### CLARK HILL

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April 24, 2015

#### VIA ELECTRONIC CASE FILING

Ms. Mary Jo Kunkle Executive Secretary Michigan Public Service Commission 6545 Mercantile Way Lansing, Michigan 48909-7721

#### Re: MPSC Case No. U-17735: Consumers Energy Company's Electric General Rate Case (2015)

Dear Ms. Kunkle:

Enclosed for filing are the *Testimony and Exhibits of James T. Selecky on behalf of ABATE* and the *Testimony and Exhibits of Christopher C. Walters on behalf of ABATE* and a *Proof of Service* in the above case.

Very truly yours,

CARK HILL Monthly signed by: Robert A. W. Strong DN: CN = Robert A. W. Strong C = US O = Clark A. W. Hill PLC Date: 2015.04.24 12:31:27 -Strong W. S 05 Ag

RAWS:111m

cc w/encls: Parties of Record

#### **STATE OF MICHIGAN**

#### **BEFORE THE MICHIGAN PUBLIC SERVICE COMMISSION**

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

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Case No. U-17735

#### **PROOF OF SERVICE**

STATE OF MICHIGAN COUNTY OF OAKLAND

Robert A. W. Strong, being first duly sworn, deposes and says that on April 24, 2015, he did cause to be served the **Direct Testimony and Exhibits of James T. Selecky on behalf of ABATE** and the **Direct Testimony and Exhibits of Christopher C. Walters on behalf of ABATE**, as well as this **Proof of Service**, in the above docket, via electronic mail, to the persons identified on the attached service list.

Robert A. W. Strong Robert A. W. Strong

Digitally signed by: Robert A. W. Strong DN: CN = Robert A. W. Strong C = US O = Clark Hill PLC Date: 2015.04.24 12:31:46 -05'00'

this 24<sup>th</sup> day of April, 2015. Linda McCauley DN: CN = Linda McCauley C Eus O = Clark Hill PLC Date: 2015.04.24 12:32:07 -Ostardy Public Oakland County, MI My Commission expires: October 18, 2019 Acting in Oakland County

Subscribed and sworn to before me

#### SERVICE LIST MPSC Case No. U-17735

#### Administrative Law Judge

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#### STATE OF MICHIGAN

#### **BEFORE THE MICHIGAN PUBLIC SERVICE COMMISSION**

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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-17735

Direct Testimony and Exhibits of

**Christopher C. Walters** 

On behalf of

Association of Businesses Advocating Tariff Equity ("ABATE")

April 24, 2015



Project 10013

#### **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-17735

#### **Direct Testimony of Christopher C. Walters**

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#### 1 Q PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

- 2 A Christopher C. Walters. My business address is 16690 Swingley Ridge Road,
- 3 Suite 140, Chesterfield, MO 63017.

#### 4 Q WHAT IS YOUR OCCUPATION?

- 5 A I am a consultant in the field of public utility regulation at Brubaker & Associates, Inc.,
- 6 energy, economic and regulatory consultants.

#### 7 Q PLEASE DESCRIBE YOUR EDUCATIONAL BACKGROUND AND EXPERIENCE.

8 A This information is included in Appendix A to my testimony.

#### 9 Q ON WHOSE BEHALF ARE YOU APPEARING IN THIS PROCEEDING?

- 10 A I am testifying on behalf of the Association of Businesses Advocating Tariff Equity
- 11 ("ABATE"). ABATE's members are customers of Consumers Energy Company
  12 ("Consumers" or "Company").

#### 1 Q WHAT IS THE PURPOSE OF YOUR TESTIMONY?

2 A My testimony will address Consumers' proposed rate of return on common equity

3 ("ROE").

#### 4 Q PLEASE BRIEFLY SUMMARIZE YOUR CONCLUSIONS AND

#### 5 **RECOMMENDATIONS IN THIS PROCEEDING.**

- 6 A My conclusions and recommendations are as follows:
- Consumers' proposed ROE of 10.70% is excessive and significantly exceeds its current cost of equity.
- 9
  2. Consumers' proposed ROE of 10.70% is more than 100 basis points higher than current industry average authorized ROEs. The average authorized ROEs for electric utilities in 2013 and 2014 have been 9.80% and 9.76%, respectively.
  12 The average authorized ROE for the first guarter of 2015 was 9.67%.
- Mr. Rao's Capital Asset Pricing Model ("CAPM") is overstated for two reasons.
   First, his projected risk-free rate of 4.36% is outdated. Second, his use of the historical risk-free rate of 5.09% for the period 1926 through 2013 is inappropriate and inconsistent with the forward nature of the CAPM analysis. In the current market, a projected rate of 3.70% through 2016 should be used in the CAPM analysis.
- 194.Mr. Rao's Empirical Capital Asset Pricing Model ("ECAPM") is flawed and20overstated. His use of an adjusted beta in his ECAPM analysis is not supported21by academic research. The ECAPM was designed to use an unadjusted, or22raw, beta estimate.
- 5. Projected Treasury yields have changed significantly since Mr. Rao performed his risk premium analysis, rendering his projected yield of 4.36% stale and outdated. Using the most recent projected Treasury yield of 3.70% by consensus economists is appropriate.
- 6. Correcting the deficiencies in Mr. Rao's studies (use of historical risk-free rates, taking into consideration national average authorized returns and correcting severe deficiencies in his CAPM, and risk premium models) shows that a fair and balanced ROE for Consumers is in the range of 9.00% to 10.00%, with a midpoint of 9.50%.
- I recommend an ROE of 9.60% for Consumers. My recommended ROE of
   9.60% is in-line with the current trend of authorized ROEs being awarded to
   electric utilities and is within my recommended range. This is slightly higher
   than the midpoint of my recommended range of 9.50%.

#### 1 Return on Equity

#### 2 Q WHAT ROE IS CONSUMERS PROPOSING FOR THIS PROCEEDING?

A Consumers is proposing an ROE of 10.70% based on the testimony of Consumers'
witness Mr. Dhenuvakonda Rao. His proposed ROE is the midpoint of his
recommended range of 10.50% to 10.90%.<sup>1</sup>

#### 6 Q WHAT IS THE COMPANY'S CURRENT AUTHORIZED ROE?

A On May 15, 2013, the Commission issued its Final Order approving a Settlement
Agreement filed by the Parties in Consumers' last rate case (Michigan Public Service
Commission, Case No. U-17087), which included an authorized ROE of 10.30%.
This is the same ROE that was authorized by the Commission on June 7, 2012 in
Case No. U-16794

#### 12 Q ARE MARKET COSTS OF CAPITAL LOWER TODAY THAN THEY WERE IN 13 CONSUMERS' LAST RATE CASE?

A Yes. Market costs of capital have declined since Consumers' last rate case. This is
illustrated by a comparison of bond yields in this case and the last case. In Table 1, I
show the change in utility bond yields from May 2013 to March 2015.

<sup>&</sup>lt;sup>1</sup>Rao Direct Testimony at 4.

TABLE 1
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#### Capital Costs – Consumers' Rate Cases

Description	Current Case <sup>1</sup>	Case No. U-17087	Case No. <u>U-16794</u>	Yield <u>Change</u>
"A" Rated Utility Bond Yields "Baa" Rated Utility Bond Yields	3.67% 4.45%	4.10% 4.61%	4.31% 5.04%	-0.64% -0.59%
13-Week Period Ending	4/3/2015	5/15/2013	6/7/2012	
Source: <sup>1</sup> credittrends.moodys.com.				

As shown in Table 1, the current market cost of debt for "A" and "Baa" rated utility bonds have decreased in this case relative to the last rate case in which Consumers' ROE was established. The current "A" rated utility bond yield is 64 basis points lower now. Also, the current "Baa" utility bond yield is 59 basis points lower than during Consumers' last rate case. This decline in utility bond yields suggests that Consumers' cost of capital is lower now than it was in its last rate case.

#### 7

#### Q HAVE REGULATORY COMMISSIONS RECOGNIZED THE DECLINE IN CAPITAL

#### 8 COSTS IN THE AUTHORIZED RETURNS ON EQUITY?

9 A Yes. Table 2 shows the average authorized ROE for electric utilities over the last five 10 years. As Table 2 shows, there has been a downward trend in the level of authorized 11 returns on equity by regulatory commissions. Regulators have appropriately captured 12 the electric utility industry and capital market trends in authorizing lower returns on 13 equity. In fact, since 2012, authorized returns on equity for electric utilities have 14 continued to decline well below 10%.

	TABLE 2	
	Electric Utiliti Authorized R	ies' <u>OE</u>
Line	Year	ROE
1 2 3 4 5 6	2010 2011 2012 2013 2014 2015*	10.34% 10.30% 10.01% 9.80% 9.76% 9.67%
Source: SNL Finan *Through Ma	ucial, Downloaded	l on April 1, 2015.

1 The Company's proposed ROE is substantially overstated as evidenced by 2 Industry authorized ROEs. It does not reflect the current market and regulatory 3 environment, and unnecessarily increases Consumers' claimed revenue deficiency in 4 this proceeding. If the Company's proposed ROE of 10.70% is adopted, the resulting 5 electric rates will be unjust and unreasonable.

6 In fact, the U.S. Supreme Court has held that a just and reasonable ROE 7 should be "commensurate with returns on investments in other enterprises having 8 corresponding risks . . . [and] sufficient to assure confidence in the financial integrity 9 of the enterprise, so as to maintain its credit and to attract capital.<sup>2</sup> An allowed ROE 10 or capital structure in excess of that standard exploits consumers and produces tariff 11 rates that are not just and reasonable.

<sup>&</sup>lt;sup>2</sup>Federal Power Comm'n v. Hope Natural Gas Co., 320 U.S. 591, 603 (1944); Bluefield Water Works & Improvement Co. v. Public Serv. Comm'n. of W. Va., 262 U.S. 679, 692-93 (1923).

#### 1 Regulated Utility Industry Market Outlook

#### 2 Q PLEASE DESCRIBE REGULATED UTILITIES' CREDIT RATING OUTLOOK.

- 3 A Over the recent past, the utility industry's credit ratings have improved and the credit 4 outlook has improved and is now Stable. Further, credit analysts have observed that 5 utilities currently have strong access to capital at attractive pricing (i.e., low capital
- 6 costs).
  - Standard & Poor's ("S&P") recently published a report titled "The Outlook For
- 8 U.S. Regulated Utilities Remains Stable On Increasing Capital Spending And Robust
- 9 Financial Performance." S&P noted the following:

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#### Capital Spending Will Grow

- 11 Consistent with the trend over the past 10 years, we expect that utility 12 company capital spending will continue to grow (see related article "U.S. Regulated Electric Utilities' Annual Capital Spending Is Poised 13 14 To Eclipse \$100 Billion," July 29, 2014). We project that capital 15 spending will reach an all-time high of about \$95 billion in 2014, 16 reflecting growing funding needs for environmental compliance 17 projects and new transmission investments. For 2015-2016, we 18 expect capital spending overall to slow somewhat, but transmission 19 investments to continue to grow to address reliability, accommodate 20 new generation, and integrate renewable energy projects into the grid. The slowdown in the next few years is due to environmental 21 22 compliance-related capital spending that reflects the completion of 23 of [sic] the necessary projects for much of coal-fired generation to 24 meet the existing U.S. Environmental Protection Agency's (EPA) 25 Mercury and Air Toxics Standards (MATS). Beginning in 2017, we expect the industry's generation and overall capital spending needs to 26 27 pick up significantly, consistently exceeding \$100 billion annually. This 28 hike reflects some utilities' decisions to proactively boost lower carbon-29 intensive generation capital spending in order to meet the EPA's 30 recently announced proposed carbon pollution rules.
- 31 \* \* \*

#### 32 INDUSTRY RATINGS OUTLOOK: STABLE

33Our outlook on the regulated utility sector, which encompasses34electric, natural gas, and water companies, is stable with a slightly35positive bias, with about 20% of companies in the sector having a36positive outlook. The positive bias is not industry wide, rather it is the37result of certain issuers undertaking actions that can benefit their credit

1 profiles, a trend that has been making its way through the industry over 2 the past few years. We have seen companies, when opportune, 3 endeavor to reduce business risk while maintaining or slightly 4 enhancing their financial profiles. Overall, our fundamental view of the 5 sector is a stable one, supported by the essential nature of the 6 services provided, making the companies somewhat insensitive to 7 economic fluctuations; the rate-regulated nature of the business, which 8 lends a measure of stability and predictability to cash flow generation; 9 and the generally supportive posture of regulators toward cost 10 recovery of incremental investments facilitated by the ongoing low 11 power prices.<sup>3</sup>

- 12 Similarly, Fitch states:
- 13 Stable Sector Outlook: Fitch Ratings' stable outlook for the U.S. Utilities, Power and Gas (UPG) sector reflects modest recovery in 14 15 electricity sales after three years of stagnant growth. The recently observed positive momentum in industrial sales could sustain in line 16 with the broader economic recovery and potentially spill over to other 17 18 sectors. This is welcome news for electric utilities wrestling with structural headwinds posed by energy efficiency and distributed 19 20 generation, and pressure on retail prices as costs are spread over 21 declining units of sales.
- 22 \* \* \*
- 23 Divergence in Subsector Rating Outlook

24 The outlook for electric and gas utilities and utility parent companies is 25 stable given the backdrop of gradual economic recovery, low inflation and subdued interest rates, and stable commodity prices. Issuer 26 27 Default Ratings should remain on the cusp of 'BBB+' to 'A-', with more 28 than 90% of debt issuances being rated in the 'A' category. Long-term 29 debt instrument ratings of Fitch's entire universe of regulated utilities 30 carry investment-grade ratings, a testament to the sound credit profile 31 of the industry. The outlook for gencos is negative, reflecting poor 32 sector fundamentals, including weak electricity demand and low power 33 prices. Affiliated gencos generally have investment-grade ratings and 34 may be under greater rating pressure. Recent consolidation among 35 independent gencos has added scale and diversity, and is a credit positive.4 36

37 Moody's recent comments on the U.S. Utility Sector state as follows:

<sup>&</sup>lt;sup>3</sup>*Standard & Poor's RatingsDirect*: "Industry Report Card: The Outlook For U.S. Regulated Utilities Remains Stable On Increasing Capital Spending And Robust Financial Performance," December 16, 2014 at 4, emphasis added.

<sup>&</sup>lt;sup>4</sup>*FitchRatings*: "2015 Outlook: U.S. Utilities, Power and Gas," December 16, 2014 at 1-2, emphasis added.

1	Our out	look for	the U	IS regulated	utilities	industry is sta	<u>able</u> . This
2	outlook	reflects	our	expectation	for the	e fundamental	business
3	condition	ns in the	indus	try over the r	next 12 f	o 18 months.	

» Regulatory support is the most important driver of our stable outlook. Our stable outlook for the US regulated utility industry is based on our expectation that regulators will continue to help utilities recover costs and maintain stable cash flow, such that the ratio of cash flow from operations (CFO) to debt will remain close to 20%, on average, for the industry.<sup>5</sup>

#### 10 Q PLEASE DESCRIBE UTILITY STOCK PRICE PERFORMANCE OVER THE LAST

#### 11 SEVERAL YEARS.

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A As shown in the graph below, the Edison Electric Institute ("EEI") has tracked utility stock price performance compared to the market. The EEI data shows its Utility Index has outperformed the market in downturns and trailed the market during recovery. This supports my conclusion that utility stock investments are regarded by market participants as a moderate- to low-risk investment.



<sup>&</sup>lt;sup>5</sup>*Moody's Investors Service*: "2015 Outlook – US Regulated Utilities: Regulatory Support Drives Our Stable Outlook," December 15, 2014 at 1, emphasis added.

# 1QWHAT ARE THE IMPORTANT TAKEAWAY POINTS FROM THIS ASSESSMENT2OF UTILITY INDUSTRY CREDIT AND INVESTMENT RISK OUTLOOKS?

A Credit rating agencies consider the regulated utility industry to be stable and also believe investors will continue to provide an abundance of capital to support utilities' large capital programs at moderate capital costs. This supports the continued belief that utility investments are generally regarded as safe-haven or low-risk investments, and the market embraces low-risk investments, such as utility investments. The demand for low-risk investments will provide funding for regulated utilities in general.

9 Consumers' Investment Risk

#### 10 Q PLEASE DESCRIBE THE MARKET'S ASSESSMENT OF THE INVESTMENT RISK

#### 11 OF CONSUMERS.

- 12 A The market assessment of Consumers' investment risk is best described by credit
- 13 rating analysts' reports. Consumers' current senior secured credit ratings from S&P
- 14 and Moody's are "A" and "A1," respectively, with a "Stable" outlook from both rating
- 15 agencies.
- 16 Specifically, S&P states the following:

#### 17 Business Risk: Excellent

18 We view Consumers Energy's business risk as "excellent" 19 incorporating our assessment of the regulated utility industry risk as 20 "very low" and country risk as "very low" based on the company's focus 21 on U.S. operations and markets. The business risk profile reflects a 22 competitive position of "excellent," which incorporates the utility's lower-risk, rate-regulated electric and natural gas distribution 23 24 operations that provide essential services. The company's business 25 risk profile is bolstered by the strength of regulatory support in 26 Michigan where the utility has been able to earn, on average, its allowed return on equity by managing costs, filing forward-looking rate 27 28 cases, using a six-month self-implementation, and various riders that 29 enhances cash flow predictability. The Michigan economy has 30 generally been improving since the recession and we continue to

expect that economic growth within the utility's service territories will
 generally perform slightly better than the U.S. average.

#### 3 Financial Risk: Significant

- 4 We view Consumers' financial risk profile as "significant" using our 5 medial volatility table. We apply the medial volatility table given that 6 the company's cash flows mostly come from vertically integrated 7 electric operations. Given various rate mechanisms that allow for 8 timely cost recovery, coupled with effective cost controls, we expect 9 Consumers' key measures of bondholder protection to remain 10 commensurate with our significant financial risk profile category.<sup>6</sup>
- 11 S&P views Consumers as being a low-risk utility. The ratemaking factors such as six
- 12 month self-implementation of rates, forward looking test years and automatic
- 13 adjustment clauses reduce its risk. These factors should be reflected in any
- 14 authorized ROE.

#### 15 Q HAS S&P TAKEN A RATINGS ACTION ON CONSUMERS RECENTLY?

- 16 A Yes. On December 3, 2014, S&P announced that it will be upgrading CMS Energy
- 17 Corp. and its utility subsidiary, Consumers.
- 18 Specifically, S&P states the following:

#### 19 Overview:

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- We are raising our issuer credit ratings on CMS Energy Corp. and its utility subsidiary Consumers Energy Co. to 'BBB+' from 'BBB' based on the continued focus on the regulated utility business model and supportive cost recovery that we believe will support profit stability and strengthening financial measures.
- We also are raising our ratings on all Consumers' first-mortgage bonds to 'A' from 'A-'. The '1+' recovery ratings on the first-mortgage bonds remain unchanged.
- The rating outlooks are stable based on our expectation that CMS
   Energy Corp. will continue to effectively manage its regulatory risk,
   thereby supporting consistent operating results and a financial
   profile in line with expectations at the current ratings.

<sup>&</sup>lt;sup>6</sup>*Standard & Poor's RatingsDirect*: "Consumers Energy," April 15, 2015 at 3-4.

#### 2 Rationale:

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4 The upgrade on CMS Energy and Consumers Energy reflects our 5 assessment of CMS Energy's improved business risk profile stemming 6 from its continuing strategy to focus on its regulated utilities, effective 7 management of regulatory risk, and strengthening cost recovery through the regulatory process. Profitability has subsequently 8 9 stabilized and financial measures have strengthened. We expect that 10 CMS Energy will continue to favor moderate financial policies that support the company's credit measures.<sup>7</sup> 11

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#### 12 Q HOW DOES THE BOND RATING OF CONSUMERS COMPARE TO MR. RAO'S

#### 13 PROXY GROUP?

14 А As shown on his Exhibit A-9 (DVR-1), page 1, Mr. Rao compares Consumers' bond 15 ratings from S&P and Moody's to that of the proxy group. On his exhibit, he shows Consumers as having bond ratings from S&P and Moody's of 'A-' and 'A1,' 16 respectively. On his exhibit, he shows the average proxy group credit rating from 17 18 S&P and Moody's being 'BBB+' and 'A3,' respectively. Since this exhibit has been 19 prepared, Consumers has received a bond rating upgrade from Standard & Poor's as 20 described above. Their bond rating from S&P is now 'A' rather than the 'A-' as 21 indicated on Mr. Rao's exhibit. Consumers' bond ratings from S&P and Moody's are 22 both two notches higher than the average bond rating assigned to the proxy group 23 companies. This is indicative of lower overall investment risk.

<sup>&</sup>lt;sup>7</sup>*Standard and Poor's RatingsDirect.* "Research Update: CMS Energy Corp. and Subsidiary Issues Credit Rating Raised to 'BBB+, 'Outlook Stable; Other Ratings Action Taken.'' December 3, 2014. [Emphasis added.]

#### 1 Q DO YOU HAVE ANY FURTHER COMMENTS IN REGARDS TO CONSUMERS' 2 LOW OPERATING RISK?

A On January 7, 2014, S&P issued a revised assessment of the regulatory environment
 rankings for investor-owned utilities. The revised regulatory environment
 methodology assesses regulatory jurisdictions on both quantitative and qualitative
 factors, focusing on four main categories:

- The stability of the regulatory framework in the jurisdiction;
- Ratemaking procedures;
- 9 Political influence; and
- 10 Financial stability.

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In its revised assessment, S&P used a five notch scale to rank the regulatory
jurisdictions. The revised rankings are as follows:

- Strong;
- Strong Adequate;
- Adequate;
- Adequate Weak;
- 17 Weak.

18 The vast majority of regulatory jurisdictions fall under the "strong adequate" 19 category, two jurisdictions fall under the "adequate" category and 10 jurisdictions fall 20 under the "strong" category. The Michigan regulatory jurisdiction is ranked as 21 "strong," the highest ranking under the revised methodology.

Similarly, Regulatory Research Associates ("RRA"), a division of SNL
Financial, maintains three rating categories for regulatory climates: Above Average,
Average, and Below Average, where within these categories the numbers from 1 to 3
maintain relative position, with 1 being the strongest and 3 being the weakest. The

- 1 evaluations are assigned from an investor prospective and indicate relative regulatory
- 2 risk and reflect the quality of earnings as a result of regulatory, legislative, and court
- 3 decisions.
- 4 Specifically, RRA states:

#### 5 RRA Evaluation

6 Despite the pressures presented by a lackluster (but notably 7 improving) state economy, Michigan regulation has been constructive over the last few years. In the rate cases that have been decided 8 9 during this time frame, the PSC has generally adopted equity returns that were slightly or modestly above the prevailing industry averages. 10 11 Several innovative practices have been in place for the last few years: 12 a streamlined rate case process; a framework for the utilization of 13 forecasted test years; the self-implementation of interim rate increases 14 to reduce regulatory lag; and, a PSC review process for significant new 15 infrastructure projects that permits a cash return on construction work 16 in progress and reduces the uncertainty of cost recovery. An electric 17 restructuring framework implemented in 2000 provided the utilities a 18 reasonable opportunity to recover stranded costs; this process has 19 been completed. Current statutes limit the amount of sales that may 20 be procured competitively, and recent attempts to raise this limit have 21 not been successful. Electric utilities have retained their generation 22 assets, and customers who do not select a competitive supplier 23 receive service on a regulated, traditional cost-of-service basis. 24 Adjustment mechanisms are in place for fuel costs for customers 25 served under bundled service. While the PSC had approved revenue 26 decoupling mechanisms for certain electric utilities, a 2012 Court of 27 Appeals ruling overturned the Commission. In the gas industry, the 28 major local distribution companies have instituted programs that allow 29 all retail customers to choose their gas supplier, and modest 30 small-customer switching has occurred. The gas companies utilize 31 periodic gas cost recovery mechanisms, and the PSC has authorized 32 revenue decoupling mechanisms for certain gas utilities. We continue 33 to accord Michigan regulation an Average/1 rating.<sup>8</sup>

#### 34 Q WHAT ARE THE IMPORTANT TAKEAWAYS FROM YOUR REVIEW OF THE

#### 35 OVERALL INVESTMENT RISK OF CONSUMERS?

- 36 A As described in the reports above, Consumers has low business risk and it operates
- in a credit supportive regulatory environment. As described above, Consumers has

<sup>8</sup>RRA, Regulatory Focus: "Michigan Regulatory Review – February 13, 2014." [Emphasis added.]

lower investment risk compared to the proxy group when credit ratings are
 appropriately considered. Therefore, the Commission should continue to reflect the
 Company's low risk in the current regulatory proceeding and authorize a fair ROE that
 will balance the risk of the investors and ratepayers.

#### 5 Response to Consumers' Witness Mr. Dhenuvakonda Rao

## Q PLEASE DESCRIBE MR. RAO'S METHODOLOGY SUPPORTING HIS ROE 7 RECOMMENDATION.

A Mr. Rao supported his ROE recommendation of 10.70% using a discounted cash flow
model ("DCF"), a traditional and ECAPM, a RP model and a comparable earnings
analysis. He performed these models on an electric utility proxy group of
23 companies.

#### 12 Q PLEASE SUMMARIZE YOUR RESPONSE TO MR. RAO'S PROPOSED ROE 13 ESTIMATE FOR CONSUMERS.

A As shown below in Table 3, Mr. Rao is proposing an ROE for Consumers of 10.70%.
Mr. Rao's recommendation is excessive. With reasonable and appropriate adjustments to Mr. Rao's analyses, his own studies would support an ROE below 10%.

Summary of	TABLE 3 of Rao's ROE Estimate	<u>s</u>
Description	<u>Average Rao ROE</u> (1)	Adjusted (2)
CAPM (Projected) CAPM (Historical) Average	9.39% 10.13%	9.39% <u>8.74%</u> 9.07%
ECAPM (Projected) ECAPM (Historical) Average	9.81% 10.55%	9.01% <u>8.35%</u> 8.68%
Risk Premium (Projected) Risk Premium (Historical) Average	9.91% 10.65%	9.25% <u>10.65%</u> 9.95%
DCF Comp. Earnings	8.94% 10.06%	8.94% Reject
Recommended Range Recommended ROE	10.50% - 10.90% 10.70%	9.00% - 10.00% 9.6%
Source: Exhibit A-9 (DVR-1).		

#### 1 Q DO MR. RAO'S FINDINGS AS SHOWN IN TABLE 3, COLUMN 1, ABOVE, 2 SUPPORT HIS RECOMMENDED ROE OF 10.70%?

A No. Of the average cost of equity estimates listed above, none of them are equal to
or greater than 10.70%. In fact, four of his average cost of equity estimates fall below
10%, one of which is even below 9%. Hence, without even correcting some of the
deficiencies in Mr. Rao's studies, an ROE based on his average cost estimates listed
above is below 10%. With sound and reasonable corrections to Mr. Rao's studies, a
cost of equity below 10% can be supported for Consumers in this proceeding.

# 1 Q DOES MR. RAO EXPRESS CONCERNS ABOUT THE RELIABILITY OF 2 MEASURING A UTILITY'S ROE BASED ON TRADITIONAL COST OF EQUITY 3 STUDIES IN THIS CASE?

A Yes. At pages 14, 16-17 and 21-22 of his Direct Testimony, Mr. Rao states he
discounts the results of many of his studies because they are produced through some
of the historically lowest government induced interest rates. He believes that this
government intervention makes it difficult to interpret the quantitative models and
estimate a utility's cost of equity. Based on this assessment, he believes using a
lower CAPM and Risk Premium return will understate the cost of equity for utility
companies.

#### 11 Q PLEASE RESPOND.

12 А I appreciate Mr. Rao's concern about government stimulus efforts in long-term 13 interest rates. These Federal Reserve efforts have driven down interest rates and 14 have maintained relatively low long-term interest rates for several years. Although 15 the Federal Reserve's intervention in long-term interest rate markets has recently 16 ended, the impact of this intervention on long-term interest rates is neither well 17 known, nor capable of being accurately predicted. Indeed, interest rates initially 18 increased in anticipation of the termination of these Federal Reserve stimulus 19 activities. It is simply not known how much, if any, long-term interest rates will 20 increase from current levels, or whether they have already fully accounted for the 21 termination of the Federal Reserve's quantitative easing program. Nevertheless, I do 22 agree that this Federal Reserve program introduced risk or uncertainty in long-term 23 interest rate markets. Because of this uncertainty, caution should be taken in 24 estimating Consumers' current return on common equity in this case.

However, all market indicators and authorized returns being awarded by other
 commissions suggest that utilities' overall cost of capital today is at a historically low
 level, and will remain at historically low levels for the foreseeable future.

Because of the market's preference and demand for stable low-risk investments, utility security prices have been bid up, and their overall cost of capital has declined. As such, it would be unfair to customers to ignore this historically low cost of capital to utilities in developing the utilities' cost of service and rates.

8 It is the duty of the Commission to provide the benefit of today's low capital 9 costs to customers. If the market cost of capital experiences an increase, the 10 Company can file a rate case seeking authority for an increased ROE commensurate 11 with the experienced increase in the cost of capital. The customers have no other 12 option to seek a lower return except for when the Company seeks a change in rates 13 through a formal rate proceeding.

Ignoring today's current low cost of capital that is expected to continue
through the rate period would be an unjust and unreasonable burden on the
Company's customer base.

17 Q IS THERE CERTAINTY THAT THE CONCLUSION OF THE FED'S QUANTITATIVE
 18 EASING POLICY WILL RESULT IN AN INCREASE IN UTILITIES' OVERALL RATE
 19 OF RETURN?

A No. The Federal Reserve tapered its quantitative easing seven times in 2014 ending its asset purchasing program on October 29, 2014 and interest rates for utility securities have not increased, but rather have been stable to slightly lower. This is shown on Exhibit AB-1. Treasury yields, as well as interest rates for utility bonds rated "Baa" and "A," have actually decreased in the 13-week period average ending April 3, 2015, compared to the 26-week average ending April 3, 2015. This is significant because the final tapering event ending the Federal Reserves' quantitative easing program happened during the 26-week period.

4 In these steps, the Federal Reserve reduced its procurement of collateralized 5 mortgage agreements and Treasury securities from \$85 billion a month prior to 6 December 2013, down to nothing currently. Despite the ending of the Federal 7 Reserve's quantitative easing program, utilities' overall rate of return has not increased. In fact, 30-year Treasury yields have fallen 139 basis points, and "Baa" 8 9 and "A" rated utility bond yields have fallen 81 (5.25% - 4.44%) and 10 115 (4.80% - 3.65%) basis points, respectively, since December 13, 2013, the Friday 11 before the Federal Reserve's first tapering announcement.

While the Federal Reserve's quantitative easing did create uncertainty about future interest rates, it is not proper to interpret the risk as a certainty that interest rates will increase since the Federal Reserve's quantitative easing has been terminated.

#### 16 Mr. Rao's CAPM Analysis

#### 17 Q PLEASE DESCRIBE MR. RAO'S CAPM ANALYSIS.

A The results of Mr. Rao's CAPM analysis are detailed on Exhibit A-9 (DVR-1), page 3.
Mr. Rao performed two different CAPM calculations.

In his calculations, Mr. Rao utilized a combination of two different risk free rates. Of his two risk free rate estimates, one of them is historical and one is projected. The historical risk free rate is measured over the 1926 through 2013 time period (5.09%). His forward looking risk free rate of 4.36% is the average of Global Insight US Economic Outlook and Blue Chip Financial Forecasts. His risk premium estimate measures the historical risk premium over the
 1926 through 2013 time period (6.96%).

The results of his CAPM analysis range from 9.39% (projected) to 10.13% (historical). However, Mr. Rao only relies upon the highest estimate of 10.13%. The return estimate of 10.13% relies on the historical risk free rate and historical risk premium. In determining his cost of equity estimate for Consumers, Mr. Rao disregarded the CAPM result utilizing the forward looking risk free rate.

#### 8 Q WHAT ISSUES DO YOU HAVE WITH MR. RAO'S CAPM RESULTS?

9 A My major issue with Mr. Rao's CAPM results concerns his use of historical risk free 10 rates. This is wrong because the model is designed to measure the current market 11 cost of equity based on the current market environment. Mr. Rao's use of historical 12 risk-free rates fails to produce a CAPM result that measures the current, and forward 13 looking, cost of equity for Consumers.

#### 14 Q WHY DO YOU BELIEVE IT IS INAPPROPRIATE TO RELY ON HISTORICAL

#### 15 INTEREST RATES TO MEASURE THE CURRENT MARKET COST OF EQUITY?

16 А The purpose of the CAPM model is to capture the current market cost of equity, or 17 required rate of return. There is nothing current about Mr. Rao's historical measures 18 of long-term Treasury yields over his historical time period of 1926 to 2013. In fact, 19 current 30-year Treasury yields are approximately 2.6%. By using his historical risk 20 free rate of 5.09%, Mr. Rao is implying Treasury yields are going to increase by 21 approximately 250 basis points in the near term and revert to the historical mean. 22 The most recent consensus projection published in the Blue Chip Financial Forecasts 23 is predicting an average 30-year Treasury yield for the rest of year 2015 of 2.9%, and approximately 3.6% through the third quarter of 2016.<sup>9</sup> Mr. Rao's use of historical
 Treasury yields in his CAPM analysis is simply without merit, produces unreliable
 results, and should be disregarded.

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#### Q CAN MR. RAO'S CAPM ANALYSIS BE CORRECTED TO PRODUCE MORE RELIABLE RETURN ESTIMATES?

- 6 A Yes. As shown on my Exhibit AB-2, by applying the proxy group beta of 0.72 to his
- 7 risk premium estimate of 6.96%, and using Mr. Rao's projected risk free rate of 4.36%
- 8 and a more recent projected risk-free rate of 3.7%, the CAPM return estimates would
- 9 be approximately 9.39% and 8.74%, respectively, with a midpoint of 9.07%.

#### 10 Mr. Rao's Empirical CAPM ("ECAPM") Analysis

#### 11 Q PLEASE DESCRIBE MR. RAO'S ECAPM ANALYSIS. 12 А Mr. Rao relied on an ECAPM formula which is defined as follows: 13 $R_i = R_f + \alpha + B_i (R_p - \alpha)$ where: 14 $R_i$ = Required return for stock i 15 $R_f$ = Risk-free rate $R_{p}$ = Market risk premium 16 17 $B_i$ = Beta - Measure of the risk for stock $\alpha$ = Alpha of the risk-return line 18 19 In his book, New Regulatory Finance, Dr. Morin reduces this formula to its more pragmatic form to show the math that produces the alpha of 1% to 2%<sup>10</sup> as follows: 20 21 $R_i = R_f + 0.25 (R_m - R_f) + 0.75 B_i (R_m - R_f)$ where: 22 $R_i$ = Required return for stock i 23 $R_f$ = Risk-free rate 24 $R_m$ = Return on the market $B_i$ = Beta - Measure of the risk for stock 25

<sup>&</sup>lt;sup>9</sup>Blue Chip Financial Forecast, April 1, 2015 at 2.

<sup>&</sup>lt;sup>10</sup>Roger A. Morin, Ph.D., *New Regulatory Finance*, page 190.

1 In its reduced form, the ECAPM analysis modifies the traditional CAPM equation by 2 including a risk premium weighted by the utility beta, and the overall market beta of 3 1.0. The original ECAPM analysis was designed to use unadjusted regression betas. 4 In Mr. Rao's ECAPM analysis, rather than making the adjustments to the average 5 utility beta and market beta, he adds the midpoint of Dr. Morin's prescribed range of 6 alpha of 1% to 2%, or 1.5%. By choosing this alpha of 1.5%, Mr. Rao effectively uses 7 a market beta weighting factor of 0.22 and a utility beta weighting factor of 0.78, 8 rather than the 0.25 and 0.75 weighting factors shown above. The theory of the 9 ECAPM is that a beta of less than 1.0 will increase toward the market beta of 1.0 over 10 time, which is necessary because the risk of securities will be increasing over time.

#### 11 Q WHAT ISSUES DO YOU TAKE WITH MR. RAO'S ECAPM ANALYSIS?

12 A The ECAPM analysis presented by Mr. Rao should be rejected for several reasons. 13 First, the practical result of Mr. Rao's ECAPM is that the CAPM return is based on a 14 beta estimate of 0.78,<sup>11</sup> instead of his actual *Value Line* utility beta of 0.72. The 15 ECAPM analysis significantly overstates a utility company-specific risk premium for 16 use in a risk premium analysis.

17 Second, Mr. Rao incorrectly applies an adjusted beta in his ECAPM analysis. 18 The ECAPM was developed to adjust the traditional CAPM return estimate if an 19 unadjusted beta is used. Theoretical constructs of the ECAPM are based on a raw 20 beta or unadjusted betas. Using a raw beta, the ECAPM will increase the CAPM 21 return estimate when the raw betas are less than 1.0, and decrease the CAPM return 22 estimate when the raw betas are greater than 1.0.

<sup>&</sup>lt;sup>11</sup>Weighted at 78% utility proxy beta of 0.72, plus the market beta of 1.0 weighted at 22%.

#### 1 Q WHAT HAPPENS IF YOU USE AN ADJUSTED BETA IN AN ECAPM ANALYSIS?

2 Α If an adjusted beta is used in the ECAPM, you double-count the adjustment to the 3 return on equity estimate. Value Line's adjusted beta creates the same impact on a 4 CAPM return estimate as the ECAPM. Specifically, Value Line's beta adjustment 5 when used in a traditional CAPM return estimate, will increase a CAPM return 6 estimate when the beta is less than 1.0, and decrease the CAPM return estimate 7 when the beta is greater than 1.0. Therefore, an ECAPM with a raw beta produces 8 the same impact on the CAPM return estimate as does a traditional CAPM using an 9 adjusted beta estimate. Importantly, I am not aware of any research, that was 10 subjected to peer review, that supports Mr. Rao's proposed use of an adjusted beta in 11 an ECAPM study. Therefore, Mr. Rao's proposal to use an "adjusted" beta, such as 12 those provided by Value Line, in an ECAPM analysis is not based on sound 13 academic principles, is not supported by the academic community, and should be 14 rejected.

Further, using an adjusted beta in an ECAPM analysis, as Mr. Rao proposes, double-counts the increase in the CAPM return estimates for betas less than 1.0, and correspondingly would decrease the CAPM return estimates for companies that have betas greater than 1.0. Since utility companies have betas less than 1.0, Mr. Rao's application of an ECAPM with adjusted beta estimates overstates a CAPM return estimate for a utility company.

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For all these reasons, Mr. Rao's ECAPM analysis should be rejected.

#### 1 Q CAN MR. RAO'S ECAPM ANALYSIS BE MODIFIED TO PRODUCE A MORE 2 REASONABLE RESULT?

3 Α The only acceptable method of producing a reasonable ECAPM result would be using 4 raw beta estimates (i.e., unadjusted) rather than the Value Line "adjusted" beta 5 estimates. Value Line's adjusted beta estimates are produced using the equation of 6 giving 35% weight to the market beta of 1, and 67% weight to the raw beta estimate. 7 Using this estimate, Value Line's raw beta estimate based on a proxy group adjusted 8 beta estimate of 0.72 would be 0.55. Using the 0.25 and 0.75 beta weighting factors 9 described in the formula above, using a raw beta estimate of 0.55, Mr. Rao's risk-free 10 estimate of 4.36% and his market risk premium of 6.96%, produces a correct ECAPM 11 estimate of 9.01%.

Using the same weighted beta and risk premium with the most recent risk free
rate projection of 3.70% as described above produces and ECAPM estimate of
8.35%.

My ECAPM estimates range from 8.35% to 9.01%, with a midpoint of 8.68%.
this is all shown on my Exhibit AB-2.

#### 17 Mr. Rao's Risk Premium Analysis

#### 18 Q PLEASE DESCRIBE MR. RAO'S RISK PREMIUM ANALYSIS.

A Mr. Rao performed two risk premium analyses which are developed on pages 5-7 of
his Exhibit A-9 (DVR-1). His first analysis measures the historical spread of electric
utility common stock returns over utility bonds. That risk premium is measured at
4.2%. He then adds corporate utility bond spreads to a projected long-term Treasury
bond yield to develop projected utility bond yields. He then adds his 4.2% historical

risk premium to his projected utility bond yields to develop a cost of equity estimate
that ranges from 9.5% to 10.46%, with an average of 9.91%.

Mr. Rao's second risk premium analysis utilizes the same historical risk premium of electric utility common stock returns over utility bonds of 4.2%. He then measures the historical long-term government bond return as 5.09%. He then adds the same corporate utility credit spreads from his prior risk premium analysis to the historical long-term Treasury yields to develop an estimated bond yield that ranges from 6.04% to 7%. This produces a cost of equity estimate range of 10.24% to 11.2%, with an average of 10.65%.

#### 10 Q DO YOU HAVE ANY COMMENTS WITH REGARDS TO MR. RAO'S RISK 11 PREMIUM ANALYSIS?

A My primary concern with Mr. Rao's risk premium analysis is his use of stale, projected Treasury yields. His projected Treasury yields are from sources dated September 2014, and do not reflect revised expectations in the marketplace. It is important to reflect as new data as possible in order to reflect current and expected capital market conditions that influence projections by consensus economists and market participants.

## 18 Q CAN MR. RAO'S RISK PREMIUM ANALYSIS BE UPDATED TO REFLECT MORE 19 RECENT DATA?

A Yes. The most recent consensus forecast of US interest rates can be found in the
April 1, 2015 issue of *Blue Chip Financial Forecast*. At this time, consensus
economists are projecting 30-year Treasury yields to range from 3.4% to 3.7%
through the third quarter of 2016. Reflecting the more recent 30-year Treasury yield

projection of 3.7% by the consensus economists from *Blue Chip Financial Forecast*,
produces a cost of equity estimate range of 8.85% to 9.81%. The midpoint of my
updated risk premium range of 8.85% to 9.81% is 9.25% as developed on my Exhibit
AB-3. Using my updated projected risk premium analysis estimate of 9.25% and
Mr. Rao's historical risk premium cost estimate of 10.65% produces a mid-point cost
of equity estimate of 9.95%.

I should note that I do not endorse the use of developing a risk premium cost
estimate using a historical equity risk premium added to a historical bond yield. This
measure tells us nothing about the expected cost of equity over the rate period.
However, to limit issues in this case, I will not be contending its use.

#### 11 Mr. Rao's DCF Analysis

#### 12 Q PLEASE DESCRIBE MR. RAO'S DCF ANALYSIS.

A Mr. Rao performed a constant growth DCF model as part of his analysis to estimate
the cost of equity for Consumers. In his analysis, Mr. Rao relied upon an average
long-term growth rate of 4.98% and expected dividend yield of 3.9652%. The
average cost of equity estimate produced by his DCF study is 8.94% as shown on his
Exhibit A-9 (DVR-1), page 8.

## 18 Q DOES MR. RAO EXPRESS ANY CONCERNS ABOUT THE RESULTS OF HIS DCF 19 ANALYSIS?

20 A Yes. At page 21 of his direct testimony, Mr. Rao states that the use of short-term 21 growth rates such as those provided by *Value Line*, *Zacks*, and *Yahoo* results in 22 understating the true investor required return in its current environment.

#### 1 Q PLEASE RESPOND.

2 Α While it is true that if current short-term growth estimates provided by the sources 3 listed above are abnormally low, the DCF result would produce a low estimate of the 4 true cost of equity under the constant growth stage form of the DCF model. If 5 Mr. Rao believed that to be the case, he should have performed a multi-stage growth 6 DCF analysis to develop a more appropriate cost of equity estimate. In the 7 multi-stage form of the DCF model, it is widely accepted to use the projected nominal 8 GDP growth rate as the third stage growth estimate. At this time, projected nominal 9 GDP growth is expected to be approximately 4.6% into the future. If anything, the 10 results of Mr. Rao's constant growth DCF analysis are overstated since his average 11 growth estimate used in perpetuity of 4.98% is higher than that of projected nominal 12 GDP growth, all else constant. Therefore, at this time, Mr. Rao's constant growth 13 DCF analysis does not produce an understated estimate of the cost of equity 14 because of the use of short-term growth rates in perpetuity like he would lead us to 15 believe.

#### 16 Mr. Rao's Comparable Earnings Analysis

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#### PLEASE DESCRIBE MR. RAO'S COMPARABLE EARNINGS ANALYSIS.

A Mr. Rao performs a comparable earnings analysis using his proxy group of electric utility companies. Mr. Rao asserts that he uses the comparable earnings analysis in determining a fair cost of equity for Consumers because, most of the time, utilities are awarded returns on book equity values rather than market values. To perform this analysis, Mr. Rao relies on the projections of returns on book equity from *Value Line* over the period of 2017 through 2019.

#### 1 Q DO YOU HAVE ANY ISSUES WITH MR. RAO'S COMPARABLE EARNINGS 2 ANALYSIS?

3 Α Yes. Comparable earnings analysis is a flawed method of estimating a fair ROE for 4 Consumers. A comparable earnings analysis does not measure the return an 5 investor demands in order to assume the risk of an investment opportunity. As such, 6 it does not measure a fair rate of return to allow the utility to make incremental plant 7 investments that are in line with the same return investors would expect by making 8 another investment of comparable risk. Rather, a comparable earnings analysis 9 simply observes historical actual earnings, or projected earnings for the companies, 10 with no consideration of the risk or stability of the earnings.

11 It is simply inappropriate to rely on an actual earned return as a means of
12 estimating a fair rate of return. An illustration can help make this point clear.

Assume a utility issued a bond 10 years ago at a coupon rate of 7%. The accounting cost of a bond a utility sold years ago is 7%. The cost of this bond can be observed on the utility's books and records in a test year. However, if a utility went to the market in the test year to issue bonds, it would pay the prevailing market rate on the bond – say, 5%. That means a utility's cost of debt capital in the test year is 5% based on the test year market cost of a bond.

19 The same is true for common equity investments. A utility issues common 20 equity over time to fund capital investments in plant and equipment. A utility has 21 added to its equity base by retaining earnings to grow its invested capital. A fair rate 22 of return on that invested capital should be set equal to the rate of return a utility 23 investor can earn by using its capital to invest in other enterprises of comparable risk. 24 That opportunity cost is based on market factors which relate to the market value of 25 stock, the investment risk, and the expected return of the investment.

1 Another reason a comparable earnings analysis should be rejected is it could 2 provide misleading results, even if the methodology were reasonable. Specifically, 3 there can be accounting differences between companies which make an earned 4 return on book equity for one company not necessarily comparable to that of another 5 company. For example, differences in accounting for inventory measures, differences 6 for regulatory treatment of construction work in progress, and other investments in 7 working capital accounts may result in earned ROE not being directly comparable 8 between companies. This is in stark contrast to the comparability of required returns 9 based on market information. As such, comparable earnings based on book returns 10 on equity simply do not produce a reliable estimate of a fair ROE.

#### 11 Q DOES THIS CONCLUDE YOUR DIRECT TESTIMONY?

12 A Yes, it does.

#### **Qualifications of Christopher C. Walters**

#### 1 Q PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A Christopher C. Walters. My business address is 16690 Swingley Ridge Road,
Suite 140, Chesterfield, MO 63017.

#### 4 Q PLEASE STATE YOUR OCCUPATION.

5 A I am an Associate Consultant in the field of public utility regulation with the firm of
6 Brubaker & Associates, Inc. ("BAI"), energy, economic and regulatory consultants.

#### 7 Q PLEASE STATE YOUR EDUCATIONAL BACKGROUND AND PROFESSIONAL

#### 8 **EMPLOYMENT EXPERIENCE**.

- 9 A I graduated from Southern Illinois University Edwardsville in 2008 where I received a
  10 Bachelor of Science Degree in Business Economics and Finance. I graduated with a
  11 Master of Business Administration Degree from Lindenwood University in 2011. I am
  12 currently a Level III candidate in the Chartered Financial Analyst ("CFA") program
  13 through the CFA Institute.
- The Chartered Financial Analyst designation is awarded to those who successfully complete, among other requirements, the three exams. The exams are offered annually and must be completed in sequential order. The Level I exam focuses on a basic knowledge of analysis covering a broad range of topic areas such as Equity, Fixed Income, Financial Reporting Analysis, Economics, Corporate Finance and Derivatives. The Level II exam emphasizes the application of investment tools and concepts with a heavy focus on the valuation of all types of

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assets. The Level III exam focuses on synthesizing all of the concepts and analytical methods in a variety of applications for effective portfolio management.

In January 2009, I accepted the position Financial Representative with American General Finance and was quickly promoted to Senior Assistant Manager. In this position I was responsible for assisting in the management of daily operations of the branch, analyzing and reporting on the performance of the branch to upper management, performing credit analyses for consumers and small businesses, as well as assisting home buyers obtain mortgage financing.

9 In January 2011, I accepted the position of Analyst with BAI. As an Analyst, I 10 performed detailed analysis, research, and general project support on regulatory and 11 competitive procurement projects. In July 2013, I was promoted to the position of 12 Consultant. As a Consultant, I have performed detailed technical analyses and 13 research to support regulatory projects including expert testimony, and briefing 14 assistance covering various regulatory issues. At BAI, I have been involved with 15 several regulated projects for electric, natural gas and water and wastewater utilities, 16 as well as competitive procurement of electric power and gas supply. My regulatory 17 filing tasks have included measuring the cost of capital, capital structure evaluations, assessing financial integrity, merger and acquisition related issues, risk management 18 19 related issues, depreciation rate studies, other revenue requirement issues and 20 wholesale market and retail regulated power price forecasts. Since 2011, I have 21 been working with BAI witnesses on utility rate of return filings. Specifically, I have 22 assisted BAI witnesses in analyzing rate of return studies, drafting discovery requests 23 and analyzing responses, drafting rate of return testimony and exhibits and assisting 24 with the review of the briefs.

BRUBAKER & ASSOCIATES, INC.

1	BAI was formed in April 1995. BAI and its predecessor firm have participa	ated
2	in more than 700 regulatory proceedings in 40 states and Canada.	

BAI provides consulting services in the economic, technical, accounting, and financial aspects of public utility rates and in the acquisition of utility and energy services through RFPs and negotiations, in both regulated and unregulated markets. Our clients include large industrial and institutional customers, some utilities and, on occasion, state regulatory agencies. We also prepare special studies and reports, forecasts, surveys and siting studies, and present seminars on utility-related issues.

In general, we are engaged in energy and regulatory consulting, economic
analysis and contract negotiation. In addition to our main office in St. Louis, the firm
also has branch offices in Phoenix, Arizona and Corpus Christi, Texas.

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#### Case No U-17735 Witness: Christopher Walters Exhibit AB-1 Date: April 2015

#### **Consumers Energy**

#### **Movement in Bond Yields**

LineDate $Yield$ Treasury YieldFed Announcements14/3/20153.65%4.44%2.49%23/27/20153.68%4.42%2.53%33/20/20153.61%4.42%2.53%53.6/20153.91%4.64%2.83%62/27/20153.69%4.39%2.60%72/20/20153.69%4.57%2.73%82/13/20153.74%4.50%2.63%92.0/20153.64%4.44%2.25%101/30/20153.51%4.33%2.28%111/23/20153.51%4.33%2.28%121/16/20153.68%4.49%2.55%1310/20153.84%4.60%2.69%141/220153.68%4.40%2.69%1512/26/20143.90%4.71%2.77%1612/19/20143.90%4.77%3.27%1712/12/20143.90%4.77%3.02%2011/21/20144.08%4.77%3.04%2111/14/20144.08%4.77%3.03%2310/31/20144.03%4.66%2.89%2410/24/20144.09%4.77%3.02%25101/12/2144.08%4.77%3.03%26101/12/2144.08%4.77%3.03%2111/14/20144.08%4.74%3.04%2310/31/20144.02%4.74%3.03%24 <t< th=""><th></th><th></th><th>Utility</th><th>Bonds</th><th>30-Year</th><th></th></t<>			Utility	Bonds	30-Year	
Line         Date         Yield         Yield         Yield         Yield         Fed Announcements           1         4/3/2015         3.65%         4.44%         2.63%           3         3/20/2015         3.64%         4.42%         2.50%           3         3/20/2015         3.64%         4.42%         2.60%           5         3/6/2015         3.64%         4.42%         2.83%           6         2/27/2015         3.69%         4.39%         2.60%           7         2/20/2015         3.74%         4.50%         2.63%           9         2/6/2015         3.64%         4.44%         2.61%           10         1/30/2015         3.64%         4.44%         2.65%           11         1/30/2015         3.65%         4.39%         2.46%           13         1/9/2015         3.68%         4.44%         2.65%           14         1/2/2/2014         3.99%         4.66%         2.69%           15         12/2/6/2014         3.99%         4.66%         2.89%           20         11/2/1/2014         4.08%         4.77%         3.02%           21         11/1/4/2014         4.09%         4.77%		-	A-Rated	Baa-Rated	Treasury	
1         4/3/2015         3.65%         4.44%         2.49%           3         3/20/2015         3.64%         4.42%         2.63%           4         3/13/2015         3.81%         4.57%         2.70%           5         3/6/2015         3.91%         4.64%         2.83%           6         2/27/2015         3.83%         4.57%         2.73%           8         2/13/2015         3.74%         4.50%         2.63%           9         2/6/2015         3.64%         4.44%         2.51%           10         1/30/2015         3.83%         4.21%         2.25%           11         1/23/2015         3.55%         4.33%         2.38%           12         1/16/2015         3.55%         4.38%         2.44%           13         19/2016         3.66%         4.49%         2.55%           14         1/2/2014         3.94%         4.77%         2.81%           16         12/19/2014         3.99%         4.66%         2.89%           10         1/3/2014         4.08%         4.77%         3.02%           11/12/2014         4.08%         4.77%         3.03%           10/3/2014         4.0	Line	Date	Yield	Yield	Yield	Fed Announcements
1         4/3/2015         3.65%         4.44%         2.49%           2         3/27/2015         3.66%         4.42%         2.53%           3         3/20/2015         3.64%         4.42%         2.50%           4         3/13/2015         3.81%         4.57%         2.70%           5         3/6/2015         3.91%         4.64%         2.83%           6         2/27/2015         3.83%         4.57%         2.73%           7         2/20/2015         3.74%         4.50%         2.63%           9         2/6/2015         3.64%         4.44%         2.51%           10         1/30/2015         3.68%         4.24%         2.55%           11         1/23/2015         3.68%         4.49%         2.55%           12         1/16/2015         3.88%         4.60%         2.69%           13         1/9/2016         3.68%         4.49%         2.55%           14         1/2/2014         3.94%         4.77%         2.07%           15         12/2/2014         3.94%         4.66%         2.89%           01/12/2014         4.08%         4.77%         3.04%           11/12/2014         4.						
2         3/27/2015         3.68%         4.48%         2.53%           3         3/20/2015         3.64%         4.42%         2.50%           4         3/13/2015         3.81%         4.57%         2.70%           5         3/6/2015         3.91%         4.64%         2.83%           6         2/27/2015         3.80%         4.57%         2.73%           7         2/20/2015         3.84%         4.57%         2.73%           9         2/6/2015         3.64%         4.21%         2.25%           10         1/30/2015         3.84%         4.21%         2.25%           11         1/23/2015         3.55%         4.33%         2.38%           12         1/16/2015         3.66%         4.49%         2.55%           14         1/2/2016         3.86%         4.40%         2.61%           15         12/26/2014         3.99%         4.77%         2.09%           16         12/18/2014         3.99%         4.66%         2.89%           11         11/2/2014         3.99%         4.66%         3.04%           11         12/8/2014         4.09%         4.77%         3.02%           11 <td>1</td> <td>4/3/2015</td> <td>3.65%</td> <td>4.44%</td> <td>2.49%</td> <td></td>	1	4/3/2015	3.65%	4.44%	2.49%	
3         3/20/2015         3.64%         4.42%         2.50%           4         3/13/2015         3.81%         4.57%         2.70%           5         3/6/2015         3.91%         4.64%         2.63%           6         2/27/2015         3.69%         4.39%         2.60%           7         2/20/2015         3.64%         4.44%         2.51%           9         2/6/2015         3.64%         4.44%         2.51%           10         1/30/2015         3.81%         4.21%         2.25%           11         1/23/2015         3.55%         4.33%         2.44%           13         1/9/2015         3.68%         4.9%         2.55%           14         1/2/2015         3.88%         4.77%         2.81%           16         12/19/2014         3.99%         4.66%         2.98%           20         11/21/2014         4.06%         4.77%         3.04%           11/14/2014         4.09%         4.71%         3.04%           11/11/2014         4.08%         4.77%         3.02%           21         11/11/2014         4.09%         4.74%         3.05%           21         11/12/2014	2	3/27/2015	3.68%	4.48%	2.53%	
4       3/13/2015       3.81%       4.57%       2.70%         5       3/6/2015       3.91%       4.64%       2.83%         6       2/27/2015       3.89%       4.39%       2.60%         7       2/20/2015       3.83%       4.57%       2.73%         8       2/13/2015       3.74%       4.50%       2.63%         9       2/6/2015       3.64%       4.44%       2.51%         10       1/30/2015       3.51%       4.33%       2.25%         11       1/2/2015       3.55%       4.33%       2.44%         13       19/2015       3.88%       4.49%       2.65%         14       1/2/2015       3.82%       4.60%       2.69%         15       12/26/2014       3.99%       4.66%       2.89%         20       11/21/2014       3.89%       4.66%       2.97%         11       12/2/2014       4.06%       4.73%       3.04%         21       11/17/2014       4.09%       4.71%       3.04%         21       10/31/2014       4.09%       4.71%       3.04%         21       10/3/2014       4.03%       4.65%       3.33%         26       10/17	3	3/20/2015	3.64%	4.42%	2.50%	
5         3/6/2015         3.91%         4.64%         2.83%           6         2/27/2015         3.99%         4.39%         2.60%           7         2/20/2015         3.74%         4.57%         2.73%           8         2/13/2015         3.74%         4.50%         2.63%           9         2/6/2015         3.64%         4.44%         2.55%           11         1/23/2015         3.51%         4.33%         2.86%           12         1/16/2015         3.55%         4.38%         2.44%           13         19/2015         3.68%         4.49%         2.55%           14         1/2/2015         3.88%         4.40%         2.55%           15         12/26/2014         3.90%         4.71%         2.07%           16         12/19/2014         3.90%         4.71%         3.04%           11/12/2014         4.08%         4.77%         3.02%           21         11/14/2014         4.09%         4.76%         3.04%           21         11/14/2014         4.09%         4.71%         3.07%           21         10/31/2014         4.10%         4.71%         3.07%           21         10	4	3/13/2015	3 81%	4 57%	2 70%	
6         2/27/2015         3.69%         4.39%         2.60%           7         2/20/2015         3.83%         4.57%         2.73%           8         2/13/2015         3.74%         4.50%         2.63%           9         2/6/2015         3.84%         4.44%         2.55%           10         1/30/2015         3.51%         4.24%         2.25%           11         1/23/2015         3.51%         4.33%         2.44%           13         1/9/2015         3.88%         4.44%         2.55%           14         1/2/2015         3.82%         4.60%         2.69%           15         12/26/2014         3.94%         4.72%         2.81%           16         12/19/2014         3.89%         4.63%         2.77%           18         12/5/2014         4.06%         4.77%         3.02%           21         11/7/2014         4.08%         4.77%         3.02%           21         10/31/2014         4.08%         4.77%         3.02%           21         10/7/2014         4.02%         4.84%         2.98%           23         10/3/2014         4.20%         4.77%         3.02%           24	5	3/6/2015	3.91%	4 64%	2.83%	
7         2/20/2015         3.83%         4.57%         2.73%           8         2/13/2015         3.74%         4.50%         2.63%           9         2/6/2015         3.64%         4.44%         2.51%           10         1/30/2015         3.51%         4.33%         2.38%           11         1/23/2015         3.51%         4.33%         2.28%           12         1/16/2015         3.55%         4.49%         2.55%           14         12/26/2014         3.94%         4.72%         2.81%           16         12/19/2014         3.90%         4.71%         2.75%           17         12/25/2014         4.06%         4.73%         2.97%           19         11/26/2014         3.99%         4.66%         2.89%           20         11/21/2014         4.08%         4.77%         3.02%           21         11/1/4/2014         4.09%         4.77%         3.04%           21         10/31/2014         4.08%         4.71%         3.07%           24         10/24/2014         4.02%         4.64%         3.93%           27         10/3/2014         4.13%         4.72%         3.13%	6	2/27/2015	3 69%	4 39%	2 60%	
2         2         10         2         10         2         10           1         2         10         1/30/2015         3.64%         4.44%         2.63%           10         1/30/2015         3.84%         4.21%         2.25%           11         1/23/2015         3.51%         4.33%         2.38%           12         1/16/2015         3.68%         4.44%         2.55%           13         1/2/2015         3.86%         4.44%         2.55%           14         1/2/2015         3.82%         4.60%         2.69%           15         12/26/2014         3.90%         4.77%         2.81%           16         12/19/2014         3.90%         4.77%         3.02%           11         11/22/2014         3.99%         4.66%         2.89%           20         11/21/2014         4.08%         4.77%         3.02%           11         11/14/2014         4.09%         4.77%         3.02%           21         11/1/2014         4.09%         4.77%         3.02%           21         10/31/2014         4.13%         4.72%         3.13%           26         10/17/2014         4.02%	7	2/20/2015	3.83%	4 57%	2 73%	
9       216/2015       3.64%       4.44%       2.51%         10       11/30/2015       3.38%       4.21%       2.25%         11       1/23/2015       3.55%       4.38%       2.44%         13       1/9/2015       3.68%       4.49%       2.55%         14       1/2/2015       3.82%       4.60%       2.66%         15       12/26/2014       3.94%       4.72%       2.81%         16       12/19/2014       3.90%       4.71%       2.77%         17       12/12/2014       3.87%       4.66%       2.88%         20       11/21/2014       4.08%       4.77%       3.02%         21       11/14/2014       4.08%       4.77%       3.02%         21       11/12/2014       4.08%       4.71%       3.04%         22       11/7/2014       4.09%       4.71%       3.04%         23       10/31/2014       4.09%       4.71%       3.03%         24       10/24/2014       4.09%       4.71%       3.03%         25       10/17/2014       4.02%       4.64%       2.98%         26       10/17/2014       4.02%       4.71%       3.03%         27	8	2/13/2015	3 74%	4 50%	2.63%	
D         Lolo 1         Control         Lon 1           10         1130/2015         3.38%         L21%         L25%           11         1/23/2015         3.51%         4.33%         L23%           12         11/16/2015         3.68%         4.49%         L255%           14         1/2/2015         3.68%         4.49%         L55%           14         1/2/2015         3.68%         4.49%         L55%           14         1/2/2015         3.68%         4.49%         L55%           14         1/2/2014         3.94%         4.63%         L7%           15         12/26/2014         3.99%         4.66%         L89%           16         12/19/2014         3.99%         4.66%         L89%           20         11/28/2014         4.09%         4.71%         3.02%           21         11/1/2014         4.08%         4.71%         3.04%           22         10/31/2014         4.09%         4.71%         3.05%           26         10/10/2014         4.03%         4.65%         3.03%           27         10/3/2014         4.29%         4.77%         3.22%           9/19/2014         4.28	a	2/6/2015	3.64%	4.00%	2.00%	
10       103/2013       0.50/0       4.21/0       2.28/0         11       1/23/2015       3.51%       4.33%       2.34%         13       1/9/2015       3.68%       4.49%       2.55%         14       12/2015       3.68%       4.49%       2.55%         15       12/26/2014       3.94%       4.72%       2.81%         16       12/19/2014       3.90%       4.71%       2.77%         17       12/12/2014       3.87%       4.63%       2.97%         19       11/28/2014       4.06%       4.73%       2.97%         10       11/2/2014       4.08%       4.77%       3.02%         21       11/1/14/2014       4.09%       4.76%       3.04%         23       10/31/2014       4.09%       4.71%       3.05%         24       10/24/2014       4.09%       4.71%       3.05%         25       10/17/2014       4.02%       4.65%       3.03%         26       10/10/2014       4.03%       4.85%       3.35%         29       9/19/2014       4.20%       4.76%       3.29%         30       6/20/2014       4.20%       4.76%       3.44%         31 <td>10</td> <td>1/30/2015</td> <td>3 38%</td> <td>4.21%</td> <td>2.01%</td> <td></td>	10	1/30/2015	3 38%	4.21%	2.01%	
11       11/16/2015       3.51%       4.33%       2.30%         13       11/9/2015       3.65%       4.49%       2.55%         14       1/2/2015       3.82%       4.60%       2.69%         15       12/26/2014       3.94%       4.72%       2.81%         16       12/19/2014       3.90%       4.71%       2.81%         17       12/12/2014       3.87%       4.63%       2.75%         18       12/5/2014       4.06%       4.73%       2.97%         20       11/21/2014       3.99%       4.66%       3.04%         21       11/1/14/2014       4.09%       4.76%       3.04%         22       11/17/2014       4.08%       4.71%       3.05%         23       10/31/2014       4.10%       4.71%       3.05%         24       10/24/2014       4.02%       4.64%       2.98%         25       10/10/2014       4.03%       4.72%       3.13%         26       10/10/2014       4.20%       3.35%       September 17, 2014 - Tapering Announced         31       8/1/2014       4.20%       4.87%       3.29%       July 30, 2014 - Tapering Announced         27/25/2014       4.33% <t< td=""><td>10</td><td>1/23/2015</td><td>3.50%</td><td>4.21/0</td><td>2.20%</td><td></td></t<>	10	1/23/2015	3.50%	4.21/0	2.20%	
12       11/10/2015       3.63%       4.49%       2.55%         14       11/2/2015       3.88%       4.60%       2.69%         15       12/26/2014       3.94%       4.72%       2.81%         16       12/19/2014       3.94%       4.72%       2.81%         16       12/19/2014       3.86%       4.63%       2.75%         18       12/5/2014       4.06%       4.73%       2.97%         19       11/28/2014       3.99%       4.66%       2.89%         20       11/2/2014       4.08%       4.77%       3.02%         21       11/1/2014       4.09%       4.76%       3.04%         22       11/7/2014       4.08%       4.71%       3.04%         23       10/31/2014       4.09%       4.71%       3.04%         24       10/17/2014       4.03%       4.65%       3.03%         25       10/17/2014       4.03%       4.65%       3.03%         26       10/10/2014       4.33%       3.29%       September 17, 2014 - Asset Purchases Ended         30       9/26/2014       4.29%       4.65%       3.03%         27       10/3/2014       4.28%       4.83%       3.29% <td>12</td> <td>1/16/2015</td> <td>3.51%</td> <td>4.33%</td> <td>2.30%</td> <td></td>	12	1/16/2015	3.51%	4.33%	2.30%	
13       19/2013       3.06%       4.49%       2.53%         14       1/2/2015       3.82%       4.60%       2.69%         15       12/26/2014       3.90%       4.71%       2.77%         16       12/19/2014       3.87%       4.63%       2.75%         18       12/5/2014       4.06%       4.73%       2.97%         19       11/21/2014       3.89%       4.66%       2.89%         20       11/21/2014       4.08%       4.77%       3.02%         21       11/1/12014       4.08%       4.71%       3.04%         22       11/7/2014       4.09%       4.71%       3.04%         23       10/31/2014       4.10%       4.71%       3.04%         24       10/24/2014       4.09%       4.71%       3.05%         26       10/11/2014       4.02%       4.64%       2.98%         27       10/32014       4.33%       4.88%       3.35%         28       9/26/2014       4.20%       4.77%       3.22%         29       9/19/2014       4.33%       4.88%       3.35%         33       6/20/2014       4.33%       4.76%       3.44%         4/13/2014 </td <td>12</td> <td>1/10/2015</td> <td>3.00%</td> <td>4.30%</td> <td>2.44 70</td> <td></td>	12	1/10/2015	3.00%	4.30%	2.44 70	
14       1/2/2013       3.62%       4.00%       2.69%         15       12/26/2014       3.94%       4.72%       2.81%         16       12/19/2014       3.90%       4.71%       2.77%         17       12/12/2014       3.87%       4.63%       2.97%         18       12/5/2014       4.06%       4.73%       2.97%         19       11/28/2014       3.99%       4.66%       2.89%         20       11/21/2014       4.08%       4.77%       3.02%         21       11/1/4/2014       4.09%       4.71%       3.04%         22       11/7/2014       4.09%       4.71%       3.04%         24       10/24/2014       4.09%       4.71%       3.05%       October 29, 2014 - Asset Purchases Ended         25       10/17/2014       4.02%       4.65%       2.98%          26       10/10/2014       4.03%       4.85%       3.22%          29       9/19/2014       4.33%       4.88%       3.22%          30       9/12/2014       4.32%       4.88%       3.35%       September 17, 2014 - Tapering Announced         31       8/1/2014       4.20%       4.76%       3.44%	13	1/9/2015	3.00%	4.49%	2.00%	
15       12/20/2014       3.94%       4.72%       2.81%         16       12/19/2014       3.87%       4.63%       2.75%         17       12/12/2014       3.87%       4.63%       2.75%         18       12/5/2014       4.06%       4.73%       2.97%         19       11/28/2014       3.99%       4.66%       2.89%         20       11/21/2014       4.08%       4.77%       3.02%         21       11/1/2014       4.09%       4.71%       3.04%         23       10/31/2014       4.10%       4.71%       3.05%         24       10/24/2014       4.09%       4.71%       3.05%         25       10/17/2014       4.02%       4.64%       2.98%         26       10/10/2014       4.03%       4.65%       3.03%         27       10/3/2014       4.20%       4.77%       3.22%         29       9/19/2014       4.28%       4.83%       3.29%       July 30, 2014 - Tapering Announced         31       8/1/2014       4.33%       4.76%       3.44%       June 18, 2014 - Tapering Announced         36/20/2014       4.32%       4.76%       3.37%       April 30, 2014 - Tapering Announced <t< td=""><td>14</td><td>1/2/2015</td><td>3.02%</td><td>4.00%</td><td>2.09%</td><td></td></t<>	14	1/2/2015	3.02%	4.00%	2.09%	
10       12/19/2014       3.90%       4.71%       2.77%         17       12/12/2014       3.80%       4.73%       2.97%         18       12/5/2014       4.06%       4.73%       2.97%         19       11/28/2014       3.99%       4.66%       2.89%         20       11/21/2014       4.08%       4.77%       3.02%         21       11/14/2014       4.09%       4.76%       3.04%         22       11/7/2014       4.09%       4.71%       3.07%         24       10/24/2014       4.09%       4.71%       3.05%         25       10/17/2014       4.02%       4.64%       2.98%         26       10/10/2014       4.03%       4.65%       3.03%         27       10/3/2014       4.20%       4.77%       3.22%         29       9/19/2014       4.28%       4.83%       3.29%         30       9/12/2014       4.33%       4.76%       3.44%         31       8/1/2014       4.20%       4.77%       3.29%         32       10/3/2014       4.29%       4.76%       3.44%         34       6/13/2014       4.29%       4.76%       3.44%         34	15	12/26/2014	3.94%	4.72%	2.81%	
17       12/12/2014       3.87%       4.63%       2.75%         18       12/5/2014       3.99%       4.66%       2.97%         19       11/28/2014       3.99%       4.66%       2.97%         20       11/21/2014       4.08%       4.77%       3.02%         21       11/14/2014       4.08%       4.71%       3.04%         22       11/7/2014       4.08%       4.71%       3.04%         23       10/31/2014       4.10%       4.71%       3.04%         24       10/24/2014       4.09%       4.71%       3.05%       October 29, 2014 - Asset Purchases Ended         25       10/17/2014       4.02%       4.66%       2.98%       Image: Control 10/2014         26       10/10/2014       4.03%       4.65%       3.03%       Image: Control 10/2014         27       10/3/2014       4.28%       4.83%       3.29%       September 17, 2014 - Tapering Announced         31       8/1/2014       4.28%       4.76%       3.29%       July 30, 2014 - Tapering Announced         32       7/2/5/2014       4.14%       4.60%       3.24%       June 18, 2014 - Tapering Announced         33       6/20/2014       4.28%       4.75%       3.44%	16	12/19/2014	3.90%	4.71%	2.77%	
18       12/5/2014       4.06%       4.73%       2.97%         19       11/28/2014       3.99%       4.66%       2.89%         20       11/21/2014       4.08%       4.77%       3.02%         21       11/7/2014       4.08%       4.71%       3.04%         23       10/31/2014       4.09%       4.71%       3.05%       October 29, 2014 - Asset Purchases Ended         24       10/24/2014       4.09%       4.71%       3.05%       October 29, 2014 - Asset Purchases Ended         25       10/17/2014       4.03%       4.65%       3.03%         26       10/17/2014       4.03%       4.65%       3.03%         27       10/3/2014       4.13%       4.72%       3.13%         28       9/26/2014       4.20%       4.70%       3.22%         29       9/19/2014       4.33%       4.88%       3.35%       September 17, 2014 - Tapering Announced         31       8/1/2014       4.20%       4.76%       3.44%       July 30, 2014 - Tapering Announced         34       6/13/2014       4.29%       4.76%       3.44%       June 18, 2014 - Tapering Announced         41       4/25/2014       4.32%       4.76%       3.61%       January 29,	17	12/12/2014	3.87%	4.63%	2.75%	
19       11/22/2014       3.99%       4.66%       2.89%         20       11/21/2014       4.08%       4.77%       3.02%         21       11/1/14/2014       4.09%       4.76%       3.04%         22       11/7/2014       4.09%       4.71%       3.07%       October 29, 2014 - Asset Purchases Ended         24       10/31/2014       4.09%       4.71%       3.05%       October 29, 2014 - Asset Purchases Ended         25       10/17/2014       4.02%       4.65%       3.03%         26       10/10/2014       4.03%       4.65%       3.03%         27       10/3/2014       4.13%       4.72%       3.13%         28       9/26/2014       4.20%       4.77%       3.22%         29       9/19/2014       4.28%       4.83%       3.35%       September 17, 2014 - Tapering Announced         31       8/1/2014       4.20%       4.76%       3.24%       July 30, 2014 - Tapering Announced         33       6/20/2014       4.33%       4.76%       3.44%       June 18, 2014 - Tapering Announced         41       4/25/2014       4.32%       4.75%       3.46%       June 18, 2014 - Tapering Announced         42       3/21/2014       4.52%       5.	18	12/5/2014	4.06%	4.73%	2.97%	
20       11/21/2014       4.08%       4.77%       3.02%         21       11/21/2014       4.08%       4.77%       3.04%         22       11/71/2014       4.08%       4.71%       3.04%         23       10/31/2014       4.09%       4.71%       3.05%       October 29, 2014 - Asset Purchases Ended         24       10/24/2014       4.09%       4.71%       3.05%       October 29, 2014 - Asset Purchases Ended         25       10/17/2014       4.02%       4.64%       2.98%       2.01/14       Asset Purchases Ended         26       10/10/2014       4.03%       4.65%       3.03%       2.27%         27       10/3/2014       4.13%       4.72%       3.13%         28       9/26/2014       4.28%       4.83%       3.29%         30       9/19/2014       4.33%       4.76%       3.24%         31       8/1/2014       4.20%       4.70%       3.29%         32       7/25/2014       4.14%       4.60%       3.24%         33       6/20/2014       4.33%       4.76%       3.41%         41       4/25/2014       4.32%       4.67%       3.41%         42       3/21/2014       4.22%       5.	19	11/28/2014	3.99%	4.66%	2.89%	
21       11/14/2014       4.09%       4.76%       3.04%         22       11/7/2014       4.08%       4.71%       3.04%         23       10/31/2014       4.10%       4.71%       3.07%       October 29, 2014 - Asset Purchases Ended         24       10/24/2014       4.09%       4.71%       3.05%       October 29, 2014 - Asset Purchases Ended         25       10/17/2014       4.03%       4.65%       3.03%         27       10/3/2014       4.13%       4.72%       3.13%         28       9/26/2014       4.20%       4.83%       3.29%         29       9/19/2014       4.28%       4.83%       3.29%         31       8/1/2014       4.33%       4.88%       3.35%         32       7/25/2014       4.14%       4.60%       3.24%         31       8/1/2014       4.20%       4.76%       3.44%         32       7/25/2014       4.33%       4.76%       3.44%         34       6/13/2014       4.29%       4.72%       3.41%         41       4/25/2014       4.32%       4.75%       3.66%         3/21/2014       4.52%       5.01%       3.61%       March 19, 2014 - Tapering Announced	20	11/21/2014	4.08%	4.77%	3.02%	
22       11/7/2014       4.08%       4.71%       3.04%         23       10/31/2014       4.10%       4.71%       3.07%       October 29, 2014 - Asset Purchases Ended         24       10/24/2014       4.09%       4.71%       3.05%       October 29, 2014 - Asset Purchases Ended         25       10/17/2014       4.02%       4.64%       2.98%         26       10/10/2014       4.03%       4.65%       3.03%         27       10/3/2014       4.13%       4.72%       3.13%         28       9/26/2014       4.28%       4.83%       3.29%         29       9/19/2014       4.28%       4.83%       3.29%         30       9/12/2014       4.33%       4.76%       3.24%         31       8/1/2014       4.20%       4.76%       3.44%         32       7/25/2014       4.14%       4.60%       3.24%         33       6/20/2014       4.29%       4.76%       3.37%         4       6/13/2014       4.29%       4.75%       3.44%         4       1/25/2014       4.32%       5.01%       3.61%         41       4/25/2014       4.52%       5.01%       3.61%         3/14/2014       4.	21	11/14/2014	4.09%	4.76%	3.04%	
23       10/31/2014       4.10%       4.71%       3.07%       October 29, 2014 - Asset Purchases Ended         24       10/24/2014       4.09%       4.71%       3.05%       October 29, 2014 - Asset Purchases Ended         25       10/17/2014       4.02%       4.64%       2.98%         26       10/10/2014       4.03%       4.65%       3.03%         27       10/3/2014       4.13%       4.72%       3.13%         28       9/26/2014       4.28%       4.83%       3.29%         30       9/12/2014       4.33%       4.88%       3.35%         31       8/1/2014       4.20%       4.77%       3.22%         32       7/25/2014       4.14%       4.60%       3.24%       July 30, 2014 - Tapering Announced         33       6/20/2014       4.33%       4.76%       3.44%       June 18, 2014 - Tapering Announced         41       4.125/2014       4.22%       5.01%       3.61%       April 30, 2014 - Tapering Announced         42       3/21/2014       4.52%       5.01%       3.61%       January 29, 2014 - Tapering Announced         44       1/31/2014       4.48%       4.97%       3.59%       March 19, 2014 - Tapering Announced         44       3	22	11/7/2014	4.08%	4.71%	3.04%	
24       10/24/2014       4.09%       4.71%       3.05%       00000 201 201 201 00000 201 00000000	23	10/31/2014	4.10%	4.71%	3.07%	October 29 2014 - Asset Purchases Ended
25       10/17/2014       4.02%       4.64%       2.98%         26       10/10/2014       4.03%       4.65%       3.03%         27       10/3/2014       4.13%       4.72%       3.13%         28       9/26/2014       4.20%       4.77%       3.22%         29       9/19/2014       4.28%       4.83%       3.29%         30       9/12/2014       4.33%       4.88%       3.35%         31       8/1/2014       4.20%       4.70%       3.29%         32       7/25/2014       4.14%       4.60%       3.24%         33       6/20/2014       4.33%       4.76%       3.44%         34       6/13/2014       4.29%       4.72%       3.41%       June 18, 2014 - Tapering Announced         41       4/25/2014       4.32%       4.67%       3.37%       April 30, 2014 - Tapering Announced         42       3/21/2014       4.52%       5.01%       3.61%       March 19, 2014 - Tapering Announced         44       1/31/2014       4.48%       4.97%       3.61%       January 29, 2014 - Tapering Announced         45       1/24/2014       4.51%       5.00%       3.64%       January 29, 2014 - Tapering Announced         46 <td>24</td> <td>10/24/2014</td> <td>4.09%</td> <td>4.71%</td> <td>3.05%</td> <td></td>	24	10/24/2014	4.09%	4.71%	3.05%	
26       10/10/2014       4.03%       4.65%       3.03%         27       10/3/2014       4.13%       4.72%       3.13%         28       9/26/2014       4.20%       4.77%       3.22%         29       9/19/2014       4.28%       4.83%       3.29%         30       9/12/2014       4.33%       4.88%       3.35%         31       8/1/2014       4.20%       4.70%       3.29%         32       7/25/2014       4.14%       4.60%       3.24%         33       6/20/2014       4.33%       4.76%       3.44%         34       6/13/2014       4.29%       4.72%       3.41%         40       5/2/2014       4.22%       4.67%       3.37%         41       4/25/2014       4.32%       4.75%       3.46%         42       3/21/2014       4.52%       5.01%       3.61%         43       3/14/2014       4.48%       4.97%       3.59%         44       1/31/2014       4.49%       4.97%       3.61%         45       1/24/2013       4.73%       5.14%       3.82%         46       12/20/2013       4.73%       5.14%       3.82%         47       <	25	10/17/2014	4.02%	4.64%	2.98%	
27       10/3/2014       4.13%       4.72%       3.13%         28       9/26/2014       4.20%       4.77%       3.22%         29       9/19/2014       4.28%       4.83%       3.29%         30       9/12/2014       4.33%       4.88%       3.35%         31       8/1/2014       4.20%       4.70%       3.29%         31       8/1/2014       4.20%       4.70%       3.29%         32       7/25/2014       4.14%       4.60%       3.24%         33       6/20/2014       4.33%       4.76%       3.44%         34       6/13/2014       4.29%       4.72%       3.41%         40       5/2/2014       4.29%       4.76%       3.37%         41       4/25/2014       4.32%       4.75%       3.46%         42       3/21/2014       4.52%       5.01%       3.61%         43       3/14/2014       4.48%       4.97%       3.59%         44       1/31/2014       4.48%       4.97%       3.61%         45       1/24/2014       4.51%       5.00%       3.61%         45       1/24/2013       4.73%       5.14%       3.82%         12/13/2013	26	10/10/2014	4.03%	4.65%	3.03%	
28         9/26/2014         4.20%         4.77%         3.22%           29         9/19/2014         4.28%         4.83%         3.29%         September 17, 2014 - Tapering Announced           31         8/1/2014         4.20%         4.70%         3.29%         July 30, 2014 - Tapering Announced           32         7/25/2014         4.14%         4.60%         3.24%         July 30, 2014 - Tapering Announced           33         6/20/2014         4.33%         4.76%         3.44%         June 18, 2014 - Tapering Announced           40         5/2/2014         4.29%         4.72%         3.41%         June 18, 2014 - Tapering Announced           41         4/25/2014         4.32%         4.67%         3.37%         April 30, 2014 - Tapering Announced           42         3/21/2014         4.32%         4.67%         3.37%         April 30, 2014 - Tapering Announced           44         1/31/2014         4.48%         4.97%         3.69%         March 19, 2014 - Tapering Announced           45         1/24/2014         4.51%         5.00%         3.64%         January 29, 2014 - Tapering Announced           46         12/20/2013         4.73%         5.14%         3.82%         December 18, 2013 - Tapering Announced           47 </td <td>27</td> <td>10/3/2014</td> <td>4.13%</td> <td>4.72%</td> <td>3.13%</td> <td></td>	27	10/3/2014	4.13%	4.72%	3.13%	
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30         9/12/2014         4.33%         4.88%         3.35%         Deptember 11, 2014         1.2014         1.4014           31         8/1/2014         4.20%         4.70%         3.29%         July 30, 2014 - Tapering Announced           32         7/25/2014         4.14%         4.60%         3.24%         July 30, 2014 - Tapering Announced           33         6/20/2014         4.33%         4.76%         3.44%         June 18, 2014 - Tapering Announced           40         5/2/2014         4.29%         4.72%         3.41%         June 18, 2014 - Tapering Announced           41         4/25/2014         4.32%         4.75%         3.46%         April 30, 2014 - Tapering Announced           42         3/21/2014         4.52%         5.01%         3.61%         March 19, 2014 - Tapering Announced           44         1/31/2014         4.48%         4.97%         3.59%         March 19, 2014 - Tapering Announced           45         1/24/2014         4.51%         5.00%         3.64%         January 29, 2014 - Tapering Announced           47         12/13/2013         4.73%         5.14%         3.82%         December 18, 2013 - Tapering Announced           48         13 week average         3.68%         4.46%         2.56%	29	9/19/2014	4.28%	4.83%	3.29%	September 17 2014 - Tapering Appounced
31       8/1/2014       4.20%       4.70%       3.29%         32       7/25/2014       4.14%       4.60%       3.24%       July 30, 2014 - Tapering Announced         33       6/20/2014       4.33%       4.76%       3.44%       June 18, 2014 - Tapering Announced         40       5/2/2014       4.29%       4.72%       3.41%       June 18, 2014 - Tapering Announced         41       4/25/2014       4.29%       4.67%       3.37%       April 30, 2014 - Tapering Announced         42       3/21/2014       4.32%       4.75%       3.46%       March 19, 2014 - Tapering Announced         43       3/14/2014       4.48%       4.97%       3.59%       March 19, 2014 - Tapering Announced         44       1/31/2014       4.48%       4.97%       3.61%       January 29, 2014 - Tapering Announced         45       1/24/2014       4.51%       5.00%       3.64%       January 29, 2014 - Tapering Announced         46       12/20/2013       4.73%       5.14%       3.82%       December 18, 2013 - Tapering Announced         47       12/13/2013       4.80%       5.25%       3.88%       December 18, 2013 - Tapering Announced         48       13 week average       3.68%       4.46%       2.56%       3.20%	30	9/12/2014	4.33%	4.88%	3.35%	
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34       6/13/2014       4.29%       4.72%       3.41%       but it 10, 2014 + Tapering Announced         40       5/2/2014       4.24%       4.67%       3.37%       April 30, 2014 - Tapering Announced         41       4/25/2014       4.32%       4.75%       3.46%       April 30, 2014 - Tapering Announced         42       3/21/2014       4.52%       5.01%       3.61%       March 19, 2014 - Tapering Announced         43       3/14/2014       4.48%       4.97%       3.61%       January 29, 2014 - Tapering Announced         44       1/31/2014       4.49%       4.97%       3.61%       January 29, 2014 - Tapering Announced         45       1/24/2014       4.51%       5.00%       3.64%       December 18, 2013 - Tapering Announced         46       12/20/2013       4.73%       5.14%       3.82%       December 18, 2013 - Tapering Announced         47       12/13/2013       4.80%       5.25%       3.88%       December 18, 2013 - Tapering Announced         48       13 week average       3.68%       4.46%       2.56%         49       26 week average       3.85%       4.58%       2.75%         50       Average Since Dec, 13, 2013       4.17%       4.74%       3.20%	33	6/20/2014	4.33%	4.76%	3.44%	June 18, 2014 - Tapering Appounced
40       5/2/2014       4.24%       4.67%       3.37%       April 30, 2014 - Tapering Announced         41       4/25/2014       4.32%       4.75%       3.46%       April 30, 2014 - Tapering Announced         42       3/21/2014       4.52%       5.01%       3.61%       March 19, 2014 - Tapering Announced         43       3/14/2014       4.48%       4.97%       3.61%       January 29, 2014 - Tapering Announced         44       1/31/2014       4.49%       4.97%       3.61%       January 29, 2014 - Tapering Announced         45       1/24/2014       4.51%       5.00%       3.64%       January 29, 2014 - Tapering Announced         46       12/20/2013       4.73%       5.14%       3.82%       December 18, 2013 - Tapering Announced         47       12/13/2013       4.80%       5.25%       3.88%       December 18, 2013 - Tapering Announced         48       13 week average       3.68%       4.46%       2.56%         49       26 week average       3.85%       4.58%       2.75%         50       Average Since Dec, 13, 2013       4.17%       4.74%       3.20%	34	6/13/2014	4.29%	4.72%	3.41%	Sulle 10, 2014 - Tapering Announced
41       4/25/2014       4.32%       4.75%       3.46%       April 30, 2014 - Tapering Announced         42       3/21/2014       4.52%       5.01%       3.61%       March 19, 2014 - Tapering Announced         43       3/14/2014       4.48%       4.97%       3.59%       March 19, 2014 - Tapering Announced         44       1/31/2014       4.49%       4.97%       3.61%       January 29, 2014 - Tapering Announced         45       1/24/2014       4.51%       5.00%       3.64%       January 29, 2014 - Tapering Announced         46       12/20/2013       4.73%       5.14%       3.82%       December 18, 2013 - Tapering Announced         47       12/13/2013       4.80%       5.25%       3.88%       December 18, 2013 - Tapering Announced         48       13 week average       3.68%       4.46%       2.56%         49       26 week average       3.85%       4.58%       2.75%         50       Average Since Dec, 13, 2013       4.17%       4.74%       3.20%	40	5/2/2014	4.24%	4.67%	3.37%	April 30, 2014 Taparing Appaured
42       3/21/2014       4.52%       5.01%       3.61%       March 19, 2014 - Tapering Announced         43       3/14/2014       4.48%       4.97%       3.59%       March 19, 2014 - Tapering Announced         44       1/31/2014       4.49%       4.97%       3.61%       January 29, 2014 - Tapering Announced         45       1/24/2014       4.51%       5.00%       3.64%       January 29, 2014 - Tapering Announced         46       12/20/2013       4.73%       5.14%       3.82%       December 18, 2013 - Tapering Announced         47       12/13/2013       4.80%       5.25%       3.88%       December 18, 2013 - Tapering Announced         48       13 week average       3.68%       4.46%       2.56%         49       26 week average       3.85%       4.58%       2.75%         50       Average Since Dec, 13, 2013       4.17%       4.74%       3.20%	41	4/25/2014	4.32%	4.75%	3.46%	April 50, 2014 - Tapering Announced
43       3/14/2014       4.48%       4.97%       3.59%       March 19, 2014 - Tapening Announced         44       1/31/2014       4.49%       4.97%       3.61%       January 29, 2014 - Tapering Announced         45       1/24/2014       4.51%       5.00%       3.64%       January 29, 2014 - Tapering Announced         46       12/20/2013       4.73%       5.14%       3.82%       December 18, 2013 - Tapering Announced         47       12/13/2013       4.80%       5.25%       3.88%       December 18, 2013 - Tapering Announced         48       13 week average       3.68%       4.46%       2.56%         49       26 week average       3.85%       4.58%       2.75%         50       Average Since Dec, 13, 2013       4.17%       4.74%       3.20%	42	3/21/2014	4.52%	5.01%	3.61%	March 10, 2014 Tanaring Announced
44       1/31/2014       4.49%       4.97%       3.61%       January 29, 2014 - Tapering Announced         45       1/24/2014       4.51%       5.00%       3.64%       January 29, 2014 - Tapering Announced         46       12/20/2013       4.73%       5.14%       3.82%       December 18, 2013 - Tapering Announced         47       12/13/2013       4.80%       5.25%       3.88%       December 18, 2013 - Tapering Announced         48       13 week average       3.68%       4.46%       2.56%         49       26 week average       3.85%       4.58%       2.75%         50       Average Since Dec, 13, 2013       4.17%       4.74%       3.20%	43	3/14/2014	4.48%	4.97%	3.59%	March 19, 2014 - Tapening Announced
45       1/24/2014       4.51%       5.00%       3.64%       January 29, 2014 - Tapering Announced         46       12/20/2013       4.73%       5.14%       3.82%       December 18, 2013 - Tapering Announced         47       12/13/2013       4.80%       5.25%       3.88%       December 18, 2013 - Tapering Announced         48       13 week average       3.68%       4.46%       2.56%         49       26 week average       3.85%       4.58%       2.75%         50       Average Since Dec, 13, 2013       4.17%       4.74%       3.20%	44	1/31/2014	4.49%	4.97%	3.61%	January 20, 2014 Tanaring Announced
46       12/20/2013       4.73%       5.14%       3.82%         47       12/13/2013       4.80%       5.25%       3.88%       December 18, 2013 - Tapering Announced         48       13 week average       3.68%       4.46%       2.56%         49       26 week average       3.85%       4.58%       2.75%         50       Average Since Dec, 13, 2013       4.17%       4.74%       3.20%	45	1/24/2014	4.51%	5.00%	3.64%	January 29, 2014 - Tapening Announced
47       12/13/2013       4.80%       5.25%       3.88%       December 18, 2013 - Tapering Announced         48       13 week average       3.68%       4.46%       2.56%         49       26 week average       3.85%       4.58%       2.75%         50       Average Since Dec, 13, 2013       4.17%       4.74%       3.20%	46	12/20/2013	4.73%	5.14%	3.82%	
48       13 week average       3.68%       4.46%       2.56%         49       26 week average       3.85%       4.58%       2.75%         50       Average Since Dec. 13, 2013       4.17%       4.74%       3.20%	47	12/13/2013	4.80%	5.25%	3.88%	December 18, 2013 - Tapering Announced
49       26 week average       3.85%       4.58%       2.75%         50       Average Since Dec. 13, 2013       4.17%       4.74%       3.20%	48	13 week average	3.68%	4.46%	2.56%	
50 Average Since Dec. 13, 2013 4,17% 4,74% 3,20%	49	26 week average	3.85%	4.58%	2.75%	
	50	Average Since Dec. 13. 2013	4.17%	4.74%	3.20%	

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# **Consumers Energy**

# Variations of the CAPM

			Corrected						CAPM	Results:	
		Implied	ECAPM	Value Line	Mr. Rao's	Mr. Rao's			Corrected	Value Line	Mr. Rao's
		Raw	Adjusted	Adjusted	Adjusted	<b>Market Risk</b>	<b>Risk Free</b>	Implied	ECAPM	Adjusted	Adjusted
Line	Company	Beta <sup>1</sup>	<u>Beta</u> <sup>1</sup>	<u>Beta<sup>2</sup></u>	Beta <sup>1</sup>	Premium <sup>2,a</sup>	Rate <sup>2</sup>	Raw Beta	Beta	Beta	Beta
		(1)	(2)	(3)	(4)	(2)	(9)	(2)	(8)	(6)	(10)
~	Alliant Energy Corporation	0.67	0.75	0.80	0.84	6.96%	4.36%	9.03%	9.60%	9.92%	10.22%
2	Ameren Corporation	09.0	0.70	0.75	0.80	6.96%	4.36%	8.51%	9.21%	9.58%	9.95%
ო	American Electric Power	0.52	0.64	0.70	0.76	6.96%	4.36%	7.99%	8.82%	9.23%	9.68%
4	Consolidated Edison	0.37	0.53	0.60	0.69	6.96%	4.36%	6.95%	8.04%	8.53%	9.13%
5	Dominion Resources	0.52	0.64	0.70	0.76	6.96%	4.36%	7.99%	8.82%	9.23%	9.68%
9	DTE Energy Company	09.0	0.70	0.75	0.80	6.96%	4.36%	8.51%	9.21%	9.58%	9.95%
7	Duke Energy Corporation	0.37	0.53	0.60	0.69	6.96%	4.36%	6.95%	8.04%	8.53%	9.13%
œ	Edison International	09.0	0.70	0.75	0.80	6.96%	4.36%	8.51%	9.21%	9.58%	9.95%
6	Entergy Corporation	0.52	0.64	0.70	0.76	6.96%	4.36%	7.99%	8.82%	9.23%	9.68%
10	FirstEnergy Corporation	0.52	0.64	0.70	0.76	6.96%	4.36%	7.99%	8.82%	9.23%	9.68%
1	Great Plains Energy	0.75	0.81	0.85	0.88	6.96%	4.36%	9.55%	9.99%	10.27%	10.50%
12	Nextera Energy	0.52	0.64	0.70	0.76	6.96%	4.36%	7.99%	8.82%	9.23%	9.68%
13	Northeast Utilities	09.0	0.70	0.75	0.80	6.96%	4.36%	8.51%	9.21%	9.58%	9.95%
14	OGE Energy Corp.	0.75	0.81	0.85	0.88	6.96%	4.36%	9.55%	9.99%	10.27%	10.50%
15	PG&E Corporation	0.45	0.59	0.65	0.73	6.96%	4.36%	7.47%	8.43%	8.88%	9.40%
16	Pinnacle West Capital	0.52	0.64	0.70	0.76	6.96%	4.36%	7.99%	8.82%	9.23%	9.68%
17	Portland General Electric	09.0	0.70	0.75	0.80	6.96%	4.36%	8.51%	9.21%	9.58%	9.95%
18	Public Service Enterprise Group	09.0	0.70	0.75	0.80	6.96%	4.36%	8.51%	9.21%	9.58%	9.95%
19	SCANA Corporation	09.0	0.70	0.75	0.80	6.96%	4.36%	8.51%	9.21%	9.58%	9.95%
20	Southern Company	0.37	0.53	09.0	0.69	6.96%	4.36%	6.95%	8.04%	8.53%	9.13%
21	TECO Energy	0.75	0.81	0.85	0.88	6.96%	4.36%	9.55%	9.99%	10.27%	10.50%
22	Westar Energy	09.0	0.70	0.75	0.80	6.96%	4.36%	8.51%	9.21%	9.58%	9.95%
23	Xcel Energy	0.45	0.59	0.65	0.73	6.96%	4.36%	7.47%	8.43%	8.88%	9.40%
24	Average	0.56	0.67	0.72	0.78			8.24%	9.01%	9.39%	9.81%

Source & Note:

<sup>1</sup> Exhibit AB-1, page 3. <sup>2</sup> Exhibit A-9 (DVR-1), page 4.

a The use of Mr. Rao's risk premium on this schedule does not imply my acceptance of it. Rather, this is to illustrate his misuse of adjusted betas to develop an ECAPM analysis.

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# **Consumers Energy**

# Variations of the CAPM

			Corrected						CAPM	Results:	
		Implied	ECAPM	Value Line	Mr. Rao's	Mr. Rao's			Corrected	Value Line	Mr. Rao's
		Raw	Adjusted	Adjusted	Adjusted	<b>Market Risk</b>	<b>Risk Free</b>	Implied	ECAPM	Adjusted	Adjusted
Line	Company	Beta <sup>1</sup>	Beta <sup>1</sup>	<u>Beta<sup>2</sup></u>	Beta <sup>1</sup>	Premium <sup>2,a</sup>	Rate <sup>3</sup>	Raw Beta	Beta	Beta	Beta
		(1)	(2)	(3)	(4)	(5)	(9)	(2)	(8)	(6)	(10)
~	Alliant Energy Corporation	0.67	0.75	0.80	0.84	6.96%	3.70%	8.37%	8.94%	9.27%	9.57%
2	Ameren Corporation	09.0	0.70	0.75	0.80	6.96%	3.70%	7.85%	8.56%	8.92%	9.29%
ო	American Electric Power	0.52	0.64	0.70	0.76	6.96%	3.70%	7.33%	8.17%	8.57%	9.02%
4	Consolidated Edison	0.37	0.53	09.0	0.69	6.96%	3.70%	6.30%	7.39%	7.87%	8.47%
2	Dominion Resources	0.52	0.64	0.70	0.76	6.96%	3.70%	7.33%	8.17%	8.57%	9.02%
9	DTE Energy Company	09.0	0.70	0.75	0.80	6.96%	3.70%	7.85%	8.56%	8.92%	9.29%
7	Duke Energy Corporation	0.37	0.53	0.60	0.69	6.96%	3.70%	6.30%	7.39%	7.87%	8.47%
ø	Edison International	09.0	0.70	0.75	0.80	6.96%	3.70%	7.85%	8.56%	8.92%	9.29%
ი	Entergy Corporation	0.52	0.64	0.70	0.76	6.96%	3.70%	7.33%	8.17%	8.57%	9.02%
10	FirstEnergy Corporation	0.52	0.64	0.70	0.76	6.96%	3.70%	7.33%	8.17%	8.57%	9.02%
1	Great Plains Energy	0.75	0.81	0.85	0.88	6.96%	3.70%	8.89%	9.33%	9.61%	9.84%
12	Nextera Energy	0.52	0.64	0.70	0.76	6.96%	3.70%	7.33%	8.17%	8.57%	9.02%
13	Northeast Utilities	09.0	0.70	0.75	0.80	6.96%	3.70%	7.85%	8.56%	8.92%	9.29%
14	OGE Energy Corp.	0.75	0.81	0.85	0.88	6.96%	3.70%	8.89%	9.33%	9.61%	9.84%
15	PG&E Corporation	0.45	0.59	0.65	0.73	6.96%	3.70%	6.82%	7.78%	8.22%	8.75%
16	Pinnacle West Capital	0.52	0.64	0.70	0.76	6.96%	3.70%	7.33%	8.17%	8.57%	9.02%
17	Portland General Electric	09.0	0.70	0.75	0.80	6.96%	3.70%	7.85%	8.56%	8.92%	9.29%
18	Public Service Enterprise Group	09.0	0.70	0.75	0.80	6.96%	3.70%	7.85%	8.56%	8.92%	9.29%
19	SCANA Corporation	09.0	0.70	0.75	0.80	6.96%	3.70%	7.85%	8.56%	8.92%	9.29%
20	Southern Company	0.37	0.53	0.60	0.69	6.96%	3.70%	6.30%	7.39%	7.87%	8.47%
21	TECO Energy	0.75	0.81	0.85	0.88	6.96%	3.70%	8.89%	9.33%	9.61%	9.84%
22	Westar Energy	09.0	0.70	0.75	0.80	6.96%	3.70%	7.85%	8.56%	8.92%	9.29%
23	Xcel Energy	0.45	0.59	0.65	0.73	6.96%	3.70%	6.82%	7.78%	8.22%	8.75%
24	Average	0.56	0.67	0.72	0.78			7.58%	8.35%	8.74%	9.15%

Source & Note: <sup>1</sup> Exhibit AB-1, page 3. <sup>2</sup> Exhibit A-9 (DVR-1), page 4. <sup>3</sup> Blue Chip Financial Forecast , April 1, 2015, page 2.

a The use of Mr. Rao's risk premium on this schedule does not imply my acceptance of it. Rather, this is to illustrate his misuse of adjusted betas to develop an ECAPM analysis.

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#### **Consumers Energy**

#### **Beta Calculations**

<u>Line</u>	Company	Value Line Adjusted Beta <sup>1</sup> (1)	Value Line's Adjustment to <u>Market Beta</u> (2)	Value Line's Adjustment to <u>Company Beta</u> (3)	<u>Implied Raw Beta</u> <sup>a</sup> (4) = [(1) - (2)] / (3)
1	Alliant Energy Corporation	0.80	0.35	0.67	0.67
2	Ameren Corporation	0.75	0.35	0.67	0.60
4	Consolidated Edison	0.60	0.35	0.67	0.32
5	Dominion Resources	0.70	0.35	0.67	0.52
6	DTE Energy Company	0.75	0.35	0.67	0.60
8	Edison International	0.60	0.35	0.67	0.37
9	Entergy Corporation	0.70	0.35	0.67	0.52
10	FirstEnergy Corporation	0.70	0.35	0.67	0.52
11 12	Great Plains Energy Nextera Energy	0.85	0.35	0.67	0.75
13	Northeast Utilities	0.75	0.35	0.67	0.60
14	OGE Energy Corp.	0.85	0.35	0.67	0.75
15 16	PG&E Corporation Pinnacle West Capital	0.65	0.35	0.67	0.45
17	Portland General Electric	0.75	0.35	0.67	0.60
18	Public Service Enterprise Group	0.75	0.35	0.67	0.60
19 20	SCANA Corporation	0.75	0.35	0.67	0.60
21	TECO Energy	0.85	0.35	0.67	0.75
22	Westar Energy	0.75	0.35	0.67	0.60
23	Xcel Energy	0.65	0.35	0.67	0.45
24	Average	0.72			0.56
Line	Company	Implied Raw Beta (1)	ECAPM Adjustment to <u>Market Beta</u> (2)	ECAPM Adjustment to Company Beta (3)	Corrected ECAPM Adjusted Beta (4) = (2) + (1)*(3)
25	Alliant Energy Corporation	0.67	0.25	0.75	0.75
26	Ameren Corporation	0.60	0.25	0.75	0.70
27	American Electric Power	0.52	0.25	0.75	0.64
29	Dominion Resources	0.52	0.25	0.75	0.64
30	DTE Energy Company	0.60	0.25	0.75	0.70
31	Edison International	0.37	0.25	0.75	0.53
33	Entergy Corporation	0.52	0.25	0.75	0.64
34	FirstEnergy Corporation	0.52	0.25	0.75	0.64
36	Nextera Energy	0.52	0.25	0.75	0.64
37	Northeast Utilities	0.60	0.25	0.75	0.70
38	PG&E Corporation	0.75	0.25	0.75	0.81
40	Pinnacle West Capital	0.52	0.25	0.75	0.64
41	Portland General Electric	0.60	0.25	0.75	0.70
42	SCANA Corporation	0.60	0.25	0.75	0.70
44	Southern Company	0.37	0.25	0.75	0.53
45	TECO Energy	0.75	0.25	0.75	0.81
40 47	Xcel Energy	0.60	0.25	0.75	0.59
48	Average	0.56			0.67
		Value Line	Mr. Baola	Mr. Baolo	Mr. Baolo
<u>Line</u>	Company	Adjusted Beta (1)	Adjustment to Market Beta (2)	Adjustment to Company Beta (3)	Adjusted Adjusted Beta $(4) = (2) + (1)^*(3)$
49	Alliant Energy Corporation	0.80	0.22	0.78	0.84
50 51	Ameren Corporation	0.75	0.22	0.78	0.80
52	Consolidated Edison	0.70	0.22	0.78	0.69
53	Dominion Resources	0.70	0.22	0.78	0.76
54 55	DIE Energy Company	0.75	0.22	0.78	0.80
56	Edison International	0.75	0.22	0.78	0.80
57	Entergy Corporation	0.70	0.22	0.78	0.76
58 59	FirstEnergy Corporation Great Plains Energy	0.70	0.22	0.78	0.76
60	Nextera Energy	0.70	0.22	0.78	0.76
61	Northeast Utilities	0.75	0.22	0.78	0.80
₀∠ 63	PG&E Corporation	0.85	0.22	0.78	0.88
64	Pinnacle West Capital	0.70	0.22	0.78	0.76
65	Portland General Electric	0.75	0.22	0.78	0.80
00 67	SCANA Corporation	0.75	0.22	0.78	0.80
68	Southern Company	0.60	0.22	0.78	0.69
69 70	IECO Energy Westar Energy	0.85	0.22	0.78	0.88
71	Xcel Energy	0.65	0.22	0.78	0.73
72	Average	0.72			0.78

Source & Notes: <sup>a</sup> Exhibit A-9 (DVR-1), page 4. <sup>a</sup> Value Line's adjusted beta is calculated by adjusting a company's raw beta by: Adjusted  $Bi=0.35 + .67^*Bi$ . This can be rewritten as: Bi = [Adjusted Bi - .35] / .67where Bi = Company's Raw Beta.

Case No.: U-17735 Witness: Christopher Walters Exhibit: AB-3 Date: April 2015

# **Consumers Energy Company**

# **Risk Premium Analysis Over Utility Bonds**

(6)	BBB-		4.20%	3.70% <u>1.91%</u> 5.61%	9.81%	9.26% 8.85% 9.81%
(f)	BBB		4.20%	3.70% <u>1.59%</u> 5.29%	9.49%	
(e)	S&P Bond Rating <u>BBB+</u>		4.20%	3.70% <u>1.27%</u> 4.97%	9.17%	
(q)	<u>-</u>		4.20%	3.70% <u>1.06%</u> 4.76%	8.96%	
(c)	Ā		4.20%	3.70% <u>0.95%</u> 4.65%	8.85%	
(q)	Description	m (A)	Historical Spread of Electric Utility Common Stock Over Utility Bonds	Long-Term Treasury Bond Yield (2015 Risk-Free Rate) <sup>a</sup> Corporate Spread Current Estimated Bond Yield (Lines 2 + 3)	Cost of Equity (A) (Lines 1 + 4)	Average Minimum Maximum
(a)	Line	Risk Premiu	-	0 0 4	5	8 / 6

Sources: Exhibit A-9 (DVR-1), page 7. <sup>a</sup>Blue Chip Financial Forecast , April 1, 2015, page 2.

#### 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-17735

Direct Testimony and Exhibits of

James T. Selecky

On behalf of

Association of Businesses Advocating Tariff Equity ("ABATE")

April 24, 2015



Project 10013

#### **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-17735

#### **Direct Testimony of James T. Selecky**

#### 1 Q PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

- 2 A James T. Selecky. My business address is 16690 Swingley Ridge Road, Suite 140,
- 3 Chesterfield, MO 63017.

#### 4 Q WHAT IS YOUR OCCUPATION?

- 5 A I am a consultant in the field of public utility regulation and associated with the firm of
- 6 Brubaker & Associates, Inc., energy, economic and regulatory consultants.

#### 7 Q PLEASE DESCRIBE YOUR EDUCATIONAL BACKGROUND AND EXPERIENCE.

8 A This information is included in Appendix A to my testimony.

#### 9 Q ON WHOSE BEHALF ARE YOU APPEARING IN THIS PROCEEDING?

- 10 A I am testifying on behalf of the Association of Businesses Advocating Tariff Equity
- 11 ("ABATE"). ABATE's members are customers of Consumers Energy Company
- 12 ("Consumers" or "Company").

1	Q	HAVE YOU PRES	SENTED 1	FESTI	MONY IN PF	RIOR CON	SUMERS	REGULATORY
2		PROCEEDINGS	BEFORE	THE	MICHIGAN	PUBLIC	SERVICE	COMMISSION
3		("COMMISSION")	?					

4 A Yes. I have been involved in many prior Consumers regulatory proceedings before
5 the Commission. I have presented testimony in several Consumers' electric and gas
6 rate cases.

#### 7 Q WHAT IS THE PURPOSE OF YOUR TESTIMONY?

A My testimony will address the allocation of the production fixed costs, and transmission costs. I will address Consumers' power supply rates for the General Primary Demand ("GPD") Rate. Specifically, I will address both the GPD Rate demand charges and the seasonal energy charges. I will also address Consumers' proposed reconciliation mechanisms. Consumers has proposed the following reconciliation mechanisms: (1) a Revenue Adjustment Mechanism ("RAM"); and (2) an Investment Recovery Mechanism ("IRM").

15 My colleague, Mr. Chris Walters, will support the appropriate return on 16 common equity ("ROE") that should be used to develop Consumers' test year 17 revenue requirement. Finally, the fact that I do not address an issue should not be 18 construed as an endorsement of Consumers' position.

#### 19 Q PLEASE BRIEFLY SUMMARIZE YOUR CONCLUSIONS AND

#### 20 **RECOMMENDATIONS IN THIS PROCEEDING.**

- 21 A My conclusions and recommendations are as follows:
- 221.The Commission should use a 100% demand four coincident peak method23("4CP") to allocate the fixed production costs. To reflect cost-causation24principles, the Commission should approve a 100% demand 4CP allocator.

BRUBAKER & ASSOCIATES, INC.

- 1 2. A review of Consumers' monthly maximum demand peaks in each month for the 2 ten-year period from 2004 through 2013 shows that the summer peaks are 3 dominant and drive the need for new capacity.
- 4 3. A review of Consumers' monthly energy demand peaks forecasted for 2015 5 through 2019 show that the summer peaks are also dominant and drive the 6 need for new capacity.
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  4. The transmission cost should be allocated based on a 100% demand
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  12 coincident peak allocator ("12CP"). Allocating these costs on a 100% demand 12CP allocator largely mirrors the way that these costs are incurred by Consumers. A pure 12CP allocator is more reflective of cost-causation.
- 5. If the Commission elects to use a fixed cost production allocator that relies on an
  energy component, it should also adjust the allocation of fuel or energy costs to
  reflect the symmetry that exists between high generation capacity costs for base
  load units and the lower energy costs associated with those units.
- Consumers is proposing to recover approximately 75% of the GPD Rate
   demand costs in the demand charges, and the remainder in the energy charges.
   One-hundred percent of the demand costs should be recovered through the
   demand charges.
- 197.For the GPD Rate, Consumers is proposing to eliminate the summer and winter20differential for both the on-peak and off-peak energy charges. Consumers is21proposing to distinguish between the on-peak and off-peak periods, but the22energy charges for each of those periods will remain constant throughout the23year.
- 8. The Commission should continue to differentiate between the energy charges
  for the summer period. Because Consumers is a summer peaking utility, and
  higher energy costs are incurred during the summer months, this differential
  should be reflected in the rates.
- 9. As a matter of policy, the Commission should limit the use of tracking
  mechanisms because they shift the regulatory risk from investors to customers.
  In past orders, the Commission has found that with the passage of Public
  Act 286 ("PA 286") trackers and reconciliation mechanisms are no longer
  needed.
- The Commission should not implement any additional tracking mechanisms.
   However, if additional tracking mechanisms are approved, the Commission should reflect the transfer of risk from Consumers to the ratepayers through an adjustment to lower Consumers' ROE.
- 373811. Even if legislation is passed that allows the Commission to approve a RAM, the38RAM should not be approved.
- The Commission should not approve the IRM. However, if the IRM is approved,
   the Commission should make an adjustment to the ROE.

#### 1 Cost of Service Overview

#### 2 Q WHAT IS THE BASIC PURPOSE OF A COST OF SERVICE STUDY?

3 А After determining the total cost to serve or revenue requirement, a cost of service 4 study is used to allocate the revenue requirement or cost responsibility among the 5 customer rate classes. A cost of service study compares the cost that each customer 6 rate class imposes on the system to the revenues each rate contributes. For 7 example, when a rate class produces the same rate of return as the total system rate 8 of return, it is paying revenue to the utility just sufficient to cover the costs incurred to 9 serve that class. If a rate class produces a below-average rate of return, it may be 10 concluded that the revenues provided by that class are insufficient to cover all 11 relevant costs to serve that class. On the other hand, if a class produces a rate of 12 return above the system average, it is not only paying revenues sufficient to cover the 13 cost attributable to it but, in addition, it is paying part of the cost attributable to other classes who produce a below-system average rate of return. 14

#### 15 Q WHY IS A CLASS COST OF SERVICE STUDY ("CCOSS") IMPORTANT?

A It is a widely held principle that costs should be shared among customer rate classes
 on the basis of cost-causation. That principle is perhaps the most universally
 accepted principle of regulatory rate design

19 Cost-based rates are not only fair and reasonable, but further the cause of 20 stability, conservation and efficiency. When customers are presented with price 21 signals that convey the consequences of their consumption decisions (i.e., how much 22 energy to consume, at what rate and when), they tend to take actions, which not only 23 minimize their own costs but those of the utility as well.

- The fundamental starting point and guideline for setting rates should be the
   actual cost of serving each customer class as required by Michigan law. In addition,
   cost-based rates will enhance Michigan's business climate.
- 4

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#### Q CAN YOU PLEASE EXPLAIN WHY COST OF SERVICE IS AN IMPORTANT STARTING POINT IN DESIGNING RATES?

6 А ABATE has always been a staunch advocate of rates based upon the cost of 7 providing service because this method is the most fair and results in rates sending 8 the proper economic signals to customers. For example, basic economic theory is 9 that customers will respond to price signals and consume less as the prices increase 10 and consume more as the prices decrease. Accordingly, if the actual cost of production rises during the peak periods during the summer and rates are not 11 12 designed to recover those costs appropriately, then customers will over-consume and 13 place pressure on utilities to either contract for or build incremental resources to 14 produce the energy needed. This, in turn, has cost implications for customers who will have to pay rates to support an increased rate base. 15

# 16QWHAT COST ALLOCATION METHOD FOR FIXED PRODUCTION PLANT DID17CONSUMERS UTILIZE TO DEVELOP ITS RATES?

# A Consumers used 4CP to allocate production fixed costs and 12CP to allocate the transmission fixed costs. These methods allocate fixed costs 100% on CP demands.

#### 20 Q WOULD YOU PLEASE EXPLAIN WHAT IS MEANT BY THE AVERAGE OF 4CP?

A The 4CP allocation factor is based on class contributions to Consumers' highest four monthly summer coincident peaks in each of the four summer months, which are June through September. Under this method, the coincident demand, at the time of
 each of the four monthly summer peaks, is used to allocate the production fixed
 costs.

#### 4 Q PLEASE EXPLAIN.

5 A Consumers has been and continues to be a predominantly summer peaking utility. 6 Therefore, the demands which occur during the summer period cause the need to 7 add or purchase capacity. Therefore, the production fixed costs should be allocated 8 to the rate classes based on peaks or demands not energy or kWh.

#### 9 Q HAVE YOU REVIEWED CONSUMERS' MONTHLY PEAK DEMANDS?

10 A Yes. Exhibit AB-4 shows Consumers' monthly maximum peak demand in each 11 month for the ten-year period, 2004 through 2013, as reported in FERC Form 1. The 12 data show that the summer peaks have clearly been the dominant peaks over the last 13 ten years. As previously stated the summer months are defined as June through 14 September.

Looking at an average of the four monthly summer peaks over this ten-year period indicates that for the summer months the lowest average monthly peak is 85% of the average maximum peak demand, which occurred in July.

18 Consumers must plan for and provide adequate generation capacity to meet 19 the summer peak loads on its electric system. Therefore, it is the summer peaks that 20 are causing Consumers to acquire generation capacity and the Company to incur 21 additional production fixed costs.

# 1QHAVE YOU REVIEWED CONSUMERS' FORECASTED PEAK DEMANDS TO2DETERMINE IF THEY ALSO SUPPORT THE USE OF A 4CP?

A Yes. Exhibit AB-5 shows Consumers' forecasted monthly peak demands in each
month for the five-year period from 2015 through 2019, as forecasted by Consumers
in Case No. U-17678. Those peak demands show that Consumers is forecasted to
remain a summer peaking utility. As Exhibit AB-5 shows, for the forecasted period,
Consumers is projecting the peak to occur in August and the September peak to be
approximately 89% of the average summer peak.

# 9 Q DO YOU HAVE ANY ADDITIONAL COMMENTS ON THE USE OF CONSUMERS' 10 PEAK SUMMER DEMANDS FOR ALLOCATING FIXED PRODUCTION COSTS TO 11 THE RATE CLASSES?

12 А Yes. The Midcontinent Independent System Operator, Inc. ("MISO") utilizes its single 13 coincident peak as the starting point to determine each utility's capacity reserve 14 requirements and future capacity needs. Over the last five years, that single peak, in MISO's Zone 7, has occurred in the summer months, specifically in June or July. 15 16 Since the MISO summer peak drives Consumers' need for capacity and causes 17 Consumers' ratepayers to incur cost to meet Consumers' capacity requirement, it is 18 appropriate that these fixed capacity-related costs should be allocated to ratepayers 19 based on peak demand or kW and not energy or kWh.

#### 1 Q DO YOU HAVE ANY ADDITIONAL COMMENTS ON WHY IT IS APPROPRIATE TO 2 USE THE HIGHEST MONTHLY COINCIDENT PEAKS TO ALLOCATE FIXED 3 PRODUCTION COSTS?

A It is clear that Consumers' capacity needs are driven by the monthly summer peaks.
That is, Consumers acquires capacity to meet its summer peaks. Therefore, it is
appropriate to allocate the fixed production cost solely based on these summer
monthly peaks.

8 In addition, those customers that add new load during the off-peak periods 9 and increase their off-peak energy consumption should not be penalized through 10 increased allocation of fixed costs. Any fixed production cost allocator that has an 11 energy component does exactly that. Those customers are not causing the need for 12 any additional capacity and therefore should not be penalized through higher rates. It 13 should be remembered that any cost that Consumers incurs as a result of increased 14 off-peak energy will be passed on to these customers through their energy charges. 15 The production costs that Consumers incurs through increased off-peak energy 16 usage are variable or kWh-related.

17 Q DO YOU HAVE ADDITIONAL COMMENTS TO MAKE IF THE COMMISSION
 18 CHOOSES TO ALLOCATE A PORTION OF THE FIXED PRODUCTION COSTS ON
 19 AN ENERGY ALLOCATOR?

20 A Yes. If the Commission approves an allocation of a portion of the fixed product cost 21 on an energy allocator, it needs to develop an alternative allocator for fuel or energy 22 costs. Typically, base load units have higher fixed or capital costs per kW basis than 23 peaking units. However, base load units have lower energy or fuel costs. If high load 24 factor customers are going to see an increased cost allocation of production fixed

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costs through an energy allocator, they should receive the fuel cost benefit through a
 revised energy or fuel cost allocator. The Commission needs to address the fuel
 symmetry argument if it elects to allocate production fixed costs on an energy
 allocator.

#### 5 Q DO YOU SUPPORT THE USE OF THE 12CP METHOD TO ALLOCATE 6 TRANSMISSION-FIXED COSTS?

7 A Yes.

8 Q WHY ARE YOU SUPPORTING THE ALLOCATION OF THE PRODUCTION-FIXED 9 COSTS ON A 100% DEMAND 4CP AND THE ALLOCATION OF THE 10 TRANSMISSION-FIXED COSTS ON A 100% DEMAND 12CP?

11 A The transmission system used to serve Consumers' customers is operated by MISO, 12 and Consumers pays charges that are largely based on 12CP. That is, the 13 transmission cost to Consumers and its customers is a function of 12CP demands. 14 Since these costs are assigned to Consumers by FERC based on 12CP, it is 15 appropriate to allocate these costs to the various classes based on that same 16 allocator.

# 17 Q WHICH COST ALLOCATION METHODS DO YOU BELIEVE TO BE MOST 18 APPROPRIATE FOR THIS PROCEEDING?

A The 100% demand 4CP method is appropriate to use for allocating fixed production
 costs. The use of this method provides a better correlation to cost-causation. The
 transmission costs should be allocated based on a 100% demand 12CP since that is
 how Consumers incurs the vast majority of those costs.

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#### 1 GPD Rate Design

#### 2 Q DO YOU HAVE ANY REVISIONS TO CONSUMERS' PROPOSED RATE DESIGN 3 FOR RATE GPD?

4 A Yes. First, I am recommending that a seasonal differential energy charge for the
5 on-peak energy consumption be retained. Second, in this case, I support collecting
6 100% of the production demand costs through the power supply demand charges.

# 7 Q WHAT CHANGE ARE YOU PROPOSING TO MAKE TO CONSUMERS' 8 PROPOSED GPD RATE ENERGY CHARGES?

9 A Consumers is proposing to remove the seasonal differentials on the power supply 10 energy rates for the GPD Rate. Consumers contends that removing the seasonal 11 differential provides customers with consistent rates year round. This allows the 12 customers to better plan for the year. In addition, Consumers states that the 13 seasoned differentials are based on a difference between the summer and winter 14 Locational Marginal Prices ("LMP"), and that the differential between the summer and 15 winter prices has been decreasing and is forecast to continue to decrease.

# 16QHAS CONSUMERS PROVIDED ANY INFORMATION REGARDING THE17DIFFERENTIAL BETWEEN THE SUMMER AND WINTER ON-PEAK AND18OFF-PEAK PRICES?

19 A Yes. Exhibit AB-6 is a summary of Consumers' workpaper-LMC-11 that shows the 20 calculation of the LMP energy price splits for the historic years of 2009 through 2013 21 and for the forecasted period 2014 through 2018. That data still clearly shows that 22 the on-peak summer energy costs are higher than the on-peak winter energy 23 charges, with the exception of 2014. It appears that the 2014 data may be a combination of actual and forecasted data. The 2014 data is skewed because of the
 extremely cold winter. I drew this conclusion from my review of day-ahead real time
 prices for the Michigan Hub.

For the off-peak periods, the average energy costs for the winter period are slightly higher than they are for the summer period, with the exception of 2014. Based on my review of the data, a case can be made that the winter off-peak energy charges and the summer off-peak energy charges should be the same since the difference in energy prices for the two periods is small.

#### 9 Q WHAT IS YOUR RECOMMENDATION REGARDING THE ENERGY CHARGES

#### 10 FOR THE GPD RATE?

11 A I am recommending that the price differential should be built in to the energy rates for 12 summer and winter on-peak usage. Based on my analysis of the data, the on-peak 13 summer energy charges should be 10 mills per kWh higher than the on-peak winter 14 charges. However, for the off-peak energy charges, I am recommending that the 15 energy charges remain the same.

#### 16 Q HOW IS CONSUMERS PROPOSING TO RECOVER THE GPD DEMAND COSTS?

A Consumers is proposing to recover 75% of the demand costs through the demand
charge. The remaining 25% of the costs will be recovered through the energy
charges.

#### 1 Q ARE YOU PROPOSING ANY CHANGE IN THE DEVELOPMENT OF THE DEMAND 2 CHARGES?

A In order to provide proper signals, the rate design should include 100% of the
production demand costs in the power supply demand charges.

#### 5 Proposed Tracker Mechanisms

# 6 Q WOULD YOU PLEASE DESCRIBE CONSUMERS' RATEMAKING ADJUSTMENT 7 MECHANISMS?

# 8 A Yes. Consumers is proposing two ratemaking adjustment mechanisms: (1) an 9 Investment Recovery Mechanism ("IRM"); and (2) a Revenue Adjustment Mechanism 10 ("RAM").

Consumers is proposing an IRM that provides for recovery of the incremental 11 12 annual revenue requirement associated with additional capital spending for 2017 and 13 2018. The IRM provides for the recovery of average incremental rate base beyond 14 the level ultimately approved in the test year, which is the 12-month period ending 15 May 31, 2016. The proposed IRM will operate through an annual surcharge effective 16 January 1, 2017 until rates are changed in the subsequent rate case. The surcharge 17 is designed to recover the incremental revenue requirement associated with the 18 annual projected increase in rate base for the years 2017 and 2018. Consumers has 19 provided surcharges for their projected IRM 2017 expenditures. With Commission 20 approval, Consumers' proposed rates would be effective for service rendered on and 21 after June 1, 2016. On June 1, 2017, the IRM proposed surcharges for the 2018 22 expenditures would be added to the IRM surcharges that were effective on June 1. 23 2016. These IRM surcharges would remain in effect until rates are modified in a rate 24 case. Finally, the surcharges associated with the Production capital expenditures

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would apply to only full service customers. The Distribution capital expenditure surcharges would apply to both full service and retail open access customers.

It should be noted that the costs reflected in the proposed IRM occur after the test year. This means that Consumers is proposing three test years: (1) the 12-month period for the year ending May 31, 2016; (2) calendar year 2017; and (3) calendar year 2018. Section 6(a) of PA 286 only refers to using projected costs in one test year "for a future 12-month period in developing its requested rates and charges." The first year of Consumers' proposed IRM for 2016 is clearly outside its chosen test year.

Finally, Consumers is also proposing a RAM. Consumers' proposed RAM compares non-fuel rate case revenues approved by the Commission in the most recent case to the total non-fuel revenues generated through actual sales for the time period under evaluation. Under Consumers' proposal, the revenues that will be compared exclude the customer charges.

15 The revenue comparison will be performed by rate class. Consumers 16 proposes to compare actual total delivery revenues less customer charges, which 17 would apply to all customers, and to compare actual non-fuel power supply revenues 18 to the approved non-fuel power supply revenues, which would only apply to full 19 service customers. The difference in revenues would be deferred on Consumers' 20 books pending an annual reconciliation process. Consumers proposes to use actual 21 revenues as opposed to weather-normalized revenues. Under the proposed RAM, 22 Consumers would collect its authorized level of revenues. The RAM would continue 23 until Consumers self-implements with the next electric rate case filing. Consumers 24 conditions its request for the RAM on the enactment of legislation addressing RAM or 25 revenue decoupling during this case.

# Q WOULD THE RECOVERY OF THESE COST AND REVENUE FLUCTUATIONS THROUGH TRACKING MECHANISMS UNREASONABLY SHIFT RISK FROM UTILITY INVESTORS TO CUSTOMERS?

A Yes. A policy that permits a utility to adjust its rates for individual cost or revenue
items outside of a base rate case shifts regulatory risk from utility investors to
customers by providing investors with accelerated recognition of specific cost and
revenue adjustments in utility rates. Moreover, this change in the Company's risk
profile would occur without a corresponding reduction to its rate of return to recognize
the reduced business risks faced by the utility.

A utility's allowed return on rate base is established to compensate the utility's investors for the various business risks incurred, among them the risk that regulatory lag will delay the recognition of cost increases or revenue fluctuations in utility rates between base rate cases. Therefore, utility investors are compensated for bearing the risk that the utility's costs or sales revenues could fluctuate between rate cases relative to the levels embedded in the utility's base rates.

16 Tracking mechanisms shift much of this risk to customers by allowing 17 Consumers to adjust its rates between base rate cases to recover increases in costs 18 or to offset reductions in bundled sales revenues. Thus, Consumers' investors would 19 be granted expedited rate recognition for these items, without the need to petition for 20 a change in base rates. The Commission should reject the Company's efforts to 21 transfer the traditional utility business risk associated with regulatory lag from 22 investors to customers.

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#### 1 Q WHAT ARE THE RAMIFICATIONS OF TRANSFERRING THIS REGULATORY **RISK FROM INVESTORS TO RATEPAYERS?** 2

3 Α When investors bear the risk of regulatory lag, the utility's management has a strong 4 incentive to control cost escalations. This is the case because any cost increases damage the utility's bottom line until the next base rate case. The existing regulatory 5 6 framework also gives Consumers a strong incentive to control its costs in order to avoid upward pressure on rates. 7

#### 8 Q ARE THERE ANY OTHER POLICY CONSIDERATIONS THAT ARE SPECIFIC TO

#### 9 MICHIGAN THAT JUSTIFY A DECISION TO REJECT TRACKER MECHANISMS?

- 10 Yes. The passage of PA 286 has significantly diminished the need for trackers and А 11 true-up mechanisms by requiring a utility to receive a final order within 12 months of 12 the filing date. Also, PA 286 allows a utility to implement interim rate relief within six 13 months of the filing date.
- 14 Consumers has filed rate cases on a regular basis and has received interim 15 and final rate relief in those cases. This has enabled Consumers to adjust its base 16 rates either through interim or final rate relief more frequently than once a year.

#### HAS THE COMMISSION AGREED WITH THE COMMISSION STAFF'S POLICY 17 Q

#### 18

#### ARGUMENTS WITH RESPECT TO THE NEED FOR TRACKERS?

- 19 Yes. In a Consumers rate case, the Commission terminated the Company's UETM А
- 20 tracker and rejected the implementation of two other tracking mechanisms. In its
- Order in that case, the Commission stated as follows: 21

#### 22 "The Staff argues that Act 286, with its generous provisions for the filing of rate cases every 12 months (using projected costs and 23 24 revenues for a future 12-month period), followed quickly by the 25 self-implementation of unapproved new rates, has rendered tracking

and true-up mechanisms largely unnecessary... The Commission
 agrees with the Staff and finds that, after almost two years of
 experience with carrying out the mandates of Act 286, *trackers have become unnecessary.*" [Emphasis added.]
 The Commission reaffirmed its position in Consumers' last electric rate case,

6 Case No. U-16794, and stated that because of PA 286 "tracking mechanisms are 7 unnecessary."

8 Orders Also. the Commission issued in DECo's rate cases. 9 Case Nos. U-16472 and U-16489. In those Orders, the Commission found that 10 DECo's proposed trackers should be eliminated. The Commission found that with the passage of PA 286, trackers or reconciliation mechanisms were no longer needed. 11

#### 12 Q DO YOU HAVE ANY CONCERNS ABOUT CONSUMERS' PROPOSED IRM?

A Yes. The rate increase that Consumers is seeking through the IRM will be larger than the total rate increase that Consumers is seeking in this case. In the rate case, Consumers is seeking a rate increase of \$163 million (Exhibit A-7, Schedule A1). Under the IRM, Consumers is seeking an increase of approximately \$163 million effective June 1, 2016, and an additional increase of \$78 million effective June 1, 2017. As a result, the increase proposed by Consumers through the IRM is larger than the increase Consumers is actually seeking in base rates

#### 20 Q DO YOU HAVE ANY ADDITIONAL COMMENTS TO MAKE ABOUT THE IRM?

A Yes. Consumers' witness, Patricia K. Poppe, provides in her direct testimony on page 12 a table that shows the key drivers of Consumers' total base rate request of \$163 million. A review of that table indicates that plant investment and related costs contributed \$211 million. Revenue requirement reductions for cost of removal tax benefit, operating expenses and sales/revenue reduced the need for a \$211 million rate increase to \$163 million. Under the IRM approach, other cost reductions are
 ignored and passed to the shareholders because the IRM is piece meal ratemaking.

Finally, the IRM allows Consumers to collect a revenue requirement for
investment that the Commission has not determined is used and useful.

#### 5 Q IF THE COMMISSION NEVERTHELESS APPROVES THE IRM, DESPITE THE 6 CONCERNS IDENTIFIED ABOVE, DO YOU HAVE ANY ADDITIONAL 7 RECOMMENDATIONS FOR THE COMMISSION?

A Yes. If the Commission approves the IRM proposed by Consumers, it should impose a downward adjustment on the Company's authorized ROE to reflect the lowering of the Company's business risk resulting from the implementation of this cost tracker. As I discussed above, Consumers' proposed ratemaking mechanisms serve only one purpose – to shift the operating risk from investors to customers. Therefore, in order to fairly compensate the risks of the parties involved, the Commission should reduce the ROE to reflect the Company's lower operating risk.

#### 15 Q DO YOU HAVE ANY COMMENTS TO MAKE ABOUT THE RAM MECHANISM?

A Yes. The Commission cannot legally approve this mechanism given a recent opinion
 of the Michigan Court of Appeals. Therefore, the Commission should reject this
 request out-of-hand.

# 1QHAVE OTHER STATE REGULATORY COMMISSIONS RECOGNIZED THAT A2DOWNWARD ADJUSTMENT TO A UTILITY'S ROE IS APPROPRIATE IF3REVENUE DECOUPLING OR SIMILAR POLICIES ARE IMPLEMENTED?

4 Yes. The Connecticut Department of Public Utility Control issued an Order which А 5 found that the implementation of a revenue decoupling proposal permitted the 6 Department to lower the allowed ROE for United Illuminating Company. Moreover, 7 the Missouri Public Service Commission applied an explicit reduction to Missouri 8 Electric Energy's allowed ROE to recognize the reduced risks associated with the 9 adoption of a straight-fixed variable rate design, which is an alternative approach to 10 achieving the more stable revenue stream that would result from the continuation of 11 the RAM. Finally, the Indiana Utility Regulatory Commission issued an Order that 12 stated the following on this issue:

"Further, we agree with the OUCC's comments that decoupling
mechanisms clearly shift risk from the utility to ratepayers, and that
reduction of risk should be considered in determining the appropriate
return on equity of for-profit electric utilities." (Indiana Utility
Regulatory Commission, Order, Cause No. 43180, Issued October 21,
2009, page 10)

19QHOW DID YOU DETERMINE AN APPROPRIATE ROE ADJUSTMENT TO20REFLECT THE RISK REDUCTION CREATED BY CONSUMERS' PROPOSED

21 RATEMAKING MECHANISMS?

A I approximated an appropriate ROE return risk reduction by reviewing the difference in market-required return available for an investment that produces a higher probability of cost recovery. This market evidence is produced by the normal bond yield spread between an "A" rated utility bond and a "Baa" rated utility bond. A utility bond rate of "A" has a greater probability of full cost recovery and meeting its debt service obligations compared to a "Baa" utility bond. For this greater cost recovery assurance, the market prices "A" rated utility bonds to produce a lower yield relative
 to the yield on "Baa" utility bonds. This yield spread represents fair compensation for
 greater cost recovery assurance.

Because of recent market conditions, the yield spread between "A" rated utility
bonds and "Baa" rated utility bonds is abnormally wide. This yield spread is caused
by current economic circumstances unrelated to utility cost recovery risk, but rather
reflects a temporary flight to quality that has caused an abnormally large yield spread.

8 I estimated a more normal yield spread using the typical yield spreads that 9 prevailed during the calendar years 2010 through 2014. As shown in Table 1, the 10 average yield spread during the period 2010 through 2014 is approximately 55 basis 11 points.

TABLE 1						
Utility Bond Yield Spreads						
<u>Year</u>	<u>"A"</u>	<u>"Baa"</u>	<u>Spread</u>			
2010 2011 2012 2013 2014	5.46% 5.04% 4.13% 4.48% 4.28%	5.96% 5.56% 4.83% 4.98% 4.80%	0.50% 0.52% 0.70% 0.51% <u>0. 52%</u>			
Avg.	4.68%	5.23% - ends moody	0.55%			

Based on the difference between the typical spread for "A" rated utility bonds and "Baa" utility bonds, the appropriate ROE adjustment for implementing the IRM to provide greater assurance of cost recovery is 50 basis points. This adjustment is not reflected in ABATE's recommended ROE.

#### 1 Q DOES THIS CONCLUDE YOUR DIRECT TESTIMONY?

2 A Yes, it does.

#### **Qualifications of James T. Selecky**

#### 1 Q PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

- 2 A James T. Selecky. My business address is 16690 Swingley Ridge Road, Suite 140,
- 3 Chesterfield, MO 63017.

#### 4 Q PLEASE STATE YOUR OCCUPATION.

- 5 A I am a consultant in the field of public utility regulation and associated with the firm of
- 6 Brubaker & Associates, Inc. (BAI), energy, economic and regulatory consultants.

## Q PLEASE STATE YOUR EDUCATIONAL BACKGROUND AND PROFESSIONAL 8 EMPLOYMENT EXPERIENCE.

9 A I graduated from Oakland University in 1969 with a Bachelor of Science degree with
10 a major in Engineering. In 1978, I received the degree of Master of Business
11 Administration with a major in Finance from Wayne State University.

I was employed by The Detroit Edison Company (DECo) in April of 1969 in its Professional Development Program. My initial assignments were in the engineering and operations divisions where my responsibilities included evaluation of equipment for use on the distribution and transmission system; equipment performance testing under field and laboratory conditions; and troubleshooting and equipment testing at various power plants throughout the DECo system. I also worked on system design and planning for system expansion.

In May of 1975, I transferred to the Rate and Revenue Requirement area of
 DECo. From that time, and until my departure from DECo in June 1984, I held
 various positions which included economic analyst, senior financial analyst,

1 supervisor of the Rate Research Division, supervisor of the Cost-of-Service Division 2 and director of the Revenue Requirement Department. In these positions, I was 3 responsible for overseeing and performing economic and financial studies and book 4 depreciation studies; developing fixed charge rates and parameters and procedures 5 used in economic studies; providing a financial analysis consulting service to all 6 areas of DECo; developing and designing rate structure for electrical and steam 7 service; analyzing profitability of various classes of service and recommending 8 changes therein; determining fuel and purchased power adjustments; and all aspects 9 of determining revenue requirements for ratemaking purposes.

In June of 1984, I joined the firm of Drazen-Brubaker & Associates, Inc.
(DBA). In April 1995 the firm of Brubaker & Associates, Inc. (BAI) was formed. It
includes most of the former DBA principals and staff. At DBA and BAI I have testified
in electric, gas and water proceedings involving almost all aspects of regulation. I
have also performed economic analyses for clients related to energy cost issues.

In addition to our main office in St. Louis, the firm also has branch offices in
Phoenix, Arizona and Corpus Christi, Texas.

# 17 Q HAVE YOU PREVIOUSLY APPEARED BEFORE A REGULATORY 18 COMMISSION?

A Yes. I have testified on behalf of DECo in its steam heating and main electric cases.
In these cases I have testified to rate base, income statement adjustments, changes
in book depreciation rates, rate design, and interim and final revenue deficiencies.

In addition, I have testified before the regulatory commissions of the States of
 Colorado, Connecticut, Georgia, Illinois, Indiana, Iowa, Kansas, Louisiana, Maryland,
 Massachusetts, Minnesota, Missouri, New Hampshire, New Jersey, North Carolina,

1 Ohio, Oklahoma, Oregon, Tennessee, Texas, Utah, Washington, Wisconsin, and 2 Wyoming, and the Provinces of Alberta, Nova Scotia and Saskatchewan. I also have 3 testified before the Federal Energy Regulatory Commission. In addition, I have filed 4 testimony in proceedings before the regulatory commissions in the States of Florida, 5 Hawaii, Kentucky, Montana, New York, Pennsylvania, Virginia and the Province of 6 British Columbia. My testimony has addressed revenue requirement issues, cost of 7 service, rate design, financial integrity, accounting-related issues, merger-related 8 issues, and performance standards. The revenue requirement testimony has 9 addressed book depreciation rates, decommissioning expense, O&M expense levels, 10 rate base adjustments, working capital, and post test year adjustments. In addition, I 11 have testified on deregulation issues such as stranded cost estimates.

#### 12 Q ARE YOU A REGISTERED PROFESSIONAL ENGINEER?

13 A Yes, I am a registered professional engineer in the State of Michigan.

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Witness: James Selecky

Date: April 24, 2015

Percent of

Exhibit AB-4

Case No: U-17735

**Consumers Energy Company** 

**Historical Monthly Maximum Coincident Peaks** МV Highest Peak 72% 67% 62% 93% 93% 97% 68% 68% 73% (12) <u>Average</u> 5,519 (11) 5,353 5,136 4,763 5,776 **7,151 7,676 7,442 6,536** 5,196 5,303 5,636 5,384 5,070 4,819 4,670 5,718 **6,745** 7,953 6,778 4,709 7,173 5,151 5,460 **2013** (10) 5,370 5,038 5,020 5,742 5,742 **7,809 7,809 8,387 7,410 6,339 6,339** 5,011 5,011 5,146 (9) 5,336 5,369 5,014 4,783 6,454 7,405 8,306 7,462 7,003 4,820 5,342 5,364 (8) 4,522 6,457 **6,373 7,635 7,451 6,461** 4,778 **2010** (7) 5,548 5,165 4,711 5,077 5,712 5,328 4,798 4,899 7,440 6,033 6,598 5,348 5,635 5,474 4,811 5,164 5,750 **2009** (6) 4,874 4,881 **6,716** 7,488 7,210 6,966 5,118 5,388 5,647 (5) 5,739 5,654 5,351 5,558 5,127 6,493 **8,137** 7,951 **8,183 7,291** 6,895 5,652 5,730 5,636 5,814 (4) 5,438 5,423 5,349 4,977 6,940 **6,590** 8,657 8,497 5,707 5,272 5,607 6,037 (3) 5,486 5,182 5,069 5,069 4,628 7,630 7,556 7,556 6,796 6,069 6,069 5,431 5,762 5,762 (2) 5,615 5,339 5,076 5,076 4,693 5,288 6,528 6,958 6,825 6,825 6,279 4,802 5,209 5,750 **2004** (1) September November February August December October January March <u>Month</u> May June April July Line 

Source: FERC Form 1

#### Case No. U-17735 Witness: James Selecky Exhibit AB-5 Date: April 24, 2015

Line	<u>Month</u>	<u>2015</u>	<u>2016</u>	<u>2017</u>	<u>2018</u>	<u>2019</u>	Average	Percent of Highest <u>Peak</u>
1	Jan	5,875	5,809	5,841	5,815	5,835	5,835	70%
2	Feb	5,845	5,964	5,810	5,832	5,795	5,849	70%
3	Mar	5,727	5,726	5,743	5,745	5,739	5,736	69%
4	Apr	5,532	5,520	5,539	5,547	5,537	5,535	67%
5	May	6,313	6,323	6,343	6,362	6,362	6,341	76%
6	Jun	7,490	7,499	7,527	7,549	7,562	7,525	91%
7	Jul	7,945	7,956	7,890	7,810	7,770	7,874	95%
8	Aug	8,422	8,355	8,284	8,248	8,239	8,310	100%
9	Sep	7,404	7,403	7,421	7,430	7,436	7,419	89%
10	Oct	5,963	5,961	5,974	5,975	5,973	5,969	72%
11	Nov	5,787	5,799	5,793	5,775	5,758	5,782	70%
12	Dec	5,868	5,936	5,956	5,920	5,861	5,908	71%

#### Consumers Energy Company Forecast Total Monthly Peak Demands

Source: Case No. U-17678; Exh A-7

#### **Consumers Energy Company**

#### Seasonal LMP Energy Prices

		On-Peak Costs			Off-Peak Costs		
		Summer	Winter	Differ	Summer	Winter	Differ
Line	Year	<u>\$/MWh</u>	<u>\$/MWh</u>	<u>\$/MWh</u>	<u>\$/MWh</u>	<u>\$/MWh</u>	<u>\$/MWh</u>
1	2009	36.43	35.82	0.61	27.07	34.34	(7.27)
2	2010	58.70	39.59	19.11	33.64	33.72	(0.08)
3	2011	60.44	39.81	20.63	36.85	35.00	1.85
4	2012	58.32	33.33	24.99	33.55	29.37	4.18
5	2013	46.74	37.63	9.11	31.30	33.51	(2.21)
6	Average	52.13	37.24	14.89	32.48	33.19	(0.71)
	Forecasted						
7	2014	46.27	59.32	(13.05)	32.47	52.26	(19.79)
8	2015	59.77	48.99	10.78	37.29	39.42	(2.13)
9	2016	54.51	50.18	4.33	37.35	40.99	(3.64)
10	2017	54.47	50.22	4.25	37.76	41.14	(3.38)
11	2018	55.36	49.09	6.27	38.89	40.85	(1.96)
12	Average	54.08	51.56	2.52	36.75	42.93	(6.18)
	Average Exc.						
13	2014	56.03	49.62	6.41	37.82	40.60	(2.78)

#### Notes:

1. On-Peak = 11:00 AM to 7:00 PM Monday - Friday

2. Summer = June 1 - September 30

Source: WP-LMC-11

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Case No(s). 20-1651-EL-AIR, 20-1652-EL-AAM, 20-1653-EL-ATA

Summary: Exhibit Company Exh 66 electronically filed by Mr. Ken Spencer on behalf of Armstrong & Okey, Inc.