Law licenses in Minnesota, North Dakota and South Dakota

PROFESSIONAL AFFILIATIONS

- Minnesota State Bar Assn. Public Utility Law Section Council
- Fergus Area College Foundation Board-Past President
- Otter Tail County United Way-Past Campaign Co-Chair
- Fergus Falls Sister City Commission (Sister City relationship with Nordhordland, Norway)