BEFORE THE WASHINGTON

UTILITIES & TRANSPORTATION COMMISSION

WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION,

Complainant,

v.

PUGET SOUND ENERGY

Respondent.

Docket Nos. UE-220066 & UG-220067 (*Consolidated*)

RESPONSE TESTIMONY OF J. RANDALL WOOLRIDGE ADDRESSING THE SETTLEMENT STIPULATIONS ON BEHALF OF THE WASHINGTON STATE OFFICE OF THE ATTORNEY GENERAL PUBLIC COUNSEL UNIT

EXHIBIT JRW-13T

September 9, 2022

RESPONSE TESTIMONY OF J. RANDALL WOOLRIDGE
ADDRESSING THE SETTLEMENT STIPULATIONS

EXHIBIT JRW-13T

DOCKETS UE-220066, UG-220067, and UG-210918 (*Consolidated*)

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I. INTRODUCTION / OVERVIEW

Q. Please state your name and business address.

A. My name is J. Randall Woolridge, and my business address is 120 Haymaker Circle, State College, PA 16801. I am a Professor of Finance, and the Goldman, Sachs & Co. and Frank P. Smeal Endowed University Fellow in Business Administration at the University Park Campus of Pennsylvania State University.

Q. Have you previously provided testimony in this proceeding?

A. Yes, I provided response testimony for the Public Counsel Unit of the Washington State Attorney General's Office on the overall fair rate of return or cost of capital for the regulated electric and gas utility service of Puget Sound Energy (PSE or the Company).[1] I evaluated PSE's rate of return testimony in this proceeding. The facts and arguments established in my testimony of July 28, 2022, Exhibit JRW-1T, still stand and should be considered in opposition to cost of capital and rate of return terms of the Partial Multiparty Settlement (Main Settlement or Settlement).[2]

Q. What is the purpose of your testimony here in response to the Main Settlement?

A. My testimony in response to the Main Settlement provides my opinion that the cost of capital terms in the proposed Settlement between the Company and many of the parties in this proceeding are not fair, just, or reasonable. My testimony also presents Public Counsel's opposition to the proposed cost of capital terms in the Settlement.

[1] *See* Response Testimony of J. Randall Woolridge, Exh. JRW-1T.
[2] Settlement Stipulation and Agreement on Revenue Requirement and All Other Issues Except Tacoma LNG and PSE's Green Direct Program (filed Aug. 26, 2022) (hereinafter "Main Settlement").

I also address and critique the testimony and return on equity (ROE) recommendation of Staff witness, David C. Parcell, which Parcell provided in response testimony filed prior to the filing date of the Settlement.[3] The issues I discuss further below regarding Parcell's analysis and recommendation of a 9.25 percent ROE and 48.5 percent equity ratio provide additional support for my opinion that the cost of capital and capital structure terms in the Settlement are unreasonable. I have not directly addressed the ROE recommendation of Alliance of Western Energy Consumers (AWEC) witness Bradley Mullins, which Mullins provided in response testimony filed prior to the filing date of the Settlement.[4] However, I will note that Mullins did not perform any analysis in arriving at his recommendation. Mullins only cited the authorized ROEs for electric and gas companies in the Northwest in recent years. Mullins performed no analyses of capital costs, relative risks, or any other economic factors affecting ROEs.[5]

II. SUMMARY OF RECOMMENDATIONS

Q. Please summarize the Company's requested cost of capital and the proposed settlement terms on cost of capital.

A. The Company originally proposed a capital structure of 50 percent equity and 50 percent debt, and a return on equity of 9.90 percent.[6] In my Response Testimony, I concluded that a capital structure with a common equity ratio of 48.5 percent, which the Company received in its last rate case, was appropriate along with a return on

[3] *See* Testimony of David C. Parcell, Exh. DCP-1T.
[4] *See* Response Testimony of Bradley G. Mullins, Exh. BGM-1T.
[5] *See id.*
[6] Direct Testimony of Ann E. Bulkley, Exh. AEB-1T at 4:4–5.

equity of 8.80 percent. Commission Staff witness David Parcell proposed a capital structure with a common equity ratio of 48.5 percent and a ROE of 9.25 percent.

The Company and several other parties including the Staff of the Washington Utilities and Transportation Commission (UTC or Commission) entered into the Settlement, which they filed along with joint testimony and supporting exhibits on August 26, 2022.[7] The Settlement proposes a capital structure of 49 percent equity and 51 percent debt and a ROE of 9.4 percent.[8]

Q. What is your opinion regarding the Settlement terms on cost of capital, and what is Public Counsel's position on these terms?

A. As I discussed in greater detail in my Response Testimony filed on July 28, 2022, a fair ROE should be at 8.80 percent with an equity ratio of 48.5 percent. Thus, setting ROE at 9.40 with a 49 percent equity ratio is excessive, and thus is not fair, reasonable, justified, or in the public interest. Public Counsel opposes the proposed Settlement terms on cost of capital on this basis.

III. RESPONSE TO COST OF CAPITAL TERMS IN SETTLEMENT

Q. Are you aware of the cost of capital terms included in the Main Settlement?

A. Yes. I have reviewed the proposed Settlement, and am aware that the Settlement includes a capital structure with a common equity ratio of 49.0 percent and a ROE of 9.40 percent.

Q. What is your opinion about these terms?

[7] *See* Main Settlement.
[8] Main Settlement ¶ 23.

A. I view the capital structure and ROE terms in the proposed Settlement as excessive and unreasonable.

On the capital structure, Commission Staff witness Parcell stated that PSE has operated with a capital structure with a common equity ratio below 48.5 percent. In addition, I highlighted that the electric utility companies in the proxy groups have, on average, much lower common equity ratios than that proposed by PSE. Hence, I disagree with the proposed capital structure.

I also disagree with the proposed ROE of 9.40 percent. As I highlighted in my Response Testimony, there are several other factors that support Public Counsel's cost of capital position:

(1) As noted above, Puget Sound has operated with a capital structure with a common equity ratio below 48.50 percent in recent years, and has proposed a capital structure with a common equity ratio of 50.0 percent, which is much higher than the average common equity ratios of companies in the Electric, Bulkley, and Gas Proxy Groups;[9]

(2) Puget Sound's investment risk, as indicated by its S&P and Moody's issuer credit ratings, is on par with the three proxy groups;[10]

(3) Capital costs and authorized ROEs remain at historically low levels despite the increase in interest rates in 2022. In addition, utilities have

[9] Woolridge, Exh. JRW-1T at 28–29.
[10] *Id.* at 25.

taken advantage the record low rates in recent years to raise record amounts of debt and equity capital;[11]

(4) While interest rates have increased in 2022, authorized ROEs never reflected the historically low rates associated with the COVID-19 pandemic. As I noted in my response testimony, interest rates declined about 150 basis points during the pandemic, but authorized ROEs for electric utilities only declined about 20 basis points. Hence, while authorized ROEs hit all-time lows in 2021, they never declined to the extent that interest rates did;[12]

(5) While much has been made in the financial press of the 40-year high year-over-year inflation rates of as high as 9.0 percent, investors expect long-term inflation to be at about 2.50 percent;[13]

(6) Finally, as I also highlighted in my Response Testimony, while the stock market is down about 20 percent in 2022, utility stocks have thrived and are up for the year.[14] As such, the higher interest rates of 2022 have not impacted utility stocks to a significant degree.

Below I discuss a number of issues with UTC Staff witness Parcell's approach in this case. My critique of Parcell's testimony undergirds my concerns about the cost of capital and capital structure in the Main Settlement. As I explain further below, Parcell has relied on non-traditional equity cost rate approaches and distorted his

[11] *Id.* at 12–13.
[12] *Id.* at 17–20.
[13] *Id.* at 14–15.
[14] *Id.* at 16.

Discounted Cash Flow (DCF) results to support his 9.25 percent recommendation. The DCF and Capital Asset Pricing Model (CAPM) results reported by Parcell actually support a ROE in the 8.50 percent range.

III. PARCELL RECOMMENDATIONS IN RESPONSE TO THE INITIAL FILING

A. Summary

Q. Please summarize Staff witness Parcell's testimony that was filed on July 28, 2022, in response to the Company's initial filing.

A. Parcell's testimony includes a discussion of the following topics: (1) the economic and legal principles of the cost of capital for public utilities; (2) a review of general economic conditions; (3) a summary of PSE's operations; (4) PSE's capital structure and cost of debt; (5) proxy group selection; (6) Discounted Cash Flow (DCF) model; (7) Capital Asset Pricing Model (CAPM); (8) Comparable Earnings (CE) analysis; (9) the Risk Premium (RP) approach; (10) ROE recommendation; and (11) the total proposed cost of capital.

Q. What is Staff witness Parcell's cost of capital recommendation?

A. Parcell's cost of capital recommendation is summarized in Table 1.[15]

[15] Parcell, Exh. DCP-1T at 2:21–3:10.

Table 1
Staff's Cost of Capital Position

Item	Percent	Cost	Weighted Cost[1]
December 31, 2023			
Short-Term Debt	2.42%	1.43%	0.05%
Long-Term Debt	49.08%	5.07%	2.51%
Common Equity	48.50%	9.25%	4.49%
Total	100.00%		
			7.05%
December 31, 2024			
Short-Term Debt	2.45%	2.36%	0.08%
Long-Term Debt	49.05%	5.07%	2.51%
Common Equity	48.50%	9.25%	4.49%
Total	100.00%		
			7.07%
December 31, 2025			
Short-Term Debt	1.96%	3.14%	0.08%
Long-Term Debt	49.54%	5.08%	2.54%
Common Equity	48.50%	9.25%	4.49%
Total	100.00%		
			7.10%

In his recommendation, Parcell employs a hypothetical capital structure with a common equity ratio of 48.50 percent, uses the Company's debt cost rate, and applies a common equity cost rate in the range of 9.1 percent to 9.5 percent, with a specific return on equity (ROE) recommendation of 9.25 percent. The overall cost of capital recommendations range from 7.05 percent to 7.10 percent over the 2023–2025 period.

Q. Please summarize your assessment of Parcell's conclusions in his capital structure recommendation.

A. I generally agree with Parcell's position on economic conditions as well as his observation that interest rates and capital costs are at historic lows due, in part, to the coronavirus pandemic. I also agree that PSE's proposed capital structure includes an inflated common equity ratio. However, Parcell's ROE recommendation does not accurately reflect the results of the ROE studies. Simply put, Parcell has distorted the results of his equity cost rate studies and ignored low-end results, and thereby reports a higher recommended ROE than is supported by his ROE studies. As discussed below, in

this process Parcell has distorted the figures, abandoned traditional statistical measures of central tendency like the mean and median, and relied on ranges of individual outcomes. In doing so, he makes an elementary statistical error that he highlights and recognizes in his testimony, but then he goes ahead and commits it. The simple answer is that Parcell's ROE studies suggest a lower ROE for PSE than he recommends. If he had just reported the actual ROE results, and not distorted the data, he would have a lower ROE recommendation. Finally, the only equity cost rate estimates that support his 9.25 percent ROE recommendation are his alternative Risk Premium (RP) and Comparable Earnings (CE) approaches. Both of these are non-traditional approaches that are of his own making and interpretation. The results of his traditional DCF and CAPM approaches support a ROE in the 8.5 percent range, which is also well below the proposed 9.4 percent ROE in the Settlement.

B. Distorted Reporting of ROE Results

Q. What are the reported results of Staff witness Parcell's equity cost rate studies for PSE?

A. Parcell's reported equity cost rate results for his ROE studies are presented in Table 2.[16]

Table 2
Staff's Reported Cost of Equity Capital Position

	Mid-Point	Range
DCF	8.75%	8.7-8.8%
CAPM	8.7%	8.7%
CE	9.5%	9.0-10.0%
RP	9.7%	9.45-9.95%

Parcell summarizes his equity cost rate recommendation in the following manner:[17]

[16] Parcell, Exh. DCP-1T at 54:1–12.
[17] *Id.*

> These results indicate an overall broad range of 8.7 percent to 10.0 percent, which focuses on the respective high and low individual model results. Using mid-point values, the range is 8.7 percent to 9.7 percent. My specific ROE recommendation is 9.25 percent, which gives consideration to the results of each of the four methodologies. I furthermore recommend a "range of reasonableness" of 9.0 percent to 9.5 percent, which gives more consideration to my DCF and CE results, which I have traditionally focused on in my ROE recommendations.

Q. How has Parcell distorted his reported ROE results?

A. Parcell has distorted his summary results as well as overall ROE recommendation using non-traditional statistical measures. Parcell notes in the quote above that the 9.10 percent to 9.50 percent represents mid-point values and he gives more consideration to his DCF and CE results, which he traditionally does. There are two related issues with his analyses.

(1) Parcell reports his DCF results using the mid-point of the range. The issue is that the mid-point of the range of the outcomes: (1) is based on only two data points—the lowest and the highest individual ROE outcomes; (2) can be significantly impacted by outliers on either the low and high side; and (3) is not necessarily reflective of all outcomes because only the lowest and highest go into the calculation of the mid-point of the range.

(2) Parcell has made an elementary statistical mistake that he even recognizes as an error, but he still commits it. In discussing the DCF results, Parcell states: "I note that the individual DCF calculations shown in Exh. DCP-9 should not be interpreted to reflect the expected COC for individual companies in the proxy group …"[18] This observation is illustrative of the statistical error that Parcell is

[18] *Id*. at 34:1–4 (COC is an abbreviation for cost of capital).

making by only using the highest and lowest DCF growth rates in calculating the mid-point of the range. The problem is that the individual DCF cost of equity estimates are measured with error, most likely due to the growth rate estimates. In statistics, this is the well-known errors-in-variables (EIV) problem. The EIV problem results from incorrectly measured dependent variables (in this case, the DCF equity cost rate estimates) in a regression model. Errors in measuring the dependent variable (the growth rates) are incorporated in the error term in the regression, which cause no problems. However, when an independent variable is measured with error, this error appears in both the regressor variable and in the error term of the regression model. The typical way to address this issue is to group the data to mitigate the EIV problem. That is why, in estimating an equity cost rate, rate of return analysts use a proxy group and employ the means or medians for the entire group. The presumption in using such an approach is that the measurement errors for the individual companies in the group will average out, and therefore the results of the entire group are a meaningful measure for the cost of equity capital, but not the individual company results.

Q. How does this distort Parcell's reported ROE results?

A. For each of Parcell's equity cost rate approaches, Table 3[19] shows the reported range, the mid-point, and the actual mean and medians of the outcomes for the proxy group. There are several issues highlighted here:

[19] *Id*. at 30:9–53:19.

(1) In my experience, the DCF and CAPM approaches are the most common approaches to estimating a ROE for a public utility. Neither of these approaches support Parcell's 9.25 percent ROE recommendation, or the 9.4 ROE from the Settlement.

(2) In addition, Parcell has distorted the results of his DCF approach. The mean and median of the DCF results are 8.0 percent and 7.8 percent. However, Parcell reports DCF results of 8.7 percent and 8.8 percent.

(3) Parcell claims that in this case, in contrast to previous cases, he is considering the CAPM results. The CAPM result, 8.7 percent, is more than 50 basis points below Parcell's 9.25 percent ROE recommendation, and 70 basis point below the 9.4 percent ROE in the Main Settlement.

(4) The results from the Parcell's Comparable Earnings (CE) and Risk Premium approaches are the only mid-point outcomes that support Parcell's 9.25 percent ROE. These are non-traditional approaches, and as employed by Parcell, the results are totally based on his subjective interpretation.

Table 3
Staff's Actual Cost of Equity Capital Position

Approach	Reported Range	Midpoint of Reported Range	Mean	Median
DCF	8.7% - 8.8%	8.75%	8.0%	7.8%
CAPM	8.70%	8.70%	8.7%	8.7%
Comparable Earnings	9.0% - 10.0%	9.50%	NA	NA
Risk Premium	9.45%-9.95%	9.70%	NA	NA

C. Capital Structure

Q. What is Parcell's capital structure recommendation for PSE?

A. Parcell recommends a capital structure with a common equity ratio of 48.50 percent.

Parcell explains his recommendation of pages 27 through 28 of his testimony:[20]

> I first note that PSE's actual consolidated capital structure as of December 31, 2021, contained 46.9 percent common equity, as shown on Exh. DCP-6, page 2. Thus, my proposed capital structure is similar to the recent actual consolidated capital structure ratios of PSE.
>
> Second, Exh. DCP-6 shows that the actual equity ratios of PSE have not increased in recent years.
>
> Third, the common equity ratio in this capital structure matches the capital structure adopted by the Commission in PSE's prior rate proceedings.

Parcell also cites the Commission's recent policy on capital structure, and specifically the fact that the Commission has noted that the appropriate capital structure can either be the Company's historical capital structure, the projected capital structure, or a hypothetical capital structure. Parcell also notes that PSE's proposed capital structure includes a higher common equity ratio than the Company has maintained in recent years. As a result, Parcell concludes that a hypothetical capital structure is appropriate in this case and uses a capital structure with a common equity ratio of 48.5 percent.

Q. Do you agree with Parcell's capital structure recommendation?

A. Yes. Although we evaluate the capital structure in different ways, we both agree that a capital structure with a common equity ratio of 48.5 percent is appropriate for PSE. Clearly, this opinion and recommendation are at odds with the Settlement's 49.0 percent common equity ratio. And while the difference between the 49.0 percent and the 48.5 percent may not seem large, it does have a significant revenue impact to customers when combined with the Settlement ROE of 9.40 percent.

[20] Parcell, Exh DCP-1T at 27:14–19 and 28:1–2 (citation omitted).

D. DCF Approach

Q. Please review Parcell's DCF results.

A. As shown in Table 4, Parcell states that his DCF results are in the range of 7.1 percent to 9.3 percent for the two groups.[21]

Table 4
Staff's DCF Results

	Mean	Median	Mean Low[42]	Mean High[43]	Median Low[44]	Median High[45]
Proxy Group	8.0%	7.8%	7.0%	8.8%	6.9%	8.7%

Q. What are your observations on how Parcell reports his DCF results?

A. I have four observations.

(1) I agree with Parcell when he states: "The DCF model is one of the oldest and most commonly-used models for estimating the ROE for public utilities";[22]

(2) Parcell has misstated the results of his DCF results by using non-traditional statistical measures. In his summary, Parcell reports a DCF range of 8.7 percent to 8.8 percent, with a mid-point of 8.75 percent. The mean and median of his DCF results are 8.0 percent and 7.8 percent for the Parcell group. How does one report results that are much higher than the mean and median? By ignoring the mean and median, and using the range of results. The range is represented by the lowest and highest of the individual DCF results. However, as discussed above, even Parcell acknowledges, "I note that the individual DCF calculations shown on Exh. DCP-9 should not be interpreted to reflect the expected COC for

[21] Parcell, Exh. DCP-1T at 33:19–21.
[22] *Id*. at 30:12–13.

individual companies in the proxy groups; rather the individual values shown should be interpreted as alternative information considered by investors."[23] As such, he acknowledges that the individual high and low DCF ROE observations, which are used to establish the range, do not represent the expected cost of equity capital; and

(3) In addition, Parcell proceeds to violate this principle a second time when he reports the mean and median high observations in his summary of results. In this case, he is reporting an individual DCF result, which only considers the high mean and median DCF results, which are based on the earnings per share (EPS) growth rate forecast of only one analyst. As noted above, in estimating an equity cost rate, we use proxy groups and take a measure of central tendency.

E. CAPM Approach

Q. Please review Parcell's CAPM results.

A. Parcell's CAPM results are presented in Table 5 for the gas group.[24]

Table 5
Staff's CAPM Results

	Mean	Median
Proxy Group	8.7%	8.7%

Q. What is your observation on this omission?

A. I have three observations:

(1) The CAPM is a well-recognized methodology for measuring the cost of equity capital. The CAPM was developed in the late 1960s and early 1970s, is widely

[23] *Id*. at 34:1–4.
[24] *Id*. at 41:6–9.

used to compute the cost of equity capital, has been used routinely in utility rate cases, and the academics who developed the model have won the Nobel prize in economics.

(2) Parcell offers no rational reason for discounting his CAPM results.

(3) By discounting his CAPM results, Parcell's analysis does not accurately reflect the result of the traditional approaches used to measure ROE. As a result, Parcell's ultimate conclusion is unreasonably inflated.

F. Comparable Earnings Approach

Q. Please review Parcell's CE results.

A. Parcell's CE results are presented in Table 6 for the proxy groups.[25]

Table 6
Staff's CE Results

	Proxy Group
Historic Periods ROE	
Mean	9.0-9.2%
Median	9.1-9.5%
Historic M/B	
Mean	150-159%
Median	145-153%
Current Period ROE	
Mean	9.4-10.2%
Median	9.0

Q. How does Parcell explain his CE model?

A. Parcell summarizes his CE model in the following:

> The CE method normally examines the experienced and/or projected return on book common equity. The logic for examining returns on book equity follows from the use of original cost rate base regulation for public utilities, which uses a utility's book common equity to determine the COC. This COC is, in turn, used as the fair rate of return which is then applied

[25] Parcell, Exh. DCP-1T at 46:7–18.

> (multiplied) to the book value of rate base to establish the dollar level of capital costs to be recovered by the utility. This technique is thus consistent with the rate base-rate of return methodology used to set utility rates.[26]

Q. Is the CE model as used by Parcell a model that is recognized in academics and finance to compute an equity cost rate?

A. No. As noted above, the DCF and CAPM models are well-recognized in the academic and professional financial worlds and are regularly used to calculate equity cost rates. Parcell's CE approach is a model of his own creation that is not generally recognized as a cost of equity capital model. Moreover, his interpretation of the results of his CE model is totally subjective.

Q. Do you agree with any of the statements made by Parcell about his CE model?

A. Yes. Parcell makes some general observations regarding ROEs, the cost of equity capital, and market-to-book (M/B) ratios that I do agree with. Specifically, he notes the following:[27]

> I apply the CE methodology by examining realized ROEs for the group of proxy utilities, as well as unregulated companies. My CE analysis also uses prospective ROEs and thus is not backward looking. I evaluate investor acceptance of these returns by reference to the resulting market-to-book ratios (M/Bs). In this manner it is possible to assess the degree to which a given level of ROE equates to the COC. It is generally recognized for utilities that an M/B of greater than one (i.e., 100 percent) reflects a situation where a company is able to attract new equity capital without dilution (i.e., above book value). As a result, one objective of a fair ROE is the maintenance of stock prices at or above book value. There is no regulatory obligation to set rates designed to maintain an M/B significantly above one.

Parcell and I are in agreement about the relationship between ROEs, the cost of equity capital, and M/B ratios. I discussed this exact point on pages 30 through 33 of my

[26] *Id*. at 44:7–13.
[27] *Id.* at 44:16-23 and 45:1–2.

Response Testimony. In particular, I agree with Parcell's observation in the above except that "[t]here is no regulatory obligation to set rates designed to maintain an M/B significantly above one."[28]

Q. What does this tell you about the results of Parcell's CE approach?

A. It tells me that the cost of equity capital that results from Parcell's CE approach should be well below 9.0 percent. Additionally, I am not in agreement with Parcell's interpretation of the CE results, in which he concludes that the results suggest a ROE of 9.0 percent to 10.0 percent, with a mid-point of 9.5 percent. This is a highly subjective interpretation and recommendation, which are at odds with the ROE – M/B discussion cited above.

Q. What other specific issues occur within Parcell's CE approach?

A. There are a number of issues with his CE approach. As such, I strongly suggest that the Commission ignore the CE approach in setting a ROE for PSE. These issues include:

The CE Approach Does Not Measure the Market Cost of Equity Capital — First, this accounting-based methodology does not measure investor return requirements. Dr. Roger Morin's book, *New Regulatory Finance*, is commonly cited (such as by PSE's witness Bulkley) as the source of the CE approach. In his book on utility cost of capital, Dr. Morin has made the following observation on the CE approach: "More simply, the Comparable (Expected) Earnings standard ignores capital markets. If interest rates go up two percent for example, investor

[28] *Id*. at 45:1–2.

requirements and the cost of equity should increase commensurably, but if regulation is based on accounting returns, no immediate change in equity cost results."[29] As such, this method does not measure the market cost of equity because there is no way to assess whether the earnings are greater than or less than the earnings investors require.

The Expected ROEs are not Related to Investors' Market-Priced Opportunities — The ROE ratios are an accounting measure that do not measure investor return requirements. Investors had no opportunity to invest in the proxy companies at the accounting book value of equity. As also indicated by Morin,

> The denominator of accounting return, book equity, is a historical cost-based concept, which is insensitive to changes in investor return requirements. Only stock market price is sensitive to a change in investor requirements. Investors can only purchase new shares of common stock at current market prices and not at book value.[30]

The CE Approach is Circular — The proxies' ROE ratios are not determined by competitive market forces, but instead are largely the result of federal and state rate regulation, including the present proceedings.

The Proxies' ROEs Reflect Earnings on Business Activities that are not Representative of PSE's Rate-Regulated Utility Activities — The numerators of the proxy companies' ROEs include earnings from business activities that are riskier and produce more projected earnings per dollar of book investment than does regulated electric utility service. These include earnings from: (1) unregulated businesses

[29] Roger Morin, *New Regulatory Finance* at 293 (Pub. Utils. Report 2006).
[30] *Id.*

including merchant generation; (2) electric generation; and (3) international operations.

Q. Please summarize the observations of the Federal Energy Regulatory Commission's (FERC) on the Comparable Earnings approach in its recent Midcontinent Independent System Operator (MISO) decision.

A. In a 2019 order, FERC rejected the use of the CE or Expected Earnings approach to estimate an equity cost rate to set an authorized ROE.[31] Specifically, FERC made note of the following:

> While it may be true that the Expected Earnings model does not involve the same complexities as the market-based approaches, we find that this is because it does not reflect a utility's cost of equity. It is simpler because it does not consider the market price that an investor must pay to make its investment and other factors such as projected growth rates for the subject utility. Factors such as these—in particular the market price that an investor must pay for an investment, which is the basis for determining the return on that investment—are critical to determining a utility's cost of equity. While it may be simpler to use a model that does not consider such factors, doing so renders that model unable to effectively estimate the rate of return that investors require to invest in the market-priced common equity capital of a utility, which is the utility's cost of equity capital. We find that it is not appropriate to use a model that does not accurately measure the "return to the equity owner" as required by *Hope* merely because it may be simpler to administer. We are cognizant of the administrative burden that is placed on parties to evaluate models that are used in analyzing ROEs, but the mere simplicity of one model as compared to others does not justify using that model if it does not assist us in ensuring that returns to equity owners are just and reasonable.[32]

[31] FERC called Parcell's CE approach "the Expected Earnings approach." In either case, the comparable or expected earnings are simply stated as an accounting return on book value (net income/book value of equity).
[32] *See*, *Ass'n of Bus. Advocating Tariff Equity Coalition of MISO Transmission Carriers v. Midcontinent Indep. Sys. Operator*, 169 FERC ¶ 61,129, 61768 (F.E.R.C. 2019) (Docket No. EL14-12-003 and EL15-45-000, Opinion No. 569, ¶ 204 (issued Nov. 21, 2019)).

Q. Did Dr. Morin use this approach in his recent testimony in Washington?

A. No. Dr. Morin is a well-known utility company rate of return witness who testified on behalf of Puget Sound Energy (PSE) in its 2019 rate case. And, no, Dr. Morin did not use the CE approach in estimating PSE's cost of equity capital in the rate case.[33]

Q. Please summarize your analysis of Parcell's Comparable Earnings approach.

A. In short, Parcell's CE approach does not measure the market cost of equity capital, is independent of most cost of capital indicators, has a number of other empirical issues, and was rejected in 2019 by FERC as a methodology to estimate the cost of equity capital for a public utility. Therefore, the Commission should ignore this approach in determining the appropriate ROE for PSE.

G. Alternative Risk Premium Approach

Q. Please review Parcell's Risk Premium (RP) results.

A. In Parcell's alternative Risk Premium approach, he makes modifications to Bulkley's RP study.

Q. How has Parcell modified Bulkley's RP study?

A. Parcell makes three modifications to Bulkley's approach: (1) he uses the yield on A-rated and BBB-rated utility bonds and not Treasury bonds; (2) he limits the time period to the last 10 years; and (3) to estimate a risk premium, instead of using a regression, he computes the average annual difference between quarterly average electric and gas

[33] *See* Direct Testimony of Roger A. Morin, Exh. RAM-1T, *Wash. Utils. & Transp. Comm'n v. Puget Sound Energy* Dockets UE-190529 and UG-190530 (filed June 20, 2019).

company authorized ROEs and the yields on A and BBB utility bonds over the 2012–21 time period.

Table 7[34]
Staff's Risk Premium Study Results

Year	Avg ROE	A-Rated Risk Premiums	Baa-Rated Risk Premiums
2012	10.02%	4.98-5.89%	4.45-5.17%
2013	9.82%	5.34-5.74%	4.84-5.12%
2014	9.76%	5.17-5.48%	4.69-4.96%
2015	9.60%	5.32-5.60%	4.57-4.95%
2016	9.60%	5.36-5.67%	4.36-4.92%
2017	9.68%	5.63-5.75%	5.00-5.30%
2018	9.56%	5.31-5.60%	4.89-5.24%
2019	9.65%	5.34-5.88%	4.88-5.46%
2020	9.39%	5.62-6.07%	5.20-6.00%
2021	9.39%	6.28-6.41%	6.00-6.09%
2012-2021 Avg.	9.65%	5.54-5.73%	4.98-5.20%
2012-2019 Avg.	9.71%	5.43-5.59%	4.84-5.01%

Q. How has Parcell used this data to arrive at a recommended equity cost rate using the RP model?

A. Table 8 provides the data and estimates used by Parcell. He does not use his actual figures, but instead he make subjective adjustments to the RP data.

Q. What are the errors in Parcell's alternative RP approach?

A. There are several problems with this approach for calculating the risk premium. First, like his CE approach, Parcell's alterative RP approach is a model of his own making and interpretation. Parcell uses his own judgement as to the appropriate risk premium to be added to the utility A-rated and BBB-rated yields.

Second, Parcell's RP approach is a gauge of *commission* behavior and not *investor* behavior. Capital costs are determined in the marketplace through the

[34] Parcell, Exh. DCP-1T at 52:13–22.

financial decisions of investors and are reflected in such fundamental factors as dividend yields, expected growth rates, interest rates, and investors' assessment of the risk and expected return of different investments. Regulatory commissions evaluate capital market data in setting authorized ROEs, but also consider other utility- and rate case-specific information in setting ROEs. As such, Bulkley's approach and results reflect other factors such as capital structure, credit ratings and other risk measures, service territory, capital expenditures, energy supply issues, rate design, investment and expense trackers, and other factors used by utility commissions in determining an appropriate ROE in addition to capital costs. This may especially be true when the authorized ROE data includes the results of rate cases that are settled and not fully litigated.

Third, since the stocks of electric utilities have been selling above book value for the last decade, it is obvious that the authorized ROEs of state utility commissions are above the returns that investors require.

Q. Please summarize your assessment of Parcell's testimony, ROE results, and recommendation.

A. First, I agree with Parcell's position on economic conditions and capital structure. However, I do not believe that Parcell's ROE recommendation reflects the low capital cost environment because this recommendation does not accurately reflect the results of his ROE studies. The fact is that Parcell's four ROE studies suggest a lower ROE for PSE than he recommends. Specifically, Parcell has misstated the results of his DCF analysis by reporting DCF results that are above the actual ROEs indicated by the data. Finally, Parcell's CE and

RP approaches are models of his own creation and interpretation and was recently rejected by FERC as an approach to estimating the cost of equity capital.

In summary, the Commission should recognize the numerous errors, distortions, and inconsistencies in Parcell's rate of return recommendation of 9.25 and testimony, and reject the 9.40 percent recommendation of the Main Settlement in setting a ROE for PSE. The errors and inconsistencies associated with Parcell's 9.25 percent ROE recommendation also highlight how unreasonable the Settlement's 9.40 percent ROE recommendation is.

Q. Does this conclude your testimony?

A. Yes.