

Exhibit No.:  
Issue: Lead Lag Study  
Design, Regulatory Mechanism  
Witness: Timothy S. Lyons  
Type of Exhibit: Rebuttal Testimony  
Sponsoring Party: Liberty Utilities  
(Midstates Natural Gas) Corp.  
d/b/a Liberty Utilities  
Case No. GR-2018-0013  
Date Testimony Prepared: April 2018

**Before the Public Service Commission  
of the State of Missouri**

**Rebuttal Testimony**

**of**

**Timothy S. Lyons  
ScottMadden, Inc**

**On Behalf Of**

**Liberty Utilities (Midstates Natural Gas) Corp.  
d/b/a Liberty Utilities**

**April 2018**



REBUTTAL TESTIMONY  
OF  
TIMOTHY S. LYONS  
LIBERTY UTILITIES  
BEFORE THE  
MISSOURI PUBLIC SERVICE COMMISSION  
CASE NO. GR-2018-0013

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SCHEDULE TSL-R1            Rebuttal Position and Supporting Workpapers

REBUTTAL TESTIMONY  
OF  
TIMOTHY S. LYONS  
LIBERTY UTILITIES  
BEFORE THE  
MISSOURI PUBLIC SERVICE COMMISSION  
CASE NO. GR-2018-0013

1 **INTRODUCTION**

2 **Q. PLEASE STATE YOUR NAME, OCCUPATION AND BUSINESS**  
3 **ADDRESS.**

4 A. My name is Timothy S. Lyons. I am a Partner at ScottMadden, Inc. My business  
5 address is 1900 West Park Drive, Suite 250, Westborough, Massachusetts 01581.

6

7 **Q. ARE YOU THE SAME TIMOTHY S. LYONS WHO PREVIOUSLY**  
8 **SPONSORED DIRECT TESTIMONY IN THIS PROCEEDING?**

9 A. Yes, I am. I provided direct testimony (“Direct Testimony”) before the Missouri  
10 Public Service Commission (the “Commission”) on behalf of Liberty Utilities  
11 (Midstates Natural Gas) Corporation d/b/a Liberty Utilities (“Liberty Utilities” or  
12 the “Company”).

13

14 **Q. WHAT IS THE PURPOSE OF YOUR REBUTTAL TESTIMONY?**

15 A. The purpose of this rebuttal testimony (“Rebuttal Testimony”) is to respond to the  
16 Staff of the Missouri Public Service Commission’s (“Staff”) Cost of Service  
17 Report (“Staff Report”) related to the Company’s proposed Cash Working Capital  
18 (“CWC”) requirement.

19

1 **Q. HAVE YOU PREPARED SCHEDULES SUPPORTING YOUR REBUTTAL**  
2 **TESTIMONY?**

3 A. Yes. Schedule TSL-R1 supports this rebuttal testimony. The Schedule was  
4 prepared by me or under my direction and is incorporated herein by reference.

5

6 **I. SUMMARY OF STAFF RECOMMENDATIONS**

7 **AND THE COMPANY'S RESPONSE**

8 **Q. PLEASE SUMMARIZE STAFF'S RECOMMENDATIONS RELATED TO**  
9 **THE COMPANY'S PROPOSED CWC REQUIREMENTS.**

10 A. Staff recommends the following changes to the Company's CWC requirements:

- 11 1. Separate the collection lags for each of the Company's three districts:  
12 Northeast Missouri ("NEMO"), Southeast Missouri ("SEMO"), and West  
13 Missouri ("WEMO").
- 14 2. Adjust WEMO's collection lag for a large billing error.
- 15 3. Decrease the collection lag by adjusting the Accounts Receivable ("A/R")  
16 balance for those accounts that will later become uncollectible and included in  
17 bad debt expense.
- 18 4. Revise the Non-Labor Operations and Maintenance ("O&M") expense lag due  
19 to several invoices related to the Iowa and Illinois service areas by calculating  
20 an expense lag based on a new stratified sample of 200 invoices.
- 21 5. Measure separately an expense lag associated with incentive compensation/  
22 bonus payments.
- 23 6. Measure separately an expense lag associated with 401K payments.

- 1 7. Measure separately an expense lag associated with Federal Unemployment  
2 (“FUTA”) and State Unemployment (“SUTA”) payments.
- 3 8. Reduce the billing lag to reflect implementation of Automated Meter Reading  
4 (“AMR”).
- 5 9. Revise the expense lag associated with Medical and Dental payments.
- 6 10. Revise the expense lag associated with Missouri Public Service Commission  
7 (“PSC”) Assessment payments.
- 8 11. Revise O&M and tax payments to reflect Staff’s proposed revenue  
9 requirements.

10

11 **Q. PLEASE SUMMARIZE STAFF’S RECOMMENDATIONS THAT THE**  
12 **COMPANY DOES NOT OPPOSE.**

13 A. The Company does not oppose the following Staff recommendations:

- 14 1. Separate the collection lags for each of the Company’s three districts.
- 15 2. Adjust WEMO’s collection lag for a large billing error.
- 16 3. Revise the Non-Labor O&M expense lag.

17

18 **Q. WHAT IS THE COMPANY’S POSITION ON THOSE EXPENSES THAT**  
19 **STAFF PROPOSES TO MEASURE SEPARATELY?**

20 A. There are three expense lags that Staff proposes to measure separately: (a)  
21 incentive compensation/ bonus payments, (b) 401K payments; and (c) FUTA and  
22 SUTA payments. In general, these expense lags reflect a level of granularity not  
23 included in the Company’s prior lead-lag studies. The Company’s approach in the

1 past was to strike a balance between the level of precision and the level of  
2 effort/cost in preparing the studies. The lead-lag study could, for example,  
3 attempt to measure the net lead-lag associated with most test year expenses.  
4 However, the increase in precision would likely not be supported by the increase  
5 in the level of effort/cost. On the other hand, the lead-lag study could use a single  
6 net lead-lag to measure all test year expenses, such as a 45-day convention.  
7 However, the decrease in precision would likely not be supported by the decrease  
8 in level of effort/cost, particularly related to significant expenses such as  
9 purchased gas costs.

10 The Company's approach in prior lead-lag studies was to strike a balance  
11 between the level of precision and effort/cost by including certain expenses in the  
12 study, such as purchased gas costs, while excluding other expenses.

13 The Company does not oppose Staff's recommendation to separately  
14 identify and measure the net lead-lag days associated with incentive  
15 compensation/ bonus, FUTA and SUTA payments, and 401K payments since it  
16 results in a reasonable calculation of CWC requirements and is not inconsistent  
17 with other lead-lag studies used in the industry. Further, Staff's calculation of the  
18 expense lag associated with incentive compensation/ bonus, FUTA and SUTA  
19 payments, and 401K payments generally reflects the Company's CWC  
20 requirements.

21  
22 **Q. WHAT IS THE COMPANY'S POSITION ON THE REMAINING**  
23 **RECOMMENDATIONS?**

- 1 A. The Company's position on the remaining recommendations is discussed below.
- 2 1. The Company does not support Staff's recommended decrease in the
- 3 collection lag by adjusting the Accounts Receivable ("A/R") balance for those
- 4 accounts that will later become uncollectible and included in bad debt
- 5 expense.
- 6 2. The Company does not support Staff's recommended reduction in the billing
- 7 lag to reflect implementation of AMR.
- 8 3. The Company supports its proposed expense lag associated with Medical and
- 9 Dental payments.
- 10 4. The Company supports its proposed expense lag associated with the PSC
- 11 assessment.

12

13 **Q. WHAT IS THE IMPACT OF THE COMPANY'S REBUTTAL POSITION**

14 **RELATIVE TO STAFF?**

- 15 A. Figure 1 compares the Company's rebuttal testimony CWC requirement with
- 16 Staff's direct testimony CWC requirement. The rebuttal testimony CWC
- 17 requirement is based on a revised lead-lag study as included in Schedule TSL-R1
- 18 and applied to Staff's test year adjusted expenses to produce an illustrative,
- 19 apples-to-apples comparison of the CWC requirement between the Company's
- 20 rebuttal testimony and Staff's direct testimony. The illustrative, apples-to-apples
- 21 comparison is meant to compare the impact of the revised lead-lag study rather
- 22 than present the Company's position regarding cost of service items.

23

1

**Figure 1: Comparison of CWC Requirement**

Company	CWC Requirement <sup>1</sup>		
	Company CWC Rebuttal Testimony	Staff CWC Direct Testimony	Difference
NEMO	\$45,601	(\$10,587)	\$56,188
SEMO	\$25,440	(\$43,804)	\$69,244
WEMO	\$6,205	(\$16,817)	\$23,022
<b>Total</b>	<b>\$77,246</b>	<b>(\$71,208)</b>	<b>\$148,454</b>

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**II. THE COMPANY'S RESPONSE TO STAFF'S RECOMMENDATIONS**

12

**Q. WHAT IS STAFF'S RECOMMENDATION REGARDING AN ADJUSTMENT TO THE ACCOUNTS RECEIVABLE BALANCE USED TO CALCULATE THE COLLECTION LAG?**

13

14

15

**A.** Staff recommends a decrease in the collection lag by adjusting the Accounts Receivable ("A/R") balance for those accounts that will later become

16

<sup>1</sup> Based on Staff's revenue requirement



1 uncollectible and included in bad debt expense.<sup>2</sup> Staff believes that bad debt  
2 expense is treated as a separate annualized expense and should not be included in  
3 the calculation of the collection lag.

4

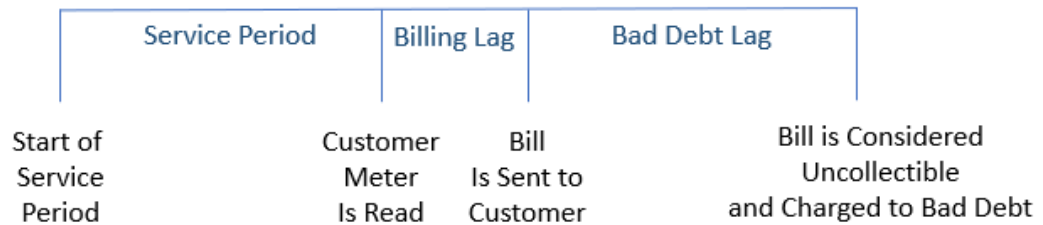
5 **Q. WHAT IS THE COMPANY'S POSITION ON THE ADJUSTMENT TO**  
6 **THE ACCOUNTS RECEIVABLE BALANCE?**

7 A. The Company does not support Staff's recommended adjustment to the Accounts  
8 Receivable balance since bad debt expense recovers only bad debt expense and  
9 not the revenue lag associated with bad debt expense; *i.e.*, the number of days  
10 from when the bill is calculated and posted to A/R to when the bill becomes  
11 uncollectible and included in bad debt expense.

12

13

**Figure 2: Illustration of Lag Associated with Bad Debt Expenses**



14

15 Figure 2 illustrates the lag associated with bad debt expenses. The Figure shows  
16 there is a lag associated with bad debt expenses from the time the bill is sent to  
17 the customer until the time that the customer bill is considered uncollectible and  
18 charged to bad debt expense. This lag represents a carrying cost since the  
19 Company does not begin to recover the customer bill until it is charged to bad  
20 debt. Importantly, the amount charged to bad debt does not include carrying

<sup>2</sup> Staff Cost of Service Report at page 16.

1 costs. The amount charged to bad debt includes only the amount of the customer  
2 bill.

3

4 **Q. ACCEPTING FOR THE MOMENT STAFF'S RECOMMENDATION**  
5 **REGARDING AN ADJUSTMENT TO THE ACCOUNTS RECEIVABLE**  
6 **BALANCE, DO YOU AGREE WITH STAFF'S CALCULATION?**

7 A. No, Staff's adjustment to the Accounts Receivable balance is not consistent with  
8 Staff's recommendation on bad debt expense in its cost of service. The bad debt  
9 adjustment is meant to reflect an average monthly bad debt expense; however,  
10 Staff's recommended adjustment is not consistent with their proposed bad debt  
11 expense in its cost of service, as shown in Figure 3. The Figure shows that Staff's  
12 annual bad debt expense for WEMO is \$12,561, or an average monthly bad debt  
13 expense of \$1,047. Staff's bad debt adjustment to the Accounts Receivable  
14 balance is \$5,225, which would reflect an annual bad debt expense of over  
15 \$150,000, well in excess of Staff's proposed bad debt expense in its cost of  
16 service.

1 **Figure 3: Comparison of Monthly Bad Debt to Bad Debt Adjustment**

	NEMO	SEMO	WEMO
Staff's Bad Debt Expense (1)	\$ 82,341	\$ 66,222	\$ 12,561
Divided by 12	12	12	12
Staff's Monthly Bad Debt	\$ 6,862	\$ 5,519	\$ 1,047
Staff's Bad Debt Adjustment (2)	\$ (1,517)	\$ 16,038	\$ 5,225
<b>Difference</b>	<b>\$ 8,379</b>	<b>\$ (10,519)</b>	<b>\$ (4,178)</b>
(1) From Staff Accounting Schedule 8 at Line 10, for NEMO, SEMO, and WEMO Districts			
(2) From Staff Cash Working Capital Workpapers			

2  
3

4 The Company believes that if the Commission were to approve Staff's proposed  
5 adjustment to the Accounts Receivable balance, which the Company does not  
6 support, then the adjustment should be consistent with bad debt expense included  
7 in the approved cost of service; i.e., that the adjustment reflects an average  
8 monthly bad debt expense consistent with the approved cost of service.

9

10 **Q. WHAT IS STAFF'S RECOMMENDATION REGARDING THE EXPENSE**  
11 **LAG ASSOCIATED WITH BAD DEBT EXPENSE?**

12 A. Staff recommends an increase to the expense lag associated with bad debt expense  
13 to match the revenue lag, effectively negating the working capital requirement  
14 associated with bad debt expense. Staff believes that bad debt expense is treated  
15 as a separate annualized expense and should not be included in the CWC  
16 requirement.<sup>3</sup>

17

<sup>3</sup> Staff Cost of Service Report at page 16.

1 **Q. DO YOU AGREE THAT THERE IS NO CASH WORKING CAPITAL**  
2 **REQUIREMENT ASSOCIATED WITH BAD DEBT EXPENSE?**

3 No, there is a cash working capital requirement associated with bad debt expense  
4 from the time a customer bill is considered uncollectible and charged to bad debt  
5 expense to the time payments are received from customers.

6

7 **Q. WHAT IS STAFF'S RECOMMENDATION REGARDING THE BILLING**  
8 **LAG TO REFLECT IMPLEMENTATION OF AUTOMATED METER**  
9 **READING ("AMR")?**

10 A. Staff recommends a reduction in the billing lag to reflect implementation of  
11 AMR. Staff believes that AMR will result in a significant reduction in the billing  
12 lag due to implementation of AMR. Staff's adjustment is supported by the  
13 Company's statement that all AMR devices will be installed by March 31, 2018,  
14 (Schwartz Direct pg. 9), which is also the true-up cutoff date for this case. Staff  
15 has indicated that if installation of these devices is completed by the true-up cutoff  
16 date, Staff will include an adjustment to reduce the billing lag to take into account  
17 the benefit of this metering technology.<sup>4</sup>

18

19 **Q. WHAT IS THE COMPANY'S POSITION ON STAFF'S**  
20 **RECOMMENDATION REGARDING THE BILLING LAG TO REFLECT**  
21 **IMPLEMENTATION OF AMR?**

---

<sup>4</sup> Staff Cost of Service Report at page 17.

1 A. The Company does not support an adjustment to the billing lag to reflect  
2 implementation of AMR. First, the Company is uncertain at this time of the  
3 impact that implementation of AMR will have on the billing lag. While  
4 implementation of AMR will provide certain benefits for the Company and  
5 customers as described in the Company's response to Staff's DR-0288, the  
6 Company also notes that the transition to reading meters one day per week will  
7 increase the billing lag for certain billing cycles. Furthermore, the Company will  
8 continue to follow its verification procedures as described in the Company's  
9 response to Staff's DR-0045 to ensure that customers receive an accurate bill.

10 These procedures include:

11	Day 1	Meters are read
12	Day 2	Data is verified to identify missing or potential incorrect
13		meter reads
14	Day 3	Service orders that may have an impact on the customer
15		meter read are completed
16	Day 4	Bills are calculated
17	Day 5	Bill are generated and review for reasonableness and
18		released for mailing
19		

20 As mentioned earlier, implementation of AMR is designed to streamline some of  
21 the procedures, including a reduction of incorrect reads; however, the Company  
22 will continue to follow its verification procedures to ensure that customers receive  
23 an accurate bill. Given these considerations, there is not an adequate basis for  
24 revising the billing lag at this time.

25

1 **Q. WHAT DO STAFF'S WORKPAPERS REFLECT REGARDING THE**  
2 **EXPENSE LAG ASSOCIATED WITH MEDICAL AND DENTAL**  
3 **EXPENSES?**

4 A. Staff's workpapers reflect that Staff intended to adopt the expense lag associated  
5 with medical and dental expenses from the Company's lead-lag study. However,  
6 Staff's study reflects a change in the medical and dental expense lag, essentially  
7 changing the expense lead into an expense lag.<sup>5</sup>

8

9 **Q. WHAT IS THE COMPANY'S POSITION ON STAFF'S WORKPAPERS**  
10 **REGARDING THE EXPENSE LAG ASSOCIATED WITH MEDICAL AND**  
11 **DENTAL EXPENSE?**

12 A. The Company does not support the change in Staff's workpapers. The Company  
13 believes the change to be inadvertent and recommends correction consistent with  
14 the Company's lead-lag study. The Company's calculation of the expense lag  
15 associated with Employee Benefit expenses is fully supported in testimony and  
16 workpapers and is based on actual invoices paid by the Company during the test  
17 year.<sup>6</sup>

18

19 **Q. WHAT DO STAFF'S WORKPAPERS REFLECT REGARDING THE**  
20 **EXPENSE LAG ASSOCIATED WITH PSC ASSESSMENT?**

21 A. Staff's workpapers reflect that Staff intended to adopt the expense lag associated  
22 with PSC Assessment payments from the Company's lead-lag study. However,

---

<sup>5</sup> See Staff Accounting Schedule 8 at Line 7, for NEMO, SEMO, and WEMO Districts

<sup>6</sup> See *Lyons Direct* at page 7.

1 Staff's study reflects a change in the PSC Assessment expense lag, essentially  
2 changing the expense lead into an expense lag.<sup>7</sup>

3

4 **Q. WHAT IS THE COMPANY'S POSITION ON STAFF'S WORKPAPERS**  
5 **REGARDING THE EXPENSE LAG ASSOCIATED WITH THE PSC**  
6 **ASSESSMENT?**

7 A. The Company does not support the change in Staff's workpapers. Similar to  
8 medical and dental expense lag, the Company believes this change to be  
9 inadvertent and recommends correction consistent with the Company's lead-lag  
10 study. The Company's calculation of the expense lag associated with the PSC  
11 Assessment is fully supported in testimony and workpapers and is based on actual  
12 invoices paid by the Company during the test year.<sup>8</sup>

13

14

### **III. CONCLUSION**

15 **Q. CAN YOU PLEASE SUMMARIZE THE IMPACT OF THE COMPANY'S**  
16 **REBUTTAL POSITION RELATIVE TO STAFF?**

17 A. As discussed previously at pages 5-6 above, Figure 1 (replicated below) compares  
18 the Company's rebuttal testimony CWC requirement with Staff's direct testimony  
19 CWC requirement. The rebuttal testimony CWC requirement is based on a  
20 revised lead-lag study as included in Schedule TSL-R1 and applied to Staff's test  
21 year adjusted expenses to produce an illustrative, apples-to-apples comparison of  
22 the CWC requirement between the Company's rebuttal testimony and Staff's

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<sup>7</sup> See Staff Accounting Schedule 8 at Line 11, for NEMO, SEMO, and WEMO Districts

<sup>8</sup> See *Lyons Direct* at page 9.

1 direct testimony. The illustrative, apples-to-apples comparison is meant to  
2 compare the impact of the revised lead-lag study rather than present the  
3 Company's position regarding cost of service items.

4 **Figure 1: Comparison of CWC Requirement**

	CWC Requirement		
Company	Company Rebuttal Testimony	Staff Direct Testimony	Difference
NEMO	\$45,601	(\$10,587)	\$56,188
SEMO	\$25,440	(\$43,804)	\$69,244
WEMO	\$6,205	(\$16,817)	\$23,022
<b>Total</b>	<b>\$77,246</b>	<b>(\$71,208)</b>	<b>\$148,454</b>

5  
6 The comparison shows that the Company's rebuttal CWC requirement for NEMO  
7 is \$45,601 as compared to Staff's CWC requirement of (\$10,587), or an increase  
8 of \$56,188. The comparison also shows that the Company's revised CWC  
9 requirement for SEMO \$25,440 as compared to Staff's CWC requirement of  
10 (\$43,804), or an increase of \$69,244. Finally, the Figure shows that the  
11 Company's revised CWC requirement for WEMO of \$6,205 as compared to  
12 Staff's CWC requirement of (\$16,817), or an increase of \$23,022.

13  
14 **Q. DOES THIS CONCLUDE YOUR REBUTTAL TESTIMONY?**

15 A. Yes, it does.



**Rebuttal Position (NEMO)**

Liberty Utilities Missouri Lead-Lag Study Ending June 30, 2017 Cash Working Capital Requirement Summary (NEMO)									
Line	Description	Revenue Requirement Amount	Average Daily Amount	Revenue Lag	Ref.	Expense Lag	Ref.	Net (Lead)/Lag Days	Working Capital Requirement
	<u>Gas Supply Expense</u>								
1	Purchased Gas Costs	\$ 7,866,648	21,552	48.11	A	(40.14)	B	7.97	171,817
2	Purchased Gas Costs	\$ (7,866,648)	(21,552)	48.11	A	(48.11)	B	0.00	-
3	<u>Operation and Maintenance Expenses</u>								
4	O&M, Labor	\$ 1,467,165	4,020	48.11	A	(13.00)	C	35.11	141,129
5	Pension Expense	\$ 63,877	175	48.11	A	(51.38)	C	(3.27)	(571)
6	OPEB	\$ 154,047	422	48.11	A	(167.00)	C	(118.89)	(50,177)
7	Medical and Dental Expenses	\$ 493,033	1,351	48.11	A	12.92	C	61.03	82,436
8	401K Payments	\$ 51,466	141	48.11	A	(28.35)	C	19.76	2,786
9	Incentive compensation	\$ 62,013	170	48.11		(302.50)		(254.39)	(43,221)
10	Uncollectibles	\$ 82,341	226	48.11	A	0.00		48.11	10,853
11	Affiliate Expenses	\$ 579,969	1,589	48.11	A	(42.50)	C	5.61	8,914
12	O&M, Other Non-Labor	\$ 1,573,930	4,312	48.11	A	(31.89)	C	16.22	69,943
13	Total O&M Expenses	\$ 4,527,841							\$ 222,093
14									
15	<u>Taxes Other Than Income Taxes</u>								
16	Ad Valorem	\$ 804,320	2,204	48.11	A	(169.85)	E	(121.74)	(268,261)
17	Federal Unemployment Tax	\$ 2,047	6	48.11	A	(76.24)	E	(28.13)	(158)
18	State Unemployment Tax	\$ 5,737	16	48.11	A	(76.43)	E	(28.32)	(445)
19	Payroll Taxes	\$ 117,305	321	48.11	A	(12.00)	E	36.11	11,605
20	PSC Assessment	\$ 51,365	141	48.11	A	41.13	E	89.24	12,558
21	DOT	\$ -	-	48.11	A	(55.66)	E	(7.55)	-
22	Total Taxes Other Than Income Taxes	\$ 980,774							\$ (244,701)
23									
24	Federal Income Tax	\$ 219,249	601	48.11	A	(37.99)	D-1	10.12	6,079
25	State Income Tax	\$ 62,295	171	48.11	A	(37.99)	D-2	10.12	1,727
26	Interest Payments	\$ 948,149	2,598	48.11	A	(91.00)	F	(42.89)	(111,414)
27	Sales Tax	\$ -	-	48.11	A	(13.45)	G	34.66	-
28									
29	Total	\$ 14,604,956	40,014						\$ 45,601

**Rebuttal Position (SEMO)**

Liberty Utilities Missouri									
Lead-Lag Study Ending June 30, 2017									
Cash Working Capital Requirement									
Summary (SEMO)									
Line	Description	Revenue Requirement Amount	Average Daily Amount	Revenue Lag	Ref.	Expense Lag	Ref.	Net (Lead)/Lag Days	Working Capital Requirement
	<u>Gas Supply Expense</u>								
1	Purchased Gas Costs	\$ 6,230,858	17,071	47.08	A	(40.14)	B	6.94	118,506
2	Purchased Gas Costs	\$ (6,230,858)	(17,071)	47.08	A	(47.08)	B	0.00	-
3	<u>Operation and Maintenance Expenses</u>								
4	O&M, Labor	\$ 1,781,900	4,882	47.08	A	(13.00)	C	34.08	166,376
5	Pension Expense	\$ 88,270	242	47.08	A	(51.38)	C	(4.30)	(1,039)
6	OPEB	\$ 212,771	583	47.08	A	(167.00)	C	(119.92)	(69,905)
7	Medical and Dental Expenses	\$ 581,187	1,592	47.08	A	12.92	C	60.00	95,536
8	401K Payments	\$ 70,892	194	47.08	A	(28.35)	C	18.73	3,638
9	Incentive Compensation	\$ 88,177	242	47.08	A	(302.50)	C	(255.42)	(61,705)
10	Uncollectibles	\$ 66,222	181	47.08	A	0.00		47.08	8,542
11	Affiliate Expenses	\$ 801,796	2,197	47.08	A	(42.50)	C	4.58	10,061
12	O&M, Other Non-Labor	\$ 2,297,759	6,295	47.08	A	(31.89)	C	15.19	95,625
13	Total O&M Expenses	\$ 5,988,974							\$ 247,128
14									
15	<u>Taxes Other Than Income Taxes</u>								
16	Ad Valorem	\$ 723,536	1,982	47.08	A	(169.85)	E	(122.77)	(243,359)
17	Federal Unemployment Tax	\$ 2,650	7	47.08	A	(76.24)	E	(29.16)	(212)
18	State Unemployment Tax	\$ 7,284	20	47.08	A	(76.43)	E	(29.35)	(586)
19	Payroll Taxes	\$ 142,738	391	47.08	A	(12.00)	E	35.08	13,718
20	PSC Assessment	\$ 68,960	189	47.08	A	41.13	E	88.21	16,665
21	DOT	\$ -	-	47.08	A	(55.66)	E	(8.58)	-
22	Total Taxes Other Than Income Taxes	\$ 945,168							\$ (213,773)
23									
24	Federal Income Tax	\$ 235,295	645	47.08	A	(37.99)	D-1	9.09	5,860
25	State Income Tax	\$ 66,854	183	47.08	A	(37.99)	D-2	9.09	1,665
26	Interest Payments	\$ 1,113,165	3,050	47.08	A	(91.00)	F	(43.92)	(133,946)
27	Sales Tax	\$ -	-	47.08	A	(13.45)	G	33.63	-
28									
29	Total	\$ 14,580,314	39,946						\$ 25,440

**Rebuttal Position (WEMO)**

Liberty Utilities Missouri Lead-Lag Study Ending June 30, 2017 Cash Working Capital Requirement Summary (WEMO)									
Line	Description	Revenue Requirement Amount	Average Daily Amount	Revenue Lag	Ref.	Expense Lag	Ref.	Net (Lead)/Lag Days	Working Capital Requirement
	<u>Gas Supply Expense</u>								
1	Purchased Gas Costs	\$ 1,900,208	5,206	46.39	A	(40.14)	B	6.25	32,548
2	Purchased Gas Costs	\$ (1,900,208)	(5,206)	46.39	A	(46.39)	B	0.00	-
3	<u>Operation and Maintenance Expenses</u>								
4	O&M, Labor	\$ 268,082	734	46.39	A	(13.00)	C	33.39	24,524
5	Pension Expense	\$ 12,626	35	46.39	A	(51.38)	C	(4.99)	(172)
6	OPEB	\$ 30,461	83	46.39	A	(167.00)	C	(120.61)	(10,065)
7	Medical and Dental Expenses	\$ 82,139	225	46.39	A	12.92	C	59.31	13,347
8	401K Payments	\$ 10,178	28	46.39	A	(28.35)	C	18.04	503
9	Incentive Compensation	\$ 13,497	37	46.39	A	(302.50)	C	(256.11)	(9,470)
10	Uncollectibles	\$ 12,561	34	46.39	A	0.00		46.39	1,596
11	Affiliate Expenses	\$ 92,293	253	46.39	A	(42.50)	C	3.89	984
12	O&M, Other Non-Labor	\$ 332,984	912	46.39	A	(31.89)	C	14.50	13,228
13	Total O&M Expenses	\$ 854,821							\$ 34,474
14									
15	<u>Taxes Other Than Income Taxes</u>								
16	Ad Valorem	\$ 137,886	378	46.39	A	(169.85)	E	(123.46)	(46,638)
17	Federal Unemployment Tax	\$ 395	1	46.39	A	(76.24)	E	(29.85)	(32)
18	State Unemployment Tax	\$ 1,127	3	46.39	A	(76.43)	E	(30.04)	(93)
19	Payroll Taxes	\$ 21,995	60	46.39	A	(12.00)	E	34.39	2,072
20	PSC Assessment	\$ 10,010	27	46.39	A	41.13	E	87.52	2,400
21	DOT	\$ -	-	46.39	A	(55.66)	E	(9.27)	-
22	Total Taxes Other Than Income Taxes	\$ 171,413							\$ (42,291)
23									
24	Federal Income Tax	\$ 36,835	101	46.39	A	(37.99)	D-1	8.40	848
25	State Income Tax	\$ 10,466	29	46.39	A	(37.99)	D-2	8.40	241
26	Interest Payments	\$ 160,488	440	46.39	A	(91.00)	F	(44.61)	(19,615)
27	Sales Tax	\$ -	-	46.39	A	(13.45)	G	32.94	-
28									
29	Total	\$ 3,134,231	8,587						\$ 6,205

**Workpapers**

Collection Lag A/R Adjustment (NEMO)	Rebuttal Position	Staff Position	Modified Staff Position
Test Year Revenues	\$ 18,090,468	\$ 18,090,468	\$ 18,090,468
Average A/R Balance	\$ 1,428,485	\$ 1,428,485	\$ 1,428,485
Less: Average Bad Debt Expense	\$ -	\$ (1,517)	\$ 6,862
<b>Net Revenues</b>	<b>\$ 1,428,485</b>	<b>\$ 1,430,003</b>	<b>\$ 1,421,624</b>
A/R Turnover	12.66	12.65	12.73
Collection Days Lag	28.82	28.85	28.68
Service Lag	15.21	15.21	15.21
Billing Lag	4.08	4.08	4.08
<b>Revenue Lag</b>	<b>48.11</b>	<b>48.14</b>	<b>47.97</b>
Collection Lag A/R Adjustment (SEMO)	Rebuttal Position	Staff Position	Modified Staff Position
Test Year Revenues	\$ 18,097,874	\$ 18,097,874	\$ 18,097,874
Average A/R Balance	\$ 1,378,079	\$ 1,378,079	\$ 1,378,079
Less: Average Bad Debt Expense	\$ -	\$ 5,225	\$ 5,519
<b>Net Revenues</b>	<b>\$ 1,378,079</b>	<b>\$ 1,372,854</b>	<b>\$ 1,372,561</b>
A/R Turnover	13.13	13.18	13.19
Collection Days Lag	27.79	27.69	27.68
Service Lag	15.21	15.21	15.21
Billing Lag	4.08	4.08	4.08
<b>Revenue Lag</b>	<b>47.08</b>	<b>46.98</b>	<b>46.97</b>
Collection Lag A/R Adjustment (WEMO)	Rebuttal Position	Staff Position	Modified Staff Position
Test Year Revenues	\$ 3,750,844	\$ 3,750,844	\$ 3,750,844
Average A/R Balance	\$ 278,482	\$ 278,482	\$ 278,482
Less: Average Bad Debt Expense	\$ -	\$ 16,038	\$ 1,047
<b>Net Revenues</b>	<b>\$ 278,482</b>	<b>\$ 262,444</b>	<b>\$ 277,435</b>
A/R Turnover	13.47	14.29	13.52
Collection Days Lag	27.10	25.54	27.00
Service Lag	15.21	15.21	15.21
Billing Lag	4.08	4.08	4.08
<b>Revenue Lag</b>	<b>46.39</b>	<b>44.83</b>	<b>46.29</b>

AFFIDAVIT OF TIMOTHY S. LYONS

STATE OF VERMONT

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On the 13<sup>th</sup> day of April, 2018, before me appeared Timothy S. Lyons, to me personally known, who, being by me first duly sworn, states that he a partner at ScottMadden, Inc and acknowledges that he has read the above and foregoing document and believes that the statements therein are true and correct to the best of his information, knowledge and belief.

Timothy S. Lyons

Timothy S. Lyons

Subscribed and sworn to before me this 13<sup>th</sup> day of April, 2018.

Megan Thomas  
Notary Public

My commission expires: 02/10/2019

