EXH. CGP-AEB-TAS-1JT
DOCKETS UE-220066/UG-220067 et al.
2022 PSE GENERAL RATE CASE
WITNESS: CARA G. PETERMAN
ANN E. BULKLEY
TODD A. SHIPMAN

BEFORE THE
WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION

WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION, **Complainant,** **v.** **PUGET SOUND ENERGY,** **Respondent.**	**Docket UE-220066** **Docket UG-220067**
In the Matter of the Petition of **PUGET SOUND ENERGY** **For an Order Authorizing Deferred Accounting Treatment for Puget Sound Energy's Share of Costs Associated with the Tacoma LNG Facility**	**Docket UG-210918**

JOINT TESTIMONY (NONCONFIDENTIAL) OF

CARA G. PETERMAN, ANN E. BULKLEY AND TODD A. SHIPMAN

ON BEHALF OF PUGET SOUND ENERGY IN SUPPORT OF THE MULTIPARTY SETTLEMENT STIPULATION AND AGREEMENT ON REVENUE REQUIREMENT AND ALL OTHER ISSUES EXCEPT FOR TACOMA LNG AND PSE'S GREEN DIRECT PROGRAM

AUGUST 26, 2022

PUGET SOUND ENERGY

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I. INTRODUCTION

Q. Are you the same Cara G. Peterman who submitted Prefiled Direct Testimony on January 31, 2022, on behalf of Puget Sound Energy ("PSE" or "the Company") in this proceeding?

A. Yes. On January 31, 2022, I filed the Prefiled Direct Testimony of Cara G. Peterman, Exhibit CGP-1CT and nine supporting exhibits (CGP-2 through CGP-10).

Q. Are you the same Ann E. Bulkley who submitted Prefiled Direct Testimony on January 31, 2022, on behalf of PSE in this proceeding?

A. Yes. On January 31, 2022, I filed the Prefiled Direct Testimony of Ann E. Bulkley, Exhibit AEB-1T, and eleven supporting exhibits (AEB-2 through AEB-12), regarding the appropriate return on equity ("ROE") for the Company and the reasonableness of the Company's proposed ratemaking capital structure.

Q. Are you the same Todd A. Shipman who submitted Prefiled Direct Testimony on January 31, 2022, on behalf of PSE in this proceeding?

A. Yes, on January 31, 2022, I filed the Prefiled Direct Testimony of Todd A.

Shipman, Exhibit TAS-1T and two supporting exhibits (TAS-2 through TAS-3).

Q. What is the purpose of your Joint Testimony?

A. This Joint Testimony supports the ROE and capital structure of the Settlement Stipulation and Agreement on Revenue Requirement and All Other Issues Except Tacoma LNG and PSE's Green Direct Program ("Settlement"), including the Settlement's anticipated positive credit impact on PSE. This Joint Testimony also rebuts response testimony submitted by the Public Counsel Unit of the Washington Office of the Attorney General ("Public Counsel") regarding ROE, capital structure, and credit impacts, which are issues PSE understands Public Counsel will continue to oppose in the Settlement. A detailed overview of the Settlement is provided in the Joint Testimony of Jon A. Piliaris, Susan E. Free and Joshua J. Jacobs.

II. THE SETTLEMENT (PETERMAN)

Q. Ms. Peterman, please describe the Settlement as it relates to ROE and capital structure.

A. During July and August, the parties participated in numerous settlement discussions to explore settlement on all or some of the issues in this case. On August 12, 2022, the following parties, in addition to PSE, reached agreement on a settlement of the majority of issues in the case, including the revenue requirement, capital structure, and ROE: (i) the regulatory staff of the Washington Utilities and Transportation Commission ("Commission Staff"), (ii) Alliance of

Western Energy Consumers ("AWEC"), (iii) Federal Executive Agencies, (iv) Walmart, Inc. ("Walmart"), (v) The Energy Project, (vi) Kroger, Co. ("Kroger"), (vii) Northwest Energy Coalition, (viii) Sierra Club, (ix) Front and Centered, (x) Microsoft and (xi) Nucor Steel Seattle, Inc. ("Nucor"). The only party that opposes the ROE and equity ratio in the Settlement is Public Counsel.

Q. Do you support the terms of the Settlement?

A. Yes. The Settlement in this case resolves the issues in a manner that is in the public interest and satisfies PSE's interests. The Settlement, if approved, will result in fair and reasonable rates for PSE customers. This is a complicated case with many issues across a broad spectrum of topics. To arrive at a settlement to which the majority of the parties agree, indicates that many competing interests have been properly balanced.

Q. Does any party contest the ROE and equity ratio in the Settlement?

A. It is PSE's understanding that Public Counsel opposes the ROE and equity ratio in the Settlement. The Settlement includes an ROE of 9.4 percent and an equity ratio of 49 percent for each of the two years of the multi-year rate plan. Although Public Counsel has not yet filed testimony opposing the Settlement, Public Counsel did file response testimony addressing the ROE and equity ratio on July 28, 2022. Specifically, the testimony and exhibits filed by Public Counsel on these issues are in the Response Testimony of J. Randall Woolridge, Exhibit JRW-1T, and his eleven supporting exhibits, Exhibit JRW-2 through Exhibit

JRW-12. Because PSE understands Dr. Woolridge's response testimony and exhibits to continue to be Public Counsel's position on these topics, this Joint Testimony discusses why the ROE and equity level supported by Dr. Woolridge and Public Counsel should be rejected by the Commission.

Q. Please provide any last thoughts on the equity ratio and ROE in the Settlement.

A. PSE's equity ratio and ROE requests are important to improving PSE's financial strength and achieving a credit-supportive multi-party settlement. While PSE sought an increase in its ROE, it made a business decision to settle this multiyear rate plan to achieve certain benefits that will enable PSE to invest in safety, reliability, and the clean energy targets established by state energy policy. Similarly, even though the Settlement does not grant the full increase in the equity ratio the Company requested, an increase from 48.5 percent to 49.0 percent will enable the Company to begin the process of rebalancing how much debt and equity is invested in the business to meet the significantly changed business conditions it faces in the future. Importantly, it will help improve cash flows and credit metrics, both of which have been a critical focus in this case. Finally, the weighted average cost of capital ("WACC") in the Settlement will be the lowest WACC experienced by PSE and customers in recent memory, which will provide customers a significant amount of savings for the next two years. As such, the Settlement should be approved.

III. RETURN ON EQUITY (BULKLEY)

A. Summary and Overview

Q. Ms. Bulkley, what factors should be considered when evaluating the results of ROE models and establishing the authorized ROE?

A. The primary factors that should be considered are: (i) the importance of investors' actual return requirements and the critical role of judgment in selecting the appropriate ROE; (ii) the importance of providing a return that is comparable to returns on alternative investments with commensurate risk; (iii) the need for a return that supports a utility's ability to attract needed capital at reasonable terms; and (iv) the effect of current and expected capital market conditions.

Q. What are your key conclusions and recommendations regarding the appropriate ROE for the Company in this proceeding?

A. My key conclusions and recommendations in this proceeding are as follows:

- The results of the ROE estimation models based on market data through July 31, 2022, support, and are well above, the Settlement's 9.40 percent ROE.

- Since the filing of my Direct Testimony, interest rates have increased significantly, and inflation has reached levels not seen in four decades. Interest rates are expected to continue to increase over the period during which the Company's rates will be in effect as the Federal Reserve combats inflation. Those changes in the capital markets will have a direct and significant effect on the ROEs required by investors, and while placing upward pressure on the cost of equity, the Company has agreed to reduce its proposed ROE in this proceeding by 50 basis points and keep it constant through the multi-year rate plan ("MYRP").

- While I disagree with a number of aspects of the ROE analyses of Dr. Woolridge, as well as his criticisms of my analyses, the ultimate conclusion is that Dr. Woolridge's recommended ROE is unreasonably low, does not reflect the investor-required ROE for an electric and natural gas utility, and does not meet the comparable return standard of *Hope* and *Bluefield*. Specifically, Dr. Woolridge's ROE recommendation of 8.80 percent is below the low-end of the range of authorized ROEs for any electric or natural gas distribution company since 2018.

Q. Please summarize the ROE recommendation of Dr. Woolridge in this proceeding.

A. As shown in Figure 1, Dr. Woolridge conducted a discounted cash flow ("DCF") model and capital asset pricing model ("CAPM") and recommends an ROE of 8.80 percent for each year of the MYRP based primarily on the result of his DCF model. Since 2018, 99 percent of authorized ROEs have been greater than Dr. Woolridge's recommendation.

Figure 1: Summary of Dr. Woolridge's Model Results

	Dr. Woolridge
Constant Growth DCF	8.75% - 8.90%
CAPM	7.40% - 7.70%
ROE Recommendation	**8.80%**
% of Authorized ROEs Since 2018 ***Above*** Dr. Woolridge's ROE Recommendation[1]	**99%**

[1] The authorized ROEs for the electric utilities in Arizona, New York and Vermont and the natural gas utilities in Arizona and New York are excluded as these authorizations are not considered comparable to the manner in which ROE is established in Washington by the Commission.

Q. Are authorized returns in other jurisdictions a relevant benchmark that investors consider?

A. Yes. The regulatory decisions of other Commissions provide a basic test of reasonableness and a benchmark that investors consider in comparing the authorized ROE to the returns available from other regulated utilities with comparable risk. The *Hope*[2] and *Bluefield*[3] decisions require that authorized ROEs must be comparable to other investments of commensurate risk. Dr. Woolridge references prior authorized ROEs for electric and natural gas distribution utilities in his testimony.

Q. Are there additional factors that should be considered when reviewing authorized ROEs?

A. Yes. It is important to consider the market conditions that existed as of the period when the return was authorized and to compare that to the current market conditions. Regulatory commissions consider a variety of factors in establishing the ROE for a utility, including the results of the ROE estimation methodologies, risk factors and market conditions. Therefore, when reviewing the authorized ROE data it is important to identify and understand these factors to determine whether the authorized ROE would be reasonable in current market conditions. For example, an ROE that was set taking into consideration a specific performance factor (positive or negative) should not be considered a "market

[2] *Fed. Power Comm'n v. Hope Nat. Gas Co.*, 320 U.S. 591 (1944).
[3] *Bluefield Waterworks & Improvement Co. v. Pub. Serv. Comm'n of W. Va.*, 262 U.S. 679 (1923).

based" return. Similarly, formula ROEs that are set without consideration of the type of information that is typically reviewed by a regulatory commission may not be appropriate as a benchmark return. Considering the current market environment, it is important to recognize that recently authorized ROEs are *not* based on market conditions that take into consideration the persistent high inflation that exists today. Those recently authorized ROEs also fail to reflect that the Federal Reserve has recently substantially raised interest rates and the expectation is that further increases will continue in order to bring inflation back towards target levels. Therefore, recently authorized ROEs likely understate the investor-required return in the current market.

Q. Recognizing these limitations, how do recently authorized ROEs compare with the ROE in the Company's proposed Settlement and Dr. Woolridge's recommended ROE?

A. Figure 2 and Figure 3 show the distribution of authorized returns for vertically-integrated electric utilities and natural gas distribution utilities, respectively, since 2018. The range of authorized ROEs for the vertically-integrated electric utilities has been from 8.75 percent to 10.60 percent, with an average of 9.66 percent. The range of authorized ROEs for the natural gas distribution utilities has been from 9.10 percent to 10.25 percent, with an average of 9.63 percent.

As shown in Figure 2 and Figure 3, the ROE specified in the Company's proposed Settlement is approximately 20 to 25 basis points *below* the average of all authorized ROEs for vertically-integrated electric utilities and natural gas

distribution utilities since 2018. However, Dr. Woolridge's recommended 8.80 percent ROE is *lower than 99 percent* of all authorized ROEs (*i.e.*, all but one authorized ROE) for vertically-integrated electric utilities since 2018 and *well below <u>any</u>* authorized ROE for natural gas distribution utilities over that same time period. In fact, the most recently authorized ROE for a natural gas distribution utility (*i.e.*, CMS Energy) was 9.90 percent.

Figure 2: Authorized ROEs for Electric Utilities, 2018-Present

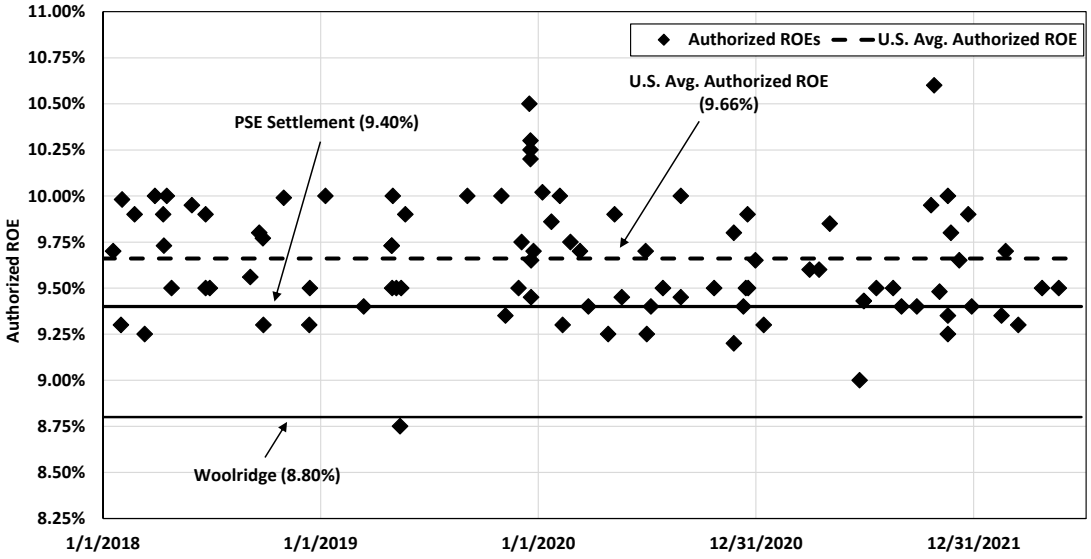
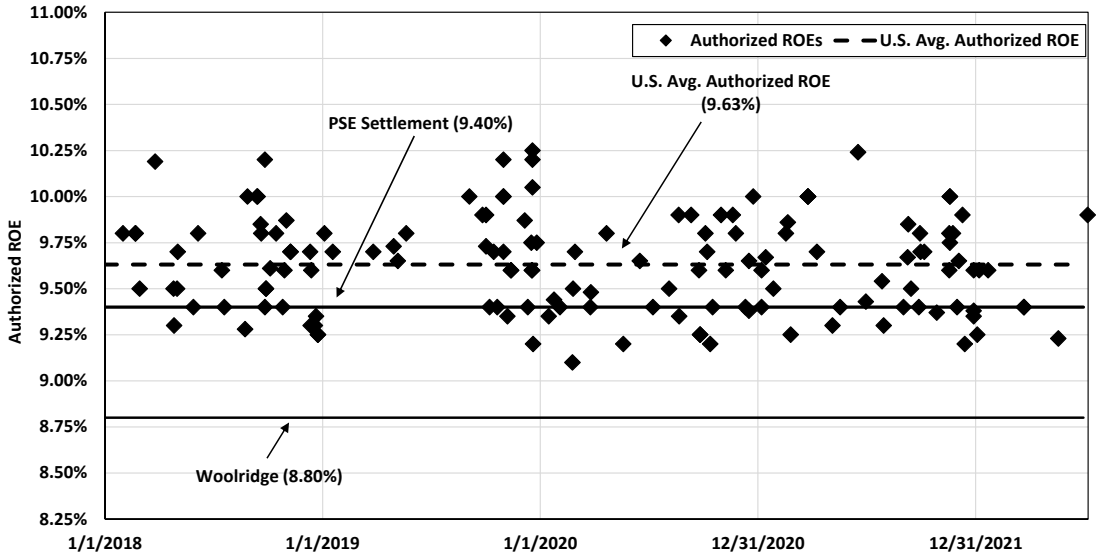


Figure 3: Authorized ROEs for Natural Gas Utilities, 2018-Present



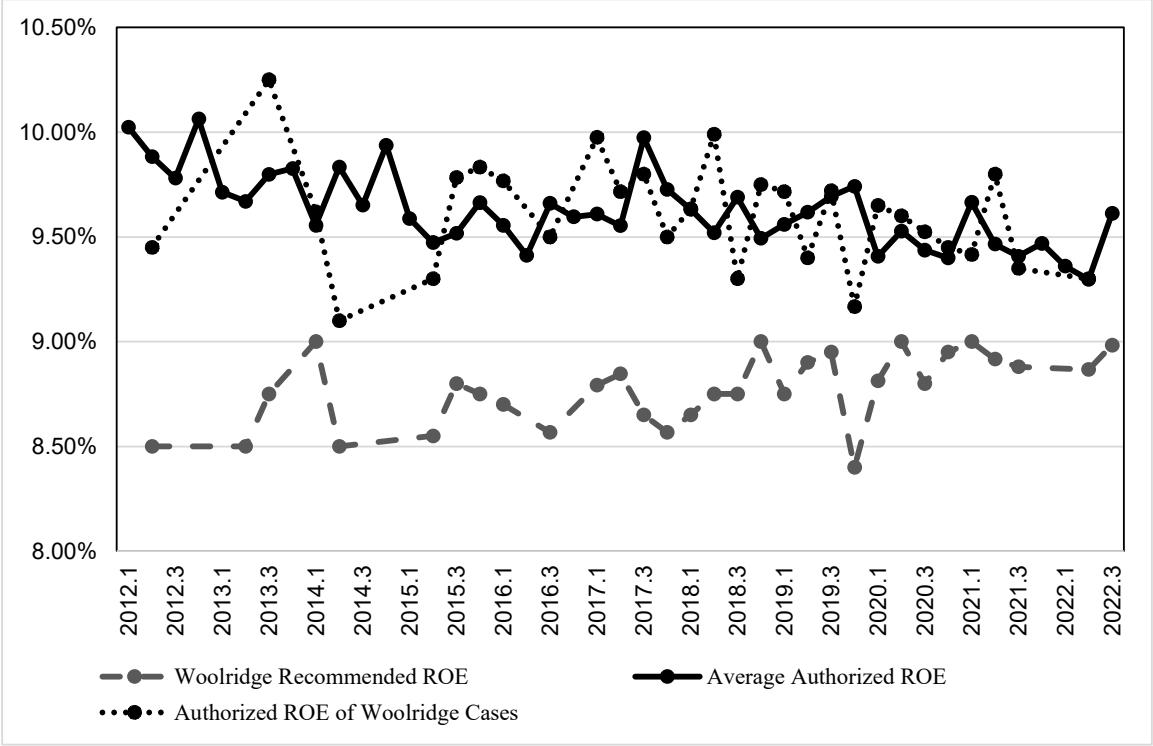
Q. Is the ROE recommendation of Dr. Woolridge fair and reasonable for PSE in this proceeding?

A. No. Taking into consideration the current market conditions, it is evident that Dr. Woolridge's ROE recommendation is well below recently authorized ROEs, is unreasonably low, and does not reflect the investor-required ROE for a combination electric and natural gas utility. The rates set in this case, including the ROE and capital structure, will directly affect PSE's cash flows over the period during which rates are in effect. The Company's cash flows, in turn, have a direct effect on its credit quality and investors' perception of the risk profile of the enterprise. Dr. Woolridge has not justified why it would be appropriate to authorize an ROE for PSE that is, as shown in Figure 2 and Figure 3, at the very low-end or below the low end of the range of authorized ROEs for vertically-integrated electric utilities and natural gas distribution companies since 2018.

Q. Do Dr. Woolridge's ROE recommendations in other cases typically meet the comparable return standard?

A. No. I have compiled Dr. Woolridge's recommendations in various cases from June 2012 through the second quarter of 2022. As shown in Figure 4, Dr. Woolridge's ROE recommendations are consistently significantly lower than the return that is actually authorized by the state regulatory commissions, as well as lower than the average authorized return for electric and natural gas utilities at the same approximate time as his recommendation was made. Since the second quarter of 2012, Dr. Woolridge's ROE recommendation has been as much as 138 basis points below the average authorized return in the same quarter.

Figure 4: Average Authorized ROEs vs. Dr. Woolridge's ROE Recommendations, 2012-2022



Q. Dr. Woolridge presents historical average authorized ROEs in his testimony. Do you agree with their presentation of that data?

A. No. Dr. Woolridge presents authorized returns on equity from 2000 to 2021; however, it appears that he has presented data that is not comparable to PSE in a number of respects. Specifically, it appears that Dr. Woolridge:

- Includes ROEs associated with electric distribution utilities instead of only vertically-integrated utilities when PSE is a vertically-integrated utility that owns generation.[4]
- Includes authorized ROEs associated with limited issue rider proceedings instead of only base rate proceedings.[5]
- Includes the authorized ROEs associated with those jurisdictions that have formula rate plans or determine the value of a utility's rate base in an alternative manner, both of which are not consistent with how the Commission regulates PSE.
- Includes ROE authorizations that reflect penalties that have been imposed by the respective regulatory commission, which is inconsistent with the base ROE that is to be estimated for PSE in this proceeding.

In addition, Dr. Wooldridge also claims that "[t]he average ROE for gas companies has been in the range of 8.0 percent – 9.0 percent in recent years,"[6] which is simply incorrect, and is in fact contradicted by the data he presents in Table 3 of his testimony.

[4] *See, e.g.*, JRW-WP21-RRA – ROEs in 2021 Data, Table 5-Chronology, footnote designation of "D" is for delivery-only electric utilities.

[5] *Id.*, footnote designation of "LIR" is for limited-issue rider proceedings.

[6] Exhibit JRW-1T at 11.

B. Updated Capital Market Conditions

Q. What are your conclusions regarding the effect of capital market conditions on the cost of equity of the Company?

A. Since the filing of my Direct Testimony, interest rates have increased significantly and inflation has reached levels not seen in four decades. Those changes in the capital markets will have a direct and significant effect on the ROEs required by investors. Further, current market conditions are different than when the Commission set the Company's current authorized ROE in July 2020, and if these changed conditions are not recognized in establishing the Company's cost of equity in this proceeding, PSE may not be able to attract capital on reasonable terms.

Q. Does Dr. Woolridge adequately consider the implications of current and prospective capital market conditions on the cost of equity?

A. No. While Dr. Woolridge discusses current capital market conditions, he does not adequately consider the implications of the current and prospective market conditions on the cost of equity. Dr. Woolridge ultimately concludes that, while interest rates have increased recently, we are in a historically low interest rate environment, which is indicative of a continuing low cost of capital for utilities.[7] While I agree that interest rates are relatively low historically, his viewpoint that the cost of equity established for the Company in this proceeding need not consider current market conditions is misinformed. Inflation is currently nearly *9*

[7] Woolridge, Exh. JRW-1T at 17.

times the level in mid-2020 when PSE's current rates were approved,[8] and interest rates have increased substantially and are projected to continue to increase in the near-term.

Q. How have interest rates increased?

A. Interest rates have increased substantially both from when PSE's existing rates were approved by the Commission in July 2020, and since the filing of my Direct Testimony. As shown in Figure 5 below, the 30-day average of the 30-year Treasury yield is currently nearly 120 basis points higher as of July 31, 2022, than when I filed my Direct Testimony and 182 basis points higher than at the time of the Company's prior proceeding.[9] Likewise, the near-term projected yield on the 30-year Treasury bond published by *Blue Chip Financial Forecasts* has increased 102 basis points since I filed my direct testimony and is 176 basis points higher than in the Company's last rate proceeding. Further, the current yield on the 30-year Treasury bond is higher than the near-term projections (one year forward) that were expected when I filed my Direct Testimony.

[8] The year-over-year change in the Consumer Price Index was 1.03 percent in July 2020 and is currently 9.00 percent in June 2022. Bureau of Labor Statistics, CPI for All Urban Consumers, U.S. City Average, Seasonally Adjusted.

[9] Represents 30-day average yield as of July 31, 2020, and as of July 31, 2022. Federal Reserve Bank of St. Louis, Market Yield on U.S. Treasury Securities at 30-Year Constant Maturity, Quoted on an Investment Basis [DGS30].

Figure 5: Summary of Interest Rates

30-year Treasury Yield	PSE Prior Case 7/31/2020	Direct Testimony 1/31/2022	Rebuttal Testimony 7/31/2022
30-day average	1.34%	1.97%	3.16%
Near Term Projection	1.72%	2.46%	3.48%
Long-term Projection	3.00%	3.40%	3.80%

The next Federal Open Market Committee ("FOMC") meeting is in September 2022, and Chair Powell stated at the July FOMC meeting that "we anticipate that ongoing increases in the target range for the federal funds rate will be appropriate; the pace of those increases will continue to depend on the incoming data and the evolving outlook for the economy."[10] Chair Powell also reiterated that reducing inflation to the long-term goal of two percent was the primary objective.

Q. Has the Commission previously considered capital market conditions in establishing the ROE for a utility?

A. Yes. In PSE's last rate proceeding, the Commission noted that "the rates we set by this Order must be sufficient to meet the Company's financial needs, including the ability to attract capital in a market that has also been impacted by the global pandemic."[11] Similarly, the Commission has more broadly noted that:

> We must evaluate all cost of capital evidence offered and consider other relevant principles and factors such as the general state of the economy, investment cycles in the industry, and the principle of gradualism to determine, consistent with the public interest, a

[10] Transcript of Chair Powell's Press Conference, July 27, 2022.
[11] *WUTC v. Puget Sound Energy*, Dockets UE-190529, *et al.*, Final Order 08/05/03 ¶ 72 (July 8, 2020).

reasonable range of returns and what specific ROE within that range is appropriate...[12]

Q. How has the Federal Reserve responded to inflation?

A. Since I filed my Direct Testimony, the Federal Reserve has continued to accelerate the normalization of monetary policy in response to the significant increase in inflation that will be discussed in more detail below. As of the June 27, 2022, FOMC meeting, the Federal Reserve:

- Completed its taper of Treasury bond and mortgage-backed securities purchases;[13]
- Increased the target federal funds rate from near zero to 2.25 percent to 2.50 percent at the July 27, 2022, FOMC meeting;[14]
- Forecasted a total of seven additional 25-basis-point rate increases in 2022 and two 25-basis-point rate increases in 2023, which resulted in a median forecast of the federal funds rate of 3.4 percent and 3.8 percent, respectively;[15] and
- Started reducing its holdings of Treasury and mortgage-backed securities on June 1, 2022. Specifically, the Federal Reserve will reduce the size of its balance sheet by only reinvesting principal payments on owned securities after the total amount of payments received exceeds a defined cap. For Treasury securities, the cap will be set at $30 billion per month for the first three months and $60 billion per month after the first three months, while for mortgage-backed securities the cap will be set at $17.5 billion per month for the first three months and $35 billion per month after the first three months.[16]

[12] *WUTC v. Avista Corp.*, Dockets UE-200900, *et al.*, Final Order 08/05 ¶ 97 (September 27, 2021.)

[13] FEDERAL RESERVE BANK OF NEW YORK, Treasury Securities Operational Details, available at https://www.newyorkfed.org/markets/domestic-market-operations/monetary-policy-implementation/treasury-securities/treasury-securities-operational-details#monthly-details (last visited Aug. 23, 2022).

[14] Press Release, Federal Reserve (June 15, 2022).

[15] Summary of Economic Projections, Federal Reserve, at 2 (June 15, 2022).

[16] Press Release, *Plans for Reducing the Size of the Federal Reserve's Balance Sheet*, Federal Reserve (May 4, 2022).

Q. How has inflation changed since you filed your Direct Testimony?

A. Inflation has continued to rise despite the recent the Federal Reserve's increases in federal funds rate. At the time that I filed my Direct Testimony, using market data as of November 2021, the year-over-year ("YOY") change in the Consumer Price Index ("CPI") was 6.83 percent; however, the YOY change in the CPI has increased in every month since except for one, and reached 9.00 percent for the 12-month period ending June 30, 2022, which was the highest such rate since November 1981 and 8.50 percent as of July 30, 2022.

Q. What is the effect of inflation on long-term interest rates?

A. Persistent inflation and the Federal Reserve's normalization of monetary policy will likely result in continued increases in long-term interest rates. This is because inflation will reduce the purchasing power of the future interest payments from Treasury bonds; thus, investors will require higher yields to compensate for the increased risk of inflation, which means interest rates will increase.

Q. Are current and projected market conditions indicative of an increase in the cost of equity for the Company?

A. Yes. The current market conditions suggest an increase in the cost of equity. In reviewing the results of the ROE models, it is important to consider how current market conditions affect these models. Over the near-term, investors expect long-term interest rates to increase in response to continued elevated levels of inflation and the Federal Reserve's normalization of monetary policy. Because the share

prices of utilities are inversely correlated to interest rates, an increase in long-term government bond yields will likely result in a decline in utility share prices, which is the reason a number of equity analysts expect the utility sector to underperform over the near-term. The expected underperformance of utilities means that DCF models using recent historical data likely underestimate investors' required return over the period that rates will be in effect.

Likewise, the increase in interest rates in response to persistently high inflation is directly included in the assumptions used in other ROE estimation methodologies, specifically the CAPM, the Empirical CAPM ("ECAPM"), and the Bond Yield Risk Premium, which may better reflect expected market conditions. For example, as interest rates increase, it is reasonable to expect that the positive correlation between interest rates and utility equity returns shown in the Bond Yield Risk Premium analysis would result in an increase in the investor-required return on equity, as has been the case in past rising interest rate environments.

Q. What are your conclusions regarding the effect of capital market conditions on the cost of equity for the Company?

A. There are several important conclusions regarding the effect of capital market conditions for the Company:

- While Dr. Woolridge recognizes that interest rates have increased, simply stating that interest rates remain at historically low levels fails to acknowledge the correlation between interest rate levels and investors' required cost of equity. As I discuss below, Dr. Woolridge's ROE recommendations over more than a decade have remained within a narrow band of between approximately 8.00 percent and 9.00 percent regardless of

the variation in interest rates that has occurred over this period, which is counter to empirical evidence of the relationship between interest rates and utility costs of equity, and does not meet the comparable return standard of *Hope* and *Bluefield*.

- Market conditions have affected the results of the ROE estimation models requiring consideration of the results of multiple models and exercised judgment.

- The share prices of utilities are inversely related with the interest rates. The Federal Reserve is projecting additional increases in the federal funds rate, and investors expect interest rates to increase over the near-term, which will likely result in a decline in the share prices of utilities. A decline in share prices will increase the dividend yield and thus the cost of equity estimate of the DCF model. Therefore, current DCF results are likely understating the cost of equity during the period that the Company's rates will be in effect.

- While the ROE estimation models use some historical data (*i.e.*, stock prices and dividends in the DCF model, and Treasury bond yields in the CAPM), based on the clear expectation that interest rates will increase, it is also appropriate to consider near-term projections in the ROE estimation models.

C. Updated ROE Analyses

Q. Have you updated your ROE analyses from your Direct Testimony?

A. Yes. I updated the results of the ROE analyses conducted in my Direct Testimony based on market data through July 31, 2022, using the same methodologies as in my Direct Testimony.[17] The updated results are provided with this Joint Testimony as Exhibit CGP-AEB-TAS-2 through Exhibit CGP-AEB-TAS-8.

[17] Bulkley, AEB-1T.

Q. What are the updated results of your analyses?

A. Figure 6 summarizes the results of my updated analyses. As shown, the results of the ROE models are consistent with, albeit slightly higher than, the results of these same models as presented in my Direct Testimony.[18] As shown, these results support the Company's proposed settlement ROE of 9.40 percent. In addition, as discussed, capital market conditions have continued to evolve with substantial increases in interest rates, with further increases expected, to combat inflation, over the period during which the PSE's rates will be in effect. Based on these factors, I conclude that that the ROE proposed in the Settlement is reasonable for setting the rates for the Company in this proceeding.

[18] Note that the Bloomberg beta in my Direct Testimony, AEB-1T, was inadvertently incorrect and thus overstated the result of the CAPM and ECAPM analyses as shown for the Bloomberg beta. That error was corrected in my updated analyses, but is the reason that it appears that there is a significant reduction in the result of the CAPM and ECAPM using the Bloomberg beta from the from my Direct Testimony, AEB-1T.

Figure 6: Updated ROE Results

Constant Growth DCF - Median			
	Median Low	Median	Median High
30-Day Average	8.91%	9.39%	9.96%
90-Day Average	8.79%	9.28%	9.85%
180-Day Average	8.88%	9.37%	9.94%
Constant Growth Average	8.86%	9.35%	9.91%
Constant Growth DCF - Mean w/ exclusions [1]			
	Mean Low	Mean	Mean High
30-Day Average	9.07%	9.71%	10.55%
90-Day Average	8.97%	9.61%	10.44%
180-Day Average	9.05%	9.69%	10.52%
Constant Growth Average	9.03%	9.67%	10.50%
CAPM			
	Current 30-day Average Treasury Bond Yield	Near-Term Blue Chip Forecast Yield	Long-Term Blue Chip Forecast Yield
Value Line Beta	11.40%	11.45%	11.50%
Bloomberg Beta	10.83%	10.90%	10.97%
Long-Term Avg. Beta	10.07%	10.16%	10.25%
ECAPM			
	Current 30-day Average Treasury Bond Yield	Near-Term Blue Chip Forecast Yield	Long-Term Blue Chip Forecast Yield
Value Line Beta	11.79%	11.82%	11.86%
Bloomberg Beta	11.36%	11.41%	11.46%
Long-Term Avg. Beta	10.78%	10.86%	10.93%
Treasury Yield Plus Risk Premium			
	Current 30-day Average Treasury Bond Yield	Near-Term Blue Chip Forecast Yield	Long-Term Blue Chip Forecast Yield
Risk Premium Analysis - Elec.	9.90%	10.00%	10.10%
Risk Premium Analysis - NG	9.86%	9.99%	10.13%
Expected Earnings			
Mean	11.43%		
Median	11.55%		

D. Discounted Cash Flow Model

Q. Please summarize Dr. Woolridge's DCF models.

A. Dr. Woolridge calculates the dividend yield for the companies in his proxy groups using the 30-day and 90-day historical average stock prices, and adjusts the dividend yield by one-half of the growth rate. For the growth rate, Dr. Woolridge considers: (i) 5-year and 10-year historical average earnings per share ("EPS"), dividends per share ("DPS") and book value per share ("BVPS") growth rates per *Value Line*; (ii) projected EPS, DPS and BVPS growth rates per *Value Line*; (iii) projected retention (or sustainable) growth rates per *Value Line*; and (iv) projected consensus EPS growth rates from Yahoo, Zacks and Standard & Poor's. Based on his review of the various growth rates, he selects 5.50 percent as the growth rate. Dr. Woolridge's DCF model results in an ROE of 8.75 percent (gas proxy group), 8.80 percent (electric proxy group), and 8.90 percent (Bulkley proxy group).

Q. What are your primary areas of disagreement with Dr. Woolridge's DCF models?

A. The primary area with which I disagree with Dr. Woolridge regarding the DCF model is the growth rates to be used in the DCF model and the relevance of the results produced by that model under current market conditions. In addition, Dr. Woolridge has also critiqued certain aspects of my DCF analysis with which I disagree. Specifically, (i) Dr. Woolridge states that I have applied an asymmetric outlier approach to the results of the Constant Growth DCF model; and (ii) Dr. Woolridge disagrees that the DCF results underestimate the market-determined cost of equity because of the currently high utility stock valuations and low

dividend yields.

Q. Do you believe that the DPS and BVPS growth rates, whether historical or projected, that Dr. Woolridge has considered in his DCF analyses are reasonable or should be utilized in establishing the ROE for the Company?

A. No. As a practical matter, Dr. Woolridge's 5.50 percent growth rate used in his analysis is greater than his historical growth rate estimates. Therefore, while he may have "considered" historical growth rates, he has not relied on this data to estimate the ROE for PSE.

While not relied upon, the historical growth rates, whether DPS, BVPS or EPS, are also not appropriate for use in estimating the ROE in this proceeding. The Constant Growth DCF model is a forward-looking model that evaluates investors' required returns based on future cash flows. As such, the appropriate measure of growth is investors' expectations, not historical results and should be based on current and prospective market conditions. Historical growth rates are less relevant because past growth may not reflect future growth potential, and in fact, Dr. Woolridge acknowledges this issue.[19] Furthermore, securities analysts' forecasted EPS growth rates incorporate historical performance to the extent the analysts believe that historical performance is relevant and applicable for the future. Additional consideration of historical growth rates

[19] Woolridge, Exh. JRW-1T at 41. In addition, Dr. Woolridge also indicates that he ignores historical growth rates when considering the range of the growth rates to consider in his DCF model. Woolridge, Exh. JRW-1T at 49.

provides no meaningful incremental information regarding the proxy companies' future growth potential and places unwarranted weight on historical events.

Further, neither historical nor projected DPS or BVPS growth rates are reasonable for use in the DCF model to establish the Company's ROE in this proceeding. As explained in my Direct Testimony, dividend growth can only be sustained by earnings growth.[20] Earnings are the fundamental determinant of a company's ability to pay dividends. Further, both dividends and book value per share may be directly affected by short run management decisions. As a result, dividend growth rates and book value growth rates may not accurately reflect a company's long-term growth. In contrast, earnings growth rates are not affected by short-run cash management decisions and are the only forward-looking growth rates available on a consensus basis.

Q. Does Dr. Woolridge suggest that projected EPS growth rates should not be exclusively relied upon in the DCF model?

A. Yes. Dr. Woolridge states that, "[i]t is highly unlikely that investors today would rely exclusively on the EPS growth rate forecasts of Wall Street analysts and ignore other growth rate measures in arriving at their expected growth rates for equity investments." Dr. Woolridge suggests that analysts' forecasts of EPS growth rates and *Value Line* projections of EPS growth rates are inaccurate and

[20] Bulkley, AEB-1T at 43.

"overly optimistic and upwardly biased," and thus other indicators of growth should be considered.[21]

Q. While Dr. Woolridge suggests that it is not appropriate to rely exclusively on analysts' projected EPS growth rates, is his recommended DCF model result consistent with this position?

A. No. While Dr. Woolridge criticizes my reliance on projected EPS growth rates in the DCF model, and claims throughout his testimony that projected EPS growth rates are "overly optimistic and upwardly biased,"[22] ironically, he nonetheless gives primary weight to analysts' projected EPS growth rates in selecting the growth rate for his DCF model.[23] In addition, there is no basis to Dr. Woolridge's criticism of the projected EPS growth rates in my DCF model being overly optimistic considering that the average growth rate in the analysis was 6.08 percent, or only 6 basis points higher than the median of projected EPS growth rates Dr. Woolridge considers for his proxy group.[24]

Q. While Dr. Woolridge gives primary weight to projected EPS growth rates, does his criticism of projected EPS growth rates being optimistic and upwardly biased have merit?

A. No. As an initial matter, the Federal Energy Regulatory Commission ("FERC") addressed the concern about analyst growth rate forecasts over five years ago in

[21] Woolridge, Exh. JRW-1T at 44-45, 69-71.
[22] *Id.* at 7, 44-45, 68, 70-71.
[23] *Id.* at 49.
[24] Woolridge, Exh. JRW-1T at 68; Woolridge, Exh. JRW-9, Panel A.

Opinion No. 531-B, where it reaffirmed its rejection of the argument that analyst growth rates should not be used in the DCF analysis because the analysts making those projections allegedly are overly optimistic in their growth rate projections. The FERC also noted that the appropriate dividend growth rate to include in a DCF analysis is the growth rate expected by the market. In that case, FERC indicated that while the market may be wrong in its expectations, as reflected in the Institutional Brokers' Estimate System ("IBES") growth projections, the cost of common equity to a regulated enterprise depends upon what the market expects, not upon precisely what is actually going to happen. Since that time, FERC has re-evaluated the appropriate methodologies to establish the ROE in many opinions; however, the use of earnings growth rates has been consistently applied in all FERC opinions, including its most recent Opinion No. 569-A in May 2020.

Similarly, in terms of alleged "upward bias," the Global Analysts Research Settlement of 2003 (the "Global Settlement") served to remove all incentives for analyst bias in the financial industry. Specifically, the Global Settlement required financial institutions to insulate investment banking from analysis, prohibited analysts from participating in "road shows," and required the settling financial institutions to fund independent third-party research. In addition, analysts covering the common stock of the proxy companies must certify that their analyses and recommendations are not related, either directly or indirectly, to their compensation.

A 2010 article in Financial Analysts Journal, which was published seven years after the Global Settlement, found that analyst forecast bias has significantly declined or disappeared entirely:

> Introduced in 2002, the Global Settlement and related regulations had an even bigger impact than Reg FD on analyst behavior. After the Global Settlement, the mean forecast bias declined significantly, whereas the median forecast bias essentially disappeared. Although disentangling the impact of the Global Settlement from that or related rules and regulations aimed at mitigating analysts' conflicts of interest is impossible, forecast bias clearly declined around the time the Global Settlement was announced. These results suggest that the recent efforts of regulators have helped neutralize analysts' conflicts of interest.[25]

Q. Dr. Woolridge also consider retention growth rates. Are retention growth rates a reasonable basis for growth in the DCF model?

A. No. The underlying premise of the "retention growth" calculation is that future earnings will increase as the retention ratio (*i.e.*, the portion of earnings not paid out in dividends) increases. There are, however, several reasons why that may not be the case. Management decisions to conserve cash for capital investments, to manage the dividend payout for the purpose of minimizing future dividend reductions, or to signal future earnings prospects can and do influence dividend payout (and therefore earnings retention) decisions in the near-term.

[25] Armen Hovakimian & Ekkachai Saenyasiri, *Conflicts of Interest and Analyst Behavior: Evidence from Recent Changes in Regulation*, 66 FINANCIAL ANALYSTS JOURNAL 4 (2010).

Q. Is there academic research to support your position?

A. Yes. In 2006, two articles were published in Financial Analysts Journal, which addressed the theory that high dividend payouts (*i.e.*, low retention ratios) are associated with low future earnings growth.[26] Both of those articles cite a 2003 study by Arnott and Asness, who found that over the course of 130 years of data, future earnings growth is associated with high, rather than low payout ratios.[27] In essence, the findings of all three studies are that there is a negative, not a positive relationship between earnings growth rates and payout ratios. Therefore, I disagree with Dr. Woolridge's use of retention growth rates in the DCF model.

Q. Does Dr. Woolridge's calculation of the retention growth rate consider all sources of growth?

A. No. As shown on Exhibit JRW-9, Dr. Woolridge's calculation of projected retention growth rates (also known as "internal growth rates" or "sustainable growth rates") considers only the product of projected earnings retention rates and projected earned returns on common equity, or internally generated funds.[28] Thus, Dr. Woolridge fails to consider that earnings growth also occurs as a

[26] Ping Zhou & William Ruland, *Dividend Payout and Future Earnings Growth*, 62 FINANCIAL ANALYSTS JOURNAL 3 (2006); *see also* Owain ap Gwilym, James Seaton, Karina Suddason & Stephen Thomas, *International Evidence on the Payout Ratio, Earnings, Dividends and Returns*, 62 *FINANCIAL ANALYSTS JOURNAL* 1 (2006).

[27] Robert Arnott & Clifford Asness, *Surprise: Higher Dividends = Higher Earnings Growth*, 59 *FINANCIAL ANALYSTS JOURNAL 1* (2003) (Because the payout ratio is the inverse of the retention ratio, the authors found that future earnings growth is negatively related to the retention ratio).

[28] In the sustainable growth formula, this is commonly referred to as the product of "b x r", where "b" is the retention ratio, or the portion of net income not paid in dividends, and "r" is the expected ROE on the portion of net income that is retained within the company as a means for future growth.

result of new equity issuances, or externally-generated funds.[29] Accounting for both internally-generated and externally-generated funds is recognized as a common approach to calculating the sustainable growth rate, and by only considering the funds from internally-generated sources, Dr. Woolridge's sustainable growth rate calculation understates the prospective retention growth rates that he considered and that set the lower end of his growth rate range.

Q. Do you have any further concerns with Dr. Woolridge's selection of the growth rate for his DCF analysis?

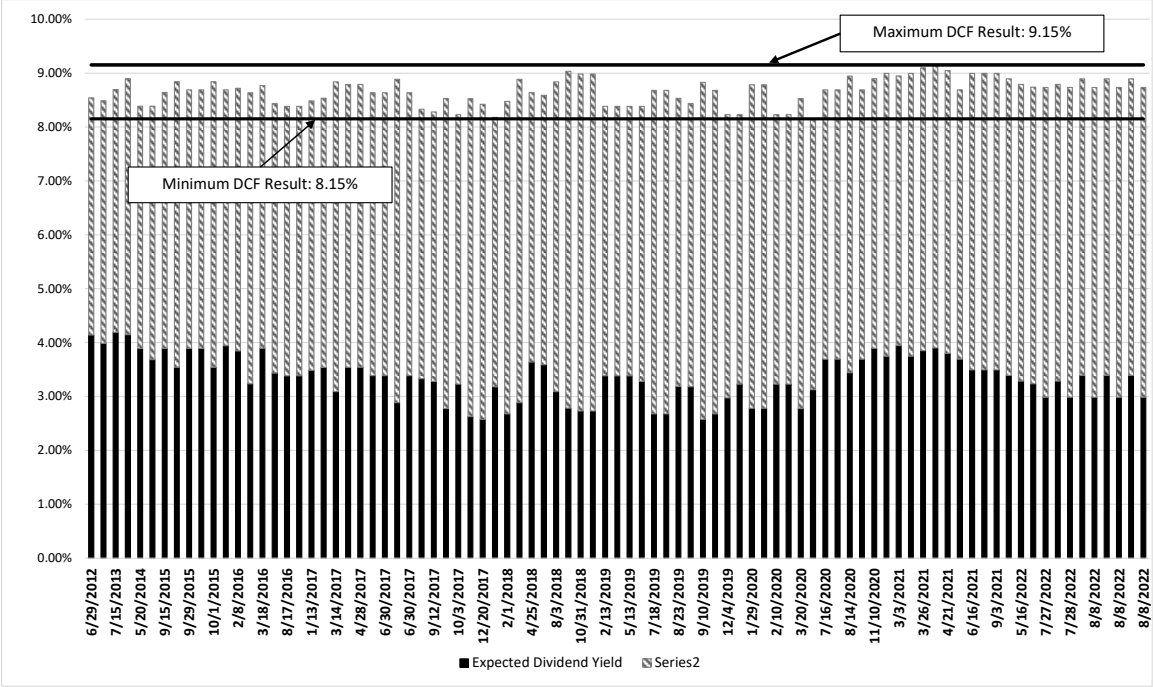
A. Yes. I have two further concerns: Dr. Woolridge's selection of the growth rate for his DCF analysis appears to be results-oriented, and Dr. Woolridge simply chooses the growth rate that he relies on from within the projections he has summarized and does not derive a result for each individual proxy group company, causing his DCF result to be entirely subjective.

First, Figure 7 summarizes the dividend yields and growth rates that Dr. Woolridge relied on in the development of his Constant Growth DCF models for over 70 cases since June 2012. As shown, as the dividend yields for his proxy groups have declined in response to capital market conditions, Dr. Woolridge simply selects a higher projected growth rate in the Constant Growth DCF model. Conversely, when the dividend yields for his proxy group increase, Dr. Woolridge selects a lower projected growth rate. As can be seen in the figure, as the

[29] In the sustainable growth formula, this is shown as the product of "s" x "v", where "s" represents the growth in shares outstanding and "v" is that portion of the market-to-book (M/B) ratio that exceeds unity.

calculated dividend yield changes, it is offset by Dr. Woolridge's selection of the growth rate so that his DCF result remains within a very narrow band from 8.15 percent to 9.15 percent.

Figure 7: Woolridge Historical Dividend Yields and Growth Rates



In addition to reviewing the data graphically, I calculated the correlation between these two assumptions over time in Dr. Woolridge's analysis. The correlation coefficient between the dividend yield and growth rate used in Dr. Woolridge's DCF analysis over this period is negative 0.84, which suggests a high degree of negative correlation between the dividend yield and the growth rate. The negative correlation coefficient highlights that as the dividend yield increases (decreases), the growth rate decreases (increases). This supports my conclusion that Dr. Woolridge's selected growth rate in his DCF analysis appears to be solely

related to whether the dividend yield for his proxy group has increased or decreased such that his ROE recommendation remains within a very narrow band.

Q. What is the concern that Dr. Woolridge fails to calculate a growth rate for each of the companies in his proxy group?

A. Because he is selecting a value for the growth rate in his DCF, rather than relying directly on the consensus estimates from industry analysts, Dr. Woolridge's DCF analysis is entirely subjective and judgment based. As discussed in both Dr. Woolridge's testimony as well as in my Direct Testimony, in the Constant Growth form of the DCF model, the dividend yield is also affected by the growth rate to develop the next year's cash flow. Consequently, Dr. Woolridge's method of selecting the growth rate in general as opposed to each individual company imposes his judgment on both terms of the Constant Growth DCF model.

Q. Considering these issues with Dr. Woolridge's DCF analysis, is it appropriate the Dr. Woolridge place primary reliance on the results of his DCF analysis in deriving his overall recommended ROE in this proceeding?

A. No. Dr. Woolridge's DCF result, which he states is the primary determinant of his ROE recommendation in this proceeding, is not reasonable given that his DCF analysis is based entirely on judgment. Moreover, as previously discussed, Dr. Woolridge's recommended ROEs over time demonstrate that his DCF results are well below the average authorized ROEs for electric and gas utilities, demonstrating that his judgment is not considering all the necessary risk factors for the subject companies.

Q. Dr. Woolridge expresses concern with your elimination of DCF results below 7.00 percent.[30] Is it appropriate to eliminate these results?

A. Yes, I continue to believe that it is appropriate to eliminate these results for the reasons discussed in my Direct Testimony. In addition, Dr. Woolridge ignores the fact that I have relied on both the median and mean (with exclusions), both of which support the Settlement ROE of 9.40 percent. Further, as discussed the following section herein, Dr. Woolridge also excluded the results of his CAPM that were actually 7.4 percent to 7.7 percent, or higher than the results that I excluded in the DCF. Regardless of Dr. Woolridge's expressed concern, as a threshold matter, the 7.0 percent low-end screen did not result in the exclusion of any DCF results, which is acknowledged by Dr. Woolridge and is shown in Exhibit CGP-AEB-TAS-2. Thus, Dr. Woolridge's concern is irrelevant.

Q. Dr. Woolridge states that your position that current utility stock valuations and low dividend yields will underestimate the market-determined ROE using the DCF model is without merit.[31] Do you agree with Dr. Woolridge's conclusion?

A. No. Dr. Woolridge alleges that my position presumes that I know more than investors, which is not the case whatsoever. Rather, as I described in my Direct Testimony, my conclusion regarding the likelihood of lower utility stock prices and thus increasing dividend yields of the proxy group during the period in which

[30] Woolridge, Exh. JRW-1T at 68-69.
[31] *Id.* at 71-72.

PSE's rate will be in effect—thus current DCF results understating the market-determined ROE—is firmly grounded in the views of various market analysts and banks. Thus, I am not presuming to know more than investors such as Dr. Woolridge suggests, but rather reflecting the views of investors.

E. Capital Asset Pricing Model

Q. Please summarize Dr. Woolridge's CAPM models.

A. Dr. Woolridge calculates the risk-free rate as the current 30-year Treasury yield of 3.0 percent, and relies on the most recent beta coefficients reported by *Value Line* for his proxy group companies.[32] For the market risk premium, Dr. Woolridge considers historical risk premia, *ex-ante* market risk premium studies, surveys of financial professionals, and expected return models and market data, and then selects a market risk premium of 5.50 percent.[33] Based on his specification of the CAPM model, his results range from 7.4 percent to 7.7 percent, depending on the proxy group relied upon.[34] Dr. Woolridge states that he gives his CAPM analysis less weight in his overall ROE recommendation because he believes that risk premium studies provide a less reliable indication of equity-cost rates for public utilities because it requires an estimate of the market risk premium, which varies significantly in studies by academics and investment firms.

[32] *Id.* at 53.
[33] *Id.* at 54-62.
[34] Woolridge, Exh. JRW-10 at 1.

Q. As a threshold manner, should Dr. Woolridge's CAPM results be considered by the Commission in this proceeding?

A. No. While Dr. Woolridge claims that he gives his CAPM results less weight in his overall ROE recommendation, he has effectively given the CAPM results zero weight. Dr. Woolridge has recommended an ROE of 8.80 percent, which is within his DCF results of 8.75 percent to 8.90 percent, and his CAPM results are far lower—meaning he has not relied on the CAPM results whatsoever. Since Dr. Woolridge has not relied on his CAPM results, neither should the Commission.

Moreover, the Commission should not give his CAPM results any weight on the basis that their models produce results that are lower than any authorized ROE for an electric or natural gas utility in the past 40 years. CAPM results based on historical market data such as relied on by Dr. Woolridge are not a reliable indicator of the forward-looking cost of equity for PSE and the results of the CAPM models specified by Dr. Woolridge clearly violate the *Hope* and *Bluefield* comparable return standard.

Q. Do you agree with Dr. Woolridge's CAPM analysis?

A. No, there are a number of additional issues with Dr. Woolridge's CAPM analysis. However, because Dr. Woolridge does not rely on his CAPM results for his ROE recommendation, I will not address those additional issues herein.

F. Empirical Capital Asset Pricing Model

Q. Does Dr. Woolridge challenge your ECAPM analysis?

A. Yes. Dr. Woolridge claims that the ECAPM has not been "theoretically or empirically validated in refereed journals."[35] Dr. Woolridge also states that there are two errors in my CAPM: (i) there are no tests of the CAPM that use adjusted betas; and (ii) adjusted betas already increases the beta for betas lower than 1.0 and decreases the beta for betas higher than 1.0.[36]

Q. Do you agree with Dr. Woolridge that it is inappropriate to use adjusted betas in the ECAPM?

A. No. The purpose of adjusting beta is to account for the tendency of beta to trend back over time to the market beta of 1.00. The betas published by *Value Line* include this adjustment, which was first proposed by Marshall E. Blume in 1975. The use of adjusted betas in the CAPM is important because if beta trends towards 1.00, as Blume noted, then the adjusted beta will be more reflective of the beta that can be expected over the near-term. This is equally important in the specification of the CAPM in this case since we are estimating the cost of equity for the Company over the near-term.

In contrast, the ECAPM does not account for the tendency of beta to trend toward 1.00. The purpose of the ECAPM is to account for the fact that the risk-return

[35] Woolridge, Exh. JRW-1T at 73.
[36] *Id*.

relationship is flatter than what is estimated by the CAPM. While beta is not observable and must be estimated, the theory behind the ECAPM is that even if the true value of a stock's beta were observable, the CAPM would understate the return for stocks with betas less than 1.00 and overstate the results for stocks with betas greater than 1.00.

In other words, the slope of the ECAPM is flatter than the CAPM, indicating that the CAPM understates the return for companies with betas less than 1.00 and overstates the return for companies with betas greater than 1.00. Therefore, use of the adjusted beta provides a better approximation of the expected beta over the near-term, while the ECAPM adjusts for the fact that the actual risk-return relationship observed is flatter than is predicted by the CAPM. Therefore, contrary to Dr. Woolridge's assertions, the purpose of each adjustment is different and thus applying both adjustments in the ECAPM is appropriate and not duplicative.

Q. Is Dr. Woolridge correct that the ECAPM has not been theoretically or empirically validated in refereed journals?

A. No. An article published by Robert Litzenberger, Krishna Ramaswamy, and Howard Sosin studied the ability of the CAPM to estimate the returns for utilities.[37] Litzenberger, *et. al*. found that the CAPM tends to understate the return for stocks such as utilities, which have a beta less than 1.0. To develop the

[37] Robert Litzenberger, *et al*., *On the CAPM Approach to the Estimation of A Public Utility's Cost of Equity Capital*, 35 THE JOURNAL OF FINANCE 2 at 369-83 (1980).

analysis, Litzenberger, *et al*. utilized both adjusted and raw betas. In both cases, the CAPM understated the return for utilities with betas less than 1.0, thus demonstrating that the adjustment to beta and the use of the ECAPM are not duplicative but rather account for two different factors in the CAPM.

In addition, Stephane Chretien and Frank Coggins published a study in 2011 where they studied the CAPM and its ability to estimate the risk premium for the utility industry in particular subgroups of utilities.[38] The article considered the CAPM, the Fama-French three-factor model and a model similar to the ECAPM used in my Direct Testimony. In the article, the ECAPM relied on adjusted betas, which were adjusted using the same approach applied by *Value Line*. As Chretien and Coggins show, the ECAPM significantly outperformed the traditional CAPM model at predicting the observed risk premium for the various utility subgroups.

Finally, in his 2021 text *Modern Regulatory Finance*, Dr. Roger Morin concludes:

> Because of this adjustment, some critics of the ECAPM argue that the use of Value Line adjusted betas in the traditional CAPM amounts to using an ECAPM. This is incorrect. The use of adjusted betas in a CAPM analysis is not equivalent to the ECAPM. Betas are adjusted because of the regression tendency of betas to converge towards 1.0 over time. We have seen that numerous empirical studies have determined that the SML [Security Market Line] described by the CAPM formula at any given moment in time is not as steeply sloped as the predicted SML. The slope of the SML should not be confused with Beta On the point, Eugene F. Brigham, finance professor and the author of many financial textbooks states:
>
> The Slope of the SML (5% in Figure 6-16) reflects the degree of risk aversion in the economy. The greater the average investor's aversion

[38] Stéphane Chrétien & Frank Coggins, *Cost Of Equity For Energy Utilities: Beyond The CAPM*, 18 ENERGY STUDIES REVIEW 2 (2011).

> to risk, then (a) the steeper the slope of the line, (b) the greater the risk premium for all stocks, and (c) the higher required rate of return on all stocks. Students sometimes confuse beta with the slope of the SML. This is a mistake.
>
> The use of an adjusted beta by Value Line is correcting for a different problem than the ECAPM. The adjusted beta captures the fact that betas regress towards one over time. The ECAPM corrects for the fact that the CAPM under-predicts observed returns when beta is less than one and over-predicts observed returns when beta is greater than one.[39]

G. Bond Yield Plus Risk Premium

Q. Please summarize Dr. Woolridge's comments regarding your Bond Yield Plus Risk Premium analysis.

A. Dr. Woolridge expresses several concerns with my Bond Yield Plus Risk Premium analysis, including: (1) that my analysis produces inflated results because I have used historical authorized ROEs and Treasury yields and applied the resulting risk premium to projected Treasury yields, which produces inflated results; (2) that the analysis is a gauge of regulatory commission behavior, not investor behavior; and (3) stocks of electric utilities have been selling above book value for the last decade, the authorized ROEs of state utility commissions are above the returns that investors require.[40]

[39] ROGER A. MORIN, MODERN REGULATORY FINANCE 223-4 (2021).
[40] Woolridge, Exh. JRW-1T at 87-88.

Q. Do you agree with Dr. Woolridge's concern regarding your use of projected Treasury yields?

A. No. I disagree with Dr. Woolridge that it is incorrect to apply the historical risk premium from this analysis to projected Treasury yields in order to estimate the ROE at specified interest rates. As just discussed, the Risk Premium analysis that I have conducted is supported by a regression equation that demonstrates a strong correlation between equity risk premiums and interest rates, meaning that the regression can be used to predict the equity risk premium at different levels of interest rates. In summary, my Bond Yield Plus Risk Premium analysis is designed to use the historical relationship between bond yields and the equity risk premium to predict how investors will react to changes in interest rates.

Q. What is your response to Dr. Woolridge's concern that your Bond Yield Plus Risk Premium analysis is a gauge of regulatory commission behavior rather than investor behavior?

A. While my Risk Premium analysis is based on authorized ROEs and the corresponding Treasury yields at the time the regulatory decisions were issued, I believe that investors are informed by allowed ROEs from hundreds of rate case decisions to frame their return expectations. As Dr. Woolridge observes, one of the fundamental principles in setting a just and reasonable return is that the return must be comparable to returns available to investors in companies with similar risk. In that regard, the authorized returns for other electric and natural gas utilities are a relevant consideration for investors. My Risk Premium analysis

simply shows what those returns are in relation to the risk-free rate at the time, so that it is possible to use historical returns to estimate future returns at various Treasury bond yields.

Q. Do you agree with Dr. Woolridge that authorized ROEs are above investors' required returns because the market-to-book ratios for electric utilities are greater than 1.0?

A. No. According to Dr. Woolridge, a firm that has a return on equity that exceeds the cost of equity will have a market-to-book ratio greater than 1.0.[41] This relationship implies that if the return on equity increases (decreases) then the market-to-book ratio should also increase (decrease). Dr. Woolridge conducts a regression analysis of the ROE and market-to-book ratios of his proxy group utilities, concluding that there is a positive correlation between the two.[42] However, based on the data presented by Dr. Woolridge in Exhibit JRW-4.3, it is clear that the average earned return on equity for electric utilities declined slightly from 2010 to 2021, yet over the same time period, the market-to-book ratio has continued to increase. Therefore, Dr. Woolridge's assumption about the relationship between equity returns and the market-to-book ratio is not supported by actual market data. Consequently, it is incorrect to claim that the authorized ROEs for electric utilities that I relied on to calculate my Bond Yield Risk Premium analysis are above investors' return.

[41] *Id.* at 31.
[42] *Id.* at 32.

Q. What is your conclusion regarding the Bond Yield Plus Risk Premium analysis?

A. I continue to support the use of the Bond Yield Plus Risk Premium to corroborate the reasonableness of my DCF and CAPM results.

H. Expected Earnings

Q. What is Dr. Woolridge's position regarding your Expected Earnings analysis?

A. According to Dr. Woolridge, there are a number of issues with the Expected Earnings approach, including (1) it does not measure the market cost of equity capital; (2) changes in ROE ratios do not track capital market conditions; (3) the approach is circular; (4) the proxy companies' projected ROEs reflect earnings on business activities that are not representative of PSE's rate-regulated utility operations; and (5) the Value Line data used to develop the Expected Earnings analysis is biased upward and reflects the views of only one analyst. For his position that the changes in ROE ratios do not track capital market conditions and that the approach is circular, he cites to Dr. Morin's New Regulatory Finance text.

Q. Do you agree with Dr. Woolridge's position regarding the Expected Earnings analysis?

A. No. The *Hope* and *Bluefield* standards establish that a utility should be granted the opportunity to earn a return that is commensurate with the return on other investments of similar risk. Therefore, it is reasonable to consider the returns that

investors expect to earn on the common equity of the electric and natural gas utilities in the proxy group as a benchmark for a just and reasonable return because that is the expected earned return on equity that an investor will consider in determining whether to purchase shares in the company or seek alternative investments with a better risk/reward profile. As Dr. Morin notes:

> The Comparable Earnings standard has a long and rich history in regulatory proceedings, and finds its origins in the fair return doctrine enunciated by the U.S. Supreme Court in the landmark Hope case. The governing principle for setting a fair return decreed in Hope is that the allowable return on equity should be commensurate with returns on investments in other firms having comparable risks, and that the allowed return should be sufficient to assure confidence in the financial integrity of the firm, in order to maintain creditworthiness and ability to attract capital on reasonable terms. Two distinct standards emerge from this basic premise: a standard of Capital Attraction and a standard of Comparable Earnings. The Capital Attraction standard focuses on investors' return requirements, and is applied through market value methods described in prior chapters, such as DCF, CAPM, or Risk Premium. The Comparable Earnings standard uses the return earned on book equity investment by enterprises of comparable risks as the measure of fair return.[43]

Dr. Woolridge fails to note in his critique of the Expected Earnings analysis that the ROE established in this proceeding will be applied to the net book value of the Company's rate base (subject to certain regulatory adjustments). Accordingly, the Expected Earnings approach provides valuable insight into the opportunity cost of investing in PSE's electric and natural gas operations in Washington. If investors devote capital to the Company (which would offer a return of only 8.80 percent on book value if Dr. Woolridge's recommended ROE were adopted), they forgo the opportunity for that same capital to earn a potentially greater return on book

[43] ROGER A. MORIN, NEW REGULATORY FINANCE at 381 (2006).

value through investment in the proxy companies. As a result, the Expected Earnings approach is informative because it provides a measure of the return on book value that is expected by investors through other investments with comparable risk to PSE.

Q. Please comment on Dr. Woolridge's references to Dr. Morin's statements as it pertains to the Expected Earnings analysis.

A. While Dr. Woolridge references certain weaknesses of the Expected Earnings analysis identified by Dr. Morin, Dr. Woolridge fails to note that Dr. Morin discusses the strengths and weaknesses of each of the methodologies used to compute the cost of equity, including the DCF and CAPM analyses that are solely relied on by Dr. Woolridge.

Additionally, Dr. Woolridge fails to mention Dr. Morin's conclusion regarding the Expected Earnings analysis. Specifically, Dr. Morin stated:

> The Comparable Earnings approach is far more meaningful in the regulatory arena than in the sphere of competitive firms. Unlike industrial companies the earnings requirement of utilities is determined by applying a percentage rate of return to the book value of a utility's investment, and not on the market value of that investment. Therefore, it stands to reason that a different percentage rate of return than the market cost of capital be applied when the investment base is stated in book value terms rather than market value terms. In a competitive market, investment decisions are taken on the basis of market prices, market values, and market cost of capital. If regulation's role was to duplicate the competitive result perfectly, then the market cost of capital would be applied to the current market value of rate base assets employed by utilities to provide service. But because the investment base for ratemaking purposes is expressed in book value terms, *a rate of return on book*

> *value, as is the case with Comparable Earnings, is highly meaningful*.[44]

Therefore, contrary to the position of Dr. Woolridge, Dr. Morin believes that the Expected Earnings approach is highly meaningful in a regulatory setting similar to the one being used to set the cost of equity for PSE.

I. PSE Risk Factors

Q. What does Dr. Woolridge state regarding the risks to which PSE is subject relative to establishing the ROE in this proceeding?

A. Dr. Woolridge focuses on investment risk, stating that PSE's investment risk is similar to other electric utilities, as PSE's credit ratings are similar to the averages of the proxy group. In addition, Dr. Woolridge states that credit rating agencies have noted PSE's credit supportive relationship with the Commission and that there are credit supportive attributes of the Clean Energy Transformation Act.[45]

Q. What is your response to Dr. Woolridge's consideration of PSE's risks?

A. I do not agree with Dr. Woolridge's comparison of credit ratings as being dispositive of PSE's relative risk to the proxy group. Credit ratings are assessments of the likelihood a company could default on its debt, whereas the purpose of Dr. Woolridge's and my testimony in this proceeding is to establish a return on equity for the Company that is comparable to the return on other investments of similar risk, using the proxy group as a benchmark for this

[44] ROGER A. MORIN, NEW REGULATORY FINANCE at 381 (2006) (emphasis added).
[45] Woolridge, Exh. JRW-1T at 25-27.

alternative risk investment. In addition, while credit rating agencies consider the business risks of an individual company, when establishing its debt credit rating, for the purposes of assessing the ability to make the fixed payments on debt obligations, they do not consider the incremental risk of owning equity or the return that investors require for that incremental risk, by comparison with the proxy group.

The development of the investor-required ROE is based on a proxy group of risk-comparable companies. In developing the proxy group, it is essential to balance the relative risk of the companies included in the proxy group with the overall size of the group. Therefore, it is always the case that the proxy companies do not have exactly the same risk profile as the subject company. As such, it is reasonable to review the relative risks of the proxy group companies and the subject company to determine how the subject company's risk profile compares with the group to determine the appropriate placement of the ROE within the range of results established using the proxy group companies. In my Direct Testimony, I evaluated various regulatory and business risks to which PSE is subject relative to the proxy group, and concluded that PSE has slightly greater regulatory and business risk than the proxy group. Section V of this Joint Testimony provides additional discussion regarding credit ratings.

IV. CAPITAL STRUCTURE (PETERMAN)

A. Public Counsel Asserts Without Support That PSE's Historical Equity Ratio Should Continue

Q. Ms. Peterman, what is Public Counsel's recommendation regarding PSE's equity ratio?

A. Public Counsel Witness Dr. Woolridge recommends that the Commission approve an equity ratio of 48.5 percent.

Q. Why does Dr. Woolridge recommend maintaining a 48.5 percent equity ratio?

A. Dr. Woolridge believes a 48.5 percent equity ratio is adequate. He states: "this common equity ratio is: (1) consistent with the Company's historic capitalization, which PSE has used to finance its operations and maintained its credit ratings; (2) consistent with the Commission past policies on utility capitalizations; and (3) more reflective of the capital structures of proxy groups of electric, combination electric and gas, and gas distribution companies."[46]

Q. Do you agree with Dr. Woolridge's perspectives?

A. No, I do not. PSE manages its average of monthly averages ("AMA") regulated equity ratio to what the Commission allows the Company to maintain in its capital structure. Since the Commission approved a 48.5 percent equity ratio in the last two cases, PSE has managed its equity to that level. This has been a fundamental,

[46] Woolridge, Exh. JRW-1T at 29:5-12.

long-standing component of PSE's financing strategy, which PSE will continue into the future. However, this strategy does not, in and of itself, represent a logical rationale to maintain a 48.5 percent equity component in the capital structure in the future as Dr. Woolridge suggests.

Additionally, any assertion that historical financing practices should determine future funding allocations would be inappropriate and illogical. PSE should manage its financing needs based on the needs of customers inherent in the multi-year rate plan. Too much has changed in the last five years (such as the passage of the Clean Energy Transformation Act ("CETA"), Senate Bill 5295, the new Inflation Reduction Act, the upcoming Clean Energy Implementation Plan, inflationary pressures, etc.) to assert that what was done in the past will be adequate during the multiyear rate plan.

Finally, the current capital structure with an equity ratio of 48.5 percent has not been sufficient to maintain proper credit health as Dr. Woolridge suggests. Although PSE has not recently received a full credit downgrade, PSE weathered downgrades in rating outlooks (from stable to negative) from both S&P Global Ratings ("S&P") and Fitch Ratings ("Fitch") for almost a year spanning 2020 and 2021, including a potentially costly stint on credit watch negative from S&P (an indication of potential credit downgrade). Accordingly, any suggestion that PSE has experienced clear sailing on the credit ratings front is inaccurate. PSE has experienced significant headwinds on the credit ratings front, which have only subsided due to the *prospect* of a more credit supportive regulatory paradigm

arising from the CETA legislation and more recently SB 5295. Further, PSE Witness Shipman, Hasan and I described in much detail in our prefiled direct testimonies,[47] and Mr. Shipman in Section V of this Joint Testimony, PSE's current credit metrics remain strained as it hovers below downgrade thresholds. Clearly, the rating agencies await a potentially credit supportive regulatory outcome under recent legislation that will rebuild credit metric performance and sustainably position PSE's credit performance above downgrade metric thresholds with appropriate margins of safety. Therefore, given the many deficiencies in Dr. Woolridge's commentary on PSE's credit rating performance, I respectfully suggest that the Commission ignore Dr. Woolridge's testimony in this regard.

Q. Does Dr. Woolridge provide data in an attempt to support his recommendations of a capital structure with an equity ratio of 48.5 percent?

A. Dr. Woolridge provides a variety of data for the proxy companies he uses in his ROE analysis, including common equity ratios.[48] He then finds the average for each proxy group and presents that data. These averages ranged from 38.6 percent to 41.7 percent.

Q. Are these proper equity ratio comparisons to PSE's 49.0 percent AMA equity ratio request in the Settlement?

[47] Shipman, Exh. TAS-1T; Peterman, Exh. CGP-1CT; Hasan, Exh. KKH-1CT.
[48] *See* Woolridge, Exh. JRW-5.

A. No. These are not proper comparisons for several reasons. First, Dr. Woolridge's data set is not comparable to the capital structure of a stand-alone regulated utility. The companies Dr. Woolridge provides for comparison purposes are parent companies of regulated utilities. Typically, parent companies' financial statements will include the consolidated financial performance of multiple utilities and/or companies, across multiple states and/or countries, and potentially from both regulated and unregulated subsidiaries. Parent companies are in most cases financed differently than a regulated utility with a regulated equity structure, due to on the nature, breadth, geographical dispersion, and complexity of their consolidated operations.

Second, Dr. Woolridge compares actual parent company common equity balances at a specific point in time with PSE's regulated equity ratio in the capital structure used for ratemaking purposes for a regulated utility. This approach serves to compare apples and oranges; parent company capital structures are never appropriate proxies for setting the capital structure of a regulated utility for rate making purposes.

Third, the actual parent company common equity balances referenced in Dr. Woolridge's testimony do not appear to be calculated based on an AMA basis, which is contrary to the calculation of PSE's regulated equity in the capital structure. Since equity ratios vary monthly, an equity ratio in PSE's regulated capital structure in one month can be much different than the equity ratio averaged for the year due to seasonality of earnings and other factors. For this

reason, common equity balances at a specific point in time should not be used for proxy and comparative purposes, and it is certainly contrary to the Commission's long standing practices.

Q. Does Dr. Woolridge rely on the data he provides to support the recommendation that the Commission approve a 48.5 percent equity ratio?

A. No, it appears that Dr. Woolridge does not even rely on the actual parent company common equity balances he presents in his testimony (38.6 percent to 41.7 percent) as the basis of his recommendation. He ignores his own financial analysis and asserts that the 48.5 percent ratio that he recommends is "more reflective of the capital structures of proxy groups of electric, combination electric and gas, and gas distribution companies."[49] It is not clear how Dr. Woolridge transitions his thinking and rationale from a peer equity percent range of 38.6 to 41.7 percent to a recommendation of 48.5 percent, nor is it clear why 49 percent is unacceptable to him, or not in line with proxy utilities. If 48.5 percent satisfies Dr. Woolridge, why not 49.0 percent? I note that Mr. Parcell and other parties were able to see this change in equity ratio as rational, as evidenced by their agreement to the Settlement. For all of the reasons I present above, I respectfully suggest that the Commission ignore Dr. Woolridge's recommendations regarding the equity component of PSE's capital structure and adopt the 49.0 percent consensus included in the multi-party Settlement.

[49] Woolridge, Exh. JRW-1T at 29:7-8.

B. The Settlement's Weighted Average Cost of Capital is Reasonable

Q. Please provide the capital structure agreed upon in the Settlement.

A. The parties to the Settlement agree to a WACC that is comprised of 51 percent debt at a cost of five percent and 49.0 percent equity with an ROE of 9.4 percent. The Settlement WACC is 7.16 percent. Please see the following table:

Figure 8. Multi-party Settlement WACC

Mutli-party Settlement WACC			
	Weight	Cost	Total
Debt	51.0%	5.0%	2.55%
Equity	49.0%	9.4%	4.61%
WACC			**7.16%**

Q. How does the Settlement WACC balance the needs of PSE and PSE's customers?

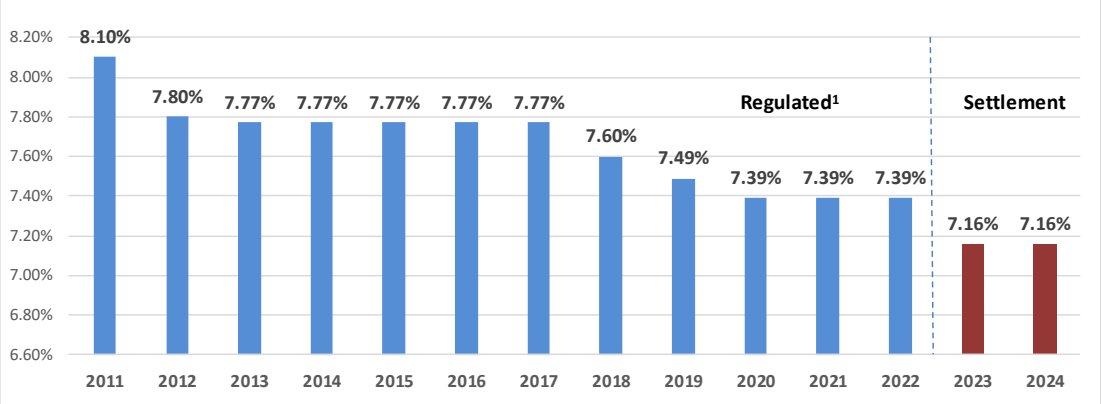
A. The Settlement increases the Company's equity ratio from 48.5 percent to 49.0 percent. This increase is a good faith effort that (i) will begin to improve PSE's weighted cost of equity relative to its peers, (ii) will enable the Company to finance its activities with less debt (and incur less debt financing pressure), (iii) partially replaces cash flows lost from the lower Federal income tax rate resulting from the 2017 Tax Cut and Jobs Act ("TCJA"), and (iv) will help improve credit metrics sustainably into the future. Collectively, the benefits from this small increase in the authorized equity ratio in PSE's capital structure should help create

a credit supportive regulatory outcome. The annual cost to customers of this increase in authorized equity ratio is $5.3 million.

From a customer perspective, the Settlement WACC will lower the overall rate of return paid by PSE customers by 23 basis points in 2023 and 28 basis points in 2024 compared to what was included in my Prefiled Direct Testimony.[50] This has the impact of reducing the annual revenue requirement to be collected from customers by $26.5 million in 2023 and $34.3 million in 2024.

The following table illustrates that the Settlement WACC will yield the lowest cost of capital for the next two years that customers have experienced for the last 12 years, even with the increase in the equity ratio.

Figure 9. PSE Regulated Cost of Capital (2011-2022) and Settlement Cost Capital (2023-2024)



1. The RORs in this table represent the regulated rates at the end of each calendar year, rather than the actual blended rate if rate cases effective dates fall in the middle of the year

[50] Peterman, Exh. CGP-1CT at 20-25.

Q. How does the Settlement achieve a lower cost of capital than any authorized by this Commission for PSE in the recent past?

PSE is able to support this historically low cost of capital because Company management has worked diligently over the last 12 years to maintain its current credit ratings and as a result, has been able to take strategic advantage of this long period of declining interest rates.[51] This cost savings from lower cost of debt has real, material, and lasting benefits on customer rates. For example, the Company's long-term cost of debt in 2010 was 6.59 percent, which is 152 basis points higher than the projected 2022 long-term cost of debt of 5.07 percent. This dramatic decline represents an annual reduction of interest expense by $63.7 million. Taking into consideration TCJA and the change in tax rates, the net, annual cost savings to customers is $11.6 million on $8.6 billion rate base.

Q. Are PSE customers benefitting from any other historical cost reductions related to cost of capital?

Yes. While not a result of past PSE actions or considered in the Settlement, I think it is important to remember that the TCJA also yielded considerable cost savings to customers by decreasing the gross-up factor on equity returns from 35 percent to 21 percent. For example, in a pre-TCJA world with a 35 percent gross-up factor on equity returns on $8.6 billion of rate base with a 48.5 percent equity ratio and 9.4 percent ROE, the equity revenue requirement would have been approximately $605 million. With the post-TCJA gross up factor of 21 percent

[51] Peterman, Exh. CGP-1CT at 47.

and the Settlement equity components of 49.0 percent equity ratio and a 9.4 percent ROE, the revenue requirement for equity return is approximately $502 million. In a post-TCJA world, PSE customers save $102 million on just the gross up factor on the equity ratio. While this savings is now hidden from customers as the gross up factor has already been adjusted in previous cases, it is nonetheless important to remember that it had real, lasting, material benefits to customers (while decreasing cash flow to the Company).

Q. How does the Settlement balance the needs of customers and PSE?

A. The Settlement WACC benefits both customers and PSE. As I stated above, the Settlement WACC reduces annual revenue requirement to be paid by PSE customers by $26.5 million in 2023 and $34.3 million in 2024 as compared to the WACCs I proposed for 2023 and 2024 in my Prefiled Direct Testimony,[52] whereas the increase in the regulated equity ratio from 48.5 percent to 49 percent represents an annual increase in cost of just $5.3 million. These explicit cost savings to PSE customers (and other additional, hidden cost reductions) illustrate that the WACC agreed upon in the Settlement balances safety and economy of PSE and is materially and financially beneficial to PSE customers. Lastly, the Settlement WACC enables to PSE to begin the process of making improvements in its financial strength, credit profile, and fund the business sustainably into the future, all of which combine to create a credit supportive regulatory outcome in this proceeding.

[52] Peterman, Exh. CGP-1CT at 20-25.

V. CREDIT RATINGS: REBUTTAL OF PUBLIC COUNSEL

A. Dr. Woolridge Relies on Outdated Sources (Shipman)

Q. Mr. Shipman, what is the position of Dr. Woolridge on rating agency views of PSE's risk profile and its implications for its cost of capital?

A. Dr. Woolridge offers commentary from a 2019 Moody's Investor Service ("Moody's") PSE credit report and the scoring of PSE in that report to support his conclusion on the risk of PSE compared to his proxy groups.[53] Both the language and the scoring from that 2019 report have been superseded by more recent Moody's credit reports. He also cites a Moody's commentary from ***2015*** on the effect of lower interest rates on utility credit quality. From that seven-year-old commentary, he concludes that the article "lends additional support to the emergent prevailing belief that lower authorized ROEs are unlikely to hurt the financial integrity of utilities or their ability to attract capital."[54]

Q. What is your general response to how PSE's risk profile is depicted by Dr. Woolridge?

A. Dr. Woolridge relies on outdated credit reports and reaches incorrect conclusions on the risk of PSE. A close and careful reading of the rating agencies reveals that they anticipate improvement in the PSE risk profile but await the details on, for instance, any MYRP that may be adopted in this proceeding. The new legislation is not *per se* risk-reducing. It simply lays the groundwork for the Commission to

[53] Woolridge, Exh. JRW-1T at 25-27.
[54] *Id.* at 66.

adopt a MYRP that can reduce the PSE risk profile. However, as I stated in my Direct Testimony, "the promise of lower risk can turn into the opposite if the details are not attended to."[55] The important factor I identified to gauge whether a MYRP or any other new rate mechanism will lead to lower risk is whether it constrains regulatory lag.[56] Creating a regulatory regime that allows a utility to better align its rates with its costs to improve its ability to earn its rate of return is the best path to lower risk for the benefit of ratepayers. The recent Washington legislation did not forge that path. It only gave the Commission the tools to create that path.

Dr. Woolridge reaches wrong conclusions about the PSE risk profile as viewed by the rating agencies because he relies on obsolete and incorrect material to justify his conclusions. Conclusions built on obsolete data are untrustworthy, and his testimony should be ignored.

Q. Does Dr. Woolridge correctly use rating agency comments and analysis in his effort to support his selection of proxy groups?

A. No. He relies on an outdated Moody's credit report from 2019 to provide "additional insights into how credit rating agencies view PSE."[57] His conclusion that PSE's regulatory relationship is credit-supportive is not wide of the mark, as far as it goes, but it ignores more recent Moody's insights that support my

[55] Shipman, Exh. TAS-1T at 20.
[56] *Id.* at 29.
[57] Woolridge, Exh. JRW-1T at 26.

concerns about the weaknesses in the PSE credit profile.[58] In its latest credit report, Moody's reiterates the importance of the regulatory relationship, but with greater reservation: "Although PSE has historically maintained a credit supportive relationship with the WUTC, recent regulatory outcomes have been inconsistent."[59] Moody's less benign portrayal of PSE's regulatory risk that has evolved since 2019 is perhaps the reason Woolridge chose to cite an obsolete credit opinion.

Q. What was his conclusion on Moody's scorecard for PSE and why is it misleading?

A. Woolridge's use of outdated Moody's information is even more problematic in the case of the scoring of PSE's rating factors. Woolridge claims that the Moody's analysis "grades PSE primarily as an A rated utility."[60] That is false. The latest 2021 scorecard shows a "Scorecard-Indicated Outcome Before Notching Adjustment" of 'Baa1', whereas Table 6 in the Woolridge testimony (pulled from the 2019 credit report) shows the score as 'A3'. That's what Dr. Woolridge used to conclude that Moody's regards PSE as primarily an 'A'-rated utility. This mistake is fatal to any conclusions he reached on the risk profile of PSE. In fact, he unwittingly reinforces the warnings in my Direct Testimony on deteriorating credit fundamentals and reminds us that the outcome of this proceeding is crucial to restoring PSE's credit profile.

[58] *Id.* at 16-17.
[59] *See* Peterman, Exh. CGP-10 at 38.
[60] Wooldridge, Exh. JRW-1T at 26.

Q. Was that the only instance you found where Dr. Woolridge employs outdated rating agency commentary to reach an incorrect conclusion?

A. No. Later in his testimony he goes back even farther, to 2015, in an attempt to make the facially illogical case that low ROEs are good for credit quality. "Moody's published an article on utility ROEs and credit quality"; he intones, without stating (except down in the footnote) that it was over seven years ago.[61] Needless to say, the economic and capital market conditions prevailing today, with inflation running at 9% or so and the Federal Reserve raising interest rates to combat it, are quite different from 2015. I review the effects of the troublesome macroeconomic picture in my Direct Testimony,[62] and capital market conditions are discussed in Section III.B of this Joint Testimony. The conclusion Dr. Woolridge tries to draw from the old Moody's article—"lower authorized ROEs are unlikely to hurt the financial integrity of utilities or their ability to attract capital"[63]—defies logic and sound financial principles.

Q. What are your conclusions on the topic of the rating agencies and their views of PSE's risk profile?

A. The Commission should approve the Settlement, which would actually produce the risk reduction the rating agencies are anticipating. If that is accomplished, PSE will achieve a lower cost of capital that will justify lower ROEs than would otherwise have materialized. The lower cost will translate into a faster and more

[61] *Id.* at 65.
[62] Shipman, Exh. TAS-1T at 23-36.
[63] Woolridge, Exh. JRW-1T at 66.

efficient energy transition in Washington that will benefit ratepayers with lower rates and a cleaner environment**.**

Q. Do you support the Settlement?

A. Yes. I anticipate that, if approved by the Commission, the Settlement would improve credit health for PSE, providing a much-needed credit supportive decision. The Settlement is a rational and reasonable outcome that is in the public's interest and will benefit customers while allowing PSE to continue to provide safe and reliable service at fair and reasonable rates.

B. Market Reaction to ROEs Below National Averages (Bulkley)

Q. Ms. Bulkley, is there evidence of negative credit rating agency and market reactions to authorized ROEs at the levels significantly below national averages such as being recommended by Dr. Woolridge?

A. Yes. Most recently, changes made by the Arizona Corporation Commission ("ACC") to an Administrative Law Judge's recommended order in an Arizona Public Service Company ("APS") rate proceeding caused credit rating agencies to institute negative ratings actions, and received a very negative reaction from the market with APS' parent company Pinnacle West's stock price falling 24 percent and its IBES earnings growth rate estimate reduced to nearly zero. Specifically, the ACC reduced the authorized ROE for APS from the ALJ-recommended 10.00 percent to 8.70 percent. As a result of this rate case decision by the ACC, Fitch downgraded the issuer default credit rating of APS and PNW's, citing heighted

business risk.[64] Subsequently, Moody's also downgraded APS and PNW, noting that the downgrade was a function of "the recent decline in Arizona regulatory environment" and "the organization's weakened credit metrics. [65] Guggenheim Securities LLC, an equity analyst that follows PNW, informed its clients that: [T]he "Arizona Corporation Commission is now confirmed to be the single most value destructive regulatory environment in the country as far as investor-owned utilities are concerned."[66] Similarly, S&P Global Market Intelligence's Regulatory Research Associates ("RRA") noted that this decision was "among the lowest ROEs RRA had encountered in its coverage of vertically integrated electric utilities in the past 30 years."[67]

Notably, the negative reaction by the market to the APS proceeding started when the initial recommended ROE for APS was 9.16 percent, or 36 basis points *above* the ROE recommended by Dr. Woolridge in this proceeding. This highlights the risk to PSE and its customers associated with Dr. Woolridge's proposed cost of equity in this proceeding, and demonstrates that his ROE recommendation does not meet the investor-required ROE. Considering how credit rating agencies recently have reacted to authorized ROEs that are significantly below the

[64] Fitch Ratings, *Fitch Downgrades Pinnacle West Capital & Arizona Public Service to 'BBB+'; Outlooks Remain Negative* (Oct. 12, 2021) https://www.fitchratings.com/research/corporate-finance/fitch-downgrades-pinnacle-west-capital-arizona-public-service-to-bbb-outlooks-remain-negative-12-10-2021#:~:text=Fitch%20Ratings%20%2D%20Chicago%20%2D%2012%20Oct,Negative%20for%20PNW%20and%20APS.

[65] Moody's Investors Service, Inc., *Rating Actions: Moody's downgrades Pinnacle West to Baa1 and Arizona Public Service to A3* (Nov. 17, 2021).

[66] Allison Good, *Pinnacle West shares tumble after regulators slash returns in rate case*, S&P Global Market Intelligence (Oct. 7, 2021).

[67] S&P Global, *RRA State Regulatory Evaluations—Energy* (Dec. 15, 2021).

national average such as suggested by Dr. Woolridge, it is likely that adopting his ROE recommendation would result in a similar response from rating agencies and the market overall.

VI. CONCLUSION

Q. Does that conclude your joint testimony?

A. Yes, it does.