
**BEFORE THE MINNESOTA OFFICE OF ADMINISTRATIVE HEARINGS
600 North Robert Street
St. Paul, Minnesota 55101**

**FOR THE MINNESOTA PUBLIC UTILITIES COMMISSION
121 7th Place East
Suite 350
St. Paul, Minnesota 55101-2147**

**MPUC Docket No. G-011/GR-13-617
OAH Docket No. 8-2500-31126**

*In the Matter of a Petition by Minnesota Energy Resources Corporation
for Authority to Increase Natural Gas Rates in Minnesota*

**PROPOSED FINDINGS OF FACT, CONCLUSIONS, AND RECOMMENDED ORDER
OF THE
OFFICE OF THE ATTORNEY GENERAL-ANTITRUST AND UTILITIES DIVISION**

July 11, 2014

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OF THE ATTORNEY GENERAL**

This matter came for evidentiary hearing before Administrative Law Judge (“ALJ”) Eric L. Lipman on May 13, 2014, at the offices of the Minnesota Public Utilities Commission in St. Paul, Minnesota. Public hearings were held on March 12, 2014, in Rochester and Rosemount, and on March 13, 2014 in Cloquet. Public comments were received until March 19, 2014.

Michael J. Ahern, Kristin M. Stastny, and Kristin K. Berkland, Attorneys at Law, Dorsey & Whitney LLP, 50 South Sixth Street, Suite 1500, Minneapolis, Minnesota 55402, appeared on behalf of Minnesota Energy Resources Corporation (“MERC” or the “Company”).

Chad T. Marriott, Attorney at Law, Stoel Rives, LLP, 900 SW Fifth Avenue, Suite 2600, Portland, Oregon 97204, appeared for and on behalf of the Super Large Gas Intervenors.

Richard J. Savelkoul, Attorney at Law, Martin & Squires, P.A., 332 Minnesota Street, Suite W2750, St. Paul, Minnesota 55101, appeared for and on behalf of Constellation New Energy – Gas Division, LLC (“Constellation”).

Julia E. Anderson, Linda S. Jensen, and Peter Madsen, Assistant Attorneys General, 445 Minnesota Street, Suite 1800, St. Paul, Minnesota 55101, appeared for and on behalf of the Department of Commerce, Division of Energy Resources, Energy Regulation and Planning (“Department”).

Ian M. Dobson and Ryan P. Barlow, Assistant Attorneys General, 445 Minnesota Street, Suite 1400, St. Paul, Minnesota 55101, appeared for and on behalf of the Office of the Attorney General, Antitrust and Utilities Division (“OAG-AUD”).

Robert Harding, Clark Kaml, Robert Brill, Ann Schwieger and Andrew Bahn, 121 Seventh Place East, Suite 350, St. Paul, Minnesota 55101, attended the hearings on behalf of the Staff of the Public Utilities Commission (“Commission”).

FINDINGS OF FACT

I. PROCEDURAL HISTORY.

1. MERC is a natural gas utility that serves approximately 213,000 customers in 51 counties and 165 communities throughout Minnesota.

2. On September 30, 2013, MERC filed a request to increase natural gas rates by \$14,187,597, or approximately 5.5%. In addition, MERC proposed an interim rate increase of \$12,095,382, or 4.70%.¹

3. On November 27, 2013, the Commission accepted MERC’s filing as substantially complete as of September 30, 2013, suspended the operation of the proposed rate schedule under Minn. Stat. § 216B.16, subd. 2 until a final determination in this case, established interim rates, and referred the matter to the Office of Administrative Hearings for a contested case proceeding.²

4. On December 10, 2013, Administrative Law Judge Eric L. Lipman conducted a prehearing conference at the Public Utilities Commission, 350 Metro Square Building, 121 Seventh Place East, St. Paul, Minnesota.³

¹ *Id.*

² See Order Accepting Filing, Suspending Rates, and Extending Time for Final Determination (Nov. 27, 2013); Notice and Order for Hearing (Nov. 27, 2013); Order Setting Interim Rates, at 2, 5 (Nov. 27, 2013).

³ See First Prehearing Order (Dec 12, 2013).

5. Judge Lipman issued the first prehearing order on December 12, 2013 and protective order on December 23, 2013.⁴ In the first pre-hearing order, Judge Lipman ordered that petitions for intervention be filed by February 14, 2014; that direct testimony of intervenors be filed by March 4, 2014; that rebuttal testimony of all parties be filed by April 15, 2014; and that the evidentiary hearing take place on May 13-16, 2014.⁵

6. The initial parties to the proceeding were MERC, the Department, and the OAG-AUD.⁶ On February 14, 2014, both Constellation and the Hibbing Taconite Company, ArcelorMittal USA's Minorca Mine, Northshore Mining Company, United Taconite, LLC, the Minntac and Keewatin Mines of United States Steel Corporation, and USG Interiors, Inc., (collectively appearing as the "Super Large Gas Intervenors") filed Petitions to Intervene.⁷ MERC did not object to the intervention of the Super Large Gas Intervenors or Constellation as parties to this matter.

7. On February 24, 2014, U.S. Energy Services, Inc. on behalf of itself and a group of industrial, commercial, and institutional customers (collectively the "ICI Group") filed a Petition to Intervene.⁸

8. On February 26, 2014, Judge Lipman issued a Third Prehearing Order, granting the intervention of Constellation and the Super Large Gas Intervenors and requesting additional information from the ICI Group as to which interruptible transport service customers it sought to represent.⁹

⁴ *See id.*; Second Prehearing Order (Protective Order) (Dec. 23, 2013).

⁵ First Prehearing Order (Dec. 12, 2013).

⁶ *See id.*

⁷ Petition to Intervene filed by Constellation New Energy – Gas Division, LLC (Feb. 14, 2014); Petition to Intervene filed by Super Large Gas Intervenors (Feb. 14, 2014).

⁸ *See* Petition to Intervene filed by U.S. Energy Services, Inc. (Feb. 24, 2014).

⁹ *See* Third Prehearing Order (Feb. 26, 2014).

9. The ICI Group filed a supplement to its Petition to Intervene on February 27, 2014.¹⁰ MERC filed an objection to the ICI Group's untimely petition to intervene on March 3, 2014.¹¹ Oral arguments on the ICI Group's Petition to Intervene were held on March 14, 2014.¹² Judge Lipman issued an Order denying the intervention of the ICI Group on March 24, 2014.¹³

10. The Department, OAG-AUD, and Constellation filed direct testimony on March 4, 2014, March 20, 2014, April 21, 2014 and May 9, 2014.

11. Public hearings were held in Rochester and Rosemount on March 12, 2014.¹⁴ Eight members of the public attended the meeting in Rochester and six spoke. One member of the public attended the meeting in Rosemount and spoke.¹⁵ An additional public hearing was held in Cloquet, Minnesota on March 13, 2014.¹⁶ Three members of the public attended the hearing and all three spoke.¹⁷

12. MERC, the Department, and the OAG-AUD filed rebuttal testimony on April 15, 2014 and April 21, 2014. The same parties filed surrebuttal testimony on May 7, 2014 and May 9, 2014.

13. Judge Lipman conducted an evidentiary hearing on May 13, 2014.

14. On June 24, 2014, MERC, the OAG, and the Department filed initial briefs. The same parties filed Reply Briefs on July 11, 2014.

¹⁰ Supplement to Petition to Intervene (Feb. 27, 2014).

¹¹ See Objection to Petition to Intervene of U.S. Energy Services, Inc. and Affidavit in Support (Mar. 3, 2014).

¹² Fourth Prehearing Order (Mar. 11, 2014).

¹³ See Fifth Prehearing Order (Mar. 24, 2014).

¹⁴ First Prehearing Order (Dec. 12, 2013) (OAH Docket No. 8-2500-31126; MPUC Docket No. G-011/GR-13-617) (Doc. ID No. 201312-94534-01).

¹⁵ See Rochester Public Hearing Transcript (Mar. 12, 2014); Rosemount Public Hearing Transcript (Mar. 12, 2014).

¹⁶ First Prehearing Order (Dec. 12, 2013).

¹⁷ See Cloquet Public Hearing Transcript (Mar. 13, 2014).

II. DISPUTED ISSUES.

15. The following issues are disputed between MERC and the OAG:

- A. Customer Service Expenses;
- B. Bad Debt Expenses;
- C. Operations and Maintenance Inflation;
- D. Property Tax Expenses;
- E. Net Operating Loss Deferred Tax Asset;
- F. Travel and Entertainment Expenses.
- G. Unamortized Rate Case Expenses;
- H. Transportation Sales;
- I. Return on Equity;
- J. Class Cost of Service Study;
- K. Allocation of Customer Service Expenses;
- L. Allocation of Income Tax Expenses;
- M. Allocation of Distribution Mains Expenses;
- N. Revenue Apportionment; and
- O. Customer Charge.

A. Customer Service Expenses.

16. MERC has requested recovery for customer service expenses related to customer services provided by its outside contractor, Vertex. But MERC also requests recovery for expenses related to a project intended to create an in-house customer service product, known as ICE 2016.

17. OAG witness Mr. John Lindell identified concerns with MERC's request.¹⁸ Specifically, Mr. Lindell noted that it would be inappropriate to include costs for MERC's in-house customer service system, known as ICE 2016, when the system was not used and useful for MERC's customers.¹⁹ Additionally, Mr. Lindell noted that MERC's customers should not be required to pay for the ICE project and third-party customer service expenses at the same time.²⁰

18. In response, MERC witness Mr. Seth DeMerritt agreed that MERC would be willing to exclude \$322,226 from the 2014 test year related to the ICE 2016 project, and defer the costs as a regulatory asset until MERC's next rate case.²¹

19. The OAG indicated that it had no objection to this proposal as long as several conditions are included. First, MERC should not receive a return on expenses related to the ICE 2016 project as they are not used and useful at this time and MERC did not include the expenses as construction work in progress. Second, the OAG does not agree to the amortization period proposed by MERC, and recommends that any discussion of amortization period be resolved during MERC's next rate case. Third, the OAG indicated that it did not waive any review of the reasonableness of the costs in MERC's next rate case.

20. The ALJ finds that the OAG's recommendation to exclude \$322,226 in ICE 2016 expenses from rate base is reasonable, and the ALJ recommends that the expenses be deferred until MERC's next rate case. The ALJ agrees with the OAG that MERC should not recover any return on the ICE 2016 expenses at this time. The ALJ makes no finding on the reasonableness of the expenses or any future amortization period at this time.

¹⁸ Ex. 151, at 20 (Lindell Direct).

¹⁹ *Id.* at 21.

²⁰ *Id.*

²¹ Ex. 24, at 24–25 (DeMerritt Rebuttal)

B. Bad Debt Expenses.

21. MERC requested recovery for a known and measurable change of more than \$2 million related to bad debt expenses in the 2014 test year.²² The Department and the OAG recommend reducing MERC's bad debt expense. The OAG estimates that MERC will have bad debt expenses of \$1,350,000 in test year 2014.

22. MERC has overestimated its bad debt in previous rate cases. In MERC's last rate case, MERC initially calculated bad debt expenses of \$2,820,465 for a 2012 test year,²³ and the Commission permitted recovery of \$2,031,887.²⁴ MERC still ended up recovering excess costs in 2012 because its actual bad debt in 2012 was \$1,293,772,²⁵ nearly \$740,000 less than was allowed. MERC's proposal in that case overestimated the actual 2012 bad debt by more than \$1.5 million.

23. MERC has similarly overestimated its bad debt expenses in this case. MERC calculated its 2014 test year bad debt expenses by using the average percentage of uncollectible expenses from 2010 to 2012.²⁶ But reviewing MERC's historical level of bad debt shows that \$2 million is more than MERC's actual bad debt in any year from 2010 to 2012.²⁷ The average bad debt expense over 2010 to 2012 was \$1,421,544.²⁸ MERC's unreasonableness is even clearer when 2013 actual bad debt, \$1,481,318, is included in the calculation.²⁹ Incorporating 2013 bad debt results in an average bad debt level from 2010 to 2013 of \$1,436,488. MERC's bad debt

²² *Id.* at SSD-3 (estimating \$2,016,410 in uncollectible expenses).

²³ Findings of Fact, Conclusions of Law, and Order, *In the Matter of the Application of Minnesota Energy Resources Corporation for Authority to Increase Rates for Natural Gas Service in Minnesota*, Docket No. G-007, 011/GR-10-977, at 30 (July 13, 2012).

²⁴ Ex. 151, at 5 (Lindell Direct).

²⁵ Ex. 152, Schedule JLL-3 (Schedules to Lindell Direct).

²⁶ Ex. 19, at 16–17 (DeMerritt Direct).

²⁷ Ex. 152, JLL-3 (Schedules to Lindell Direct).

²⁸ *Id.*

²⁹ Ex. 218, MAS-25 (St. Pierre Direct Attachments).

proposal in this case exceeds the four-year bad debt average by nearly \$600,000, an increase of 39.2%, and would result in recovery of nearly \$600,000 more than recent history would suggest.

24. Department witness Michelle St. Pierre agrees that MERC's proposed bad debt expense is unreasonable. Ms. St. Pierre stated that MERC's average bad debt calculation "would not be reasonable in this instance since there is a clear downward trend in costs."³⁰ Ms. St. Pierre also noted that MERC's uncollectible expense ratio "has been dropping year after year by approximately 0.10 percent every year since MERC's last general rate case test year 2011."³¹ For that reason, Ms. St. Pierre recommended that the Commission include the more recent 2013 actual data when estimating bad debt, rather than the years-old 2010 data. Ms. St. Pierre recommended a bad debt expense of \$1,433,812.³²

25. Several external factors support Ms. St. Pierre's conclusion that bad debt levels are trending downwards and will contribute to lower uncollectible expenses in 2014. MERC is currently benefitting from a comparatively low price for natural gas, which will lead to lower bills. In addition, the general economic conditions in and around Minnesota have been improving in recent months.³³ Lower bills and a better economy will presumably result in fewer customers being unable to pay their bills – and a lower level of uncollectible expenses. These factors, especially when considered in light of Ms. St. Pierre's conclusion that MERC's bad debt levels are trending steadily downwards, support the OAG's estimate that MERC's bad debt for test year 2014 will be slightly lower than average bad debt expenses from 2010 to 2013.

26. The ALJ accepts the recommendation of the OAG to reduce MERC's bad debt expense to \$1,350,000.

³⁰ Ex. 219, at 36 (St. Pierre Surrebuttal).

³¹ *Id.*

³² *Id.* at 36, MAS-S-10.

³³ Ex. 151, at 6 (Lindell Direct).

C. Operating and Maintenance Expenses.

27. MERC has requested an increase in all of its operating and maintenance (“O&M”) expenses related to inflation. MERC projects inflation in O&M expense of nearly 8.4% from 2012 to 2014, with a total increase of \$1,995,655.

28. The OAG raised concerns with MERC’s proposal to use multiple years of estimated inflation for O&M costs. Minnesota Rules permit MERC to use a 2014 test year and rely on 2012 historical data rather than data from 2013.³⁴ This method allows MERC to inflate 2012 historical data twice to reach a 2014 test year, rather than examining what actually took place during 2013. While the Rules technically permit MERC to claim that 2012 was its most recent fiscal year, rather than 2013, OAG witness Mr. Lindell believes that this “contravenes the intent of the rule” because a large amount of 2013 financial data was available at the time the case was filed.³⁵ Utilizing this 2013 data, rather than allowing MERC to estimate 2013 inflation on 2012 data and then estimate inflation again for 2014, would result in more accurate cost estimations for the 2014 test year. For that reason, the OAG recommends permitting only one year of inflation for MERC’s O&M expenses.

29. MERC’s proposal to include multiple years of inflation is also concerning because MERC’s inflation estimates are inaccurate. MERC used an external inflation based on the consumer price index to estimate inflation of 1.708% in 2013 and 1.993% in 2014, for a total inflation of 3.74% over two years for non-labor expenses.³⁶ But MERC’s 2013 inflation estimate is susceptible to bias because two of the five sources that MERC relies on for consumer price

³⁴ Minn. Rule 7825.3100 (instructing utilities to utilize the “prior fiscal year unless a change of rates is filed within the last three months of the current fiscal year and at least nine months of historical data is available”).

³⁵ Ex. 152, at 6 (Lindell Surrebuttal).

³⁶ Ex. 19, SSD-19 (DeMerritt Direct).

index estimations did not provide an estimate for 2013.³⁷ MERC's 2013 estimation only has a sample size of three sources, which is too low to provide an accurate estimate of inflation based on the consumer price index. Furthermore, external inflation indexes are less reliable than the readily available internal inflation measures identified by Mr. Lindell.³⁸

30. Additionally, Mr. Lindell noted that the consumer price index is not a proper method for estimating MERC's internal inflation.³⁹ The consumer price index measures external, economy-wide factors; an internal inflation projection, "based on MERC's historical O&M cost changes," provides a more accurate estimate of MERC's future non-labor cost inflation.⁴⁰ Mr. Lindell developed an internal inflation factor by averaging the annual change in O&M expenses from the most recent three years that had reliable financial data.⁴¹ This average results in an inflation rate of 2.2%.

31. The ALJ recommends applying an internal inflation factor of 2.2% to MERC's O&M expenses, and applying one year of inflation rather than two.

D. Property Tax Expenses.

32. MERC has requested recovery of \$7,314,733 in property tax expenses for test year 2014, significantly more property taxes than it has been granted in previous cases. The increase represents an increase of more than 10% in just two years.⁴² The OAG recommends that a value of \$6,624,033 for property tax expenses.⁴³

³⁷ *Id.*

³⁸ Ex. 151, at 17 (Lindell Direct).

³⁹ *Id.*

⁴⁰ *Id.*

⁴¹ *Id.* at 18. The three most recent years does not include 2013 because MERC had not filed its 2013 financial data at the time the rate case was filed. *Id.* at 19.

⁴² Ex. 152, JLL-4 (Schedules to Lindell Direct); Ex. 37, at 6-7 (Wilde Rebuttal).

⁴³ Ex. 152, JLL-4 (Schedules to Lindell Direct). Mr. Lindell also identified some irregularities in the historical property tax reported by MERC. In Mr. Wilde's direct testimony, he indicated that MERC's 2012 property tax was \$6,624,033. Ex. 36, JRW-1 (Wilde Direct). But in response to information requests from the OAG, MERC indicated that its 2012 property tax was \$6,602,054. Ex. 152, JLL-4 (Schedules to Lindell Direct). MERC has failed to explain this discrepancy even though Mr. Lindell raised it in his direct testimony. Ex. 151, at 12 (Lindell Direct).

33. One reason that MERC's proposed property tax expense is significantly larger than previous cases is that, similar to its O&M expense methodology, MERC applied an inflation factor twice to calculate its test year 2014 property taxes. MERC first inflated the amount of its 2012 historical property taxes to estimate 2013 taxes, and then inflated the 2013 estimation to reach its proposed amount for 2014 test year property taxes. In order to reach its recommendation, MERC has inflated its estimates while ignoring actual amounts from 2013. This has led to MERC's claim that property tax rates will increase by nearly ten percent in only two years. This claim is unfounded and unreasonable.

34. MERC's multiple year inflation method is especially unreasonable because the analysis of OAG witness Mr. Lindell demonstrates that at least some of MERC's property taxes will actually *decrease* from 2013 to 2014. Mr. Lindell reviewed the proposed 2014 taxes for MERC's property in Washington County. As reported on the Proposed Taxes 2014 form, MERC's property taxes in Washington County will decrease by 0.01% in 2014.⁴⁴ And MERC has not identified any specific property tax data to rebut Mr. Lindell's argument. The only property tax estimates for 2014 that have been introduced into the record were produced by Mr. Lindell, and they demonstrate that at least some of MERC's property taxes are trending downward in 2014. It would be unreasonable to permit multiple years of inflation when the only evidence in the record demonstrates that MERC's property taxes will not increase in 2014.

Depending on the true value of MERC's 2012 property taxes, MERC's estimate for the 2014 test year could represent an increase if more than 22% in only two years. *Id.*; see also Ex. 152, JLL-4, at 2 (Schedules to Lindell Direct).

⁴⁴ Ex. 152, JLL-5 (Schedules to Lindell Direct). MERC argues that Mr. Lindell's example should be disregarded because it represents only part of MERC's statewide property tax, and that the aggregate result of statewide bills is an overall increase in property tax. See Ex. 37, at 8-9 (Wilde Rebuttal).

35. The record demonstrates that property tax will either decrease or remain relatively stable going into 2014. The ALJ recommends that property tax expenses be reduced to \$6,624,033 as recommended by the OAG.

E. Net Operating Loss Deferred Tax Asset.

36. MERC has requested an upward adjustment of \$2.2 million to rate base to represent a deferred tax asset that is attributable to a net operating loss carryforward.⁴⁵ MERC claims that the adjustment will account for net operating loss carryforward that MERC accumulated due to bonus depreciation in 2012 and 2013.⁴⁶ The bonus depreciation resulted in more tax deductions than tax liability, and under IRS regulations MERC is permitted to carry forward its net operating losses and use it to reduce future income taxes.⁴⁷ In contrast to a deferred income tax liability, net operating losses produce a deferred tax asset that increases rate base.

37. The OAG recommends that the Commission deny the net operating loss adjustment. OAG witness Mr. Lindell testified that MERC should not receive a tax related adjustment because MERC does not pay income taxes and cannot claim a net operating loss carryforward; it is part of a consolidated group for income tax purposes and Integrys Energy

⁴⁵ Ex. 151, at 11 (Lindell Direct).

⁴⁶ Ex. 36, at 4 (Wilde Direct.).

⁴⁷ The federal statutory provision involved is 26 USCA § 172, which states in pertinent part:

§ 172. Net operating loss deduction

(a) Deduction allowed.--There shall be allowed as a deduction for the taxable year an amount equal to the aggregate of (1) the net operating loss carryovers to such year, plus (2) the net operating loss carrybacks to such year. For purposes of this subtitle, the term "net operating loss deduction" means the deduction allowed by this subsection.

(b) Net operating loss carrybacks and carryovers.--

(1) Years to which loss may be carried.--

(A) General rule.--Except as otherwise provided in this paragraph, a net operating loss for any taxable year--

(i) shall be a net operating loss carryback to each of the 2 taxable years preceding the taxable year of such loss, and

(ii) shall be a net operating loss carryover to each of the 20 taxable years following the taxable year of the loss.

Group, the parent company, is the entity that files and pays taxes. Because it is not a taxpayer, Mr. Lindell stated that MERC should not be permitted to include net operating loss deferred tax assets in rate base before satisfying two conditions: MERC must first demonstrate that it had a net operating loss as a stand-alone company. Second, MERC must demonstrate that Integrys, the taxpaying entity, was not paying income taxes due to the net operating loss carryforward created by MERC.

38. The record in this case demonstrates that MERC has failed to satisfy this second condition. The OAG asked MERC to provide documentation of Integrys's net operating loss in 2012 and 2013, but MERC refused to provide it.⁴⁸ As the OAG noted in its initial brief, without this information it is not possible to verify which of Integrys's affiliated companies contributed to the Integrys net operating loss, and therefore, it is impossible to tell whether MERC's claimed net operating loss was actually utilized by the entity that actually pays taxes. Without this showing, it is unreasonable for MERC to include the deferred tax asset in rate base.

39. Mr. Lindell also explained that MERC should not receive a rate base adjustment for its deferred taxes in the test year because MERC will "effectively utilize its [net operating loss] carryforward from the first day of 2014."⁴⁹ Standard rate base accounting would increase rate base by the average value of the deferred tax asset at the beginning and end of the year, but that is not appropriate in this case. According to Mr. Lindell, MERC will receive any economic benefit from the net operating loss assets because Integrys will use it to reduce its income tax payments from the beginning of 2014.⁵⁰ By recognizing the net operating loss in this fashion, MERC will have used the entire carryforward on the first day of 2014. MERC witness Mr. Wilde states that MERC will not utilize all of its net operating losses until it makes tax payments

⁴⁸ Ex. 152, Schedule JIL-2 (Schedules to Lindell Direct).

⁴⁹ Ex. 151, at 10–11 (Lindell Direct).

⁵⁰ *Id.*

later in 2014,⁵¹ but misses the point of Mr. Lindell's argument. Integrys will use the entire carryforward from the beginning of 2014 because the entire value of the net operating loss will be incorporated into Integrys's estimated income tax payments from the beginning of 2014.⁵² The full value will be used to estimate a reduction for each periodic income tax payment, and that estimate, which will determine payments for all of 2014, will recognize the entire benefit. For this reason, Mr. Lindell recommends that the Commission disallow in its entirety the deferred tax asset attributable to net operating loss carryforward.

40. Mr. Lindell's recommendation is consistent with the IRS's normalization regulations. MERC argues that, based on an IRS Private Letter Ruling from 1988, it must include the net operating loss in rate base or it will violate normalization principles.⁵³ But according to Mr. Lindell:

MERC's circumstances are not representative of the facts in the private letter ruling for two reasons. First, MERC is a member of a consolidated group for tax purposes whereas the taxpayer represented in the private letter ruling was not. Second, a normalization violation can only be attributed to a public utility and the utility's tax loss must be attributable to accelerated depreciation or other tax timing differences between book and tax reporting. MERC has not demonstrated that it is one of the sources of [Integrys's net operating loss] carryforward that is attributable to tax timing differences and require normalization. I would also note that a private letter ruling cannot be used or cited as precedent.⁵⁴

MERC should not be permitted to use net operating loss for rate base adjustments when it was consumed entirely at the beginning of 2014. And MERC should also not be permitted to benefit from a net operating loss when it is not a taxpayer and has refused to provide the evidence necessary to substantiate whether it contributed to Integrys's net operating loss.

⁵¹ Ex. 37, at 17–18 (Wilde Rebuttal).

⁵² See Ex. 153, at 11–12 (Lindell Surrebuttal).

⁵³ See Ex. 36, at 6 (Wilde Direct).

⁵⁴ Ex. 151, at 10 (Lindell Direct).

41. The ALJ recommends that MERC's deferred tax asset related to net operating loss be removed from rate base.

F. Travel and Entertainment Expenses.

42. Minnesota Statutes section 216B.16, subdivision 17 provides, “[A] public utility filing a general rate case petition shall include a schedule separately itemizing all travel, entertainment, and related employee expenses [E]ach applicable expense incurred in the most recently completed fiscal year must be itemized separately, and each itemization must include the date of the expense, the amount of the expense, the vendor name, and the business purpose of the expense.”

43. MERC has failed to meet the requirements of Minnesota Statutes section 216B.16 because MERC did not file separately itemized travel and entertainment expenses that were allocated to it by the service company, Integrys Business Solutions (“IBS”).⁵⁵ Department witness Ms. La Plante agrees that the expenses from IBS “should have been filed in the rate case.” Even MERC notes that it will file the IBS travel and entertainment expenses in future rate cases.⁵⁶ All travel and entertainment expenses related to IBS that were not itemized separately must be denied for failing to comply with statutory requirements.

44. One problem with service company expenses is that the record does not demonstrate the amount of expenses that should have been separately itemized. Despite the challenge of determining the amount of unreported costs, the ALJ finds that it would be unreasonable to allowed recovery of these expenses only because they are difficult to measure, because the very reason that they are impossible to measure is that MERC failed to report the expenses as it was *required* to do. Failing to do so violated Minnesota law, and there must be

⁵⁵ Ex. 152, JIL-9 (Schedules to Lindell Direct).

⁵⁶ Ex. 25, at 3 (DeMerritt Surrebuttal).

some consequence for this violation in order for the statute to have meaning. As MERC has failed to provide an estimate of its un-itemized travel and entertainment expenses, the ALJ accepts the recommendation of the OAG to use the value of MERC employees' reported travel and entertainment expenses as a proxy for those expenses that were not reported.

45. MERC is also required by statute to separately itemize any dues and expenses for memberships in organizations or clubs.⁵⁷ Just as with IBS travel and entertainment expense, MERC failed to itemize membership dues for several organizations. MERC included more than sixty thousand dollars in membership dues in its 2014 test year without separately itemizing them as the statute requires. Specifically, MERC failed to itemize \$3,397 for membership in the Minnesota Chamber of Commerce; \$3,496 for membership in the Edison Electric Institute; and \$56,352 for membership in the American Gas Association. These expenses should be excluded because they were not itemized as required by statute.

46. The membership expenses should also be excluded because MERC has not established that the membership dues are beneficial for MERC's customers. Membership dues are recoverable "only to the extent that the activities they support directly benefit ratepayers."⁵⁸ The Commission has excluded membership dues for the Chamber of Commerce in other rate cases.⁵⁹ And the Edison Electric Institute is an electric utility organization that provides no clear advantages for customers of a natural gas utility like MERC. OAG witness Mr. Lindell raised these concerns in his direct testimony,⁶⁰ and no MERC witness defended the company's failure to itemize its membership expenses as required, or taken the opportunity to explain how membership in these organizations directly benefits ratepayers. The membership expenses

⁵⁷ Minn. Stat. § 216B.16, subd. 17(a)(6).

⁵⁸ *In the Matter of the Application of Interstate Power Company for Authority to Increase its Rates for Electric Service in the State of Minnesota*, Docket E-001/GR-91-605, 1991 WL 634712, at *3 (Oct. 11, 1991)

⁵⁹ *See id.*

⁶⁰ Ex. 152, at 24–25 (Lindell Direct).

should be excluded because MERC has not provided any evidence showing why they are reasonable.

47. The OAG also identified that many of the expenses claimed by MERC are not supported by a business purpose demonstrating how the expenses are reasonable and necessary for the provision of utility services.⁶¹ For example, MERC reports expenses for several meals in Michigan from September 24 to 26, 2012.⁶² MERC indicated that the business purpose of these meals was “Supper in Michigan,” “Lunch in Michigan,” and “Breakfast in Michigan.”⁶³ These descriptions simply indicate that, for example, some employee of MERC ate a meal in Michigan; they provide no information about why the meals were reasonable and necessary for the provisions of utility services.⁶⁴ Similarly, MERC describes the business purpose of many expenses as being “Meal less than \$75.”⁶⁵ Just as with the description of breakfast or lunch in Michigan, a notation that a meal cost less than \$75 does not justify requiring ratepayers to reimburse the company. MERC has failed to satisfy the statutory requirements for itemizing travel and entertainment expenses and justifying their necessity. As such, the ALJ has no reasonable alternative but to recommend that all travel and entertainment expenses be denied.

48. The ALJ recommends denying all travel and entertainment expenses because MERC failed to meet statutory reporting requirements. In addition, the ALJ recommends excluding all travel and entertainment expenses from IBS that were not properly itemized. As MERC has refused to provide the information required to establish the total travel and entertainment expenses from IBS, the ALJ recommends that the Commission exclude additional travel and entertainment expenses equal to MERC’s initial request. Finally, the ALJ also

⁶¹ Minn. Stat. § 216B.16, subd. 17.

⁶² Information Requirements 14, at 23.

⁶³ *Id.*

⁶⁴ Minn. Stat. § 216B.16, subd. 17.

⁶⁵ *See, e.g.*, Information Requirements 14, at 35 (expenses for February 15, 16, 20, 21, 22, and 23).

recommends that the Commission disallow \$63,245 in membership dues that were not proven as necessary for providing utility service and were not itemized as required by statute. In total, the ALJ recommends that the Commission disallow \$632,695 in travel and entertainment expenses.

G. Unamortized Rate Case Expenses.

49. Department witness Ms. La Plante recommended that the Commission should exclude \$1,312,704 in unamortized rate case expenses from rate base.⁶⁶ The OAG agreed with the Department that a normalized level of rate case expenses can be recovered in a test year, but that it is improper to include these expenses in rate base.⁶⁷ MERC should not be allowed to earn a rate of return on rate case expenses, especially when it has not requested deferral. The OAG also agrees with the Department that \$540,106 in related deferred taxes should also be excluded. The ALJ accepts the recommendation of the Department and the OAG on this issue.

H. Transportation Sales.

50. MERC estimated \$5,880,151 in transportation revenues in test year 2014,⁶⁸ but both the OAG and Department witness Laura Otis determined that MERC's estimation was unreasonable. OAG witness Mr. Lindell and Ms. Otis made similar recommendations that the Commission increase transportation revenues to correct for this error. MERC agreed with Ms. Otis's recommendation to increase test year transportation sales by \$1,263,271, to a total of \$7,143,422,⁶⁹ and the OAG had no objection to Ms. Otis's recommendation as it is similar to the recommendation of Mr. Lindell. The ALJ accepts the recommendation of the Department and the OAG to reduce transportation sales.

⁶⁶ Ex. 216, at 3–4 (LaPlante Surrebuttal).

⁶⁷ See Ex. 153, at 1–2 (Lindell Rebuttal).

⁶⁸ Ex. 152, JLL-6 (Schedules to Lindell Direct).

⁶⁹ Ex. 214, LBO-S-6 (Otis Surrebuttal).

I. Return on Equity.

51. Three parties provided testimony on ROE. MERC requests a ROE of 10.75%. The OAG recommends a ROE of 8.62%, or one within a reasonable range of 8.60% to 9.1%. The Department recommends a ROE of 9.29% based on analysis similar, but not identical, to the OAG.

52. In determining just and reasonable rates for public utilities, the Commission “shall give due consideration to . . . the need of the public utility for revenue sufficient to enable it to meet the cost of furnishing the service . . . and to earn a fair and reasonable return upon the investment in such property.”⁷⁰ Establishing a reasonable return for a utility’s equity capital is a quasi-judicial function that involves a factual determination by the ALJ and Commission.⁷¹ For that reason, in weighing the evidence, the interests of the utility must be balanced against the interest of the utility’s ratepayers,⁷² and, in setting rates, “[a]ny doubt as to reasonableness should be resolved in favor of the consumer.”⁷³

53. The guiding principles for determining a reasonable return for utility investments are set forth in two landmark cases from the United States Supreme Court: *Bluefield* and *Hope*. The principles established in *Bluefield* and *Hope* include: (1) allowing the utility, under efficient and economical management, to maintain and support its credit rating, (2) enabling the utility to attract capital necessary to perform its public functions, and (3) providing a return that is commensurate with other enterprises having corresponding risks.⁷⁴ For the reasons set forth below, the ALJ finds that the OAG recommended ROE is reasonable.

⁷⁰ Minn. Stat. § 216B.16 Subd. 6 (2012).

⁷¹ *Hibbing Taconite Co. v. Minnesota Pwr. & Light, et. al.*, 302 N.W.2d 5, 9 (Minn. 1980).

⁷² *Id.* at 10.

⁷³ Minn. Stat. § 216B.03 (2012).

⁷⁴ *Federal Pwr. Comm’n v. Hope Natural Gas Co.*, 320 U.S. 591, 603 (1944); *Bluefield Waterworks & Improvement Co. v. Pub. Serv. Comm’n of West Virginia et. al.*, 262 U.S. 679, 692–93 (1923).

1. The OAG's ROE Recommendation.

54. The OAG's ROE recommendation was presented by Dr. Chattopadhyay utilized several widely-recognized economic models. Dr. Chattopadhyay considered the results of two methods rooted in the Discounted Cash Flow ("DCF") construct: the standard single-stage or "constant growth" DCF analysis and the market-to-book method.⁷⁵ In addition, Dr. Chattopadhyay conducted a Capital Asset Pricing Model ("CAPM") analysis to inform his range of reasonable ROE's.⁷⁶ By using several widely accepted economic models, as well as a variety of inputs from respected sources, Dr. Chattopadhyay's analysis captures a broad spectrum of investor behavior and values to establish an appropriate ROE recommendation.

a. The OAG's DCF Analysis Incorporates Several Growth Metrics to Provide a Range of Reasonable Results.

55. The DCF model is used by each party's ROE witness and is based on the premise that the value of a stock is the present value of its stream of cash dividends in the future, assuming the stock is held in perpetuity.⁷⁷ The two essential elements of a DCF analysis are the dividend yield (a function of a company's dividends and stock price) and the growth component.⁷⁸ It is not possible, however, to perform a DCF analysis on MERC directly because it is a subsidiary of Integrys Energy Group and does not have a stock price, dividend, or growth estimate.⁷⁹ Instead, to estimate the cost of equity for MERC, each party selected a group of publicly-traded companies similar to MERC to act as a proxy.

56. To develop a proxy with companies similar to MERC, Dr. Chattopadhyay began with the universe of utilities categorized by the Value Line investment service as either gas

⁷⁵ Ex. 161, at 21-22 (Chattopadhyay Direct).

⁷⁶ *Id.*

⁷⁷ *Id.* at 24.

⁷⁸ Ex. 161, at 23 (Chattopadhyay Direct).

⁷⁹ Ex. 200, at 6 (Amit Direct).

utilities or gas and electric utilities.⁸⁰ Dr. Chattopadhyay then eliminated any utility that did not have at least 50 percent of its revenues from its gas distribution business and any utility that did not have at least 75 percent of its assets associated with gas distribution in order to ensure that his proxy group was comparable to MERC.⁸¹ Finally, Dr. Chattopadhyay applied additional checks related to the S&P credit ratings and dividends.⁸² This method resulted in a proxy with investment risks similar to MERC, if not slightly higher. Specifically, MERC's credit rating and equity ratio are similar to the companies in Dr. Chattopadhyay's proxy.⁸³ Additionally, Integrys exhibited a similar price-to-earnings ratio, a similar variability of return on equity, superior performance in generating internal funds, superior interest coverage, and a superior operating ratio to the members of the proxy group.⁸⁴ Dr. Chattopadhyay cautioned, however, that his proxy contains several companies with substantial non-regulated activities.⁸⁵ These companies present a different risk profile than MERC.⁸⁶ For that reason, to the extent that Dr. Chattopadhyay's proxy does not perfectly reflect the investment risk associated with MERC, it likely does so to MERC's benefit.

57. For the price input in the DCF model, Dr. Chattopadhyay used average daily closing prices for the most recent one-month period at the time of his analysis.⁸⁷ Using a one-month period provides a reasonable basis to reflect investors' current expectations, while smoothing out daily price movements.⁸⁸ For his dividend input, Dr. Chattopadhyay used Value

⁸⁰ Ex. 161, at 25 (Chattopadhyay Direct).

⁸¹ *Id.*

⁸² *Id.*

⁸³ *Id.*

⁸⁴ *Id.*

⁸⁵ *Id.*

⁸⁶ *Id.*

⁸⁷ *Id.* at 29.

⁸⁸ *Id.* at 30.

Line's 2014 dividend projections, which he adjusted upwards to reflect Value Line's expected long-term growth in dividends.⁸⁹

58. To calculate a reasonable growth input in the DCF model, Dr. Chattopadhyay used an average of several published growth metrics. Specifically, Dr. Chattopadhyay used earnings growth projections from the Value Line, Yahoo Finance, and Zacks investments services, as well as dividend and book value growth estimates from Value Line.⁹⁰ Dr. Chattopadhyay also considered a measure of growth based on estimates of the "internal" and "external" growth components.⁹¹ This estimate was calculated by using projected retention ratios and returns for the internal component, projected growth in the number of shares for the external component and current market-to-book ratios.⁹²

59. Dr. Chattopadhyay incorporates multiple growth metrics in forming the growth component for his discounted cash flow ("DCF") model because it reflects the reality that investors look at many factors.⁹³ Dr. Chattopadhyay believes that earnings growth is an important factor in determining the growth component, and more than 80% of Dr. Chattopadhyay's growth component is made up of earnings growth. But it has been recognized that investors, as a group, do not rely on a single growth metric.⁹⁴ Additionally, earnings growth projections, which are used exclusively by the other parties, tend to be biased upwards when the market-to-book ratio is significantly greater than one, as is the case for MERC.⁹⁵ Therefore, using an average of several growth metrics better encapsulates investors' collective values than reliance on a single metric.

⁸⁹ *Id.* at 29.

⁹⁰ *Id.* at 35.

⁹¹ *Id.* at 35.

⁹² *Id.* at 36–37, 42.

⁹³ See OAG Initial Brief, at 24.

⁹⁴ David C. Parcell, *The Cost of Capital – A Practitioner's Guide* 146 (2010) (noting that "[i]t is reasonable to believe that investors, as a group, do not utilize a single growth estimate when they price a utility's stock.")

⁹⁵ *Id.* at 14.

60. After performing all of these analytical steps, Dr. Chattopadhyay's DCF analysis developed a range of results from 8.21% to 8.89% depending on the specific growth projection.⁹⁶ To determine his final ROE recommendation, Dr. Chattopadhyay also incorporated the results of his market-to-book and CAPM analyses.

b. The OAG's Market-to-Book Confirms the Results of the DCF Method.

61. The market-to-book method utilized by Dr. Chattopadhyay is also rooted in the DCF construct, but estimates the cost of equity as the sum of the "internal" return and "external" returns.⁹⁷ In other words, rather than using dividend and growth projections from investment analysts, the market-to-book method utilizes projections of investment analysts regarding a company's retention ratio, return on equity, and growth in the number of shares, as well as the company's current market-to-book ratio, to calculate an ROE. Dr. Chattopadhyay's market-to-book analysis resulted in an ROE of 8.69%.⁹⁸

c. The OAG's CAPM Analysis Contributes to the Recommended Range of Reasonable ROEs.

62. Each party also conducted a CAPM analysis, which estimates the cost of equity by adding a premium associated with the risk of equity to the return paid by a risk-free asset.⁹⁹ For his "risk-free" return, Dr. Chattopadhyay incorporated the current return for the ten-year treasury.¹⁰⁰ While Dr. Chattopadhyay noted that a truly risk-free rate would be captured better by using short-term bonds, he chose the higher rate of the ten-year Treasury Bond to balance the need for a risk-free rate with the fact that utility rates are typically set for periods longer than

⁹⁶ Ex. 165, at 2 (Chattopadhyay Surrebuttal).

⁹⁷ Ex. 161, at 22 (Chattopadhyay Direct).

⁹⁸ Ex. 165, at 2 (Chattopadhyay Surrebuttal).

⁹⁹ Ex. 161, at 45 (Chattopadhyay Direct).

¹⁰⁰ *Id.* at 47.

short-term treasury bills.¹⁰¹ Dr. Chattopadhyay then developed a forward-looking estimate of the market risk premium by comparing the returns provided by ten-year treasuries to estimates of market return provided by the S&P 500 and Value Line investment service.¹⁰² Dr. Chattopadhyay's CAPM estimate resulted in an ROE of 10.09%.¹⁰³ While Dr. Chattopadhyay did not use his CAPM estimate in developing his ROE "point estimate," he did use it to establish the upper-end of his recommended range of reasonable ROEs.¹⁰⁴

63. After conducting his analysis, Dr. Chattopadhyay recommended a point estimate of 8.62% and a range from 8.6% to 9.1%.

2. The DOC's Recommendation.

64. The Department recommended an ROE of 9.29% and did not provide a range of reasonable results.¹⁰⁵ In many ways, DOC witness Dr. Amit's analysis is similar to the analysis conducted by Dr. Chattopadhyay. Like Dr. Chattopadhyay, Dr. Amit relies primarily on the DCF method in determining his recommended ROE, with the CAPM method being used as a "check" on his DCF results.¹⁰⁶ Dr. Amit also limits his proxy group to companies whose "main line" of business is natural gas distribution and, therefore, present investors with similar investment risk as MERC.¹⁰⁷

65. Despite the many similarities between the two analyses, the Department's recommendation is excessive as a result of several important differences. While Dr. Chattopadhyay and Dr. Amit disagree on a variety of technical points, the difference between their final ROE recommendations relates predominately to their positions on two issues. First,

¹⁰¹ *Id.*

¹⁰² *Id.* at 51.

¹⁰³ Ex. 165, at 2 (Chattopadhyay Surrebuttal).

¹⁰⁴ *Id.*

¹⁰⁵ Ex. 202, at 2 (Amit Surrebuttal).

¹⁰⁶ Ex. 200, at 34 (Amit Direct); Ex. 202, at 10-11 (Amit Surrebuttal).

¹⁰⁷ Ex. 200, at 8 (Amit Direct).

Dr. Amit inappropriately relies exclusively on a single growth metric—earnings growth—in his DCF analysis as the sole method of explaining all investor behavior. Second, Dr. Amit artificially increases his recommended ROE by separately adding floatation costs to the results of his various economic models. Dr. Amit’s position on both of these issues is unreasonable, and leads to the Department recommending an inflated ROE.

66. In analyzing projected growth rate, Dr. Amit dedicates significant portions of his testimony to arguing that earnings growth is the “best” growth rate for the DCF model.¹⁰⁸ Despite these arguments, Dr. Amit fails to demonstrate why earnings growth should be the *only* growth metric used in a DCF analysis. Dr. Amit admits that investors consider factors other than earnings when making investment decisions. But he then claims, with no apparent basis, that analysts are somehow required to choose among separate growth metrics to conduct a DCF analysis, rather than incorporating multiple metrics as done by Dr. Chattopadhyay.¹⁰⁹ From this false premise, Dr. Amit proceeds to summarize a self-selected sample of financial literature explaining the merits of using earnings growth in the DCF, and conduct a technical analysis to demonstrate the statistically strong relationship between earnings growth and a company’s price-to-earnings ratio.¹¹⁰

67. Despite his arguments that earnings growth provides a “better” metric than complementary metrics such as dividend or book value growth, Dr. Amit’s analysis does not demonstrate that the overall growth component used by Dr. Chattopadhyay leads to an

¹⁰⁸ See Ex. 201, at 14 (Amit Rebuttal) (referring to earnings growth as the “best” projected growth rate to predict utilities’ stock prices); *Id.* at 21 (noting that “the most important question that must be answered is whether or not the projected EPS growth rates are *better* than any other projected growth rate to be used in a DCF analysis.”) (emphasis in original); *Id.* at 23 (referring to earnings growth as the “most appropriate” growth rate to use in the DCF analysis).

¹⁰⁹ Ex. 200, at 14 (Amit Rebuttal) (“There is no doubt that investors make their investment decisions based, among other factors, on dividends. However, the issues in this rate case is not the impact of dividends on investors’ investment decisions. Rather, the issue to be addressed is *which projected growth rate* is most appropriate for the DCF analysis.”) (emphasis added).

¹¹⁰ Ex. 201, at 15–24 (Amit Rebuttal).

unreasonable result. Dr. Chattopadhyay conducted a statistical analysis demonstrating that his overall growth component has a stronger statistical relationship with a company's price-to-earnings ratio than using earnings growth alone.¹¹¹ Therefore, Dr. Amit's position that earnings growth is the "best" growth metric for the DCF does not support his conclusion that it should be the *only* growth metric used. Dr. Chattopadhyay's growth component, which uses earnings growth to form 80% of its estimate and dividend and book growth for 17% of the estimate, provides a superior metric for explaining all investor behavior.¹¹²

68. In addition to his flawed use of a single growth metric in his DCF analysis, Dr. Amit also adjusts his final DCF recommendation upward to account for costs associated with issuing stock, or "floatation" costs. As Dr. Amit explains, "[d]ue to issuance costs, the price paid by an investor for a new share of common stock is higher than the price per share received by the company."¹¹³ Dr. Amit then concludes that "[t]hese issuance costs must be recognized by *adjusting the required rate of return*" and that denying these issuance costs "is contradictory to the purpose of rate of return regulation."¹¹⁴

69. Contrary to Dr. Amit's implication, no authority exists for the proposition that denying an explicit floatation cost adjustment "is contradictory to the purpose of rate of return regulation." Rather, the ROE must be sufficient to fulfill the standards set forth in the *Bluefield* and *Hope* cases, while recognizing that flotation costs will be paid by investors when the company issues stock.¹¹⁵ If the Commission has fulfilled these legal standards without *explicitly*

¹¹¹ Ex. 161, at 37–38 (Chattopadhyay Direct); Ex. 165 at 26 (Chattopadhyay Surrebuttal).

¹¹² Ex. 165, at 20 (Chattopadhyay Surrebuttal).

¹¹³ Ex. 200, at 26 (Amit Direct).

¹¹⁴ *Id.* at 26–27 (emphasis added).

¹¹⁵ See *Federal Pwr. Comm'n v. Hope Natural Gas Co.*, 320 U.S. 591, 602 (1944) ("And when the Commission's order is challenged in the courts, the question is whether that order "viewed in its entirety" meets the requirements of the Act. Under the standard of "just and reasonable" it is the result reached not the method employed which is controlling. It is not theory but the impact of the rate order which counts. If the total effect of the rate order cannot be said to be unjust and unreasonable, judicial inquiry under the Act is at an end . . .") (citations omitted).

adjusting the ROE for flotation costs, any additional adjustment for flotation costs is both inappropriately duplicative and unfair to ratepayers.

70. As Dr. Chattopadhyay explains, each party's ROE recommendation results in a return sufficient for MERC to attract the capital it needs, without an additional flotation cost adjustment.¹¹⁶ Since the ROE estimates provided by the parties are all sufficient to account for flotation costs, without an explicit upward adjustment, the Commission should reject making a duplicative upward adjustment to MERC's ROE.

3. MERC's Recommendation.

71. In contrast with both Drs. Chattopadhyay and Amit, MERC witness Mr. Moul presents an analysis that appears directed simply at justifying the highest possible ROE. As a threshold matter, Mr. Moul suggests, without providing analysis of either a specific utility or the economic conditions occurring at a given time, that an allowed ROE below 10% is *de facto* unreasonable.¹¹⁷ This sweeping proposition, which Mr. Moul supports by reference to a single report published more than five years ago by an association of gas utilities, runs counter to recent trends both nationally and in Minnesota.¹¹⁸ Indeed, since the report was released in 2008, ROEs below 10% have become the norm. As even Mr. Moul points out, there were eleven rate cases for natural gas utilities decided in the fourth quarter of 2013 in which authorized ROEs ranged from 9.08% to 10.25%. In other words, of the eleven natural gas rate cases cited by Mr. Moul himself, *the highest* ROE authorized was fifty basis points below his own recommendation. And

¹¹⁶ Ex. 161, at 44 (Chattopadhyay Direct).

¹¹⁷ See Ex. 17, at 7 (Moul Direct); Ex. 18 at 7–8 (Moul Rebuttal).

¹¹⁸ Ex. 17, at 7 (Moul Direct); Ex. 18, at 7–8 (Moul Rebuttal) (citing American Gas Foundation, *Regulatory Policy of Return on Equity*, Review and Analysis of the Natural Gas Sector (2008)) (noting that “the report specifically found that returns below 10% [will] trigger broad disenchantment with local distribution company (“LDC”) investments”).

the Commission authorized an ROE of 9.59% for CenterPoint’s Minnesota gas operations only weeks ago.¹¹⁹ Mr. Moul’s recommendation does not even come close to this range.

72. Mr. Moul’s predisposition to an inflated ROE—one that is *always* above 10%—is demonstrated by his reliance on a series of novel and unreliable analytical approaches. Unlike Drs. Chattopadhyay and Amit, who rely primarily on the widely-used DCF method to develop their recommendations, Mr. Moul blends the results of different analytical methods—including DCF, Risk Premium (“RP”), CAPM, and “Comparable Earnings”—to develop his overall recommendation.¹²⁰ Some of these methods, however, produce ROE results that border on the absurd in the current environment. For example, the RP method utilized by Mr. Moul produces an ROE of 12.14%, and his CAPM analysis produces an ROE of 11.97%.¹²¹ Drs. Chattopadhyay and Amit each explain the numerous technical flaws with these analyses and with Mr. Moul’s approach in general. Even absent this technical explanation, however, it is not difficult to see that these analyses produce results that are simply not reasonable when they exceed the highest natural gas ROE decision cited by Mr. Moul by well over 150 basis points.

73. Moreover, it is unclear from Mr. Moul’s analysis exactly *how* he is blending the results of his various approaches to come to his overall recommendation of 10.75%. Mr. Moul’s final recommendation is not the median or mean of the results of his various approaches, and he fails to provide an equation or other methodology to explain how he derived his final result from the outcomes of his various creative analytical approaches. Mr. Moul’s only support for his overall recommendation of 10.75% is that it “fits well within” his range of analytical results.¹²²

¹¹⁹ Findings of Fact, Conclusions, and Order, *In the Matter of an Application by CenterPoint Energy Resource Corp. d/b/a CenterPoint Energy Minnesota Gas for Authority to Increase Gas Rates in Minnesota*, No. G-008/GR-13-316, at 32 (June 9, 2014).

¹²⁰ See Ex. 17, at 6 (Moul Direct).

¹²¹ See Ex. 18, at 4 (Moul Rebuttal).

¹²² Ex. 17, at 6 (Moul Direct).

Further, when the results of Mr. Moul's analytical methods changed in rebuttal testimony, his final recommendation did not.¹²³ In short, the ALJ and the Commission must assume that Mr. Moul used multiple analytical approaches, several of which produce ROEs that are overtly unreasonable, and then arbitrarily picked a number somewhere "well within" that range of results.¹²⁴ Such an approach is woefully insufficient to support a finding of fact needed for a quasi-judicial determination.

74. In addition to Mr. Moul's use of novel and unreliable approaches to produce an artificially high range of ROEs, and his arbitrary selection of an overall recommendation, Mr. Moul's DCF estimate is also inflated by use of a variety of unreliable concepts. For instance, Mr. Moul's proxy group is not limited to gas utilities, but includes four companies with significant electric operations.¹²⁵ These four companies were added to Mr. Moul's proxy after he had applied a series of screening criteria to gas utilities.¹²⁶ As Dr. Amit explains, the addition of these four combined companies to Mr. Moul's proxy would be expected to increase the ROE produced by Mr. Moul's analysis, since these companies have a different risk profile than MERC.¹²⁷ Notably, Mr. Moul did not include these combined electric/gas utilities in his proxy group when he established an ROE recommendation in MERC's last rate case.¹²⁸

75. Finally, Mr. Moul proposes a complicated and unnecessary "leverage adjustment" that artificially increases his DCF results. Mr. Moul attempts to justify his leverage adjustment

¹²³ Compare Ex. 17, at 6 (Moul Direct), with Ex. 18, at 4 (Moul Rebuttal).

¹²⁴ Mr. Moul's approach of arbitrarily choosing inputs is repeated throughout his analysis. For example, in choosing the growth rate to use for his DCF analysis, Mr. Moul initially calculated a range of 4.72% to 5.74%. From this range, Mr. Moul chose an expected growth rate of 5% for his analysis, which he described as "within the array" of earnings growth rates expected by investors. Ex. 17 at 25 (Moul Direct).

¹²⁵ Ex. 17, at 5 (Moul Direct).

¹²⁶ *Id.* at 4-5.

¹²⁷ Ex. 200, at 47 (Amit Direct) (noting that "it is reasonable to expect a higher average required rate of return for the group of four companies than for the Delivery group excluding the four companies")

¹²⁸ See Direct Testimony of Paul Moul, *In the Matter of the Application of Minnesota Energy Resources Corporation for Authority to Increase Rates for Natural Gas Service in Minnesota*, Docket No. G-007,011/GR-10-977, Ex. 22, at 4 (Nov. 30, 2010).

on the concept that investors are concerned with the return they realize on the market value of their investments, while the DCF model derives the cost of equity based on a utility's book value capital structure.¹²⁹ Mr. Moul then argues that this requires an upward adjustment to the ROE produced by the DCF model when its market value exceeds its book value.¹³⁰ Likewise, Mr. Moul argues that his leverage adjustment would require a downward adjustment to the DCF result if the book value exceeds the market value.¹³¹

76. As Drs. Chattopadhyay and Amit both explain, Mr. Moul's leverage adjustment ignores the simple fact that utility investors are well aware that a utility's earnings are based on an allowed return granted by regulators on the utility's book value.¹³² Moreover, as Dr. Chattopadhyay explains, Mr. Moul's leverage adjustment has the perverse effect of increasing a return that is already supporting a market price well above a company's book value, and would result in the detrimental effect of *reducing* a utility's ROE when the market value of the stock is below the book value and the utility is facing dilution of stock.¹³³ For these reasons, Mr. Moul's "leverage adjustment" should be rejected.

4. Return on Equity Recommendation.

77. The ALJ accepts the recommendation of the OAG to establish an ROE of 8.62%. The OAG's recommendation is based on sound economic analysis and appropriately balances the interests of MERC with the interests of its ratepayers consistent with the applicable legal requirements.

¹²⁹ Ex. 17, at 26–28 (Moul Direct).

¹³⁰ *Id.* at 27.

¹³¹ *Id.*

¹³² Ex. 161, at 19 (Chattopadhyay Direct); Ex. 200, at 66 (Amit Direct).

¹³³ Ex. 161, at 19–20 (Chattopadhyay Direct).

J. Class Cost of Service Study.

78. The Commission acts in a legislative capacity when it is “allocating costs between utility customers and balancing various factors to achieve a fair and reasonable allocation of those costs.”¹³⁴

79. One tool that the Commission has used to inform revenue apportionment is the class cost of service study (“CCOSS”), which estimates the cost of service for each customer class. A CCOSS first functionalizes similar costs by determining their purpose; then, the CCOSS classifies the costs as either customer, capacity, or commodity costs; finally, the costs are allocated to various customer classes depending on how the costs were classified and caused.¹³⁵

80. Customer costs are “required to provide service to customers, regardless of whether the customer consumes gas or not;” customer costs are allocated based on the number of customer locations within each class.¹³⁶ Capacity costs, in contrast, are required for the company to meet the peak demand on its system, and they are allocated based on the customer class’s contribution to peak demand.¹³⁷ The difference between customer and capacity costs is significant, and care must be taken to properly allocate them, because the residential class pays significantly more of the costs that are classified as customer costs.¹³⁸ Classifying and allocating costs incorrectly can dramatically increase the burden on the residential class.

¹³⁴ *City of Moorhead v. Minnesota Public Utilities Commission*, 343 N.W.2d 843, 846 (Minn. 1984).

¹³⁵ Ex. 155, at 4 (Nelson Direct).

¹³⁶ *Id.*

¹³⁷ *See id.*

¹³⁸ *Id.* at 7.

K. Allocation of Customer Service Expenses.

81. MERC has allocated its customer service and collections expenses, which are contained within FERC Account 903, solely on the basis of the number of customers in each class.

82. Of the three largest natural gas utilities in Minnesota, MERC is the only one that allocates costs from FERC Account 903 without using a weighted allocator.¹³⁹ For example, Xcel Energy concluded that its natural gas customer service expenses could be more accurately allocated by performing studies to apply weights to the various customer classes.¹⁴⁰ Xcel's study determined that, for example, administration of a large C&I customer account costs 3.35 times more than a residential customer.¹⁴¹ Additionally, Xcel found that interruptible accounts cost between 13.08 and 21.23 times as much as residential accounts, and that transportation accounts cost between 8.88 and 20.97 times more than residential accounts.¹⁴² CenterPoint Energy also recognizes that customer service costs differ between classes, and uses a weighted allocator to assign customer service costs.¹⁴³ It is unreasonable for MERC to claim that it should use a flat allocator when studies performed by the other large natural gas utilities in Minnesota demonstrate clearly that a weighted allocator is more appropriate.

83. MERC argues that it should not be required to weight customer service costs because the services are performed by an outside firm, Vertex.¹⁴⁴ According to MERC witness Ms. Hoffman Malueg, "Vertex charges MERC a flat, per account, rate to perform these customer

¹³⁹ Ex. 155, at 41–42 (Nelson Direct).

¹⁴⁰ Direct Testimony of James Gilroy, at 9, *In the Matter of the Application of Northern States Power Company, d/b/a Xcel Energy, for Authority to Increase Rates for Natural Gas Service in Minnesota*, Docket No. G-002/GR-09-1153.

¹⁴¹ Volume 3, Required Information Page 10A–10B, *In the Matter of the Application of Northern States Power Company, d/b/a Xcel Energy, for Authority to Increase Rates for Natural Gas Service in Minnesota*, Docket No. G-002/GR-09-1153.

¹⁴² *Id.*

¹⁴³ Ex. 155, at 42 (Nelson Direct).

¹⁴⁴ Ex. 30, at 34 (Hoffman Malueg Rebuttal).

services; there is no difference in the flat rate charge amongst the different types of MERC customers.”¹⁴⁵ But Ms. Hoffman Malueg’s argument misses the point because she does not address whether MERC’s billing arrangement with Vertex is reasonable to ratepayers. Mr. Nelson noted that,

Whether or not Vertex bills the same rate for all customers does not mean that all customers cause equal costs. MERC has not demonstrated that negotiating an equal cost-per customer arrangement was based on cost causation. It is possible that Vertex has spread the increased cost of serving large commercial customers across the residential customers by pricing all customers equally.¹⁴⁶

Such an arrangement would be unfair to ratepayers because it does not allocate the true costs for providing customer service. But MERC has not produced any evidence to show that allocating customer service costs in the same way that MERC is billed by Vertex is reasonable.¹⁴⁷ MERC’s flat rate contract with Vertex does not represent the principles of cost causation, and should not be used to develop an allocation method for Account 903.¹⁴⁸

84. To illustrate its position, the OAG provided an example in which MERC has 100 customers and \$100 of customer service related costs. For purposes of the example, imagine that MERC’s 80 residential customers each cost \$0.50 to administer, the 15 large volume customers each costs \$2 to administer, and each of the 5 interruptible customers costs \$6 to administer. The total cost of providing customer services to these imaginary customers is \$100. Under Vertex’s pricing model, MERC would be charged a flat rate of \$1 per customer, and MERC would allocate \$1 of costs for each customer in a class. The interruptible customers in this example would be allocated only \$5 in costs, even though the true cost of providing them with customer

¹⁴⁵ *Id.*

¹⁴⁶ Ex. 158, at 20 (Nelson Surrebuttal).

¹⁴⁷ Minn. Stat. § 216B.16; *see also* Minn. Stat. § 216B.03.

¹⁴⁸ OAG Initial Brief, at 35–37.

services is \$30; large volume customers would be allocated \$15, although they cause \$30 in costs. The excess costs would be allocated to the residential class, resulting in an allocation of \$80 in customer service costs where the true cost of service is only \$40. It is possible that this example actually underestimates the cost disparity between customer classes: when Xcel Energy performed a study to determine the cost of customer service accounts, it determined that the cost of administering interruptible account could be more than *20 times* the cost of a residential account.¹⁴⁹

85. MERC's allocation is unreasonable because it assumes that MERC's customer service accounts cost the same to administer for each customer. Common sense, as well as the treatment of these expenses by other natural gas companies in Minnesota, indicates that larger customers have more complex accounts and cost more to administer. MERC's method also deviates from the recommendations of the NARUC Rate Design Manual for natural gas, which recommends using a weighted customer allocator.¹⁵⁰ This improper misallocation is significant, because OAG witness Ron Nelson estimates that MERC's method assigns approximately 12% more costs to the residential class than the weighted allocator created by CenterPoint Energy.¹⁵¹

86. The flat rate charged by Vertex does not represent actual cost; it is simply reflective of a business contract that was probably designed for ease of administration rather than equity or reasonableness.¹⁵² In the absence of any evidence to the contrary, it is likely that MERC's true costs are similar to those of the other large natural gas utilities in Minnesota.

¹⁴⁹ Exhibit B, Volume 3, Required Information Page 10A–10B, *In the Matter of the Application of Northern States Power Company, d/b/a Xcel Energy, for Authority to Increase Rates for Natural Gas Service in Minnesota*, Docket No. G-002/GR-09-1153.

¹⁵⁰ *Gas Distribution Rate Design Manual*, NARUC Staff Subcommittee on Gas, at 38 (June 1989).

¹⁵¹ Tr. Evidentiary Hearing, at 171 (May 13, 2014).

¹⁵² Tr. Evidentiary Hearing, at 72 (May 13, 2014).

87. Given the fact that other natural gas utilities and the NARUC Gas Manual recommend using a weighted allocator, the ALJ recommends that MERC be ordered to use a weighted customer allocation method for FERC Account 903. If MERC is unable to produce a weighted allocator, the ALJ recommends that MERC be ordered to use the allocator recommended by the NARUC Gas Manual for this case, and that MERC be ordered to create a more precise weighted customer allocator for MERC's future rate cases.¹⁵³

L. Allocation of Income Tax Expenses.

88. In MERC's 2010 rate case, the Commission ordered the company to allocate its income taxes "on the basis of taxable income by class that fully and only reflects the CCOSS."¹⁵⁴ According to MERC witness Ms. Hoffman Malueg, this method would require MERC to "calculate[e] income taxes by rate class that is reflective of a CCOSS where all classes would be charged rates that are representative of their cost of service."¹⁵⁵ Such a calculation is necessary, according to Ms. Hoffman Malueg, because "allocating income taxes based on an allocation methodology that does not reflect a class's true cost of service . . . does not provide an accurate cost of service allocation, an accurate calculation of revenue deficiency by rate class, or an accurate overall cost of service by rate class."¹⁵⁶

89. MERC has not complied with this instruction. Instead, MERC has allocated income tax expenses by rate base, the very method it was ordered to stop using in its 2008 rate

¹⁵³ Ex. 158, at 20 (Nelson Surrebuttal).

¹⁵⁴ This language was recommended by the Administrative Law Judge, and was accepted by the Commission without comment. Findings of Fact, Conclusions, and Order, *In the Matter of the Application of Minnesota Energy Resources Corporation for Authority to Increase Rates for Natural Gas Service in Minnesota*, Docket No. G-007, 011/GR-10-977, at 6–7 (July 13, 2012); Findings of Fact, Conclusions, and Recommendation, *In the Matter of the Application of Minnesota Energy Resources Corporation for Authority to Increase Rates for Natural Gas Service in Minnesota*, Docket No. G-007, 011/GR-10-977, at 56 (Apr. 2, 2012).

¹⁵⁵ Ex. 30, at 37 (Hoffman Malueg Rebuttal).

¹⁵⁶ *Id.*

case.¹⁵⁷ MERC has not followed the Commission's order because it claims that allocating income taxes that are based fully on the CCOSS is technically impossible because of a circular reference problem: income taxes cannot be calculated until MERC estimates its expenses, and MERC's expenses cannot be calculated until MERC has determined its level of income taxes.¹⁵⁸ Because the calculations are connected in this way, MERC claims that it was unable to allocate income taxes based fully and only on the CCOSS.

90. Faced with this difficulty, MERC has chosen to allocate income tax on the basis of rate base. To justify this switch, MERC attempts to demonstrate through simple algebraic formulas that an allocation on the basis of rate base is equivalent to an allocation based on the CCOSS.¹⁵⁹ But MERC admits that the formulas represent only a "simplified example" of how costs and income taxes are determined.¹⁶⁰ And, critically, in allocating income taxes based only on rate base, MERC fails to consider the expenses that are included in a CCOSS. A cost of service study includes rate base costs, but it also includes costs from company expenses. Rather than allocating "on the basis of taxable income by class that fully and only reflects the CCOSS," MERC has selectively decided to ignore the expenses within the CCOSS and allocate only on the basis of rate base. According to Ms. Hoffman Malueg's criteria, such a method would be inaccurate because it does not consider expenses within the CCOSS and therefore does not "reflect a class's true cost of service."¹⁶¹

91. Additionally, as noted, MERC was instructed to stop allocating income taxes according to rate base years ago. In its 2008 rate case, MERC was ordered to allocate income

¹⁵⁷ Findings of Fact, Conclusions of Law, and Order, *In the Matter of the Application of Minnesota Energy Resources Corporation for Authority to Increase Rates for Natural Gas Service in Minnesota*, Docket No. G-007, 011/GR-08-835, at 24 (June 29, 2009).

¹⁵⁸ See Informational Requirement 12, Schedule 9; see Ex. 208, at 3–4 (Ouanes Rebuttal).

¹⁵⁹ See Informational Requirement 12, Schedule 9.

¹⁶⁰ *Id.*

¹⁶¹ Ex. 30, at 37 (Hoffman Malueg Rebuttal).

taxes “on the basis of the taxable income attributable to each customer class, not on the basis of rate base.”¹⁶² The Commission noted that this policy was logical because “income taxes are causally linked to income, not capital investment,” and that it was the method recommended by the American Gas Association’s *Gas Rate Fundamentals* publication.¹⁶³

92. OAG witness Mr. Lindell provides further support for allocating income taxes on the basis of income by class. According to Mr. Lindell, MERC’s current method is absurd from an accounting perspective because it attributes nearly a million dollars in income taxes to the residential class when the residential class did not generate any taxable income.¹⁶⁴ Mr. Lindell testified that, instead, income taxes should be allocated on the basis of income because that is the same method used to calculate total company income taxes. This method would also be in accordance with the Commission’s order from MERC’s 2008 rate case.¹⁶⁵ Mr. Lindell recommends that MERC should determine taxable income by calculating “taxable revenues minus tax deductible expenses,” and then apply the corporate tax rate to determine the level of income taxes caused by each class.¹⁶⁶

93. MERC is unable to allocate income taxes based fully and only on the CCOSS because of a circular reference problem. As a result, the ALJ recommends that MERC follow

¹⁶² Findings of Fact, Conclusions of Law, and Order, *In the Matter of the Application of Minnesota Energy Resources Corporation for Authority to Increase Rates for Natural Gas Service in Minnesota*, Docket No. G-007, 011/GR-08-835, at 24 (June 29, 2009).

¹⁶³ *Id.*

¹⁶⁴ Ex. 151, at 27–28 (Lindell Direct).

¹⁶⁵ Findings of Fact, Conclusions of Law, and Order, *In the Matter of the Application of Minnesota Energy Resources Corporation for Authority to Increase Rates for Natural Gas Service in Minnesota*, Docket No. G-007, 011/GR-08-835, at 24 (June 29, 2009).

¹⁶⁶ Ex. 152, at 8–9 (Lindell Rebuttal).

the Commission's next most recent instruction, which was to allocate income taxes on the basis of "taxable income attributable to each customer class, not on the basis of rate base."¹⁶⁷

M. Allocation of Distribution Mains Expenses.

94. The Mains Account is MERC's largest single investment, and contains approximately \$159 million in costs associated with the physical network of pipes that MERC uses to distribute natural gas to customers.¹⁶⁸ The Commission has instructed utilities to allocate fixed costs, which are necessary only to connect a consumer to the gas system, as customer costs; all other costs should be classified as capacity costs.¹⁶⁹ The distinction is significant because the residential class pays approximately 90% of those costs classified as customer costs, but pays approximately 63% of the costs that are classified as capacity costs.¹⁷⁰

1. The Zero-Intercept Theory.

95. According to the Commission's prior orders and the NARUC Gas Manual, only the costs that are necessary to connect a customer to the gas system should be classified as customer costs; the remaining portion of the Mains Account should be classified as capacity costs and be allocated based on each class's contribution to peak demand.¹⁷¹ To determine this classification, the Gas Manual recommends using the minimum system theory.¹⁷²

¹⁶⁷ Findings of Fact, Conclusions of Law, and Order, *In the Matter of the Application of Minnesota Energy Resources Corporation for Authority to Increase Rates for Natural Gas Service in Minnesota*, Docket No. G-007, 011/GR-08-835, at 24 (June 29, 2009).

¹⁶⁸ Ex. 155, at 6 (Nelson Direct).

¹⁶⁹ Order, *In the Matter of the Petition of Northern States Power Gas Utility for Authority to Increase Rates for Retail Customers within the State of Minnesota*, Docket No. G-002/GR-92-1186, 146 P.U.R.4th 1, 44 (Sept. 1, 1993).

¹⁷⁰ Ex. 155, at 7 (Nelson Direct).

¹⁷¹ Order, *In the Matter of the Petition of Northern States Power Gas Utility for Authority to Increase Rates for Retail Customers within the State of Minnesota*, Docket No. G-002/GR-92-1186, 146 P.U.R.4th 1, 44 (Sept. 1, 1993); *see also* Ex. 155, at 7 (Nelson Direct).

¹⁷² *Gas Distribution Rate Design Manual*, NARUC Staff Subcommittee on Gas, at 22 (June 1989).

96. One method suggested by the NARUC Gas Manual is the minimum-size main method. The minimum-size main method uses “the historic unit cost of the smallest main installed in the system” to determine the level of customer costs.¹⁷³ One problem with the minimum sized method is some costs related to the size of the main, like the material cost of the pipe, are included as customer costs, when they should be classified as capacity costs.¹⁷⁴

97. The method that MERC used in this case was the zero-intercept method, which the Commission recently ordered CenterPoint Energy to file in its future rate cases.¹⁷⁵ The zero-intercept theory acknowledges that the decision of what size gas main to install is related, at least in part, to the utility’s desire to ensure that the system has enough capacity to meet peak demand.¹⁷⁶ In other words, the zero-intercept theory recognizes that some of the costs of installing a 2-inch main, for example, are costs that the utility has incurred in order to meet peak demand, rather than to connect a customer to the gas system.

98. To account for the capacity related costs inherent in a 2-inch main, the zero-intercept method uses an ordinary least squares regression to measure the cost of a hypothetical zero-inch main. The cost of this zero-inch main represents the cost to connect a customer to the system; all additional costs represent the need for the system to have enough capacity to meet peak demand. By identifying the cost of a hypothetical zero-inch main, the zero-intercept study is able to isolate the costs that are required to connect a customer to the gas system, and exclude the costs that are related to capacity.

¹⁷³ *Gas Distribution Rate Design Manual*, NARUC Staff Subcommittee on Gas, at 22 (June 1989); see Ex. 155, at 8 (Nelson Direct).

¹⁷⁴ *Id.*

¹⁷⁵ Findings of Fact, Conclusions, and Order, *In the Matter of an Application by CenterPoint Energy Resources Corp. d/b/a CenterPoint Energy Minnesota Gas for Authority to Increase Natural Gas Rates in Minnesota*, Docket No. G-008/GR-13-316, at 37 (June 9, 2014).

¹⁷⁶ Ex. 155, at 9 (Nelson Direct).

2. MERC's Zero-Intercept Study.

99. The zero-intercept model is performed by conducting an OLS regression to isolate the customer costs of a distribution main system. In order to produce reliable results,¹⁷⁷ an OLS regression must satisfy a series of assumptions, known as the Gauss-Markov assumptions.¹⁷⁸ “The Gauss-Markov assumptions are essential to have valid zero-intercept results.”¹⁷⁹ OAG witness Mr. Nelson reviewed MERC's OLS regression and identified several technical deficiencies.

a. Omitted Variable Bias.

100. The first step in an OLS regression is to specify a theoretical model for the study. The corresponding Gauss-Markov assumption requires that the model used in the regression be specified correctly.¹⁸⁰ A model that is specified incorrectly introduces errors into the results of the regression. MERC's model fails to satisfy this assumption because it inexplicably assumes that only one variable, to the exclusion of any other factors, has an effect on the cost of distribution mains. MERC's model is illogical, and the analysis performed by Mr. Nelson demonstrates that it has resulted in omitted variable bias.

101. MERC's model proposes that the only variable that impacts the cost of a distribution main is the diameter of the main squared. The equation can be expressed as follows:¹⁸¹

$$(\textit{Unit Cost}) = \alpha + B_1 (\textit{Main Diameter})^2 + \varepsilon$$

The equation can also be described graphically:

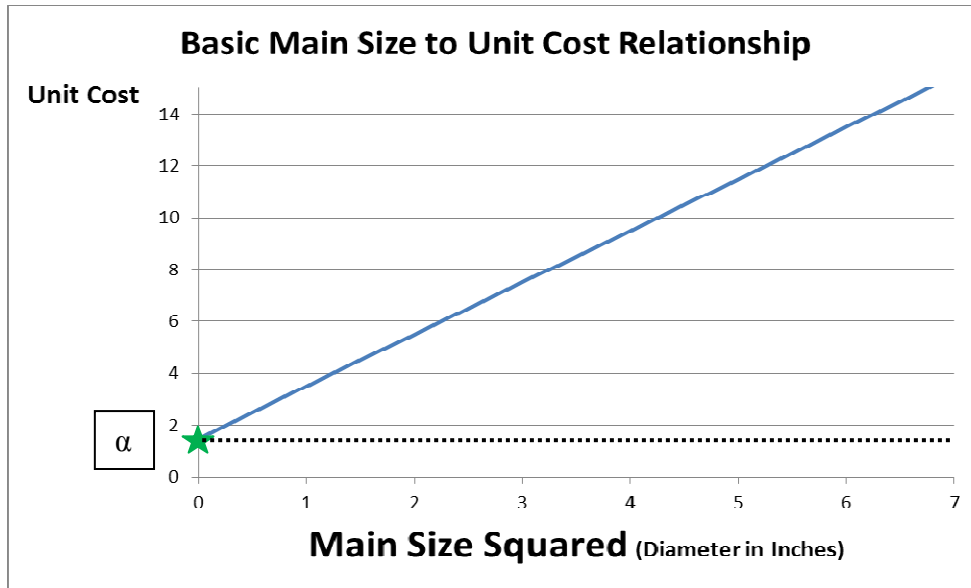
¹⁷⁷ For a list of the assumptions, refer to Exhibit 156, REN-1, at 34 (Schedules to Nelson Direct).

¹⁷⁸ Tr. Evidentiary Hearing, at 73 (May 13, 2014).

¹⁷⁹ *Id.* at 152. MERC's own expert, Ms. Hoffman Malueg, agrees that the Gauss-Markov assumptions are required to run an OLS regression. Tr. Evidentiary Hearing, at 73 (May 13, 2014).

¹⁸⁰ Ex. 156, REN-1, at 34 (Schedules to Nelson Direct).

¹⁸¹ Ex. 155, at 12–13 (Nelson Direct).



In this graph, the blue line represents the right side of MERC’s model and describes the amount of costs that increase as the size of the main increases. The location at which the line crosses the y-axis, marked by the star, represents the zero-intercept value, which is α in MERC’s model. The star, or α , represents the cost of installing a main when all variable costs are zero. In other words, α is the zero-intercept value, and represents the cost of installing a main when all variable costs are zero. The ultimate purpose of the OLS regression is to determine the value of α , because α is the customer associated with installing one foot of main.¹⁸² On the graph, all of the costs that fall under the star are customer costs; all of the costs that are between the star and the blue line are capacity costs. In the equation, the value of α represents customer costs, and any costs in excess of α should be classified as capacity costs.

102. MERC’s specification is flawed because it assumes that the only variable that influences the unit cost of a gas main is the diameter-squared of that particular main. The record in this case demonstrates that MERC has excluded many variables from its model. For example, the Integrys Gas Group Engineering Manual indicates that route selection, depth of installation,

¹⁸² Ex. 158, at 8 (Nelson Surrebuttal).

number and material of fittings, number of valves, and geography of the installation location are all factors that must be considered when installing a main.¹⁸³ Additionally, MERC witness Mr. David Kult noted that there are “varying construction costs across the State of Minnesota caused by geographic area, type of soil, size of lot, [and the] amount of gas used.”¹⁸⁴ And the bids that MERC receives from the contractors who complete main installation projects include many cost factors that have nothing to do with the diameter-squared of the pipe to be installed.¹⁸⁵ MERC’s own authority and witnesses indicate that these variables affect cost, and should have been included in MERC’s model. Furthermore, it is commonly accepted that a regression model which includes a quadratic variable, such as diameter-squared, should also include the linear variable, which would be represented as diameter, to increase accuracy and reliability.¹⁸⁶ Each of these factors may have a statistically significant impact on the cost of a gas main, and MERC’s model fails to account for this.

103. Variables that are left out of MERC’s model result in further errors in the results of the regression.¹⁸⁷ The Integrys Gas Group Engineering Manual and common sense indicate that the number of valves in a gas main will have an impact on cost. The consequence of MERC failing to account for the number of valves in its model is that, instead of calculating the true fixed costs of installing a foot of gas main, MERC has calculated the fixed costs plus the costs of valves. And every variable that is excluded from MERC’s model creates the same effect, magnifying the error.¹⁸⁸ The cumulative result of these omissions is that MERC’s estimate of the

¹⁸³ Ex. 156, REN-3, at 3–10 (Schedules to Nelson Direct).

¹⁸⁴ Ex. 14, at 5 (Kult Direct).

¹⁸⁵ Ex. 160, REN-18 (Trade Secret Schedules to Nelson Surrebuttal).

¹⁸⁶ Ex. 158, at 10–12 (Nelson Surrebuttal).

¹⁸⁷ Ex. 155, at 27 (Nelson Direct).

¹⁸⁸ Ex. 158, at 8 (Nelson Surrebuttal).

fixed costs for the distribution system includes many variable costs that should not be classified as customer costs.

104. MERC witness Ms. Hoffman Malueg attempts to defend MERC's model by arguing that the variables suggested by Mr. Nelson are either already included in MERC's model or cannot be included because MERC is unable to provide data for the variables.¹⁸⁹ But the availability of data for the variables suggested by Mr. Nelson is not relevant to whether their omission has irreparably biased MERC's model. If the variables should have been included in the model and were not, the model is flawed regardless of whether MERC has collected data on them.¹⁹⁰

105. The claim that MERC's model includes the variables because they are contained within book costs is simply incorrect.¹⁹¹ In fact, Ms. Hoffman Malueg's statement that variables such as the number of fittings and valves are included in the book cost is an admission that those variables have an effect on the cost of a mains project.¹⁹² If that is so, then they should have been included as variables in the model to ensure that their costs were not included in customer costs. Ms. Hoffman Malueg's reference to book value is an admission that these variables effect unit cost data, represented on the left side of MERC's model. By failing to control for them on the right side of the equation as well, MERC has introduced omitted variable bias into its results.

106. Technical analysis performed by Mr. Nelson confirms that MERC has not specified its model correctly. After reviewing the results of MERC's OLS regression, Dr.

¹⁸⁹ Ex. 30, at 5–8 (Hoffman Malueg Rebuttal).

¹⁹⁰ The ALJ and the Commission should consider, however, that it was MERC's failure to collect this data that has caused its own analysis to be unusable. The issues raised by the OAG should not surprise MERC, because it is well aware that in practice many factors other than the diameter-squared of a main will impact the cost of a main installation. *See* Ex. 160, REN-18 (Trade Secret Schedules to Nelson Surrebuttal).

¹⁹¹ Ex. 30, at 6–7 (Hoffman Malueg Rebuttal).

¹⁹² *Id.*

Nelson conducted the specification error test for omitted variables.¹⁹³ The results of the specification error test demonstrated that MERC’s “model [was] incorrectly specified,” that “the parameters estimated in the model were estimated incorrectly,” and that “it is highly probable that the unit cost for a zero inch main is incorrectly estimated in MERC’s zero-intercept model.”¹⁹⁴ Mr. Nelson’s technical analysis is unopposed on this point. Department witness Mr. Samir Ouanes did not perform a similar test,¹⁹⁵ and neither did Ms. Hoffman Malueg.¹⁹⁶ Mr. Nelson is the only expert witness in this case that conducted a test for omitted variable bias, and his conclusion is that MERC’s model was specified incorrectly and that the consequence of this error is the presence of omitted variable bias in the results.

b. MERC’s Data.

107. The OAG also identified problems with MERC’s treatment of data in its zero-intercept study. The data set that MERC used in its regression includes two variables – the diameter-squared of the main, and the unit cost of installing that size of main in a particular year.¹⁹⁷ Instead of using minimally processed data, MERC used manipulated data to construct both the unit cost and diameter-squared of main. MERC’s data management practices result in “a data set that is not fit for a zero-intercept analysis,” and “all results from any such analysis [are] meaningless.”¹⁹⁸

108. MERC introduced errors into the process as early as the first data gathering steps. Instead of collecting original data from main installation projects, MERC began its analysis with data that had already been aggregated by diameter and year. Aggregating data in this way is detrimental to the accuracy of a regression because the aggregation “can destroy the relationship

¹⁹³ Ex. 155, at 26–27 (Nelson Direct).

¹⁹⁴ *Id.*

¹⁹⁵ Tr. Evidentiary Hearing, at 192 (May 13, 2014).

¹⁹⁶ *Id.* at 80.

¹⁹⁷ Informational Requirement Document 12, Schedule 5, at 1–5.

¹⁹⁸ Ex. 155, at 24 (Nelson Direct).

that a regression is attempting to model.”¹⁹⁹ This process damaged the reliability of any conclusions about the relationship between the diameter-squared of a pipe and unit costs of mains projects.

109. Additionally, MERC improperly manipulated its data set. MERC intentionally altered more than 25% of the data sets in its sample by relabeling mains that were less than 2-inches as 2-inch main. For example, any data sets that provided information about the unit cost of a ¾ inch main were changed so that they appeared to be 2-inch mains instead of the smaller size. In addition to altering the size of mains, MERC manipulated the data for unit cost. In the original data, the cost of installing a main varies by year. Instead of using this original data, MERC averaged the cost for each diameter across time, and reported the average as the cost in each year. MERC’s data set includes 128 data points for 2 inch mains. In its original form, each of the 128 data points would have a different cost. After MERC’s data manipulation, each of the 128 data points for 2 inch mains indicates that the cost of installing one foot of 2 inch main was exactly \$13.72.

110. After the manipulation, the data set appears to lead to the conclusion that every 2-inch main ever installed in MERC’s distribution system has exactly the same cost. At this point, MERC’s data no longer describes a variable; it describes a predetermined relationship between size and cost with no variability. After reviewing MERC’s data manipulation, Mr. Nelson concluded that, “This practice creates insurmountable problems when trying to estimate [a] regression because it biases the relationship that is being determined.”²⁰⁰ MERC’s data is beyond repair.²⁰¹

¹⁹⁹ Ex. 155, at 17 (Nelson Direct).

²⁰⁰ Ex. 155, at 23 (Nelson Direct).

²⁰¹ Again, the ALJ and the Commission should take note that it was MERC’s own actions that caused its analysis to be unreliable.

111. To further illustrate the problems with MERC’s data practices, Mr. Nelson provided a hypothetical example of what MERC’s original data set would look like:²⁰²

Table 1
Example of Un-manipulated Data

Diameter	Diameter-squared	Adjusted Unit Cost	Linear feet	Average Unit Cost	Year
3	9	2,979,513	280,342	10.62	2003
3	9	1,855,565	184,299	10.06	2004
3	9	1,417,502	120,549	11.76	2005
3	9	1,156,191	121,799	9.49	2006
3	9	1,581,194	253,833	6.23	2007
3	9	774,087	94,831	8.16	2008
3	9	108,158	28,335	3.82	2009
3	9	137,228	18,959	7.24	2010
3	9	980,868	1,732	566.32	2011
3	9	97,442	417	209.69	2012
Total for 3"		11,087,748	1,105,096		
		Average Unit Cost For All Years	10.03		

In this table, just as in MERC’s original data, the data points for 3-inch diameter main have different adjusted unit costs in different years. But this was not the data that MERC used in its regression. Instead, MERC calculated an average unit cost for each main diameter over all of the years in the data set. Mr. Nelson continued his hypothetical example to demonstrate the result of MERC’s manipulation:²⁰³

²⁰² See Ex. 155, at 19 (Nelson Direct).

²⁰³ *Id.* at 20, Table 2.

Table 2
Example of Manipulated Data

Adjusted Unit Cost (Y variable)	Diameter Squared (X variable)
10.03	9
10.03	9
10.03	9
10.03	9
10.03	9
10.03	9
10.03	9
10.03	9
10.03	9
10.03	9
10.03	9

In this example, the data is averaged so that it appears that every data point has the same cost. By averaging the data, MERC eliminated all variability from the sample and, as a result, each data point is identical. In the process of manipulation, “MERC changes the unit cost of every single observation to the same number for each diameter of main.”²⁰⁴ MERC “completely eliminates the variability associated with each individual diameter of main.”²⁰⁵ Rather than using a regression to determine the cost of the main, MERC has manipulated the data to make it appear as if the cost is always the same. As a result, MERC has stripped the data of its meaning and rendered it not only useless, but misleading.²⁰⁶

112. Mr. Nelson noted that “the point of econometrics is to determine a relationship,” but that MERC “distorts the relationship between the two variables and makes it seem like the

²⁰⁴ *Id.* at 20.

²⁰⁵ *Id.* at 23.

²⁰⁶ *Id.* at 24.

dependent variable is perfectly predicted by the independent variable.”²⁰⁷ This is particularly troubling given that the very “goal of running a regression is to explain the variation of the dependent variable using . . . independent variables.”²⁰⁸ Instead of attempting to analyze this variation, MERC has predetermined the relationship between the size of the main and the unit cost. The consequence of this manipulation is that MERC’s “model [is] completely meaningless” and should be disregarded.²⁰⁹ To do otherwise would condone MERC’s manipulation, and encourage similarly contrived “analysis” in future cases.

c. Outliers.

113. The negative effect of MERC’s data manipulation can be determined by quantitative analysis. Mr. Nelson analyzed the results of MERC’s regression for the presence of outliers by performing a stem and leaf plot test.²¹⁰ The results of the test indicated that 78 of the 266 observations in the plastic data set, almost 30%, were outliers.²¹¹ According to Mr. Nelson, “Outliers will result in an incorrectly estimated model because they can overly influence the prediction of the Y variable.”²¹² The presence of any outliers in a data set can result in bias; a data set that consists of 30% outliers is, by definition, unreliable. Mr. Nelson concluded that the high incidence of outliers resulted from MERC’s data manipulation.²¹³ No party in this case has contradicted Mr. Nelson’s technical analysis. MERC did not perform a stem and leaf plot test to check for outliers.²¹⁴ Mr. Nelson’s unchallenged technical analysis demonstrates that nearly 30% of MERC’s regression data are outliers, and that as a consequence MERC’s regression should be rejected as inaccurate and unreliable.

²⁰⁷ *Id.* at 21.

²⁰⁸ *Id.* at 21.

²⁰⁹ *Id.* at 22.

²¹⁰ *Id.* at 29; Ex. 156, Schedule REN-9 (Schedules to Nelson Direct).

²¹¹ *Id.*

²¹² Ex. 155, at 29 (Nelson Direct).

²¹³ *Id.* at 30.

²¹⁴ Tr. Evidentiary Hearing, at 75 (May 13, 2014).

d. Heteroscedasticity.

114. MERC's regression also violates the Gauss-Markov assumptions of homoscedasticity. Department witness Laura Otis explained this assumption by noting that, "One of the basic assumptions for regression analysis is that the error terms [of the regression] must have the same variances."²¹⁵ When the error terms have different variances, the regression has heteroscedasticity. According to Ms. Otis, the "consequence of [heteroscedasticity] is that the estimated variances and covariances of regression estimates are biased and inconsistent."²¹⁶ MERC's expert witness agrees. MERC witness Dr. Harry John notes that "the major consequences [of heteroscedasticity] are that the predicted values will have large errors, leading to imprecise estimates. The potential for large errors . . . will increase significantly in the presence of heteroscedasticity, and as a result all statistical tests of the model such as T-statistics, and F-test will be unreliable."²¹⁷

115. OAG witness Mr. Nelson ran a diagnostic test to check for heteroscedasticity.²¹⁸ The results of the Bruesch-Pagan test, as well as the graphical plot of the regression residuals, provide "clear evidence that heteroscedasticity was present."²¹⁹ According to the expert opinions of Ms. Otis and Dr. John, as well as Mr. Nelson, heteroscedasticity means that MERC's regression is totally unreliable. But MERC made no attempt to test for the presence of heteroscedasticity even after reviewing Mr. Nelson's evidence that heteroscedasticity was present.²²⁰ In fact, Ms. Hoffman Malueg did not even attempt to interpret the results of Mr.

²¹⁵ Ex. 214, at 7 (Otis Surrebuttal).

²¹⁶ *Id.* at 8.

²¹⁷ Ex. 39, at 9 (John Rebuttal); *see also* Tr. Evidentiary Hearing, at 109–10 (May 13, 2014) (confirming that Dr. John believes that the results of a regression will be unreliable in the presence of heteroscedasticity).

²¹⁸ Ex. 155, at 31 (Nelson Direct); Ex. 156, REN-11 (Schedules to Nelson Direct).

²¹⁹ *Id.* at 31.

²²⁰ Tr. Evidentiary Hearing, at 76 (May 13, 2014).

Nelson's study.²²¹ MERC's failure to do so is baffling, especially given the fact that MERC's own expert witnesses confirm that heteroscedasticity completely invalidates the results of the regression. The ALJ and the Commission should particularly note MERC's failure to respond to this issue. According to the expert witnesses of both the Department and MERC, the presence of heteroscedasticity in MERC's regression means that MERC's results are biased and unreliable.²²² Mr. Nelson's uncontroverted analysis demonstrates that MERC's regression contains heteroscedasticity.

3. The OAG's Recommendation.

116. The OAG provided an alternative zero-intercept analysis. Mr. Nelson acknowledged that his analysis was limited by the data provided by MERC; in this circumstance, as a result of MERC's data manipulation it would be impossible to perform an OLS regression that did not suffer from some problems.²²³ Even given these limitations, Mr. Nelson was able to improve MERC's model by including the linear diameter variable to the model to "increase the model's flexibility, provide[] a superior theoretical specification, increase the . . . model's measure of fit, and . . . align with theory and other zero-intercept analyses completed in additional jurisdictions."²²⁴ With these improvements, Mr. Nelson's regression suggested that 26% of the Mains Account should be classified as customer costs.

117. In order to check his results, Mr. Nelson conducted a literature review to compare his results to that of other utilities that had conducted a zero-intercept analysis.²²⁵ Mr. Nelson first noted that MERC's request to classify 70% of the Mains Account as customer costs was

²²¹ *Id.* at 77.

²²² Ex. 214, at 7–8 (Otis Surrebuttal); Ex. 39, at 9 (John Rebuttal).

²²³ Ex. 155, at 37–38 (Nelson Direct).

²²⁴ *Id.* at 37.

²²⁵ *Id.* at 39; Tr. Evidentiary Hearing, at 176-77 (May 13, 2014). Mr. Nelson excluded the results of other Integrys utilities. *Id.*

“extremely high” compared to the results of other zero-intercept studies.²²⁶ The average zero-intercept study indicated that 35.63% of a distribution system should be classified as customer costs.²²⁷ Given that the results of his study were below the average, and that they were limited by the significant problems with MERC’s data, Mr. Nelson recommended that the Commission classify 30% of the Mains Account as customer costs.²²⁸

118. Ms. Hoffman Malueg recommends that the Commission reject Mr. Nelson’s analysis because she does not approve of the results of his analysis.²²⁹ But Ms. Hoffman Malueg does not provide any technical analysis, and inappropriately relies on “layman’s terms” to engage with Mr. Nelson’s technical arguments.²³⁰ Instead of taking the opportunity to defend or correct its methods, MERC argues that Mr. Nelson’s *results* are unreasonable, ignoring its own role in failing to provide accurate data to support its rate increase request. Similarly, Department witness Dr. Ouanes recommends that the Commission reject Mr. Nelson’s results. But Dr. Ouanes also failed to provide any technical analysis of the regression. In fact, Dr. Ouanes testified that he did not analyze the regression at all, even though he reviewed the technical issues that were raised by Mr. Nelson.²³¹ Instead, Dr. Ouanes accepts the *results* of MERC’s regression based on alternative minimum-sized studies.

119. MERC and Dr. Ouanes attempt to justify their results-based analysis by relying on several minimum-sized main studies conducted by the company. MERC believes that the similarity between the results of the minimum-size studies and its zero-intercept study indicate that the zero-intercept study was performed correctly.²³² But this is not the case. The record in

²²⁶ Ex. 155, at 38 (Nelson Direct).

²²⁷ Ex. 156, REN-16 (Schedules to Nelson Direct).

²²⁸ *Id.* at 40.

²²⁹ Ex. 30, at 21 (Hoffman Malueg Rebuttal).

²³⁰ *Id.* at 4.

²³¹ Tr. Evidentiary Hearing, at 192 (May 13, 2014).

²³² *See* Ex. 208, at 12 (Ouanes Rebuttal).

this case, as well as a basic understanding of the theory involved, demonstrates that the minimum-size main method overstates the cost of connecting a customer to the gas system.²³³ Common sense reaches the same result: a 2-inch main, such as MERC used for its studies, costs more to install than a zero-inch main. But only the costs of the zero-inch main are necessary to connect a customer to the system, and the additional costs of the 2-inch main are costs that MERC has incurred in order to provide the capacity of a 2-inch main. For this reason, a minimum-size study based upon a 2-inch main overstates the cost of connecting a customer, and improperly shifts the costs of the Mains Account to the residential class. There is no reasonable basis to conclude that the results of a minimum-sized study should be similar to the results of a zero-intercept study.

120. Additionally, MERC and the Department fail to recognize the results of MERC's third minimum-sized study. The third study, the only one in which MERC based its model on the lowest cost mains in the system, indicated that 32% of the distribution system should be classified as customer costs.²³⁴ Dr. Ouanes and Ms. Hoffman Malueg appear to ignore the third study for no reason other than because it reaches a result they disagree with. MERC believes that the third study is flawed because it "did not consider MERC's minimum installation standards."²³⁵ But the fact that MERC's other studies *did* reflect the minimum installation standards means that they included some costs that are related to the capacity of a 2-inch main, rather than calculating only the cost necessary to connect a customer to the gas system. When MERC finally conducted a study that *did not* reflect its claimed minimum installation standards,

²³³ Ex. 155, at 9 (Nelson Direct). MERC witness Ms. Hoffman-Malueg also confirmed that the purpose of determining the cost of a zero-inch pipe is to determine the cost of a pipe that does not allow any demand costs. Tr. Evidentiary Hearing, at 91-92 (May 13, 2014). For that matter, the NARUC Gas Manual notes that classifying any distribution system costs as customer costs "can be controversial." *Gas Distribution Rate Design Manual*, NARUC Staff Subcommittee on Gas, at 22 (June 1989).

²³⁴ Ex. 30, JCHM-4 (Hoffman Malueg Rebuttal).

²³⁵ MERC Initial Brief, at 85.

the results of the study were strikingly similar to the results of the OAG's zero-intercept analysis.²³⁶ For that reason, MERC's third minimum-size study is likely the most accurate.

121. The result of MERC's improper classification of the mains account is that the cost of service for the residential class is overstated by nearly 2.5%. Mr. Nelson's testimony demonstrates that MERC's regression is inaccurate and unreliable because it contains excessive outliers, heteroscedasticity, and omitted variable bias. Mr. Nelson's analysis addresses the technical faults of MERC's study, adheres to the methodology accepted for cost of service studies accepted by the authorities in this field, and proposes a classification that is fair and reasonable for all classes. As a result, Mr. Nelson's recommendation would reduce the residential class's revenue deficiency by nearly 20%, or \$3.85 million.²³⁷

4. Recommendation.

122. The OAG has demonstrated significant technical errors in MERC's zero-intercept study. MERC has provided no evidence to rebut the OAG's technical critiques of its zero-intercept study. As a result, the ALJ finds that MERC's zero-intercept study is unreliable and should not be used to classify the Mains Account.

123. The OAG has presented evidence that MERC's supplemental minimum-size main studies overstate the customer costs of the distribution system, and this evidence has not been challenged. As a result, the minimum-size studies are unreliable and should not be used to classify the Mains Account.

124. The ALJ finds that the OAG's zero-intercept study produces the most reliable results on this record. Neither MERC nor the Department has identified technical errors in the OAG's recommended classification. Furthermore, the OAG's recommended classification more

²³⁶ Ex. 30, JCHM-4 (Hoffman Malueg Rebuttal).

²³⁷ Ex. 155, at 40 (Nelson Direct); Ex. 156, REN-17, at 19 (Schedules to Nelson Direct).

closely aligns with zero-intercept studies in other jurisdictions. For this reason, the ALJ recommends classifying 30% of the Mains Account as customer costs, and 70% of the Mains Account as capacity costs, as recommended by the OAG.

125. Additionally, ALJ recommends MERC collect additional data in order to conduct an accurate zero-intercept study in future rate cases.

N. Revenue Apportionment.

126. MERC and Department witness Ms. Susan Peirce have agreed on a proposed revenue apportionment.²³⁸ Under their jointly proposed rate apportionment, the residential class would pay 96.6% of the cost as determined by the CCOSS.²³⁹ But this recommendation is based on a class cost of service study that is rife with technical errors, as discussed in the previous section. The testimony of OAG witnesses Mr. Nelson has demonstrated that MERC incorrectly classified its distribution main expenses, which represent MERC's largest single investment, and its customer service expenses. In addition, the testimony of OAG witness Mr. Lindell shows that MERC's allocation of income tax expenses unreasonably shifts costs to the residential class in violation of the Commission's prior orders and basic accounting principles. For these reasons, MERC's class cost of service study dramatically overstates the costs caused by the residential and small C&I classes.

127. The OAG asserts that a CCOSS that was updated to reflect the inaccuracies identified by Mr. Nelson and Mr. Lindell would show that residents are very close to paying 100% of costs under MERC's current apportionment. Adjusting the CCOSS to account for only Mr. Nelson's recommended mains classification would reduce the residential class's cost of service by almost 2.5%, and reduce the revenue deficiency of the residential class by

²³⁸ Ex. 42, at 4 (Walters Rebuttal); Ex. 205, at 2–3 (Peirce Surrebuttal and Attachments).

²³⁹ Compare Ex. 42, GJW-2 (Walters Rebuttal), with Ex. 203, at 11 (Peirce Direct and Attachments).

approximately 20%.²⁴⁰ After incorporating the OAG's recommendations for income taxes and customer service expenses, a corrected CCOSS could even indicate that the residential class is paying more than 100% of costs. It would be unreasonable to increase apportionment on the basis of a CCOSS that is unreliable and inaccurate.

128. The OAG's recommendation is also supported by the Commission's directive to incorporate non-cost factors when designing rates.²⁴¹ These non-cost factors include, among others, the customers' ability to pay, customer acceptance of rates, historical continuity of rates, and the ability of some customer classes to pass costs on to others.²⁴² Each of these non-cost factors provides further justification for limiting rate increases for the residential and small C&I classes. The residential class contains many ratepayers who have no ability to pay increased utility costs, such as low income families and seniors living on a fixed income.

129. The ALJ recommends that any revenue increase be collected using MERC's existing revenue apportionment. MERC's failure to provide an adequate record to support its request leaves no other reasonable option.

O. Customer Charge.

130. MERC has proposed an increase in its customer charge from \$8.50 to \$9.50 for the residential class, and from \$14.50 to \$18.00 for the small C&I class. This proposal would set MERC's customer charge at the highest level that ratepayers in the state of Minnesota have ever seen.

131. Moderating increases to the customer charge achieves the Commission's important directive to "encourage energy conservation" by increasing the incentive to

²⁴⁰ Ex. 156, REN-17, at 19 (Schedules to Nelson Direct).

²⁴¹ Findings of Fact, Conclusions of Law, and Order, *In the Matter of the Application of Dakota Electric Association for Authority to Increase Rates for Electric Service in Minnesota*, Docket No. E-11/GR-09-175, at 14 (May 24, 2010).

²⁴² *Id.*

conserve.²⁴³ Ratepayers can always reduce their monthly bills by reducing consumption. But that incentive is reduced when the customer charge is allowed to continually increase. In contrast, when the customer charge is kept stable, customers have a greater incentive to conserve because each dollar spent on conservation will have a comparatively greater effect on customer' bills. A low customer charge sends a stronger conservation signal to consumers.

132. MERC argues that an increased customer charge is important to guarantee the utility's revenue stability.²⁴⁴ But that is not true. While MERC's revenue decoupling mechanism does have a 10% cap on revenues, as the Commission noted in MERC's 2010 rate case, "The mechanism is considered a full decoupling mechanism because the true-up amount is based on deviations from forecasted revenue for any reason, including weather, that differs from forecasted amounts."²⁴⁵ MERC does not need a high customer charge in order to stabilize its revenues because, contrary to MERC's argument, MERC has a full decoupling program that protects the company's revenue from all deviations, including weather.

133. MERC also claims that an increased customer charge will benefit ratepayers by leveling winter and summer bills.²⁴⁶ But, again, MERC has already fully accomplished this goal by providing an even payment plan as required by statute.²⁴⁷ Customers have access to a completely leveled monthly bill if they want it. MERC has not identified any benefit it receives from increasing the customer charge because it already has the benefits it claims the customer charge will provide.

²⁴³ Minn. Stat. § 216B.03.

²⁴⁴ Ex. 42, at 10 (Walters Rebuttal).

²⁴⁵ Findings of Fact, Conclusions, and Order, *In the Matter of the Application of Minnesota Energy Resources Corporation for Authority to Increase Rates for Natural Gas Service in Minnesota*, Docket No. G-007, 011/GR-10-977, at 8 (July 13, 2012).

²⁴⁶ Ex. 42, at 9 (Walters Rebuttal).

²⁴⁷ Minn. Stat. § 216B.098, subd. 2; Ex. 150, at 41 (Adopted Direct Testimony of Chavez by Lindell).

134. In contrast, residents lose out on the ability to control their utility bills with increased customer charges. Each time the customer charge is increased, customers give up more control over their bills. This concern is particularly significant for customers who are living on a low or fixed income. Department witness Ms. Peirce argues that the customer charge must be increased because a low customer charge will result in intra-class subsidies.²⁴⁸ But neither Ms. Peirce nor any MERC witness can identify a single ratepayer who has ever complained of intra-class subsidies. And neither Ms. Peirce nor the utility have provided any quantitative analysis of what the effect of any intra-class subsidy might be.²⁴⁹ In contrast, the Commission has historically recognized that customer charges are detrimental to consumers:

Customer charges tend to confuse and alienate customers, neutralize conservation incentives, burden low income households, and perpetuate pricing structures ill-suited to competition. . . . The *cardinal goals* in residential ratemaking are making rates understandable, making them easy to administer, and maintaining public confidence in their fairness. Customer charges work at cross purposes with these goals.²⁵⁰

135. Increasing the customer charge does not benefit MERC because it is already guaranteed its revenue requirement by the decoupling program. But increasing the customer charge would increase the confusion and alienation suffered by customers who do not understand why they continue to be charged when they consume no gas. On the other hand, holding the customer charge stable will allow the ratepayers to retain personal control over a larger portion of their utility bills and will contribute to the Commission's directive to maximize conservation by increasing consumers' incentive to conserve. For these reasons, the ALJ recommends that the

²⁴⁸ Ex. 203, at 17 (Peirce Direct).

²⁴⁹ See Ex. 150, at 41 (Adopted Direct Testimony of Chavez by Lindell).

²⁵⁰ Findings of Fact, Conclusions of Law, and Order, *In the Matter of the Request of Interstate Power Company for Authority to Change its Rates for Electric Service in Minnesota*, Docket No. E-001/GR-95-601, 1996 WL 532195, at *6 (Apr. 8, 1996) (emphasis added).

Commission maintain the customer charge at its current level of \$8.50 for the residential class and \$14.50 for the small C&I class.

CONCLUSIONS

1. The Minnesota Public Utilities Commission and the ALJ have jurisdiction over the subject matter of this proceeding pursuant to Minn. Stat. §§ 14.50, 216.08 and 216B.16.

2. In the absence of competition, government regulation has been used to approximate the results that would be achieved in a competitive environment. Minnesota Statutes §§ 216B.03 and 216B.07 require rates to be reasonable and not unreasonable discriminatory.

3. A reasonable rate of return for MERC is 8.62%, or within a range of 8.6% to 9.1%.

4. The adjustments recommended by the OAG are reasonable. The adjustments include:

- a. Deferral of customer service expenses for the ICE 2016 Project;
- b. Reduction of bad debt expenses;
- c. Disallowance of deferred tax assets relating to net operating loss carryforward;
- d. Reduction in property tax expenses;
- e. Disallowance of all travel and entertainment expenses, including those un-itemized expenses associated with the service company;
- f. Reduction in the inflation used to calculation O&M expenses;
- g. Removal of unamortized rate case expenses from rate base; and
- h. Increase in transportation revenues.

5. MERC's class cost of service study is inaccurate and unreliable, and should not be used for ratemaking purposes. Specifically, the OAG's recommendations to reallocate customer service expenses, income tax expenses, and distribution mains expenses are reasonable.

6. The OAG's recommendation to maintain revenue apportionment and customer charges at their current levels is reasonable.

RECOMMENDATION

The ALJ recommends that the Commission issue an Order providing that:

1. MERC is entitled to gross annual revenues in accordance with the terms of the Report.

2. Within ten days of the service date of this Report, MERC shall file with the Commission for its review and approval, and serve on all parties in this proceeding, revised schedules of rates and charges reflecting the revenue requirements and the rate design decisions based on the recommendations made herein.

3. MERC shall make further compliance filings regarding rates and charges, rate design decisions, and tariff language as ordered by the Commission.

Dated: _____

Respectfully submitted,

ERIC L. LIPMAN
Administrative Law Judge