

**BEFORE THE WASHINGTON STATE
UTILITIES AND TRANSPORTATION COMMISSION**

WASHINGTON UTILITIES AND
TRANSPORTATION COMMISSION,

Complainant,

v.

PUGET SOUND ENERGY,

Respondent.

DOCKETS UE-121697 and
UG-121705 (*consolidated*)

WASHINGTON UTILITIES AND
TRANSPORTATION COMMISSION,

Complainant,

v.

PUGET SOUND ENERGY,

Respondent.

DOCKETS UE-130137 and
UG-130138 (*consolidated*)

INITIAL BRIEF OF PUBLIC COUNSEL

March 6, 2015

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I. INTRODUCTION

1. This case addresses an important unresolved issue from the Commission's approval in 2013 of a multi-year Rate Plan for Puget Sound Energy, Inc. (PSE). That issue is the establishment of fair, just, reasonable, and sufficient rates to be charged under the plan. This proceeding focuses on the key component necessary to set fair rates which was not decided in the initial phase of the case -- the determination of PSE's return on equity (ROE), as of early 2013.¹
2. In this Remand proceeding, the Commission directed the parties to submit fully developed analyses on the issue of return on equity consistent with the evidence that would have been submitted in a contested general rate proceeding held in early 2013.² In accordance with the Commission's directive, Public Counsel has submitted a full return on equity analysis developed by cost of capital analyst Stephen Hill.
3. Mr. Hill's analysis concludes that, based on a range of 8.5 to 9.5%, a recommended cost of equity for PSE is 9.0%, consistent with the declining trend in capital costs. The recommendations of both Michael Gorman for Industrial Customers of NW Utilities (ICNU) (9.3%) and David Parcell for Commission Staff (Staff) (9.5%) also reflect this decline. This evidence clearly establishes that the currently authorized ROE is excessive.
4. In addition, because all relevant factors that bear on PSE's ROE must be considered, Mr. Hill evaluated the impact of PSE's newly approved decoupling mechanism. Based on two analyses: a revenue volatility analysis, and a review of the Brattle Group results with the

¹ The Rate Plan included the adoption of full "true-up" decoupling for PSE. The multi-year Rate Plan was implemented in conjunction with the decoupling mechanism, through automatic annual increases to the approved revenue per customers, based on the "K-factor" escalation formula. Order 07, ¶¶ 7-9 (Orders in this Rate Plan docket are referred to in the brief without additional docket title citation).

² Order 10, ¶ 25; Order 11, ¶ 14.

assistance of Dr. Christopher Adolph, Mr. Hill recommends a downward adjustment of 35 basis points to reflect the reduced risk under decoupling. In combination, the analyses of market-based ROE and the impact of decoupling result in a recommended cost of equity for PSE of 8.65%.

5. Neither PSE nor Staff in this Remand case have approached the case in a manner consistent with the Commission's directives, or with the Court's order. PSE continues its efforts, similar to the initial phase of the case, to shift the burden to other parties to rebut the presumption that its legacy ROE is still reasonable, failing to present a specific ROE recommendation, and framing the issue on Remand as whether its prior ROE of 9.8% "remains within the range of reasonableness."³
6. Rather than present "fully developed" cases of the type presented in a general rate case as the Commission directed, PSE and Staff have chosen instead to present artificially narrow expert analyses which do not address the impact of PSE's major risk reduction mechanism – full "true up" decoupling in the context of the Rate Plan. This is particularly notable given that both the PSE and Staff experts are on record as agreeing that decoupling should be specifically recognized in an adjustment to cost of capital to reflect reduced risk.
7. In this Remand proceeding, the Commission has the opportunity to determine, on a clean slate and with sufficient evidence in the record, an appropriate ROE for PSE as of the inception of its Rate Plan. The substantial weight of the evidence presented by the parties leads to the conclusion that PSE's rate of return on equity in early 2013 had declined significantly since the

³ Prefiled Rebuttal Testimony of Dr. Roger A. Morin, Exhibit No. RAM-16T at 2:9-13.

2011 General Rate Case when it was set. The ROE which was built into the initially approved Rate Plan is too high, and the resulting rates were and are excessive.

8. Public Counsel respectfully requests that the Commission set a fair ROE that takes all factors bearing on PSE's risk into account, including decoupling, and reflects the declining cost of capital in the relevant period. Updating PSE's ROE to the lower level recommended by Public Counsel will allow the Commission to set fair, just, and reasonable and sufficient rates for customers under the Rate Plan.

II. APPLICABLE LAW AND NATURE OF THE CASE

A. The Superior Court Order.

9. In its initial decision approving the Rate Plan rates, the Commission did not conduct a comprehensive review of cost of capital in the case for purposes of updating PSE's ROE to the beginning of the Rate Plan. Instead, the decision based rates on the ROE of 9.8% established in PSE's 2011 General Rate Case (GRC).⁴ Public Counsel and ICNU appealed the decision, arguing that the Commission erred by not updating PSE's cost of capital, and specifically its ROE, to consider the current market-based cost of capital as of 2013, and the impact of decoupling and the multi-year rate plan in reducing PSE's risk.

10. The Thurston County Superior Court reversed the Commission's approval of the Rate Plan rates "because the Commission's findings of fact with respect to the return on equity component of Puget Sound Energy's cost of capital in the context of a multi-year rate plan are unsupported by substantial evidence and the Commission improperly shifted the burden of proof on this issue

⁴ Order 07, ¶¶ 3, 58. The recommendation to use the 9.8 ROE was presented to the Commission for approval as part of a "Multiparty Settlement Agreement" between PSE, Commission Staff, and NW Energy Coalition. Order 07, ¶¶ 16-17.

from Puget Sound Energy, Inc., to the other parties in this proceeding below, contrary to RCW 34.05.461(4) and RCW 80.04.130(4)."⁵ Accordingly, the Court ordered the case remanded to the Commission "to establish fair, just, reasonable, and sufficient rates to be charged under the Rate Plan, and to order any other appropriate relief."⁶

B. The Commission's Orders on Remand.

11. On remand, the Commission interpreted the Court's order as a determination that "the Commission cannot adjust rates in the context of considering a multi-year rate plan without undertaking a thoroughgoing analysis of return on equity with the Company bearing the burden of proof, as is typically required, if at all, only in general rate proceedings."⁷ The Commission stated that it was "the Court's direction to the Commission to conduct additional process to develop a record that includes the full body of evidence the Commission typically considers when determining a regulated utility's return on equity to be effective during the rate period."⁸ The Commission further observed that "[i]t is essential that we conduct additional process to allow PSE and the other parties the opportunity to develop and present such evidence on the issues as they believe will provide the Commission with an adequate record, as they would do, for example, in the context of a general rate case."⁹

12. In Order 10, the Commission summarized its decisions as to scope, stating "the Commission expects the parties to provide focused and detailed analyses such as would have

⁵ *ICNU v. WUTC, Public Counsel v. WUTC*, Thurston Cty. Sup. Ct. Cause Nos. 13-2-01576-2, 13-2-01582-7 (*Consolidated*), Order Granting in Part and Denying In Part Petitions for Judicial Review, at 2 (July 25, 2014) (hereafter "Court Order" or "Remand Order").

⁶ *Id.* at 3.

⁷ Order 10, ¶ 3.

⁸ *Id.*, ¶ 4.

⁹ *Id.*, ¶ 4.

informed a determination of return on equity in early 2013 for purposes of updating PSE's rates from the 2012 General rate case and for continued application through the rate plan period,"¹⁰ while indicating that there might also be other relevant evidence filed for consideration. The Commission declined to adopt narrower boundaries for the proceeding than those customarily applied in a general rate proceeding.¹¹

13. In Order 11, the Commission noted that "[t]he Court determined ... that the Commission ... should not have left the previously approved rate of return on equity in place and should instead have required the submission of additional evidence."¹² The Commission stated its intention, "following the Court's direction, to receive such evidence during the remand phase of these proceedings."¹³ The Commission stated its intention for the conduct of this proceeding: "As in the context of a contested general rate proceeding, the Commission will consider all relevant evidence admitted on the question of return on equity, weigh the evidence, determine a range of reasonable returns, and set a return on equity that falls within that range."¹⁴ The Commission described the required presentation of additional evidence as follows:

What the Commission minimally requires on remand are fully developed analyses of data available prior to June 25, 2013, such as are usually undertaken to support advocacy on the issue of return on equity. That is we expect to see from the expert witnesses their development of the usual models (*e.g.*, discounted cash flow analyses, capital asset pricing models, and other risk premium models) using such data. Beyond this, parties are free to develop and present such other evidence as they believe is relevant and helpful to the Commission in meeting its

¹⁰ *Id.*, ¶ 24. The early 2013 period is referred to in the brief as the "target period." The Commission also described the period as "prior to June 25, 2013." Order 11, ¶ 14.

¹¹ *Id.*, ¶¶ 22-23.

¹² Order 11, ¶ 4.

¹³ *Id.*, ¶ 5.

¹⁴ *Id.*, ¶ 8, quoting Order 10, ¶ 25.

obligation to ensure that PSEs rates under the rate plan are fair, just, reasonable, and sufficient.¹⁵

C. Fundamental Legal Principles for Establishing a Fair Rate of Return.

14. The United States Supreme Court has established the foundational principles for establishing a fair rate of return in utility ratemaking. In the *Bluefield Waterworks v. Public Service Commission* case, the Court stated:

What annual rate will constitute just compensation depends upon many circumstances and must be determined by the exercise of fair and enlightened judgment, *having regard to all relevant facts*. A public utility is entitled to earn a return on the value of property which it employs for the convenience of the public equal to that generally being made at the same time and in the same general part of the country or investments in other undertakings which are attended by *corresponding risks and uncertainties*, but it has no constitutional right to profits[.]¹⁶

15. A second key decision is the *Federal Power Commission v. Hope Natural Gas Co.* case, which held *inter alia*, that “the fixing of ‘just and reasonable’ rates involves a balancing of the investor and consumer interests” and “should be commensurate with returns on investments in other enterprises having corresponding risks.”¹⁷

16. In the *Permian Basin Area Rate* case, the Court affirmed these principles, while noting that investor interests in profitability do not exhaust the relevant considerations in rate setting.¹⁸ Two essential elements identified by the U.S. Supreme Court of particular importance in this case are that “all relevant facts” must be taken into account,¹⁹ and that the fair return is

¹⁵ *Id.*, ¶ 14.

¹⁶ *Bluefield Water Works & Improvement Co. v. Public Service Comm’n*, 262 U.S. 679, 692 (1923) (emphasis added) (*Bluefield*).

¹⁷ *Federal Power Comm’n v. Hope Natural Gas Co.*, 320 U.S. 591, 603 (1944) (*Hope*).

¹⁸ *Permian Basin Area Rate Case*, 390 U.S. 747, 769 (1968) (*Permian Basin*).

¹⁹ *Bluefield*, 262 U.S. at 692.

determined in light of the risk of the investment.²⁰ These principles are fully recognized and applied in the Washington courts, as the state Supreme Court made clear in the seminal *POWER v. Utilities & Transportation Commission*²¹ decision. The Commission, likewise, has endorsed and applied these precedents and principles in its rate cases.²²

D. The Impact of PSE’s Decoupling Mechanism Must be Taken Into Account in Setting Return on Equity For Rate Plan Rates.

17. All the cost of capital witnesses in this case agree that the well-established guiding principles reviewed above are the principles to be applied in establishing a fair return in this case.²³ Nevertheless, neither PSE nor Commission Staff cost of capital experts analyzed the impact of decoupling in their testimony, though both agree decoupling reduces risk. Their position, that the Commission can set a fair return for PSE without addressing the impact of decoupling, is at odds with the applicable law, with Commission policy, and with economic reality.
18. The foregoing precedents clearly require that “all relevant facts” must be considered and that an assessment of “risk” is integral to setting a fair return. The Commission, in its Decoupling Policy Statement, found that “[a full decoupling] mechanism can serve to reduce risk to the company, and therefore to investors, which in turn should benefit customers reducing a

²⁰ *Id.*; *Hope*, 320 U.S. at 603.

²¹ *POWER v. Util. & Transp. Comm’n*, 104 Wn.2d 798, 811 (1985).

²² See, e.g., *Wash. Util. & Transp. Comm’n v. Puget Sound Energy*, Dockets UE-111048/UG-111049 (PSE 2011 GRC), Order 08, ¶ 21 (May 7, 2012); *Wash. Util. & Transp. Comm’n v. Puget Sound Energy*, Dockets UE-090704/UG-090705 (PSE 2009 GRC), Order 11, ¶¶ 18-19 (April 2, 2010); *Wash. Util. & Transp. Comm’n v. Avista Util.*, Dockets UE-090134/UG-090135 (Avista 2009 GRC), Order 10, ¶¶ 17-18 (December 22, 2009); *Wash. Util. & Transp. Comm’n v. PacifiCorp d/b/a Pacific Power*, Docket UE-130043 (Pacific Power 2013 GRC), Order 05, ¶ 15 (December 4, 2013).

²³ Testimony of David C. Parcell, Exh. No. DCP-1T at 5:15-7:5; Direct Testimony of Stephen G. Hill, Exh. No. SGH-2T at 8:5-16; Direct Testimony of Michael P. Gorman, Exhibit No. MPG-23T at 10:19-11:2; Morin, Exh. No. RAM-1T at 4:9-6:6 (“The heart of utility regulation is the setting of just and reasonable rates by way of a fair rate of return.” *Id.* at 4:9-10).

company's debt and equity costs."²⁴ In the initial phase of this case, the Commission held that the decoupling impact is at issue, and expressly acknowledged a "shift of risk from PSE to its ratepayers that is unquestionably is a result of implementing decoupling."²⁵ As PSE witness, Dr. Roger A. Morin correctly observed at the hearing, all the experts in this case agree that "decoupling reduces risk."²⁶ The impact of decoupling is, therefore, a relevant factor directly related to PSE's reasonable return on equity in this case.

III. MARKET-BASED RETURN ON EQUITY

A. Overview.

19. From the outset of this proceeding, Public Counsel has opposed the use of PSE's 2011 GRC ROE of 9.8% as a basis for setting rates, for two reasons: (1) PSE's ROE from the 2011 GRC did not reflect the change in market conditions and the decline in cost of capital between the 2011 GRC and the start of the Rate Plan in 2013; and (2) PSE's earlier ROE pre-dated and therefore did not reflect the risk reduction due to decoupling. Consistent with the Superior Court's Remand Order, the Commission is now conducting this proceeding to address both of these issues on a full record. This brief parallels the testimony of Public Counsel witness Stephen Hill, addressing the decline in the market-based ROE in this section, and decoupling issues separately below.

²⁴ *In the Matter of the Wash. Util. & Trans. Comm'n Investigation Into Energy Conservation Incentives*, Docket U-100522 (Decoupling Policy Statement), ¶ 27.

²⁵ Order 07, ¶ 107.

²⁶ Morin, TR. 686:8-11.

1. Market-based Return on Equity declined between the PSE 2011 General Rate Case and the inception of the Rate Plan.

20. The weight of the expert analyses presented in this Remand case strongly supports a finding that the market-based cost of capital declined between the 2011 GRC and the early 2013 target period when the Rate Plan began. The expert testimony contains the following recommendations for the target period, based on market conditions:

Commission Staff (David Parcell)	9.5%
ICNU (Michael Gorman)	9.3%
Public Counsel (Stephen Hill)	9.0%

21. PSE witness, Dr. Morin does not make a specific recommendation for ROE in this case, instead presenting various ranges. However, the mid-point of his analytic model result for the first half of 2013 is 10.3%, indicating his conclusion that cost of capital increased during the relevant period.²⁷

2. The analyses for 2014 corroborate the target period recommendations.

22. The Commission directed parties “at a minimum” to present a full cost of capital analysis for the early 2013 time period when the Rate Plan was being adopted.²⁸ The Commission also allowed parties to address later periods if they desired.²⁹ All parties’ experts addressed the target period. ICNU witness Michael Gorman and PSE witness Dr. Morin conducted full analyses for 2014, in addition to their early 2013 target period analyses. Mr. Hill did not conduct a separate

²⁷ Morin, Exh. No. RAM-1T at 2:9-12.

²⁸ Order 10, ¶ 24 (target period). Despite some initial concerns expressed at the start of the case, the expert witnesses did not report difficulties with “back-casting.” TR. 649:19-652:13. Likewise, all parties ultimately focused on ROE, rather than addressing other aspects of cost of capital such as capital structure or cost of debt.

²⁹ Order 10, ¶ 24.

analysis for 2014 but addressed the 2014 market in his testimony.³⁰ None of the 2014 analyses caused the witnesses to conclude that cost of capital had changed substantially since 2013 or to change their recommendations for the target period or the term of the rate plan.³¹ There is no disagreement among the parties that the early 2013 target period is the appropriate time period upon which to focus for determining the fair return to be used in setting the Rate Plan rates.

B. Public Counsel Expert Stephen Hill Recommends a Reduction in PSE's Return on Equity.

23. As just noted, Stephen Hill's analysis determines that a reasonable ROE for PSE for purposes of the Rate Plan at mid-year 2013 is 9.0%, the mid-point of his range of 8.5 to 9.5%. This does not include consideration of the impact of decoupling, discussed separately below.

1. The economic environment reflects low inflation, moderate recovery and declining long-term interest rates.

24. Mr. Hill's testimony begins with a review of the economic environment in early 2013. This is important because the cost of capital is expectational or *ex ante*, based on an estimate of investor expectations with regard to the relative risk and return of the utility, and for the particular risk-class of the investments that includes the subject utility. Accordingly, the broader economic context, including such factors as the strength of the U.S. economy, the direction of interest rates, and the level of inflation are relevant to investor expectations.³²

25. With regard to the Federal Reserve (Fed) policy, long-term interest rates (20-year Treasury bonds), ranging from 3.5 to 5.0% in the last decade, have shown a slow and relatively

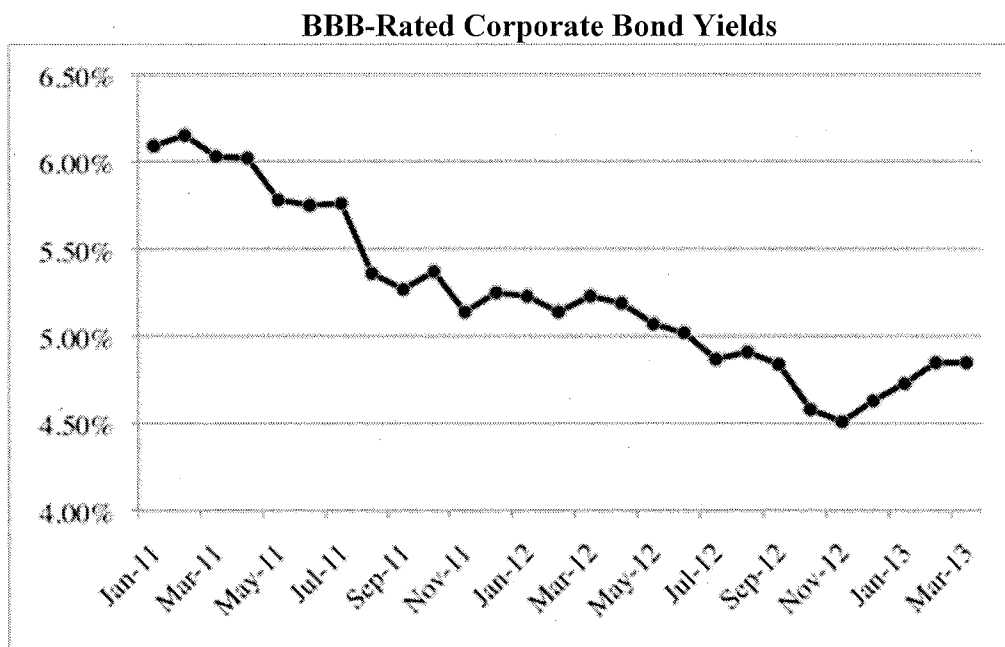
³⁰ Mr. Hill relied, generally on other recent cost of capital studies undertaken for electric utilities of generally similar risk. Those studies show that capital costs have not risen dramatically and, in fact, have moderated to some degree, compared to Mr. Hill's "early 2013" equity cost analysis. Hill, Exh. No. SGH-2T at 51:3-52:18.

³¹ Gorman, Exhibit No. MPG-23T at 2:12-3:7. Morin, Exhibit RAM-1T at 2:8-20.

³² Hill, Exh. No. SGH-2T at 10:2-15.

steady downward trend.³³ Because long-term Treasury bonds are a fundamental building block of capital costs, this provides an indication that capital costs were lower in 2013 than during the economic turmoil of late 2008 and early 2009, as shown in a chart in Mr. Hill's testimony, reproduced here.

Chart I³⁴



Source: Data from the Federal Reserve Statistical Release H.15, Historical Data.

BBB-rated corporate bond yields also declined between the time of PSE's 2011 GRC and early 2013. This market evidence is a further indication that a lower cost of capital would be appropriate for the time rates were set in 2013.³⁵

³³ Hill, Exh. No. SGH-2T at 12:1-14 (Chart I).

³⁴ *Id.* at 14:1-4 (Designated as Chart II in Mr. Hill's testimony).

³⁵ *Id.* at 14:5-13.

26. The expectation in early 2013 was that recovery from the economic recession would be likely to continue at a moderate pace, allowing core inflation to remain moderate. The Fed was expected to keep interest rates low for at least the next two years.³⁶ In 2013, the indicated expectations from Value Line were that long-term interest rates would move somewhat higher in the future, assuming a continued moderate pace to the economic recovery. With the moderate pace of the economy and relatively low core inflation, for the period in question, capital costs were low, and expected to remain low until there is more rapid economic growth, expected by Value Line to occur in the 2016-2018 period.³⁷

2. Mr. Hill relied on five cost of capital methodologies to evaluate return on equity for PSE.

27. Mr. Hill conducted his cost of equity analysis using five methodologies: Discounted Cash Flow (DCF), Mechanical DCF, Capital Asset Pricing Model (CAPM), Modified Earnings-Price Ratio (MEPR), and Market-to-Book Ratio (MTB). They are briefly described here. The traditional DCF model, which relies on the equivalence of the market price of the stock with the present value of the cash flows investors expect from the stock, assumes that the discount rate equals the cost of capital. Under the DCF, the total investor return, which equals the required return or cost of equity, is the sum of the dividend yield and the expected growth rate in the dividend.³⁸ Traditional DCF has historically been given substantial weight by the Commission.³⁹

28. Mr. Hill also employed a “mechanical” DCF analysis, an additional corroborating analysis, to compare to the traditional DCF results. This method responds to the concern of

³⁶ *Id.* at 15:1-16:7.

³⁷ Hill, Exh. No. SGH-2T at 16:12-17.

³⁸ *Id.* at 16:18-17-11.

³⁹ PSE 2011 GRC, Order 08, ¶ 89; Jones, TR. 653:20-654:19.

some analysts regarding the effect of analyst judgment on the outcome of the traditional DCF. In summary, the mechanical DCF uses dividend yield and projected growth rate data published in investor-service publications for all the sample group companies.⁴⁰ As shown below, in this case the mechanical DCF yields an ROE result 30 basis points lower than that of Mr. Hill's traditional DCF analysis.

29. Mr. Hill used other methodologies as a corroborative check on his traditional DCF results. The CAPM method states that the expected rate of return is determined by a risk-free rate of return plus a risk-adjusted market premium.⁴¹ The Modified Earnings-Price Ratio (MEPR) analysis is the expected earnings per share divided by the current market price used in combination with the expected return on common equity (ROE).⁴² The final methodology Mr. Hill employs is the Market-to-Book Ratio (MTB) analysis. While based on DCF, which smooths data to determine investors' long-term sustainable expectations, Market-to-Book relies instead on point-in-time data projected one year and three-to-five years into the future.⁴³

30. Mr. Hill's equity cost estimates using these five methods are shown below:

**Table 1: Public Counsel
Equity Cost Estimates⁴⁴**

Method	ROE Results
Discounted Cash Flow	8.69%
Mechanical DCF	8.33%
Capital Asset Pricing Model	7.42%
Modified Earnings Price Ratio	8.21% - 8.45%
Market-to-Book Ratio	8.63% - 8.73%

⁴⁰ Hill, Exh. No. SGH-2T at 30:16-32:4 (explaining the "mechanical" DCF methodology); Hill, Exh. No. SGH-10 shows the results of the analysis.

⁴¹ *Id.* at 32.

⁴² *Id.* at 35.

⁴³ *Id.* at 39.

⁴⁴ *Id.* at 42, Table II.

1. The DCF result indicates an ROE of 8.69%. The average of the corroborating analyses (Mechanical DCF, CAPM, MEPR and MTB) indicate an ROE range of 8.15 to 8.23%. This would indicate that the traditional DCF of 8.69% may somewhat overstate the 2013 cost of capital. Mr. Hill also took into account, however, the expectations in early 2013 that continued economic expansion would result in interest rate increases in the 2013-2015 period. Based on this factor and his analytic results, Mr. Hill concludes that a reasonable range as of early 2013 for PSE's ROE is 8.5% to 9.5%, with a mid-point of 9.0%.⁴⁵

C. Dr. Morin's Cost of Equity Analysis is Flawed.

1. Dr. Morin's DCF overstates the cost of capital through exclusive reliance on analyst earnings projections and other flaws.

32. A central problem with Dr. Morin's DCF analysis is its exclusive reliance on projected earnings growth. The Commission has expressed disapproval of Dr. Morin's DCF results "because they rely solely on analysts' forecast of earnings growth[.]"⁴⁶
33. A key problem with relying solely on analyst projections is that sell-side analyst projected earnings growth overstates actual long-term growth. This is illustrated by a comparison with mechanical DCF results based on a broader array of data. The mechanical DCF includes Value Line projected earnings, dividends and book value growth, along with sell-side earnings growth rates, all of which are published and available to investors. Mr. Hill's mechanical DCF yields an ROE of 8.3%, substantially below Dr. Morin's DCF estimate of 9.8%-10% based solely on

⁴⁵ *Id.* at 43:1-10.

⁴⁶ PSE 2009 GRC, Order 11, ¶ 299.

projected earnings growth.⁴⁷ When asked in discovery whether he could cite any studies to show that analyst growth rates are the only growth rate on which investors rely, he responded he was unaware of any such study.⁴⁸

34. An additional problem with Dr. Morin's analysis is that he omits negative earnings growth rate projections, but does not remove projections that are outliers at the high end, skewing his DCF results upward.⁴⁹ Although the average projected growth rate for his sample group is 4.73%, he includes NV Energy with a growth rate of 11%, even though that growth rate is beyond two standard deviations from the sample group average. Removing this outlier would reduce the average growth rate to 5.27, or 23 basis points below the 5.5 % he used in his Value Line growth projection analysis.⁵⁰ Similarly, removal of NV Energy as an outlier (15.2% growth) from Dr. Morin's analyst growth consensus forecast analysis (Exh. No. RAM-5) lowers the growth rate by 49 basis points compared with the rate he used in his DCF. Those lower DCF growth rates transfer directly to lower cost of equity estimates.⁵¹

35. Dr. Morin also errs in his use of dividend yield data from Value Line. Value Line published dividend yields include "cash dividends estimated to be declared in the next twelve months."⁵² Dr. Morin uses this Value Line data, but then adds to that amount through his own calculation designed to estimate the dividends for the next year. The result is that he double counts the growth in dividend yield,⁵³ increasing the DCF cost of equity by 22 to 24 basis points.

⁴⁷ Hill, Exh. No. SGH-2T at 53:22-54:9, Morin, RAM-1T at 27:1-6.

⁴⁸ Morin, Exh. No. RAM 2-CX; Morin, TR. 564:10-16 (confirming on cross-examination).

⁴⁹ *Id.* at 54:10-557.

⁵⁰ Hill, Exh. No. SGH-2T at 55:8-21. *See* Exh. No. RAM-4.

⁵¹ *Id.* at 56:1-6.

⁵² *Id.* at 56:14-17.

⁵³ *Id.* at 56:9-20.

If Dr. Morin's DCF analyses are corrected to eliminate double counting of dividend yields, and remove the high outlier growth rates discussed above, his DCF results show markedly lower ROEs.⁵⁴

Table 2: Morin DCF With Hill Adjustments

<u>Morin DCF ROE Result (2013)</u>	<u>Morin DCF ROE results (2013)</u>
As Filed	Hill adjustments, Exhibit No. SGH-15
10.04% (Average)	9.59 (Average)
Exh. No. RAM-4	9.44 (Median)
9.83% (Average)	9.22 (Average)
Exh. No. RAM-5	9.35 (Median)

2. Dr. Morin's CAPM ROE estimate is overstated.

36. Dr. Morin's CAPM estimate of ROE is overstated for two reasons: (1) his market risk premium of 7.2% is overstated; and (2) he elects to use forward interest rate projections rather than current Treasury bond yields as the risk-free rate of return.

a. The CAPM Market risk premium is not reasonable.

37. Dr. Morin uses a market risk premium of 7.2% in his CAPM analysis. Over the past 85 years, however, the difference between the return on common stocks and the return on long-term Treasury bonds has ranged from 4 to 6%,⁵⁵ representing a long-term historical average risk premium below Dr. Morin's number.⁵⁶ The Brealey and Meyers text, as another reference, indicates a *long-term* risk premium relative to Treasury bonds in a range from 3.5 to 6.5%.⁵⁷ Dr. Morin's initial testimony, however, cites the Brealey and Meyers range for *short-term*

⁵⁴ Hill, Exh. No. SGH-2T at 57:1-15; Hill, Exh. No. SGH-15.

⁵⁵ This data is published by Morningstar (formerly Ibbotson Associates). Hill, Exh. No. SGH-2T at 66:17-67:6.

⁵⁶ Recent academic analysis has suggested that investors' expected risk premiums may actually be below this historical average. Hill, Exh. No. SGH-2T at 66:2-16.

⁵⁷ Hill, Exh. No. SGH-2T at 67:1-6. Mr. Hill uses a 6% risk-free rate, near the top of the Brealey Meyers range, and at the top of the Morningstar 85 year historical ranges. Hill, Exh. No. SGH-2T at 66:2-17.

Treasury bonds (5 to 8%) in support of his 7.2% market risk premium, not pointing out that range is based on short-term bonds.⁵⁸

38. In his rebuttal testimony, Dr. Morin also supports his CAPM market risk premium estimate of 7.2% by citing a Harris/Marston study of S&P 500 companies for 1993 to 1998. He states: “[f]rom that study, the average Market Risk Premium estimate for the overall period is 7.2%, the same as used in my CAPM analysis and higher than the Market Risk Premium reported by Morningstar.”⁵⁹ In discovery, Public Counsel asked Dr. Morin for the risk premium for utilities in the Harris/Marston study. In the response, he provided only an excerpt with a table containing the 7.2% figure, but did not provide the utility risk premium. On cross-examination, Dr. Morin acknowledged that the 7.2% figure is for the overall market, and that, in fact, the Harris/Marston study provides a much lower risk premium specifically for utilities of 4.15%, a fact not included in his discovery response.⁶⁰

39. If the Harris/Marston *utility* risk premium of 4.15% is added to Dr. Morin’s projected risk free rate for Treasury bonds of 4.6%, the indicated ROE would be 8.75%, as Dr. Morin admitted at the hearing.⁶¹ Dr. Morin also acknowledged that the long-term Treasury bond yields have declined since he prepared his direct testimony, from 4.6% (his risk-free rate) to approximately 2.5%, which would indicate an ROE even lower than 8.75% prospectively.⁶²

⁵⁸ Morin, Exh. No. RAM-1T at 47:11-18. Even if the 5 to 8% range for short term bonds were used, T-bill yields in May and June of 2013 (in the target period) averaged 0.4%. This would generate CAPM results for ROE of 5.04 to 8.04%.

⁵⁹ Morin, Exh. No. RAM-16T at 42:3-6.

⁶⁰ Morin, Exh. No. RAM-22CX. Morin, TR. at 566:19-567:24.

⁶¹ Morin, TR. at 568:7-18.

⁶² Dr. Morin’s CAPM is also overstated as a result of his reliance on sell-side analyst projected earnings growth for the S&P 500. The problems with this approach are discussed above. Mr. Hill’s testimony also addresses

b. Dr. Morin's selected risk free rate skews his CAPM results upward.

40. Dr. Morin uses a risk-free rate for long-term Treasury bonds of 4.6%, as just noted. This is 140 basis points higher than the actual 3.19% bond yield in the market during May and June 2013 during the target period.⁶³ Dr. Morin's rate is based on bond yield projections, representing a change from his former CAPM methodology in which used current Treasury bond yields.⁶⁴ As Mr. Hill explains in his testimony, interest rate forecasts are not a very accurate indicator of the current cost of capital. Indeed, Dr. Morin himself acknowledged at the hearing: "One thing that has always bothered me in the last couple of years is that I've been forecasting higher yields for several years now and they haven't materialized yet."⁶⁵

41. Mr. Hill's testimony provides data regarding consistent overestimates of bond yields by Value Line in the last five years.⁶⁶ Current bond yields provide a more reliable risk-free rate of return for use in CAPM analysis than the estimates of what yields might be in two years, as relied on by Dr. Morin. Using a more reliable risk-free rate for the 2013 target period of 3.4%⁶⁷ in Dr. Morin's CAPM formula, even with his very high 7.2% market risk premium, provides an ROE result of 8.58%. This clearly demonstrates how Dr. Morin's use of projected interest rates skews his results upward. Use of current "target period" 2013 bond yields would bring his indicated ROE below 9.0%.

why these analyst projections improperly skew the CAPM forward-looking market risk premium. Hill, Exh. No. SGH-2T at 69:12-70:5.

⁶³ Hill, Exh. No. SGH-2T at 70:11.

⁶⁴ Hill, Exh. No. SGH-2T at 70:13-16 (Morin acknowledged change in response to discovery).

⁶⁵ Morin, TR. 673:10-12.

⁶⁶ Hill, Exh. No. SGH-2T at 71:7-20.

⁶⁷ Mr. Hill's 3.4% risk-free rate starts with the actual bond yields of 3.19% in the "target period" and also looks at long-term trends in T-bond yields to normalize short term fluctuations. Hill, Exh. No. SGH-2T at 70:17-21.

3. Dr. Morin's risk premium analysis is flawed.

42. Mr. Hill discusses the problems with Dr. Morin's risk premium analysis in detail, identifying at least two major issues. First, as just described in the CAPM section above, Dr. Morin's use of a projected bond yield of 4.6%, rather than a normalized current bond yield of 3.4% for the 2013 target period, overstates the risk-free rate by 120 basis points. Even if Dr. Morin's risk premium calculations are used (5.2% long-term historical, 5.4% historical allowed returns), use of the more reliable normalized current bond yield indicates an ROE of 8.6 or 8.8%, very similar to Mr. Hill's recommendation.⁶⁸

43. The second weakness in Dr. Morin's analysis is his premise that there is a negative correlation between bond yields and risk premiums. There are several concerns with this view. His regression analysis appears to more likely capture regulatory caution in following market trends than any fundamental relationship between bond yields and equity cost rates.⁶⁹ Contrary to Dr. Morin's theory, an ongoing Duke University study finds a positive correlation in which as interest rates decline so do risk premiums. Dr. Morin's theory is counter-intuitive. In a period of market uncertainty, instability, and increasing interest rates for bonds, logic would dictate that investors would require higher, not lower risk premiums. This is consistent with the results of the Duke study.⁷⁰

⁶⁸ Hill, Exh. No. SGH-2T at 75:1-16. In his Cross-Answering Testimony, Mr. Hill also suggests a modest adjustment to Mr. Gorman's ROE results to the extent Mr. Gorman relies on projected interest rates in his CAPM and risk premium analysis. Hill, Exh. No. SGH-21T at 13:4-15:15.

⁶⁹ *Id.* at 76:13-19.

⁷⁰ *Id.* at 77: 6-78:5.

4. Modifying Dr. Morin’s analysis to remove flaws significantly reduces his ROE results.

44. If Dr. Morin’s model results for the target period are modified to address the issues raised above, the results are as shown in the following table:

Table 3: Hill Modifications To Dr. Morin’s Model Results

Method	Original Morin ROE	Modified Morin per Hill recommendations	Issues addressed
Discounted Cash Flow	9.8% - 10% ⁷¹	9.22% - 9.59%	Use of analyst growth rate projections/ double counting of dividend yields
CAPM	9.8% - 10.3% ⁷²	8.15% - 8.58%	Risk premium above long term bonds; risk free rate based on interest rate projections
Risk Premium	9.8% - 10.7% ⁷³	8.6% - 8.88%	Use of interest rate projections; false “negative correlation” between yield/returns.

The averages of the low and high end of these estimates creates a range of 8.66 to 8.99% for the 2013 target period. Dr. Morin’s range of 9.8% to 10.7% does not represent a reasonable estimate of the cost of equity.⁷⁴

45. A further defect in Dr. Morin’s analysis is that it fails to take into account the risk reduction impact of the 2013 approval of PSE’s multi-year Rate Plan, including decoupling, as addressed further below. As a result, Dr. Morin’s analysis is incomplete and overstated. His ROE recommendation does not provide a reasonable basis for setting rates for the Rate Plan.

⁷¹ Morin, Exh. No. RAM-1T at 27.

⁷² Morin, Exh. No. RAM-1T at 49.

⁷³ Morin, Exh. No. RAM-1T at 63.

⁷⁴ Hill, Exh. No. SGH-2T at 78:6-18 (including Table IV). Additional information is added to the table in the brief.

D. Staff Witness David Parcell's ROE Recommendation Is Not Reliable.

46. Staff presented its cost of capital analysis and ROE recommendation through David C. Parcell. As a general matter, for purposes of his market-based cost of capital determination, Public Counsel does not take issue with the accuracy of Mr. Parcell's calculated results in the operation of the models. Based on these results, Mr. Parcell recommends that the Commission approve an ROE for PSE of 9.5%. This represents the mid-point of his range of 9.0 to 10.0%.

47. Public Counsel does have a major concern, however, with Mr. Parcell's exercise of judgment to focus on the highest results of his analysis to arrive at his recommendation. Throughout his analysis, Mr. Parcell consistently makes choices that have the effect of increasing both his recommended range and his final point recommendation with little or no rationale for these choices. The net result is that his recommendations, based heavily on his *highest* results, without a reliable rationale based on sound economic principles, deserve less weight.

48. Another unusual aspect of Mr. Parcell's testimony is that he fails to address the analysis and recommendations of Dr. Morin in any manner. As Mr. Parcell conceded at the hearing, ordinarily, when he testifies in a case with Dr. Morin, he has presented detailed criticisms of Dr. Morin's results.⁷⁵ In the 2006 Cascade GRC in Washington, for example, Mr. Parcell provided detailed criticism of each of Dr. Morin's methodologies (CAPM, Risk Premium, DCF), concluding they each overstated the company's cost of capital. For example, Mr. Parcell

⁷⁵ Parcell, TR. at 604:8-605-3.

strongly criticized Dr. Morin's sole reliance on earning projections for his DCF growth parameters, a method Dr. Morin uses again in this case.⁷⁶

1. Mr. Parcell's DCF recommendation is poorly supported.

49. Mr. Parcell states that his DCF recommendations in this case are conservative, that is, higher than they would have been had he emphasized mean or median values. A review of his DCF results and recommendations reveals just how conservative he chose to be. Mr. Parcell estimated the DCF cost of equity of 36 different companies. His results show an average (mean) DCF-based ROE indication of 8.5%.⁷⁷ Notwithstanding these results, Mr. Parcell selects a DCF range of 9.1 to 9.7%, based on his highest estimates. The low end of his selected range is therefore 60 basis points above the actual average of the sample companies' DCF, and the mid-point (9.4%) is a full 90 basis points above the average results of his DCF data. The dramatic difference between the actual data results and Mr. Parcell's selected range is illustrated in the chart attached in Appendix A (Exhibit No. SGH-22).

50. These are not merely Public Counsel characterizations of Mr. Parcell's testimony. They are transparently presented in his testimony. All the results described above, with the high and low ranges, are presented in table form. As he points out, "the results ... indicate average (mean and median) DCF cost rate of 8.1 percent to 8.6 percent. The 'high' DCF rates (i.e., *using the highest growth rates only*) are 9.1 percent to 9.7 percent on an average basis and median basis."⁷⁸

⁷⁶ Parcell, Exh. No. DCP-16CX at 40:20-21, and at 45:21-22.

⁷⁷ Parcell, Exh. No. DCP-1T at 17:7-18:15. The 36 companies broke down as follows: Mr. Parcell's sample proxy group (8.3%), Mr. Gorman's proxy group (8.5%), and Dr. Morin's proxy group (8.6%). *Id.* Mr. Hill discusses the results at Exh. No. SGH-21T at 5:9-14; Hill, Exh. No. SGH-22 (attached as Appendix A). The 36 companies broke down as follows: Mr. Parcell's sample proxy group (8.3%), Mr. Gorman's proxy group (8.5%), and Dr. Morin's proxy group (8.6%). *Id.*

⁷⁸ Parcell, Exh. No. DCP-1T at 18:1-3 (emphasis added).

51. He states the following conclusions:

This analysis reflects a broad DCF range of 8.1 percent to 9.7 percent for the proxy groups. ... I give less weight to the low values *and average values of the groups*. I believe that the 9.1 percent to 9.7 percent (9.4 percent mid-point) reflects the proper DCF cost for PSE. *This reflects the highest DCF results.*⁷⁹

52. When asked, “Why do you focus on the highest DCF rates?” he provides only the following explanation:

I focus on the highest DCF rates, as well as the highest CE rates later in my testimony, in order to be conservative. Had I emphasized mean/median values, *as other analysts might reasonably have done*, my recommended cost of equity would have been lower.⁸⁰

It is worth simply re-reading this short section of Mr. Parcell’s testimony to get a clear sense of the extremely conclusory nature of his analysis. As these excerpts show, he provides no explanation whatever for choosing “the highest DCF results” which use “the highest growth rates only,”⁸¹ beyond the wish to be conservative.

53. Mr. Parcell’s decision to use only the highest growth rates stands in stark contrast to his description two pages earlier of the five growth rate indicators he uses, where he states: “I believe this diverse combination of growth indicators is a representative and appropriate set with which to begin the process of estimating investor expectations[.]”⁸² Again, he provides no reasoned explanation for disregarding his own “appropriate” set of indicators and instead relying only on high-end results.

⁷⁹ *Id.* at 18:5-10 (emphasis added).

⁸⁰ *Id.* at 18:12-15 (emphasis added). Mr. Hill emphasized the mean and median values in their DCF analysis. Mr. Parcell is agreeing this is reasonable.

⁸¹ An emphasis on the mean or median values in the DCF calculation is especially appropriate method because Mr. Parcell uses a large set of sample companies, including his own, Mr. Gorman’s and Dr. Morin’s sample groups. A major characteristic and benefit of larger sample groups is that results will tend to be arrayed around the mean or average. The essential meaning of the data is found at the mean or median, not in the outliers.

⁸² Parcell, Exh. No. DCP-1T at 16:21-22.

54. While cost of capital analysis certainly includes some exercise of judgment on the part of the expert, experts ordinarily provide a methodological or theoretical rationale for moving away from the central results of their data. Mr. Parcell makes no effort to do so in this case. His decision to move significantly toward the uppermost end of the DCF results range means, ultimately, that he is relying on less reliable results, based on fewer company data points than at the mid-range of the results.

55. Mr. Hill points out that, even if one wishes to use a conservative approach in this case, a more reasonable alternative would be to use a range using the average DCF result of 8.5% as the low end and the mid-point of his highest DCF results, 9.4%, as the top end. This retains a link to and is more strongly grounded in the actual data. Mr. Parcell's high end range, by contrast, is far removed from the central nature of the DCF data sets he produces.

2. Mr. Parcell's Comparable Earnings (CE) results are not adequately explained.

56. Mr. Parcell is the only analyst to use a Comparable Earnings methodology in this case. Mr. Parcell's CE analysis raises similar concerns to his DCF analysis in that the ROE range he selects is higher than his CE data indicates. The CE results for his sample proxy group of companies show that the average historic ROE earned over the last 10 years ranged from 8.3 to 9.1%. In addition, the Market-to-Book ratio resulting from these ROEs ranged from 124% to 152%. As Mr. Parcell himself agrees, this is an indicator that the expected cost of equity was below the CE-based historic ROE range of 8.3% to 9.1%.⁸³ Mr. Parcell's prospective CE analysis produces similar results, with his projected sample group ROE in a range from 8.7 to

⁸³ Parcell, Exh. No. DCP-1T at 23:19- 24:2 ("There is no regulatory obligation to set rates designed to maintain a market-to-book ratio significantly above one."); *Id.* at 27:1-9.

9.6%.⁸⁴ Because the sample group has a Market-to-Book ratio of 139%, the investor's required return range is, by Mr. Parcell's own definition, lower than 8.7 to 9.6%.⁸⁵

57. As the data demonstrate, Mr. Parcell's decision to use a range of 9.0 to 10.0% for his CE ROE is unreasonable, as it is above the range of expected returns for his sample group. As with DCF, he uses the highest results in his data set to create this range, based on an unexplained desire to be conservative. This approach again overstates PSE's cost of equity. Even though Mr. Parcell has not provided one, if there is a justification to take a conservative approach, a more sound alternative would be to use the range resulting from Mr. Parcell's sample group of 8.7 to 9.6%, without any downward adjustment to recognize that their Market-to-Book ratios exceed 100%.

3. Mr. Parcell's ROE recommendation fails to consider his CAPM analysis.

58. The range of results for Mr. Parcell's CAPM analysis is 6.5 to 6.8%. Mr. Parcell opts not to use these results in establishing his range, however. As he states in testimony: "Focusing on the respective mid-points [of DCF, CAPM, and CE], the range is 6.7 percent to 9.5 percent. I recommend a return on equity range of 9.0 percent to 10.0 percent for PSE as of the early 2013 time frame."⁸⁶ The juxtaposition of these two sentences illustrates the conclusory and unexplained nature of Mr. Parcell's approach. He gives no explanation in his testimony in this case for not using the mid-points of his three methodologies (6.7 - 9.5%) as a basis for his range. Again, he simply opts, without a rationale, for an approach which will yield a higher range.

⁸⁴ *Id.* at 25:12-13 (Table, Prospective ROE).

⁸⁵ Hill, Exh. No. SGH-21T at 5:6-15.

⁸⁶ Parcell, Exh. No. DCP-1T at 27:20-22.

59. At the hearing, all the cost of capital witnesses, including Mr. Parcell agreed that all of the methodologies should be used in the process of developing a cost of capital recommendation, although some expressed preferences for certain models.⁸⁷ Consistent with that approach, in the PacifiCorp 2014 General Rate Case, Mr. Parcell did incorporate the CAPM results in developing his final recommendation.⁸⁸ At the hearing in that case, Mr. Parcell was asked to explain his inconsistent approach to CAPM in the two cases:

Q: [Pacific Power counsel] So even though PSE's CAPM results are lower [than those in Pacific Power] you don't advocate for the Commission to consider those, correct?

A: [Mr. Parcell] Right, because I'm talking about two years ago in PSE. And when I came across that question and answer, I determined that it would be more confusing in a historic sense that it would be as opposed to being clear in a present sense. Therefore, I made the executive decision to take that out of that PSE case because it was two years ago.⁸⁹

This comment in the Pacific Power docket is difficult to decipher. Mr. Parcell's filed CAPM testimony in this docket makes no mention of this historic confusion issue, or of any other problem with performing the CAPM analysis as of 2013. He performs his CAPM analysis in a standard manner, in the same fashion as he did during the Pacific Power 2014 GRC. At no point in the testimony in this Remand case does he mention his "executive decision" to "take ... out" the CAPM analysis for any reason. He simply discards the results when setting the range, without any stated rationale. Disregarding his CAPM equity cost estimates in this proceeding works to increase his ultimate ROE recommendation.

⁸⁷ TR. 655:18-659:12.

⁸⁸ In his testimony in the 2006 Cascade rate case, Mr. Parcell incorporated his CAPM results in calculating his ROE range and recommendation. Exh. No. DCP-16CX at 37:18-38:4.

⁸⁹ Parcell, Exhibit No. DCP-19CX at 16:12-24.

a. Mr. Parcell used a different analytic approach based on a misunderstanding of the nature of the case.

60. Mr. Parcell has prepared and presented two cost of capital analyses to the Commission seven weeks apart that are not consistent. Here, Mr. Parcell uses the highest results of his DCF analysis based on the highest growth rates, uses very high CE results well above the actual averages, and disregards CAPM results, results he normally considers, all which directly increases the overall ROE ranges and recommendation. The ultimate result of this series of decisions by Mr. Parcell is his recommended range of 9.0 to 10.0%. As he acknowledged at the PacifiCorp hearing, this approach and his reliance on the high end CE results was “how he [got] to 9.5 and to justify a 9.8 as part of a reasonable range.”⁹⁰ In the remand case, he volunteered that had he relied on his DCF and CAPM analyses, his results would have been below 9%.⁹¹

61. In the Pacific Power case, he arrived at a range of 9.0 to 9.5% (50 basis points) for ROE, while in this case he recommended a range double that, from 9.0 to 10.0%. When asked to explain the difference during the Pacific Power hearing, his rationale was not based on any cost of capital analysis or methodology. Instead, he stated it was based on his understanding of the “directives” related to this case and of what was “desired.”⁹² He was asked further about this at the Remand hearing and provided a similar explanation.⁹³

62. Mr. Parcell’s perceptions about the nature of the case are not accurate. Neither the Commission nor the Superior Court directed or requested the parties to take a particular or unusual approach in their cost of capital analysis with respect to methodology, to the breadth of

⁹⁰ Parcell, Exhibit No. DCP-19CX; Parcell, TR. 286:10-16.

⁹¹ *Id.*

⁹² Parcell, Exhibit No. DCP-19CX at 13:10-18.

⁹³ Parcell, TR. 602:6 – 603:20.

their range, or any other analytic requirements. On the contrary, parties were directed to conduct an analysis in the same fashion as they would in a general rate case.⁹⁴ Mr. Parcell's apparent belief that he was required to use a broader range than he otherwise would have introduces an improper distortion into his analysis which has nothing to do with cost of capital and undermines the credibility of his testimony. Mr. Parcell acknowledges taking a different approach in the instant case than he would otherwise have taken to standard cost of capital analysis for purposes of rate setting.⁹⁵ It appears from Mr. Parcell's statements at the PSE Remand and Pacific Power hearings that his ROE recommendations in this case were influenced by his perceptions about "directives" and were tailored to what he understood to be a special approach expected in the case. This detracts from the weight and credibility of his analysis.

IV. IMPACT OF DECOUPLING ON COST OF CAPITAL

A. The Brattle Studies Submitted by PSE in This Case Provide Reliable Market-Based Evidence That Decoupling Reduces the Cost of Capital.

1. The Brattle Report results.

63. The record in this case contains extensive evidence regarding the impact of decoupling on cost of capital, contained in studies performed by the Brattle Group.⁹⁶ Public Counsel walked

⁹⁴ Notably, in his pre-filed testimony, Mr. Parcell acknowledges the clear direction from the Commission to provide the type of analysis that would have informed cost of capital testimony in 2013. Parcell, Exh. No. DCP-1T at 2:14-21. The special considerations he mentions in his oral testimony are nowhere mentioned, and did not come to light until the hearings.

⁹⁵ For example, Mr. Parcell makes a point in his testimony of stating that 9.8 is within his range. Parcell, Exh. No. DCP-1T at 4:3-6. This seems to mirror the burden-shifting "rebuttable presumption" approach reflected in Dr. Morin's testimony.

⁹⁶ Public Counsel does not accept the premise that the Commission must be presented with empirical evidence (which has not been defined) in order to take into account the risk-shifting effect of decoupling on cost of capital. Nor is Public Counsel without concerns as to the objectivity and reliability of the Brattle data, as discussed in the brief. However, even taking these concerns into account, Public Counsel believes that the evidence presented by Dr. Vilbert provides ample proof that decoupling has a demonstrable impact on cost of capital, as supported by the testimony of Mr. Hill and Dr. Adolph.

through the studies and their results with PSE witness, Dr. Michael J. Vilbert at the hearing, using Exhibit No. MJV-39CX as a road map.⁹⁷ A copy of the exhibit is attached as Appendix B. For the electric industry, the primary study is *The Impact of Revenue Decoupling on The Cost of Capital For Electric Utilities: An Empirical Investigation*, dated March 20, 2014 (March 2014 Brattle Report).⁹⁸ In addition, Dr. Vilbert provided two “updates” to the primary study in his testimony, referred to as Electric Study I and Electric Study II, which changed certain parameters of the March 2014 Brattle Report. For the gas industry, the record consists of the primary study, Dr. Vilbert’s gas holding company decoupling study in his Exhibit No. MJV-10, and a recalculation of the primary gas study in response to Public Counsel discovery.⁹⁹

a. The March 2014 Brattle Report.

64. The March 2014 Brattle Report, for which Dr. Vilbert was the lead author, examined the change in the overall cost of capital for 12 electric utility holding companies for the period 2005 to 2012. The type of decoupling studied was similar to that approved for PSE, that is, full revenue decoupling with a true-up mechanism. The report specifically excluded “straight fixed variable” (SFV) rate design, and lost revenue adjustment mechanisms.¹⁰⁰
65. The March 2014 Brattle Report looked only at companies that did not have decoupling at the outset of the study period, but had adopted some decoupling by the end. The report examined cost of capital impact at four points in time: the time of the regulatory order, as well as each of the three preceding quarters. Preceding quarters were studied to measure the impact

⁹⁷ Dr. Michael J. Vilbert, TR. 705:8-706:17.

⁹⁸ Hill, Exh. No. SGH-16.

⁹⁹ Vilbert, Exh. No. MJV-35CX (part d).

¹⁰⁰ Hill, Exh. No. SGH-2T at 92:3-12.

of market knowledge of the pending adoption of decoupling.¹⁰¹ The March 2014 Brattle Report is the most detailed and robust of the studies in the record, and therefore the most reliable. It remains the only study published and maintained by the Brattle Group on its website.¹⁰²

66. The results of the March 2014 Brattle Report study indicate that decoupling lowers utilities' overall cost of capital by between 41 and 49 basis points, which translates to a reduction in ROE of 68 to 82 basis points.¹⁰³ The range is derived from the four different measurement points just mentioned, with the highest impact of 49 (48.7) basis points reported two quarters prior to the order, at a confidence level of 92%. The confidence level for the reductions in overall cost of capital shown by the study ranges from 86% to 92%.¹⁰⁴

b. Dr. Vilbert's Updated Electric Studies I and II.

67. Dr. Vilbert offered two additional studies in testimony, described as updates to the original March 2014 Brattle Report. In the first update, "Electric Study I," the same time period was studied, but Dr. Vilbert made two changes in the analysis: he added companies with straight fixed variable (SFV) rate design, and he used a multi-stage DCF analysis. In the second update, "Electric Study II," he extended the study from 2012 to 2014, and again included SFV companies and employed multi-stage DCF.¹⁰⁵

68. These updates add elements that weaken their reliability. Companies with SFV were previously excluded because SFV is not sufficiently similar to PSE's full decoupling mechanism.

¹⁰¹ Hill, Exh. No. SGH-2T, at 72 and n.70.

¹⁰² Vilbert, TR. 708:21-709:11.

¹⁰³ Hill, Exh. No. SGH-2T at 93:13-18; *See* March 2014 Brattle Report, Hill, Exh. No. SGH-16 at 18. Mr. Hill's conversion of the Brattle overall rate of return reductions to reductions in the cost of equity capital was unrebutted by any party in the proceeding.

¹⁰⁴ A 92% confidence interval is only 3% lower than the 95% threshold Dr. Vilbert elected to use as a significance test for whether or not decoupling impacted the cost of capital.

¹⁰⁵ Vilbert, Exh. No. MJV-23CX.

Multi-stage DCF relies on long-term GDP growth projections which dampen quarter to quarter fluctuations. As Mr. Hill points out in his testimony, if the point of the study is to determine the rate of change in the cost of capital, using a multi-stage DCF with a GDP growth rate will dampen the changes in the DCF results, making the model results less responsive to introduction of decoupling. The multi-stage DCF is therefore not a good tool for a study attempting to identify those variations.¹⁰⁶ The results are interesting in another respect, in view of PSE's overall position in this case regarding equity costs. For Electric Study II, the average ROE results were 8.99 % and 9.19 %, for the time period that is the target period in this case.¹⁰⁷

69. Also, it is important to note that in the Electric Studies I and II updates, Dr. Vilbert elected to analyze the cost of capital impact only on the decoupling order date, not using prior quarter data as was done in the March 2014 Brattle Report. The March 2014 Brattle Report showed that the maximum impact on cost of capital occurred two quarters prior to the regulator's decoupling order, and the lowest result was obtained on the date of the regulatory order itself. Dr. Vilbert's update studies only examined the latter date.¹⁰⁸

70. Dr. Vilbert's updates and model parameter changes have the effect of reducing the cost of capital impact results of decoupling, and of reducing the *p*-values, making the results appear somewhat less statistically reliable. The results of both of Dr. Vilbert's new electric studies are almost identical, indicating the impact on the results caused by the introduction of a multi-stage DCF model in the analysis was similar. However, even with Dr. Vilbert's changes, the results

¹⁰⁶ Hill, Exh. No. SGH-2T at 98:5-23.

¹⁰⁷ Vilbert, Exh. No. MJV-33CX; Vilbert, TR. 716:1-718:25. As a contrast, Dr. Vilbert admitted that in July 2013, shortly after the time period of these multi-stage DCF results, that he had provided his expert opinion that a 13 to 14.5% return on equity was "fair and reasonable" for an A-rated electric utility. Vilbert, Exh. No. MJV-22CX; Vilbert, TR. 723:13-19.

¹⁰⁸ Vilbert, Exh. No. MJV-39CX.

show that the overall cost of capital is reduced by approximately 25 basis points at an 83% confidence level. This represents approximately a 42 basis point reduction in the cost of equity capital due to decoupling.¹⁰⁹

c. Dr. Vilbert's natural gas studies also show a reduction in cost of capital, although at a lower level.

71. The results of Dr. Vilbert's gas study, developed for purposes of this case, showed an overall cost of capital impact of just under 9%, with a 63% confidence level.¹¹⁰ This study, however, had several elements of concern. As with the electric updates, it included companies with SFV and employed the multi-stage DCF. In addition, because the study did not use a "before and after" requirement, it included some companies that already had decoupling at the outset of the study and therefore had no measurable change in decoupling. The sample group also included several gas holding companies with low percentages of regulated operations. Finally, the cost of capital estimates used were estimates presented by Brattle Group experts on behalf of the utilities, rather than independent information.¹¹¹

72. In response to a Public Counsel discovery request, Dr. Vilbert re-ran his gas utility study to account for the fact that two of the companies did not change their decoupling policy during the study period. Removing those two companies caused the overall cost of capital impact to substantially increase to approximately 14 basis points.¹¹²

¹⁰⁹ *Id.*

¹¹⁰ Hill, Exh. No. SGH-2T at 103:4-6.

¹¹¹ Hill, Exh. No. SGH-2T at 100:1-102:2. Brattle Group experts were used due to resource constraints. Vilbert, Exh. No. MJV-28CX (part e). Dr. Vilbert took issue with Mr. Hill's concern that the gas study could be inaccurate because the Brattle-sponsored equity cost estimates were not unbiased. Vilbert Rebuttal Testimony, Exh. No. MJV-18T at 21:5-22-2.

¹¹² Vilbert, Exh. No. MJV-35CX at 3.

2. The Brattle Study results provide reliable evidence that decoupling reduces cost of capital.

73. PSE and Dr. Vilbert have provided detailed empirical evidence to the Commission of cost of capital reductions caused by decoupling. As Dr. Vilbert's cross-examination at hearing established, none of the study results or parameters are in dispute.¹¹³ It is only the significance of the results which is at issue. PSE's case hangs entirely upon on acceptance of the proposition that, although the results show substantial reductions in the cost of equity across the board, they are entirely without meaning because they do not reach a 95% level of confidence. As statistical expert Professor Christopher Adolph explains in his testimony for Public Counsel and ICNU, the Commission should not accept this argument. The Commission can reasonably conclude in this case that under a preponderance of evidence standard, the study results show empirical evidence of a reductive impact of decoupling on cost of capital.¹¹⁴

74. In summarizing his findings regarding Dr. Vilbert's statistical claims, Dr. Adolph states:

[T]he key findings in the Brattle Group's research -- the statistical evidence at the heart of Dr. Vilbert's testimony -- *support* the contention that decoupling is associated with lower cost of capital in the electric and gas utilities, with stronger and more consistent evidence regarding the electric utilities. Most importantly, across every model considered, the most likely effect of decoupling on the cost of capital in the electric industry is a substantial reduction [in the overall cost of capital] of between 25 and 49 basis points.¹¹⁵

75. The statistical results for the electric industry can be divided into two groups, those from the original published study, and those from Dr. Vilbert's updates.

¹¹³ Vilbert, TR. 707:18-708-12.

¹¹⁴ Direct Testimony of Dr. Christopher A. Adolph, Exh. No. CAA-1T at 6:8-7:14 and at 30:20-31-7.

¹¹⁵ Adolph, Exh. No. CAA-1T at 6:17-23 (emphasis in original).

Table 4: March 2014 Brattle Report Results and Confidence Bounds¹¹⁶

Measure Date	Overall Cost of Capital Reduction – Study Data	<i>p</i> -value	Confidence Bound
Regulatory Order date	40.9 basis points	0.14	86%
1 Quarter prior	46.6 basis points	0.12	88%
2 Quarters prior	48.6 basis points	0.08	92%
3 Quarters prior	45.9 basis points	0.11	89%

Table 5: Electric Studies I and II Results and Confidence Bounds¹¹⁷

Measure Date	Overall Cost of Capital Reduction – Study Data	<i>p</i> -value	Confidence Bound
Elec. Study I Regulatory Order date	25 basis points	0.17	83%
Elec. Study II Regulatory Order date	26 basis points	0.17	83%

76. The specific value for the cost of capital reduction shown above is the “point estimate,” the most likely estimate of the effect of decoupling on cost of capital.¹¹⁸

a. Confidence bounds and *p*-values.

77. As Dr. Adolph explains, the “confidence bound” shown on the above table is another way to represent the “*p*-value” produced by the studies.¹¹⁹ Because the study looks at a relatively limited sample of companies and time periods, there is a source of doubt as to the point estimate: is the limited sample representative of the general population of companies? The confidence bound is a tool of statistical inference that allows quantification of this doubt and can be used to avoid drawing misleading conclusions from limited samples.¹²⁰

¹¹⁶ Vilbert, Exh. No. MJV-39CX.

¹¹⁷ *Id.*

¹¹⁸ Adolph, Exh. No. CAA-1T at 9:19-24.

¹¹⁹ *Id.* at 14:2-5.

¹²⁰ *Id.* at 17:3-21 (Providing a “plainer language” explanation of confidence bounds).

78. For example, a confidence bound of 83% (corresponding to a p -value of 0.17) means that in 100 different cases over time, if the Commission decides that the data supported by an 83% confidence bound can be used to confirm that there is a cost of capital reduction, it will be correct in 83% of those cases, and incorrect 17% of the time.¹²¹

79. In the context of this case, the confidence bounds applicable to the study results can be stated in the following way.

- Highest Impact - For the original March 2014 Brattle Group study, for the data two quarters prior to the regulatory order, if the Commission saw a series of 100 cases over time, and determined that overall cost of capital was reduced by 49 basis points, it would be correct that cost of capital was reduced 92% of the time, and incorrect 8% of the time
- Intermediate Impact – For the remaining March 2014 Brattle Group study results, if the Commission saw a series of 100 cases, and determined that cost of capital was reduced 41 to 47 basis points, it would be correct that cost of capital was reduced 86 to 89% of the time.
- Lowest Impact - For the updated results preferred by Dr. Vilbert (Electric Studies I and II), if the Commission saw a series of 100 cases over time, and determined that the cost of capital was reduced by 25 basis points, the Commission would be correct 83% of the time, and incorrect 17% of the time.¹²²

¹²¹ *Id.* at 31:9-20.

¹²² *Id.* It is important to note that the basis point reductions reported in the Brattle studies and cited by Professor Adolph are reductions in the overall cost of capital. The cost of equity reductions—the focus of the analysis in this proceeding—are nearly twice as high. Ranging, across all the studies, from approximately 25 basis points to 75 basis points. Hill, Exh. No. SGH-2T at 93:11-18.

b. The null hypothesis and the one-tailed test.

80. The question in the case is directional – we want to know if the effect of decoupling is negative, i.e., if decoupling reduces the cost of equity capital. This calls for the use of a “one-tailed” statistical analysis, for purpose of computing the p -value. Dr. Vilbert and Dr. Adolph both agree that a “one-tailed” test is most appropriate in this case, although as noted below, it must be understood that this creates an asymmetric burden of proof.¹²³

81. To compute a p -value, a statistical study must also select a “null hypothesis.” The Brattle Group selected as the null hypothesis the proposition that decoupling *does not* lower the cost of capital, which they attempt to reject in favor of the alternative hypothesis that decoupling *does* lower the cost of capital. With this null hypothesis, the one-tailed p -value assesses how likely a sample is to produce a spurious finding that decoupling lowers the cost of capital when it actually has no effect or raises the cost of capital in the general population of utility firms. The smaller the p -value, the more confident one can be that the estimate of a downward impact on the cost of capital in the sample data is evidence of a downward impact in the population.¹²⁴

82. It is important to note that the choice of the null hypothesis is not “neutral” when a one-tailed test is used. The significance of the choice is illustrated if the mirror image null hypothesis is used, i.e., “decoupling *does* reduce the cost of capital.” Using the same Brattle Group data, the study would then attempt to reject the null in favor of the alternative hypothesis that decoupling *does not* reduce the cost of capital. In this mirror image of the test, using Dr. Vilbert’s significance test of 95% and the same data, the hypothesis of a downward ROE

¹²³ *Id.* at 10:21-11:6. A “two-tailed” test would ask whether the true effect of decoupling is either far above or far below a specific value without specifying a direction.

¹²⁴ *Id.* at 11:18-12:6.

impact *cannot* be rejected. The confidence levels to reject the alternative hypothesis (no downward impact) range from a high of 17% to a low of 8%, far below the 95% level. This illustrates that selection of the null hypothesis can shift the conclusion in favor of one's preferred conclusion and create a more difficult and asymmetrical burden on proponents of the alternative hypothesis.¹²⁵

c. The study results are sufficient to meet the preponderance of the evidence standard.

83. Again, the dispute between the parties does not focus on the above results or statistical principles. The issue is what legal impact is appropriately attributed to the results. Decision makers are free to determine how much statistical confidence they require to make a decision, accepting the amount of risk that confidence level implies, to apply to the "confidence level" generated by the study data. The decision maker can decide what level of significance it will use as a "cut off" for consideration of evidence, whether that be 51% or 95%, or something in-between.¹²⁶

84. Dr. Vilbert argues that 95% is an absolute cut-off, but cites no binding precedent that imposes that standard on the Commission. The fact that many academic journals use the standard is not determinative in a civil legal proceeding. Even if the academic standard is applied, some academic journal standards use a 90% significance level, a standard met by some of the evidence in the case.¹²⁷ The 95% level is akin to requiring proof beyond a reasonable

¹²⁵ Adolph, Exh. No. CAA-1T at 22:13-23:18. Adolph points out that for this reason, scientific papers are not allowed to impose the claim that is being considered as the null hypothesis.

¹²⁶ *Id.* at 21:7-22:12.

¹²⁷ *Id.* at 30:13-15.

doubt, a standard not applicable in civil cases.¹²⁸ The evidentiary standard for Commission proceedings is a “preponderance of the evidence” standard, which requires that “the evidence establish the proposition at issue is more probably true than not true.”¹²⁹

85. Requiring that evidence must meet the 95% standard or be afforded no weight at all is incompatible with the preponderance of the evidence standard. Dr. Vilbert is asking the Commission to reject undisputed evidence showing that in 83 to 92 cases out of 100, it would be correct if it decided that the cost of equity capital would be reduced by decoupling, on the sole basis that the evidence does not show the Commission would be correct in 95 cases out of 100. This is an arbitrary dividing line. A better approach is for the Commission to simply look at the confidence bounds (*p*-values) of the data and to decide what weight it wishes to afford the evidence. Dr. Adolph discusses how this is an approach which has support in the academic sphere, as an alternative to an arbitrary cut-off. The Commission has the discretion to make its own determination about what confidence level it requires in the evidence presented to meet the preponderance of the evidence test.

d. The statistical analysis provides a basis for the Commission to reasonably conclude with a strong degree of confidence that decoupling reduces PSE’s cost of capital.

86. In summary, the original published March 2014 Brattle Report, the most reliable Brattle data in the record, shows that there is a reduction of between 40 and 49 basis points in cost of

¹²⁸ *Id.* at 24:14-18.

¹²⁹ *Mohr v. Grant*, 153 Wn. 2d 812, 822, 108 P.3d 768 (2005); *Palmer v. Huston*, 67 Wn. 210, 211, 121 at 452 (“It is the excess over the amount of testimony necessary to balance the scales [.]”) This can be compared with the “clear, cogent, and convincing” standard, which is more than a preponderance, but less than beyond a reasonable doubt. Tegland, *Washington Practice, Evidence* (2007) § 301.3 (applied to such issues as fraud, invalidity of a will).

capital¹³⁰ resulting from decoupling, with a confidence level of 86 to 92%. Based on these results, the Commission can reasonably conclude that a preponderance of the statistical evidence in the record establishes that a significant cost of capital reduction for PSE is appropriate due to decoupling.¹³¹

87. If the Commission alternatively accepts Dr. Vilbert's preferred updated studies (Electric Study I and II), these data establish that there is a reduction of 25 basis points in the overall cost of capital, due to decoupling, translating to 42 basis point reduction in the cost of equity capital, with a confidence level of 83%.¹³²

88. PSE has not made a persuasive showing that the Commission is required to use an inflexible 95% level for the significance of the Brattle study results. The Commission is free to weigh the evidence without Dr. Vilbert's preferred filter, and determine its appropriate weight. The Brattle results are sufficient to provide a basis for the Commission to conclude that a preponderance of the statistical evidence establishes that a significant cost of capital reduction for PSE is appropriate due to decoupling.¹³³

89. As a final point, it is important to recall that the Brattle Group studies do not provide evidence *against* the conclusion that decoupling reduces cost of capital for utilities. "In statistical inference, the absence of evidence is not the same as evidence of absence[.]"¹³⁴ If the Commission decides that the Brattle Group results must meet Dr. Vilbert's preferred level of 95% statistical significance, the Commission cannot draw any conclusions one way or the other

¹³⁰ The 40 to 49 basis point reduction in overall cost of capital translates to a 68 to 82 basis point reduction in return on equity. Hill, SGH-2T at 93:15-18 and Exh. No. SHG-17.

¹³¹ Adolph, Exh. No. CAA-1T at 30:20-31:8.

¹³² Hill, Exh. No. SGH-2T at 99:13-17 and Exh. No. SGH-17.

¹³³ *Id.*

¹³⁴ Adolph, Exh. No. CAA-1T at 8:9-15.

from the Brattle Group studies. It can still, however, look to other evidence in the record on the issue of decoupling impact, such as Mr. Hill's revenue volatility analysis, discussed in the next section.

B. Mr. Hill's Net Revenue Volatility Analysis Demonstrates The Impact of Decoupling On The Cost of Capital.

90. In addition to the cost of capital impact evident from the Brattle Report, the impact of decoupling on cost of capital can also be determined by an analysis of revenue volatility.

Commission Staff identified this as measure of impact in the earlier phase of the case in their pre-filed testimony:

Full decoupling should reduce substantially the utility's revenue risk by guaranteeing a specific amount of revenue per customer. ... Reduced revenue volatility reduces risk which should translate into lower capital costs, either as a lower required return on equity or the need for less equity in the utility's capital structure.¹³⁵

91. On behalf of Public Counsel, Mr. Hill performed a revenue volatility analysis for the remand phase of the case and presented the results in his pre-filed direct testimony.¹³⁶ The basic premise of this analysis is that an investor purchases a financial asset with the expectation the asset will produce a future stream of income to the investor, generating an expected rate of return. The risk of investing in the asset is directly related to the possibility that actual, realized returns will deviate from expected returns. A measure of investment risk, therefore, is the volatility or variability of the income stream it generates. The fundamental concept is that the volatility of the financial asset is directly related to its investment risk.

¹³⁵ Direct Testimony of Deborah J. Reynolds, Exh. No. DJR-1T at 8:23-9:2; See also, PSE 2011 GRC, Order 08, ¶ 446 (addressing reduced revenue volatility).

¹³⁶ Hill, Exh. No. SGH-2T at 106-122.

92. Decoupling acts like a revenue pass-through rate adjustment for factors that cause revenue volatility, including weather, conservation, economic downturns, price elasticity, changes in customer mix, or technological change. It operates as a buffer, sheltering the shareholders from fluctuations in revenue and moderating swings in operating earnings and dividends that might otherwise result from these factors. The allowed rate of return for a utility with revenues decoupled from volumetric sales must be lower than that for the same utility under traditional regulation.

93. The revenue volatility analysis is a method to quantify that impact. As Mr. Hill observes, this is intuitively obvious. If, for example, operating costs were constant, and 100% of the utility's revenue variance were eliminated by decoupling, a utility equity investment would become, in effect, a bond-like investment. The level of uncertainty would be either eliminated or substantially reduced and the risk-adjusted equity return would move to a level comparable to debt capital.¹³⁷

94. Mr. Hill used a two-step methodology to analyze the cost of equity impact of a reduction in revenue volatility. First, he measured the degree to which utility revenues were dependent on factors such as economic growth and weather. Second, he quantified the net revenue volatility that normally exists for PSE's utility operations. Mr. Hill obtained Washington State economic data from the Bureau of Labor Statistics as well as data in discovery from PSE for the period 1999-2013 for revenues and heating degree days. He performed a multiple regression analysis of the historical net revenues, established PSE's net revenue trend for the period, and performed a

¹³⁷ Hill, Exh. No. SGH-2T at 111:8-14.

combined utility operations variance analysis, assuming that decoupling, ultimately, would reduce the variance in PSE's net revenues by approximately 35%.¹³⁸

95. Based on this analysis, Mr. Hill calculated that an equity return reduction of 33.5 basis points would be appropriate for PSE under its new decoupling mechanism. This is consistent with the market-based data analysis provided in the Brattle Group study, which indicated that a decoupling based adjustment to equity return in the range of 25 to 75 basis points is reasonable.¹³⁹ Taking into account both analyses, Mr. Hill recommends a decoupling adjustment to market-based ROE of 35 basis points.

C. Neither Staff Nor PSE Present A Decoupling Impact Analysis.

1. Staff's position in the case is problematic.

a. Staff agrees that decoupling should be reflected in lower capital costs.

96. Staff's position on the decoupling impact issue is problematic. Staff agrees that "[r]educed revenue volatility reduces risk, which should translate into lower capital costs[.]"¹⁴⁰ At the Remand hearing, Staff expressly disclaimed that it would "never reduce return on equity due to the effects of decoupling" and agreed that "it needs to be looked at."¹⁴¹ Staff continues to maintain, however, that capital costs should not be reduced at the time rate plan rates are set, but at some later date.¹⁴² At the same time, Staff is taking the legal position in the Remand proceeding, that decoupling impact is not before the Commission at all, due to Staff's interpretation of the Remand order. It appears to be Staff's position that, even if the Commission

¹³⁸ *Id.* at 110:15- 122:7 (describing analytic methodology in detail); *See* Hill, Exh. No. SGH-19 (containing analysis and results).

¹³⁹ *Id.* at 121:1-122:7.

¹⁴⁰ Reynolds, Exh. No. DJR-1T at 8:23 - 9:2.

¹⁴¹ Schooley, TR. 763:19-24.

¹⁴² Schooley, Exh. No. TES-6T at 5:7-22.

wished to recognize reduced capital costs from decoupling in Rate Plan rates, it is barred from doing so by the Remand order.

b. Staff positions on this issue are inconsistent.

97. Staff has recently made recommendations to the Commission regarding the impact of decoupling that are diametrically opposed to its recommendations here. In the recent Avista 2014 GRC, Mr. Schooley proposed adoption of a full decoupling mechanism “similar in all substantial respects to PSE’s full decoupling mechanisms.”¹⁴³ In the Avista case, Mr. Schooley reviewed how each element of the proposal met the Commission’s Decoupling Policy Statement, including the second element addressing “Impact on Rate of Return.”¹⁴⁴ Staff met that element by sponsoring cost of capital testimony by Staff witness Kenneth Elgin recommending a specific adjustment reducing the overall cost of capital by 13 basis points.¹⁴⁵

98. Staff’s recommendation was that the 13 basis point reduction in overall return be incorporated immediately in Arista’s new rates. Neither Mr. Schooley nor Mr. Elgin on behalf of Staff recommended that the Commission wait and study the impact of decoupling for Avista for several years before making an adjustment.¹⁴⁶ Neither testified that the impact of decoupling on Avista’s cost of capital was “hypothetical.”¹⁴⁷ The final result of the Avista rate proceeding was a settlement which included an agreement of Staff with all other parties that the revenue requirement in the case included a reduction to reflect the adoption of decoupling. The

¹⁴³ *Wash. Util. & Transp. Comm’n v. Avista Corp.* Dockets UE-140188/UG-140189 (Avista 2014 GRC), Testimony of Thomas E. Schooley, Exh. No. TES-1T at 19:20-21.

¹⁴⁴ Schooley, TR. 746:3-18.

¹⁴⁵ Schooley, TR. 746:3-18. Mr. Elgin used a substantial reduction in the ratemaking common equity ratio as a basis to reduce Avista’s cost of capital.

¹⁴⁶ Schooley, TR. 747:1-7, 749:4-750:1.

¹⁴⁷ Schooley, TR. 750:2-8.

settlement was approved and adopted by the Commission.¹⁴⁸ Nevertheless, in testimony filed less than six months later, Staff's testimony is that the impact of decoupling is "at best hypothetical and unsupported by empirical evidence."¹⁴⁹ This is directly contrary to the Staff recommendation in Avista.

c. Staff's "wait and see" approach is unlawful and unfair to customers.

99. The "wait and see" approach which Staff continues to advocate to assess decoupling impact, at least for PSE, should be rejected. First and foremost, it violates the fundamental legal and economic principles of ratemaking and cost of capital determination. There is no dispute that decoupling reduces a utility company's risk.¹⁵⁰ Every party to the case takes that position, as has the Commission. A utility company's cost of capital is directly related to the company's risk, as the U.S. Supreme Court and the Washington Supreme Court have recognized. Determining a utility's cost of capital as part of rate setting without consideration of a major change in its risk profile is a violation of these fundamental legal and economic principles.

100. The Commission's decoupling policy statement on decoupling does not adopt a "wait and see" approach. The Staff has cited no Commission precedent for delayed recognition. The precedent instead supports immediate recognition, as reflected in the recent Avista rate decision. The March 2014 Brattle Report assesses the cost of capital impact at the time of the regulatory order approving decoupling and shortly before, not months or years after the fact. Cost of capital

¹⁴⁸ *Wash. Util. & Transp. Comm'n v. Avista Corp*, Dockets UE-140188/UG-140189 (Avista 2014 GRC), Order 05, Settlement Stipulation at 5 (November 25, 2014).

¹⁴⁹ Schooley, TES-6T at 5:15-16.

¹⁵⁰ During the hearing panel, for example, Dr. Morin observed that "I don't think there's any question that decoupling reduces risk in an absolute fashion. There's no question about that. I think we all agree on that. But does it really reduce risk on the relative basis, relative to the peer group?" Morin, TR. 686:8-12.

is an *ex ante* expectational analysis.¹⁵¹ It is a current cost that must be incorporated in rate setting at the outset.

101. Assessing the impact of decoupling is no more hypothetical than any other aspect of the cost of capital determination in a general rate case. The Staff's "wait and see" approach fails to balance the interests of shareholders and ratepayers by exposing customers to payment of excessive returns during the life of the Rate Plan, with no avenue for relief. Meanwhile, because revenue is stabilized and risk is shifted to customers at the outset of the plan, PSE and its investors immediately benefit. Absent a reduced cost of capital, investors receive years of unfairly elevated returns. Even if the Commission were to make a finding in PSE's next GRC that decoupling reduced PSE's cost of capital during the Rate Plan, the Commission is barred by the doctrine against retroactive ratemaking from refunding customers for excessive rates during the plan.¹⁵² Any relief for customers from excessive returns would be prospective only.¹⁵³

d. Staff has no clear plan to analyze decoupling impact.

102. Staff does not appear to currently have any clear plan for evaluating decoupling impact. In discovery, Staff was asked to "describe in as much detail as possible the manner in which Staff expects to be able to assess the risk reduction impact on Puget at the conclusion of the current rate plan." Staff responded only that it was reviewing the most recent PSE Commission Basis Report, and planned to review the impact of decoupling and other mechanisms using

¹⁵¹ Morin, TR. at 568:1-6. ("the whole discipline of finance is forward looking, and investors make decisions today on the basis of what they expect to happen. So it behooves us to try to be as *ex ante*, as prospective as possible.")

¹⁵² Goodman, *The Process of Ratemaking*, Public Utility Reports (1998), at 165-169.

¹⁵³ If the Rate Plan is in place for a full four years, this means that PSE customers will have been paying a locked in 9.8% ROE, based on 2011 data for approximately six years, during a period when the evidence shows cost of capital has been declining.

“careful thought.”¹⁵⁴ No further detail was provided. Staff’s argues that the Commission must wait to allow time for evidence and data to be gathered. Even assuming this search for “empirical data” makes sense, which Public Counsel disputes, PSE’s decoupling mechanism has been in place for 18 months and data has been available to Staff. In response to Public Counsel discovery, however, Staff indicated it had not produced or reviewed any studies, memoranda, or reports on decoupling impact except for Dr. Vilbert’s study in this case.¹⁵⁵ Staff conducted no discovery in this proceeding regarding decoupling impact, apparently because of its litigation position.¹⁵⁶

103. The data already available shows that potential refunds for electric customers in 2013 were \$16 million, while potential surcharges for electric customers for the first half of 2014 were over \$25 million. Mr. Schooley has testified earlier in this case that the magnitude of the refunds and surcharges under decoupling would be “direct evidence” of the revenue volatility dampened by decoupling and confirmed that again in discovery.¹⁵⁷ In response to Public Counsel discovery, he confirmed this would be “one type of evidence” to be used, and also agreed that these refunds and surcharges experienced in 2013 and 2014 “demonstrate that revenue volatility has been reduced or dampened,” although arguing it is a minor factor.¹⁵⁸ The \$25 million for the first half of 2014, however, is 2.4% of PSE’s total revenue, close to the 3% level that is

¹⁵⁴ Schooley, Exh. No. TES-9CX.

¹⁵⁵ *Id.*

¹⁵⁶ Schooley, TR.750:14-19.

¹⁵⁷ Schooley, Exh. No. TES-10CX (part a). Commission Staff retained Stephen Hill to provide cost of capital testimony in the PSE 2006 GRC. In that case, based on a revenue volatility analysis he recommended a 50 basis point reduction in ROE due to decoupling. Hill, Exh. No. SGH-1T at 11:12-18.

¹⁵⁸ Schooley, Exh. No. TEX-10CX (part b).

considered significant enough to require a general rate case. If the full year figures follow the trend, the surcharge could be nearly \$50 million, nearly 5% of revenues.

104. In examination by Commissioner Jones at the hearing, moreover, Mr. Schooley was no longer describing the impact of decoupling as a minor factor. While he did not have the full year figures for 2014, he expressed serious concern that customers will see a “double whammy” when the under-collections for 2014 flow through the mechanism, predicting “significant fluctuations” and customer confusion.¹⁵⁹ He also agreed that the mechanism “evens out the fluctuations of revenue to the company.”¹⁶⁰ This is further evidence that decoupling has a major impact, shifting PSE’s revenue volatility to its customers.

e. Staff witness Parcell has historically supported the Public Counsel position on decoupling impact.

105. Staff’s own expert witness David Parcell provides little support for Staff’s position on decoupling. On the contrary, he is on record in multiple jurisdictions as supporting the same positions advocated by Public Counsel and ICNU in this case. He has frequently testified in support of the proposition that decoupling reduces a utility’s risk and therefore its cost of capital. He has testified to this effect in Arizona, Maryland, Hawaii, Delaware, and in Washington State, recommending either specific basis point reductions or movement downward in his range.¹⁶¹ In a 2006 Cascade Natural Gas case in Washington, Mr. Parcell testified for Commission Staff that

¹⁵⁹ Schooley, TR. 758:4-759:12.

¹⁶⁰ Schooley, TR. 759:1-2.

¹⁶¹ Hill, Exh. No. SGH-23CX; Parcell, Exh. Nos. DCP-15CX and DCP-16CX.

Cascade's cost of equity should be reduced by 25 basis points if the decoupling mechanism proposed in that case was adopted.¹⁶²

106. Nor has Mr. Parcell advocated for Staff's "wait and see" approach. He has not recommended, as his own expert opinion, that a regulatory Commission delay recognition of the effect until some future time.¹⁶³ His testimony in Washington, as well as other jurisdictions has supported immediate recognition of the decoupling impact in rates.

107. It is reasonable to assume that if Mr. Parcell had filed testimony in this case consistent with his past positions, he would have addressed the impact of decoupling as part of the cost of capital analysis, and would likely have recommended a downward adjustment. His testimony in the PacifiCorp 2014 General Rate Case, filed only a few months after his Remand testimony, supports this conclusion.¹⁶⁴ In PacifiCorp he has specifically recommended that if a Power Cost Adjustment is adopted for PacifiCorp, it should be reflected in a lower cost of capital at the time of rate setting, because it is a "new mechanism" for the Company. He concedes that PSE's decoupling mechanism and K-factor rate plan are also "new mechanisms" for PSE.¹⁶⁵

108. When questioned about his failure to address decoupling in this case, his explanation was that this is not a general rate case.¹⁶⁶ This makes little sense. First, the point, if valid, would apply equally to the process of setting a market-based cost of capital, on which he, and all the other witnesses, have testified with no such objection. Secondly, the argument mistakes the entire import of the Remand. In the initial phase of the case, PSE and Staff argued that cost of

¹⁶² Parcell, TR. 609:13-23.

¹⁶³ In Arizona, he made no specific recommendation because the Commission had issued a policy statement indicating it would require a three-year delay on the issue. Hill, Exh. No. SGH-23CX at 7.

¹⁶⁴ Parcell, Exh. No. DCP-17CX at 41-42.

¹⁶⁵ Parcell, TR. 697:7-23.

¹⁶⁶ Parcell, TR. 615:14-616:10.

capital need not be addressed and the 9.8% could simply remain in effect because the Commission was not conducting a general rate case. The Superior Court ultimately rejected this view, requiring the Commission to address cost of capital on remand and the Commission directed the parties to present cost of capital in the same manner as in a general rate case. Mr. Parcell has routinely addressed decoupling as part of his cost of capital analysis in general rate cases. In this case, it appears that it was simply Staff's decision that he not address decoupling, because of their litigation position "that the issue of the effect of decoupling on ROE is not included in the remand."¹⁶⁷

2. Dr. Morin has previously supported adjusting ROE to reflect decoupling.

109. Dr. Morin has previously testified in Hawaii, Washington D.C., and Washington state that the adoption of decoupling should be reflected in a specific downward adjustment to cost of capital.¹⁶⁸ In Hawaii, he testified that "if the RDM[revenue decoupling mechanism]/Rider mechanisms are approved by the Commission, the Company's risk is reduced, and the cost of common equity declines by some 25 basis points."¹⁶⁹ In the 2006 Cascade General Rate Case in Washington, Dr. Morin testified that his ROE recommendation was "based upon anticipated adoption of the decoupling mechanism proposed by the Company[.] Rejection of this proposed mechanism would increase Cascade's risk profile and would therefore require an upward adjustment to this ROE recommendation."¹⁷⁰ In none of these cases did Dr. Morin recommend that the regulatory Commission postpone recognition of the cost of capital impact for any period

¹⁶⁷ Staff Response to Public Counsel Data Request No. 4, Exh. No. SGH-24CX (asking "why there is no mention of decoupling in Mr. Parcell's testimony).

¹⁶⁸ Morin, Exh. Nos. RAM-19CX at 2, RAM-23CX at 5-6, RAM-25CX at 3, and RAM-26CX at 7.

¹⁶⁹ Morin, Exh. No. RAM-19CX at 2.

¹⁷⁰ Morin, Exh. No. RAM-23CX at 54:13-17. At the hearing Dr. Morin recalled that the adjustment was 25 basis points. TR. 573:18-22.

of time. The recommendation was to be incorporated in the calculation of the rates being set in the case.

110. Based on his testimony and his responses to cross-examination at the hearing, it appears Dr. Morin now believes that no adjustment is appropriate for PSE because decoupling is so ubiquitous that it is already incorporated in market expectations. The record does not support his new position. His own direct testimony in the case is a conclusory one paragraph statement without any analysis. He testified only that, “*To the extent* that the market-derived cost of common equity for other utility companies already incorporates the impacts of these or similar mechanisms, no further adjustment is appropriate or reasonable[.]”¹⁷¹ Dr. Morin made no attempt to ascertain the “extent” to which his assumption was true through any analysis in testimony whatever. At hearing, he was unable to state how many companies in his sample group have decoupling comparable to PSE’s mechanism¹⁷² and was unable to name or describe any of PSE’s other regulatory mechanisms for comparison purposes.¹⁷³ He referenced Dr. Vilbert’s testimony in this case in his testimony, although Dr. Vilbert’s evidence actually shows across-the-board impacts on cost of capital, not that the impact is “baked in.” Dr. Morin also acknowledged at the hearing that the Brattle Report only includes 12 companies with full true-up decoupling and that the majority of companies in the United States do not have decoupling mechanisms.¹⁷⁴

¹⁷¹ Morin, Exh. No. RAM-1T at 68:6-10 (emphasis added).

¹⁷² Morin, TR. 574:1-4, TR. 663:17-22.

¹⁷³ Morin, TR. 575:1-22.

¹⁷⁴ Morin, TR. 574:12-14; TR. 663:23-24 (“If I had done that [only used companies that had full decoupling], I would have ended up with a very, very small portfolio of a handful of companies.”)

111. Mr. Hill addresses this general contention (the “baked in” contention) in some detail in his testimony, including an analysis of Dr. Morin’s sample group.¹⁷⁵ More than half of the utilities in Dr. Morin’s sample group have zero decoupling. He points out that the Brattle Group’s own decoupling map, attached as Appendix C, shows that at the time of the study only twelve states had full “true-up” decoupling of the type awarded to PSE.¹⁷⁶ Dr. Morin does not respond to these specific points in his rebuttal testimony. While Dr. Morin points to the existence of many types of risk-adjustment mechanisms for utilities, he has provided no evidence that the variety of different mechanisms are comparable to PSE’s full decoupling mechanism, or that they lower operating risk to the same degree. As a result, PSE has failed to carry its burden of proof on the issue of decoupling impact.¹⁷⁷

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¹⁷⁵ Hill, Exh. No. SGH-2T at 78:18-83:16.

¹⁷⁶ Hill, Exh. No. SGH-2T at 80:1-11 and nn.50-51 (*See* Appendix C).

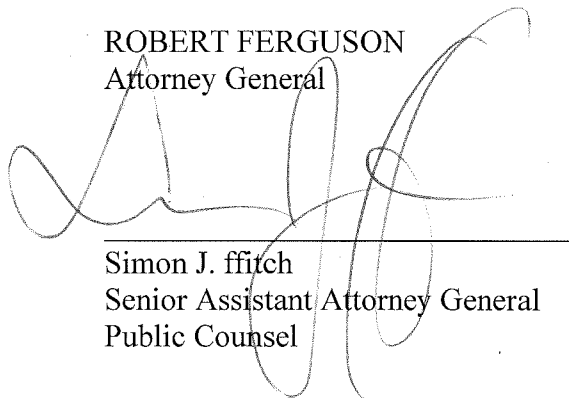
¹⁷⁷ As noted above, the statistical analysis presented by Dr. Vilbert does not prove that decoupling has *no* effect on cost of capital.

V. CONCLUSION

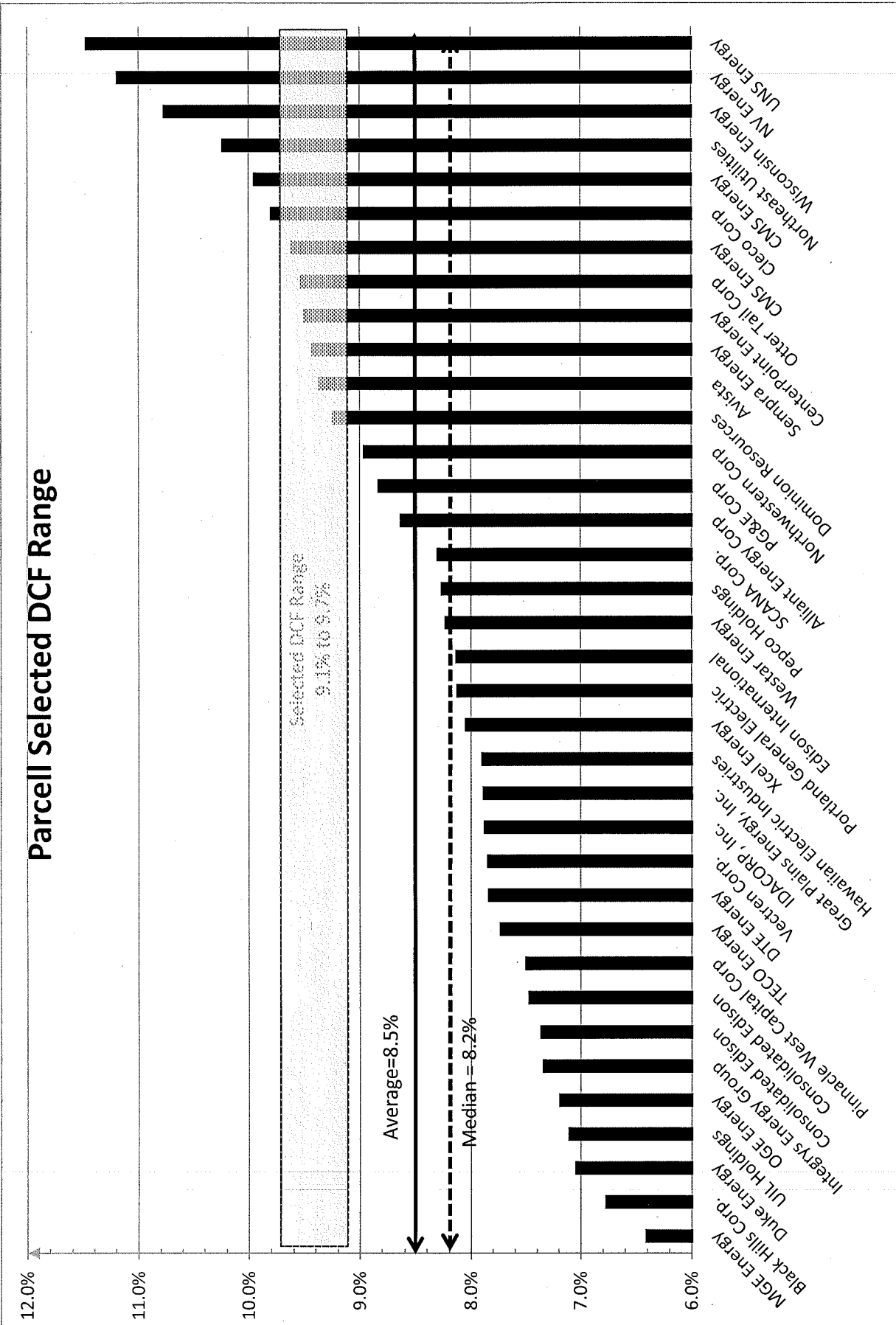
112. For the foregoing reasons, Public Counsel respectfully requests that the Commission adopt a new lower ROE for PSE that reflects the declining cost of capital and the adoption of decoupling at the initiation of the Rate Plan in early 2013. Mr. Hill's recommendation of 8.65% is a reasonable ROE based on the evidence. The need for a reduction in ROE is further supported by the analyses of Mr. Gorman and Mr. Parcell. Public Counsel also requests that the Commission order further proceedings to establish fair, just, reasonable, and sufficient rates to be charged under the Rate Plan, pursuant to the Superior Court's order, and to establish refunds for excess rates paid by customers since the effective date of the Rate Plan.

DATED this 6th day of March, 2015.

ROBERT FERGUSON
Attorney General



Simon J. Ffitch
Senior Assistant Attorney General
Public Counsel



All data from Parcell Exhibit No. DCP-7, pp. 4 and 5.

Brattle Group/Vilbert Decoupling Studies

Designation	Analysis Point ^o	Time Period Analyzed ^{††}	Type of Decoupling ^{††}	Equity Cost Model ^o	Overall Wt. Avg. Cost of Capital Reduction	p-value
1) March 2014* [Published Brattle Report]	Reg. Order Date 1 Qtr. Prior 2 Qtr. Prior 3 Qtr. Prior	1Q/05-4Q/12 1Q/05-4Q/12 1Q/05-4Q/12 1Q/05-4Q/12	True-up True-up True-up True-up	DCF DCF DCF DCF	-0.409% -0.465% -0.487% -0.459%	0.14 0.12 0.08 0.11
2) PSE El. Study I**	Reg. Order Date	1Q/05-4Q/12	True-up, SFV	Multi-Stage DCF	-0.250%	0.17
3) PSE El. Study II**	Reg. Order Date	1Q/05-2Q/14	True-up, SFV	Multi-Stage DCF	-0.260%	0.17
4) PSE Gas Study**	Reg. Order Date	10/05-5/12	True-up, SFV	Multi-Stage DCF	-0.087%	0.37
Gas Study (Removing Two Companies With No Decoupling Policy Change) [†]						
-0.136%						

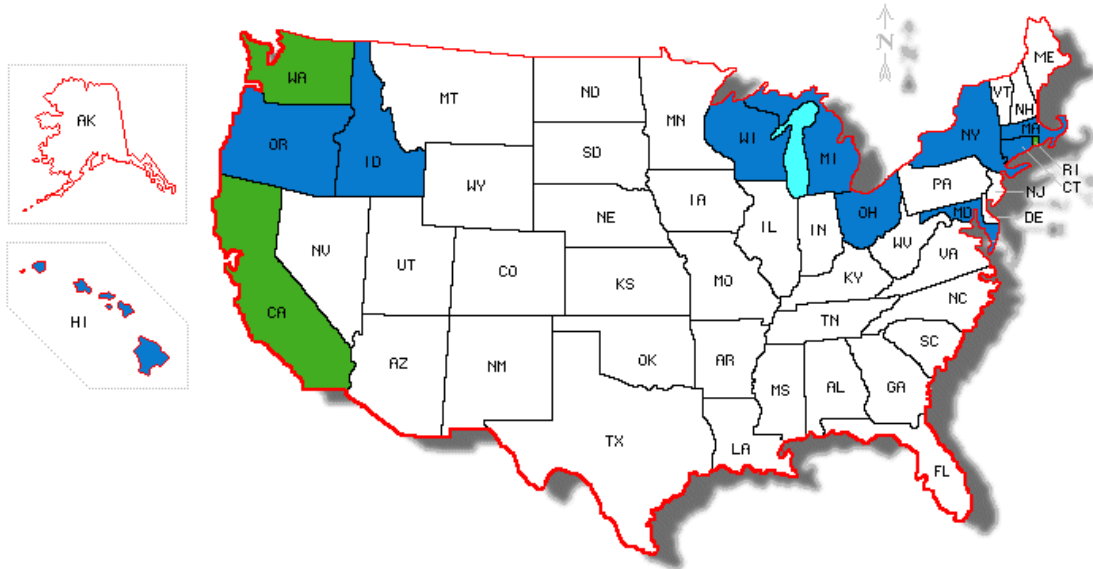
* Hill Exhibit SGH-16
 ** Vilbert Exhibit MJV-1T, pp. 20, 28: (Electric Study I - MJV-13), (Electric Study II - MJV-12), (Gas Study - MJV-10)
 † PSE response to PC DR No. 107
 †† Exhibit MJV-19
 ° Exhibit MJV-20

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Chart IV

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States With Electric Utility Decoupling⁵⁰



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Rather than being ubiquitous, this map, published by Brattle, shows that electric

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revenue decoupling with true-up (the decoupling mechanism awarded Puget)

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exists in only twelve states. In addition, the Edison Electric Institute, in a 2013

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report on alternative regulation, indicates that an additional 15 states have revenue

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decoupling for gas utilities only.⁵¹ Not all states have decoupling of the type

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allowed Puget and the majority of those that do have it, do so for either electric

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utilities or gas utilities but not for both. Decoupling is far from “the norm” that

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the Company representatives suggest it is.

⁵⁰ Source: “The Impact of Revenue Decoupling on the Cost of Capital for Electric Utilities: An Empirical Investigation,” The Brattle Group, March, 2014, p. 6 (Exhibit No SGH-16). The shaded states are states with decoupling. In colored versions, green connotes states with decoupling instituted outside the Brattle study period (Washington, California, and Rhode Island).

⁵¹ The Edison Electric Institute, “Alternative Regulation for Evolving Utility Challenges: An Updated Survey,” January 2013, pp. 3-4.