

**BEFORE THE WASHINGTON**

**UTILITIES & TRANSPORTATION COMMISSION**

WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION,

Complainant,

v.

PUGET SOUND ENERGY,

Respondent.

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DOCKETS UE-170033 & UG-170034 (*Consolidated*)

TESTIMONY IN RESPONSE TO PROPOSED SETTLEMENT

OF

DR. J. RANDALL WOOLRIDGE (JRW-18T)

ON BEHALF OF

WASHINGTON STATE OFFICE OF THE ATTORNEY GENERAL,

PUBLIC COUNSEL UNIT

**SEPTEMBER 22, 2017**

TESTIMONY IN RESPONSE TO PROPOSED SETTLEMENT  
OF DR. J. RANDALL WOOLRIDGE (JRW-18T)

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**EXHIBIT LIST**

Exhibit No. JRW-19

Corrected Cost of Capital

1 **I. INTRODUCTION / SUMMARY**

2 **Q: Please state your full name, address, and occupation.**

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

7 **Q: Have you previously provided testimony in this proceeding?**

8 A: Yes, I provided testimony for the Public Counsel Unit of the Washington State Attorney  
9 General's Office on the overall fair rate of return or cost of capital for the regulated  
10 electric and gas utility service of Puget Sound Energy (PSE or "the Company").<sup>1</sup> I also  
11 provided an evaluation of PSE's rate of return testimony in this proceeding.<sup>2</sup>  
12 Additionally, I provided cross-answering testimony in this proceeding in response to  
13 Commission Staff's testimony.<sup>3</sup>

14 **Q: What is the purpose of your testimony in response to the settlement agreement?**

15 A: First, I correct an error in my overall rate of return recommendation. Second, I respond  
16 to the joint testimony filed by Commission Staff in support of a return on equity  
17 (ROE) of 9.50 percent included in the Multiparty Settlement Stipulation and  
18 Agreement ("Settlement"). The parties to the settlement, in addition to PSE, include  
19 the Commission Staff, the NW Energy Coalition/Renewable Northwest/Natural  
20 Resource Defense Council, the Industrial Customers of Northwest Utilities (ICNU),

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<sup>1</sup> See Exhibits JRW-1T through JRW-16.

<sup>2</sup> In my testimony, I use the terms 'rate of return' and 'cost of capital' interchangeably. This is because the required rate of return of investors on a company's capital is the cost of capital.

<sup>3</sup> Cross-Answering Testimony of J. Randall Woolridge, Exh. JRW-17T.

1 the Northwest Industrial Gas Users (NWIGU), The Energy Project, Federal Energy  
2 Agency (FEA), Sierra Club, Kroger, the State of Montana (hereafter “Settling  
3 Parties”). Public Counsel has not joined the Settlement and offers an alternative  
4 viewpoint on cost of capital for the Commission’s consideration.

5 **II. CORRECTED OVERALL RATE OF RETURN**

6 **Q: Please discuss Exhibit JRW-19.**

7 A: There was a small error in the calculation of the weighted costs in my original rate of  
8 return recommendation in Exhibit JRW-3. My corrected rate of return  
9 recommendation is provided in Exhibit JRW-19. The corrected rate of return  
10 recommendation is 7.22 percent versus my original 7.28 percent.

11 **III. RESPONSE TO SETTLEMENT ROE OF 9.50 PERCENT**

12 **Q: What is the justification in the joint testimony for adopting a ROE of 9.50**  
13 **percent?**

14 A: The primary reason provided in Staff’s joint testimony of Thomas E. Schooley and  
15 Melissa C. Cheesman for supporting the ROE of 9.50 percent is that this figure is  
16 within the ROE ranges of PSE witness Dr. Roger Morin, Staff witness Mr. David  
17 Parcell, and ICNU witness Mr. Michael Gorman.

18 **Q: Please review the ROE ranges of the parties to the settlement.**

19 A: Dr. Morin has established a ROE range of 9.30 percent to 10.7 percent using DCF,  
20 CAPM, and risk premium models.<sup>4</sup> Staff witness Mr. Parcell reports a ROE range of

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<sup>4</sup> Prefiled Direct Testimony of Dr. Roger A. Morin, Exh. RAM-1T at 55: 14-5.

1 8.85 percent to 9.50 percent using his DCF and Certainty Equivalent (CE) models.<sup>5</sup>

2 In rebuttal to Dr. Morin, Mr. Gorman indicates that Dr. Morin's corrected range of  
3 ROEs estimates is 8.6 percent to 9.6 percent.<sup>6</sup>

4 **Q: What is your ROE range for PSE?**

5 A: I have established a ROE range of 7.60 percent to 8.90 percent using DCF and CAPM  
6 models. In my rate of return recommendation, I used a ROE of 8.85 percent for  
7 PSE.<sup>7</sup>

8 **Q: What are the errors in Dr. Morin's ROE approaches and results?**

9 A: As I highlighted in my Response Testimony, the errors include:

- 10 1. The expectation that interest rates and capital cost are about to increase  
11 significantly;
- 12 2. Dr. Morin's DCF equity cost rate estimates, and in particular his exclusive  
13 use of the earnings per share growth rates of Wall Street analysts and *Value*  
14 *Line*;
- 15 3. The base interest rate and market or equity risk premium in Dr. Morin's  
16 CAPM and Risk Premium approaches; and
- 17 4. The level of ROE that is adequate to meet *Hope*<sup>8</sup> and *Bluefield*<sup>9</sup> standards.

18 Of particular note are Dr. Morin's high-end ROE results, which stem from his  
19 historical and allowed risk premium approaches, as well as use of a projected 30-year  
20 Treasury yield of 4.40 percent. As I highlighted in my initial testimony, there are two

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<sup>5</sup> Testimony of David C. Parcell, Exh. DCP-1T at 4:2-5.

<sup>6</sup> Response Testimony of Michael P. Gorman, Exh. MPG-1T at 12:1.

<sup>7</sup> Response Testimony of J. Randall Woolridge, Exh. JRW-1T at 3-4; Exh. JRW-3; Exh. JRW-19.

<sup>8</sup> *Fed. Power Comm'n v. Hope Nat. Gas Co.*, 320 U.S. 591 (1944) ("*Hope*").

<sup>9</sup> *Bluefield Water Works and Improvement Co. v. Public Service Comm'n of West Virginia*, 262 U.S. 679 (1923) ("*Bluefield*").

1 errors in using these forecasts to estimate a ROE. First, economists have been  
2 projecting higher interest rate forecasts for a decade, and these forecasts have been  
3 wrong. Interest rates have remained at historically low levels due to relatively slow  
4 economic growth and low inflation. Second, investors would not buy long-term  
5 Treasury bonds at the current rate of 2.80 percent if they expected this rate to increase  
6 to 4.40 percent in the next year or two. Due to the inverse relationship between  
7 interest rates and bond prices, if the 30-year Treasury yield increased from 2.80  
8 percent to 4.40 percent in the next year, investors would lose 30 percent of their  
9 investment.

10 **Q: Please summarize your testimony on interest rates and capital costs.**

11 A: As I discussed on pages 5-19 of my Response Testimony, capital costs are at  
12 historically low levels with interest rates at historic lows and stock prices at all-time  
13 highs.<sup>10</sup> I also discuss why interest rates are likely to stay that way for some time.  
14 Specifically, I note that despite increases in the federal funds rate by the Federal  
15 Reserve, long-term interest rates have remained at low levels because long-term  
16 interest rates primarily reflect expected economic growth and inflation expectations  
17 and are not directly set by the Federal Reserve. Finally, expected economic growth  
18 and inflation expectations remain at low levels and are likely to remain there for some  
19 time.

20 **Q: Please review Mr. Parcell's ROE range.**

21 A: Mr. Parcell's summary equity cost rate results for PSE are presented in Table 1.

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<sup>10</sup> Woolridge, Exh. JRW-1T.

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**Table 1**  
**Staff's Summary ROE Results**

	Mid-Point	Range
DCF	8.85%	8.7-9.0%
CAPM	6.75%	6.5-7.0%
CE	9.50%	9.0-10.0%

Taking these results, Mr. Parcell arrives at a 9.20 percent ROE for PSE based on the following:

Based upon these findings, I conclude that PSE's ROE is within a range of 8.85 percent to 9.5 percent, which is based upon the mid-point of the range of the results for the DCF model and the mid-point of the range of results for the CE model. I specifically recommend the approximate mid-point of this range (9.20 percent) for PSE.<sup>11</sup>

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

A: Mr. Parcell's reported equity cost rate results for his ROE studies are presented in Table 2.

**Table 2**  
**Staff's Reported Cost of Equity Capital Position**

<u>Methodology</u>	<u>Range</u>
Discounted Cash Flow ("DCF")	8.7%-9.0% (8.85% mid-point)
Capital Asset Pricing Model ("CAPM")	6.5%-7.0% (6.75% mid-point)
Comparable Earnings ("CE")	9.0%-10.0% (9.50% mid-point)

**Q: Do you agree with Mr. Parcell's assessment of capital costs and interest rates?**

A: Yes. In contrast to the testimony of Dr. Morin, I agree with Mr. Parcell's position that interest rates and capital costs have declined and that they are likely to stay low for some time. However, I do not believe that Mr. Parcell's ROE recommendation reflects the low capital cost environment because his recommendation does not accurately reflect

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<sup>11</sup> Parcell, Exh. DCP-1T at 4:2-5.



1 the results of his ROE studies.

2 **Q: Why do you believe that Mr. Parcell's ROE position does not reflect the low**  
3 **capital cost environment?**

4 A: I addressed these issues in detail in my cross-answering testimony.<sup>12</sup> In short,  
5 Mr. Parcell's three ROE studies suggest a significantly lower ROE for PSE than he  
6 recommends.

7 First, Mr. Parcell has misstated the results of his DCF analysis by reporting DCF  
8 results that only include the single, high DCF growth rate. He reports a DCF range of  
9 8.7 percent to 9.0 percent using only the high DCF growth rate for each proxy company.  
10 The DCF range using the mean growth rates is 7.9 percent to 8.0 percent.

11 Second, Mr. Parcell's CAPM analysis produces a range of 6.5 percent to 7.0  
12 percent. However, he has totally ignored these results, and they are not used in his ROE  
13 recommendation or range. His CAPM results point to a much lower ROE for PSE.

14 Third, given that he has misstated his DCF results and ignored his CAPM  
15 results, Mr. Parcell gives almost 100 percent weight to the results of his CE approach,  
16 which is a model of his own creation and interpretation and, unlike the DCF and CAPM  
17 models, is not a recognized approach to estimating the cost of equity capital.

18 **IV. HOPE AND BLUEFIELD STANDARDS**

19 **Q: Do you believe that your 8.85 percent ROE recommendation meets *Hope* and**  
20 ***Bluefield* standards?**

21 A: Yes, I do. As previously noted, according to the *Hope* and *Bluefield* decisions,  
22 returns on capital should be: (1) comparable to returns investors expect to earn on

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<sup>12</sup> Woolridge, Exh. JRW-17T.

1 other investments of similar risk; (2) sufficient to assure confidence in the company's  
2 financial integrity; and (3) adequate to maintain and support the company's credit and  
3 to attract capital.

4 Utilities have been earning ROEs of about 9.0 percent (on average) in recent  
5 years. As I noted in my Response Testimony, given this level of return, the credit  
6 ratings of utility companies are going up (at least 70 percent upgrades in recent  
7 years), utilities are raising \$50 billion in capital, and utility stock prices are  
8 outperforming the S&P 500 in 2017.<sup>13</sup>

9 **Q: Does this conclude your testimony?**

10 A: Yes, it does.

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<sup>13</sup> Woolridge, Exh. JRW-17T.