August 29, 2023

Ms. Lisa Felice
Michigan Public Service Commission
7109 W. Saginaw Hwy.
P. O. Box 30221
Lansing, MI 48909

Via E-Filing

RE: MPSC Case No. U-21389

Dear Ms. Felice:

The following is attached for paperless electronic filing:

Direct Testimony and Exhibits of Matthew Bandyk on behalf of Michigan Environmental Council, Natural Resources Defense Council, Sierra Club, and Citizens Utility Board of Michigan (MEC-6 through MEC-12); and

Proof of Service.

Sincerely,

Digitally signed by Christopher M. Bzdok
DN: cn=Christopher M. Bzdok, o=Olson, Bzdok & Howard, PC, email=chris@envlaw.com, c=US
Date: 2023.08.29 15:01:03 -04'00'

Christopher M. Bzdok
chris@envlaw.com

xc: Parties to Case No. U-21389

STATE OF MICHIGAN

BEFORE THE MICHIGAN PUBLIC SERVICE COMMISSION

In the matter of the application of **CONSUMERS ENERGY COMPANY** for authority to increase its rates for the generation and distribution of electricity and for other relief.	U-21389

TESTIMONY OF MATTHEW BANDYK

ON BEHALF OF

MICHIGAN ENVIRONMENTAL COUNCIL, NATURAL RESOURCES DEFENSE COUNCIL, SIERRA CLUB, AND CITIZENS UTILITY BOARD OF MICHIGAN

August 29, 2023

TABLE OF CONTENTS

DIRECT TESTIMONY OF MATTHEW BANDYK FOR MNSC
CASE NO. U-21389

I. INTRODUCTION & QUALIFICATIONS

Q. Please state for the record your name, position, and business address.

A. My name is Matthew Bandyk. I am a consultant at 5 Lakes Energy LLC, a Michigan limited liability corporation, located at Suite 218, 220 MAC Avenue, East Lansing, Michigan 48823.

Q. On whose behalf is this testimony being offered?

A. I am testifying on behalf of Michigan Environmental Council (MEC), Natural Resources Defense Council (NRDC), Sierra Club (SC), and Citizens Utility Board of Michigan (CUB), collectively referred to as "MNSC."

Q. Please summarize your experience in the field of utility regulation.

A. I have over 13 years of experience in the field of utility regulation as a journalist and/or financial analyst. My experience is summarized in my resume, provided as Exhibit MEC-6.

Q. Have you testified before this Commission or as an expert in any other proceeding?

A. Yes, I previously testified on behalf of the Citizens Utility Board of Michigan in the proceeding regarding Consumers Energy Company's application for approval to implement a power supply cost recovery plan for the 12 months ending Dec. 31, 2022 (U-21048).

Q. What is the purpose of your testimony?

A. I am testifying on behalf of MNSC regarding Consumers Energy's recommendation to set the authorized return on equity (ROE) at 10.25%.

My testimony is primarily in response to the direct testimony of Company Witness Todd Wehner and his recommendation for a ROE. I will explain why my recommendation of 9.33% is a much more reasonable ROE for the Company.

Q. Are you sponsoring any exhibits?

A. Yes, I am sponsoring the following exhibits:

Exhibit MEC-6:	Resume of Matthew Bandyk
Exhibit MEC-7:	*Public Utilities Fortnightly* Article by Steven Huntoon
Exhibit MEC-8:	Realized ROEs for Electric Utilities, 2011 to 2022
Exhibit MEC-9:	Equity Risk Premium Estimates
Exhibit MEC-10:	CAPM Analysis
Exhibit MEC-11:	Long Term Growth Rate Sources
Exhibit MEC-12:	DCF Analysis

II. A "JUST AND REASONABLE" RETURN

Q. Please explain the concept of cost of capital and its significance.

A. The cost of capital is the return demanded by investors on the capital they supply to the Company.[1] It is the weighted average of the costs of the various classes of capital supplied by investors — in this case, debt and equity. The cost of debt and cost of equity are each weighted by the respective amounts of debt and equity in the Company's total capital structure, so the ratio of equity to debt is another important component of the cost of capital.

[1] Roger A, Morin, PhD. Modern Regulatory Finance. PUR Books, 2021, p. 27. "Clearly, nobody give their money away for free — capital has a cost. The utility that obtains funds in the capital markets needs to pay a return to those who provides funds. That return is the cost of capital. The cost of capital is in turn the opportunity cost, expressed in percentage terms, of the total pool of capital employed by the utility."

The cost of debt can be relatively easily observed through the interest rates lenders demand on debt issued by the Company. The cost of equity, however, is the product of market expectations that can only be estimated by looking at a number of factors.

Estimating the cost of equity for a regulated utility must be done carefully so as to arrive at a return that is "just and reasonable," a principle elaborated on in the landmark U.S. Supreme Court cases that set the legal standards governing public utility regulation, *Bluefield Water Works & Improvement Co. v. Public Service Commission of West Virginia*[2] and *Federal Power Commission v. Hope Natural Gas Co*.[3]

For example, in *Hope*, the Court said that the "just and reasonable" standard implies that:

> *...the return to the equity owner should be commensurate with returns on investments in other enterprises having corresponding risks. That return, moreover, should be sufficient to assure confidence in the financial integrity of the enterprise, so as to maintain its credit and to attract capital.*[4]

But the Court was also clear that the determination of what return is "sufficient" in that regard must also involve a consideration of the interests of the company's customers.[5] Indeed, just as a return for a utility that is set *below* the amount "commensurate with returns on investments in other enterprises having corresponding risks" causes the utility to lose wealth relative to what it should earn with a more appropriate return, a return that is set *above* this amount will cause the utility's customers to be overcharged and lose wealth

[2] 262 U.S. 679 (1923).

[3] 320 U.S. 591 (1944).

[4] 320 U.S. at 603.

[5] "The ratemaking process under the Act, i.e., the fixing of 'just and reasonable' rates, involves a balancing of the investor and the consumer interests." *Id.*

relative to what they would be charged with a lower and more appropriate return.[6] In this latter case, that wealth is instead transferred from customers to the utility holding company's shareholders.

Q. What does it mean for a cost of capital to be "just and reasonable" under the standard used in *Bluefield* and *Hope*?

A. In *Hope*, the Supreme Court did not require any specific method at arriving at a "just and reasonable" return, but rather, ruled that any method should be used that arrived at the result of a rate that people would reasonably consider to be commensurate with the risk of the investment. In practice, the financial academic community has interpreted "just and reasonable" returns to be those that are arrived at through methods that are widely accepted in the financial community to estimate investor perceptions of risk.[7] I will rely on these methods in my testimony to estimate the Company's ROE.

Q. How have public regulatory commissions historically fared at estimating "just and reasonable" returns on equity for utilities?

A. There is strong evidence from multiple observers that public regulatory commissions on average have tended to set electric utility ROEs above the market cost of equity, resulting in a transfer of wealth from ratepayers to shareholders.

As I described above, arriving at a ROE is a process of estimation, and that process will invariably include some degree of subjectivity. Subjective factors can influence any human

[6] *Id.*

[7] Morin, p. 12. "Clearly, if rates are to be just and reasonable to the utility and yield a fair return, the allowable return on common equity should be commensurate with returns on investments in other firms having corresponding risks and sufficient to assure confidence in the financial integrity of the firm."

decision-making process, including the decisions of public regulatory commissions, and lead to results that vary from objective methods.

Figure 2 from direct testimony of David Garrett for MEC and CUB in case U-20836[8] compares the average ROE for U.S. stocks as a whole since 1990 to the ROEs for regulated electric and gas utilities awarded by public regulatory commissions over the same time period. It shows that the average awarded ROEs have been consistently above the market ROEs by about two percentage points in almost every year for over three decades.

For more evidence of this phenomenon, experts including utility attorney Steve Huntoon have also published evidence indicating that regulators tend to set ROEs above what the market would bear, which I have submitted as Exhibit MEC-7. [9] A higher return implies higher risk, so the empirical result that awarded ROEs are higher than market returns would imply that regulated utilities are riskier investments than the market as a whole. But they are indeed not riskier. Consider the noncontroversial fact that regulated utility returns tend to be less risky than the market as a whole. This phenomenon can be observed simply by looking at the betas of regulated utility holding companies. Beta is a measurement of the sensitivity of a stock's returns relative to those of the market as a whole. Utility holding company betas tend to be less than one, meaning that those stocks are less sensitive to changes in overall market returns. All of the utility holding company stocks used in the Company's proxy group for calculating ROE have betas less than one, for example.[10]

[8] Case No. U-20836-0479, Direct Testimony of David J. Garrett, 8 TR 3880.

[9] Steve Huntoon. "Nice Work If You Can Get It." Fortnightly Magazine, August 2016, last accessed August 29, 2023, available at https://www.fortnightly.com/fortnightly/2016/08/nice-work-if-you-can-get-it.

[10] Exhibit A-14 (TAW-1), Schedule D-5, p. 2.

Q. If regulated utilities are less risky than the market, then why have regulated utilities historically been awarded ROEs above market returns?

A. The remaining explanation is that public regulatory commissions have tended to accept estimates for ROE that are above fair, market-based ROE estimates.

In this case, Consumers Energy is proposing a ROE of 10.25%, a significant increase from the 9.9% ROE authorized in its last electric rate case (U-21224).

Q. Do you agree with Mr. Wehner's testimony characterizing the Company's proposed ROE range in this proceeding as being "just and reasonable"?

A. No. In multiple instances in his testimony, Mr. Wehner suggests that a "reasonable" ROE is one that does not lead to a decrease in any of the utility's current financial health metrics.[11] His testimony seems to assume that any ROE that would lead to an increase in the company's costs of acquiring capital compared to its current level is not reasonable.

But the "just and reasonable" standard from *Bluefield* and *Hope* does not entitle a utility to its current level of cost of capital. The language of *Hope* is that a "just and reasonable" return is one "commensurate with risk," and that return may be one *below* its current level of cost of capital. Indeed, there is strong support for the proposition that public regulatory commissions consistently set ROEs too high, resulting in costs of capital for utilities that are too high. For those utilities, the current level itself is not "just and reasonable."

[11] For example, quoting from the Direct Testimony of Todd A. Wehner: "…a reasonable ROE not only contributes to better credit ratings, it also attracts increased investment interest in the Company, thereby lowering borrowing costs" (p. 7); "The ROE proposed by the Company in this case would send an important signal to investors that management is not investing in a company or state that has a declining regulatory environment" (p. 21); "Authorizing an ROE in this case at a level that investors view as adequate to compensate them for the risk is necessary to attract large amounts of cost-effective capital to Michigan to keep Consumers Energy financially healthy to the benefit of customers" (p. 20).

The *Hope* decision does qualify that "commensurate with risk" standard by adding that the return must also be "sufficient to assure confidence in the financial integrity of the enterprise." But contrary to his statement that "authorizing an ROE that investors consider to be below expectations could… hinder the Company's ability to access capital altogether,"[12] Mr. Wehner presents no evidence that the utility will be unable to obtain capital if it receives an ROE below his recommended range. He also argues that if the Commission maintains the current ROE of 9.9%, then the proposed ratio of equity to debt should be increased to 53.5% to compensate for this lower ROE.[13] But again, he presents no evidence that the utility will be unable to obtain capital if it does not receive this higher equity-debt ratio.

Mr. Wehner does present evidence suggesting that the utility's costs to obtain capital could increase, but again, the utility is not entitled to its current level of capital costs. Mr. Wehner's evidence shows that his recommended range is what CMS shareholders would prefer because they would financially benefit from it, not that it is an upper limit for what is "just and reasonable."

Q. How would the Company's interpretation and recommended ROE range impact ratepayers?

A. It would be detrimental to ratepayers. Mr. Wehner's testimony appears to support an ROE that satisfies the Company's shareholders rather than one that is commensurate with market

[12] Wehner Direct, p. 20, line 22.

[13] Wehner Direct, p. 5, lines 15-18.

risk. As a result, his recommended ROE would result in a transfer of wealth from Consumers Energy's ratepayers to its shareholders.

Q. Does Mr. Wehner acknowledge that excess ROE is detrimental to ratepayers?

A. No. Mr. Wehner seems to anticipate this objection to his proposed ROE and responds by claiming that an ROE below his recommended range would be overall "detrimental" to Consumers Energy customers.[14]

But Mr. Wehner's testimony fails to support these alleged detriments. In Exhibit A-14 (TAW-1), Schedule D-5, page 12, Mr. Wehner quantifies the "higher funding costs" from which he claims customers would suffer at a lower authorized ROE.[15] Company Witness Bleckman claims that exhibit shows "the Company has saved ratepayers $109 million annually as a result of improved credit ratings and lowered interest costs."[16] The $109 million in cumulative savings from 2006 to 2022 is the sum of the spread between the interest costs from the S&P rating on CMS senior secured debt in a given year and the interest costs if the rating were BBB-. Neither Mr. Bleckman nor Mr. Wehner provide evidence that CMS's debt rating would have fallen to BBB- if the utility had been awarded an ROE or equity-debt ratio below its actual awarded ROE in those years, nor do they show that such a rating would follow this case if the Commission approved an ROE below the Company's recommended range in this case.

[14] For example: "If the investor view of the Michigan regulatory environment becomes less certain or less predictable, then they will be less inclined to invest further capital into Michigan utilities, which would lead to higher funding costs and would be detrimental to customers." Wehner Direct, p. 11, line 1.

[15] *See* Ex A-14 Sch D-5, p. 12; Wehner Direct, p. 11, line 4.

[16] Direct Testimony of Marc R. Bleckman, p. 16, lines 11-13.

Mr. Wehner cites a credit opinion from S&P submitted as an exhibit to Witness Bleckman's testimony that says that "credit quality could weaken" for CMS from a lower ROE.[17] That general statement does not quantify the ROE that might trigger a weakening. Nor does this general assertion necessarily imply a downgrade.

But in any case, the costs to customers from awarding the utility an excessively high ROE are much greater than even the full amount of benefits that Wehner has not supported.

Q. What are the costs to customers from an excessive ROE?

A. If the MPSC were to accept the utility's request for a rate increase without changes, Consumers Energy would collect $877.15 million from customers for a return on its rate base, based on an overall rate return of 6.11% and a total jurisdictional electric rate base of $14.35 billion.[18] If the ROE were instead the market-based ROE of 9.33% that I am recommending in this case, that return would fall from $877.15 million to $821.39 million, resulting in savings of $55.76 million on an annualized basis.[19] Those savings dwarf the $109 million in cumulative savings from 2006 to 2022 shown in Exhibit A-14, Schedule D-5, page 12 provided by Mr. Wehner, which are a mere $6.4 million on an annualized basis.

[17] Direct Testimony of Marc R. Bleckman, p. 23, line 13.

[18] Exhibit A-16 (EAD-1), Schedule F-1, p. 1.

[19] This result is calculated by multiplying the rate base of $14.35 billion by an overall rate of return of 5.71%, which is what the overall rate of return would be if 9.33% were used instead of 10.25% in Exhibit A-14 (MRB-1), Schedule D-1, p. 1.

Q. Does the Company offer any other support for its recommended ROE?

A. Yes. Among his "Qualitative Equity Cost Rate Considerations," Mr. Wehner lists "Investor and Rating Agency Expectations and View of Regulatory Environment"[20] and suggests that an awarded ROE that is below his recommended range would send a message to investors and rating agencies that the utility is no longer in a "supportive" regulatory environment.[21]

Q. What is a "supportive" regulatory environment?

A. Mr. Wehner never defines what he means by "supportive." His usage suggests a state has a "supportive" regulatory environment when that public service commission awards an ROE that is generally high compared to those awarded by other states. In addition, Witness Bleckman cites a chart from S&P Global Market Intelligence that classifies Michigan in a top tier of states where regulators tend to award the most generous ROEs to utilities.[22]

Q. Do you agree that the Commission should set ROE in this case to ensure credit agencies consider Michigan to be a "supportive" regulatory environment?

A. No. The Commission should not set a utility ROE in order to ensure it remains a "supportive" regulatory environment. ROE should be set to ensure a "just and reasonable" return. To strive for recognition as a "supportive" regulatory environment – where that means awarding the highest ROE – would distort regulatory approval and bias ROE in an ever-upward trend.

[20] Wehner Direct, p. 10, lines 13-14.

[21] Wehner Direct, p. 15, lines 5-14.

[22] Exhibit A-35 (MRB-11).

Q. Do you agree with Mr. Wehner's implication that Consumers Energy is facing a "deteriorating" regulatory environment?

A. No. He claims that "in many conversations with investors and rating agencies" that he has had they "have expressed concerns regarding authorized ROEs and a perceived deterioration in Michigan's regulatory environment in recent years from the premium spot it once held."[23] Such hearsay has no role in this proceeding. Moreover, Consumers Energy has enjoyed returns higher than most other regulated electric utilities and shows no signs of "deterioration" relative to comparable utilities.

Q. Have you evaluated how Consumers' returns compare to other utilities historically?

A. Yes. To examine the return Consumers Energy is generating for its shareholders, it is most helpful to consider the ROE the utility has actually achieved based on real financial performance (the "realized ROE") as opposed to just the ROE it has been awarded via regulatory commission decision. While for any regulated utility the authorized ROE will have a large influence on the realized ROE, the utility's actual performance will create a divergence between the two in practice, because the authorized ROE is more of a target based on forecasts, while the realized ROE is what the utility actually achieved in practice. When evaluating how a utility is actually performing relative to its peers, there are at least two reasons to consider the realized ROE over the authorized ROE. First, the realized ROE is measurable and transparent because it is calculated from public financial information reported to the federal government, while there is no single source for authorized ROEs that can be compared to each other across utilities. Second, because the authorized ROE is

[23] Wehner Direct, p. 12.

a target, and not the actual return the utility is achieving, it is more of a proxy for the utility's financial performance relative to other utilities, while the realized ROE is a direct measurement of that performance.

To calculate the realized ROE, I collected financial data reported to the Federal Energy Regulatory Commission through the annual Form 1 filing from 2011 to 2022. These filings provide the net income and shareholders equity for all regulated utilities in the U.S. The net income divided by the average shareholders equity for each year is the realized ROE for a given utility.

Exhibit MEC-8 shows the realized ROE for all investor-owned utilities that sell and distribute electricity to retail customers. This data, collected from FERC Form 1, shows that Consumers Energy has consistently enjoyed a much higher than average realized ROE. From 2011 to 2022, Consumers Energy's realized ROE was 10.45%, compared to 8.44% for all the investor-owned, distribution utilities. If the time period is restricted to just the past five years, Consumers Energy's realized ROE was 10.07%, well above the 8.56% for all the investor-owned, distribution utilities.

Q. Should the realized ROE be a substitute for the ROE awarded in this case?

A. No. As discussed above, a "just and reasonable" return is one that is commensurate with returns on investments in other enterprises having corresponding risks, as estimated by widely-accepted financial methods. I am providing the realized ROE in response to the Company's testimony about the importance of awarding an ROE that reflects a "supportive" regulatory environment. Mr. Wehner, by listing it among his "Qualitative Equity Cost Rate Considerations," implies that this argument is a qualitative reason for awarding the utility an ROE as close to his recommended range as possible. The evidence

of Consumers Energy's actual financial performance shows that the utility has received a generous return compared to other utilities. The utility's return has not been deteriorating compared to other utilities, and that should not be a qualitative factor considered in this case.

III. METHODS

Q. What quantitative methods did you use to estimate the utility's ROE?

A. As I stated earlier in my testimony, arriving at a "just and reasonable" ROE requires the use of the methods that are widely accepted in the financial community to estimate investor perceptions of risk. My ROE estimate is based on the Capital Asset Pricing Model (CAPM) and the Discounted Cash Flow (DCF) methods, which are probably the two most widely accepted methods for calculating ROE. These are also two of the methods used by Mr. Wehner to develop his recommended ROE. I did not, however, use three of the methods he used, for reasons I will explain. These three are the Empirical Capital Asset Pricing Model (ECAPM), the Projected Risk Premium method and the Comparable Earnings method.

Q. Please summarize your ROE recommendation.

A. The results of my DCF and CAPM analysis and my resulting recommendation for the utility's ROE in this case are below:

CAPM	9.01%
DCF	8.56%
Average of CAPM and DCF	8.78%
Consumers Energy ROE awarded in U-21224	9.90%
Recommendation	**9.33%**

Q. Why are you recommending an ROE that is higher than any of the results found in your financial models?

A. The average of my model results suggests that a ROE much lower than 9.33% would be a market-based cost of equity for Consumers Energy. But Consumers Energy is not a competitive business solely answerable to market forces, which helps explain why its awarded ROE has historically been significantly higher than the market-based cost of equity.

There is a degree of uncertainty in any financial model. In addition, any significant changes in Consumers Energy's ROE should be implemented gradually so as not to create unnecessary instability in the company's market value, which is based in great degree on the outcomes of regulatory proceedings like this one.

To account for modeling uncertainty and this principle of gradualism, my final recommendation of 9.33% represents the midpoint between the average result of my models and the 9.90% ROE awarded to Consumers Energy in its last electric rate case (U-21224).

Q. Please describe your application of the CAPM to estimate the ROE.

A. Mr. Wehner's use of the CAPM formula is noncontroversial, and I have no objection to the risk-free rate he selected, so I use the same rate in my CAPM formula. Our results differ because of two key inputs to the CAPM formula: the equity risk premium (ERP) and the beta.

Q. Please explain how you arrived at the ERP used in your CAPM formula.

A. The ERP is an essential component of the CAPM formula. It represents the excess return an investor would receive over the risk-free rate by investing in the broader equity market. The ERP is calculated as the market risk premium minus the risk-free rate. The market risk premium is an estimate of the return an investor can expect from investing in the stock market in general.

Mr. Wehner uses an unrealistically high ERP to calculate the CAPM formula. His ERP is an average of four different estimates, three of which are calculated from historical returns from specific slices of time. These are, referring to page 28 from Mr. Wehner's testimony, the "Risk Premium During Most Recent Federal Reserve Action (2011-2022)" estimate of 10.35%, the "Risk Premium During Federal Reserve Action (1942-1951 and 2011-2022)" estimate of 12.79% and the "Federal Reserve Research" estimate of 12%.

Historical estimates like these three have a flawed methodology that leads to an inaccurate estimate of market return. While historical estimates of ERP are indeed commonly used by the financial community, that popularity does not make them less flawed. As New York University Stern School of Business Professor Aswath Damodaran, one of the most highly respected and widely cited experts in finance and valuation, has written:

> *Given how widely the historical risk premium approach is used, it is surprising how flawed it is and how little attention these flaws have received.*[24]

There are two main reasons for the flaw with this methodology. First, the historical estimate for ERP is extremely sensitive to the historical time period selected, meaning that the

[24] Aswath Damodaran, "Estimating Equity Risk Premiums," Stern School of Business, accessed August 2023, available at https://pages.stern.nyu.edu/~adamodar/pdfiles/papers/riskprem.pdf.

subjective judgment by the person making the estimate of which time period to collect market data for has an outsized impact on the ultimate result.[25]

Second, regardless of the time period selected, historical estimates of ERP are subject to the problem of survivorship bias, where returns that go into historical ERPs tend to be those from stocks that remain in the market, rather than those that drop out. This survivorship bias effect tends to inflate historical ERPs.[26]

Q. Are there any methods of estimating ERP not subject to these problems?

A. Yes. Dr. Damodaran suggests using an "implied equity risk premium" method:

> *The advantage of this approach is that it is market-driven and current, and does not require any historical data. Thus, it can be used to estimate implied equity premiums in any market.*[27]

This approach values stocks in a market at the present value of dividends from each stock growing at a constant rate.

Dr. Damodaran regularly publishes an estimate of the U.S. ERP based on this implied equity premium approach. The ERP I used in my estimate is an average of this estimate from Dr. Damodaran and ERP estimates from two other sources: First, the average U.S. market risk premium identified by the 2023 IESE Business School survey of thousands of finance and economics professors, analysts and managers of companies, from which I

[25] *Id.* "…the risk premium estimated in the US markets by different investment banks, consultants and corporations range from 4% at the lower end to 12% at the upper end… In summary, the risk premium estimates vary across users because of differences in time periods used, the choice of treasury bills or bonds as the risk-free rate and the use of arithmetic as opposed to geometric averages."

[26] *Id.* "…the survivor bias will result in historical premiums that are larger than expected premiums for markets like the United States, even assuming that investors are rational and factor risk into prices."

[27] *Id.*

added the risk-free rate to this market risk premium to arrive at the ERP implied by this survey result.[28] Second, I used the recommended U.S. ERP from financial research firm Kroll for 2023. Kroll's recommended U.S. ERP is based on risk perceptions in the market and other qualitative and quantitative inputs, such as an implied equity risk premium model.[29]

These ERP estimates are summarized in Exhibit MEC-9.

Q. Please explain how you arrived at the beta used in your CAPM formula.

A. I used the Value Line beta for Consumers Energy parent company CMS, which is 0.80.

For the beta used in the CAPM formula, it is more accurate to use the beta for the utility's parent company CMS than to use an average of the betas of the companies in Mr. Wehner's proxy group. It is unnecessary to turn to a proxy group to estimate beta for the utility when the beta of the parent company, CMS, is theoretically not different from the beta of the regulated electric utility.

Theoretically, the risk of a multidivisional company is the weighted average of risk of its divisions, meaning the beta of the parent company is also the weighted average of the beta of the subsidiaries that make up the parent company.[30] For CMS, the risk of the company as a whole is almost entirely generated by its regulated utility business, and in particular, its electric utility business. CMS Energy consists of three primary business segments: its

[28] Exhibit MEC-9.

[29] Kroll Lowers Equity Risk Premium to 5.5%, published July 19, 2023, last accessed August 29, 2023, available at https://www.cfo.com/news/equity-risk-premium-kroll-cost-of-equity-CAPM-equities-returns-pricing-risk/688305/.

[30] Morin, p. 267.

regulated electric utility, its regulated gas utility and NorthStar Clean Energy, its non-utility operations and investments.[31] The regulated utility subsidiaries make up the vast majority of CMS Energy's business by any measure. For example, in 2022, the regulated utilities generated $945 million of CMS's total net income of $827 million (reduced by $156 million in negative income from "corporate interest and other").[32] Of those regulated operations, the electric utility side makes up the majority of CMS's operations, providing $567 million in net income in 2022. Therefore, in the case of CMS, the beta of the electric utility should be approximately the same as that of the parent company.

Q. What are the results of your CAPM analysis?

A. The results of my CAPM analysis are presented in Exhibit MEC-10.

Q. Why did you not use the ECAPM?

A. The MPSC staff has historically rejected the ECAPM model as part of ROE analyses in rate cases.[33] In this case, it is not clear how the adjustments made to the CAPM model to arrive at the ECAPM model are grounded in empirical results (as the E in ECAPM implies).

Q. Please explain your application of the Discounted Cash Flow (DCF) model to estimate the Company's cost of equity.

A. Like Mr. Wehner, my model adds the company's growth rate, or (*g*), to the dividend yields of each company in Mr. Wehner's preferred proxy group to arrive at an estimated cost of

[31] CMS Energy and Consumers Energy Annual Report 2022, last accessed August 29, 2023, available at https://s26.q4cdn.com/888045447/files/doc_financials/2022/ar/AR-WEB-FINAL.pdf.

[32] *Id*.

[33] For example, see Case No. U-20940, Direct Testimony of MPSC Staff Witness Joseph Ufolla, 5 TR 1869, lines 9-16.

equity. My DCF result is somewhat lower than Mr. Wehner's primarily due to the lower estimate I use for the growth rate. Selecting the growth rate is possibly the most important element of the DCF analysis.

Q. Why is the growth rate you have selected superior to that selected by Mr. Wehner?

A. The EPS projections used by Mr. Wehner are all in the short term: three-year consensus analyst dividend per share growth estimates. But a short-term growth rate cannot serve as the only growth rate used in the DCF model.

The use of short-term rates for perpetual growth leads to a wildly unrealistic outcome. If the growth rate used in the DCF model is higher than that of the growth rate of the economy as a whole, that implies that in the long run, the Company would grow bigger than the entire U.S. economy. Such an outcome is theoretically impossible, as Dr. Damodaran has explained:

> "[i]f a firm is a purely domestic company, either because of internal constraints . . . or external constraints (such as those imposed by a government), the growth rate in the domestic economy will be the limiting value." [34]

Q. Explain how you selected the *g* you use in your DCF model.

A. In contrast, I use a two-stage DCF model that includes a weighted average of a short-term growth rate based on investor expectations of utility earnings growth and a long-term growth rate that matches investor expectations of the domestic economy as a whole. The

[34] Aswath Damodaran. *Investment Valuation: Tools and Techniques for Determining the Value of Any Asset*, 3rd ed. John Wiley & Sons, Inc, 2012.

formula for this model is essentially the same as that in the model used by Mr. Wehner: $k_e = (D_1/P_0) + g$.

But whereas in Mr. Wehner's model, (g) is merely the five-year earnings projection, in the two-stage model (g) is a composite of the short-term projection and the long-term growth rate that represents the proper bound for Consumers Energy's long-term growth, reflecting the fact that in the long-term Consumers Energy cannot grow larger than the domestic economy of which it is a part. The reason for this two-step process is that short-term and long-term growth often differ and failing to account for those differences leads to an incorrect application of the DCF model.[35]

My method follows the Federal Energy Regulatory Commission's approved methodology used to analyze the base ROE of a public utility's rates under the Federal Power Act using the DCF model. Specifically, FERC has endorsed a two-step model in which the short-term growth rate is weighed at 80% and the long-term growth rate is weighed at 20%.[36] I use those same weightings in my model. Specifically, I weighed the short-term growth rates for each proxy group company from Exhibit A-14 (TAW-1), Schedule D-5, page 5 at 80%, and the long-term growth rate at 80%.

Candidates for long-term growth rates are listed in Exhibit MEC-11, and they each represent conservative estimates of long-term economic growth. I select the highest of

[35] "The standard DCF model would be incorrectly specified when the investors' expected intermediate term EPS growth rate differs from the long-term sustainable EPS growth rate." Morin, p. 385.

[36] Stephen M. Spina, J. Daniel Skees and Patrick R. Pennella. "FERC Revises Methodology to Evaluate Return on Equity (Again)." Morgan Lewis, June 2, 2020, last accessed August 29, 2023, available at https://www.morganlewis.com/blogs/powerandpipes/2020/06/ferc-revises-methodology-to-evaluate-return-on-equity-again.

these candidates, the nominal GDP growth rate from 2023 to 2032, as the value for the long-term (*g*) used in the DCF formula.

Q. What are the results of your DCF analysis?

A. The results of my analysis are in Exhibit MEC-12.

Q. Why did you not use the Projected Risk Premium method?

A. The Projected Risk Premium method used by Mr. Wehner is not one of the standard methods used by the financial community to estimate ROE. We already have a much more commonly-accepted method to estimate a risk premium for a company: the CAPM. The Projected Risk Premium method as used by Mr. Wehner yields a 12.92% ROE, which is well above the 8.87% I estimated through the CAPM and the 8.56% through the DCF method. Since this result is so far above the more widely-used methods and at least one of these methods already more directly estimates the risk premium, I discarded the Projected Risk Premium method result as an outlier.

Q. Why did you not use the Comparable Earnings method?

A. Mr. Wehner's version of the method does not include some of the most important minimum standards for the use of the comparable earnings method.

First, Mr. Wehner uses the returns on common equity for the utility companies that make up his proxy group used in the CAPM and DCF methods. But the expected earnings approach requires one to look at the book of profitability of *unregulated* companies with comparable risk to the company whose ROE is being estimated. Mr. Wehner's proxy group are holding companies that primarily or solely generate revenue from the regulated utilities

they own. The problem with using regulated utilities is that the expected earnings approach is meant to be a measure of fair return in the *economic* sense of the term.[37]

But if the book profitability of regulated utilities is used instead of that of unregulated companies, we are no longer estimating what the market views as the fair return for a company comparable risk. Instead, we are considering the political decisions of other regulators who may diverge from what the market would consider. Doing so divorces Mr. Wehner's ROE recommendation from economic reality.[38]

IV. RECOMMENDATIONS

Q. Please summarize your conclusions and recommendations to the Commission.

A. On behalf of MNSC, I recommend that the Commission find 9.33% as a just and reasonable ROE for Consumers Energy's electric utility because the mainstream and commonly-used methods for calculating ROE identify 9.33% as a market-based ROE for the utility.

[37] Morin, pp. 423-24: "The rationale of the method is that regulation is a surrogate for competition. The profitability of unregulated firms is set by the free forces of competition. In the long run, the free entry of competitors would limit the profits earned by these unregulated companies, and, conversely, unprofitable ventures and product lines would be abandoned by the unregulated companies. In other words, the free entry and exit of competitors should ensure that the profits earned by nonregulated firms are normal in the economic sense of the term. Aggregating book rates of return over a large number of comparable risk unregulated companies would even out any abnormal short run profit aberrations, while averaging over time would dampen any cyclical aberrations. Thus, by averaging the book profitability of a large number of unregulated companies over time, an appropriate measure of the fair return on equity for a public utility is obtained."

[38] Morin, p. 426: "In defining a population of comparable-risk companies, care must be taken not to include other utilities in the sample, since the rate of return on other utilities depends on the allowed rate of return… It would be circular to set a fair return based on the past actions of other regulators, much like observing a series of duplicate images in multiple mirrors. The rates of return earned by other regulated utilities may well have been reasonable under historical conditions, but they are still subject to tests of reasonableness under current and prospective conditions."

Q. Does that complete your testimony?

A. Yes.

Matthew J. Bandyk

Education

- **Master of Business Administration (MBA), University of Michigan Stephen M. Ross School of Business, Ann Arbor, MI, April 2018**
- **Passed CFA Level I exam, June 2015**
- **BA in political science, *cum laude*, Davidson College, Davidson, NC, May 2006**

Experience

Consultant, 5 Lakes Energy, September 2021-present
• Provides public policy recommendations and financial analysis for nonprofit energy advocacy clients
• Analyzes utility justifications of return on equity and other corporate finance issues for testimony in Michigan Public Service Commission rate cases

Clean Energy Consultant, Bandyk Consulting LLC, January 2019-September 2021
• Manages and writes social media, blog posts, op-eds that appear in newspapers like the Detroit Free Press and
• Serves as communications strategist for the Michigan Energy Innovation Business Council, including social media, blog posts on utility regulation and policy issues and enterprise articles in publications like Utility Dive

Financial Services Manager, Atwell LLC, Southfield, MI, May 2018-January 2019
• Purchased long-lived assets to support Atwell's work in environmental and engineering consulting for renewables and oil & gas sectors
• Performed financial analysis to overhaul company's asset leasing policies with goal of saving up to ~100k per year by improving asset life

Climate Corps Fellow, Environmental Defense Fund, Toledo, OH, Summer 2017
• Built financial valuation tool for payback, NPV and IRR of solar arrays planned by client, determining best ROI for about $300,000 in solar investments
• Designed energy use tracking system for the largest private low-income housing provider in Toledo, Ohio; system saved hundreds of work hours annually

MBA Student Consultant, DTE Energy, Detroit, MI, March-April 2017
• Performed market and regulatory compliance research on original proposal for DTE to enter the corporate renewable energy space; presented to company leadership
• Designed tariff to add wind/solar and cut rates by 20% compared to DTE's green tariff

Reporter, S&P Global Market Intelligence/SNL Financial, Arlington, VA, June 2010-August 2016
• Used Excel analysis of power plant output and commodity price databases to create actionable intelligence about new trends in the energy industry for clients
• Wrote articles on utilities, power plants, energy efficiency and regulation for subscription website read daily by thousands of energy and investment professionals

PUBLIC UTILITIES FORTNIGHTLY
The Sustainable Resilient Affordable Debates
Published on *Fortnightly* (https://www.fortnightly.com)

Nice Work If You Can Get It [1]

Deck:
Rate of Return for Fun and Profit

Byline:
Steve Huntoon

Author Bio:

Steve Huntoon is the principal of Energy Counsel, LLP. Mr. Huntoon is a former President of the Energy Bar Association, and for over 30 years of practice in energy regulatory law he has advised and represented such companies and institutions as Dynegy, PECO Energy (now part of Exelon), Florida Power & Light (NextEra Energy), ISO New England, Entergy, PacifiCorp, Williston Basin (MDU Resources) and Conectiv (now part of PHI, and Exelon).

Fortnightly Magazine - August 2016 [2]

Let's admit one thing right off the bat. Rate of return is one of the most arcane subjects in utility regulation's ocean of arcania.

But one thing that makes rate of return interesting is the amount of money involved. It's roughly $58 billion each year for electric utilities.[1]

Now you may be thinking, OK, so there's big money involved. But what's in it for me? In the spirit of BLUF, Bottom Line Up Front, let me tackle that question.

There is mounting evidence that investment in utility stocks has outperformed the broader market in the past, and will continue to do so. This is a conundrum. Regulated utilities are less risky than competitive industries, and therefore are supposed to produce a lower total return over time. But instead the opposite is happening.

We'll get into the evidence for this, and then speculate as to how this can be so. But if you want actionable intelligence up front, here it is: invest in regulated utilities.

Vanguard Group gives you low-cost index-fund options for utility investment. The symbol for the mutual fund is VUIAX and for the ETF is VPU. You may now skip the rest of this column if so inclined.

By the way, if your interest is the welfare of utility customers, there is more at stake than just higher than needed equity rates. When allowed equity returns exceed the true cost of equity, utilities have an artificial incentive to expand utility facilities upon which they can earn that extra return, including favoring themselves over others in resource procurement. This is the well-known Averch-Johnson effect first described in 1962.

OK, for those sticking around for the substance here it is. The historical evidence of outperformance comes in three data points:

1. A study released by PJM showing lower-risk regulated generation outperforming higher-risk, market-based generation over a long-term horizon.[2]

2. Broader studies of markets showing lower-beta, lower-risk stocks outperforming higher-beta, higher-risk stocks over a long-term horizon.[3]

3. Utility stocks outperforming the broader market over the last 12 years, the longest period tracked in Google Finance, with the Dow Jones Utility Average at a total return of 161 percent and the Dow Jones Industrial Average at a total return of 133 percent.[4]

These are astounding, counter-intuitive results.

This counter-intuitive past seems destined to continue into the future. Three data points point the way:

1. Jack Bogle, the founder of Vanguard Group and a Wall Street legend, provides rigorous analysis that the long-term total return for the broader market will be around 7 percent going forward.[5] Another Wall Street legend, Professor Burton Malkiel, corroborates that 7 percent in the latest edition of his seminal work, *A Random Walk Down Wall Street*.[6]

2. Institutions like pension funds are validating #1 by piling on risky investments to try and get to a 7.5 percent total return, as reported by the *Wall Street Journal.*[7]

3. Utilities are being granted returns on equity around 10 percent.[8]

Let's reflect on what #3 means relative to #1 and 2.

It means that the less risky utilities are being awarded much higher returns, roughly 40 percent higher, than the broader market is expected to earn. The extra is about $17 billion per year.[9] Not too shabby.

So let's repeat the actionable intelligence. If you're a professional money manager it means you should buy the Vanguard utility index fund (or a comparable fund) and spend the next 10 years in Maui drinking Mai Tai's with those little umbrellas.

The rest of us should make the same investment. But we'll still have to work because we can't drink Mai Tai's in Maui for a living.

Now that we've gotten the practical stuff out of the way, let's think about why this might be so. The efficient market hypothesis says it isn't possible to have an anomaly like lower risk stocks consistently outperforming higher risk stocks. And yet they are.

Why? One thing we know off the bat is that utility stocks are the only stocks where Wall Street analysts actually set earnings, instead of just forecasting earnings. That is because utility regulators use Wall Street analysts' forecasts of earnings and dividend growth to set the "g" factor, and dividend yield plus g becomes the allowed return on equity.

You might observe that there is some circularity to this. If Wall Street analysts set g high, then the allowed return on equity will be high, and then g will be high, etc.

But it's not all circular. There may be some reasons for Wall Street to think g ought to be high. Wall Street forecasts tend to be led by guidance from the companies themselves. Utility companies have decades of experience in maximizing earnings under regulation, and partial deregulation, and they do very well at it.

How exactly? Well, we need to get in the weeds to explore some of the ways, but here goes. Utilities often can take advantage of double leveraging their capital structure. That's pretty esoteric so let's take an example.

Suppose you have an operating utility company with a 50 percent debt, 50 percent equity capital structure, with 5 percent debt cost and 10 percent equity cost. Now, let's suppose a holding company is created that finances the 50 percent operating company equity with 40 percent debt and 60 percent equity. How much does the parent company equity earn on equity? It earns 13.3 percent, not 10 percent, because of the double leverage.[10]

And it also works in reverse. Wall Street forecasts a return of equity of 13.3 percent on the double leveraged parent equity, and that percent is applied to the capital structure of the operating company where the equity cost is only 10 percent. Pretty neat, eh?

Beyond capital structure, the nature of regulation has evolved favorably over time for the regulated. Utilities have been able to enlist regulators in risky endeavors so as to eliminate or mitigate financial losses from failures.

Nuclear and clean coal plants come to mind. New such plants are concentrated in areas of the country where traditional rate regulation for generation has continued. In contrast to areas where generation investment is subject to market conditions and competitive pressures.[11]

Utilities also have exhibited some facility for shifting regulatory paradigms as market conditions change. Ohio and Illinois illustrate this. As part of the deal to allow competition, utilities received stranded cost payments.

Then, rising wholesale prices became a bonus. And now with wholesale prices back down, some of those same utilities are seeking subsidies for their generation. This ability to shift among regulatory paradigms is unique to the utility industry.

Utility rates also tend to be downward sticky. It is easier for a utility to initiate and prosecute rate increases than for consumer advocates to initiate and prosecute rate decreases, with an imbalance in information being one obvious reason why.

And utilities have some ability to influence timing of expenses with, for example, workforce reductions coming a polite period after the resolution of a rate case. And utilities over time have been able to implement automatic pass-through of various types of costs so, for example, some costs can be passed through without comprehensive review of the utility's overall revenues and costs.

All of this is nice work if you can get it.

You may be thinking, is there a risk that regulators look at all this and reduce allowed returns to something closer to what the riskier broader market is expected to earn? So utilities would no longer be an anomalously great investment?

No worries. This is our little secret.

Endnotes:

1. According to EEI data, there is $356 billion in electric utility common equity. Assume a 10 percent return on equity plus an income tax allowance of 6.4 percent. The income tax allowance is based on a composite federal or state income tax rate of 39 percent. The 10 percent return is divided by 61 percent (1 minus 39 percent). This gives a pre-tax total return of 16.4 percent, which amounts to $58 billion on the $356 billion in common equity.

2. "... one would expect merchant firms to earn a much higher level of return than the firms that are more tightly regulated. However, the opposite seems to be true as the consistently positive alphas for regulated firms indicates these companies are earning returns higher than what they should be expected to earn given their much lower level of risk." Resource Investment in Competitive Markets, Technical Appendix, May 5, 2016.

3. "In an efficient market, investors earn higher returns only to the extent that they bear higher risk. Despite the intuitive appeal of a positive risk-return relationship, this pattern has been surprisingly hard to find in the data, dating at least to Black (1972). For example, sorting stocks by using measures of market beta or volatility shows just the opposite. Panel A of Figure 1 shows that from 1968 through 2012 in the U.S. equity market, portfolios of low-risk stocks delivered on the promise of lower risk as expected but had surprisingly higher average returns. A dollar invested in the lowest-risk portfolio grew to $81.66, whereas a dollar invested in the highest-risk portfolio grew to only $9.76." The Low Risk Anomaly: A Decomposition into Micro and Macro Effects, *Financial Analysts Journal,* March/April 2014.

4. These returns are from Google Finance, comparing Dow Jones Utility Average Total Return with Dow Jones Industrial Average Total Return from August 31, 2004, earliest common date, to June 28, 2016.

5. "Thus, the prospective nominal investment return on stocks seems likely to run in the range of 7 percent..." Occam's Razor Redux: Establishing Reasonable Expectations for Financial Market Returns, *Journal of Portfolio Management*. This conclusion is supported by unprecedented lows in the risk-free rate, even negative interest on some sovereign debt. For an excellent summary of the Bogle study see Jason Zweig's column, This Simple Way Is the Best Way to Predict the Market, *Wall Street Journal,* December 24, 2015.

6. "Adding the initial yield and growth rate together, we get a projected total return for the S&P 500 of just under seven percent per year ...." (*A Random Walk*, page 346).

7. "To even come close these days to what is considered a reasonably strong return of 7.5 percent, pension funds and other large endowments are reaching ever further into riskier investments..." *Wall Street Journal,* June 1, 2016.

8. FERC set the base allowed return for New England transmission owners at 10.57 percent in its Opinion Numbers 531, 531-A and 531-B. State commission allowed returns for electric utilities have averaged 9.78 percent according to an analysis of *Public Utilities Fortnightly* data in the PJM Study, earlier referenced.

9. Here's the math: 16.4 percent pretax return on $356 billion equity is $58 billion. If the equity return is 30 percent less, 7 percent versus 10 percent, then the reduction in return is $17 billion.

10. Here's an example of the math. Assume the operating company's equity is $100 million. At a 10 percent allowed return it earns $10 million. Now let's suppose the holding company finances that $100 million with 40 percent debt costing 5 percent and 60 percent equity. The holding company pays $2 million for the debt and thus earns $8 million on the $60 million equity for an actual return on equity of 13.3 percent. The key is the difference between the holding company's consolidated capital structure and the utility operating company's capital structure. Indeed, the leveraging is even more lucrative because the phantom equity also gets a phantom income tax allowance.

11. For more on this see the PJM Study, earlier referenced.

Tags:

- investment [3]
- stocks [4]
- Averch-Johnson [5]
- Dow Jones [6]
- VUIAX [7]
- VPU [8]

Lines Up, Inc. (703) 842-3762

3033 Wilson Blvd., Suite 700, Arlington, VA 22201

Realized Returns on Equity for Electric Utilities, 2011 to 2022*

Source: FERC Form 1

Name	Average 2011 to 2021	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
AEP Texas Inc.	9.36%							16.26%	8.90%	6.43%	7.81%	8.52%	8.21%
Alabama Power Co.	12.43%	12.35%	12.27%	12.25%	12.67%	12.76%	13.03%	12.61%	12.69%	12.75%	12.04%	11.88%	11.90%
Alaska Electric Light and Power Company	6.43%											6.34%	6.52%
ALLETE, Inc.	8.22%	9.11%	8.51%	8.23%	8.45%	8.23%	8.36%	8.69%	8.24%	8.46%	7.70%	7.20%	7.43%
Ameren Illinois Company	7.33%	7.79%	5.92%	6.72%	7.98%	7.81%	8.61%	8.56%	8.67%	8.75%	8.40%	0.00%	8.73%
Appalachian Power Company	8.15%	5.64%	8.60%	6.15%	6.53%	9.96%	10.46%	8.97%	9.42%	7.49%	8.68%	7.76%	8.19%
Arizona Public Service Company	9.57%	8.66%	9.84%	10.12%	9.59%	9.83%	9.64%	9.92%	10.45%	9.80%	9.39%	9.83%	7.73%
Atlantic City Electric Company	5.88%	5.16%	4.38%	5.98%	5.11%	4.26%	-4.14%	7.45%	6.92%	8.26%	8.39%	9.85%	8.92%
Avista Corporation	8.34%	8.67%	6.40%	8.69%	13.81%	8.18%	8.64%	6.86%	7.79%	10.35%	6.79%	7.04%	6.91%
Baltimore Gas and Electric Company	8.28%	5.95%	0.19%	8.55%	7.96%	10.25%	10.26%	10.25%	9.62%	10.22%	8.86%	9.26%	8.02%
Black Hills Power, Inc.	10.58%	8.39%	8.26%	9.09%	9.38%	11.77%	11.62%	13.19%	11.45%	11.03%	11.66%	10.51%	
Black Hills/Colorado Electric Utility Company, LP	2.90%	1.74%	3.10%	0.91%	2.27%	3.99%	5.40%						
CenterPoint Energy Houston Electric, LLC	16.59%	41.91%	11.47%	18.08%	17.76%	16.34%	14.83%	19.29%	13.31%	12.02%	10.49%	11.32%	12.30%
Central Hudson Gas & Electric Corp.	8.26%	9.67%	9.98%	4.12%	6.49%	8.34%	9.22%	9.08%	8.88%	8.80%	8.48%	8.23%	7.85%
Central Maine Power Company	8.00%	10.36%	8.78%	9.61%	7.61%	7.20%	8.05%	8.86%	6.97%	6.09%	6.77%	8.45%	7.27%
Cheyenne Light, Fuel and Power Company	9.57%	8.95%	8.89%	10.24%	8.96%	9.02%	10.09%	11.40%	10.12%	11.71%	8.78%	8.14%	8.57%
Cleco Power LLC	8.90%	11.59%	11.51%	11.18%	10.58%	9.12%	2.53%	9.77%	10.32%	8.96%	5.49%	7.14%	8.56%
Cleveland Electric Illuminating Company, The	6.20%	5.51%	3.56%	7.27%	3.31%	6.03%	3.02%	8.19%	13.46%	8.90%	6.08%	5.22%	3.83%
Commonwealth Edison Company	5.54%	5.96%	5.28%	3.36%	5.28%	5.28%	4.45%	6.21%	6.71%	6.58%	3.98%	6.26%	7.13%
Consolidated Edison Company of New York, Inc.	9.17%	9.62%	9.69%	9.53%	9.60%	9.59%	9.09%	9.10%	9.43%	9.24%	8.18%	8.63%	8.38%
Consolidated Water Power Company	-1.47%	-20.04%	0.14%	0.72%	0.40%	-1.68%	-6.17%	4.78%	-2.07%	0.24%	-5.30%	6.39%	4.89%

Consumers Energy Company	10.45%	10.89%	9.79%	11.32%	11.18%	10.98%	10.73%	10.17%	10.76%	10.13%	10.01%	9.73%	9.72%
Delmarva Power & Light Company	7.78%	8.73%	8.30%	9.14%	9.70%	6.63%	-0.43%	9.18%	8.48%	9.57%	7.60%	7.35%	9.06%
Dominion Energy South Carolina, Inc.	2.53%	8.62%	8.98%	9.16%	9.89%	9.65%	9.90%	-3.63%	-13.69%	-31.59%	7.35%	4.82%	10.90%
DTE Electric Company	10.43%	10.73%	11.51%	10.65%	10.59%	10.03%	10.68%	9.84%	10.17%	10.22%	10.19%	10.20%	10.33%
Duke Energy Carolinas, LLC	9.80%	9.08%	8.96%	9.65%	10.08%	9.60%	10.42%	10.97%	9.29%	11.45%	7.35%	9.88%	10.91%
Duke Energy Florida, LLC	10.45%			6.74%	10.93%	11.59%	11.00%	13.54%	9.45%	10.74%	10.74%	9.31%	10.49%
Duke Energy Indiana, LLC	7.49%	4.81%	-1.47%	9.47%	9.33%	8.50%	9.72%	8.69%	9.39%	9.87%	8.79%	9.89%	2.87%
Duke Energy Kentucky, Inc.	8.86%	5.93%	7.76%	12.01%	8.92%	11.29%	10.12%	12.53%	8.99%	7.87%	7.06%	6.94%	6.88%
Duke Energy Ohio, Inc.	3.99%	3.66%	3.38%	2.16%	-9.90%	4.56%	7.88%	6.21%	5.30%	6.67%	6.60%	4.85%	6.52%
Duke Energy Progress, LLC	7.62%				8.13%	8.76%	8.32%	9.35%	8.14%	9.10%	4.48%	2.16%	10.17%
Duquesne Light Company	11.53%	12.83%	13.16%	10.96%	9.63%	10.15%	9.95%	10.78%	12.17%	13.63%	11.64%	11.18%	12.29%
El Paso Electric Company	9.33%	13.25%	11.69%	10.39%	9.75%	8.28%	9.22%	8.76%	7.26%	10.23%	5.93%	9.96%	7.31%
Entergy Arkansas, LLC	8.66%											9.16%	8.16%
Entergy Louisiana, LLC	10.82%						12.67%	6.09%	12.05%	11.25%	15.63%	8.36%	9.69%
Entergy Mississippi, LLC	9.85%											9.50%	10.19%
Entergy New Orleans, LLC	7.33%											5.11%	9.56%
Entergy Texas, Inc.	9.03%	9.38%	4.79%	6.65%	8.41%	7.51%	10.59%	6.54%	12.10%	9.89%	10.87%	9.86%	11.75%
Evergy Kansas Central, Inc.	8.96%	8.86%	9.68%	9.82%	9.85%	8.40%	9.29%	8.40%	7.76%	8.41%	7.76%	11.44%	7.91%
Evergy Kansas South, Inc.	4.71%									4.75%	4.78%	5.35%	3.98%
Evergy Metro, Inc.	8.48%	6.71%	6.86%	7.93%	7.31%	6.50%	9.06%	7.13%	6.47%	10.07%	12.62%	12.37%	8.75%
Evergy Missouri West, Inc.	5.52%	4.80%	5.65%	6.21%	6.14%	4.69%	4.60%	-3.27%	2.32%	7.61%	13.20%	6.47%	7.86%
Fitchburg Gas and Electric Light Company	7.58%	12.63%	6.96%	6.07%	4.03%	4.99%	8.93%	7.40%	5.95%	6.66%	9.02%	9.72%	8.59%
Florida Power & Light Company	11.11%	10.35%	10.61%	10.53%	11.57%	11.48%	10.75%	11.19%	11.41%	11.00%	11.74%	11.73%	11.02%
Georgia Power Company	10.56%	12.70%	12.59%	12.29%	12.09%	11.79%	11.92%	12.13%	6.04%	11.71%	9.98%	3.46%	10.05%
Green Mountain Power Corp	7.55%			9.55%	9.99%	9.88%	9.87%	9.41%	10.10%	9.28%	0.00%	0.00%	7.42%
Gulf Power Company	9.85%	9.28%	10.56%	9.93%	10.51%	10.62%	9.19%	9.05%	9.25%	9.92%	10.54%	9.50%	
Idaho Power Company	10.31%	11.25%	10.68%	10.55%	10.70%	10.24%	9.67%	10.10%	10.39%	10.04%	10.05%	10.08%	10.00%
Indiana Michigan Power Company	9.80%	8.64%	6.65%	9.53%	8.03%	10.27%	11.45%	8.55%	11.43%	11.00%	10.76%	10.11%	11.21%
Indianapolis Power & Light Company	10.51%	12.70%	12.34%	11.07%	11.63%	9.40%	12.02%	9.60%	10.80%	10.58%	9.71%	9.29%	7.00%
Interstate Power and Light Company	9.44%	8.95%	9.37%	10.72%	10.00%	9.32%	9.72%	9.02%	9.15%	8.66%	9.11%	9.54%	9.68%
Jersey Central Power & Light Company	4.54%	5.79%	5.86%	7.69%	3.67%	2.01%	3.05%	3.83%	5.07%	3.78%	3.78%	7.01%	3.00%

Kentucky Power Company	6.40%	9.35%	10.85%	2.10%	5.11%	4.20%	7.54%	5.27%	9.00%	7.04%	5.11%	5.91%	5.30%
Kentucky Utilities Company	8.18%	6.53%	4.92%	7.84%	7.03%	7.19%	8.04%	8.47%	10.26%	10.10%	9.12%	9.12%	9.55%
Kingsport Power Company	6.04%	10.13%	8.42%	10.23%	1.92%	-5.09%	1.21%	11.07%	6.47%	10.49%	4.83%	4.39%	8.46%
Liberty Utilities (CalPeco Electric) LLC	11.67%							15.65%	10.37%	8.21%	14.12%	10.01%	
Liberty Utilities (Granite State Electric) Corp.	6.27%				8.36%	3.21%	3.90%	3.82%	4.60%	3.53%	10.43%	10.16%	8.46%
Lockhart Power Company	12.46%	9.79%	7.86%	9.18%	16.44%	14.61%	10.39%	12.38%	9.56%	12.40%	11.21%	14.12%	21.65%
Louisville Gas and Electric Company	8.88%	7.14%	6.89%	8.67%	8.13%	8.23%	8.45%	9.28%	10.48%	9.97%	9.87%	9.49%	9.96%
Madison Gas and Electric Company	8.12%	6.96%	7.57%	8.69%	9.36%	7.23%	8.23%	8.07%	8.68%	7.82%	7.67%	8.58%	8.59%
Massachusetts Electric Company	3.24%	3.49%	1.84%	1.78%	1.71%	1.54%	2.36%	3.11%	5.54%	5.97%	2.93%	5.41%	3.21%
Metropolitan Edison Company	10.71%	7.02%	5.22%	-2.86%	5.56%	8.73%	10.60%	10.86%	17.72%	14.23%	16.57%	19.61%	15.21%
MidAmerican Energy Company	10.58%	10.25%	10.29%	9.36%	10.31%	10.31%	10.99%	11.07%	11.17%	11.59%	10.79%	10.51%	10.33%
Mississippi Power Company	-7.61%	10.36%	7.10%	-23.80%	-15.11%	-0.26%	-1.78%	-118.54%	15.75%	8.54%	8.96%	8.80%	8.66%
Monongahela Power Co.	6.75%	0.23%	14.92%	-7.93%	9.03%	9.36%	5.61%	5.73%	10.46%	9.17%	6.59%	11.82%	5.97%
Montana-Dakota Utilities Co.	4.93%	7.79%	-0.03%	10.20%	10.01%	-22.51%	2.73%	11.85%	10.90%	3.99%	8.39%	8.06%	7.76%
Mt. Carmel Public Utility Co	6.91%											5.36%	8.47%
Nevada Power Company, d/b/a NV Energy	8.44%	4.73%	8.93%	5.00%	7.85%	9.53%	9.08%	9.02%	8.11%	9.29%	10.29%	10.17%	9.33%
New York State Electric & Gas Corporation	8.64%	9.36%	11.17%	10.07%	10.09%	8.57%	10.16%	8.79%	8.07%	4.60%	7.71%	8.19%	6.93%
Niagara Mohawk Power Corporation	4.92%	3.33%	4.98%	5.09%	5.20%	4.30%	4.32%	5.57%	4.33%	6.19%	4.11%	5.36%	6.27%
North Central Power Co., Inc.	8.54%	3.82%	6.74%	9.08%	8.90%	8.92%	7.94%	7.20%	9.06%	11.69%	12.06%		
Northern Indiana Public Service Company LLC	9.74%	8.53%	9.87%	11.69%	10.21%	8.08%	7.94%	9.32%	11.71%	11.51%	9.53%	9.66%	8.84%
Northern States Power Company (Minnesota)	8.90%	9.78%	8.77%	9.24%	8.82%	7.23%	9.29%	9.05%	8.91%	9.31%	9.19%	8.45%	8.76%
Northern States Power Company (Wisconsin)	9.93%	9.96%	9.62%	10.61%	10.85%	10.03%	8.63%	9.41%	10.78%	8.26%	10.51%	9.92%	10.57%
NorthWestern Corporation	9.53%	11.02%	10.98%	9.57%	9.62%	9.83%	10.02%	9.36%	10.53%	10.15%	7.54%	8.46%	7.31%
Northwestern Wisconsin Electric Company	9.69%											10.34%	9.04%
NSTAR Electric Company	10.87%	11.30%	8.42%	11.42%	12.06%	13.53%	10.91%	11.10%	11.59%	10.83%	10.15%	9.95%	9.15%
Ohio Edison Company	17.45%	16.04%	14.11%	23.51%	11.23%	12.81%	13.46%	22.74%	26.33%	20.53%	17.07%	16.39%	15.12%
Ohio Power Company	11.61%	10.28%	7.72%	13.41%	12.01%	11.73%	13.75%	14.63%	14.13%	12.36%	10.43%	9.16%	9.70%
Ohio Valley Electric Corporation	9.84%	20.22%	15.39%	13.75%	3.30%	4.79%	5.12%	7.85%	17.48%	11.86%	9.79%	8.57%	0.00%
Oklahoma Gas and Electric Company	9.50%	11.27%	10.79%	10.58%	10.01%	8.73%	8.87%	9.11%	9.29%	9.26%	8.56%	8.39%	9.11%
Oncor Electric Delivery Company LLC	5.69%	5.00%	4.67%	5.81%	5.99%	5.81%	5.69%	5.65%	6.40%	6.37%	5.51%	5.40%	6.01%
Orange and Rockland Utilities, Inc.	9.65%	10.09%	12.23%	10.34%	9.66%	8.49%	9.48%	9.74%	8.59%	9.55%	9.06%	8.87%	9.68%

Otter Tail Power Company	9.85%	11.41%	10.95%	10.15%	10.51%	10.31%	9.56%	9.00%	9.51%	9.59%	9.20%	8.81%	9.18%
Pacific Gas and Electric	-5.28%	7.01%	6.28%	6.12%	9.22%	5.18%	7.91%	8.87%	-41.70%	-83.34%	2.67%	0.54%	7.90%
PacifiCorp	8.99%	7.59%	7.19%	8.84%	8.98%	9.11%	10.24%	10.28%	9.58%	9.47%	8.39%	9.31%	8.91%
PECO Energy Company	12.03%	12.96%	12.48%	12.87%	11.39%	11.88%	13.17%	12.41%	12.43%	13.20%	10.26%	10.44%	10.83%
Pioneer Power and Light Company	2.05%	1.63%	-0.03%	-2.75%	3.44%	-6.13%	3.81%	2.82%	8.19%	12.23%	-2.68%		
Portland General Electric Company	8.17%	9.02%	8.34%	5.90%	9.41%	8.26%	8.38%	7.86%	8.61%	8.39%	5.94%	9.22%	8.69%
Potomac Electric Power Company	7.77%	6.76%	8.01%	8.42%	8.54%	8.65%	1.86%	8.47%	7.97%	8.59%	8.72%	8.86%	8.40%
PPL Electric Utilities Corporation	9.34%	9.29%	6.48%	9.83%	10.08%	8.63%	10.46%	9.82%	10.16%	9.87%	9.99%	8.24%	9.20%
Public Service Company of Colorado	9.02%	9.40%	10.30%	9.66%	9.40%	9.33%	8.92%	8.90%	9.10%	8.69%	8.06%	8.23%	8.23%
Public Service Company of New Hampshire	9.68%	10.00%	8.95%	10.04%	9.72%	9.22%	10.06%	9.93%	8.74%	9.95%	10.04%	9.59%	9.91%
Public Service Company of New Mexico	5.41%	4.62%	7.36%	7.09%	7.00%	-1.17%	5.65%	5.09%	3.88%	2.87%	8.91%	8.24%	5.34%
Public Service Company of Oklahoma	9.13%	14.32%	12.62%	10.52%	8.82%	8.61%	8.57%	5.92%	6.76%	10.50%	8.42%	7.35%	7.12%
Public Service Electric and Gas Company	10.83%	11.48%	10.87%	11.53%	11.60%	10.98%	10.92%	10.49%	10.03%	10.86%	10.51%	10.36%	10.28%
Puget Sound Energy, Inc.	8.79%	6.59%	10.75%	10.41%	7.04%	9.16%	11.11%	9.03%	8.68%	7.55%	6.67%	7.87%	10.64%
Rochester Gas and Electric Corporation	9.34%	9.20%	12.08%	9.97%	10.12%	5.13%	10.49%	9.60%	9.64%	8.99%	9.77%	8.49%	8.58%
San Diego Gas & Electric Company	10.73%	12.45%	12.04%	9.20%	10.61%	11.51%	10.49%	7.24%	11.49%	11.73%	11.12%	10.25%	10.57%
Sierra Pacific Power Company, d/b/a NV Energy	7.69%	6.15%	8.38%	5.38%	8.61%	7.96%	7.66%	9.54%	7.52%	8.00%	8.10%	8.40%	6.56%
Southern California Edison Company	8.13%	11.94%	15.30%	8.37%	12.31%	8.24%	10.65%	7.79%	-1.33%	9.68%	5.17%	4.82%	4.65%
Southern Indiana Gas and Electric Company	9.52%	9.79%	9.98%	10.33%	10.75%	11.21%	11.34%	9.90%	9.35%	5.72%	7.88%	9.39%	8.61%
Southwestern Public Service Company	8.76%	8.82%	9.44%	7.49%	8.88%	7.56%	8.14%	7.84%	9.14%	9.71%	9.54%	9.22%	9.36%
SWEPCO	7.75%	9.26%	10.37%	7.35%	6.76%	9.02%	7.55%	5.60%	6.47%	6.67%	7.14%	8.28%	8.50%
Tampa Electric Company	10.57%	10.78%	10.02%	9.51%	10.85%	11.02%	10.71%	10.93%	10.77%	10.48%	11.07%	9.77%	10.86%
The Connecticut Light and Power Company	9.41%	9.93%	8.10%	10.21%	9.88%	9.41%	9.77%	10.30%	9.46%	9.32%	9.48%	7.58%	9.44%
The Dayton Power and Light Company	1.86%	13.89%	6.74%	6.56%	9.61%	8.86%	-96.72%	4.91%	22.35%	27.22%	9.34%	6.95%	2.57%
The Empire District Electric Company	8.79%	8.13%	7.89%	8.64%	8.75%	7.14%	7.85%	4.44%	14.34%	10.39%	7.29%	9.46%	11.16%
The Narragansett Electric Company	4.68%	3.48%	4.93%	4.04%	4.98%	5.19%	4.41%	6.29%	6.06%	4.94%	5.24%	5.87%	0.70%
The Potomac Edison Co.	11.13%	11.65%	14.62%	17.49%	10.35%	13.15%	11.92%	8.85%	9.46%	10.43%	6.74%	11.42%	7.51%
The United Illuminating Company	10.01%	10.80%	11.44%	10.02%	10.18%	6.60%	9.26%	11.15%	11.41%	10.76%	9.97%	9.94%	8.65%
Tucson Electric Power Company	9.60%	11.12%	7.77%	11.34%	9.56%	9.50%	8.84%	10.96%	10.81%	9.82%	8.86%	8.26%	8.38%
Union Electric Co.	9.34%	7.09%	10.38%	9.90%	9.79%	8.75%	8.81%	7.98%	11.59%	10.02%	9.19%	9.37%	9.16%
UNS Electric, Inc.	9.44%	12.93%	12.09%	8.84%	5.50%	7.42%	9.15%	10.97%	11.81%	8.78%	9.28%	8.82%	7.65%

Upper Peninsula Power Company	5.93%	7.52%	11.22%	10.27%	7.56%	2.53%	3.96%	-3.25%	4.40%	6.16%	7.69%	9.50%	3.56%
Versant Power	5.01%										3.62%	6.20%	5.22%
Virginia Electric and Power Co.	9.99%	9.25%	11.35%	11.65%	8.50%	10.50%	10.83%	12.79%	10.14%	10.00%	9.94%	7.65%	7.31%
West Penn Power Co.	14.17%	10.21%	10.77%	16.80%	15.32%	16.12%	17.08%	14.66%	14.91%	18.51%	11.11%	15.29%	9.26%
Wheeling Power Company	21.41%	61.88%	51.01%	34.87%	39.73%	8.90%	6.79%	7.68%	11.16%	7.59%	8.94%	9.21%	9.10%
Wisconsin Electric Power Company	10.40%	10.78%	11.12%	10.57%	10.98%	10.71%	10.27%	9.71%	10.41%	10.26%	10.17%	10.03%	9.79%
Wisconsin Power and Light Company	10.22%	11.06%	10.75%	10.71%	10.66%	10.05%	8.69%	10.33%	10.48%	9.97%	10.17%	9.99%	9.84%
Wisconsin Public Service Corporation	10.31%	10.71%	11.60%	11.84%	9.93%	8.26%	9.92%	9.46%	10.20%	10.13%	10.72%	10.66%	10.27%

Average of Annual Averages, 2011-2022	8.44%
Consumers Energy Average, 2011-2022	10.45%
Average of all Returns, 2018-2022	8.56%
Consumers Energy Average, 2018-2022	10.07%

*Blank spaces denote missing data for that year

Equity Risk Premium Estimates

a) Damodaran[1]	**4.38%**
b) IESE[2]	5.7% market risk premium plus 3.84%[3] risk-free rate = **9.54%**
c) Kroll[4]	**5.5%**
Average	**6.47%**

[1] Aswath Damodaran. "Price and Value to Book Ratio by Sector (US)," https://pages.stern.nyu.edu/~adamodar/New_Home_Page/home.htm. Accessed August 2023.

[2] Pablo Fernandez, Teresa García De Santos and Javier Fernandez Acin. Survey: Market Risk Premium and Risk-Free Rate Used for 95 Countries in 2023, April 17, 2023. Available at SSRN: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4407839.

[3] Exhibit A-14 (TAW-1), Schedule D-5, page 3.

[4] Carla Nunes, James P. Harrington, Anas Aboulamer and Roger J. Grabowski, FASA. "Kroll Recommended U.S. Equity Risk Premium and Corresponding Risk-Free Rates to be Used in Computing Cost of Capital: January 2008 – Present." Kroll LLC, June 30, 2023. https://www.kroll.com/en/insights/publications/cost-of-capital/recommended-us-equity-risk-premium-and-corresponding-risk-free-rates

CAPM Analysis

a)	b)	c)	d)
Equity Risk Premium [1]	Risk-Free Rate [2]	Beta [3]	ROE [4]
6.47%	3.84%	0.8	9.01%

[1] Exhibit MEC-9.
[2] Exhibit A-14 (TAW-1), Schedule D-5, page 3.
[3] Value Line beta for CMS.
[4] = b + (a*c)

Long-Term Growth Rate Sources

Nominal GDP growth, 2023-2032[1]	**4.20%**
Real GDP growth, 2023-2032[2]	1.90%
Inflation (GDP price index)[3]	2.20%

[1] Congressional Budget Office. *The 2023 Long-Term Budget Outlook*. June 2023. https://www.cbo.gov/publication/59331#_idTextAnchor057.

[2] Ibid.

[3] Ibid.

Discounted Cash Flow Analysis

	(a)[1]	(b)[2]	c)[3]	d)[4]	e) [5]	f) [6]
Company	Price	Dividends	Yield	Analyst DPS Growth	Long-Term Growth Rate	Expected Return on Common Equity
Alliant Energy Corporation	54.9645	1.71	3.11%	6.00%	4.20%	8.7510989820702500%
Ameren Corporation	88.3695	2.36	2.67%	7.10%	4.20%	9.1906046769530200%
DTE Energy Company	117.2235	3.54	3.02%	1.50%	4.20%	5.0598722952309000%
Entergy Corporation	108.6395	4.04	3.72%	5.90%	4.20%	9.2787210913157700%
Evergy, Inc.	62.6415	2.29	3.66%	6.60%	4.20%	9.7757234421270300%
Portland General Electric Company	48.3485	1.81	3.74%	4.80%	4.20%	8.4236528537596800%
WEC Energy Group, Inc.	94.568	2.91	3.08%	7.10%	4.20%	9.5971508332628400%
Xcel Energy Inc.	70.2945	1.95	2.77%	6.00%	4.20%	8.4140434884663800%
					Average	**8.56%**

[1] Exhibit A-14 (TAW-1), Schedule D-5, page 5.
[2] Ibid.
[3] b) divided by a).
[4] Exhibit A-14 (TAW-1), Schedule D-5, page 5.
[5] Exhibit MEC-11.
[6] = c) + 0.8*d) + 0.2*e).

STATE OF MICHIGAN

BEFORE THE MICHIGAN PUBLIC SERVICE COMMISSION

In the matter of the application of **CONSUMERS ENERGY COMPANY** for authority to increase its rates for the generation and distribution of electricity and for other relief.	Case No. U-21389

PROOF OF SERVICE

On the date below, an electronic copy of **Direct Testimony and Exhibits of Matthew Bandyk on behalf of Michigan Environmental Council, Natural Resources Defense Council, Sierra Club, and Citizens Utility Board of Michigan (MEC-6 through MEC-12)** was served on the following:

Name/Party	E-mail Address
Administrative Law Judge Hon. Sally Wallace	wallaces2@michigan.gov
Consumers Energy Company Michael C. Rampe Anne M. Uitvlugt Bret A. Totoraitis Gary A. Gensch, Jr. Robert W. Beach Spencer A. Sattler Theresa A.G. Staley	mpscfilings@cmsenergy.com michael.rampe@cmsenergy.com anne.uitvlugt@cmsenergy.com bret.totoraitis@cmsenergy.com gary.genschjr@cmsenergy.com robert.beach@cmsenergy.com spencer.sattler@cmsenergy.com theresa.staley@cmsenergy.com
Michigan Attorney General Celeste R. Gill	ag-enra-spec-lit@michigan.gov gillc1@michigan.gov
Michigan Public Service Commission Staff Amit Singh Monica M. Stephens Nicholas Taylor Lori Mayabb	singha9@michigan.gov stephensm11@michigan.gov taylorn10@michigan.gov mayabbl@michigan.gov
Michigan Cable Telecommunications Association Sean P. Gallagher	sgallagher@fraserlawfirm.com

[signature page to follow]

The statements above are true to the best of my knowledge, information and belief.

OLSON, BZDOK & HOWARD, P.C.
Counsel for MEC, NRDC, SC & CUB

Date: August 29, 2023

By: 
Digitally signed by Breanna Thomas
DN: cn=Breanna Thomas, o=Olson, Bzdok & Howard, PC, email=breanna@envlaw.com, c=US
Date: 2023.08.29 15:01:19 -04'00'

Breanna Thomas, Legal Assistant
420 E. Front St.
Traverse City, MI 49686
Phone: 231/946-0044
Email: breanna@envlaw.com