

## Staff Briefing Papers

Meeting Date	June 24, 2021	Agenda Item 5**
Company	Otter Tail Power Company (Otter Tail, OTP, Company)	
Docket No.	<b>E-017/AA-19-297</b>	
	In the Matter of Otter Tail Power Company’s Petition for Approval of the Annual True-Up for its Energy Adjustment Rider, Rate Schedule Section 13.01	
Issue	Should the Commission approve Otter Tail Power’s 2020 Energy Adjustment Rider true-up?	
Staff	Jorge Alonso <a href="mailto:jorge.alonso@state.mn.us">jorge.alonso@state.mn.us</a>	651-201-2258

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 <b>Relevant Documents</b>	<b>Date</b>
Otter Tail Power – Compliance Filing (Public & Trade Secret)	February 26, 2021
Department of Commerce – Comments (Public & Trade Secret)	April 15, 2021
Otter Tail Power – Reply Comments	May 3, 2021

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## **I. Statement of the Issue**

Should the Commission approve Otter Tail's 2020 annual fuel forecast?

## **II. Background**

On February 26, 2021, Otter Tail filed its 2020 Annual True-Up for its Energy Adjustment Rider (EAR) seeking to refund \$1,246,144 over a twelve-month period.

On April 15, 2021, the Minnesota Department of Commerce – Division of Energy Resources (Department, DOC) filed comments recommending approval of Otter Tail's 2020 EAR true-up petition (Petition), with a minor modification. The Department recommended that the Company issue refunds over a four-month period from September 1 – December 31, 2021.

On May 3, 2021, Otter Tail filed reply comments agreeing to issue refunds over the four-month period recommended by the Department.

## **III. Parties' Comments**

### **A. Otter Tail Power – Initial Filing**

Otter Tail noted that, on May 14, 2020, the Company submitted, in this docket, a Supplemental Filing requesting approval of a reduction to approved fuel cost charges for the July – September 2020 period. This was a result of a \$3.6 million FCA over-collection between January – March 2020. The refund reduced approved July – September 2020 EAR rates by (\$0.0057) per kWh and was approved in the Commission's Order dated July 13, 2020.

On October 12, 2020, Otter Tail filed Reply Comments, also in this docket, addressing the Department's letters recommending Otter Tail refund approximately \$8.4 million for FCA over collection between April – September 2020. The Commission's November 16, 2020 Order approved this refund which reduced approved January to June 2021 EAR rates by (\$0.0061) per kWh.

In this filing, Otter Tail seeks to true-up final FCA costs and collections for calendar year 2020 and provides analysis of various factors that contributed to the variances that occurred between forecasted and actual 2020 costs.

Due in part to economic conditions related to the COVID-19 pandemic which put downward pressure on both energy usage (lower sales) and lower energy market prices, calendar year 2020 yielded substantially lower costs than forecasted. As a result, on a system-wide basis, Otter Tail's actual EAR recoverable costs for 2020 were \$97,122,863 as compared to Otter Tail's forecasted costs for 2020 of \$129,421,381. Based on the ratio of Minnesota kWh sales subject to the EAR, to total system kWh sales subject to the EAR, Minnesota's share of 2020 system costs were \$49,200,166. Total collections from customers in 2020 based on forecasted rates implemented in 2020 were \$61,936,710, resulting in an over collection of \$12,736,544, before refunds. As authorized by the Commission, Otter Tail has already refunded \$3,295,635 during

2020 for its Q1 over-collection and is in the process of refunding \$8,383,674 attributable to Q2 and Q3 2020 over-collections. Otter Tail now seeks to refund \$1,246,144<sup>1</sup> of estimated remaining over-recoveries from 2020 and Otter Tail’s prior year true-up period.

**1. Key Results and Analysis Overview**

Table 1 shows that the total 2020 actual cost per MWh was \$20.307 per MWh, over 20% lower than forecast, and total actual costs were \$97,122,862 for 2020, nearly 25% below forecast. These results were driven in part by lower overall sales in 2020 and significantly lower market prices for energy in 2020 that resulted in increased levels of market purchases to serve Otter Tail’s load.

**Table 1 - 2020 FCA Summary (Total System)<sup>2</sup>**

	Actual	Forecast	Variance	Variance %
Average Cost Per MWh	\$20.307	\$25.719	(\$5.412)	-21.04%
MWh Sales Subject to COE	4,782,786	5,032,227	(249,441)	-4.96%
Total Cost (Fuel & Purchased Power)	\$97,122,862	\$129,421,381	(\$32,298,519)	-24.96%
Average On-Peak LMP Prices @ OTP.OTP	\$19.95	\$30.10	(\$10.15)	-33.72%
Average Off-Peak LMP Prices @ OTP.OTP	\$13.61	\$21.59	(\$7.98)	-36.96%
MWhs of PPAs and Market Purchases	2,693,390	2,477,900	215,490	8.70%
Total Cost of PPAs and Market Purchases	\$56,861,382	\$75,064,600	(\$18,203,218)	-24.25%
Average Cost of PPAs and Market Purchases	\$21.11	\$30.29	(\$9.18)	-30.31% <sup>3</sup>

<sup>1</sup> This amount includes an estimated \$188,910 true-up attributable to the July 2018 – December 2019 recovery period.

<sup>2</sup> Attachment 2 provides a summary of 2020 monthly forecast and actual results. Attachment 3 (Not Public) includes detailed monthly forecast-to-actual comparisons, with separate monthly variance analysis for total monthly costs, monthly MWhs, and monthly cost per MWh, as well as Total Year results for those same components.

<sup>3</sup> Otter Tail’s Table 1 shows the variance to be 34.48%. Staff does not consider this discrepancy to be material.

**2. 2020 Total Costs Significantly Lower than Forecast.**

Table 2 summarizes OTP actual monthly FCA costs for 2020 compared to forecasted costs. As noted earlier.

**Table 2 - 2020 Monthly Fuel & Purchased Power Costs Forecast to Actual Comparison (Total System)**

Month	Actual	Forecast	Variance
January	\$9,332,364	\$14,502,885	(\$5,170,521)
February	\$10,452,068	\$12,634,626	(\$2,182,558)
March	\$10,372,001	\$11,496,469	(\$1,124,468)
April	\$7,824,207	\$10,256,151	(\$2,431,944)
May	\$5,870,251	\$9,187,126	(\$3,316,875)
June	\$6,575,321	\$8,963,352	(\$2,388,031)
July	\$8,308,216	\$10,600,494	(\$2,292,278)
August	\$7,865,824	\$10,565,657	(\$2,699,833)
September	\$5,801,508	\$9,515,539	(\$3,714,031)
October	\$7,697,716	\$9,922,678	(\$2,224,962)
November	\$7,330,897	\$9,982,342	(\$2,651,445)
December	\$9,692,490	\$11,794,063	(\$2,101,573)
Total	\$97,122,863	\$129,421,381	(\$32,298,518)

**3. 2020 Sales Lower than Forecast**

Otter Tail’s 2020 FCA forecast was developed using the most current sales forecast available at the time of its May 1, 2019 initial filing. One of the factors contributing to lower 2020 overall system FCA costs is that, relative to forecast, overall kWh sales were down approximately 5%. Otter Tail did see some impact to sales as a result of the Covid-19 pandemic as overall weather normalized sales were estimated to be approximately 2.3% lower than 2019 system-wide levels, with reductions seen in Otter Tail’s commercial and industrial classes. Heating degree days (HDD) for 2020 were also approximately 1.7% below average in 2020. Table 3 shows actual billed kWh sales compared to forecast for 2020.

**Table 3 – 2020 Monthly kWh Sales Forecast to Actual Comparison (Total System)**

Month	Actual	Forecast	Variance
January	525,803,882	516,145,946	9,657,936
February	485,700,007	461,351,280	24,348,727
March	447,004,344	447,936,557	(932,213)
April	424,301,304	392,321,425	31,979,879
May	342,631,227	365,688,288	(23,057,061)
June	318,787,814	360,590,709	(41,802,895)
July	377,629,725	393,002,979	(15,373,254)
August	370,769,899	390,291,493	(19,521,594)
September	348,118,753	372,297,486	(24,178,733)

Month	Actual	Forecast	Variance
October	340,535,416	396,746,982	(56,211,566)
November	381,354,135	440,853,742	(59,499,607)
December	420,149,651	494,999,959	(74,850,308)
Total	4,782,786,157	5,032,226,846	(249,440,689)

**4. Comparison of Forecasted Rates to Actual Costs Per kWh**

2020 actual average cost of fuel and purchased power was \$0.020307/kWh compared to a forecast of \$0.025719/kWh. Table 4 also summarizes the approved monthly forecasted fuel rate per kWh, the actual fuel costs per kWh and the variances.

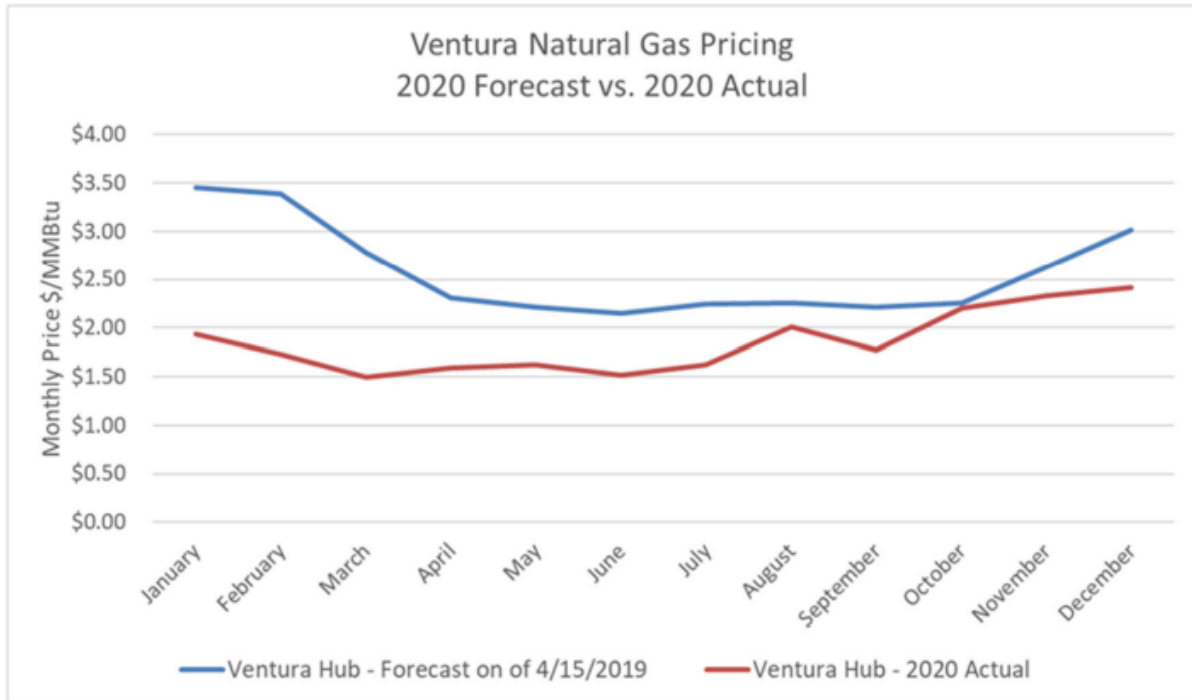
**Table 4 – Total FCA Cost Per kWh Forecast to Actual Comparison (Total System)**

Month	Actual	Forecast	Variance
January	\$0.017749	\$0.028098	(\$0.010350)
February	\$0.021520	\$0.027386	(\$0.005867)
March	\$0.023203	\$0.025665	(\$0.002462)
April	\$0.018440	\$0.026142	(\$0.007702)
May	\$0.017133	\$0.025123	(\$0.007990)
June	\$0.020626	\$0.024857	(\$0.004231)
July	\$0.022001	\$0.026973	(\$0.004972)
August	\$0.021215	\$0.027071	(\$0.005856)
September	\$0.016665	\$0.025559	(\$0.008894)
October	\$0.022605	\$0.025010	(\$0.002405)
November	\$0.019223	\$0.022643	(\$0.003420)
December	\$0.023069	\$0.023826	(\$0.000757)
Total	\$0.020307	\$0.025719	(\$0.005412)

**5. 2020 Market Prices for Natural Gas and Energy Significantly Impacted Total Costs**

**a. Natural Gas Prices**

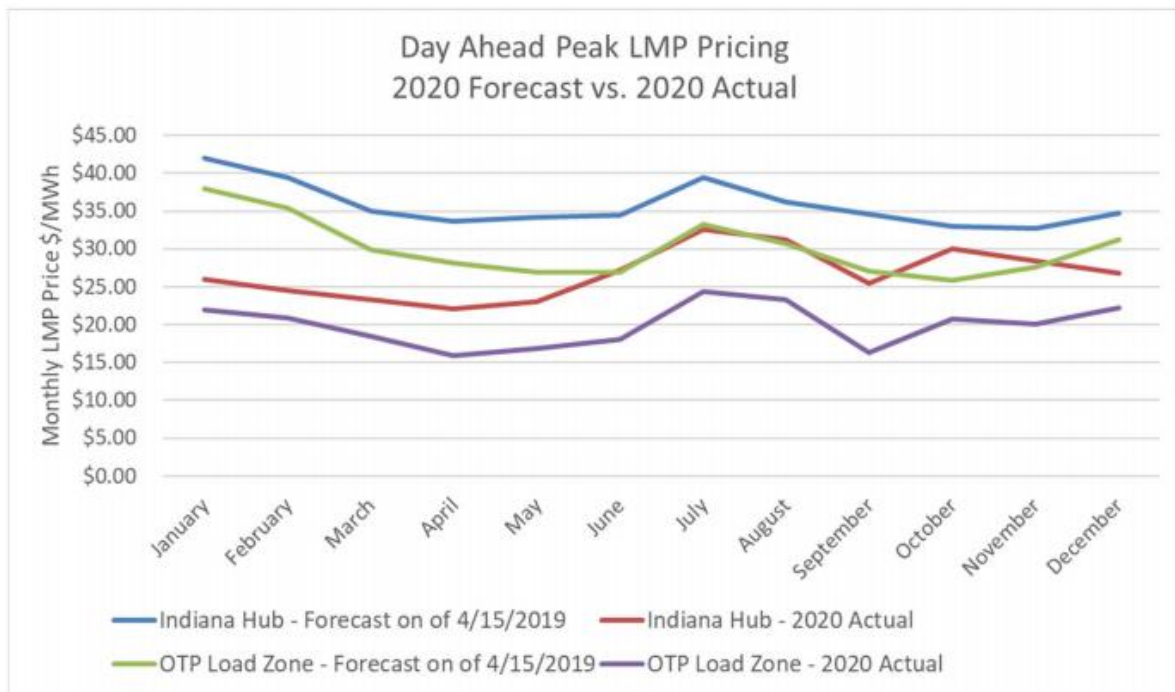
Since natural gas generation facilities are often marginal units, or price setting units, natural gas pricing often drives Mid-Continent Independent System Operator (MISO) Locational Marginal Pricing (LMP). This was evident in 2020 as pricing for much of the year remained below \$2.00 per MMBtu for the first three quarters of the year and between \$2.00 and \$2.50 in Q4. The graph below compares the 2020 actual average monthly Ventura Hub natural gas prices relative to the forecasted prices as of April 15, 2019 that were used as key inputs into Otter Tail’s FCA modeling to determine plant dispatch and associated market purchases included in Otter Tail’s forecasted rates.



**b. LMP Prices**

Forecasted LMP prices are a key input in Otter Tail’s Strategist model used to develop 2020 forecasted rates. The model uses those prices to estimate how generating resources will be dispatched based on their respective operating costs to meet forecasted load. When market prices are lower than the fuel costs to generate, the model assumes market purchases will meet load, just like the real market works.

Otter Tail’s forecasted 2020 LMP prices for the Otter Tail load zone used daily forward Indiana Hub price curves published by Intercontinental Exchange, Inc (ICE) as modeling inputs. As the Indiana Hub actual pricing deviates from forecasted pricing, the Otter Tail load zone will similarly deviate. The 2020 Otter Tail Power forecast utilized the April 15, 2019 Indiana Hub forward price curve; however, actual 2020 Indiana Hub pricing was 25% lower. Similarly, compared to the forecasted April 15, 2019 Otter Tail load zone price curve, actual 2020 Otter Tail load zone pricing dropped 33%. The reduction in LMP pricing is believed to be caused by a number of different factors, including, but not limited to, the very low natural gas pricing discussed earlier, ever increasing renewable penetration throughout the MISO footprint, and notably, the impacts to system and broader market loads caused by the COVID-19 pandemic during 2020. The graph below illustrates the Indiana Hub and Otter Tail load zone curves, forecast vs actual.



## 6. Generation Output

Otter Tail’s Strategist plant dispatch modeling is influenced by (1) the amount of load to be served, which varies seasonally; (2) energy acquired from long term purchase power agreements (PPAs) or other forward purchases; and (3) forecasted LMP prices from which energy could be acquired from the market. Plant availability is another factor, as planned outages and estimated forced outage rates were also inputs into model. The model attempts to balance all these variables to achieve the lowest cost portfolio of resources to meet load and other market requirements.

### a. Baseload Generation Utilization

Because market prices were lower in 2020, along with reduced loads, the actual dispatch of Otter Tail’s baseload units and the associated MWh output was 13.3% lower than forecasted. Fuel costs were 10% lower as a result of the reduced output. Table 5 below summarizes actual baseload generation output and fuel costs for 2020 compared to forecast.

**Table 5 – 2020 Baseload Generation Forecast to Actual Comparison (Total System)**

Generating Unit	Actual MWhs	Forecast MWhs	Variance MWhs	Variance %
Big Stone Plant	897,937	1,097,400	(199,463)	-18.2%
Coyote Station	835,443	931,200	(95,757)	-10.3%
Hoot Lake Plant Unit 2	100,201	145,700	(45,499)	-31.2%
Hoot Lake Plant Unit 3	98,031	54,000	44,031	81.5%
Total Baseload Generation -MWhs	1,931,612	2,228,300	(296,688)	-13.3%
Total Baseload Fuel Costs	\$45,124,340	\$50,336,035	(\$5,211,695)	-10.4%



## **b. Operational Changes – Big Stone Plant**

Otter Tail is a co-owner of Big Stone Plant (53.9%) along with Northwestern Energy (23.4%) and Montana-Dakota Utilities Co. (22.7%). Otter Tail is also a joint owner of Coyote Station (35%) along with Minnkota Power Cooperative (30%), Montana-Dakota Utilities Co. (25%) and Northwestern Energy (10%). Northwestern Energy's share of each plant is offered into the Southwest Power Pool (SPP) market, while Otter Tail and the rest of the joint owner's shares are part of the MISO market. Historically these plants have operated under a "must-run" status which means that the units are self-committed into the markets at a minimum level each day and depending on market conditions, MISO and/or SPP can dispatch those plants if market and/or reliability conditions merit additional output. The respective co-owners have generally relied on these units to meet their respective daily customer loads.

In April of 2020, the co-owners of Big Stone Plant agreed to a plan that would allow, if conditions warranted, the capability to offer the plant into the MISO and SPP markets on an economic dispatch basis. While at any time, any one of the co-owners can request their share of the unit be self-scheduled into the market, or if either SPP or MISO require the unit to run, all owners are required to take their minimum share of the plant as it is committed to their respective markets. There were periods during 2020 where the unit did operate under an economic dispatch status which kept the plant off-line. In those cases, loads were served through additional day ahead (DA) and real time (RT) market purchases or the dispatch of other lower priced generating units.

Hoot Lake Plant is generally offered into the market on an economic dispatch basis except for the winter months where one unit is committed to must run for purposes of providing building heat. The collective output from Hoot Lake Plant units 2 and 3 was in-line with forecasted amounts for 2020.

## **c. Plant Availability<sup>4</sup>**

Baseload generating plant availability remained high in 2020 for Otter Tail's primary baseload units. Big Stone Plant experienced just one forced outage in 2020 and Coyote Station had four, all related to various tube leaks. Big Stone plant had a major overhauls/extended maintenance outage in 2018 and Coyote Station had one in 2019.

Hoot Lake Plant units 2 and 3 both experienced a higher number of forced outages during 2020. Most of these forced outages were the result of tube leaks. Because Hoot Lake Plant is scheduled for retirement in the spring of 2021, maintenance levels are performed or adjusted to take into account the pending retirement and limited remaining life of the plant.

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<sup>4</sup> Attachment 13 (Not Public) provides a complete list of 2020 forced outages and the estimated change in energy costs attributable to those outages.

**d. Wind Generation**

Otter Tail’s owned wind generation output was approximately 8% lower than forecasted for 2020. Otter Tail’s new Merricourt Wind Energy Center had an assumed November 2020 commercial operation date included; however, final commercial operation of the entire wind farm occurred on December 21, 2020. As Table 6 shows, over half of the generation variance was attributable to Merricourt’s timing.

**Table 6 – 2020 OTP Owned Wind Generation Forecast to Actual Comparison (Total System)**

	<b>Actual MWhs</b>	<b>Forecast MWhs</b>	<b>Variance MWhs</b>	<b>Variance %</b>
Langdon Wind	141,294	147,200	(5,906)	-4.0%
Ashtabula Wind	143,736	156,900	(13,164)	-8.4%
Luverne Wind	173,806	174,800	(994)	-0.6%
Merricourt Wind	49,788	73,100	(23,312)	-31.9%
<b>Total Wind</b>	<b>508,624</b>	<b>552,000</b>	<b>(43,376)</b>	<b>-7.9%</b>

**7. Gas and Oil Peaking Units, Hydro and Solar Generation**

A small percentage of Otter Tail’s generation comes from a natural gas peaking unit at Solway, MN, several small oil peaking plants, as well as a small amount of hydro and small-scale solar generating facilities. Otter Tail’s Solway plant was dispatched at a slightly higher level than forecast in 2020. Low gas prices were the primary contributor to its increased dispatch by MISO. Detailed forecast to actual results for all these plants can be found in Attachment 3 (Not Public).

**8. Market Purchases and Purchased Power Agreements**

Otter Tail has been a party to three long-term wind Purchased Power Agreements (PPAs). Additional energy is procured through shared service agreements and small cog-gen agreements. The majority of Otter Tail’s purchased power comes through purchases in the MISO DA and RT markets, and certain forward bilateral energy purchases executed to hedge market price volatility during periods of peak load or when generating units are unavailable due to major planned outages.

Despite the increased volume, overall 2020 purchased power costs were \$18.2 million less than forecasted and accounted for a significant reduction in overall 2020 costs. Table 7 summarizes these various resources and their respective MWh contributions to Otter Tail’s overall 2020 resource needs relative to forecast and also summarizes their overall forecasted and actual costs.

**Table 7 – 2020 Purchased Power Summary Forecast to Actual Comparison (Total System)<sup>5</sup>**

	<b>Actual</b>	<b>Forecast</b>	<b>Variance</b>	<b>Variance %</b>
Wind PPAs - MWhs	327,673	359,500	(31,827)	-8.9%
Shared Loads/Small Cogen - MWhs	139,377	132,600	6,777	5.1%
Bilateral and MISO Market Purchases – MWhs	2,219,592	1,776,900	442,692	24.9%
Total Purchases - MWhs	2,686,642	2,269,000	417,642	18.4%
Total Purchases - Cost	\$56,861,382	\$75,064,600	(\$18,203,218)	-24.3%
Average Cost per MWh	\$21.16	\$33.08	(\$11.92)	-36.03%

**9. MISO and SPP Wholesale Market Charges<sup>6</sup>**

Wholesale market charges consist of numerous charges and credits Otter Tail is subjected to as a participant in the MISO and the SPP energy markets. This subset of wholesale market charges/credits does not include the primary charges/credits associated with the injection of energy (generation) and the withdrawal of energy (load), as these charges are captured in the purchased power category of costs described above. Nearly 70 different MISO and SPP wholesale market charge types are currently assessed to Otter Tail.

Table 8 below summarizes 2020 MISO and SPP Market Charges which, in aggregate, were forecasted to be an expense of approximately \$2.91 million, but resulted in a revenue credit of approximately \$1.47 million. The largest variance occurred in the MISO market where FTR hourly allocation and DA loss amount variances yielded the largest favorable variances, offsetting smaller unfavorable RT congestion and RT distribution of loss amount variances.

**10. Asset Based Sales**

Otter Tail’s forecasted 2020 fuel costs projected a very small amount of asset-based sales. Plant availability, market prices and load levels can all have an impact on when plants are dispatched to a point where units are net sellers into the market. For 2020, Otter Tail realized approximately \$4.28 million of asset-based sales that offset fuel costs and provided a small margin, all of which is credited back to customers through the fuel clause. Table 9 compares the 2020 asset-based forecast to actual results.

<sup>5</sup> Using on the same information provided in Otter Tail’s Table 7, Staff’s calculations slightly differed from those represented in the initial filing. Table 7 in these briefing papers is reflective of Staff’s calculation.

<sup>6</sup> Detailed forecast to actual comparisons of all charge-types for both MISO and SPP can be found in Attachment 3 (Not Public)

**Table 9 – 2020 Asset Based Sales Forecast to Actual Comparison Expense (Revenue), (Total System)**

	<b>Actual</b>	<b>Forecast</b>	<b>Variance</b>	<b>Variance %<sup>7</sup></b>
Fuel Costs of Asset Based Sales	(\$4,312,639)	(\$127,367)	(\$4,185,272)	3,286.0%
Margin on Asset Based Sales	(\$119,591)	(\$23,693)	(\$95,898)	404.8%
Total Asset Based Sales	(\$4,432,230)	(\$151,060)	(\$4,281,170)	2,834.1%

**11. ASM, Wind Curtailments**

At times, Otter Tail’s generating resources are called upon to provide ancillary services into the MISO market, for which it receives a revenue stream. Additionally, certain provisions within Otter Tail’s wind PPAs call for curtailment payments to be made if the facilities are shut down due to negative LMP prices. These revenues and costs are a small component of the overall FCA costs. Both ASM revenues and curtailment costs were higher in 2020 but impacts were not material. Forecast to actual details for these items can be found in Attachments 2 and 3.

**12. True-Up Balance as of December 31, 2020<sup>8</sup>**

2020 total collections based on approved rates were \$61.9 million resulting in a \$12.7 million over-collection; however, this amount does not include amounts already refunded. As noted earlier, in Q3 2020, Otter Tail refunded the Q1 \$3.3 million over-collection and is refunding the \$8.4 million Q2/Q3 over-collection during the first half of 2021. Since March of 2020, Otter Tail has also been refunding a \$1.4 million over-collection that occurred in the July 2018 to December 31 recovery period under the old FCA mechanism. That refund was included in rates for the 12 months beginning March 1, 2020. Otter Tail estimates that approximately \$189,000 will still need to be refunded as of February 28, 2021 and has proposed to include that balance in this true-up. Table 10 summarizes the 2020 true-up calculation.

**Table 10 – 2020 Annual True-Up Rate, MN Jurisdiction**

<b>Item</b>	<b>Amount</b>
Total recovery from forecasted EAR and base rates before refunds:	\$61,936,710
Actual energy costs (MN)	\$49,200,166
Over/(Under) Recovery	\$12,736,544
Q1 over-collection refunded in Q3	(\$3,295,365)
Q2 and Q3 over-collection being refunded in Q1&Q2 of 2021	(\$8,383,674)
Plus estimated True-up balance from prior period yet to be refunded	\$188,910
<b>Total Annual True-up Refund</b>	<b>\$1,246,414</b>

<sup>7</sup> Table 9 in Otter Tail’s filing seems to have duplicated the information on this same column in Table 8. Table 9 in these briefing papers reflects Staff’s calculation.

<sup>8</sup> Attachment 1 provides the monthly detail of total system sales, total system FCA costs, monthly recovery of costs and remaining true-up balances.

Otter Tail proposed to implement its annual true-up for the January through December 2020 true-up period, starting with bills dated September 1, 2021 and continuing for 12 months. The true-up rate will be incrementally added to the approved monthly rates that will be refunded in the monthly rates applied to sales that are subject to the FCA from September 1, 2021 through August 31, 2022.

### **13. Annual Compliance/Reporting Requirements**

Otter Tail provided information attesting to their compliance to the following Minn. Rules:

- 7825.2810 Annual Report of Automatic Adjustment Charges
- 7825.2820 Annual Auditor's Report
- 7825.2830 Annual Five-Year Projection
- 7825.2840 Annual Notice of Reports Availability
- Other items in compliance with various Commission Orders in various dockets.

#### **B. Department of Commerce – Comments**

The Department noted that Otter Tail's stated purpose of the Petition is to (1) demonstrate that the Company's fuel/purchased power costs for 2020 were reasonable and prudent, (2) request Commission approval of the Company's 2020 FCA true-up and the resulting proposed true-up credit factor of \$0.0005 per kWh, to be applied to sales subject to the EAR/FCA over the period of September 1, 2021 - August 31, 2022,<sup>7</sup> and (3) request Commission approval of the EAR/FCA true-up compliance reporting required by Minnesota Rules 7825.2800 – 7825.2840 and applicable Commission orders.

#### **1. Prudency and Reasonableness of Otter Tail's Actual 2020 Fuel/Purchased Power Costs**

The Department noted that Otter Tail's actual 2020 fuel/purchased power costs were considerably less than the forecasted costs that were approved and used to set the corresponding Energy Adjustment rates for 2020.

As shown in Table 1 above, Otter Tail's 2020 MWh sales were 5% less than forecasted and 2020 total system actual fuel/purchased power costs recoverable through the EAR/FCA for 2020 were 25% less than forecasted 2020. Of the \$97,122,862 total actual 2020 fuel/purchased power costs, \$49,200,166 are allocated to Minnesota.

As summarized in Table 11, actual and forecasted 2020 fuel/purchased power costs and offsetting credits/revenues can be broken into several major categories.

**Table 11 - Otter Tail’s Actual and Forecasted Total Company 2020 Fuel/Purchased Power Costs and Offsetting Credits/Revenues by Major Category**

	2020 Actual	2020 Forecast	Percentage Difference
Plant Generation Costs	\$46,296,216	\$51,565,935	-10.2%
Purchased Power Costs	\$56,861,382	\$75,064,600	-24.3%
Wholesale Market Costs/(Credits)	(\$1,467,808)	\$2,906,101	-150.5%
Wind Curtailment Costs	\$257,760	\$153,308	68.1%
Credit for Fuel Costs of Asset-Based Sales	(\$4,312,639)	(\$127,367)	3,285.9%
Revenue Margin on Asset-Based Sales	(\$119,591)	(\$23,693)	404.8%
MISO Ancillary Services Market Revenue	(\$392,458)	(\$117,503)	233.9%
<b>Total Costs, Net Credits and Revenue</b>	<b>\$97,122,862</b>	<b>\$129,421,381</b>	<b>-25.0%</b>

Table 11 shows that actual 2020 plant generation and purchased power costs, the two largest components of the Company’s total net fuel/purchased power costs, were substantially less than forecasted. Otter Tail provided data in its Petition showing that average actual on-peak and off-peak Locational Marginal Pricing (LMP) for 2020 was more than 30% lower than predicted. The low energy market prices, combined with Otter Tail’s reduced loads, caused the Company to dispatch its baseload units less than originally forecasted for 2020. The reduced level of dispatch resulted in approximately 13% lower MWh output from and about 10% lower fuel costs for Otter Tail’s baseload units. Relatedly, the Company’s 2020 combined energy purchases (by volume, in MWhs) were almost 9% higher than forecasted, while at the same time costing approximately 25% lower than predicted.

Actual 2020 credits and revenues that reduce the Company’s net fuel/purchased power costs recoverable through the EAR/FCA were notably higher than forecasted. Wholesale market charges and asset-based sales are the two major credit/revenue categories that contributed to the variance between the actual and forecasted 2020 credits/revenues. Otter Tail forecasted wholesale market charges of \$2,906,101 for 2020, but the Company actually received a credit of \$1,467,808.

In summary, Otter Tail experienced lower energy sales, substantially lower energy costs, and higher associated credits/revenues during 2020, all of which contributed to the Company’s actual 2020 fuel/purchased power costs being less than forecasted. Based on Otter Tail’s actual experience in 2020, the Department concluded that it is reasonable that the Company’s actual 2020 fuel/purchased costs recoverable through the EAR/FCA were less than those forecasted.

The Department also concluded that the Company acted prudently in purchasing more power from the market during 2020 than it had originally forecasted, because energy market prices were considerably lower than predicted for 2020. Therefore, the Department recommended that the Commission find that Otter Tail’s actual 2020 fuel/purchased power costs recoverable through the EAR/FCA were reasonable and prudent.

## 2. Otter Tail’s 2020 Fuel Clause Adjustment True-Up

Table 12 shows how Otter Tail arrived at the proposed refund amount and true-up credit factor.

**Table 12 - Otter Tail’s 2020 Fuel Clause Adjustment True-Up and Refund Amount**

True-Up Component	Amount
Recovery from Fuel Clause Adjustment/Energy Adjustment Rider (A)	\$2,208,677
Recovery through Base Cost (B)	\$59,728,033
Total Recovery (A + B) = (C)	\$61,936,710
Actual Cost of Energy Allocable to Minnesota (D)	\$49,200,166
Over or (Under) Recovery (C – D) = (E)	\$12,736,544
Q1 2020 Refund (credit applied July – September 2020) (F)	\$3,295,635
Q2 & Q3 2020 Refund (credit applied January – June 2021) (G)	\$8,383,674
Estimated Remaining Amount to be Refunded for the Previously Approved July 2018 – December 2019 True-Up (H)	\$188,910
Proposed Refund to Customers (E – F – G + H) = (I)	\$1,246,144
Forecasted Applicable kWh Sales for September 2021 - August 2022 (J)	2,685,989,496
Proposed True-Up Credit Factor (I / J)	\$0.0005

The Department confirmed that Otter Tail’s 2020 EAR/FCA true-up calculation:

- Was based on a historical twelve-month period (January 1 – December 31, 2020)
- Compared the actual and approved forecasted costs and credits/revenues to arrive at the over-recovered amount.
- Divided the over-recovered amount by the forecasted Minnesota kWh subject to the EAR/FCA (forecasted kWh for the proposed twelve-month period during which the true-up factor would be applied, September 2021 – August 2022) to arrive at the true-up factor per kWh.

The Department concluded that Otter Tail correctly calculated its 2020 EAR/FCA true-up and that the proposed refund amount, with a corresponding true-up credit factor effective on September 1, 2021, is reasonable and recommended the proposed refund of \$1,246,144 be approved. The DOC noted that the proposal to return the EAR/FCA refund over a twelve-month period (September 1 – August 31, 2021) is consistent with the language Otter Tail’s approved EAR Rate Schedule, Section 13.01, which states “[t]he annual true-up shall be...applied to the subsequent twelve months.” However, the Department believes that returning the proposed refund to customers over a shorter four-month period, from September 1 – December 31, 2021, would be a reasonable approach, given that the refund amount is relatively small and a shorter refund period would make Otter Tail’s ratepayers whole more quickly. Therefore, the Department recommended that Otter Tail be required to return the refund over that four-month period. The Department asked Otter Tail to, in reply comments, (1) explain any objections it would have to refunding customers over a four, instead of twelve, month period for the 2020 EAR/FCA true-up and (2) provide the true-up credit factor (\$/kWh), including supporting calculations, that would correspond to the 2020 EAR/FCA true-up if the Company were to return the 2020 refund over the four-month period.

### **3. Compliance with Reporting Requirements**

The Department verified that the instant Petition included the information required per the following:

- Minnesota Rules 7825.2800 - 7825.2840, as revised on pages 3 - 4 and approved in Point 1 of the Commission's June 12, 2019 Order in Docket No. E999/CI-03-802.
- Annual FCA true-up general reporting guidelines, as outlined on page 7 and approved in Point 5 of the Commission's June 12, 2019 Order in Docket No. E999/CI-03-802.
- Annual FCA true-up reporting compliance matrix specific to Otter Tail, as shown in Attachment 2 of the March 1, 2019 joint comments and approved in Point 7 of the Commission's June 12, 2019 Order in Docket No. E999/CI-03-802.

The Department concluded that the Petition complies with the applicable reporting requirements and recommended the Petition's compliance reporting portions be approved.

### **4. Maintenance Expenses of Generation Plants and Correlation to Incremental Forced Outage Costs**

In its February 6, 2008 Order,<sup>9</sup> the Commission required all electric utilities subject to automatic adjustment filing requirements, with the exception of Dakota Electric, to include in future annual automatic adjustment filings the actual expenses pertaining to maintenance of generation plants, with a comparison to the generation maintenance budget from the utility's most recent rate case. This requirement stemmed from the drastic increase in Investor-Owned Utilities' (IOUs) outage costs during fiscal years 2006 and 2007. When a generation plant experiences a forced outage, the utility must replace the megawatt hours that plant would have otherwise produced. The utility typically replaces these lost megawatt hours through wholesale market purchases. The cost of those market purchases flows through the EAR/FCA, directly to ratepayers. The high outage costs incurred by investor-owned utilities in fiscal years 2006 and 2007 raised questions as to whether the utilities were (1) maintaining plants appropriately to prevent forced outages and (2) spending as much on plant maintenance as they were charging to their customers in base rates. The Commission agreed with the Department and the Large Power Interveners that "utilities have a duty to minimize unplanned facility outages through adequate maintenance and to minimize the costs of scheduled outages through careful planning, prudent timing, and efficient completion of scheduled work."

Table 13 summarizes Otter Tail's generation maintenance expenses for select years and shows that Otter Tail's average generation maintenance expenses for 2018 - 2020 was approximately 10% lower than the \$15.1 million provided for in the Company's base rates. In 2020, the Company incurred about \$9.7 million in generation maintenance expenses, by far the lowest annual generation maintenance expense amount since 2016. Otter Tail explained its relatively low 2020 generation maintenance expenses, stating:

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<sup>9</sup> ORDER ACTING ON ELECTRIC UTILITIES' ANNUAL REPORTS, REQUIRING FURTHER FILINGS, AND AMENDING ORDER OF DECEMBER 20, 2006 ON PASSING MISO DAY 2 COSTS THROUGH FUEL CLAUSE, In the Matter of the Review of the 2005 AAA of Charges for all Electric Utilities, Docket No. E-999/AA-06-1208 (February 6, 2008) p. 9, ordering paragraph 18



In 2018, [Big Stone Plant] had a major overhaul, and in 2019, Coyote had a major overhaul, so planned 2020 maintenance expense was expected to be less. In addition, because of the high plant availability and the low number of forced outages in 2020 for Big Stone and Coyote, that performance also resulted in lower repair type maintenance expenses. Other cost savings were realized from completing certain maintenance projects with existing labor as opposed to hiring external contractors. With another extended maintenance outage planned for 2021 at Big Stone Plant, we expect to see significantly higher maintenance expenses again in 2021.<sup>10</sup>

**Table 13 - Comparison of Otter Tail’s Generation Maintenance Expense (\$ Millions)**

Approved Annual Generation Maintenance Expense per 2016 Rate Case Test Year	Actual Average 2018 – 2020 Generation Maintenance Expense	Difference
\$15.1	\$13.5	-10%

One important driver of a utility’s generation maintenance expenses is the utility’s level of forced outages. The Department concluded that the Company’s replacement power costs corresponding to the 2020 generation forced outages were reasonable under the circumstances.

Because (1) the amount of generation maintenance expense is linked to a utility’s forced outages, (2) utilities have an incentive to minimize generation maintenance expense between rate cases, and (3) utilities do not have a strong incentive to minimize the replacement power costs for which they receive flow through recovery, the Department intends to continue to monitor the difference between investor-owned utilities’ actual and approved generation maintenance expenses in future FCA true-up filings.

## 5. Conclusion and Recommendations

Based on its review, the Department concluded that (1) Otter Tail’s actual fuel/purchased power costs for 2020 were reasonable and prudent, (2) Otter Tail correctly calculated its 2020 true-up amount and the resulting refund amount of \$1,246,144 is reasonable, and (3) Otter Tail’s Petition complies with the applicable reporting requirements. Therefore, the Department recommended that the Commission take the following actions:

- Find that Otter Tail’s actual 2020 fuel/purchased power costs recoverable through the EAR/FCA were reasonable and prudent for 2020.
- Approve Otter Tail’s EAR/FCA 2020 true-up and the resulting refund amount of \$1,246,144.
- Require Otter Tail to return the \$1,246,144 refund over a four-month period, from September 1 – December 31, 2021.
- Approve the compliance reporting portions of the Otter Tail’s Petition.

<sup>10</sup> Petition Appendix A, Section 6.

The Department also asked that, in reply comments, Otter Tail (1) explain any objections it would have to refunding customers over a four, instead of twelve, month period for the 2020 EAR/FCA true-up and (2) provide the true-up credit factor (\$/kWh), including supporting calculations, that would correspond to the 2020 EAR/FCA true-up if the Company were to return the 2020 refund over the four-month period.

### **C. Otter Tail Power – Reply Comments**

Otter Tail stated that it does not object to the Department’s proposal that the Company refund the 2020 EAR/FCA true-up over a four-month period. Attachment 1 to the Reply Comments included the 2020 EAR/FCA true-up factor calculation based on a four-month true-up period (September 2021 through December 2021), which corresponds to a true-up credit rate of \$0.0014/kWh.

### **IV. Staff Comments**

Staff notes that the Department’s recommendation to refund Otter Tail’s over-collection over a four-month period deviates from the standard practice of effecting fuel clause true-ups over a twelve-month period. However, that recommendation is consistent with the Commission’s preference to refund ratepayers faster so that those who are negatively impacted by the pandemic can receive financial relief sooner.

Finally, Staff has reviewed and verified Otter Tail’s calculations and concurs with the Company and the Department’s recommendation that Otter Tail’s Petition, as modified by the Department and agreed to by the Company, should be approved.

## **V. Decision Alternatives**

### **Energy Adjustment Rider True-Up Compliance Filing**

1. Accept and approve Otter Tail's 2020 energy adjustment rider true-up compliance filing. (OTP, DOC)
2. Do not accept and approve Otter Tail's 2020 energy adjustment rider true-up compliance filing.

### **True-Up Amount**

3. Authorize Otter Tail to refund the 2020 under-collection of \$1,246,144. (OTP, DOC)
4. Authorize Otter Tail to refund a different amount.

### **Timing of True-Up**

5. Authorize Otter Tail to refund the 2020 under-collection over a twelve-month period. (OTP initial position)
6. Authorize Otter Tail to refund the 2020 under-collection over a four-month period starting on September 1, 2021. (DOC, OTP agreed)
7. Authorize Otter Tail to refund the 2020 under-collection over a different time period.