

**Attachment 1 to  
PROPOSED SUBSTITUTE FINDINGS OF FACT,  
CONCLUSIONS, AND RECOMMENDED ORDER**

**July 11, 2014**

[AG # 3458850 13-617 Cost of Equity]

ATTACHMENT 1

The Department presented its Cost of Capital proposed Findings in a separate document, but includes as Attachment 1 its attempt to respond directly to each of MERC's proposed Findings regarding the Cost of Equity in the event that doing so is helpful to the ALJ. That said, because the Department found that MERC's proposed Findings are not organized or presented in a manner that allows ready identification of issues, of problems identified by parties or of solutions presented to those problems, the Department recommends adoption of its proposed Findings as presented in its proposed Substitute Findings document. The numbered paragraphs, below, initially were numbered by MERC as 71 through 147.

1. ~~MERC determined that in~~ In light of the rates of return allowed by state utility commissions in 2013, the Department's recommended ROE ~~was too low~~ is reasonable. Nationally there were eleven (11) rate cases for natural gas utilities that were decided by state utility commissions in the fourth quarter of 2013. ~~The average measures of central tendency for these equity returns were was~~ 9.83 percent as the average, the median was 9.84 percent ~~as the median, and the mid point was~~ 9.67 percent as the midpoint (taken from a range of 9.08 percent to 10.25 percent). In contrast to measures of central tendency for the natural gas rate cases, there were nineteen (19) electric utility rate cases decided in the fourth quarter of 2013 with an average equity return of 9.89 percent, a median equity return of 10.00 percent, and a midpoint equity return of 10.06 percent (taken from a range of 8.72 percent to 11.40 percent).<sup>1</sup>

2. The Department ~~responded observed~~ that with respect to the 11 natural gas rate cases determined in the fourth quarter of 2013 with an allowed average rate of return of 9.83, the range of allowed ROEs was from a low of 9.08 percent to a high of 10.25 percent. Thus, some of the allowed ROEs were below the 9.40 percent ROE initially recommended by the Department. The Department concluded that based on the range of allowed ROEs, MERC's recommended ROE of 10.75 percent was outside the high end of the range and therefore, unreasonably high. The Department also concluded that the Commission's decisions in the fourth quarter of 2013 were most likely based on data from 2012 and early 2013 and reflected dated economic and financial data that are not relevant to the current MERC rate case.<sup>2</sup>

3. ~~MERC discounted the ROE from the Department's DCF analysis because~~ The Value Line projected an average rate of return of 11.49 percent for its natural gas utility companies over the 2017 through 2019 period only confirms that when the market-to-book ratio is greater than one the expected rate of return is greater than the cost of equity; it does not

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<sup>1</sup> Ex. 18 at 6 (P. Moul Rebuttal); DOC Ex. 202 at 18-19 (Amit Surrebuttal).

<sup>2</sup> Ex. 202 at 18-19 (E. Amit Surrebuttal).



provide any evidence that the ROE recommended by the Department is too low.<sup>3</sup> Moreover value Line projected rate of return is internally inconsistent with other data provided by Value Line.<sup>4</sup> Based on this, and the fact that anMERC's attempt to update of the Commission's prior 9.70 percent approved equity return in MERC's last rate case, Docket No. G007,011/GA-10-977, results in ato -obtain a current return of 10.27 percent, MERC determined that the Department's recommended ROE was too low-is based on circular argument and arbitrary risk premium providing no useful information regarding the appropriate ROE.<sup>5</sup>

4. To determine its proxy group, MERC began with the universe of gas utilities contained in the basic service of The Value Line Investment Survey, which consisted of eleven companies. MERC eliminated from the eleven NiSource, Inc., because of its natural gas pipeline and storage operations and UGI Corporation because of its highly diversified businesses. The remaining nine companies were included in MERC's proxy group. To this proxy group, MERC added four combination gas and electric utilities that are primarily delivery companies (i.e., they have no significant generation assets). The complete group, referred to as the "Delivery Group" is comprised of the following companies: AGL Resources, Inc. ("AGL"), Atmos Energy Corp. ("Atmos"), Consolidated Edison, Inc. ("Consolidated"), Laclede Group, Inc. ("Laclede"), New Jersey Resources Corp. ("NJR"), Northeast Utilities ("NU"), Northwest Natural Gas ("NWN"), PEPCO Holdings, Inc. ("PEPCO"), Piedmont Natural Gas Co. ("PNY"), South Jersey Industries, Inc. ("SJI"), Southwest Gas Corporation ("SWX"), UIL Holding Corporation ("UIL"), and WGL Holdings, Inc. ("WGL")<sup>6</sup>

5. ~~The Department disagreed with~~ MERC's Delivery Group is inappropriate because ~~the groupit~~ included four non-natural gas utility companies with higher risk profiles than the natural gas utilities selected by MERC. ~~The Department argued that it It~~ is likely that investors base their valuation of such companies somewhat differently than their valuation of natural gas companies. Therefore, the Department concluded thatand recommended it is appropriate to eliminating-eliminate the four companies from MERC's Delivery Group. ~~Because the Department felt that MERC did not provide any argument in its Rebuttal Testimony to justify the inclusion of the four non-natural gas utilities, the Department concluded that MERC's selection of the Delivery Group was inappropriate.~~<sup>7</sup>

6. The Department created its proxy group using a series of risk screens. The resulting group of eight companies was named the Natural Gas Comparison Group ("NGCG"). According to the DepartmentThe Department concluded that, both MERC and the companies in the 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, the Department ~~argued~~concluded that the-business risks of the two groups are somewhat similar. Regarding specific standard risk measures, MERC is a subsidiary company and, therefore, does not have beta, Standard Deviation of Price Changes or a credit rating. Therefore, the Department feels that the only market-related

<sup>3</sup> DOC Ex. 202 at 19 (Amit Surrebuttal).

<sup>4</sup> DOC Ex. 202 at 19 (Amit Surrebuttal).

<sup>5</sup> Ex. 18 at 8-9 (P. Moul Rebuttal). DOC Ex. 202 at 20 (Amit Surrebuttal).

<sup>6</sup> Ex. 17 at 4-5 (P. Moul Direct).

<sup>7</sup> Ex. 200 at 46-47 (E. Amit Direct); Ex. 202 at 13-14 (E. Amit Surrebuttal).



quantitative risk measures available for comparison are the long-term debt ratios and the equity ratios.<sup>8</sup>

7. The Department's proxy group ~~did not recognize~~ is based on well accepted observable risk factors ~~in MERC's cost of equity. When risk differences can be identified~~ A micro-risk analysis that somewhat arbitrarily select a MERC's alleged unique risk factor without carefully performing an in-depth risk analysis of each utility in the comparison group is meaningless. Since each utility would have some unique risk factor, an attempt to select a comparison group based on such unique risk factors -may result in no company being selected, between MERC conveniently picked and chose risk factors that are unique to MERC, but failed to investigate the risk factors that are unique to each utility in the group but do not exist for MERC, and the proxy group, those differences must be addressed in the cost of equity analysis for MERC. It is particularly important not to focus just on the risk traits of the proxy group, such as their bond ratings, but to compare them to MERC, which has no bond rating. Absent a valid comparison between MERC, MERC's -approach ignores the unique risks of each of the companies in the comparison group while identifying them only for MERC, and the proxy group, a "generically" derived cost of equity obtained from the proxy group has little bearing on the return requirements for MERC if the Company's risk is observably different. To ignore the factors that show higher risk for the companies in the comparison group while singling them out for MERC, as compared with the Department's NGCG, will result in inadequate over compensation compensation for MERC's higher MERC relative to its risk profile. In this case, the NGCG group assembled by the Department provides a portfolio of companies that reflects a composite risk that is less than similar to MERC's risk, as evidenced by the Department's risk analysis observable factors that distinguish the risk of MERC from the NGCG.<sup>9</sup>

8. The OAG-AUD created its proxy group using Value Line's universe of utilities that are categorized as gas utilities and gas and electric utilities. The OAG-AUD determined that in creating a proxy comparable to MERC, it is important that the companies in the proxy exhibit a fairly high percentage of regulated assets and have the majority of their revenue coming from gas utility operations. Also, as the OAG-AUD relied not only on earnings projections, but also on dividends and book value projections in its DCF analysis, the OAG-AUD only considered companies that are covered by Value Line Surveys because the OAG-AUD determined that dividends and book value projections are covered only by Value Line Survey.<sup>10</sup>

9. MERC determined that the OAG-AUD utilized an inconsistent screening process in the selection of its proxy group and excluded four companies from the proxy group that made the group less relevant for purposes of this rate case proceeding. The OAG-AUD removed three natural gas companies and four combination delivery companies from its proxy group that were included in MERC's group. The exclusion of these companies was unnecessary. The OAG-AUD failed to show that the exclusion of these companies enhanced the risk profile of the companies that the OAG-AUD retained in its proxy group. The OAG-AUD also failed to consider four companies in its proxy group that MERC considered reasonable because all of the

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<sup>8</sup> Ex. 200 at 7-13 and (EA-2) (E. Amit Direct).

<sup>9</sup> ~~Ex. 18 at 14-15 (P. Moul Rebuttal), DOC Ex. 200 at 60-61, 64 (Amit); Tr. at 201 (Amit).~~

<sup>10</sup> Ex. 161 at 25-27 (P. Chattopadhyay Direct).



companies have natural gas distribution operations in addition to their electric delivery operations.<sup>11</sup>

10. The OAG-AUD ~~discounted-disagreed with~~ the Department's comparison group selection because ~~the OAG-AUD~~it disagreed with the Department's 60 percent regulated income screen, and beta and standard deviation screen. Specifically, the OAG-AUD argued that the percentage of regulatory income is highly influenced by the percentage of non-regulated income. Thus, the percentage of regulated income may not appropriately reflect the business profile of the company in question. In the alternative, the OAG-AUD proposed to use revenues and regulatory assets to screen companies for a comparison group.<sup>12</sup> The OAG-AUD disagreements are not reasonable.<sup>13</sup>

78. The Department demonstrated that operating income is a better screen than revenue and assets since investors are much more concerned with companies' operating income than revenues and composition of assets.<sup>14</sup>

~~10.~~ The Department concluded that the OAG-AUD ~~failed to show that~~misunderstood the applicability of beta and standard deviation as risk measures, and therefore wrongly concluded that beta is an inappropriate measure of risk. With respect to the standard deviation screen, the Department determined that the standard deviation is a commonly used criterion to evaluate stock price volatility and investment risk. Whereas the Department's standard deviation of price changes is based on monthly price changes over a five-year period, the OAG-AUD used a 60-day period and did not provide data to support its calculations. The Department concluded that there was nothing in the OAG-AUD's Rebuttal Testimony that showed that using the standard deviation as a screening criterion is inappropriate.<sup>15</sup>

~~11.~~ 80. The OAG-AUD also relied on DCF methods to determine an initial ROE for MERC of 8.90 percent and an updated ROE of 8.62 percent. The OAG-AUD used the CAPM model to support its DCF analyses.<sup>16</sup> According to the OAG-AUD, the CAPM and RP methods predominantly use historical stock-price appreciation as the basis for measuring the expected return on common equity. According to the OAG-AUD, while this may provide insight into what returns investors expect based on past experience, it has limited value in assessing what returns are necessary to attract needed capital. In contrast, the DCF model is essentially forward looking. The OAG-AUD emphasized that it gave very little weight to the CAPM to arrive at the OAG-AUD's final ROE recommendations.<sup>17</sup>

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<sup>11</sup> Ex. 18 at 25-26 (P. Moul Rebuttal).

<sup>12</sup> Ex. 164 at 2-12 (P. Chattopadhyay Rebuttal); Ex. 202 at 22-23 (E. Amit Surrebuttal).

<sup>13</sup> DOC Ex. 202 at 22-37 (Amit Surrebuttal).

<sup>14</sup> DOC Ex. 202 at 22-25 (Amit Surrebuttal).

<sup>15</sup> Ex. 202 at 25-29 (E. Amit Surrebuttal).

<sup>16</sup> Ex. 161 at 4 (P. Chattopadhyay Direct); Ex. 165 at 2 (P. Chattopadhyay Surrebuttal).

<sup>17</sup> Ex. 161 at 16, 22-23, 46 (P. Chattopadhyay Direct); Ex. 165 at 38 (P. Chattopadhyay Surrebuttal); Evidentiary Hearing Transcript (May 13, 2014) at 179-186 (P. Chattopadhyay) (Doc. ID No. 20145-99937-01).

~~12.~~ 81. MERC argued that the OAG-AUD's initial recommended return on common equity of 8.90 percent was so low that it is inappropriate in this case. The 8.90 percent rate of return on common equity proposed by the OAG-AUD does not reflect a reasonable cost of equity in the current market environment. The OAG-AUD proposed to reduce the Company's return by -0.80 percent (8.90% - 9.70%) at a time when capital costs have increased since the Company's last rate case. In addition, the yield on Treasury bonds has increased by 1.07 percent (3.66% - 2.59%), which demonstrates that the OAG-AUD's proposal in this case will not result in a reasonable return.<sup>18</sup>

~~13.~~11. The OAG-AUD seems inclined toward a low return because the economy in Minnesota is performing well in comparison to other regions of the U.S. The OAG-AUD has not shown that MERC has benefitted from this phenomenon. ~~It is undeniable that MERC has experienced historically high earnings variability and its operating ratio is well above average. These risk factors show that MERC requires an above average ROE to compensate for its above average risk.~~<sup>19</sup>

~~14.~~12. The OAG-AUD discounted MERC's DCF analysis because both the OAG-AUD's average market-to-book ratio and MERC's market-to-book ratio were over one. According to the OAG-AUD, a market-to-book ratio over one indicates that the true cost of equity is comfortably less than the ROE expected by investors in the gas industry. The OAG-AUD argued that in view of a market-to-book ratio over one, if the cost of equity is estimated based on expected return on common equity, the resulting return would unreasonably benefit shareholders at the expense of ratepayers.<sup>20</sup> The OAG-AUD concluded that when the market-to-book ratio is significantly greater than one, there exists an upward bias to the earnings growth rate.<sup>21</sup>

~~15.~~13. Both MERC and the Department disagreed with the OAG-AUD's conclusion that the DCF analysis results in an upwardly biased estimate of the cost of common equity when the market-to-book ratio is greater than one. Such a ratio is irrelevant for cost of equity purposes. A review of the annual market-to-book ratios for natural gas utilities since 1958 illustrates that market-to-book ratios equal to 1.0 are unusual, and market-to-book ratios greater than 1.0 are common. The average market-to-book ratio over the past 55 years is 1.6. Both regulators and investors are aware that market-to-book ratios exceed one. Even though regulators are aware of these market-to-book ratios, they still grant utilities rate increases. If the OAG-AUD were correct in its assessment of market-to-book ratios, regulators would grant lower rate increases and lower authorized returns on equity any time those ratios were above one.

~~16.~~14. The market-to book ratios for both the OAG-AUD's and MERC's comparison groups remained significantly above one for the period 2008-2013 and trend upward over the period 2009-2013. For the Department's comparison group, the average market-to-book ratio did not go below 1.719 during the period 2003 through 2013. According to the hypothesis

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<sup>18</sup> Ex. 18 at 20 (P. Moul Rebuttal).

~~<sup>19</sup> Ex. 18 at 21 (P. Moul Rebuttal); Ex. 161 at 28 (P. Chattopadhyay Direct).~~

<sup>20</sup> Ex. 161 at 9 (P. Chattopadhyay Direct); Ex. 164 at 3-8 (P. Chattopadhyay Rebuttal).

<sup>21</sup> Ex. 161 at 5, 9, 13-16 (P. Chattopadhyay Direct); Ex. 165 at 15-16 (P. Chattopadhyay Surrebuttal).



advanced by the OAG-AUD, for a period of at least 10 years, investors investing in the gas comparison group have received excessive returns (above normal returns or return above the cost of equity capital). Such a sustained excessive return over a long time period is not only counter to basic financial principles, but also common sense. Such excessive returns should have generated a run on gas utility stocks until the excessive profits were eliminated. It is clear this did not happen, as the market-to-book ratio continues to be significantly above one.<sup>22</sup> The financial literature cited by the OAG-AUD, when reviewed carefully, does not support the OAG-AUD's claim that the DCF analysis would produce an upward biased estimate of ROE when the market-to-book ratio is greater than one.<sup>23</sup> The OAG-AUD's own empirical studies produce unreasonably low ROEs when the market-to-book ratio equals one.<sup>24</sup>

~~17-15.~~ With respect to MERC's rate of return analysis, MERC used a six-month average dividend yield for the period ending May 2013 for its DCF analysis. This resulted in a dividend of 3.91 percent. MERC then adjusted the dividend yield by the expected growth rate to arrive at an expected dividend yield of 4.02 percent.<sup>25</sup>

~~18-16.~~ The Department disagreed with MERC's dividend yield calculation for two reasons. First, the Department objected to the use of month-end prices to calculate the dividend yields, arguing that given the stock market volatility, such a method may result in one particular price having too much influence on the six-month average dividend yield. Second, the Department argued that assuming current stock prices fully reflect all publicly available information, the use of long-term historical prices may result in biased dividend yields that reflect irrelevant information. The Department proposed substituting MERC's three-month average dividend yield for six-month average dividend yields.<sup>26</sup> The Department updated its dividend yield recommendations using closing prices from the most recently available 32-day period (03/14/2014-04/14/2014) and updated the annual dividend rates to the degree that they changed for any of the companies in the Department's comparison group. The Department's updated average dividend yields for the NGCG comparison group ranged from a low of 3.84 percent to a high of 3.88 percent and a mid-point of 3.86 percent.<sup>27</sup>

~~19-17.~~ There is not a great deal of difference between MERC's dividend yield and the dividend yield calculated by the Department. The Department established a 3.94 percent mean yield within a range of 3.93 percent to 3.96 percent. MERC's updated dividend yield is 3.94 percent, prior to the forward-looking adjustment that brings MERC's final dividend yield to 4.05 percent.<sup>28</sup>

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<sup>22</sup> Ex. 201 at 4 (E. Amit Rebuttal).

<sup>23</sup> Ex. 201 at 5-7 (E. Amit Rebuttal).

<sup>24</sup> Ex. 201 at 9 (E. Amit Rebuttal).

<sup>25</sup> Ex. 200 at 48 (E. Amit Direct).

<sup>26</sup> Ex. 200 at 48-49 (E. Amit Direct); Ex. 202 at 14 (E. Amit Surrebuttal).

<sup>27</sup> Ex. 202 at 3 and Schedule (EA-S-2) (E. Amit Surrebuttal).

<sup>28</sup> Ex. 18 at 10 and Schedule (PRM-2) (P. Moul Rebuttal).

~~20-18.~~ The OAG-AUD disagreed with MERC's dividend yield calculation for two reasons. First, MERC used data from the previous six months as opposed to one month. According to the OAG-AUD, much of investors' expectations about how companies will fare in the future are captured in the most recently observed price and dividend data and data from fairly long historical periods are unlikely to reflect investors' current expectations. Second, MERC applied the projected growth in earnings to the observed dividend in a different manner than the OAG-AUD's traditional DCF recommendation. The OAG-AUD also noted that its and MERC's proxies are different. While the OAG-AUD's testimony relies on data from early 2014, MERC's calculation was based on data from December 2012 to May 2012.<sup>29</sup>

~~21-19.~~ With respect to the growth rates used in MERC's rate of return analysis, based on the projected earnings per share provided by First Call, Zacks, Morning Star, SNL and Value Line, MERC concluded that an expected growth rate of five percent is a reasonable growth rate to use for the DCF analysis. The Department agreed with MERC's methodology of using the analysts' projected earnings per share growth rate, but proposed to substitute the analysts' average projected growth rate of 5.21 percent for the 5.00 percent proposed by MERC.<sup>30</sup> The Department updated its growth rates and determined that a projected growth rate of 5.27 percent is appropriate.<sup>31</sup>

~~22-20.~~ There is not a great deal of difference between MERC's DCF growth rate and the mean growth rate calculated by the Department. MERC's DCF growth rate is 5.00 percent, which closely conforms to the Department's mean growth rate of 5.09 percent, as determined from the Department's range of 4.21 percent to 5.87 percent.<sup>32</sup>

~~23-21.~~ The OAG-AUD disagreed with MERC's exclusive use of expected earnings growth rates for the growth component of MERC's DCF analysis. The OAG-AUD concluded that while theoretically use of earnings growth projection for the DCF growth component biases the estimate for cost of equity upward in an environment of market-to-book ratio being greater than one, on a practical level, relying on earnings projections also biases the DCF estimate upward. According the OAG-AUD, sole reliance on earnings growth is inherently unjust and unreasonable for ratepayers because it leads to unnecessary transfer of wealth from them to investors. The OAG-AUD also argued that the literature cited by MERC does not support the idea that investors use a single growth estimate when pricing a utility's stock. The OAG-AUD believes that it is appropriate to look at estimates individually for companies in the proxy to determine whether there are any outliers.<sup>33</sup>

~~24-22.~~ The OAG-AUD also disagreed with the Department's conclusions regarding sustainable growth rates. Specifically, the OAG-AUD disagreed with the Department's

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<sup>29</sup> Ex. 161 at 30 (P. Chattopadhyay Direct).

<sup>30</sup> Ex. 200 at 49-50 (E. Amit Direct).

<sup>31</sup> Ex. 202 at 7-9 (E. Amit Surrebuttal).

<sup>32</sup> Ex. 18 at 10 (P. Moul Rebuttal).

<sup>33</sup> Ex. 161 at 30-41 (P. Chattopadhyay Direct); Ex. 165 at 38 (P. Chattopadhyay Surrebuttal).



determination of sustainable growth rates, selection of companies for which the Department used TGDCF and the Department's reliance solely on projected earnings per share growth rates.<sup>34</sup>

~~25-23.~~ MERC and the Department disagreed with the growth rates used by the OAG-AUD. Both MERC and the Department concluded that the analysts' projected Earnings Per Share ("EPS") growth rates are the best growth rates to use in a DCF analysis. In contrast, the OAG-AUD has concluded that some average growth rates that include EPS, Book Value Per Share ("BVPS") and Dividends Per Share ("DPS") growth rates in combination with the average EPS growth rate and the internal growth rate are better than average projected EPS growth rates.<sup>35</sup>

~~26-24.~~ MERC questioned the OAG-AUD's exclusion of forecasts from Morningstar and SNL Financial, noting that a larger group of consensus forecasts is always better than a smaller sample because it will minimize the influence of outliers and potential biases.<sup>36</sup> Moreover, the Value Line forecasts used by the OAG-AUD must be discounted for the dividend and book value growth rates. There are problems with the Value Line per dividend share growth rate used by the OAG-AUD to calculate internal growth rates. The OAG-AUD relied on returns based on year-end book values, rather than average book values. Without an adjustment to convert the Value Line forecast returns from year-end to average book values, there is a downward bias in the results. MERC used a variant of the FERC's adjustment procedure to detect any downward bias in the figures reported by the OAG-AUD.<sup>37</sup>

~~27-25.~~ The Department ~~discounted~~~~rejected~~ the OAG-AUD's analysis and concluded that, over the long run, both the growth in BVPS and the growth in DPS are derived from the growth in EPS. While the short-run growth in DPS may be influenced by management's policy decisions, the long-run sustainable growth in DPS is solely driven by the growth in earnings. Moreover, the growth rate in BVPS is simply the mirror image of the growth rate in DPS. The Department concluded that the use of analysts projected EPS growth rates is well supported by various financial studies and publications and is preferred to the projected growth rates used by the OAG-AUD.<sup>38</sup>

~~28-26.~~ The CAPM uses the yield on a risk-free interest bearing obligation plus a rate of return premium that is proportional to the systematic risk of an investment. As a result, the CAPM computes a cost of equity by determining a risk-free rate of return, a measure of systematic risk called the Beta, and a market risk premium that is determined by subtracting the risk-free rate of return from the total return on the market of equities. Using the CAPM analysis, MERC computed a cost of common equity of 10.89 percent, after recognizing that the companies

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<sup>34</sup> Ex. 165 at 12-29 (P. Chattopadhyay Surrebuttal).

<sup>35</sup> Ex. 161 at 23-24 (P. Chattopadhyay Direct); Ex. 164 at 18-21 (P. Chattopadhyay Rebuttal); Ex. 165 at 31-32 (P. Chattopadhyay Surrebuttal).

<sup>36</sup> Ex. 18 at 26 (P. Moul Rebuttal).

<sup>37</sup> Ex. 18 at 26-30 (P. Moul Rebuttal).

<sup>38</sup> Ex. 201 at 12-19 (E. Amit Rebuttal); Ex. 202 at 30-35 (E. Amit Surrebuttal).

in MERC's proxy group are entitled to a size adjustment based upon their market capitalization.<sup>39</sup>

~~29-27. The Department's CAPM analysis was too low because the Department: 1) relied principally on historical yields on 20-year Treasury bonds for its risk-free rate of return; 2) did not use a leverage adjusted beta; and 3) ignored the size adjustment. MERC's CAPM analysis is flawed and result in upward biased estimate of the return on equity.<sup>40</sup> MERC's proposed beta, risk-free rate and the risk premium are all inappropriate.<sup>41</sup>~~

~~30-28. It's appropriate to include forward-looking data in the CAPM results because like all market models of the cost of equity, CAPM is exceptional. While the Department used a Treasury obligation with a more lengthy maturity (i.e., 20-year Treasury bonds), it failed to incorporate investor expected yields in its analysis. The trend shows higher Treasury bond yields for the future that should be incorporated into the CAPM in order to conform to the specification of the model.<sup>42</sup> MERC adjusted beta upward to allegedly account for the difference between market and book values of equity and debt. Investors already account for this publicly available information and beta already accounts for these differences.<sup>43</sup>~~

~~29. MERC computed a leverage adjustment for both the DCF and CAPM analyses to reflect the fact that the market ~~determined cost of equity reflects a level~~ values of equity and debt is different than the book values of equity and debt, of financial risk that is different from the capital structure stated at book value. The leverage adjustment reflects the gap that must be bridged when using a market price in the DCF that relates to market value weights that differ from book value weights used in public utility rate setting. MERC's leverage adjustment result in a double counting of the impact of the difference between market and book value of equity and debt. Both the stock prices and betas already reflect theses discrepancies.<sup>44</sup>~~

~~31-30.~~<sup>45</sup>

~~32-31. The Department rejected this adjustment, contending that it assumes that investors willingly pay too much for a stock when are unaware of the fact that the return will be established on a book value capital structure rather than the market value of the utility's assets.<sup>46</sup> The Department took the position that neither the Modigliani-Miller, nor the Hamada equations used by MERC are applicable to the Company and the MERC Delivery Group because they contradict the fundamental principle that financial markets are efficient, i.e., the current stock prices fully reflect all publically available information. In addition, the Department argued that~~

<sup>39</sup> Ex. 17 at 37-41 (P. Moul Direct).

<sup>40</sup> DOC Ex. 200 at 51-58, 60-68 (Amit Direct); DOC Ex. 202 at 15-16 (Amit Surrebuttal).

<sup>41</sup> DOC Ex. 200 at 63, 66-67 (Amit Direct); DOC Ex. 202 at 16-17, 21 (Amit Surrebuttal).

<sup>42</sup> Ex. 18 at 16 and Schedule 2 (PRM-2) (P. Moul Rebuttal).

<sup>43</sup> DOC Ex. 200 at 66-67 (Amit Direct); DOC Ex. 202 at 21 (Amit Surrebuttal).

<sup>44</sup> DOC Ex. 200 at 66-67 (Amit Direct); DOC Ex. 202 at 21 (Amit Surrebuttal).

<sup>45</sup> Ex. 18 at 13-15, 17 (P. Moul Rebuttal).

<sup>46</sup> Ex. 200 at 65-69 (E. Amit Direct); Ex. 202 at 21 (E. Amit Surrebuttal).