

# Memorandum

To: Commissioners Fedorchak, Christmann, and Haugen-Hoffart

From: Adam Renfandt

Date: August 30, 2022

Re: Montana-Dakota Utilities, Co. (MDU), 2021 Electric, Annual Report  
Case No. PU-22-175

In Case No. PU-16-666, the Commission authorized a return on equity (ROE) of 9.65% for MDU's ND electric rate case. Staff reviewed MDU's North Dakota electric annual report for 2021. MDU reports an ROE of approximately 7.8% for 2021, which represents an under-earnings of approximately \$8.9 million.

MDU reports no major outage event days for 2021. Excluding storm events and spanning all of 2021, the system average interruption frequency index (SAIFI, or the average number of interruptions per customer) was .475 interruptions per customer, the system average interruption duration index (SAIDI, or the average outage duration per customer) was 40.82 minutes per customer, and the customer average interruption duration index (CAIDI, or the average restoration time) was 85.91 minutes.

MDU also reported no Major Event Days (MED). Staff notes that the reported MED is not based on the IEEE 1366 Standard. In MDU's letter to the Commission dated May 24, 2022, MDU indicated that they are working to implement an Outage Management System, which will have the ability to calculate MEDs according to such a standard. They plan to have the system operational in 2023.

Given the under-earnings and the recent rate case filing allowing the Commission to review MDU's rates, Staff recommends the Commission close the case.

Attachment 1 – Return Calculation

Attachment 2 – Return on Equity Chart

Attachment 3 – Net Operating Income

Attachment 4 – Reliability Indices

c: Travis Jacobson, MDU

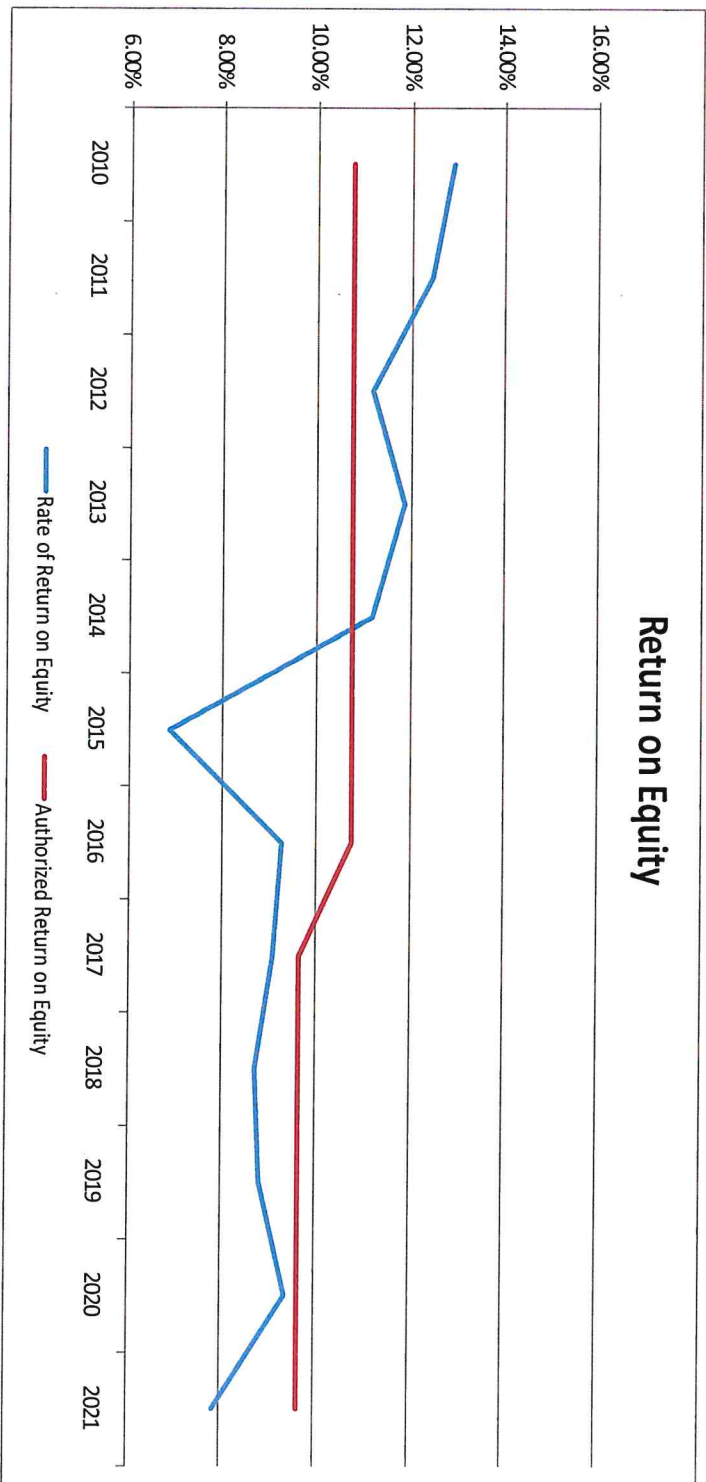
Montana-Dakota Utilities Co.  
 North Dakota Electric Operations  
 Return Calculation  
 (000's)

Attachment 1

Description	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Average Rate Base	\$231,001	\$251,453	\$268,801	\$309,734	\$389,530	\$558,552	\$680,103	\$678,730	\$694,034	\$710,156	\$739,358	\$754,253
Rate of Return	8.82%	8.92%	8.67%	8.03%	8.19%	7.84%	7.84%	7.40%	7.32%	7.18%	6.89%	6.84%
Return Required	\$20,385	\$22,431	\$23,315	\$24,885	\$31,894	\$43,783	\$53,344	\$50,252	\$50,836	\$50,984	\$50,907	\$51,578
Return Earned	\$24,036	\$25,942	\$23,933	\$26,624	\$32,769	\$33,150	\$48,296	\$48,272	\$47,636	\$48,037	\$49,953	\$44,821
Return (Excess)	(\$3,651)	(\$3,511)	(\$618)	(\$1,739)	(\$875)	\$10,633	\$5,049	\$1,980	\$3,200	\$2,947	\$955	\$6,757
Tax Factor	1.622	1.622	1.622	1.622	1.622	1.608	1.608	1.604	1.323	1.323	1.323	1.323
Revenue Deficiency (Excess)	(\$5,922)	(\$5,695)	(\$1,003)	(\$2,820)	(\$1,419)	\$17,095	\$8,117	\$3,175	\$4,234	\$3,899	\$1,263	\$8,938

Rate of Return on Rate Base	10.41%	10.32%	8.90%	8.60%	8.41%	5.94%	7.10%	7.11%	6.86%	6.76%	6.76%	5.94%
Rate of Return on Equity	12.90%	12.45%	11.18%	11.86%	11.18%	6.88%	9.27%	9.09%	8.73%	8.82%	9.39%	7.83%
Authorized Return on Equity	10.75%	10.75%	10.75%	10.75%	10.75%	10.75%	10.75%	9.65%	9.65%	9.65%	9.65%	9.65%

### Return on Equity



Montana-Dakota Utilities Co.  
 North Dakota Electric Operations  
 Operating Income  
 (000's)

Attachment 3

Description	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Sales for Resale	\$961	\$1,024	\$194	\$378	\$442	\$0	\$701	\$573	\$711	\$951	\$518	\$1,186
All Other Revenues	\$127,721	\$135,439	\$143,957	\$159,835	\$177,154	\$181,011	\$215,464	\$218,243	\$212,150	\$219,409	\$204,659	\$212,450
Total Revenues	\$128,682	\$136,463	\$144,151	\$160,213	\$177,596	\$181,012	\$216,165	\$218,815	\$212,861	\$220,359	\$205,176	\$213,635
Cost of Fuel												
Production Expense	\$50,047	\$52,232	\$58,998	\$66,445	\$70,653	\$71,231	\$68,635	\$70,891	\$73,234	\$78,653	\$60,327	\$65,979
Gross Margins	\$78,635	\$84,231	\$85,153	\$93,768	\$106,943	\$109,781	\$147,530	\$147,924	\$139,628	\$141,706	\$144,849	\$147,656
Gross Margin % of Revenue	61%	62%	59%	59%	60%	61%	68%	68%	66%	64%	71%	69%
Margin Change	\$10,438	\$5,596	\$922	\$8,615	\$13,175	\$2,838	\$37,749	\$394	(\$8,296)	\$2,079	\$3,143	\$2,806
Other O&M												
Transmission Expense	\$6,205	\$6,486	\$6,155	\$7,993	\$10,449	\$9,503	\$24,666	\$26,654	\$24,269	\$24,964	\$26,388	\$26,437
Distribution Expense	\$6,054	\$6,916	\$8,212	\$9,740	\$10,199	\$10,257	\$9,642	\$9,340	\$9,808	\$9,866	\$9,487	\$9,354
Customer Accounts	\$2,015	\$2,170	\$1,998	\$2,321	\$2,524	\$2,625	\$3,161	\$2,960	\$3,178	\$2,512	\$2,837	\$2,540
Customer Service & Info.	\$338	\$276	\$153	\$170	\$175	\$172	\$174	\$159	\$141	\$195	\$210	\$229
Sales Expense	\$82	\$156	\$123	\$96	\$105	\$114	\$66	\$70	\$70	\$82	\$96	\$95
Administration & General	\$10,459	\$11,812	\$11,876	\$13,039	\$12,993	\$14,445	\$16,062	\$16,684	\$17,220	\$18,379	\$16,425	\$19,554
Total O&M	\$75,200	\$80,048	\$87,515	\$99,804	\$107,099	\$108,347	\$122,406	\$126,759	\$127,920	\$134,651	\$115,769	\$124,190
O&M No Production Expense	\$25,153	\$27,816	\$28,517	\$33,359	\$36,446	\$37,116	\$53,771	\$55,868	\$54,686	\$55,998	\$55,442	\$58,210
Depreciation	\$17,536	\$21,129	\$21,480	\$21,147	\$22,910	\$25,070	\$34,884	\$32,552	\$34,918	\$38,519	\$39,681	\$43,429
Taxes Other Than Income	\$4,635	\$4,826	\$5,265	\$5,282	\$5,580	\$5,808	\$6,741	\$7,394	\$7,642	\$8,274	\$8,529	\$8,251
Income Tax Exp	\$7,275	\$4,518	\$5,958	\$7,356	\$9,239	\$8,636	\$3,838	\$3,837	-\$5,255	-\$9,122	-\$8,756	-\$7,056
Net Regulated Income	\$24,036	\$25,942	\$23,933	\$26,624	\$32,769	\$33,150	\$48,296	\$48,272	\$47,636	\$48,037	\$49,953	\$44,821

Attachment 4:

<b>Reliability Index - Without Identified Storm Event(s)</b>	<b>2021</b>	<b>2020</b>	<b>2019</b>	<b>2018</b>	<b>2017</b>
System Average Interruption Frequency Index (SAIFI)	0.475	0.615	0.545	0.739	0.848
System Average Interruption Duration Index (SAIDI) 2/	40.82	55.83	52.40	47.95	81.63
Customer Average Interruption Duration Index (CAIDI) 2/	85.91	90.85	96.17	64.88	96.30