

**BEFORE THE
PUBLIC SERVICE COMMISSION OF WISCONSIN**

**Application of Superior Water Light & Power Company
for Authority to Change Electric, Gas, & Water Rates**

Docket No 5820-UR-117

**DIRECT TESTIMONY OF STEVEN KIHM
ON BEHALF OF CITIZENS UTILITY BOARD**

1 **Q. Please state your name, business address, and occupation.**

2 A. My name is Steven Kihm and my business address is the Citizens Utility Board (CUB), 625
3 North Segoe Rd, Suite 101, Madison, Wisconsin 53705. I am employed by CUB as
4 Regulatory Strategist and Chief Economist.

5 **Q. Please state your educational background and experience.**

6 A. I hold a Doctor of Business Administration degree (managerial strategy and applied
7 corporate finance) from the University of Wisconsin-Whitewater, a Master of Business
8 Administration degree (finance) and a Master of Science in Business degree (quantitative
9 analysis), both from the University of Wisconsin-Madison, and a Bachelor of Science
10 degree With Highest Honors (economics) from the University of Wisconsin-La Crosse. I
11 also have earned the Chartered Financial Analyst (CFA) credential.

12 I have worked in the field of regulation since 1980, including 21 years on the staff of
13 the Wisconsin Public Service Commission. I have worked in the for-profit consulting sector
14 (MSB Energy Associates) and the non-profit research area (Slipstream Group). I have held
15 my current position with CUB since September 2021. I serve as the utility finance instructor
16 for two established regulatory training programs, those offered by Michigan State
17 University’s Institute of Public Utilities and the Wisconsin Public Utility Institute. I also am

1 a member of the macroeconomic forecasting panel for the Federal Reserve Bank of
2 Philadelphia's *Survey of Professional Forecasters*. I have published articles in academic
3 journals (*Journal of Applied Corporate Finance* and *Managerial Finance*), legal
4 publications (*Energy Law Journal*), and trade journals (*The Electricity Journal* and *Public*
5 *Utilities Fortnightly*).

6 **Q. Have you testified before this Commission?**

7 A. Yes, both in my role as a member of the Commission staff and in my current position. I
8 have also testified on utility finance and economic matters in the District of Columbia,
9 Georgia, Hawaii, Illinois, Maine, Michigan, Minnesota, Oregon, and Pennsylvania.

10 **Q. On whose behalf are you testifying in this proceeding?**

11 A. I am testifying on behalf of CUB.

12 **Purpose of the Testimony/Recommendations**

13 **Q. What is the purpose of your direct testimony?**

14 A. I address the two major financial issues in this proceeding: (1) the appropriate rate of profit
15 (return on equity or ROE) that the Commission believes is just and reasonable for Superior
16 Water Light & Power ("SWLP," "the Utility," or "the Company"); and (2) what proportion
17 of SWLP's invested capital the Commission should assume to be in the form of equity
18 (common equity ratio), as opposed to debt. These finance parameters affect the estimate of
19 the total revenues the Utility must collect. SWLP's customers will then pay for those
20 revenues in the rates it charges them when they take service from the Company. Those
21 revenues then provide the cash flows necessary to support the Utility's operations.

22 **Q. Please explain how changes to the level of the ROE affects utility customers.**

1 A. The relationship is direct. Holding other factors constant, a higher ROE means higher utility
2 bills; a lower ROE means lower utility bills.

3 **Q. Please explain how a change in the common equity ratio affects utility customers.**

4 A. This is a more complicated matter. To determine the customer impact of a capital structure
5 change we must consider five variables: (1) the common equity ratio (proportion of capital
6 that is equity), (2) the ROE, (3) the amount of debt in the capital structure, (4) the return on
7 debt, and (5) the corporate income tax rate. As I show later in my testimony, a common
8 equity ratio of 53.00% for SWLP is likely to be less expensive for customers to support than
9 is the Company's proposed 54.88% common equity ratio. This result is primarily due to the
10 fact that debt returns are tax deductible, while equity returns are not. The Commission
11 passes utility tax savings on to customers. When SWLP substitutes equity for debt, which is
12 what occurs if it increases its common equity ratio, there are fewer tax savings, leading to
13 higher costs for customers.

14 **Q. What are your overall recommendations?**

15 A. I provide evidence that supports the following recommendations, contrasted below with the
16 company's proposal:

Finance Parameter	SWLP (Young)	CUB (Kihm)
ROE	10.00%	9.50%
Common Equity Ratio	54.88%	53.00%

17 **Q. Is there anything else of major importance that you recommend to the Commission in**
18 **this proceeding?**

20 A. Yes. I have two additional items. First, I recommend that the Commission adopt
21 terminology consistent with finance principles when issuing rate orders. This would
22 eliminate ambiguities.

1 A typical Commission order discusses the determination of the just and reasonable
2 ROE. The order labels it as such in the body of the text. That is correct labeling. In the most
3 recent case for SWLP, that figure is 10.0%. But when presenting it in the standard table, the
4 order then labels that 10.0% return as a “cost rate.” The two returns are not synonyms. In
5 finance, cost rates are those derived in the financial markets based on the trading of a
6 company’s securities, not the return a company earns on its books. As the finance literature
7 states, the ROE and the cost of equity “are not different estimates of the *same thing* but
8 estimates of *different things*.”¹ The order also labels the weighted average overall rate of
9 return for the utility as the weighted average cost of capital, which again is incorrect. The
10 Commission determines the overall rate of return by selecting an ROE, a return on debt, and
11 the mix of debt and equity securities in the utility’s capital structure. In contrast, the
12 financial markets determine the weighted average cost of capital, based on the returns
13 investors expect on the debt and equity securities of other utility companies.

14 I provide detailed descriptions of the proposed labeling change to the Commission’s
15 orders later in my testimony. Notice that the proposed labeling change does not affect the
16 numbers that the Commission has chosen. It simply identifies the returns correctly.
17 Understanding the exact nature of what the Commission is approving may lead to better
18 policy analysis of those returns going forward.

19 **Q. Focusing on equity returns, can you briefly summarize the differences between the**
20 **ROE and the cost of equity.**

21 **A.** Yes. See below.

¹ Ezra Solomon. 1970. Alternative Rate or Return Concepts and Their Implications for Utility Regulation.
The Bell Journal of Economics and Management Science, 1(1), p. 80. 1

- 1 • The ROE is the return on the book value of the utility’s invested equity capital.
2 This is what the utility earns in an accounting sense—the Commission sets this
3 return.
- 4 • The cost of equity is an opportunity cost—what investors expect to earn in the
5 market if they purchased the stocks of comparable-risk companies. It is a market
6 benchmark against which we can compare the Commission’s ROE. The cost of
7 equity is based on expected dividend payments and capital gains. The
8 Commission does not set this return; investors’ trading of securities provides an
9 implicit estimate of it.

10 Note that the ROE and cost of equity manifest in separate places (ROE: on the utility’s
11 books; cost of equity: in the financial markets) and affect different parties (ROE: the utility
12 whose rates are under review; cost of equity: utility investors across the country who buy
13 and sell utility stocks).

14 The ROE and the cost of equity are never conceptually the same return. The only
15 time when the ROE is *numerically* equal to the cost of equity is when a utility’s stock trades
16 at book value, which has not occurred for decades. My analysis of investor-owned utilities
17 across the country, which I present later, shows that the typical utility stock trades at a 70%
18 premium to book value. The typical ROE granted for utilities today is in the 9% to 10%
19 range. That investors are willing to pay \$1.70 for \$1.00 of the typical utility’s book equity
20 dilutes the return investors expect when they buy the stock. The cost of equity for the typical
21 utility therefore must be noticeably lower than the ROE. I discuss in a moment that my
22 estimate of that investor return figure (cost of equity) is in the 7% to 8% range. Note these
23 cost of equity estimates do not imply that the Commission should set SWLP’s ROE in the

1 7% to 8% range, as I discuss in detail in this testimony. We must remember that the ROE
2 and the cost of equity are different returns that typically take on different numeric values.

3 **Q. What is the second additional item?**

4 A. SWLP suggests that because its equity does not trade publicly, the traditional methods for
5 determining the just and reasonable ROE do not apply (Direct-SWLP-Young, 12). This is
6 not correct.

7 Nearly all major U.S. investor-owned utilities (IOUs) are subsidiaries of parent
8 holding companies, meaning that the subsidiaries' common equity does not trade publicly.
9 Closer to home, Wisconsin's IOUs (Madison Gas and Electric Company—a subsidiary of
10 MGE Energy; Northern States Power Company—a subsidiary of Xcel Energy; Wisconsin
11 Electric Power Company, Wisconsin Gas Company, and Wisconsin Public Service
12 Corporation--subsidiaries of WEC Energy Group; and Wisconsin Power and Light
13 Company—a subsidiary of Alliant Energy) do not have publicly-traded equity. In this
14 regard SWLP's situation is not different from, but rather is comparable to, that faced by the
15 other major investor-owned utilities in the state and across the nation. The Commission
16 applies the traditional method in those proceedings, as do other regulatory bodies across the
17 country. There is no reason the Commission should not consider that information in this
18 proceeding.

19 **Q. Can you provide more details on the “traditional method” the Company cites?**

20 A. While the Company hasn't explicitly defined this method, I assume it includes cost of equity
21 estimates of investor-expected market returns, derived from financial models. While those
22 estimates are not the only evidence guiding the Commission toward the just and reasonable

1 ROE, they are helpful as inputs to the analysis. I present estimates of those expected investor
2 market returns in this testimony.

3 Framing Financial Policy Decisions

4 **Q. You note that the Commission’s decisions on the key financial parameters affect both**
5 **investors and consumers. Should the Commission consider both investor and**
6 **consumer impacts when setting the ROE and the common equity ratio?**

7 A. Yes. As set forth in *FPC v. Natural Gas Pipeline Co.* (Natural Gas Pipeline), regulators
8 must balance those competing interests when establishing finance parameters.

9 Stockholders are not the only persons whose rights or interests are to be
10 considered. The rights of the public are not to be ignored. It is alleged here
11 that the rates prescribed are unreasonable and unjust to the company and its
12 stockholders... The public cannot properly be subjected to unreasonable rates
13 in order simply that stockholders may earn dividends... the investor interest
14 is not the sole interest for protection. The investor and consumer interests
15 may so collide as to warrant the ratemaking body in concluding that a return
16 on historical cost or prudent investment though fair to investors would be
17 grossly unfair to the consumers. (*FPC v. Natural Gas Pipeline Co.*, 315 U.S.
18 575 (1942), 608-609)

19
20 The Court’s framing reveals that what some IOUs might present as a corporate finance
21 analysis is actually a public policy matter, one that includes consideration of both consumer
22 and investor impacts.

23 Notice that the Court refers to setting *fair* returns as the objective. Corporate finance
24 principles have nothing to say about fairness. With the Court framing the issue as one of
25 balancing consumer and investor interests, finance experts explain that while financial
26 models and principles can provide background information, they cannot guide the
27 Commission to the ultimate ROE.² Under the Court’s framing, financial data is relevant to

² Stewart Myers. 1972. The Application of Finance Theory to Public Utility Rate Cases. *The Bell Journal of Economics and Management Science*, 3(1), p. 74.

1 setting the ROE and determining the proper common equity ratio, but it is not the only
2 consideration.

3 **Consumer Issues**

4 **Q. How should the Commission consider consumer interests when determining the
5 proper ROE for SWLP?**

6 A. Mr. Singletary discusses information specific to SWLP. I address broader macroeconomic
7 circumstances that affect all households, including those in the SWLP service area.

8 As to the latter analysis, there is no standard approach here, but I do suggest that the
9 Commission start its determination of the proper ROE from the consumers' perspective,
10 rather than considering consumers as an afterthought. The Court suggests that when there's
11 a conflict the consumer impacts may actually be controlling.

12 **Q. What issues are consumers concerned about when they consider the impact of utility
13 rate increases?**

14 A. I suggest that we pay attention to the macroeconomic factor of inflation rates, considering
15 both near term and long term projections.

16 The run-up in near-term inflation has hurt consumers much more than investors.
17 Rising food prices have been the most challenging inflation issue for consumers. Although
18 inflation has slowed, the cumulative effect of high inflation rates over the past several years
19 remains embedded in food prices.³ As I show below in my discussion of Treasury bonds, for
20 which inflation is a key element, investors have simply ignored the short-run impacts of
21 inflation. Consumers do not have that luxury.

22 **Q. Do you have any data that supports your contention?**

³ Steve Koppes. June 18, 2024. Consumers see food prices as rising more than other goods and services, find ways to adapt. *Purdue Agricultural News*.

- 1 A. Yes. The Federal Reserve Bank of St Louis provides historical data on the Consumer Price
2 Index (CPI). Notice for the past several years the CPI rate, the one that drives short-term
3 food prices and other items, is at the highest level it has been over the last 20 years.



- 4
- 5 **Q. Do you also have data on how investors view inflation?**

- 6 A. Yes. The St Louis Fed also provides the market's embedded long run inflation forecast. See
7 the chart below.



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These are not extra-market opinions as to where inflation is headed. These are the projected 10-year inflation rates embedded in Treasury bond yields, looking forward at any point in time.⁴ Notice that there has essentially been no upward trend in the data since the inflation protected securities were first offered by the Treasury Department in 2003. Examining the latest figure we see that investors expect long-run inflation to be about 2.4%, again very similar to what it has been for the past 20 years.

8

9

10

Investors price securities over a long horizon and it is these long-run inflation rates that matter to them. We see that investors are unaffected by the inflation rate because the rate that matters to them, the long run inflation projection, hasn't changed much.

11

Q. What are the implications of this analysis?

⁴ The implied inflation rate is the difference between the market yield on the conventional 10-year Treasury Note and the market yield on the 10-year inflation protected (TIPS) Treasury Note.

1 A. As we begin the consideration of the proper ROE, we should recognize that consumers are
2 at a disadvantage relative to investors. I conduct a rigorous analysis of investor needs, but
3 the Court’s directive makes it clear that such analysis does not obviate the need to consider
4 the consumer impact.

5 **Q. How might the Commission consider the potential consumer impacts of this rate**
6 **action in determining the just and reasonable ROE for SWLP?**

7 A. The greater the concern that the Commission has with the ability of SWLP’s customers to
8 absorb rate increases, the more it could reduce the ROE for SWLP. This is a complex
9 matter. In the prior case for SWLP, in 2022, I recommended an ROE of 9.0%. In developing
10 my 9.5% ROE recommendation in this case, I am putting increased weight on the
11 Commission’s preference for making more gradual changes.

12 That said, the Commission must perform its own balancing of consumer and
13 investor interests. It may find that consideration of consumer impacts calls for more
14 noticeable adjustments in the ROE than I recommend.

15 **Investor Analysis**

16 **Q. *Natural Gas Pipeline* suggests that under certain circumstances regulators could set an**
17 **ROE that does not meet investor expectations. Is that correct?**

18 A. Yes, that is correct. Note that the Court found that even if the utility management is
19 reasonable and prudent in all of its decisions, the regulator’s authorized ROE may be lower
20 than investors expect.

21 Many people in regulation suggest that investor interests and expectations are
22 paramount when determining the just and reasonable ROE. That is inconsistent with both
23 legal principles and finance practice. Finance experts agree with the Court that utilities can

1 continue to operate even if regulators fail to meet investor expectations regarding the ROE.
2 We can refer to MIT finance Professor Myers's classic article on the role of finance
3 principles in guiding regulators: "The regulatory commission is not bound to confirm
4 investors' expectations."⁵ If it had to meet investor expectations, the directive to balance
5 consumer interests against investor interests would be a moot point. As I will now explain,
6 the financial markets will adjust for essentially any ROE that the Commission sets.

7 **Q. Would such a situation create difficulty for the utility when raising capital?**

8 A. No.

9 **Q. Why is that?**

10 A. New capital providers, those who have not yet supplied funds to the utility, do not expect to
11 earn the ROE the utility earns—they expect to earn their return in the market. The pricing of
12 utility stocks will ensure that result, regardless of where the regulator sets the ROE. Investor
13 expected market returns neither rise nor fall as the regulator changes the ROE. It is the stock
14 price that changes, which in turn leaves the cost of equity or expected return the same for
15 those new capital providers. The existing investors, those who already own the stock, bear
16 the consequences of a higher or lower ROE as the associated stock price changes affect the
17 value of their investment position.

18 **Q. Is there any way that a change in the ROE can affect the return new investors expect
19 to earn in the market?**

20 A. In modern capital markets, this would be difficult for regulators to achieve. Alfred Kahn,
21 who was not only a leading regulatory economist but who also chaired the New York Public
22 Service Commission, explains this in *The Economics of Regulation*.

⁵ Stewart Myers. 1972. The Application of Finance Theory to Public Utility Rate Cases. *The Bell Journal of Economics and Management Science*, 3(1), p. 74.

1 Any attempt of a regulatory commission, persuaded by the comparable
2 earnings argument, to permit investors the higher return would only be self-
3 defeating. Investors would respond to the higher earnings per share by
4 bidding up the prices of the securities to the point at which new purchasers
5 would earn only the old cost of [equity] capital on their investments. The
6 only beneficiaries would be those who happened to own the stock at the time
7 the policy was announced or anticipated. There is no way of giving new
8 purchases of stock more than the cost of [equity] capital.⁶
9

10 This works on the downside as well. If the regulator lowers the ROE, this does not reduce
11 the return new capital providers expect to earn. The stock price declines leaving the
12 expected *market* return at the same level as it was prior to the *book* ROE reduction. But that
13 reduction in the stock price causes capital losses for the existing investors. This stresses the
14 need to consider the right group of investors. It's not the new capital providers that matter; it
15 is those who already own the stock. They bear all the consequences of changes to the ROE.

16 **Q. Do you have empirical evidence that the ROE level does not influence the ability of a**
17 **utility to raise capital because new capital providers expect to earn the same return at**
18 **high ROEs as they do at low ROEs?**

19 A. Yes. A real example may be illustrative. Much has been made of the Arizona Corporation
20 Commission's (ACC) 2022 decision to reduce Arizona Public Service Company's ROE
21 from 10.0% to 8.6%, a 140-basis point reduction in a single rate case. Immediately after the
22 decision, utility executives, utility rate of return experts, and even some utility stock analysts
23 suggested that the utility would have difficulty raising capital for new investment at the
24 lower ROE. Anyone familiar with the workings of the capital markets would not have made
25 that prediction for one simple reason. As just explained, new investors considering
26 providing capital expect to earn the same market return regardless of the ROE the utility
27 earns.

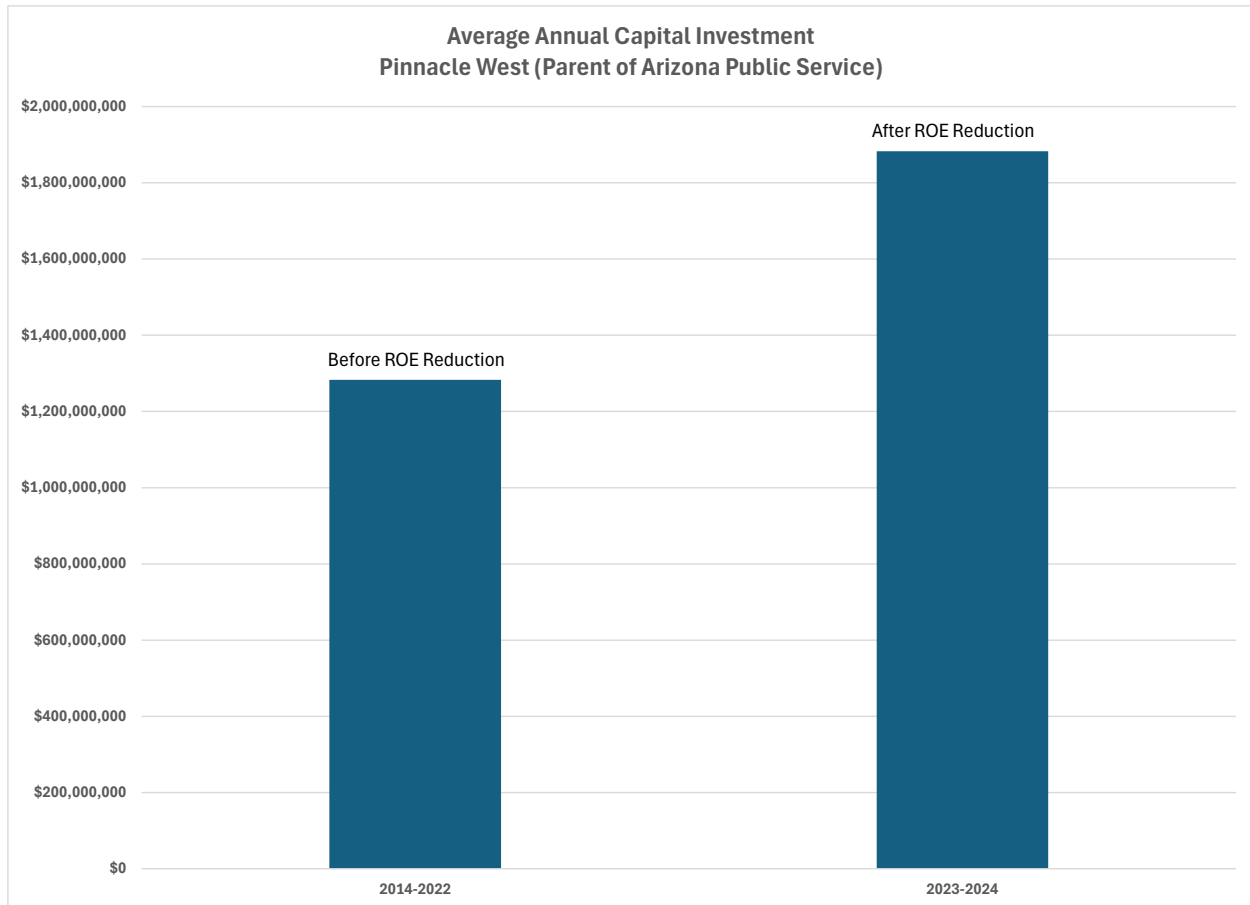
⁶ Alfred Kahn, 1970. *The Economics of Regulation*. Cambridge, MA: MIT Press, p. 52.

1 The noticeably lower ROE took a toll on the stock price of Pinnacle West
2 Capital, the parent of Arizona Public Service. That impact is borne by those who
3 held the stock when the ROE reduction took place, not those investors who
4 considered providing capital after the ROE decision. To provide greater context,
5 since 2020, Pinnacle West's stock price ranged from \$59 to \$106 per share. The
6 stock reached its high of \$106 per share when the earned ROE was 9.8%; it reached
7 its \$59 per share low-point when the earned ROE was 8.0%. Just as finance
8 principles suggest, we see that the ROE and stock price move in tandem with each
9 other. The net effect is that new capital providers expect to earn about the same
10 return at any ROE. Once the market prices the securities, the book ROE the utility
11 earns is irrelevant because investors cannot capture it. This validates Alfred Kahn's
12 position on the matter.

13 **Q. Did the lower ROE affect the ability of Arizona Public Service to make the necessary**
14 **capital investments to maintain and expand its system?**

15 A. No. True to the predictions of finance principles, the lower ROE has not hampered Arizona
16 Public Service Company's investment capabilities. Data is more readily available for
17 Arizona Public Service Company's parent Pinnacle West Capital Corporation, but I note
18 that the parent/holding company's revenues come almost exclusively from the utility so we
19 can use the parent data to consider Arizona Public Service's investment capability.

20 Not only has the utility's capital investment not declined after the ROE reduction. It
21 has substantially increased. See the following chart.



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2 **Q. Is there a general takeaway from this analysis?**

3 A. This sends a warning to the Commission in terms of the reliability of information it receives
 4 on important financial issues. Expert positions on finance matters offered in regulatory
 5 proceedings, such as the idea that the ROE affects the return new capital providers expect to
 6 earn in the market, would not pass muster in a basic corporate finance class. The point to
 7 recognize is that contrary to being an application of common sense, corporate finance is
 8 highly counterintuitive. As professor Mihir Desai of Harvard states: “The central intuitions
 9 of finance are slippery.”⁷ This is not just an academic view. In his book *Think Twice*:

⁷ Mihir Desai. 2019. *How Finance Works*. Boston, MA: Harvard Business Review Press, p. 4.

1 *Harnessing the Power of Counterintuition*⁸ Michael Mauboussin, Director of Consilience
2 Research at Morgan Stanley, encourages financial analysts to not let common sense or
3 intuitive thinking seduce them into intellectually comfortable, but incorrect, solutions, and to
4 instead look more closely at a problem, gathering data where it is available.

5 Cash flow statements provide direct evidence that changing the ROE does not affect
6 the ability of a utility to raise capital such changes to ROE do not. Yet, when the Citizens
7 Utility Board counsel has asked utility rate of return witnesses under cross-examination
8 whether they have investigated cash flow statements to support their claims about the
9 purported relationship between utility ROEs and capital attraction, they respond that they
10 have not.⁹

11 Desai's and Mauboussin's advice applies here. While it might seem that the ROE a
12 utility earns would affect the return investors expect when they provide new capital, it does
13 not. Both finance principles and the empirical evidence show that the market prices away
14 ROE differences, leaving new investors indifferent as to whether they purchase the stocks of
15 low-ROE or high-ROE companies. That conclusion, though correct, is not obvious on its
16 face, but it should be obvious to finance experts. The Commission should consider that
17 Pacific Gas and Electric, the largest operating utility in the U.S., has filed for bankruptcy

⁸ Michael Mauboussin. *Think Twice: Harnessing the Power of Counterintuition*. Boston, MA: Harvard Business Review Press.

⁹ For example, see cross-examination of Ms. Ann E. Bulkley by CUB general counsel Ms. Cara Coburn Faris in docket 5-UR-110, Tr. 67-388, October 05, 2022, p. 212. Ms. Bulkley suggested that Arizona Public Service Company would have difficulty raising capital at its recently authorized 8.6% ROE.

BY MS. FARIS:

Q. Have you examined the cash flow statements of Arizona Public Service, your main example, or the other three utilities?

A. No, I have not.

1 protection twice in the 21st century and had ready access to capital throughout the entire
2 period.¹⁰

3 It is usually utility executives and utility rate of return witnesses who, without
4 supporting evidence, are the strongest proponents of the phantom link between the ROE
5 and the ability to attract capital.¹¹ This fundamental error casts serious doubt on all aspects
6 of their public statements and testimony. (SWLP does not offer such an expert in this
7 proceeding.)

8 **Q. Do you have any additional empirical evidence to support the position that the ROE
9 does not affect the expected market returns for new investors?**

10 A. Yes. Consider the following information from my cost of equity analysis. I analyzed 29
11 utility stocks. The table below reports on the projected ROEs at the holding company level
12 and the stock price-to-book value ratio for the seven companies with the highest ROEs and
13 the seven companies with the lowest ROEs. Note that, just as finance principles suggest
14 must be the case, the stocks of the high-ROE companies are noticeably more expensive than
15 those of the low-ROE companies.

¹⁰ Iulia Gheorghiu, June 18, 2020, “A PG&E bankruptcy timeline: The road to Chapter 11 and beyond,” *Utility Dive*.

¹¹ See, for example, Herman K. Trabish, December 5, 2023. “Eversource wary about attracting capital as Connecticut moves to forefront of PBR Trend.” *Utility Dive*.

High-ROE Companies			Low-ROE Companies		
Company	ROE	P/B	Company	ROE	P/B
FirstEnergy	14.5%	2.25	PPL Corp	8.5%	1.56
NextEra Energy	14.0%	3.21	Black Hills Corp	8.0%	1.25
Edison International	13.5%	2.18	NorthWestern Corp	8.0%	1.17
Southern Company	13.0%	2.85	Pinnacle West	8.0%	1.56
CMS Energy Corp	12.5%	2.53	Allete	8.0%	1.32
OGE Energy	12.5%	1.73	Avista Corp	7.5%	1.24
Otter Tail	12.5%	3.42	Avangrid	4.5%	0.70
Median	13.0%	2.53	Median	8.0%	1.25

1 **Median** **13.0%** **2.53** **Median** **8.0%** **1.25**

2 While the median ROE of the high-ROE group is 63% higher than that of the low-ROE

3 group (13.0% vs. 8.0%), to purchase the high-ROE stock portfolio investors have to pay

4 102% more (2.53 vs. 1.25) in a relative sense, which more than offsets the ROE difference.

5 As a result, new investors do not expect to earn higher returns by buying the stocks of the

6 high-ROE companies rather than the low-ROE companies. New investors are indifferent as

7 to which utility they provide capital to because market pricing neutralizes the impact of

8 ROE differences.

9 **Q. What are the implications of this analysis?**

10 A. The idea that changing the ROE affects the return prospective investors expect to earn is

11 simply inconsistent with the way financial markets work. Regulators should evaluate

12 changes to the ROE through a fairness lens. If it lowers the ROE substantially, the utility

13 stock price will decline and existing investors will bear that impact. It is for the regulator to

14 consider the fairness of taking an action likely to lower utility stock prices.

15 **Q. Is a market value loss a sign that the regulator has been unfair to investors?**

16 A. No, not in and of itself. In *FPC v. Hope Nat. Gas Co. (Hope)*, the Court found.

17 The fixing of prices, like other applications of the police power, may reduce

18 the value of the property which is being regulated. But the fact that the value

1 is reduced does not mean that the regulation is invalid. *FPC v. Hope Nat.*
2 *Gas Co.*, 320 U.S. 591 (1944), p. 601.

3
4 This makes sense because if regulators could not take actions that caused utility stock prices
5 to decline, it would be an ineffective institution. If a utility performs poorly in terms of
6 serving customers or its earnings reach unreasonable levels, regulators must be able to make
7 adjustments, even if they cause value losses for investors.

8 In recent times we have seen utility reactions to ROE decisions that ignore this
9 principle, suggesting that any loss of market value due to an ROE decision is a reason to
10 challenge it. For example, when the Minnesota Public Utilities Commission lowered
11 Northern States Power Company's ROE to 9.25%, the company's parent Xcel Energy
12 appealed the decision to the court. It cited a 3% two-day stock market value loss as the
13 grounds for the appeal. But in *Hope*, the FPC reduced the company's net income by 63%,
14 which the Court found to be acceptable. Not surprisingly, after failing to find arguments to
15 support its claim, Xcel Energy later withdrew the ROE issue while the appeal was
16 pending.¹²

17 We must put this in context. That a market value loss is not sufficient to invalidate a
18 regulator's order does not mean that regulators should run roughshod over existing
19 investors. The regulator must have a valid reason for lowering the ROE. The Court requires
20 a balancing of interests, which requires a subjective evaluation, not an equation. The Court
21 stated that in *Natural Gas Pipeline* the regulator has discretion not only in how it determines
22 the just and reasonable ROE, but which information it considers:

23 Various routes to that end may be worked out by the expert administrators
24 charged with the duty of regulation. It is not the function of the courts to
25 prescribe what formula should be used. The fact that one may be fair to

¹² Walker Orenstein, April 16, 2024. Xcel drops rate fight, which will keep Minnesota utility bills cheaper." *Star Tribune*.

1 investors does not mean that another would be unfair. The decision in each
2 case must turn on considerations of justness and fairness which cannot be
3 cast into a legalistic formula. The rate of return to be allowed in any given
4 case calls for a highly expert judgment. That judgment has been entrusted to
5 the Commission. *Natural Gas Pipeline*, 607.
6

7 **Cost of Equity**

8 **Q. How do you estimate the cost of equity for SWLP?**

9 A. I approach it in a way similar to that which I would do for any utility. I form a portfolio of
10 utility stocks. I apply the Discounted Cash Flow (DCF) model and the Capital Asset Pricing
11 Model (CAPM). They provide me with estimates of the expected return on those stocks,
12 which is the cost of equity. Those estimates represent the minimum reasonable ROE, and
13 they also then represent the threshold return that SWLP must exceed to create value for its
14 parent company when it invests capital. I provide the supporting detailed calculations for my
15 cost of equity model analysis in Ex.-CUB-Kihm-1.

16 **Q. How did you select the portfolio of utilities?**

17 A. I started with all 36 electric utility stocks followed by the *Value Line Investment Survey*. I
18 eliminated two companies because of unusual circumstances, namely, the severe financial
19 difficulty they had related to wildfires: PGE Corp And Hawaiian Electric. As noted above,
20 this has nothing to do with whether they have access to capital. It does suggest, however,
21 that the uncertainty impounded in the stock price may make it difficult to untangle the cost
22 of equity in those cases. I also eliminated companies that owned utilities subject to
23 Wisconsin PSC jurisdiction, which is Allele (SWLP's ultimate parent company), Alliant
24 Energy, MGE Energy Corp, WEC Energy Group, and Xcel Energy.

25 **Q. Why did you eliminate the companies that have exposure to Wisconsin PSC** 26 **regulation?**

1 A. Using companies regulated by a commission to determine the returns investors expect on
2 those same companies' stocks creates a logical circularity problem with the DCF model, one
3 of the primary tools used to estimate the cost of equity, as explained by MIT financial
4 economist Stewart Myers and his colleague Lynda Borucki in their review of the return on
5 equity practices of the New York PSC. One of the key inputs to the DCF model is the
6 expected long-run growth rate in dividends. If the Commission relies in part on the DCF
7 model to determine the ROE, it begins to encounter a problem.

8 The ROE drives the dividend growth rate. The higher the ROE the faster the utility
9 can grow its dividend stream. But if the ROE produced by the DCF model generates a
10 growth rate that is different from that used in the DCF model , then that model needs to be
11 re-run. Investors react to these changes by re-pricing the stock, which then also affects the
12 DCF result. In simplest terms the problem here is that the Commission is looking to
13 investors to determine the expected return, but that expected return depends on the ROE
14 decision that the Commission makes. This process traps the Commission in a logically
15 circular void.

16 Applying the DCF method solely to Utility X [the utility whose rates are
17 under review] also falls into a trap of regulatory circularity. The DCF
18 method rests on investors' expectations of future growth in assets, earnings,
19 and dividends. Investors know that growth depends on regulatory decisions.
20 So the DCF method applied to Utility X alone has regulators looking to
21 investors to determine what they think the regulator will do. The DCF
22 method then instructs regulators to do something different...Calculating a
23 benchmark cost of equity for comparable utilities in different regulatory
24 jurisdictions escapes the circularity.¹³

25
26 Note that because of this, even if SWLP's equity traded publicly, I still would not use it in
27 my analysis.

¹³ Stewart C. Myers and Lynda Borucki. 1994. Discounted Cash Flow Estimates of the Cost of Equity Capital—A Case Study. *Financial Markets, Institutions and Instruments*, 3(3), p. 18

1 As the last sentence in the quote shown above implies, notice what happens if the Wisconsin
2 PSC applies the DCF model to a company outside its jurisdiction, such as Portland General
3 Electric. This avoids the circularity problem. When the PSC sets the ROE for a Wisconsin
4 utility, that has no effect on Portland General's ROE, growth rate, or stock price. The DCF
5 result for any company with no Wisconsin operations is therefore unaffected by Wisconsin's
6 ROE decision.

7 There is an important corollary here. Notice that even if SWLP's equity traded
8 publicly, we would still exclude it from the analysis. Remember that the cost of equity tells
9 us what investors expect to earn on the stocks of *other utilities*, not what they might expect
10 SWLP to earn. We cannot have a utility subject to the Commission's rate review providing
11 us with information about what investors expect to earn when that expectation depends on
12 the ROE decision.

13 This evidence further discredits the company's position that it, any other party, or
14 the Commission cannot apply the traditional methods for determining the just and
15 reasonable ROE. That SWLP's equity does not trade publicly is irrelevant.

16 **Q. Did you consider risk in assembling your portfolio?**

17 A. Yes, but I did so with great care to be consistent with finance principles. All of the specific
18 risks that make firms unique are irrelevant in determining the cost of equity because
19 investors diversify away those risk impacts in a portfolio.¹⁴ As a result, all companies in a
20 particular industry have about the same expected stock returns, as per valuation experts at
21 McKinsey & Co. (Koller, Goedhart, and Wessels 2020).¹⁵

¹⁴ Jonathan Berk and Peter DeMarzo. 2020. *Corporate Finance: Global Edition*.

¹⁵ Tim Koller, Mac Goedhart, and David Wessels. 2020. *Valuation: Measuring and Managing the Value of Companies*. Hoboken, NJ: John Wiley & Sons.

1 The risks that do matter are the ones that are the same for all companies in the
2 economy—the macroeconomic factors. The most significant of these is a company reaction
3 to the threat of a recession. Here we have an issue that is relevant to SWLP, as it has a
4 greater exposure to business customers than the typical utility. This means that the Company
5 may be slightly more risky than the typical utility. The Commission has recognized that
6 SWLP may be more risky and has granted it an extra 20 basis points in ROE relative to
7 those approved for the other major utilities. The Commission though attributed this
8 difference to the small size of the utility, not to its greater exposure to macroeconomic risk.

9 I do not adjust my cost of equity estimates for this SWLP-specific risk factor, but
10 rather consider the additional 20 basis points in my final ROE recommendation, relative
11 what I would recommend for other Wisconsin investor-owned utilities.

12 **Q. Please describe the DCF model.**

13 A. The primary assumption supporting this model is that a company's current stock price is the
14 present value of its future dividends from now until infinity. We can find the particular
15 discount rate that will equate the stock price to the present value of the dividends. That
16 discount rate is the cost of equity.

17 This basic DCF model is seductively simple but is often a poor fit if we are trying to
18 model actual investor expected returns. In this basic model, the analyst obtains a cost of
19 equity estimate by adding the current dividend yield to the estimated long-run dividend
20 growth rate, assuming that dividends grow forever at a constant rate. This growth rate
21 assumption is unlikely to be true as explained by Myers and Borucki, which makes the
22 result of the simple DCF model unreliable:

23 The DCF model is attractive because it looks simple. However, that
24 simplicity comes at a cost of an exceedingly strong assumption, namely, that

1 dividends per share are expected to grow at a constant rate forever.
2 Significant errors occur when that assumption is violated.¹⁶

3
4 The standard solution to this problem is to introduce multi-stage models in which the growth
5 rate changes overtime. I have applied this approach.

6 **Q. How did you determine the growth rates?**

7 A. My model uses three periods, the near-term which is years 1 through 5, the mid-term which
8 is years 6 through 10 and the long-term which is years 11 and beyond. For the near term, I
9 rely on stock analysts' reported growth rates. I note, however, that these growth rates are
10 known to be biased to the high side as long-run growth rates, but could be achieved in the
11 near-term. For my second stage I used the nominal GDP growth rate of the economy. This is
12 the maximum long-run growth rate for any company in the economy. For the third stage I
13 use the average of the nominal GDP growth rate and the long-run inflation rate. Historically,
14 over the long run, utilities have grown more slowly than the economy, and my long-term
15 growth rate estimate reflects that. While during the first five years the growth rate can vary
16 from company to company, for the second and third stages the growth rates are the same for
17 all utilities. The following table shows the median growth rates for each of the three periods
18 in my analysis.

19 **Utility Annual Dividend Growth Rate Estimates by Period**

Near-term (years 1-5)	6.2%
Mid-term (years 6-10)	4.2%
Long-term (years 11+)	3.2%

20
21
22
23
24

¹⁶ Myers and Borucki, 10.

1 **Q. How did you determine the dividend yields?**

2 A. I used stock prices as of July 28, 2024 as reported by Yahoo! Finance. I used the projected
3 2024 dividends per share contained in reports from the *Value Line Investment Survey*. The
4 quotient of dividends per share and the stock price produces the dividend yield. The median
5 dividend yield for stocks in the portfolio is 3.8%.

6 **Q. What are the overall results of the DCF analysis?**

7 A. The following table presents the cost of equity estimates for each company and the median
8 result for the portfolio. Myers and Borucki suggest not putting much weight on any
9 individual estimate because the chance of having a statistical measurement error is high. The
10 median return is likely to be a more reliable estimate of the cost of equity.

DCF Cost of Equity Estimates

Ameren	7.4%	Duke Energy	7.9%	OGE Energy	6.6%
American Electric Power	7.8%	Edison International	8.4%	Otter Tail	3.6%
Avangrid	8.5%	Energy	8.3%	Pinnacle West	8.7%
Avista Corp	9.2%	Evergy	8.6%	PNM Resources	7.6%
Black Hills Corp	7.4%	Eversource Energy	8.3%	Portland General	9.8%
CenterPoint Energy	6.8%	Exelon	8.0%	PPL Corp	7.6%
CMS Energy Corp	7.5%	FirstEnergy	8.3%	Public Service Entr Group	7.1%
Consolidated Edison	7.5%	IDACORP	7.1%	Sempra Energy	7.0%
Dominion Energy	12.3%	NextEra Energy	6.9%	Southern Company	7.6%
DTE Energy	7.5%	NorthWestern Corp	8.7%		

11 **Median (all companies) 7.6%**

12 Here we see the issue Myers and Borucki warned us about. Even when we try to downplay
13 the influence of short run growth rates, if those rates are significantly different from those of
14 other utilities the DCF result can be affected. It is unlikely that Otter Tail's cost of equity is
15 3.6% and just as unlikely that Dominion Energy's cost of equity is 12.3%.¹⁷ Individual

¹⁷ Some experts throw out low cost of equity estimates but retain high ones. That is bad practice. A 12.3% cost of equity for a regulated utility is wildly out of bounds based on market information today. Using the median return, which is not sensitive to individual high or low outliers, instead of the mean return, solves this problem.

1 inputs can skew the result for single companies. The median return of 7.6%, however, seems
2 to be in keeping with the definition of the cost of equity.

3 **Q. And what is that definition?**

4 A. As the minimum acceptable return to the company in terms of value creation for its existing
5 shareholders, it seems reasonable that utility managements would find investments that
6 earned ROEs at 7.6% or below unattractive in terms of creating value for their existing
7 investors. We must remember when we estimate the cost of equity we're not looking for the
8 midpoint estimate for the ROE, but rather for the null point at which the utility can no longer
9 create value by investing capital—a minimum return. This number seems to be in keeping
10 with that notion.

11 **Q. If the estimated cost of equity is not the midpoint target for the ROE, of what value is
12 it when determining the ROE?**

13 A. It provides a reference point against which the ROE can be compared. The Company's
14 currently authorized ROE of 10.0% is 240 basis points higher than this estimate. This
15 suggests there's room for the Commission to move that ROE down, not all the way to 7.6%,
16 or even near that figure, but to make some gradual reduction in that figure. As noted earlier,
17 I think a moderate movement from 10.0% to 9.5% is in keeping with this idea.

18 **Q. Please describe the CAPM.**

19 A. While the DCF model is the most widely used tool for estimating cost of equity in utility
20 rate proceedings, the CAPM is the most widely used in corporate America writ large. It
21 combines the yield on a Treasury security, an expected return on the broad market as
22 represented by the S&P 500, and a risk factor referred to as the beta coefficient, which I will
23 explain in a moment.

1 The typical non-regulated firm is more risky than the typical regulated utility.
2 Therefore, the S&P 500 index, which is largely made up of non-utility stocks, should have a
3 higher cost of equity (expected market return) than a typical utility stock. We can obtain
4 estimates of the cost of equity for the S&P 500 from several reliable sources, such as those
5 shown below.

6 **S&P 500 Cost of Equity Estimates**
7 **(descending rank order)**

9 Kroll (formerly Duff and Phelps)	9.6%
10 McKinsey & Co	9.3%
11 Federal Reserve Banks of Atlanta and Richmond CFO survey	9.0%
12 Morningstar	9.0%
13 Damodaran (NYU)	8.3%
14	
15 Median	9.0%

16 The current yield on the 10-year Treasury note is 4.3%. This figure is lower than the cost of
17 equity for a utility. So we now have an upper and lower bound for our cost of equity
18 estimate.

19 Treasury Note yield < utility cost of equity < S&P 500 cost of equity
20 4.3% < utility cost of equity < 9.0%

21 Notice that the DCF cost of equity estimate of 7.6% lies in this range. Notice also that the
22 company's currently authorized ROE of 10.0% is outside the range.

23 **Q. How does the CAPM help us find the utility cost of equity?**

24 A. The basic formula is:

25 company cost of equity = Treasury yield + β (S&P 500 cost of equity – Treasury yield)

26 We can observe the values for all of the parameters on the right side of the equation, with
27 the exception of the beta coefficient.

28 company cost of equity = 4.3% + β (9.0% – 4.3%)

1
$$\text{company cost of equity} = 4.3\% + \beta(4.7\%)$$

2 The beta coefficient indicates how closely the company’s stock returns match those of the
 3 broad market. If the beta coefficient is less than 1.0, the stock is less sensitive than average
 4 to broad market movements. On the other hand, if the beta is greater than 1.0, then the stock
 5 is more sensitive to broad market changes. Since investors often want to insulate their
 6 portfolios from the impact of those market changes, they will accept a lower expected return
 7 on stocks that attenuate the impact of those changes and require a higher return on stocks
 8 that accentuate them.

9 **Q. Where do you obtain the beta coefficients for the utilities in the portfolio?**

10 A. There are a variety of sources, but I prefer those provided by Zack’s Investment Services.
 11 Not surprisingly, given the risk protection that regulation provides, the median beta for the
 12 utility stocks in the portfolio is 0.56. This means that the utility cost of equity will lie in the
 13 range set forth above. The following table shows the CAPM-based cost of equity estimates.

CAPM Cost of Equity Estimates

Ameren	7.2%	Duke Energy	7.2%	OGE Energy	8.3%
American Electric Power	7.5%	Edison International	9.0%	Otter Tail	7.6%
Avangrid	7.6%	Energy	8.2%	Pinnacle West	7.4%
Avista Corp	7.3%	Evergy	7.8%	PNM Resources	6.8%
Black Hills Corp	8.1%	Eversource Energy	7.8%	Portland General	7.7%
CenterPoint Energy	9.0%	Exelon	7.5%	PPL Corp	8.6%
CMS Energy Corp	7.0%	FirstEnergy	7.3%	Public Service Entr Group	7.8%
Consolidated Edison	6.8%	IDACORP	7.7%	Sempra Energy	8.3%
Dominion Energy	7.7%	NextEra Energy	7.6%	Southern Company	7.4%
DTE Energy	8.0%	NorthWestern Corp	7.2%		

14 **Median (all companies) 7.6%**

15 While we would expect the cost of equity estimates from the DCF and CAPM to be close, it
 16 is coincidence that they are exactly the same in this case, but that does reinforce the notion
 17 that the true utility cost of equity is likely close to that figure.

1 **Q. How does all of this information help us determine the proper ROE for SWLP?**

2 A. We can plot the relevant information on a number line. See below.

3

4.0 Treasury Note Yield

4.3

4.6

4.9

5.2

5.5

5.8

6.1

6.4

6.7

7.0

7.3

7.6 Utility Cost of Equity

7.9

8.2

8.5

8.8

9.1 S&P 500 Cost of Equity

9.4

9.7

4 10.0 SWLP Authorized ROE

5 **Q. What does this figure tell us?**

6 A. While it may not be the best policy to drive utility ROE all the way to the cost of equity, it
7 does seem reasonable that the ROE lie in the range between the utility cost of equity and the
8 S&P 500 cost of equity (blue region on the figure). We see that SWLP's currently
9 authorized ROE of 10.0% is 100 basis points above that upper limit. This suggests that the
10 Commission should move the ROE down to a more reasonable level.

11 A 100-basis point reduction in the ROE would be significant. This Commission prefers to
12 move gradually. Taking that under consideration, as noted above I suggest a move down to

1 9.5% would be reasonable. The Commission might make further reductions, however, if it
2 believes that affordability is a significant issue for SWLP's customers

3 **Capital Structure**

4 **Q. Why is it important for the Commission to select an appropriate capital structure?**

5 A. Changing the mix of debt and equity securities in the capital structure affects the revenue
6 requirement as I noted above.

7 **Q. Can you provide more details?**

8 A. Yes. The following equation provides the contribution of the capital structure and the rates
9 of return to the overall revenue requirement.

10 contribution to revenue requirement = total capital × overall economic rate of return

11 **Q. Is the overall economic rate of return another way of saying weighted average
12 economic cost of capital?**

13 A. No. As I explain in the next section, while many people use that latter term, as does the
14 Commission in its rate orders, the two returns are distinct. The Commission sets rates of
15 return, not costs of capital, so it is important to use the proper terminology. They are not
16 synonyms and they take on different numeric values.

17 **Q. What are the components of the overall economic rate of return?**

18 A. The following equation shows how we calculate the overall economic rate of return.

19 overall economic rate of return =
20 % long term debt × long term debt return
21 + % short term debt × short term debt return
22 + % equity × $\frac{\text{ROE}}{(1 - \text{tax rate})}$

23 **Q. Why does the ROE get divided by (1 - the tax rate)?**

1 A. Customers must pay all reasonably incurred expenses, including income taxes. If the
2 Commission set the ROE at 9.5%, but did not allow the Company to recover those taxes, the
3 Company would not earn that full amount. The Company's effective corporate income tax
4 rate based on analysis from the most recent rate order is 28%. This means the income taxes
5 on a 9.5% ROE would be:

6
$$\text{income tax effect} = 9.5\% \times 0.28 = 2.7\%$$

7 The Company would then earn only:

8
$$\text{after tax ROE} = 9.5\% - 2.7\% = 6.8\%$$

9 To allow the Utility to earn the full 9.5%, we can't just add that 2.7 percentage points to the
10 ROE because that extra return would also be taxable.

11
$$\text{incomplete adjustment for taxes} = 9.5\% + 2.7\% = 12.2\%$$

12 Then the Company would still fall short of earning its 9.5% ROE.

13
$$\text{income tax effect} = 12.2\% \times 0.28 = 3.4\%$$

14
$$\text{after tax ROE} = 12.2\% - 3.4\% = 8.8\%$$

15 That return should be 9.5%. The correct algebraic solution is to increase the ROE by the
16 amount shown in the earlier equation.

17
$$\text{tax adjusted ROE} = \frac{\text{authorized ROE}}{(1 - \text{tax rate})}$$

18
19
$$\text{tax adjusted ROE} = \frac{9.5\%}{(1 - 0.28)} = 13.2\%$$

20
21 Verifying:

22
$$13.2\% \times 0.28 = 3.7\%$$

23
$$13.2\% - 3.7\% = 9.5\%$$

1 We see that the tax-adjusted ROE is 1.39 times the ROE the Commission approves.¹⁸ This
 2 tax-adjusted effect is buried in what the Commission refers to as the “economic cost of
 3 capital” (should be “economic rate of return”).

4 **Q. Can you provide more details on the capital structure impacts?**

5 A. Yes. It may be illustrative to provide the details. Let me start with the information Ms.
 6 Young has presented in her testimony (Ex.-SWLP-Young-01). It shows a 10.0% ROE and a
 7 common equity ratio of 54.88%.

Company Proposal				Weighted	Tax	Weighted
Capital Type	Amount	% of Capital	Rate of Return	Rate of Return	Adjusted Rate of Return	Tax Adjusted Rate of Return
Common Equity	\$ 73,533,654	54.88%	10.00%	5.49%	13.89%	7.62%
Long-term Debt	\$ 44,500,000	33.21%	3.62%	1.20%	3.62%	1.20%
Short-term debt	\$ 15,961,538	11.91%	5.52%	0.66%	5.52%	0.66%
	\$ 133,995,192	100.00%		7.35%		9.48%
				Weighted Average Rate of Return		Weighted Average Economic Rate of Return

8
 9 The number that ultimately matters is not the weighted rate of return, but rather the weighted
 10 average economic rate of return, because that includes the taxes on equity that customers
 11 must pay. Next, let me demonstrate what happens to that figure when we lower the ROE to
 12 9.5% as I suggest.

¹⁸ 13.2% / 9.5% = 1.39

Change ROE Only				Weighted	Tax	Weighted
Capital Type	Amount	% of Capital	Rate of Return	Rate of Return	Adjusted Rate of Return	Tax Adjusted Rate of Return
Common Equity	\$ 73,533,654	54.88%	9.50%	5.21%	13.19%	7.24%
Long-term Debt	\$ 44,500,000	33.21%	3.62%	1.20%	3.62%	1.20%
Short-term debt	\$ 15,961,538	11.91%	5.52%	0.66%	5.52%	0.66%
	\$ 133,995,192	100.00%		7.07%		9.10%
				Weighted Average Rate of Return		Weighted Average Economic Rate of Return

1
2 We see that the weighted average economic rate of return declines by 38 basis points. The
3 revenue requirement impact therefore is:

4 Revenues from capital at Company proposal	\$12,704,984
5 Revenues from capital at 9.5% ROE	<u>\$12,194,334</u>
6 Customer savings from lower ROE	\$510,650

7 When I switch 1.88 percentage points from common equity to long term debt, I obtain the
8 following.

Change ROE and Common Equity Ratio				Weighted	Tax	Weighted
Capital Type	Amount	% of Capital	Rate of Return	Rate of Return	Adjusted Rate of Return	Tax Adjusted Rate of Return
Common Equity	\$ 71,017,451.76	53.00%	9.50%	5.03%	13.19%	6.99%
Long-term Debt	\$ 47,018,912.87	35.09%	3.62%	1.27%	3.62%	1.27%
Short-term debt	\$ 15,961,538	11.91%	5.52%	0.66%	5.52%	0.66%
	\$ 133,997,903	100.00%		6.96%		8.92%
				Weighted Average Rate of Return		Weighted Average Economic Rate of Return

9
10 This lowers the weighted average economic rate of return by another 18 basis points, saving
11 customers additional amounts. The combined effect of the lower ROE and the lower
12 common equity ratio is shown below.

1	Revenues from capital at Company proposal	\$12,704,984
2	Revenues from capital at 9.5% ROE/53% Com. Eq.	<u>\$11,953,520</u>
3	Customer savings from lower ROE and Com. Eq.	\$751,465

4 **Q. Why should the Commission set the common equity ratio at 53%, as you suggest,**
5 **rather than at the Company’s proposed 54.88%?**

6 A. The common equity ratio receives much less attention in rate proceedings as compared to
7 the ROE. Yet, as we can see, it too has effects on the revenue requirement. Even at a 9.5%
8 ROE the Company will be earning substantially more than the cost of equity. Given that
9 customers are struggling with near term inflation, it behooves the Commission to be
10 cautious and not permit the Company to earn any additional revenues from capital.

11 **Correcting Technical Language**

12 **Q. At the outset of your testimony, you suggested that some of the Commission’s labeling**
13 **of terms in its rate orders is incorrect. Can you provide the incorrect and corrected**
14 **versions for the Commission’s consideration.**

15 A. Yes. A standard Commission rate order reports the following information.

- 16 • It contains a section titled “Regulatory Capital Structure and Cost of Capital”
 - 17 ○ The Commission sets the rate of return, not the cost of capital—those returns do
 - 18 not take on the same numeric value. That section should read “Regulatory
 - 19 Capital Structure and RATE OF RETURN”
- 20 • The section titled “Return on Common Equity” is properly labeled. That is the return the
- 21 Commission sets—it does not set the cost of equity. Again, these two returns take on
- 22 different numeric values.

- 1 • Text in the ROE section reads; “Accordingly, the average utility capitalization ratios,
2 annual cost rates, and the composite cost of capital rate considered reasonable and just
3 for setting rates for this test year are...”
- 4 ○ The Commission now switches from rates of return to costs of capital. Again,
5 the Commission does not set the cost of capital, only rates of return, which is a
6 different variable.
- 7 ○ The text should read: “Accordingly, the average utility capitalization ratios,
8 annual RATES OF RETURN, and the composite RATE OF RETURN
9 considered reasonable and just for setting rates for this test year are...”
- 10 • The order then contains the following table.

	Amount	Percent	Annual Cost Rate	Weighted Cost
Utility Common Equity	\$66,845,396	54.69%	10.00%	5.47%
Long-Term Debt	\$44,500,000	36.41%	3.62%	1.32%
Short-Term Debt	\$10,884,615	8.91%	3.63%	0.32%
Total Utility Capital	\$122,230,011	100.00%		7.11%

- 11
- 12 ○ Remembering that the Commission sets rates of return, not costs of capital, the last
13 two columns on the right should be relabeled as “annual RATE OF RETURN” and
14 “WEIGHTED RETURN”
- 15 • The order then contains the following text. “The weighted average cost of capital of 7.11
16 percent is reasonable for the applicant for the test year. It generates an economic cost of
17 capital of 9.24 percent and a pre-tax interest coverage ratio of 5.63 times.”
- 18 • That text should read: ““The weighted average RATE OF RETURN of 7.11 percent is
19 reasonable for the applicant for the test year. It generates an economic RATE OF
20 RETURN of 9.24 percent and a pre-tax interest coverage ratio of 5.63 times.”

1 Note that this is not simply a matter of semantics. What CUB respectfully requests is that
2 the Commission accurately reports the findings in its decisions.

3 **Q. Does this conclude your direct testimony?**

4 A. Yes.

5