

STATE OF NORTH DAKOTA  
BEFORE THE  
PUBLIC SERVICE COMMISSION

Otter Tail Power Company  
Advance Prudence – Astoria Gas  
Application

Case No. PU-17-

**APPLICATION FOR ADVANCE DETERMINATION OF PRUDENCE**

**I. INTRODUCTION**

Pursuant to N.D.C.C. § 49-05-16, Otter Tail Power Company (Otter Tail or the Company) respectfully submits this Application for an advance determination of prudence (ADP) for the Company's proposed development, ownership, and operation of the Astoria Simple Cycle Generation Station (Astoria Station or Project), an approximately 250 MW natural gas-fired, frame-style, simple cycle combustion turbine generation facility to be located near Astoria, South Dakota.

Astoria Station will provide capacity, dispatchable energy, and grid support as part of Otter Tail's two-part plan to reliably meet our customers' electric needs, replace expiring capacity purchase agreements, and prepare for the 2021 retirement of the 1950s-era 140 MW Powder River Basin (PRB) coal-fired Hoot Lake Plant near Fergus Falls, Minnesota. The other component of Otter Tail's two-part plan is the construction of the 150 MW Merricourt wind generation facility (the Merricourt Project) in North Dakota, which will provide very competitively priced energy made available by the federal production tax credit (PTC) for wind facilities. Otter Tail is embarking on the addition of Astoria Station and Merricourt Project to meet its customer needs in a least-cost manner.

- 43 PU-17-143 Filed 10/06/2017 Pages: 21  
Exhibit OTP-1 - Astoria Advanced Determination of Prudence Application - Public
- 39 PU-17-141 Filed 10/06/2017 Pages: 21  
Exhibit OTP-1 - Astoria Advanced Determination of Prudence Application - Public
- 34 PU-17-140 Filed 10/06/2017 Pages: 21  
Exhibit OTP-1 - Astoria Advanced Determination of Prudence Application - Public

The Company's analysis of Astoria Station indicates it will be beneficial for Otter Tail's customers because it is the least-cost resource available to meet the Company's needs. More specifically, Otter Tail's 2013 resource planning process determined that the least-cost method of meeting Otter Tail's 2021 capacity needs would be to add a simple cycle generator to Otter Tail's system. Otter Tail's 2016 resource planning process confirmed the results of the 2013 process and specifically identified a simple cycle unit with Astoria Station's size, costs and operating characteristics as the least-cost resource addition. Astoria Station will also provide reliability and hedge value. Thus, Astoria Station is prudent.

This Application and supporting testimony demonstrate that Otter Tail's proposed development, ownership, and operation of Astoria Station is a prudent resource addition; it will provide a cost effective, dispatchable generation resource for the Company's North Dakota electric customers.

## **II. DESCRIPTION OF APPLICANT**

Applicant's full name and post office address are as follows:

Otter Tail Power Company  
215 South Cascade Street  
P.O. Box 496  
Fergus Falls, MN 56538-0496

Otter Tail is a Minnesota corporation duly authorized to do business in the State of North Dakota as a foreign corporation, and it is doing business in North Dakota as a public utility subject to the jurisdiction of, and regulation by, the Commission under N.D.C.C. Title 49, as amended. Otter Tail's certificate of incorporation and amendments to the certificate have previously been filed with the Commission in Case No. PU-09-677. The certificate and amendments are hereby incorporated by reference, as though fully set forth herein. A current certificate of good standing is attached as Appendix 1.

**III. COMMUNICATION AND SERVICE**

The Company respectfully requests that the following persons be placed on the Commission's official service list for all communications in this case:

Mark Bring  
Director of Legislative Affairs and  
Associate General Counsel  
Otter Tail Power Company  
215 S. Cascade Street  
Fergus Falls, MN 56538-0496  
[mbring@otpco.com](mailto:mbring@otpco.com)

Cary Stephenson  
Associate General Counsel  
Otter Tail Power Company  
215 S. Cascade Street  
Fergus Falls, MN 56538-0496  
[cstephenson@otpco.com](mailto:cstephenson@otpco.com)

**IV. STANDARD OF REVIEW FOR ADVANCE DETERMINATION OF PRUDENCE**

Pursuant to N.D.C.C. § 49-05-16(1), the Commission may issue an order approving the prudence of a resource addition if:

- a. The public utility files with its application a projection of costs to the date of the anticipated commercial operation of the resource addition;
- b. The public utility files with its application a fee ... of one hundred seventy-five thousand dollars....;
- c. The commission provides notice and holds a hearing, if appropriate, in accordance with [N.D.C.C.] section 49-02-02; and
- d. The commission determines that the resource addition is prudent. For facilities located or to be located in this state the commission, in determining whether the resource addition is prudent, shall consider the benefits of having the resource addition located in this state.

**V. PROJECT DESCRIPTION**

Astoria Station will be an approximately 250 MW<sup>1</sup> natural gas-fired simple cycle combustion turbine near the town of Astoria in Deuel County, South Dakota. The Project includes all associated facilities, including a short segment of natural gas pipeline necessary to interconnect to the Northern Border Pipeline and electric transmission facilities necessary to interconnect to the Big Stone South-Brookings County 345 kV electric transmission line. The Project will be built with quick start capability to serve a load-following function and peak capacity needs. The Project is expected to be in service no later than May of 2021.

Otter Tail acquired land rights near Astoria precisely because that is where the Northern Border Pipeline and the Big Stone South-Brookings County transmission line intersect, which will help the Company avoid significant costs for connecting to these facilities. The generation component will be built on a minimal footprint in the area subject to the Company's land rights, which are being finalized for development. Any necessary natural gas or electric transmission interconnection infrastructure will likely be constructed on a parcel owned by the Company or on rights-of-way acquired from adjacent landowners.

The Project will use natural gas from the Northern Border Pipeline, which transports natural gas from Canada, from North Dakota's Williston Basin, and from the Dakota Gasification Company's facilities near Beulah, North Dakota, to points south and east. The Project will require construction of a gas pipeline estimated to be less than 1000 feet.

The Project will likely interconnect to a new switching station to be constructed by the co-owners of the Big Stone South-Brookings County 345 kV transmission line (i.e., Northern

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<sup>1</sup> The actual size of the simple cycle machine will be determined through Otter Tail's sourcing efforts which will seek to purchase the lowest-cost combustion turbine then available on the market, consistent with the size of the Company's capacity needs.

States Power Company-Minnesota and Otter Tail). Final interconnection costs for the Project have not yet been determined. The Project is in the Midcontinent Independent System Operator (MISO) interconnection queue, in the February 2016 study group. The MISO interconnection studies for this study group began in February 2017 and initial identification of facilities necessary to interconnect the Project will be available in the summer of 2017. This study process will ultimately culminate in a generator interconnection agreement (GIA) that the Company expects to execute in 2018. To estimate potential interconnection costs, the Company has completed its own transmission studies that are intended to replicate the MISO generator interconnection process. Otter Tail has also performed transmission deliverability studies to ensure that it can obtain sufficient transmission service for the Project.

The Project will be developed and managed by Otter Tail, which has significant experience in managing large utility projects. Otter Tail expects to engage third parties for detailed engineering contracts, with Otter Tail acting as the general contractor. Otter Tail has currently engaged two engineering firms to perform initial engineering, site evaluation, and initial site environmental analysis.

The Project will require an energy conversion facility permit from the South Dakota Public Utilities Commission. Authorization for the required associated facilities, including a short generation-tie line and the short natural gas pipeline necessary to connect to the Northern Border Pipeline, will be sought as part of the application for this permit. A transmission facility permit may also be required in order for the Big Stone South-Brookings County 345 kV transmission line co-owners to build a common interconnection point for the Project and any other regional generation projects. The Project will also require air and water appropriations permits from the South Dakota Department of Environment and Natural Resources. The

Company plans to ensure that all requisite permits and regulatory approvals (including this application for ADP) have been obtained before commencing the procurement process.

Otter Tail currently estimates the total capital cost of Astoria Station at approximately \$165 million, which is an effective cost of \$665/kw of installed capacity. The Company's cost estimate consists of [NOT PUBLIC DATA BEGINS... ..NOT PUBLIC DATA ENDS] for the generation equipment and its installation; [NOT PUBLIC DATA BEGINS... ..NOT PUBLIC DATA ENDS] for the electric transmission component of the Project, including MISO deposits, interconnection facilities, network upgrades, and transmission service; [NOT PUBLIC DATA BEGINS...

...NOT PUBLIC DATA ENDS] for Owner's Costs such as Otter Tail's labor, permitting, development, legal fees, land, engineering and other matters; [NOT PUBLIC DATA BEGINS... ..NOT PUBLIC DATA ENDS] for the short natural gas pipeline; and [NOT PUBLIC DATA BEGINS...

...NOT PUBLIC DATA ENDS] in cost escalators, inasmuch as the Project is not expected to be placed in service until 2021 and procurement will not commence for at least two years.

These initial cost estimates are based on the best information now available and are provided in advance of the commencement of the bidding and procurement process for the Project. Given this stage of development the Company's initial cost estimate includes a reasonable contingency. That said, the Company's analyses indicate that installing simple cycle generation to meet the Company's forward capacity need is the most prudent course of action. As discussed throughout this Application, Otter Tail's selection of the Astoria site mitigates the two largest cost drivers of natural gas generation: natural gas pipeline and electric transmission

infrastructure. Should the Company's cost estimates materially change, Otter Tail submits that the Project will remain a prudent resource addition. The Commission retains oversight of the prudence of the project pursuant to N.D.C.C. § 49-05-16(5). Consistent with N.D.C.C. § 49-05-16(3), Otter Tail will provide Project updates throughout the Project's development as may be directed by the Commission.

## VI. NEED FOR AND JUSTIFICATION OF THE RESOURCE ADDITION

As discussed in the Company's most recent Integrated Resource Plan (IRP),<sup>2</sup> Astoria Station is the second component of the Company's two-part plan to meet our customers' electric needs; replace expiring capacity purchase agreements; and prepare for the 2021 retirement of the 1950s-era 140 MW PRB coal-fired Hoot Lake Plant.<sup>3</sup> The other component of this plan is the construction of the Merricourt Project – an approximately 150 MW wind generation facility near Merricourt, North Dakota.<sup>4</sup> Together, the components of the Company's two-part plan exemplify Otter Tail's all-of-the-above energy strategy by securing least-cost wind energy and capacity while bolstering grid reliability with dispatchable energy and load-following capability. This two-part plan includes enough capacity to reliably serve customers during periods of high demand for power, and enough energy to serve customers long term, making these resource additions prudent. As demonstrated in this Application, Astoria Station is prudent as a needed and least-cost capacity resource providing capacity, dispatchable energy and load-following capability, as well as material hedge value.

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<sup>2</sup> Otter Tail's most recent IRP was filed with the Commission on June 15, 2016, in Case No. PU-16-308.

<sup>3</sup> The Hoot Lake Plant consists of Unit 2, built in 1959 with a nameplate rating of 53.5 MW, and Unit 3, built in 1964 with a nameplate rating of 75 MW. The units are capable of output greater than their nameplate ratings.

<sup>4</sup> Otter Tail has filed its ADP application for the wind generation facility contemporaneous with this Application.

**A. Need Drivers**

Otter Tail's development of the Project is being driven by a need for capacity and energy precipitated by three factors: (1) load growth forecasts; (2) the expiration of a series of capacity purchase agreements; and (3) the 2021 retirement of the Company's Hoot Lake Plant Units 2 and 3.

The Hoot Lake Plant is aging. Given the magnitude of investment necessary to keep its units and associated infrastructure operational, and the anticipated cost of potential future environmental compliance upgrades, Otter Tail has been analyzing the plant's ongoing role in the Company's generation portfolio. The Company's analysis began in 2010 when material investments in Hoot Lake Plant were likely to be needed to comply with the Mercury and Air Toxics Standards (MATS) regulations in 2015. To that end, the Company conducted its Baseload Diversification Study in 2012 to determine the most prudent course of action. Based on that work, the Company determined that making minimal investments for MATS compliance and then retiring Hoot Lake Plant Units 2 and 3 in 2021 was the least-cost and most prudent course of action.

Otter Tail's 2012 analysis was sound and this course of action remains least-cost and prudent. The analyses performed as part of the Company's 2013 resource planning cycle also support the retirement of Hoot Lake Plant. While Hoot Lake Plant was designed and constructed as a baseload plant, starting around 2015 low energy market prices caused Hoot Lake Plant Units 2 and 3 to be dispatched infrequently. Unit 2 is now operated primarily in the winter as a source of building heat; Unit 3 has seen only limited operation year-round and is primarily operated only for required environmental testing and when MISO infrequently dispatches the unit. As a

result, Hoot Lake Plant has essentially transitioned to a capacity resource and Otter Tail has been sourcing more of its energy from the MISO market.

Given the significant balance of plant investments needed to keep such aged units and associated infrastructure operational, the potential for future environmental upgrades, and the infrequency with which the units are dispatched, the Company can no longer justify continuing to maintain and operate Hoot Lake Plant. Consequently, it is necessary to replace the plant's generation capacity

Consistent with the Company's plans to retire Hoot Lake Plant in 2021, Otter Tail entered into a series of capacity purchase agreements to meet its obligation to serve customers. The capacity purchased through these agreements was intended to "bridge" the Company's capacity needs until Hoot Lake Plant is retired in 2021 and additional generation could be added to the Company's generation portfolio. Otter Tail timed the expiration of these capacity purchases with the retirement of Hoot Lake Plant, so that it could aggregate its capacity needs to support the addition of new generation, rather than rely on the market. Capacity reserves are declining in MISO and, therefore, it may be difficult to obtain future economical replacement capacity agreements of sufficient size.<sup>5</sup> By aggregating the capacity needs attributable to the retirement of Hoot Lake Plant and the expiration of the capacity purchases, Otter Tail is able to add optimal complements of new generation, providing grid support and a long-term market hedge.

The Company also continues to forecast future load growth, primarily driven by pipeline expansions. While load growth forecasts are inherently uncertain, anticipated load growth is an

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<sup>5</sup> MISO has indicated that "supply has declined due to plant retirements in excess of new resource additions" and "continued resource adequacy will depend on uncommitted resources or resources with potential retirements." Midcontinent Independent System Operator, Inc. 2016 OMS SURVEY RESULTS at p. 1 (June 2016).

additional driver of the need for Astoria Station. Otter Tail's energy needs will also increase due to expiration of a 50 MW on-peak energy-only agreement in 2021. This energy-only contract is separate and apart from the capacity purchases referenced in the preceding paragraph.

These events require Otter Tail to take action. The Company's current analysis indicates that without replacement capacity and energy, Otter Tail will have a capacity deficit of approximately 273 MW in 2021, and will need to source between 26% and 31% of its energy from the MISO markets.

#### **B. Developing the Two-Part Plan**

When a utility has a simultaneous capacity and energy need for a portion of its load-serving obligations, it traditionally seeks a resource addition that provides both capacity and energy at reasonable pricing. This generally results in combined cycle generation, which has the ability to follow load by ramping up and down throughout the day while providing energy at lower marginal cost than a simple cycle generator and with lower capital cost than a baseload generator. However, a hybrid approach of wind-plus-gas, as in Otter Tail's two-part plan, can more optimally provide these characteristics.

As part of the Company's 2013 resource planning cycle, Otter Tail analyzed potential replacement scenarios in anticipation of Hoot Lake Plant's retirement. The Company used the Strategist resource planning model to aid in this analysis. To conduct its analysis, Otter Tail made available to the model several different resource selection options, including a 311 MW combined cycle generator, three different sized simple cycle generators, the repowering of Hoot Lake Plant to natural gas, and wind and solar resources. Notwithstanding the need for both capacity and energy, the Strategist model indicated that moving forward with a combined cycle plant would not be economic, nor would repowering Hoot Lake Plant to natural gas.

Rather, the results indicated that replacing Hoot Lake Plant's capacity with a simple cycle generator was the most economic choice. The modelling results also indicated that if wind energy was priced at \$45/MWh, market purchases should be made to meet the Company's energy needs. However, when wind energy was priced at \$30/MWh, Strategist selected wind energy instead of market purchases for energy, signaling that acquiring 150 MW of wind generation in 2021 would be the most economic choice to meet Otter Tail's energy needs. In the Company's 2016 resource planning cycle, Strategist continued to select a wind-plus-gas configuration in all scenarios analyzed. This analysis confirmed the prudence of moving forward with the Company's two-part plan.

Additionally, a combination of wind and natural gas-fired simple cycle generation provides beneficial operating characteristics. The natural gas-fired simple cycle component of the Company's two-part plan, Astoria Station, provides low-cost capacity and dispatchable energy. The addition of dispatchable energy provides both a hedge against high energy market prices and grid support due to its capability of starting quickly and then following load. The wind component provides low-cost energy. Backing wind with gas captures the low-cost energy made possible by the current market for wind generation while helping to ensure sufficient reliability through grid support from dispatchable simple cycle generation (which yields low-cost capacity). Simple cycle gas generation paired with wind is particularly attractive because the Company's service territory has some of the best wind resources in the country. Consequently, a wind-plus-gas configuration can provide many of the same operational and economic benefits of a combined cycle plant.

A wind-plus-gas configuration also has hedge and expansion value. If Otter Tail instead installed a combined cycle plant, the Company and its customers would face significantly more

exposure to fluctuations in natural gas pricing. Because it will use less natural gas, a simple cycle plant mitigates that risk. Moreover, a natural gas simple cycle plant site can include sufficient space and design parameters to accommodate the potential future addition of combined cycle generation, if market conditions later warrant it. The wind component can provide low-cost energy from a zero-cost fuel source, providing both a market and fuel hedge. The Company's service area has excellent wind resources, providing an economical generation resource with low potential for transmission congestion – due to the wind resource's proximity to the Company's customers.

## **VII. PROJECT SELECTION AND IMPACTS**

After the Company confirmed that simple cycle generation is the most economical way to meet its capacity needs, it sought to develop the least-cost simple cycle generator available. This resulted in identification of Astoria Station. To evaluate the cost-effectiveness of Astoria Station, the Company used Strategist resource planning software to analyze the impact of the Project. The Company's analysis indicates that the Project is least-cost and prudent as it provides needed capacity on a least-cost basis, provides operational support for grid reliability, and has significant hedge value against volatile energy market pricing.

### **A. Least-Cost Resource Selected**

Once the Company confirmed that a simple cycle gas fired generator is the most economical way to meet its customer needs, the Company undertook an options assessment. First, Otter Tail determined that long-term ownership, instead of a power purchase agreement, is most appropriate for the simple cycle plant, because long-term ownership affords capacity to meet customer needs well beyond the term of a standard power purchase agreement. Long-term ownership also allows for future expansion of the plant should circumstances warrant.

Additionally, a longer project life drives beneficial project economics. Otter Tail also determined that it should manage project development, since this will eliminate additional third-party costs and is consistent with Otter Tail's management skill set.

After confirming the advisability of the Company's ownership and development of the Project, Otter Tail assessed potential project sites. One of the largest cost drivers of a simple cycle generator is the need to construct pipelines for gas access and electric transmission lines to interconnect to the electric grid. Minimizing these costs reduces the overall cost of the Project, since the cost of the turbine and its installation (the other material cost) are generally the same for any site. The Company originally assessed several sites throughout North Dakota, South Dakota, and Minnesota. Otter Tail then narrowed its consideration to three North Dakota sites,<sup>6</sup> one South Dakota site, and one Minnesota site.

The Company identified the South Dakota site as the preferred site due to its proximity to the intersection of the Northern Border Pipeline and the soon to be completed CapX2020 Big Stone South - Brookings County 345 kV transmission line. The South Dakota site required the least amount of gas and transmission interconnection infrastructure, which reduces capital investment and ensures the Project will be least-cost. Additionally, the South Dakota site was large enough to allow for plant expansion in the future.

None of the North Dakota sites could economically support construction of a pipeline absent additional regional need for natural gas. Therefore, long pipelines would have added significant cost to a gas generator located in North Dakota and impacted significantly more landowners. The Company explored whether there were ways to more economically extend a pipeline for a North Dakota site. The costs for such pipelines could not be justified.

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<sup>6</sup> The three North Dakota sites considered were near Wishek, Ellendale and Merricourt, North Dakota.

Otter Tail also explored brownfield development at its existing Solway, Minnesota simple cycle plant. Brownfield development can often reduce overall project costs by maximizing use of existing infrastructure. While the Solway site has several advantages, it lacks sufficient electric transmission infrastructure to support an additional simple cycle generator. Additionally, Astoria Station provides site diversity for the Company's gas-fired generation, allowing Otter Tail to utilize different gas supply lines and prudently hedge against gas supply disruptions.

Otter Tail also assessed the appropriate type of simple cycle generator to purchase for the Project. Two general options are available: (1) frame machines, and (2) aero-derivative machines. The Company currently plans to purchase a larger frame machine to capture economies of scale. A frame machine can operate dynamically and afford load-following and other operating characteristics appropriate for a wind-plus-gas hybrid approach.

Based on Otter Tail's plan to develop and manage construction of the Project, its selection of an economic site to minimize the cost of supporting infrastructure, and its plan to select a larger combustion turbine, Otter Tail submits that Astoria Station is the least-cost resource addition to meet its identified need.

## **B. Economic Impacts**

As discussed above, Otter Tail's current cost estimates for Astoria Station are consistent with the Company's resource plan assumptions, confirming the prudence of moving forward with a simple cycle resource addition. More specifically, Otter Tail's resource plan analysis included a generic unit with the same cost and operating characteristics as Astoria Station as a generating option for Strategist to select. Strategist selected the generic simple cycle generator with Astoria Station's characteristics in every scenario analyzed. Consequently, Otter Tail's

assessment is that Astoria Station is the most economical way to meet its identified needs and is therefore prudent.

To confirm the resource planning analysis, Otter Tail used the Strategist modelling tool to assess the cost impact of Astoria Station when compared to making no resource addition. Otter Tail also analyzed the impact of its two-part plan compared with no resource additions. The table below provides the results of this analysis. As shown, Astoria Station lowers lifetime system costs as compared to scenarios without the resource addition.

Scenario	Present Value Utility Costs (000)	Difference from Base
Base Case (Market energy and capacity purchases)	2,375,341.80	
Base plus Astoria	2,338,913.80	-36,428.00
Base plus Astoria and Merricourt	2,238,187.50	-137,154.30

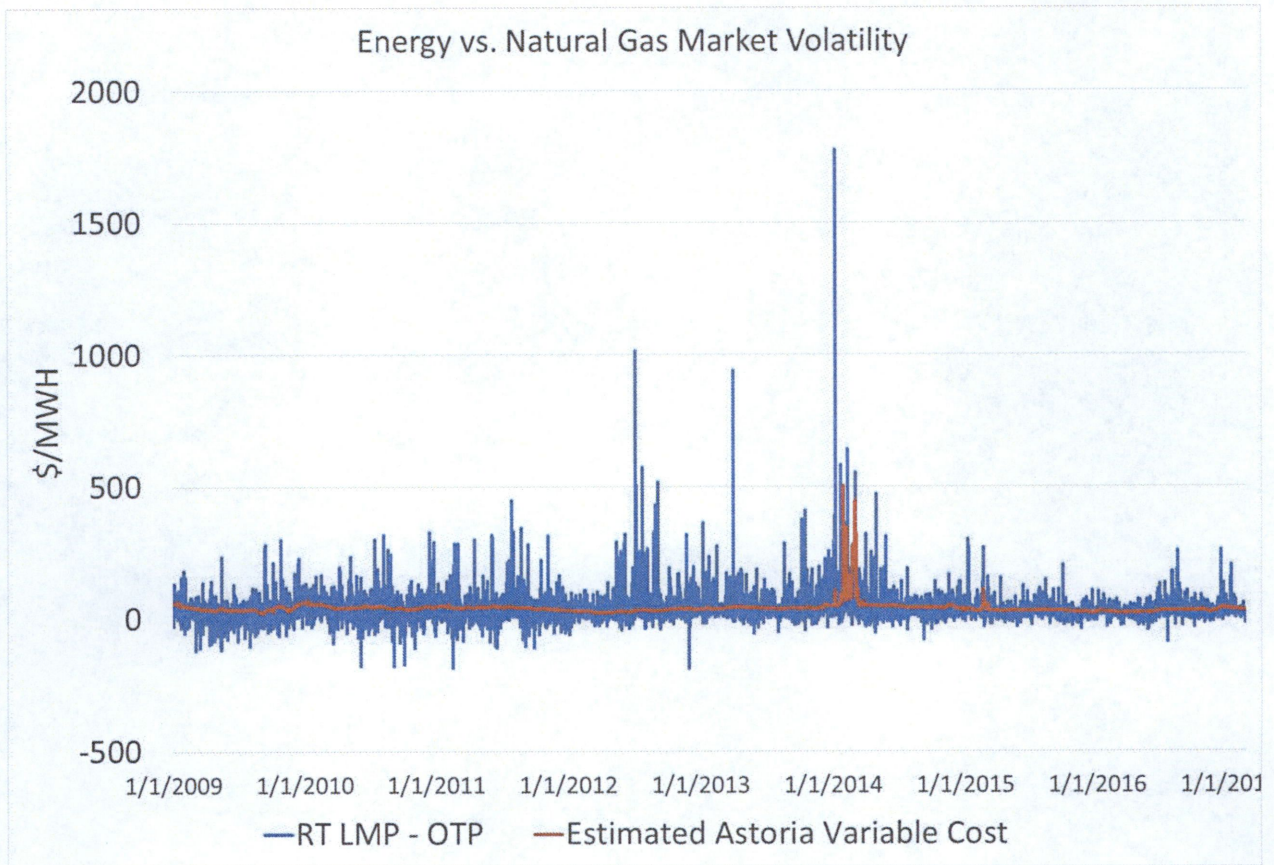
**C. Reliability and Hedge Value**

The Project will primarily serve as a capacity resource. The Company’s Strategist modeling indicates that under forecast market conditions, the Project will have a 10% to 12% annual net capacity factor and provide approximately 5% of our customers’ annual energy requirements. These operating characteristics and the Company’s ownership of the facility will provide reliability and hedge value for our customers.

While the Project will be subject to natural gas price fluctuations, utilizing a simple cycle peaking resource to meet the Company’s capacity needs mitigates Otter Tail’s exposure to price volatility by minimizing gas consumption. This is because Astoria Station is expected to have a relatively low net capacity factor when compared to a combined cycle generator. Additionally, Otter Tail is mitigating out-year capacity market risk by owning the resource.

The Project will also establish a ceiling on energy market prices that would otherwise affect the Company’s customers, hedging against potentially higher energy market prices. If energy market prices are sufficiently high, the Project will be dispatched and Otter Tail’s

customers will pay the unit's production costs rather than higher market pricing. The figure below illustrates how the Project would have performed in the energy markets from January 2009 through January 2017.



The figure shows that the Project would have dispatched at materially lower cost than the market price for those hours when the market price was highest, providing the energy market hedge. Except when necessary for reliability purposes, the Project would not dispatch if energy market prices are lower than its marginal cost.

Additionally, Astoria Station will be constructed with quick start capability, providing load-following capabilities and dispatchable energy when necessary to support reliable operation

of the electric grid when necessary. These characteristics further support the prudence of the Project.

#### **VIII. REASONABLE DEVELOPMENT RISKS**

As is typical with any large generating project, there are risks associated with the development of Astoria Station. Otter Tail has performed reasonable due diligence to assess and mitigate development risks. Additionally, Otter Tail is experienced in managing large development projects. Moreover, managing the development of Astoria Station will provide Otter Tail flexibility to directly address issues as they may arise.

The Company's due diligence investigation determined that interconnection cost uncertainty associated with the MISO generator interconnection process is the main risk in moving forward with the Project. The Company believes its selection of simple cycle generation technology is itself a way of addressing interconnection cost uncertainty. Significant wind generation development is expected in Otter Tail's service area, impacting the overall energy supply picture in the MISO region in which the Company operates. Simple cycle generation for peaking needs will be called upon when this wind generation is reduced and market prices are high. Consequently, Otter Tail's judgment is that interconnection costs will primarily be allocated to this new wind generation rather than to peaking resources fueled by natural gas.

Because the Company does not expect to receive results from the interconnection process for some time, Otter Tail performed an internal analysis replicating MISO's interconnection process. Our preliminary analysis suggests interconnection costs will be reasonably consistent with the Project's budget. Further, Otter Tail has investigated the costs necessary for deliverability of the Project (which also hedges interconnection cost uncertainty risk) and has also included those costs in its budget.

Otter Tail's management experience also mitigates construction risks. The Company has a history of successful large project execution. The Company has selected an experienced consulting engineering firm to provide necessary technical support for Otter Tail's development of the Project. The Company will contract directly with the turbine supplier to ensure contractual recourse for performance guarantees and warranties. Prudent terms and conditions will be negotiated to ensure timely completion of the Project. In addition, Project permitting and regulatory approvals will be pursued prior to significant procurements. This approach will minimize exposure to stranded costs and delays.

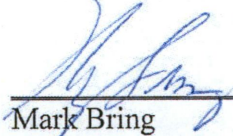
Overall, Otter Tail has planned to develop the Project in a prudent manner and will implement strategies to reasonably mitigate development risk.

#### **IX. CONCLUSION**

Astoria Station is a prudent resource addition to meet capacity needs in a least-cost manner. Together with the 150 MW Merricourt Project, it is an essential part of the Company's two-part plan to meet customers' energy and capacity needs. Otter Tail has taken prudent steps to ensure that a least-cost resource will be developed and to reasonably mitigate the risks inherent with developing this type of generating resource. Therefore, pursuant to N.D.C.C. § 49-05-16, Otter Tail respectfully requests that the Commission issue an advance determination of the prudence for the Company's addition of Astoria Station.

DATED: April 10, 2017

Respectfully submitted,



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Mark Bring  
Director of Legislative Affairs and  
Associate General Counsel  
Otter Tail Power Company  
215 S. Cascade Street  
Fergus Falls, MN 56538-0496  
[mbring@otpc.com](mailto:mbring@otpc.com)

## APPENDIX 1

# *State of North Dakota*

## SECRETARY OF STATE



### CERTIFICATE OF GOOD STANDING OF

OTTER TAIL POWER COMPANY

The undersigned, as Secretary of State of the State of North Dakota, hereby certifies that OTTER TAIL POWER COMPANY, a Minnesota corporation, authorized to transact business in the State of North Dakota on February 24, 1914, and according to the records of this office as of this date, has paid all fees due this office as required by North Dakota statutes governing foreign corporations.

**ACCORDINGLY** the undersigned, as such Secretary of State, and by virtue of the authority vested in him by law, hereby issues this Certificate of Good Standing to

OTTER TAIL POWER COMPANY

Issued: March 28, 2017

A handwritten signature in black ink, reading "Alvin A. Jaeger".

Alvin A. Jaeger  
Secretary of State