

BEFORE THE MINNESOTA PUBLIC UTILITIES COMMISSION

Beverly Jones Heydinger	Chair
David C. Boyd	Commissioner
Nancy Lange	Commissioner
Dan Lipschultz	Commissioner
Betsy Wergin	Commissioner

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

ISSUE DATE: October 28, 2014

DOCKET NO. G-011/GR-13-617

FINDINGS OF FACT,  
CONCLUSIONS, AND ORDER

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### **PROCEDURAL HISTORY**

#### **I. Initial Filings and Orders**

On September 30, 2013, Minnesota Energy Resources Corporation (MERC or the Company) filed this general rate case seeking an annual rate increase of some \$14,187,597, or approximately 5.52%. The filing included a proposed interim rate schedule.

On the same date, the Company filed a petition to establish a new base cost of gas, to be implemented at the same time as new interim rates. That petition was granted by order dated November 27, 2013, subject to the requirement that the Company update the commodity cost of gas at least once during this rate-case proceeding.<sup>1</sup>

Also on November 27, 2013, the Commission issued three orders in this case:

- an order finding the rate-case filing substantially complete, suspending the proposed final rates, and extending the procedural schedule and suspension period under Minn. Stat. § 216B.16, subd. 2 (f);
- a notice and order for hearing referring the case to the Office of Administrative Hearings for contested case proceedings; and
- an order setting interim rates for the period during which the rate case was being resolved.

#### **II. The Parties and Their Representatives**

The following parties appeared in this case:

<sup>1</sup> *In the Matter of the Petition of Minnesota Energy Resources Corporation for Approval of a New Base Gas Cost for Interim Rates*, Docket No. G-011/MR-13-732, Order Setting New Base Cost of Gas (November 27, 2013).

## COST OF CAPITAL ISSUES

### XIII. Cost of Equity

#### A. Introduction

In determining just and reasonable rates, the Commission is required to

give due consideration to the public need for adequate, efficient, and reasonable service and to the need of the public utility for revenue sufficient to enable it to meet the cost of furnishing service, including adequate provision for depreciation of its utility property used and useful in rendering service to the public, *and to earn a fair and reasonable return upon the investment in such property.*<sup>21</sup>

One of the critical components of that fair and reasonable return upon investment is the return on common equity, which—together with debt—finances the utility infrastructure. The Commission must set rates at a level that permits stockholders to earn a fair and reasonable return on their investment and permits the utility to continue to attract investment.

In short, the Commission must determine a reasonable cost of equity and factor that cost into rates. It would normally begin by examining the price of the utility's stock, but MERC is a wholly owned subsidiary of Integrys Energy Group and has no publicly traded common stock. Its cost of common equity—essential to determining overall rate of return and the final revenue requirement—must therefore be inferred from market data for companies that present similar investment risks.

#### B. The Analytical Tools

The Company, the Department, and the OAG conducted full cost-of-equity studies and based their analysis on comparison groups of utilities they considered similar enough to MERC to serve as proxies in determining the Company's cost of equity. All three used both the Discounted Cash Flow (DCF) analytical model, on which this Commission has historically placed its heaviest reliance, and the Capital Asset Pricing Model (CAPM), which the Commission has historically used as a secondary, corroborating resource. The Company also conducted a third analysis using the Risk Premium (RP) model, which the Commission has historically relied on less heavily, considering the model prone to producing volatile and unreliable outcomes.

The DCF model uses the current dividend yield and the expected growth rate of dividends to determine what rate of return is high enough to induce investment. The model is derived from a formula used by investors to assess the attractiveness of investment opportunities by determining the net present value, or price per share, of a company's stock. It uses three inputs—dividends, market equity prices, and growth rates.

The CAPM model estimates the required return on an investment by determining the rate of return on a risk-free, interest-bearing investment; adding a historical risk premium determined by subtracting that risk-free rate of return from the total return on *all* market equities; and multiplying the remainder by beta, a measure of the investment's volatility compared with the volatility of the market as a whole.

<sup>21</sup> Minn. Stat. § 216B.16, subd. 6, emphasis added.

The RP Model determines the cost of equity by adding to current corporate bond yields a premium reflecting the greater returns realized by equity holders over various historical periods.

### **C. Positions of the Parties**

MERC recommended a return on equity of 10.75%. That number was derived by applying all three analytical models discussed above to each company in MERC's comparison group, synthesizing the results to arrive at a baseline return on equity, adding an adjustment for flotation costs,<sup>22</sup> and adjusting the final figure upward to reflect generic and company-specific factors that the Company argued increased its risk.

The Department recommended a return on equity of 9.29%. That number was derived by completing a DCF analysis on each company in the Department's comparison group and evaluating the range of results in light of the range of the Department's CAPM results. The Department, like MERC, added a flotation adjustment to the final figure.

The OAG recommended a return on equity of 8.62%. That number was derived by completing two variations of the DCF analysis on each company in the OAG's comparison group and then incorporating the results of its market-to-book and CAPM analyses. The OAG opposed adding an adjustment for flotation costs, on grounds that returns on equity are already inflated in cases such as this, in which the company's market to book ratio is significantly higher than one.

The parties' positions are further described below.

#### **1. The Company**

MERC recommended a return on equity of 10.75%, which it derived by applying all three analytical models to each company in its comparison group, synthesizing the results, adding a flotation adjustment, and adjusting the final figure upward to reflect generic and company-specific factors that the Company believed increased its business and investment risks.

MERC argued that, since all analytical models have strengths and weaknesses, using three recognized models will produce a more robust result than using just one. Further, the Company argued that the DCF model—the one the Commission has generally found most trustworthy and relied upon most heavily—has two weaknesses that must be compensated for.

First, the model is somewhat circular; it involves a regulatory agency setting rates of return based on investors' expectations, which are themselves based on rates of return set by other regulatory agencies in earlier cases. This is a structural limitation, and the Company made no adjustment to its DCF results to reflect this feature of the model.

Second, the model does not take into account the disparity between the book value at which utility assets are valued and on which regulators base authorized returns, and the market values investors typically perceive and rely on in making their investment decisions. This disparity, the Company argued, understates and undercompensates for risk by making utilities' debt ratios appear lower than they are. The Company made an upward adjustment to its DCF results to account for this

<sup>22</sup> Flotation costs are the fees and expenses a company incurs to issue securities.

feature, calling it a “leverage adjustment.” It made the same adjustment to its CAPM and RP calculations.

MERC also argued that the cost of equity should be adjusted upward to account for company-specific risk factors not adequately accounted for in the models: the relatively small size of the Company, its significant concentration of large industrial customers (whose usage varies with swings in the economy and who may be able to bypass the Company’s system), its relatively high earnings variability, relatively low interest coverage, and relatively high five-year average operating ratio. None of these risks are easily quantifiable, and the upward adjustment built into the Company’s cost-of-equity number was based on the professional judgment and expertise of its expert witness.

MERC argued that the flotation adjustment built into its final cost figure was supported by past Commission practice and necessary to prevent the dilution of equity by issuance costs.

## **2. The Department**

The Department recommended a return on equity of 9.29%. That number was derived by completing a DCF analysis on each company in the Department’s comparison group and evaluating the range of results in light of the Department’s CAPM results. The Department, like MERC, added a flotation adjustment to the final figure.

The Department strongly recommended basing the Company’s cost of equity on the DCF analytical model and using the other models mainly as reasonableness checks. The agency stated that it used the DCF model because that model has proved to be the most trustworthy over the decades, is more transparent and objective than the other two models, and has been relied upon more consistently by the Commission.

The Department rejected MERC’s claims that its cost of equity should be adjusted upward to account for its size, the book-value/market-value dichotomy for which it requests a leverage adjustment, its reliance on large industrial customers, or any of the company-specific financial factors cited (interest coverage, earnings variability, operating ratio).

The agency stated that the leverage adjustment was unnecessary because investors are not markedly unsophisticated, and the book-value/market-value dichotomy is a fundamental feature of utility stocks understood by all investors. The agency argued that no adjustment was needed for the Company’s size, heavy concentration of large industrial customers, or any of the company-specific financial factors cited, because the integrity of the comparison group ensured that individual differences would offset one another and be neutralized by the companies’ overarching similarities.

The agency concurred with the Company on the need for a flotation adjustment to prevent the dilution of equity by issuance costs.

## **3. The OAG**

The OAG recommended a return on equity of 8.62%. That number was derived by completing two variations of the DCF analysis, described by the OAG as “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.”<sup>23</sup>

The OAG’s application of the single-stage or constant-growth DCF model differed from conventional applications in that, instead of using projected growth in earnings per share as a proxy for dividend growth, it used a blend of projected growth in earnings per share, dividends, book value, retention ratios, returns, total number of shares, and market-to-book ratio. The OAG argued that this adaptation was required to offset, at least in part, the inflated cost-of-equity figures that the DCF model yields when applied to companies whose market-to-book ratios significantly exceed one.

The OAG also conducted a market-to-book analysis, estimating the cost of equity as the sum of the Company’s internal return and its external returns. This method relies on analysts’ projections of a company’s future retention ratios, returns on equity, growth in number of shares, and market-to-book ratios. The OAG also conducted a CAPM analysis, which it used only as a reasonableness check.

The OAG opposed any adjustment for flotation costs, arguing that the methods commonly used to set the cost of equity for utilities nearly always inflated that cost, creating a cushion that both covered flotation costs and unreasonably enriched shareholders.

#### **D. The Recommendation of the Administrative Law Judge**

The ALJ made extensive findings on the DCF and CAPM analytical models and on the parties’ application of these models to MERC. He rejected the Company’s execution of the remaining model, RP, as invalid, without reaching conclusions on the validity or usefulness of the model itself.<sup>24</sup> He rejected the OAG’s use of a weighted blend of multiple factors to calculate dividend growth rates, finding that the standard method of using earnings-per-share had more factual support and wider acceptance.<sup>25</sup>

The ALJ found that the CAPM model raised difficult issues in execution and endorsed the Department’s decision to use CAPM only as a reasonableness check.<sup>26</sup> He found that the best practice for setting the cost of equity was to compare the results of a DCF analysis with the results of other analyses, such as the CAPM.<sup>27</sup> He essentially found that the Department’s methodological approach to and execution of the DCF and CAPM models were superior to the Company’s and the OAG’s.<sup>28</sup> He treated the Department’s DCF outcome as the baseline for determining the appropriate cost of equity.<sup>29</sup>

<sup>23</sup> OAG Initial Brief at 21.

<sup>24</sup> ALJ’s Report at ¶¶ 165-166.

<sup>25</sup> ALJ’s Report at ¶¶ 122-123.

<sup>26</sup> ALJ’s Report at ¶¶ 155 and 157.

<sup>27</sup> ALJ’s Report at ¶¶ 156.

<sup>28</sup> ALJ’s Report at ¶¶ 122, 123, 131, 153-154, 156-157, 165-166, 171.

<sup>29</sup> ALJ’s Report at ¶¶ 171-172.

At that point, however, the ALJ adopted the Department's CAPM outcome, 9.79%, instead of its DCF outcome, 9.29%, finding that the DCF outcome understated the cost of equity by failing to adjust for MERC's having a higher risk profile than the comparison group used in the Department's DCF analysis.<sup>30</sup> As further evidence that the Department's CAPM analysis "yields a better and more reasonable result" than its DCF analysis, the ALJ cited the following factors:

- The 9.79% return was just one basis point from MERC's updated DCF analysis, which rendered a return of 9.8%.
- The 9.79% return was supported by the Department's ECAPM (a variation of CAPM) analysis, which resulted in an estimated mean cost of equity for the comparison group of 9.96%.
- The 9.79% return was within the overall range for the results of the Department's DCF and TGDCF (a variation on the DCF) analyses, which ran from 8.61% to 10.14 %.
- The 9.79% return was close to the average of the return-on-equity determinations made by state utility commissions for the 11 natural gas rate cases that were resolved during the fourth quarter of 2013. That average was 9.83%.

The ALJ concurred with the Company and the Department that the cost of equity should include a 3.90% adjustment for flotation costs, which he incorporated into his recommended return of 9.79%.

## **E. Commission Action**

### **1. Summary of Commission Action**

The Commission respectfully declines to accept the recommendation of the Administrative Law Judge on the final cost of equity and will instead set that cost at 9.35%, the average of the Department's initial and updated DCF results.

The Commission concurs with the ALJ on the strengths of the DCF model and on the appropriateness of relying on it for ratemaking purposes in this case. The Commission accepts the Department's DCF analysis, including its contention that that analysis requires no adjustment for the generic, industry-wide, or company-specific factors for which the Company and the OAG seek adjustment. The Commission accepts the ALJ's conclusion that the cost of equity should include a flotation adjustment.

The Commission finds that the ALJ's rejection of the Department's DCF result was based on a misreading of the Department's testimony and does not support moving from the Department's DCF analysis to its CAPM analysis in any case.

Finally, while the Commission finds that the Department's cost-of-equity analysis is fundamentally sound in both theory and execution, the Commission has some concern about the disparity between the final result of its original DCF analysis (9.40%) and the final result of its updated DCF analysis (9.29%). As a precaution, it will modify the Department's recommendation and average these two results, to ensure that potentially anomalous market volatility between the

<sup>30</sup>ALJ's Report at ¶ 172.

two analytical periods used in the original and final analyses does not skew the rate of return downward. The final cost of equity will therefore be set at 9.35%.

These decisions are explained below.

## 2. The Analytical Models

The Commission concurs with the Administrative Law Judge that the best practice for determining MERC's cost of equity is to rely primarily on the DCF model and to use other models—mainly the CAPM—as reasonableness checks.<sup>31</sup>

In MERC's last two rate cases the Commission has rejected the Company's contention—made again in this case—that using multiple cost-of-equity models produces more trustworthy results than using one.<sup>32</sup> There has been no testimony or argument in this case that leads the Commission to a different conclusion. As the Commission explained in the last two MERC rate-case orders:

First, as it did in MERC's last rate case, the Commission rejects the Company's claim that using three models to determine return on equity is superior to relying primarily on the strongest model and using others as validity checks. As the Commission explained in that case:

The Commission rejects the Company's claim that using three models to determine return on equity is inherently more accurate than relying primarily on one, with a second serving as a validity check. It is not the number of models in the record that ensures a sound decision, but the appropriateness of each model for the purpose at hand, the quality of the data selected as inputs, and the caliber of the analysis applied to the results. Using three models does produce a more detailed record, but it also multiplies the risk of inaccurate inputs and increases the number of points at which subjective judgments are required.

In short, not all models are equally probative, and not every application of the same model is equally probative. The Commission examines the results of every model introduced into the record in every case. In this case the DCF model is the best in the record for determining return on equity.

<sup>31</sup> ALJ Findings 155-157.

<sup>32</sup> *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, Findings of Fact, Conclusions and Order (July 13, 2010); *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, Findings of Fact, Conclusions of Law, and Order (June 29, 2009).

Here, too, the Commission finds that the transparency and objectivity of the DCF model make it the strongest, most credible model, and that the most reasonable way to proceed is to use its results as a baseline and to use the results of other models to check, inform, and refine those results.

As the Department and the Administrative Law Judge concluded, the DCF model calls for fewer subjective judgments than the CAPM and Risk Premium models—in fact, two of its three inputs, dividends and market equity prices, are uncontested, publicly reported facts, and the third input, projected growth rates, generally come from a limited number of recognized professional resources.

Further, the Company’s three-model method compounds the subjectivity in each of the three models by requiring the analyst to synthesize their results, using subjective criteria. It is much more straightforward to choose the strongest model, use its results as a baseline, and use the results of the other models as additional information.<sup>33</sup>

Here, too, the Commission finds that the DCF model provides a more objective, transparent, and reliable means of determining the cost of equity than the other models in the record and should be used as the primary analytical tool for that purpose.

### **3. Market-Value/Book-Value Risk Adjustments Rejected**

#### **a) MERC’s Proposed Adjustment**

MERC argued that the cost of equity must be adjusted upward to compensate for the disparity between the book value at which utility assets are valued and on which regulators base authorized returns, and the market values investors typically perceive and rely on in making their investment decisions. The Company claimed that this disparity understates and under-compensates for risk by making utilities’ debt ratios appear lower than they are and that a “leverage adjustment” was therefore required.

The Commission rejected that claim in MERC’s last two rate cases, and the Administrative Law Judge recommended rejecting it here as well.<sup>34</sup> The Commission concurs; as it explained in the last MERC rate case order:

Such an adjustment would have to rest on the erroneous assumption that investors buying utility stocks are ignorant of one of the most basic facts of utility regulation – that book value is the norm for pricing utility assets and that returns will be based on book value. Assuming that investors know this basic fact, which they must, since

<sup>33</sup> *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, Findings of Fact, Conclusions and Order (July 13, 2010) at 20–21.

<sup>34</sup> ALJ Findings 152 and 170.

they keep buying utility stock, the only reasonable assumption is that the market value/book value dichotomy is reflected in the stock price. The stock price, of course, is properly factored into the DCF model, making further adjustment unnecessary.<sup>35</sup>

### **b) OAG's Proposed Adjustment**

The OAG argued that the DCF model yields inflated cost-of-equity figures when applied to companies with stock prices whose market-value to book-value ratios significantly exceed one.

This is the case for nearly all gas utilities, including MERC. In fact, the Company pointed out that for the past 55 years, gas utilities' average market-to-book ratio has been 1.6.<sup>36</sup> Similarly, the average market-to-book ratio for the companies in the Department's comparison group did not fall below 1.719 from 2003 through 2013.<sup>37</sup> In short, stock prices with market values significantly exceeding book values are the industry norm. The OAG essentially argued that returns on equity for gas utilities are set too high as a matter of course, resulting in excessive profits for utilities.

The Administrative Law Judge rejected this argument,<sup>38</sup> and the Commission concurs. As the Company and the Department pointed out, the relatively high market-to-book ratios of gas utilities' stock prices (and those of utilities generally) are mainly a function of regulators' using book value, not market value, to determine the value of their assets and the return those assets should yield. While rate-of-return regulation is intended to function as a stand-in for the discipline of the market, there are unavoidable incongruities, and this is one.

Still, investors, analysts, utilities, and regulators understand this difference and factor it into their decision-making. And, as the Department and the Company pointed out, if utilities were in fact earning excessive profits due to excessive returns on equity, there would have been a run on utility stocks, eliminating excessive profits—the utility sector is not so removed from the rest of the economy that basic economic principles do not apply.

For these reasons, the Commission rejects the OAG's argument that, in setting a cost of equity for MERC, it must adjust for the Company's market-value/book-value ratio exceeding one.

## **4. Company-Specific Risk Adjustments Rejected**

The Company proposed upward adjustments in the cost of equity to reflect its relatively small size, significant concentration of large industrial customers, relatively high earnings variability, relatively low interest coverage, and relatively high five-year average operating ratio. The Commission concurs with the Department that none of these factors invalidate its carefully conceived and properly executed DCF analysis and none require post-analysis adjustment of its results.

<sup>35</sup> *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, Findings of Fact, Conclusions, and Order (July 13, 2010) at 22.

<sup>36</sup> MERC Initial Brief at 21.

<sup>37</sup> *Id.* at 21.

<sup>38</sup> ALJ Finding 170.

The Department selected its comparison group of companies based on their being similarly situated and having similar investment risks, as set forth below:<sup>39</sup>

- All companies' main line of business is natural-gas distribution.
- All are traded on one of the stock exchanges.
- All have an S&P bond rating within the range of BBB to AA (MERC's parent company, Integrys, is rated A-).
- All receive at least 60% of their total net operating income from natural-gas distribution operations.
- All are listed on Value Line Investment Survey as of September 6, 2013, as natural gas utilities meeting the criteria set forth above.
- All have both a beta and standard deviation of past price changes that deviate by no more than one standard deviation from the mean of the companies meeting the five screens above. (Beta and standard deviation are measures of investment and financial risk, respectively.)
- All are regulated by state utility commissions.

All companies within this comparison group—and every comparison group—have individual characteristics that differ from some or all of the other companies within the group. The DCF model rests on the assumption that in a properly constituted comparison group—one whose members are reasonably similar in the measurable, generic characteristics that affect investment risk—these differences will offset one another and be neutralized by the companies' overarching similarities.

To assume otherwise undermines the comparison-group concept and the integrity of the DCF model. The DCF model relies on a macro-analysis of risk factors; inserting an abbreviated micro-analysis at the end of the process does nothing to enhance accuracy and introduces avoidable error. If micro-analysis were even possible—and that is questionable—it would have to be done for every company in the comparison group at an earlier point in the analytical process.

As the Department noted, it would be nearly impossible to isolate all the factors that might affect, positively or negatively, the individual investment risks of every company in a comparison group. A partial list of factors would include not only those suggested by the Company but each company's specific mix of customer classes, its amount of storage capacity, the locational density of its customers, and the age of its distribution facilities.<sup>40</sup>

Further, as the OAG noted, the Company identified only those individual characteristics that it claimed *increased* its investment risk. MERC no doubt has some individual characteristics that *reduce* its investment risk—the OAG cites its parent company's superior performance in generating internal funds, its superior interest coverage, and its superior operating revenue, as well

<sup>39</sup> Department's Initial Brief at 18–19.

<sup>40</sup> Department Reply Brief at 9.

as Minnesota’s generally favorable economic conditions.<sup>41</sup> These and other characteristics reducing MERC’s investment risk would have to be identified, analyzed, and quantified as well.

In short, it is probably impossible—and clearly not necessary and not analytically sound—to conduct the granular analysis of all comparison companies’ individual characteristics implied by MERC’s claim for Company-specific adjustments to the results of DCF modeling. As it has in the Company’s last two rate cases, the Commission rejects the Company’s claim to those adjustments.<sup>42</sup>

## 5. The Administrative Law Judge’s Recommended Cost of Equity Rejected

### a) Introduction

Despite accepting the Department’s DCF analysis as the best resource in the record for setting the Company’s cost of equity,<sup>43</sup> the Administrative Law Judge declined to adopt its results. He found the results too low, on grounds that MERC had higher investment risks than the companies in the Department’s DCF comparison group. He recommended adopting the Department’s CAPM results instead.

The ALJ based these conclusions on the testimony of the Department’s expert witness, Eilon Amit, as he explained in his report:

Based upon his examination of 2012 common equity ratios and 2012 long-term debt ratios for companies in the NGCG<sup>44</sup> and MERC, Dr. Amit<sup>45</sup> concluded that the NGCG and MERC present similar investment risks, although “MERC appears to be somewhat riskier than NGCG.”<sup>46</sup>

Moreover, as noted above, Dr. Amit’s NGCG included companies whose risk profiles were lower than MERC’s—presumably with easier access to capital.<sup>47</sup>

<sup>41</sup> OAG Reply Brief at 17.

<sup>42</sup> *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, Findings of Fact, Conclusions and Order (July 13, 2010); *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, Findings of Fact, Conclusions of Law, and Order (June 29, 2009).

<sup>43</sup> See discussion above, under *D. The Recommendation of the Administrative Law Judge*.

<sup>44</sup> Natural Gas Distribution Comparison Group, the Department’s comparison group.

<sup>45</sup> Dr. Eilon Amit, the Department’s expert witness on return on equity.

<sup>46</sup> ALJ’s Report at ¶ 112.

<sup>47</sup> ALJ’s Report at ¶ 116.

The DCF model is a reasonable, market-oriented approach to determine a fair ROE for MERC.

Yet, because MERC's risk profile is higher than the comparison group used by the Department, in the view of the Administrative Law Judge, Dr. Amit's recommendation of 9.40 percent understates the appropriate return on equity.

In the view of the Administrative Law Judge, the results of Dr. Amit's updated CAPM with flotation costs—namely, a recommended ROE [return on equity] of 9.79 percent—yields a better and more reasonable result. This higher percentage is:

(a) more reflective of the investment risks MERC presents when seeking capital;

(b) one basis point from MERC's updated DCF analysis, which rendered a ROE of 9.8 percent;

(c) supported by Dr. Amit's ECAPM analysis, which resulted in an estimated ROE mean for the NGCG of 9.96 percent with flotation costs;

(d) comfortably within the overall range for Dr. Amit's DCF and TGDCF analyses (with a low of 8.61 percent to a high of 10.14 percent, including flotation costs); and

(e) close to the average ROE determinations made by state utility commissions for the eleven natural gas rate cases that were resolved during the fourth quarter of 2013—specifically, an average ROE of 9.83 percent.<sup>48</sup>

The Commission concludes that the ALJ's finding that MERC's risk profile is higher than that of the Department's comparison group is erroneous and based on a misreading of Dr. Amit's testimony. The Commission further concludes that substituting the Department's CAPM results for its DCF results lacks support in the record and would be an inappropriate remedy. These conclusions are explained below.

**b) MERC's risk profile is not higher than the comparison group.**

The entire exchange on which the ALJ based his finding of MERC's higher risk profile occurred in Dr. Amit's direct testimony and reads as follows:

*Q. Please summarize the results of your risk-screen analysis.*

A. Both MERC and the companies in my NGCG are mostly engaged in the distribution of natural gas and are similarly rate-of-return regulated by the states in which they operate. Therefore, their business risks are somewhat similar. Regarding the specific risk measures, MERC is a subsidiary company and therefore, does not have beta, STDPC [Standard Deviation of Price

<sup>48</sup> ALJ's Report at ¶¶ 171–73.



Changes], or a credit rating. Therefore, the only market-related quantitative risk measures available for comparison are the long-term debt ratios and the equity ratios.

The average 2012 long-term debt ratio of NGCG<sup>49</sup> is 42.90 percent as compared to 47.01 percent for MERC (the long-term debt ratio for MERC is calculated excluding short-term debt from the capital structure, to make it comparable to the long-term debt ratio for NGCG). The average 2012 ratio for NGCG is 57.10 percent as compared to 52.99 percent for MERC (once again excluding short-term debt from the capital structure). Therefore, based on the only available market quantitative financial risk measures for MERC, MERC appears to be somewhat riskier than NGCG.

However, both the equity and debt ratios for MERC are well inside the range of the group's +/- one standard deviation from the means, and three of the companies in NGCG have higher debt ratios than MERC.

***Q. Dr. Amit, please state your conclusion regarding the investment risks of MERC versus the investment risks of a typical company in your comparison group (NGCG).***

A. Based on the only available quantitative market risk measures for MERC (debt ratio and equity ratio) and based on the fact that both MERC and the companies in my comparison group are engaged in the same line of business (natural gas distribution), and are similarly regulated by the state in which they operate, I conclude that MERC's investment risks are reasonably similar to the investment risks of the companies in my comparison group.<sup>50</sup>

As the full passage quoted above makes clear, Dr. Amit did not conclude that MERC's risk profile was higher than that of his comparison group. His "appears to be somewhat riskier" statement was made in the context of explaining that MERC's status as a subsidiary company complicated his analysis because the normal market-related metrics of beta, STDPC,<sup>51</sup> and credit rating were not available. The only market-related metrics available for MERC were equity ratio and debt ratio, which were somewhat higher than the group average.

Nevertheless, he explained, both ratios were well inside the range of the group's +/- one standard deviation from the mean, and three of the nine companies in the comparison group had *higher* debt ratios than MERC. Further, like MERC, all companies in the group were engaged in the same line of business—natural gas distribution—and all, like MERC, were rate-regulated by state public utility commissions.

<sup>49</sup> Natural Gas Distribution Comparison Group, the Department's comparison group.

<sup>50</sup> Exhibit 200 at 12–13, Amit Direct.

<sup>51</sup> Standard Deviation of Price Changes.

Based on careful analysis of all these facts, Dr. Amit concluded—and contended throughout the case—that MERC’s risk profile was no higher than the comparison group’s. The Commission therefore does not accept the Administrative Law Judge’s finding that Dr. Amit concluded that MERC’s risk profile was higher than the comparison group’s. Nor does it accept the finding, which is supported solely by citations to Dr. Amit’s testimony, that MERC is in fact riskier than the comparison group.

Further, although the Company vigorously disputed Dr. Amit’s claim that MERC’s risk profile was no higher than the comparison group’s, it never identified the two metrics at issue—its equity ratio or long-term debt ratio vis-à-vis those of the other companies in the comparison group—as demonstrating higher risk or requiring an upward adjustment to the cost of equity.

Instead, it offered comprehensive testimony and briefing on *other* factors it claimed merited adjustments—the book value-market value disparity common to all utility stocks, its size, its significant concentration of large industrial customers, and its relatively high earnings variability, relatively low interest coverage, and relatively high five-year average operating ratio. The Company clearly did not think the two risk factors on which the Administrative Law Judge based his upward cost-of-equity adjustment merited it.

For all these reasons, the Commission finds that MERC does not have a higher risk profile than the companies in the Department’s comparison group and that no upward adjustment to the cost of equity is merited on that basis.

**c) The remedy adopted by the Administrative Law Judge lacked support in the record.**

Finally, had there been reason to find that the two metrics that complicated Dr. Amit’s selection of his comparison group made MERC more risky than the group as a whole, substituting the results of the Department’s CAPM analysis for the results of its DCF analysis would not have been the best available remedy.

It clearly would have been preferable to quantify the impact of the Company’s equity ratio and long-term debt ratio and adjust the Department’s recommended cost of equity on that basis. That task, of course, would have been complicated by the absence of evidence on the issue from any party. But it is anomalous to adopt the result of an analysis found to be inferior to correct a perceived flaw in a superior analysis.

Further, the corroborating factors cited in the ALJ’s Report do not support adopting the Department’s CAPM results. The probative value of the Department’s CAPM figure being just one basis point from MERC’s DCF figure is compromised by the defects found in MERC’s DCF analysis, especially its upward adjustments for generic and Company-specific risk factors found not to merit adjustment.

The fact that the Department’s CAPM figure fell within the ranges of reasonableness established in its DCF and TGDCF<sup>52</sup> analyses provides little support; those ranges encompass a broad range of numbers, from 8.61% to 10.14%, and could be used in support of a broad range of returns.

<sup>52</sup> Two Growth Rates DCF, used to stabilize results during periods of high market volatility.

Similarly, the fact that the CAPM figure is fairly close to the 9.96% mean in the Department's ECAPM<sup>53</sup> analysis is unpersuasive; that 9.96% mean is still 17 basis points higher than the return recommended by the Administrative Law Judge.

The fact that the CAPM figure was close to the average of the returns on equity granted by state commissions in rate cases during the fourth quarter of 2013 also has little probative value. Those cases yielded a wide range of returns, from 9.08% to 10.25%,<sup>54</sup> and some returns were significantly below the Administrative Law Judge's 9.79% recommendation. Further, those cases were decided on the basis of financial and economic data that is now outdated.<sup>55</sup>

And most importantly, all rate-case decisions are record-driven and based on unique facts pertaining to the utility, its customers and service area, and prevailing economic conditions. There is no way to determine which, if any, of the 11 cases in that group had significant similarities to this one.

For all these reasons, the Commission rejects the Administrative Law Judge's finding that the Department's CAPM results represent a more reasonable cost of equity than its DCF results.

## **6. Flotation Adjustment Accepted**

The Administrative Law Judge concurred with the Company and the Department that flotation costs are properly added to the cost of equity to ensure the Company an opportunity to earn its full, authorized rate of return. He also found that the 3.9% level agreed to by those parties was just and reasonable. The Commission concurs.

It is clear that raising equity capital involves substantial costs. If these costs are not factored into the cost of equity, or an equivalent adjustment made, the amount of equity available for Company use would be overstated and its ability to earn its authorized rate of return impaired. In effect, the Company would be granted a lower rate of return than the one officially set by the Commission. A flotation cost adjustment is therefore just and reasonable.

## **7. Department's Recommendation Modified; Final Cost of Equity Set**

The Commission finds that the Department's DCF analysis is fundamentally sound in theory and execution and is the most reliable resource in the record for setting MERC's cost of equity. The Commission accepts that analysis and its results, with the minor modification explained below.

In its initial testimony, the Department recommended a return on equity of 9.40%, based on the stock closing prices for the companies in the comparison group for the period between September 1 and September 30, 2013. In its surrebuttal testimony, the agency updated its recommended return on equity to 9.29%, based on more recent closing prices. The more recent prices were for the

<sup>53</sup> Empirical CAPM, an alternative CAPM model sometimes applied to companies with betas smaller than one.

<sup>54</sup> Department's Initial Brief at 40.

<sup>55</sup> For the most part, these cases would be based on financial and economic data from 2012 and early 2013.

period between March 14 and April 14, 2014. The passage of six months' time had reduced the cost of equity by 11 basis points.

The Department's expert witness explained the importance of using current closing prices as follows:

Since the current price per share incorporates all relevant publicly available information, non-recent historical prices should be avoided in calculating the dividend yield. However, since share prices are very volatile in the short run, it is desirable to use a period of time long enough to avoid short-term aberrations in the capital market, yet short enough to avoid using irrelevant historical information. Thus, I use the September 1, 2013 through September 30, 2013 period closing prices to calculate the dividend yield. This dividend yield is current, yet it covers a long enough period of time to avoid very short-term aberrations in the capital market.<sup>56</sup>

While the importance of current information is indisputable, it is also indisputable that closing prices for the 32-day period ending today would differ from those for the March 14–April 14 period on which the Department based its recommendation of 9.29%, as well as from the September 1–September 30 period on which it based its recommendation of 9.40%. And closing prices will differ to some extent for every 32-day period during which the rates being set today are in effect.

The Commission cannot set the cost of equity in real time, and routine market fluctuations will inevitably affect its accuracy throughout the period it remains embedded in rates. Still, the Commission is concerned about the outsized impact in this case of one 32-day time period. To reduce the effect of any market volatilities or idiosyncrasies that may have contributed to the disparity between the September 1–September 30, 2013 and March 14–April 14, 2014 stock prices, the Commission will average the Department's initial and updated DCF results, setting the cost of equity at 9.35%.

#### **XIV. Capital Structure and Overall Cost of Capital**

All parties agreed on the Company's capital structure and on the cost of long- and short-term debt. The Administrative Law Judge concurred in their joint recommendation, as does the Commission.

The Company, the Department, and the OAG disagreed on the cost of common equity. As explained above, the Commission has set the cost of equity at 9.35%.

The resulting overall capital structure and cost of capital are set forth below:

<sup>56</sup> Exhibit 200, Amit Direct at 15.

<u>Component</u>	<u>Component Ratio (%)</u>	<u>Cost (%)</u>	<u>Weighted Cost (%)</u>
Long-Term Debt	44.64	5.5606	2.4822%
Short-Term Debt	5.05	2.3487	0.1186%
Common Equity	<u>50.31</u>	<u>9.35</u>	<u>4.7040%</u>
Total	100.00%		7.3048%

## CLASS COST OF SERVICE STUDY ISSUES

### XV. Class Cost of Service Study in General

As required by rule, the Company's rate-case filing included a class cost of service study.<sup>57</sup>

The purpose of a class cost of service study is to determine, as accurately as possible, the costs of serving each customer class. While these costs cannot be determined with precision, it is critical that the cost study make both its underlying assumptions and the cost figures they yield as accurate and transparent as possible, because the Commission puts substantial weight on cost causation in determining what portion of the total revenue requirement each customer class should pay.

The OAG challenged three aspects of the Company's cost study: (1) its compliance with the Commission's order that it allocate income taxes on the basis of the taxable income attributable to each class, not rate base; (2) its interclass allocation of distribution-mains costs; and (3) its interclass allocation customer-service costs.<sup>58</sup>

Each challenge is addressed below, followed by the Commission's determination that the class cost of service study is acceptable for use as a ratemaking tool in this case.

### XVI. Allocating Income Taxes

#### A. Introduction

In MERC's 2008 rate case, the Commission ordered the Company to change how it allocated income-tax expense among its customer classes. Previously, MERC had allocated income-tax responsibility according to each class's share of rate base. The Commission ordered MERC instead to "allocate income taxes on the basis of the taxable income attributable to each customer class."<sup>59</sup>

In its next rate case, MERC provided class cost of service studies that allocated income taxes both on the basis of the taxable income attributable to each customer class and on the basis of rate base.<sup>60</sup> The Company recommended that the Commission adopt the rate-base allocation methodology, claiming that it better allocated costs to customers based on cost causation.

<sup>57</sup> Minn. R. 7825.4300(C).

<sup>58</sup> The OAG also disagrees with MERC's allocation of its meter-reading expenses. However, the OAG stated in its exceptions to the ALJ's Report that it is no longer pursuing this issue. It merely requested that Commission update Finding 649 to correctly reflect its position. The Commission will so order.

<sup>59</sup> Docket No. G-007, 011/GR-08-835, Findings of Fact, Conclusions of Law, and Order (June 29, 2009).

<sup>60</sup> Docket No. G-007, 011/GR-10-977.