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 ATTORNEYS AT LAW

March 21, 2023

VIA E-MAIL AND HAND DELIVERY

Public Service Commission
 Attention: Steve Kahl
 600 East Boulevard Avenue, Dept. 480
 Bismarck, ND 58505-0480

In re: Montana-Dakota Utilities Co.
 2022 Electric Rate Increase
 PU-22-194
 OAH File No.: 20220225

Dear Mr. Kahl:

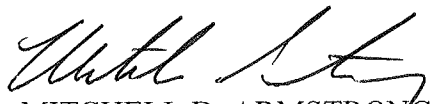
Enclosed for filing in the above-referenced matter please find the original and seven copies of the following:

1. Surrebuttal Testimony of Marie Fagan, London Economics International LLC;
2. Verification; and
3. Affidavit of Service.

Sheldon A. Smith*
 Scott K. Porsborg***
 Suzanne M. Schweigert*
 Mitchell D. Armstrong**
 Stacy M. Moldenhauer**
 David J. Smith**
 Brian D. Schmidt*
 Tyler J. Malm*
 Austin T. Lafferty*
 Jon C. Lengowski*
 Morgan E. Wentz*

Thank you for your attention to this matter.

Respectfully,


 MITCHELL D. ARMSTRONG
 Special Assistant Attorney General for
 PSC Advocacy Staff

* Licensed in North Dakota
 ** Licensed in Minnesota
 *** Licensed in South Dakota
 * Board Certified Civil Trial Specialist by National Board of Trial Advocacy

amh
 enclosures

116 PU-22-194 Filed 03/21/2023 Pages: 27
 Prefiled Surrebuttal Testimony of Marie Fagan
 Public Service Commission Advocacy Staff Counsel
 Mitchell Armstrong

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cc: John Schuh (w/ enc.)
David Tschider (w/ enc.)
Julie Clark (w/ enc.)
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Stephen Campbell (w/ enc.)
Allison Walden (w/ enc.)
Ross H. Espeseth (w/ enc.)
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PSC.3

BEFORE THE
NORTH DAKOTA PUBLIC SERVICE COMMISSION

In the Matter of Montana-Dakota Utilities
Application for Rate Increase, Case No. PU-22-194

SURREBUTTAL TESTIMONY
OF
Marie Fagan, London Economics International LLC

ON BEHALF OF THE
NORTH DAKOTA PUBLIC SERVICE COMMISSION
ADVOCACY STAFF

March 21, 2023

1 **Q: Provide your name and professional qualifications.**

2 A: My name is Marie Fagan. I am the Chief Economist at London Economics
3 International, LLC (“LEI”). My business address is 717 Atlantic Avenue, Suite
4 1A, Boston, MA 02111. I have over 30 years of experience in research and
5 consulting for the energy sector, spanning international upstream and
6 downstream oil and gas, global coal, North American gas markets, and North
7 American power markets and regulated utilities.

8
9 **Q: Has anyone else at LEI contributed to the preparation of this surrebuttal
10 testimony?**

11 A: Yes. My colleague Barbara Porto, who is a Senior Consultant at LEI,
12 contributed to the discussion of depreciation. My colleague Shashwat Nayak,
13 also a Senior Consultant, contributed to the discussion of return on equity.

14
15 **Q: What is the purpose of your surrebuttal testimony?**

16 A: I am submitting this testimony on behalf of the North Dakota Public Service
17 Commission Advocacy Staff (Staff). Staff engaged LEI as the outside
18 independent technical consultant to work with the Commission’s advocacy staff
19 in presenting its case for the North Dakota ratepayers of Montana-Dakota
20 Utilities (“MDU”). The purpose of this testimony is to respond to MDU’s rebuttal
21 testimonies of on the topics of:

- 22
- 23 1. Distribution labor costs
 - 24 2. Long-term and short-term incentive program expenses
 - 25 3. Outage Management System costs
 - 26 4. Institutional advertising expenses
 - 27 5. Industry dues expenses
 - 28 6. Insurance expenses
 - 29 7. Software maintenance expenses
 - 30 8. Personal use of vehicles
 - 31 9. Covid-19 expenses

- 1 10. Pension and post-retirement asset
2 11. Depreciation
3 12. Cost of capital

4
5 **Q: What is the net result of LEI's surrebuttal?**

6 **A:** As discussed below, with new information and clarification, LEI recommends
7 that certain costs which we had recommended be disallowed in LEI's Direct
8 Testimony, now be allowed (see Figure 1). The net result is that LEI is now
9 recommending \$14,380,872 in disallowances, rather than the \$15,550,869 we
10 recommended in LEI's Direct Testimony.¹

11 **Figure 1. LEI's updated recommended changes to 2023 test year revenue requirements**

Item	Change to expense	Change to rate base
1 Disallow a portion of distribution labor cost share to bring it closer to industry average cost per MWh	\$ -	
2 Disallow 401k expense based on reduction in distribution labor cost	\$ -	
3 Disallow the portion of long-term incentive compensation tied to financial performance	\$ (1,391,439)	
4 Disallow short-term incentive compensation tied to financial performance	\$ (2,258,988)	
5 Disallow new employee hires/promotions associated with Outage Management System	\$ (443,150)	
6 Disallow expenses for institutional advertising	\$ (56,112)	
7 Disallow expenses for industry dues	\$ (226,557)	
8 Disallow expenses for 10% insurance increase	\$ (225,084)	
9 Disallow portion of increase for software maintenance	\$ (868,050)	
10 Disallow expense for personal use of vehicles	\$ (40,000)	
11 Disallow expense for COVID	\$ -	
12 Depreciation rates at PU-16-666 settlement levels	\$ (4,741,530)	\$ 4,741,530
13 Disallow outage management system		\$ (2,146,511)
14 Updated average rate base (average 2023 rate base of \$612,177,981 + depreciation disallowance - outage management system)		\$614,773,000
15 Impact of reducing proposed ROE from 10.5% to 9.42% on updated rate base	\$ (3,319,774)	
16 Impact on income tax (tax rate * difference in ROE)	\$ (810,188)	
Impact on annual revenue requirement of items 1-16	\$ (14,380,872)	
Re-calculate pension and post-retirement asset	no	no

12

¹ Direct Testimony of Marie Fagan, London Economics International LLC, January 31, 2023, ("LEI Direct Testimony") P. 4.

1 **Q: Does LEI still recommend disallowing a portion of distribution costs to**
 2 **bring labor costs in line with industry averages?**

3 **A:** No. In Direct Testimony, LEI recommended disallowance of \$90,637 in
 4 distribution labor costs and \$8,792 in related 401k expenses. The Rebuttal
 5 Testimony of Tara R. Vesey argued that “[LEI’s] comparison [of distribution
 6 labor costs] does not consider, among other things, the differences in capital
 7 investment versus O&M, amount of subcontract labor used, customer types,
 8 and the utilization of energy within the customer types.”² Based on this, LEI
 9 compared MDU with other utilities in the region, and with the average of 26
 10 utilities on several of these factors (see Figure 2).

11 **Figure 2. Comparison of distribution labor and capital across utilities**

Company	Sales of electricity (MWh)	Distribution labor expenses (\$ '000)	Distribution labor expenses (\$/MWh)	Number of customers	Annual sales per customer (MWh)	Distribution labor expense (\$/customer)	Residential sales of electricity (MWh)	Residential electricity sales (% of total sales)	Total distribution capital (\$'000)	Distribution capital (\$/customer)
Industry total (26 companies)	1,997,608,088	\$3,175,764	\$1.59	69,717,736	29	\$48.95	637,438,348	31%	\$354,392,948	\$5,005
Northern States Power Company	48,832,747	\$50,777	\$1.04	1,522,746	32	\$33.35	10,846,862	22%	\$4,778,339	\$3,138
NorthWestern Corporation	8,834,348	\$21,772	\$2.46	453,536	19	\$48.01	3,299,444	37%	\$2,020,744	\$4,456
Otter Tail Power Company	5,250,002	\$11,815	\$2.25	134,424	39	\$87.89	1,241,949	24%	\$575,352	\$4,280
MDU Resources Group, Inc.	3,347,497	\$10,135	\$3.03	144,044	23	\$70.36	1,164,846	35%	\$474,037	\$3,291

12 Source: FERC Form-1, third-party data provider, for 2021.
 13
 14

15 LEI’s conclusion based on this data is that MDU’s distribution labor costs per
 16 MWh are high compared to the industry and to a comparable company, Otter
 17 Tail power; and its distribution labor cost per customer is high compared to the
 18 industry, but more in line with Otter Tail Power. These two results reflect MDU’s
 19 low sales per customer, at 23 MWh/year, which is not under the control of MDU.
 20 In addition, MDU’s distribution capital per customer is lower than the industry
 21 average and several of its peers. Therefore, LEI recommends allowing the
 22 \$90,637 and \$8,792 in distribution labor costs and 401k expenses,
 23 respectively, that we previously recommended disallowing.

² Rebuttal Testimony of Tara R. Vesey, February 28, 2023, (“Vesey Rebuttal Testimony”), P. 9.

1 **Q: Were there duplications in LEI's recommended disallowances of**
2 **distribution labor costs?**

3 A: Yes. In Direct Testimony LEI recommended disallowing distribution labor costs
4 in a number of categories. The Rebuttal Testimony of Tara R. Vesey noted that
5 "the recommendations of Dr. Fagan regarding distribution labor are duplicative
6 given the other reductions to labor she recommended."³ LEI agrees there was
7 overlap in some of LEI's recommended disallowances, because the proposed
8 distribution labor cost shown by MDU in the file ND 2022 Electric Income
9 Statement – A,E,F,G,I,J.xls, tab "Labor" already includes the portion of short-
10 term incentives and long-term incentives assigned to the distribution function.
11 However, as LEI is now recommending that the \$90,637 and \$8,792 be
12 allowed, this eliminates the duplication. So, LEI recommends disallowing the
13 long-term incentive payments tied to financial performance (\$1,391,439) as
14 originally recommended, and the disallowance of the short-term incentive
15 payments tied to financial performance (\$2,258,988) as originally
16 recommended.

17
18 If there is still overlap or double counting in LEI's recommended disallowance
19 associated with the Outage Management System ("OMS"), and any other
20 category of disallowance, then MDU should specify the duplicative amount of
21 disallowance. To the extent that there is double counting, only the amounts
22 related to the duplication should be added back to allowed costs.

23
24 **Q: Should the cost of the outage management system ("OMS") be**
25 **disallowed?**

26 A: Yes. LEI recommended disallowing the addition of \$2,146,511 to rate base for
27 the OMS, based partly on the lack of concrete performance targets (SAIDI,
28 SAIFI, CAIDI). LEI also recommended disallowing employee costs of \$443,150

³ Vesey Rebuttal Testimony, P9.

1 related to the OMS. The Rebuttal Testimony of Daryl Anderson (which
2 addressed the OMS topic) did not provide quantified targets for SAIDI, SAIFI,
3 or CAIDI. As noted above, to the extent that MDU demonstrates that
4 disallowance of employee cost for the OMS duplicates other disallowances
5 related to distribution costs, the duplicate portion can be added back to the
6 revenue requirement. MDU noted in rebuttal that in *“2021 the Commission*
7 *adopted changes to the reporting rules in the Administrative Rules 69-09-02-*
8 *06 – Standards of Service. The change in the annual reporting rules for*
9 *reliability statistics included additional requirements within the IEEE 1366*
10 *Standard for reporting. At the time of this change, Montana-Dakota indicated in*
11 *comments to the Commission that following the new rules would require a*
12 *change to the reporting system at Montana-Dakota, such as the addition of an*
13 *Outage Management System. In 2022, Case No. PU-22-175, the Company*
14 *again responded with comments to the Commission indicating the intent to*
15 *implement an OMS as the method to advance the Company’s ability to submit*
16 *annual reliability data under the new rules.”*⁴ However, MDU already reported
17 to FERC using the IEEE standard for SAIDI reporting, and MDU has been
18 submitting such data to the Commission since the rules change.⁵ There seems
19 to be no reason to spend over \$2 million to create a system to do what MDU
20 was already capable of doing.

21
22 **Q: Should long-term and short-term incentive compensation tied to financial**
23 **performance be disallowed?**

24 **A:** Yes. LEI recommended disallowing short-term incentive compensation tied to
25 financial performance, noting that this compensation is based on drivers which
26 benefit MDU, but not ratepayers. LEI also noted that the short-term incentive
27 rate proposed by MDU, at 11.65%, was high based on data from 2020 and

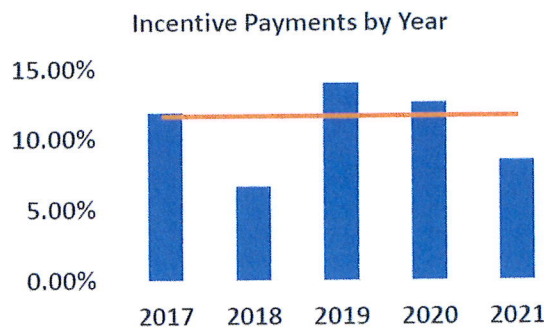
⁴ Rebuttal Testimony of Daryl Anderson, February 28, 2023, (“Anderson Rebuttal Testimony”) Pp. 3-4.

⁵ For example, see MDU’s *Electric and Gas Annual Reports for the year ended December 31, 2021*, filed in PU-22-175.

1 2021 provided by MDU. The Vesey Rebuttal Testimony presented evidence
2 that MDU has paid out short-term incentives at a rate higher than the proposal
3 in three of the past five years (see Figure 3). Based on the chart provided in
4 rebuttal testimony, the average over the five years appears to be about 10.5%
5 -not 11.65%. In any case, the drivers of incentive compensation are focused
6 on benefits to MDU and not its ratepayers.

7

8 **Figure 3. MDU's short-term incentive payment percentages 2017-2021**



9

10 Source: Rebuttal Testimony of Tara R. Vesey, P. 7.

11

12 As discussed above, LEI also recommended disallowing the portion of long-
13 term incentive compensation which is tied to financial performance. The
14 Rebuttal Testimony of Kirsti Hourigan explained MDU's efforts to control the
15 costs of wages and benefits through its Total Rewards Philosophy and
16 Executive Compensation Philosophy, described the role of "at-risk"
17 compensation, and described sources of information used by MDU to ensure it
18 is paying competitive wages. However, it does not necessarily follow that
19 ratepayers should cover this cost. As discussed in LEI's Direct Testimony,
20 incentive compensation is not universally allowed in utility rate cases. MDU's
21 distribution labor costs are already substantially above average. MDU should
22 be incentivized to bring its costs into line with the average of its peers.

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1 **Q: Should institutional advertising be disallowed?**

2 A: Yes. LEI recommended disallowing institutional advertising costs of \$56,112.
3 In rebuttal, MDU indicated that the purpose of such advertising is to maintain
4 name recognition, and ensure each community is aware of MDU's presence.⁶
5 MDU's ratepayers already know that MDU is their electric utility.

6
7 **Q: Should industry dues be disallowed?**

8 A: Yes. LEI recommended disallowing industry dues of \$226,557. In rebuttal,
9 MDU noted that "Montana-Dakota has included the industry dues associated
10 with providing gas and electric service in North Dakota utilizing the same logic
11 as presented in Electric Case Nos. PU-10-124 and PU-16-666 and Gas Case
12 Nos. PU-13-803, PU-15-090, and PU-17-295."⁷ However, in these cases,
13 decisions were based on settlements and did not specifically address dues.
14 Industry dues are similar to advertising, and ND Admin. Code 69-09-02-38
15 excludes institutional and promotional advertising; therefore, dues should not
16 be recoverable from ratepayers, as they are not necessary to provide safe and
17 reliable electricity service.

18
19 **Q: Should the increase in insurance expense be disallowed?**

20 A: Yes. LEI recommended disallowing insurance expenses of \$225,084, for lack
21 of evidence supporting the cost increase. The Direct Testimony of Tara R.
22 Vesey does indeed assert that "Projected 2023 reflects an increase of 10.00
23 percent based on recent trends and additional insurance expenses associated
24 with Heskett Unit IV."⁸ In response to LEI Data Request Set 13, DR 13.15,
25 MDU provided data showing that most of the non-Heskett-related increase of
26 10 percent was owing to test year self-insurance costs of a projected \$278,874,
27 which is \$244,466 higher than "self-insurance" costs in 2022. However, MDU

⁶ Vesey Rebuttal Testimony, Pp. 14, 15.

⁷ Vesey Rebuttal Testimony, P. 13.

⁸ Direct Testimony of Tara R. Vesey, May 16, 2022, ("Vesey Direct Testimony") P. 20.

1 provided no detail explaining what self-insurance costs cover, how they are
2 derived (based on actuarial or other analyses), or what drives the annual
3 changes in such costs. It should be disallowed.

4
5 **Q: Should the expense increase for software maintenance be disallowed?**

6 A: Yes. LEI recommended disallowing \$868,050 of the increase in software
7 maintenance costs, to keep costs at 2021 levels. The details of the software
8 maintenance expenditures, provided in MDU Statements and workpapers A-L,
9 Statement G, Schedule G-1. Pp. 46 and 47 of 50, show total software
10 maintenance expenditures for North Dakota of \$1,402,001 for 2022 and
11 \$1,458,087 for 2023, an increase of 4%, not 13.08%. The remaining
12 expenditures, for Accounts 888 and 994 (which amount to \$655,070 for 2022
13 and \$714,724 for 2023) are shown in MDU Statements and workpapers A-L,
14 Statement G, Schedule G-1. P. 45 (see Figure 4). However, as seen in Figure
15 4, the total of these schedules for 2023 (\$2,173,711) does not match the total
16 (\$2,326,137) MDU projected for 2023 (although the totals for 2022 match). The
17 2023 total is off by \$152,426. Statement G, Schedule G-1, P. 48 shows some
18 additional software costs, but these only amount to about \$30,000. This raises
19 the question of how MDU arrived at costs of \$2,326,137 for 2023. MDU again
20 did not specify whether the software expenditures shown in the test year reflect
21 new yearly cost level, or a one-off increase.

1 **Figure 4. MDU software maintenance expense for ND**

	Per Books	Adjusted	Projected		Increase from 2022
	2021	2021	2022 1/	Increase from 2021 2023 2/	
Production	\$173,923	\$173,923	\$124,265	\$140,519	
Transmission	399,432	399,432	392,887	444,277	
Distribution	68,308	68,308	25,513	28,850	
Customer Accounting	7,442	7,442	11,136	12,593	
A&G	1,243,922	1,243,922	1,503,270	1,699,898	
Total	\$1,893,027	\$1,893,027	\$2,057,071	\$164,044	\$2,326,137
1/ Projected 2022 based on estimated levels.					
2/ Projected 2023 reflects a five year average increase of 13.08% found on Statement Workpaper G, Schedule G-1, page 44.					
Components of totals above:					
Schedule G-1, P 45 of 50:					
Account 888			\$295,639	\$294,190	
Account 994 (A&G)			<u>\$359,431</u>	<u>\$420,534</u>	
Total			\$655,070	\$714,724	
Total of Workpaper G, Schedule G-1, Pp. 46-47 of 50			<u>\$1,402,001</u>	<u>\$1,458,987</u>	
Grand total of components			\$2,057,071	\$2,173,711	

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Source: MDU Statements and workpapers A-L, Statement G, Schedule G-1, P. 44, 46, 47.

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Q: Should expenses for personal use of vehicles be disallowed?

A: Yes. LEI recommended disallowing \$40,000 for the personal use of company vehicles. The Rebuttal Testimony of Eric P. Martuscelli argued that the personal use of Company vehicles is beneficial to customers, for example, in providing timely response to emergencies, but did not indicate how often such emergencies occur. In response to LEI Data Request Set 13, DR 13.14, MDU could not provide the information requested related to frequency of emergency use, and indicated that the cost is related to commuting mileage for such vehicles.

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Q: Should expenses for Covid-19 be disallowed?

A: No, they should be allowed. In Direct Testimony LEI noted that MDU's actual and projected Covid-related expenses increased substantially from 2021 to 2022, and that \$1,070,568 should be disallowed. However, in rebuttal testimony, MDU clarified that the average pre-Covid cost for certain categories of expense in 2016-2019 (shown in Workpaper Statement G, P. 50) was \$1,047,232, and these expenses were not related to Covid per se, they were

1 expenses that were impacted by Covid in 2020 and 2021. LEI recommends
2 allowing the \$1,070,568, as these expenses are not related to Covid as such,
3 but, as LEI understands it, reflects a return to business as usual for those
4 accounts.

5
6 **Q: Should MDU be required to re-calculate the value of its pension and post-**
7 **retirement assets?**

8 A: No. In LEI's Direct Testimony, we recommended that MDU be required to re-
9 calculate the value of these assets based on up-to-date assumptions for
10 discount rates and expected returns on assets ("EROA"). However, MDU
11 clarified that the value of these assets is based on historical calculations, and
12 not assumptions about future values. Therefore, LEI no longer recommends re-
13 calculation.

14
15 **Q: What were the rebuttal arguments to LEI's recommendations related to**
16 **depreciation?**

17 A: The arguments made in the Rebuttal Testimonies of Larry E. Kennedy and Tara
18 R. Vesey are:⁹

- 19 1) LEI does not recognize any of the MDU actual statistical data or relevant
20 current trends and violates the fundamentals of generational equity: Mr.
21 Kennedy stated that "information that is collected over the three-to-five-year
22 period since the previous depreciation study is critical in the development of
23 revised estimates of average service life (including Iowa curves) and required
24 net salvage provisions." However, the additional historical data added in the
25 2020 Depreciation Study did not impact the proposed depreciation rates
26 significantly when compared to the previous depreciation study (the 2014
27 depreciation study). The depreciation rates from the 2014 and 2020
28 depreciation studies are similar to one another.

⁹Rebuttal Testimony of Larry E. Kennedy ("Kennedy Rebuttal Testimony") February 28, 2023, and Vesey Rebuttal Testimony.

- 1 2) The use of only one peer cannot be considered as a viable peer analysis: This
2 remark refers to Figure 20 of the LEI Direct Testimony. However, the Figure is
3 merely an example and was not intended as a peer analysis.
- 4 3) Focusing only on net salvage rates is a critical error: Mr. Kennedy states that
5 “the LEI report makes an additional critical error, as it uses the comparison of
6 net salvage recommendations of only five accounts to form an opinion on the
7 overall depreciation rate.” LEI reviewed all the components of the depreciation
8 rates, but intentionally focused on showing the impact on the final depreciation
9 rates of changing only the net salvage component, because this component
10 had the largest impact on costs.
- 11 4) The proposed rates will benefit ratepayers in the long term: Ms. Vesey stated
12 that “Implementing depreciation rates below the study findings only results in
13 elevating depreciation rates in the future given the account is under depreciated
14 in the timeframe the negotiated rate is active.” She also mentioned that the
15 proposed depreciation rates lower MDU’s rate base and benefit ratepayers
16 over the long term, but neither Mr. Kennedy nor Ms. Vesey provided in their
17 testimony the dollar amount and timeframe of such benefits. This is only a
18 theoretical case and assumes MDU would not otherwise increase its rate base.

19

20 Q: **The Rebuttal Testimony of Larry E. Kennedy emphasized the updates to**
21 **MDU’s statistical data for the 2020 Depreciation Study. Does this impact**
22 **LEI’s recommendations regarding depreciation?**

23 A: No. LEI extensively reviewed the 2020 Depreciation Study as well as the
24 previous study (2014 Depreciation Study). While MDU provided recent
25 historical data in the 2020 Study, the impact on depreciation rates was not
26 significant. The proposed composite depreciation rate in the 2020 Study for
27 Total Plant in Service is only 0.01% higher than the proposed rates from the
28 2014 Study (see Figure 5), meaning that the new historical data did not impact
29 the rates significantly. The increase in rates was not due to additional historical
30 data.

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Figure 5. Composite depreciation rates (2014 and 2020 Depreciation Studies and settlement rates)

	Settlement rates	2014 Depreciation Study	2020 Depreciation Study	Change in rate (2020-2014)	Change in rate (2020-settl.)
Steam Plant	1.93%	2.57%	2.45%	-0.12%	0.52%
Other Production Plant	3.76%	4.36%	3.98%	-0.38%	0.22%
Transmission Plant	1.61%	1.94%	1.70%	-0.24%	0.09%
Distribution Plant	2.40%	2.90%	3.25%	0.35%	0.85%
General Plant	5.84%	6.36%	7.34%	0.98%	1.50%
Total Plant in Service	2.54%	2.94%	2.95%	0.01%	0.41%

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Source: LEI003-002, Attachment A_“PU-22-194 PSC DR 6 (LEI Set 2) MDU Response”, and LEI003-003, Attachment A_“PU-22-194 PSC DR 6 (LEI Set 2) MDU Response”

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LEI's concerns with the proposed depreciation rates are not related to updated data historical data. As LEI discussed in its Direct Testimony, LEI is concerned with: 1) how much higher the proposed rates are compared to the currently approved rates (which originated from a settlement process), and 2) how low the recommended net salvage percentages are (with excessively negative values increasing the depreciation rates).

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Q: Does MDU provide enough evidence for the higher proposed depreciation rates in the current rate case?

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A: No. Similar depreciation rates were developed in the previous Depreciation Study (2014 Depreciation Study) and were not proposed by MDU in Rate Case No. PU-16-666. Instead, MDU proposed a settlement rate. According to the Direct Testimony of Travis R. Jacobson in Rate Case No. PU-16-666, the currently approved rates provide for consistent depreciation rates across the integrated system (MDU is part of an integrated electric system including North Dakota, South Dakota and Montana).¹⁰ In the Direct Testimony, MDU did not explain why the settlement rates are no longer appropriate for the current rate case.

¹⁰ NDPSC. “PU-16-666_Prefiled Direct Testimony of Travis R. Jacobson with Exhibits TRJ-1, TRJ-2, TRJ-3.” Filed October 14, 2016. <<https://www.psc.nd.gov/database/documents/16-0666/010-010.pdf>>

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Q: Does the Direct Testimony of Larry E. Kennedy (Exhibit LEK-1) provide enough evidence to justify the increase of net salvage percentages?

A: No. Mr. Kennedy stated in his rebuttal testimony (Exhibit No. LEK-4) that his *“Direct Testimony (Exhibit LEK-1) at pages 18-20 discuss this topic in response to the question - “What is causing this trend to increased cost of removal of utility assets?”*¹¹ LEI reviewed Exhibit LEK-1 extensively and found the explanation to be general, not quantifying the impact of each of the described drivers, and not specific to individual removal costs of MDU. Furthermore, the first trend raised by Mr. Kennedy on Exhibit LEK-1 relates to inflation. Specifically, he stated that *“The net salvage percentage is calculated by dividing the costs to remove the asset in dollars of the time when the asset is removed by the original cost dollar of the time of installation.”*¹² This calculation amplifies negative net salvage percentages, because the dollar amounts in the numerator (net salvage costs) are recent dollars compared to the dollars from as long ago as decades prior in the denominator (plant investment costs, which are recorded at book value per industry standard) which can reflect many years of inflation. Therefore, LEI finds that the net salvage calculation is likely to overstate negative net salvage percentages.

Q: Are MDU’s recommended net salvage percentages reasonable?

A: No. As discussed above, the net salvage calculation used by MDU overstates negative net salvage percentages. Lower net salvage percentages (more negative or less positive) increase depreciation rates. In addition, most of MDU’s net salvage percentage recommendations were not aligned with historical data and were mostly favoring higher depreciation rates (i.e., recommended net salvage rates were mostly either more negative or less

¹¹ Rebuttal Testimony of Larry E. Kennedy, Concentric Energy Advisors, February 23, 2028 (“Kennedy Rebuttal Testimony”), Exhibit LEK-4.

¹² Direct Testimony of Larry E. Kennedy, Concentric Energy Advisors, May 16, 2022, (“Kennedy Direct Testimony”) Exhibit No. (LEK-1). P. 19.

1 positive than the historical data). Figure 3 below shows MDU's historical and
 2 recommended net salvage rates for all the accounts presented in the 2020
 3 Depreciation Study. Yellow highlighting indicates accounts for which MDU
 4 proposed a lower net salvage percentage than the historical data indicated. Of
 5 the 21 accounts listed in the 2020 Study (and shown in Figure 6), MDU
 6 recommended that 15 accounts had lower net salvage percentages (less
 7 positive or more negative), which makes depreciation rates higher.

8 **Figure 6. MDU's data-driven (historical) versus recommended net salvage**
 9 **percentages**

Account		2020 STUDY	
		Historical	Recommended
TRANSMISSION PLANT			
350.20	Land Rights	3.0%	0.0%
353.00	Station Equipment	30.0%	-10.0%
354.00	Towers and Fixtures	-70.2%	-20.0%
355.00	Poles and Fixtures	-51.1%	-35.0%
356.00	Overhead Conductors and Devices	-7.3%	-20.0%
DISTRIBUTION PLANT			
360.20	Rights of Way	-33.0%	0.0%
362.00	Station Equipment	32.6%	-15.0%
364.00	Poles, Towers & Fixtures	-84.3%	-120.0%
365.00	Overhead Conductor & Devices	-72.1%	-110.0%
366.00	Underground Conduit	-6.8%	0.0%
367.00	Underground Conductor & Devices	-82.6%	-50.0%
368.00	Line Transformers	-15.7%	-20.0%
369.10	Services	-42.3%	-50.0%
370.00	Meters	-4.9%	-5.0%
371.00	Installation on Customers Premises	-6.3%	-15.0%
373.00	Street Lighting System	-22.3%	-45.0%
GENERAL PLANT			
390.00	Structures and Improvements	47.2%	10.0%
392.10	Transportation Equipment - Trailers	22.4%	20.0%
392.20	Transportation Equipment	18.8%	20.0%
396.10	Work Equipment - Trailers	28.6%	0.0%
396.20	Power Operated Equipment	31.8%	25.0%

10 Source: Section 7 of the 2020 Depreciation Study.

11 Note: Yellow highlighting indicates accounts for which MDU proposed a lower net salvage value (which
 12 increases depreciation rates) than the historical data supported.
 13

14
 15 **Q: Did LEI make an error in comparing net salvage recommendations**
 16 **without considering other components of the depreciation calculation?**

1 A: No. Figure 19 of LEI's Direct Testimony intentionally omitted the other
2 components of the depreciation calculation as it was meant to demonstrate the
3 sole impact of the net salvage component on the final depreciation rates. The
4 five accounts shown in Figure 19 of LEI's Direct Testimony refer to all the
5 accounts MDU is proposing a change in net salvage percentages.

6

7 **Q: Do you agree that a significant change in investment is the driver for the**
8 **majority of the change in Steam Plant depreciation rates?**

9 A: No. Tara R. Vesey stated in her Rebuttal Testimony that *"This significant*
10 *change in investment, coupled with no change in the life of the plant, is the*
11 *driver for the majority of the notable change in Steam Plant depreciation*
12 *rates."*¹³ However, as shown earlier in Figure 5, MDU's proposed depreciation
13 rate did not increase from the previous study. Higher investment (e.g., higher
14 depreciable original costs) increased the total depreciation expense. LEI is not
15 questioning the original depreciable cost. LEI is questioning the significantly
16 higher proposed depreciation rate compared to the currently approved one.

17

18 **Q. What are Ann E. Bulkley's main rebuttal arguments against the ROE**
19 **proposed by LEI?**

20 A: The arguments made in the Rebuttal Testimony of Ann E. Bulkley cover:¹⁴

21 1) **Reliance on historical Market Risk Premium ("MRP"):** Ms. Bulkley
22 argues that the MRP observed in the past is not representative of what
23 investors expect in the future. LEI disagrees, for the reasons discussed
24 in Direct Testimony and highlighted below.

25 2) **Inconsistency in the use of risk-free rate in Capital Asset Pricing**
26 **Model ("CAPM") formula:** Ms. Bulkley states that LEI's CAPM
27 analysis is flawed, owing to use of inconsistent estimates of the risk-

¹³ Vesey Rebuttal Testimony, P. 4.

¹⁴Rebuttal Testimony of Ann E. Bulkley, The Brattle Group. February 28th, 2023 ("Bulkley Rebuttal Testimony").

1 free rate. One risk-free rate was used by LEI directly in the CAPM
2 formula, and another was the risk-free rate underlying the estimate of
3 the MRP. Ms. Bulkley contends that this leads to an error, in that LEI's
4 CAPM analysis fails to account for the inverse relationship between
5 interest rates and the MRP, and thus does not accurately reflect
6 current market conditions in the cost of equity estimate. As a result,
7 LEI's MRP is understated.

8 Ms. Bulkley further stated that when LEI's CAPM analysis is corrected
9 such that a single, consistent risk-free rate is used, CAPM results in
10 cost of equity estimate between 10.52 percent and 10.65 percent,
11 which support Ms. Bulkley's recommended ROE for MDU in this
12 proceeding. Ms. Bulkley therefore concluded that LEI's entire
13 evaluation of market risk premium was in error, and LEI's conclusions
14 regarding Ms. Bulkley's assumptions and results were without merit.

15 3) **Inadequate approach used to estimate ROE:** Ms. Bulkley states that
16 LEI takes a minimalist approach to estimating the cost of equity by
17 relying on a single cost of equity estimation methodology and fails to
18 recognize how other risks may affect the appropriate ROE for
19 Montana-Dakota.

20 4) **Recovery of flotation costs:** Ms. Bulkley states that examples of
21 regulatory commissions denying flotation costs provided by LEI are
22 specific to those regulatory commissions and is not indicative of what
23 other regulators have done.

24
25 **Q: Do Ms. Bulkley's statements about reliance on historical MRP have any**
26 **merit?**

27 **A:** No. Future market returns are notoriously difficult to forecast, especially in the
28 current macroeconomic environment where the US Federal Reserve is rapidly
29 adjusting interest rates to control inflation. Investor expectations for market
30 returns in a year or even in six months could be significantly different from
31 investor expectations today. To gauge forward-looking investor expectations of

1 market returns, LEI first examined the returns observed in the S&P 500 futures
2 for 2023-2027. This is generally a better indicator of investor expectations of
3 future market returns (as its value depends on actual futures contracts being
4 traded by investors) than relying on long-term revenue growth estimates, as
5 Ms. Bulkley has done. However, there is an empirical problem with using the
6 S&P 500 futures: It indicates an expected annual average market return of
7 3.2% from 2023-2027 (the five-year period of the current rate case); and a 3.2%
8 market return implies a very low ROE.¹⁵ Therefore, using the forward-looking
9 annual market returns in the CAPM formula would lead to a ROE of less than
10 5%. This 5% is not reflective of the actual cost of equity for MDU.

11
12 LEI therefore used the long-term historical average MRP of 7.25% for the
13 United States from 1926 through 2020.¹⁶ Such a long historical range includes
14 a mix of high, low, and neutral interest rate environments that capture the
15 uncertainties in predicting future MRPs. It is not a perfect measure and may
16 lead to an overestimate of MRP considering the current investor expectations.
17 However, it is better than the alternatives, and especially so when compared to
18 Ms. Bulkley's approach. In order to highlight the pitfalls of using historical data,
19 Ms. Bulkley selectively presented data on market risk premia from 2007 to
20 2009, stating that idiosyncratic data points during this period (such as annual
21 market returns of negative 37.00% in 2008 and 26.46% in 2009) produce
22 counter-intuitive results and have significant impacts on the long-term
23 average.¹⁷ LEI took such issues into consideration when considering historical
24 MRP, by using a time horizon of 95 years in its average; the long-term average
25 MRP does not produce counter-intuitive results. The MRP represents the
26 premium that investors demand on average over the risk-free rate for taking

¹⁵ CME Group. E-mini S&P 500 Futures – Settlements. Accessed on January 17th, 2023.

¹⁶ Kroll, Duff & Phelps Cost of Capital Navigator.

¹⁷ Bulkley Rebuttal Testimony, Pp. 23-24.

1 additional risks, and relying on observed historical data is a superior approach
2 to relying on unreliable future estimates.
3 It is also notable that Kroll, a corporate investigation and risk consulting firm,
4 currently recommends a MRP of 6% for the United States, which is lower than
5 the LEI recommended MRP of 7.25%.¹⁸

6
7 **Q: Do Ms. Bulkley's assertions about inconsistency in use of the risk-free
8 rate in CAPM formula have any merit?**

9 **A:** No. Ms. Bulkley relies on the claim that LEI mistakenly used historical risk-free
10 rate (historical long-term government bond yield) to estimate MRP but used a
11 forward-looking long-term government bond yield to estimate risk free rate in
12 the CAPM formula. This is not an error on LEI's part. Comparing the historical
13 market returns with the current or forward-looking risk-free rate to estimate
14 MRP, as Ms. Bulkley suggests, fundamentally misunderstands what the risk
15 premium represents. LEI's estimate of historical MRP compares market returns
16 from 1928 to 2020 with treasury bond yields during the same time horizon (as
17 market returns and treasury bond yields are inextricably linked).
18 LEI's analysis also incorporates the inverse relationship between market
19 returns and risk-free rate. LEI clearly indicated in its Direct Testimony that
20 higher interest rates typically lead to lower market return expectations by
21 discussing the pessimistic investor expectations evident in the S&P 500 futures
22 settlement values from 2023 to 2027. This is also reflected in historical data.
23 The average 10-year US Treasury bond yield (over the long term) was 2.5%
24 for years when the MRP was higher than 7%.¹⁹ Conversely, in years when
25 treasury bond yields were higher than 4%, the average MRP was a negative
26 2.5%. In years when treasury bond yields were higher than 5% (which is likely
27 to be representative of 2023), the average MRP was negative 4.1%. Though

¹⁸ Kroll. "Kroll Recommended U.S. Equity Risk Premium and Corresponding Risk-Free Rates to be Used in Computing Cost of Capital: January 2008 – Present." Last updated: October 18th, 2022.

¹⁹ Aswath Damodaran. NYU Stern. Historical Returns on Stocks, Bonds and Bills: 1928-2022. Accessed March 11, 2023.

1 the historical relationship is clearly inverse, going forward, the trajectory of
2 interest rates over the upcoming 5-year horizon is uncertain. The US Federal
3 Reserve could lower the interest rates in the near future if US economy goes
4 into a recession, or it could leave interest rates high for the foreseeable future
5 if inflation remains stubbornly high. LEI has therefore relied on a *consistent* time
6 horizon for historical data when considering market returns and the risk-free
7 rate. On the other hand, Ms. Bulkley's suggested approach ignores the inverse
8 relationship between market returns and the risk-free rate, leading to high MRP
9 estimates irrespective of the macroeconomic environment.

10
11 **Q: Does LEI agree with Ms. Bulkley that using multiple methodologies leads
12 to a better estimate of required ROE?**

13 **A:** No. Using more approaches will not necessarily increase accuracy, especially
14 when the methodologies used to estimate ROE are themselves inaccurate. The
15 DCF methodology can be a useful tool for valuing an individual unlisted
16 company. However, Ms. Bulkley used the dividend yield estimates and
17 estimates of growth in earnings per share ("EPS") for 15 proxy companies to
18 estimate the ROE using DCF methodology. She used a similar methodology
19 for estimating expected future market returns in CAPM by using growth
20 estimates for about 500 companies in the S&P 500 index. Therefore, both of
21 her approaches incorporate the forecasting error inherent in forward-looking
22 EPS estimates. As LEI highlighted in its Direct Testimony, the results of
23 multiple studies show that such forecasts not only lack accuracy but are biased.
24 They tend to over-value the cost of equity based on consistently overly
25 optimistic forecasts.

26 In Direct Testimony in this proceeding, LEI also highlighted the arbitrary
27 inflation of ROE in the ECAPM methodology used by Ms. Bulkley. Ms. Bulkley
28 states that CAPM tends to underestimate the cost of capital for companies (like
29 regulated utilities) whose Betas are less than one. Ms. Bulkley cited a study
30 from Chrétien and Coggins (2011) that states that CAPM methodology tends

1 to underestimate the risk premium for energy utilities.²⁰ The study proposes two
2 alternate methodologies, the Fama-French model and the Adjusted CAPM,
3 which “suggest equity risk premiums for gas distribution utilities between 4%
4 and 8%”. LEI’s own estimate of MRP, at 7.25%, is at the higher end of the
5 MRP range suggested by the Chrétien and Coggins study. The study cited by
6 Ms. Bulkley indicates that LEI’s inputs and assumptions have a sound basis.

7
8 **Q: Does LEI agree with Ms. Bulkley’s statement that LEI has failed to
9 consider certain risks that may affect the ROE for MDU?**

10 **A:** No. LEI considered a peer group of 26 companies which LEI shortlisted based
11 on similarity of risk profile to MDU. Based on the analysis of peer companies,
12 LEI estimated a Beta of 0.79. While this is a reasonable estimate for Beta there
13 are reasons to believe that the Beta could be lower, not higher. First, MDU has
14 one of the lowest financial leverage ratios (a widely accepted measure of firm-
15 specific risk) in the proxy group. Only 2 of the 26 companies in LEI’s peer group
16 have a lower debt to equity ratio than MDU. If the Beta is adjusted to reflect the
17 lower debt of MDU, the estimate of Beta for MDU is closer to 0.44. However,
18 LEI believes that this underestimates the actual Beta for MDU. LEI therefore
19 used an unadjusted Beta of 0.79.

20
21 **Q: Does LEI agree with Ms. Bulkley on allowance of flotation costs?**

22 **A:** No. As LEI noted in its Direct Testimony increasing the cost of capital for every
23 year to cover a one-off expense such as flotation cost will over-charge
24 ratepayers. To prevent over-collection, even if ratepayers were found to be
25 responsible for a portion of flotation costs under some circumstances, MDU
26 can request cost recovery as an expense. It should not be added to ROE.
27 Expensing the cost recognizes the one-time nature of the expenses.

28

²⁰ Chrétien, Stéphane, and Frank Coggins. “Cost of Equity for Energy Utilities: Beyond The CAPM.”
Energy Studies Review, Vol. 18, No. 2, 2011.

1 **Q: Is LEI's recommended ROE of 9.42% reasonable?**

2 A: Yes. The recommended ROE of 9.42% is reasonable and Ms. Bulkley's
3 criticism of LEI's methodology does not hold up to scrutiny. Further, as
4 emphasized in this testimony, there are certain arguments in favor of an ROE
5 slightly lower than 9.42%, but not higher.

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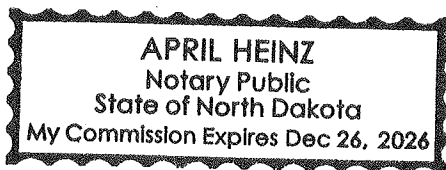
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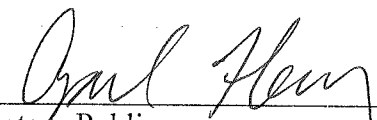
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Anna Heinen

Subscribed and sworn before me this 21st day of March, 2023.





Notary Public
Burleigh County, North Dakota