

**BEFORE THE WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION**

WASHINGTON UTILITIES AND	)	
TRANSPORTATION COMMISSION,	)	
	)	
Complainant,	)	
	)	
v.	)	Docket Nos. UE-111048/UG-111049
	)	(Consolidated)
PUGET SOUND ENERGY, INC.,	)	
	)	
Respondent.	)	
_____	)	

**RESPONSIVE TESTIMONY OF MICHAEL P. GORMAN**  
**ON BEHALF OF**  
**THE INDUSTRIAL CUSTOMERS OF NORTHWEST UTILITIES**

**December 7, 2011**

1 **Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.**

2 **A.** Michael P. Gorman. My business address is 16690 Swingley Ridge Road, Suite 140,  
3 Chesterfield, MO 63017.

4 **Q. WHAT IS YOUR OCCUPATION?**

5 **A.** I am a consultant in the field of public utility regulation and a managing principal of  
6 Brubaker & Associates, Inc., energy, economic and regulatory consultants.

7 **Q. PLEASE DESCRIBE YOUR EDUCATIONAL BACKGROUND AND**  
8 **EXPERIENCE.**

9 **A.** These are set forth in Exhibit No.\_\_(MPG-2).

10 **Q. ON WHOSE BEHALF ARE YOU APPEARING IN THIS PROCEEDING?**

11 **A.** I am appearing on behalf of the Industrial Customers of Northwest Utilities (“ICNU”).

12 **Q. WHAT IS THE SUBJECT OF YOUR TESTIMONY?**

13 **A.** I will recommend a fair return on common equity and overall rate of return for Puget  
14 Sound Energy, Inc. (“PSE” or the “Company”).

15 **Summary**

16 **Q. PLEASE SUMMARIZE YOUR RETURN ON EQUITY**  
17 **RECOMMENDATIONS.**

18 **A.** Based on my proposed capital structure, I recommend the Washington State Utilities  
19 and Transportation Commission (the “Commission”) award PSE a return on common  
20 equity of either 9.50% or 9.70%. I recommend a return on equity (“ROE”) of 9.50%  
21 if the Company’s proposed Conservation Savings Adjustment (“CSA”) mechanism is  
22 adopted. However, if the Commission does not adopt the CSA mechanism, then I  
23 recommend a 9.70% ROE, which is approximately at the midpoint of my estimated  
24 range of 9.50% to 9.85%. A 9.70% ROE would reduce PSE’s revenue requirement

1 increase by \$55.0 million and a 9.50% ROE would reduce PSE's revenue requirement  
2 increase by \$65.5 million.

3 I recommend an overall rate of return of 7.83% for PSE, as shown in Exhibit  
4 No.\_\_(MPG-3), which would reduce PSE's revenue requirement increase by \$67.6  
5 million. This is based on my 9.70% ROE and 46% common equity ratio. The 46%  
6 common equity ratio adjustment alone would reduce PSE's revenue requirement  
7 increase by \$12.6 million and \$11.5 million at a 9.70% ROE and a 9.50% ROE,  
8 respectively.

9 I demonstrate that my recommended ROE and proposed capital structure will  
10 provide PSE with an opportunity to realize cash flow financial coverages and balance  
11 sheet strength that conservatively support PSE's current bond rating. Consequently,  
12 my recommended return on equity represents fair compensation for PSE's investment  
13 risk, and it will preserve the Company's financial integrity and credit standing.

14 **Q. WHY SHOULD THE COMMISSION ADOPT A LOWER RETURN ON**  
15 **EQUITY IF THE PROPOSED CSA MECHANISM IS ADOPTED?**

16 **A.** The Company's proposed CSA mechanism is a unique type of decoupling mechanism  
17 that will materially reduce PSE's operating risk. As a result, risk is shifted to PSE's  
18 customers. This lower operating risk should be reflected in a reduced return on equity

19 **Q. DO YOU BELIEVE THE PROPOSED CSA MECHANISM LOWERS PSE'S**  
20 **RISK MORE THAN A STANDARD DECOUPLING MECHANISM?**

21 **A.** Yes. As outlined in PSE witness Tom De Boer's testimony, decoupling mechanisms  
22 are traditionally based on lost revenue adjustment mechanisms, decoupling true-up  
23 plans or straight fixed variable rate ("FVR") designs. Exhibit No.\_\_(TAD-1T) at 7.  
24 These types of mechanisms either decouple revenue from sales and ensure the utility

1 recovers the approved test year revenue, or design rates to stabilize revenue collections  
2 by including all or most fixed costs in fixed rate component charges.

3 PSE's proposed CSA is very different from these traditional decoupling  
4 mechanisms, because it is designed to not only decouple revenue and sales, but it will  
5 also permit rate increases for expense changes in between rate cases. In my view, the  
6 proposed CSA goes far beyond a traditional decoupling mechanism because it allows  
7 for rate increases outside of a rate case to reflect cost of service changes. I believe the  
8 CSA proposal is highly unorthodox, and materially erodes the protections customers  
9 normally receive in the traditional ratemaking process.

10 Nevertheless, if the CSA is approved, then there would be a significant risk  
11 reduction to PSE not only for making it whole from conservation sales reductions risk,  
12 but also it will reduce regulatory lag and significantly improve PSE's ability to earn its  
13 authorized return on an increasing rate base. I would also note that this improved  
14 return on equity probability exposes customers to rates higher than necessary because  
15 the proposed mechanism in my view significantly erodes PSE's current economic  
16 incentive to aggressively manage costs in between rate cases.

17 **Q. DID PSE RECOGNIZE THAT ITS PROPOSED CSA WILL LOWER ITS RISK**  
18 **AND POTENTIALLY LOWER ITS COST OF CAPITAL?**

19 **A.** Yes. Both PSE witnesses Mr. Gaines and Mr. De Boer recognize that the proposed  
20 CSA mechanism may have a positive impact on PSE's credit rating. Exhibit  
21 No.\_\_(TAD-1T) at 24. The CSA can impact PSE's credit rating, because it would  
22 lower PSE's operating risk because it will improve the stability and predictability of  
23 cash flows. Again, this cash flow stability may come on the backs of customers,  
24 because it will increase rate instability (via more frequent rate changes), erode

1 economic incentive to manage costs, and ultimately cause significant instability in the  
2 rate-setting process.

3 **Q. HOW DO YOU PROPOSE TO RECOGNIZE THIS RISK REDUCTION IF**  
4 **THE CSA IS APPROVED?**

5 **A.** If a regular decoupling proposal was approved, then I would recommend the  
6 Commission go from the midpoint of my estimated range down to the low end of my  
7 estimated range. Even though the CSA shifts more risk than a normal decoupling  
8 mechanism, if the Commission approves the CSA I recommend an ROE of 9.50%,  
9 which is at the low end of my recommended range. If the CSA is not approved, then I  
10 recommend the midpoint of my estimated range, 9.70%. My proposal is very  
11 conservative because some utility commissions have adopted much higher basis point  
12 ROE adjustments for full decoupling programs. A larger adjustment would be  
13 appropriate if there was a greater difference between the low and mid-range of my  
14 ROE estimates; however, I do not recommend that the Commission set an ROE below  
15 the low end of my recommended range.

16 **Q. DO YOU HAVE ANY FURTHER THOUGHTS ON THE DECOUPLING**  
17 **PROPOSAL?**

18 **A.** Yes, it is unclear whether the Commission will adopt a decoupling mechanism in this  
19 docket. If the Commission wishes to pursue decoupling for PSE, a bifurcated  
20 proceeding such as in the Avista general rate case would be appropriate.

21 **RATE OF RETURN**

22 **Electric Utility Industry Market Outlook**

23 **Q. PLEASE DESCRIBE THIS SECTION OF YOUR TESTIMONY.**

24 **A.** I have reviewed the credit rating and investment return performance of the electric  
25 utility industry. Based on the assessments described below, I find the credit rating

1 outlook of the industry to be strong and supportive of the industry's financial integrity.  
2 Further, electric utilities' stocks have exhibited strong return performance and are  
3 characterized as a safe investment.

4 **Q. PLEASE DESCRIBE THE ELECTRIC UTILITIES' CREDIT RATING**  
5 **OUTLOOK.**

6 **A.** Electric utilities' credit rating outlook has improved over the recent past and is now  
7 stable. Standard & Poor's ("S&P") recently provided an assessment of the credit  
8 rating of U.S. electric utilities for 2010. S&P's commentary included the following:

9 **Solid Industry Fundamentals Support Stable Outlook**

10 Throughout 2010, U.S. electric utilities performed well amid  
11 continuing favorable access to capital. With rebounding markets,  
12 external financing activity for the U.S. regulated electric utility industry  
13 was about \$35 billion, well below the \$48 billion in more difficult  
14 market conditions in 2009. Companies have continued to proactively  
15 pre-finance maturities, taking advantage of investor appetite and  
16 favorable spreads, and focused on strengthening their balance sheets  
17 and liquidity. Investor appetite for first mortgage bonds remained  
18 healthy, with deals continuing to be oversubscribed. Credit  
19 fundamentals indicate that most, if not all, electric utilities should  
20 continue to have ample access to capital markets and credit. Liquidity,  
21 an industry-wide strength, has been improving. Banking syndicates are  
22 expressing willingness to negotiate credit facilities, now with  
23 lengthening terms.<sup>1/</sup>

24 Similarly, Fitch states:

25 **Rating Outlook**

26 Stable Credit Outlook for Most Segments: Relatively low prices for  
27 natural gas and power, low interest rates, open capital-market  
28 conditions, and a slow economic recovery forecasted by Fitch Ratings  
29 for 2011 are the foundation for a stable credit outlook for most business  
30 segments within the utilities, power, and gas (UPG) sector. Fitch's  
31 2011 credit outlook for investor-owned gas and electric utilities, utility  
32 parent companies, pipelines, and midstream gas companies is stable. A  
33 significant exception is the negative 2011 credit outlook for

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<sup>1/</sup> Standard & Poor's RatingsDirect on the Global Credit Portal: "Industry Economic And Ratings Outlook: Stable Industry Outlook For U.S. Regulated Electric Utilities Supports Ratings," January 14, 2011 (emphasis added).

1 competitive generators, whose profit margins and cash flows are  
2 subject to continuing compression from low gas and power prices and  
3 an overhang of excess power capacity.<sup>2/</sup>

4 *Value Line* also continues to characterize utility stock investments as a safe haven:

5 **Conclusion**

6 The main appeal of electric utility stocks continues to be the prospect  
7 of consistent income in the form of quarterly dividends, coupled with  
8 relative stability. Each utility in this Issue offers a dividend, which for  
9 the most part, is quite generous in relation to those in other industries.  
10 Although valuation concerns have arisen as of late due to the recent  
11 increase in utility stock prices, we believe that these equities remain a  
12 popular safe haven for conservative investors.<sup>3/</sup>

13 EEI also opined as follows:

14 There was little change during the first nine months of 2011 in the  
15 industry's long-term outlook. Many regulated utilities are engaged in  
16 capital spending programs that should, according [to] Wall Street  
17 analysts, help drive slow but steady earnings growth over the next  
18 several years. New EPA regulations may boost capex by 30% in the  
19 years ahead, relative to EEI's latest capex survey estimates.<sup>4/</sup>

20 **Q. PLEASE DESCRIBE ELECTRIC UTILITY STOCK PRICE PERFORMANCE**  
21 **OVER THE LAST SEVEN YEARS.**

22 **A.** As shown in Figure 1 below, the Edison Electric Institute ("EEI") has recorded  
23 electric utility stock price performance compared to the market. The EEI data shows  
24 that its Electric Utility Index has outperformed the market over the last seven years  
25 (2004-Third Quarter 2011).

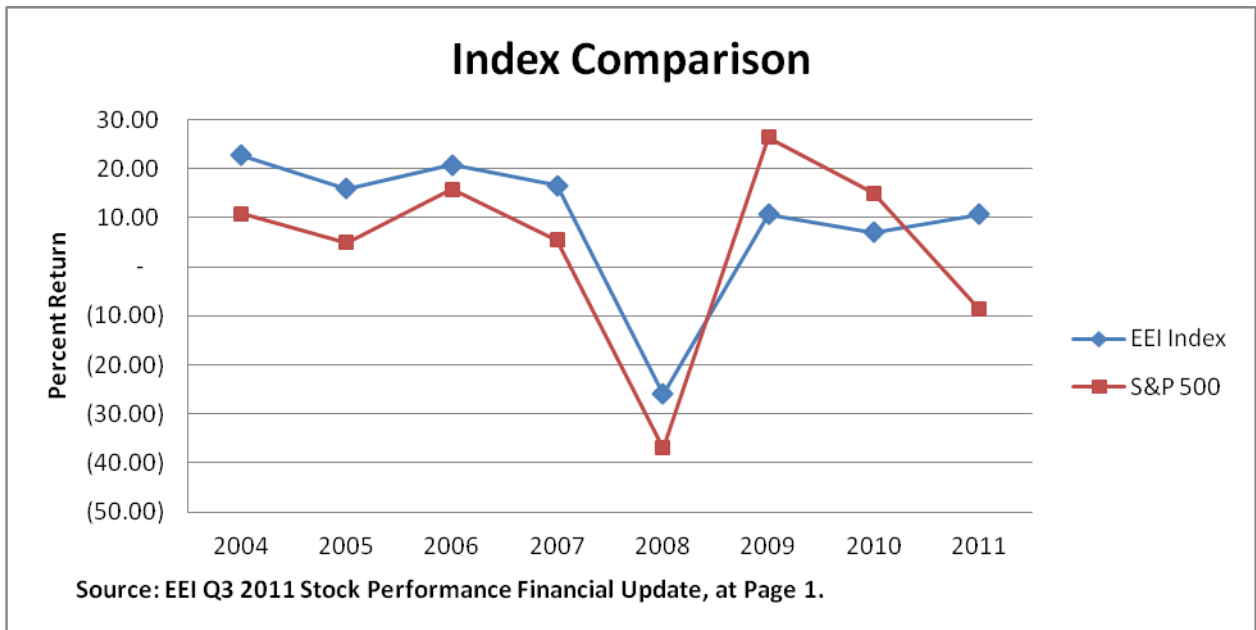
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<sup>2/</sup> Fitch Ratings: "2011 Outlook: U.S. Utilities, Power, and Gas," December 20, 2010 (emphasis added).

<sup>3/</sup> *Value Line Investment Survey*, November 26, 2010 at 139 (emphasis added).

<sup>4/</sup> *EEI Q3 2011 Financial Update* at 1.

Figure 1



1 During 2009 and 2010, the EEI Index underperformed the market, which is not  
2 unusual for stocks that are considered “safe havens” during periods of market  
3 turbulence.

4 In the first nine months of 2011, the EEI Index outperformed the market. EEI  
5 states the following:

### 6 **Commentary**

7 The EEI Index produced a positive 1.8% return during the third quarter,  
8 but that was more than enough to dramatically outperform the broad  
9 market, which saw its weakest quarterly performance since the depths  
10 of the financial crisis in early 2009.

11 \* \* \*

12 The strength of the EEI Index is no surprise, highlighting the sector’s  
13 traditional role as a defensive investment following the industry’s  
14 reemphasis in recent years of core regulated businesses with slow but  
15 predictable earnings growth and steady dividends. In fact, the  
16 industry’s 4.3% average dividend on September 30, 2011 led that of all  
17 other U.S. business sectors.<sup>5/</sup>

<sup>5/</sup> EEI Q3 2011 Financial Update at 1 and 4.



1 **PSE's Investment Risk**

2 **Q. PLEASE DESCRIBE THE MARKET'S ASSESSMENT OF THE**  
3 **INVESTMENT RISK OF PSE.**

4 **A.** The market's assessment of PSE's investment risk is best described by credit rating  
5 analysts' reports. PSE currently has a "BBB" corporate bond rating from S&P and a  
6 "Baa2" bond rating from Moody's.

7 Standard & Poor's states:

8 **Rationale**

9 The 'BBB' corporate credit rating on Puget Sound Energy Inc. (PSE)  
10 primarily reflects the excellent business risk profile and aggressive  
11 financial risk profile of its steady integrated electric and gas utility  
12 operations.

13 \* \* \*

14 The business risk profile of PSE is excellent, reflecting combined  
15 electric and gas utility operations focused in the Puget Sound region of  
16 Washington State. PSE is subject to regulation by the Washington  
17 Utilities and Transportation Commission. The company's management  
18 of its regulatory relationships in Washington is a key driver of credit  
19 quality, especially in light of PSE's relatively high capital needs and  
20 commodity price exposure.<sup>6/</sup>

21 Further, Moody's states:

22 **SUMMARY RATING RATIONALE**

23 PSE's Baa2 senior unsecured rating reflects its relatively low risk utility  
24 operations, collaborative regulatory relationships and recent credit  
25 supportive rate case outcomes, efficient handling of electric and gas  
26 supply needs, solid credit metrics, and access to its own committed  
27 bank credit facilities plus indirect access to the parent's committed  
28 capital expenditure facility to supplement internal cash flow.<sup>7/</sup>

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<sup>6/</sup> Standard & Poor's RatingsDirect on the Global Credit Portal: "Summary: Puget Sound Energy Inc.,"  
August 26, 2011 at 2.

<sup>7/</sup> Exhibit No.\_\_\_\_(DEG-5) at 2.

1 **Q. WHAT ARE THE IMPORTANT TAKEAWAYS FROM THE CREDIT**  
2 **ANALYSTS' REVIEW OF PSE'S INVESTMENT RISK?**

3 **A.** The important takeaway is:

4 Credit rating reports indicate that PSE has a stable credit standing, with  
5 constructive regulatory frameworks, stable cash flows, and has a  
6 manageable capital expenditure program. Together, these indicate that  
7 PSE is a reasonably stable investment, based on its low-risk regulated  
8 operations.

9 **PSE's Capital Structure**

10 **Q. WHAT IS PSE'S PROPOSED CAPITAL STRUCTURE?**

11 **A.** The Company's proposed capital structure is shown in Table 1 below.

<b><u>Description</u></b>	<b><u>Regulatory</u></b> <b><u>Capital</u></b> <b><u>Weight</u></b>
Long-Term Debt	48.0%
Short-Term Debt	4.0%
Common Equity	<u>48.0%</u>
Total Capital	100.0%

Source: Exhibit No.\_\_(DEG-1T) at 5.

12 **Q. IS PSE'S PROPOSED CAPITAL STRUCTURE REASONABLE?**

13 **A.** No. PSE's proposed capital structure contains a greater weight of common equity  
14 than it actually uses to support its regulated operations. Specifically, the Company's  
15 own evidence adjusted to properly remove all common equity supporting  
16 non-regulated investments, and to eliminate adjustments related to regulated

1 operations, indicates that an appropriate capital structure for regulatory purposes  
2 contains a common equity ratio of around 46%.

3 **Q. PLEASE DESCRIBE HOW YOU DEVELOPED A CAPITAL STRUCTURE**  
4 **FOR REGULATED OPERATIONS.**

5 **A.** I started with the Company's proposed actual capital structure analysis developed by  
6 Mr. Donald Gaines on his Exhibit No.\_\_(DEG-4), page 2. On that exhibit,  
7 Mr. Gaines asserts that the Company's actual test year regulatory capital structure is  
8 approximately 48.5% common equity. I disagree.

9 Mr. Gaines did not accurately estimate the capital structure supporting  
10 regulated utility operations.

11 **Q. PLEASE EXPLAIN.**

12 **A.** Mr. Gaines proposes adjustments to the Company's consolidated common equity to  
13 arrive at an estimated regulated common equity balance that he uses to develop the  
14 Company's actual test year capital structure. I have two concerns with his  
15 adjustments. First, he removes only subsidiary retained earnings for Puget Western,  
16 and Hydro Energy Development Corporation ("HEDC") from consolidated common  
17 equity. Mr. Gaines neglects to remove all the common equity supporting these  
18 subsidiaries. As shown on PSE's 2009 and 2010 FERC Form 1, these subsidiaries had  
19 more common equity than just their retained earnings balances. It is appropriate to  
20 remove all the common equity supporting these subsidiaries in order to identify the  
21 amount of common equity supporting utility operations. Because he did not remove  
22 all affiliate common equity, Mr. Gaines included some non-regulated common equity  
23 in the regulated common equity balance.

1           The second error Mr. Gaines makes in determining the common equity  
2 supporting regulated operations is that he reduces the regulated common equity for  
3 Other Comprehensive Income (“OCI”) adjustments and derivative accounting. The  
4 OCI and derivative accounting adjustments to common equity reflect standard  
5 generally accepted accounting adjustment to common equity for pension and  
6 derivative accounting. Hence, these adjustments are not consistent with the objective  
7 of carving out the utility capital from the composite capital. Therefore, the OCI and  
8 derivative common equity adjustments should not be made.

9 **Q. HOW WOULD PSE’S ACTUAL CAPITAL STRUCTURE FOR THE**  
10 **13-MONTH PERIOD ENDING DECEMBER 31, 2010 BE IMPACTED IF**  
11 **THESE DEFICIENCIES YOU HAVE NOTED ARE CORRECTED?**

12 **A.** I have adjusted Mr. Gaines’ Exhibit No.\_\_(DEG-4). I adjusted that capital structure  
13 to remove all common equity supporting Puget Western, and HEDC rather than just  
14 the retained earnings adjustment made by Mr. Gaines. Further, I removed all the OCI  
15 and derivative accounting adjustments proposed by Mr. Gaines. These adjustments  
16 are inappropriate because they remove proper accounting treatment for pension and  
17 derivatives, which are part of the cost of providing utility service. Hence, Mr. Gaines’  
18 adjustments for OCI and derivatives do not accomplish his objective of identifying the  
19 capital structure supporting regulated utility operations.

20           With these adjustments, the Company’s 13-month average capital structure is  
21 shown on my Exhibit No.\_\_(MPG-4). As shown on that exhibit, the Company’s  
22 13-month average capital structure consists of 46.7% common equity, 51.1% long-  
23 term debt, and 2.2% short-term debt.

1 **Q. WHAT CAPITAL STRUCTURE DO YOU RECOMMEND BE USED TO SET**  
2 **RATES?**

3 **A.** I recommend using the same common equity ratio of capital structure the Commission  
4 previously used to set PSE’s rates in its last rate case. That capital structure is shown  
5 below in Table 2.

<b>TABLE 2</b>	
<b><u>Recommended Capital Structure</u></b>	
<b><u>Description</u></b>	<b><u>Regulatory Capital Weight</u></b>
Long-Term Debt	50.0%
Short-Term Debt	4.0%
Common Equity	<u>46.0%</u>
Total Capital	100.0%

Source: Exhibit No.\_\_\_\_(MPG-3).

6 **Q. WHY DO YOU BELIEVE YOUR PROPOSED CAPITAL STRUCTURE IS**  
7 **REASONABLE?**

8 **A.** Because it reflects the most accurate estimate of PSE’s actual capital structure  
9 supporting utility operations in the test year, and it is a reasonable capital structure  
10 mix.

11 **Q. DO YOU BELIEVE THAT THE CAPITAL STRUCTURE USED TO SET**  
12 **RATES HAS BEEN RECEIVED POSITIVELY BY CAPITAL MARKET**  
13 **PARTICIPANTS?**

14 **A.** Yes. As noted above, Standard & Poor’s rated PSE’s business risk profile as  
15 “Excellent,” and noted “PSE’s cost recovery mechanisms support credit quality.”<sup>8/</sup> In  
16 that same report, S&P notes that it did not expect PSE’s debt ratio to climb any higher,

<sup>8/</sup> Mr. Gaines’ Exhibit No.\_\_\_\_(DEG-13) at 2.

1 and did not state that a reduction in total debt was necessary to maintain current  
2 ratings.<sup>9/</sup>

3 Further, Moody's rates PSE's credit standing as "Stable" and notes as a key  
4 credit rating driver its "sole focus on relatively low risk regulated electric and gas  
5 utility operations." It does note concern with the need for PSE to pay dividends to  
6 help serve the parent company's stand-alone debt, but does also rate as a rating driver  
7 the "key ring-fence like mechanisms afford it protection from risk of excessive  
8 dividend payments to the parent." Moody's also positively states that PSE has  
9 "collaborative regulatory relationships and credit-supportive regulatory practices."<sup>10/</sup>

10 As noted by Mr. Gaines, the capital structure previously used to set PSE's rates  
11 included a common equity ratio of 46%. This common equity ratio, along with other  
12 regulatory mechanisms, has helped support positive and stable credit at PSE and has  
13 generally been perceived by market participants as supportive regulatory treatment.  
14 Further, the capital structure of 46% helps minimize PSE's cost of service which  
15 keeps its rates as competitive as possible, and supports its service area economy,  
16 particularly in these difficult economic times. For all these reasons, I believe my  
17 recommended capital structure continues to be appropriate for setting PSE's rates in  
18 this proceeding, just as it was in the last rate case.

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<sup>9/</sup> *Id.* at 3.  
<sup>10/</sup> Gaines Exhibit No.\_\_(DEG-5), pages 1-3.

1 **RETURN ON EQUITY**

2 **Q. PLEASE DESCRIBE WHAT IS MEANT BY A “UTILITY’S COST OF**  
3 **COMMON EQUITY.”**

4 **A.** A utility’s cost of common equity is the return investors require on an investment in  
5 the utility. Investors expect to achieve their return requirement from receiving  
6 dividends and stock price appreciation.

7 **Q. PLEASE DESCRIBE THE FRAMEWORK FOR DETERMINING A**  
8 **REGULATED UTILITY’S COST OF COMMON EQUITY.**

9 **A.** In general, determining a fair cost of common equity for a regulated utility has been  
10 framed by two decisions of the U.S. Supreme Court: *Bluefield Water Works &*  
11 *Improvement Co. v. Public Serv. Commission of West Virginia*, 262 U.S. 679 (1923)  
12 and *Federal Power Commission v. Hope Natural Gas Co.*, 320 U.S. 591 (1944).

13 These decisions identify the general standards to be considered in establishing  
14 the cost of common equity for a public utility. Those general standards provide that  
15 the authorized return should: (1) be sufficient to maintain financial integrity; (2)  
16 attract capital under reasonable terms; and (3) be commensurate with returns investors  
17 could earn by investing in other enterprises of comparable risk.

18 **Q. PLEASE DESCRIBE THE METHODS YOU HAVE USED TO ESTIMATE**  
19 **THE COST OF COMMON EQUITY FOR PSE.**

20 **A.** I have used several models based on financial theory to estimate PSE’s cost of  
21 common equity. These models are: (1) a constant growth Discounted Cash Flow  
22 (“DCF”) model using analyst growth data; (2) a sustainable growth DCF model; (3) a  
23 multi-stage growth DCF model; (4) a risk premium (“RP”) model; and (5) a Capital  
24 Asset Pricing Model (“CAPM”). I have applied these models to a group of publicly  
25 traded utilities that I have determined reflect investment risk similar to PSE.

1 **Q. HOW DID YOU SELECT A UTILITY PROXY GROUP SIMILAR IN**  
2 **INVESTMENT RISK TO PSE TO ESTIMATE ITS CURRENT MARKET**  
3 **COST OF EQUITY?**

4 **A.** I relied on the same electric utility proxy group used by PSE witness Dr. Charles E.  
5 Olson to estimate PSE's return on equity.

6 **Q. HOW DOES THE PROXY GROUP INVESTMENT RISK COMPARE TO**  
7 **PSE'S INVESTMENT RISK?**

8 **A.** The proxy group is shown on Exhibit No.\_\_\_\_(MPG-5). This proxy group has an  
9 average corporate credit rating from S&P of "BBB," which is the same as S&P's  
10 credit rating for PSE of "BBB." The proxy group's credit rating from Moody's is  
11 "Baa3," which is lower than PSE's credit rating from Moody's of "Baa2." The proxy  
12 group has comparable total investment risk to PSE.

13 The proxy group has an average common equity ratio of 42.5% (including  
14 short-term debt) from AUS Utility Reports ("AUS") and 43.4% (excluding short-term  
15 debt) from *Value Line* in 2010. This proxy group's common equity ratio is lower than  
16 my proposed common equity ratio of 46.0% including short-term debt. PSE's  
17 common equity ratio is higher than that of the proxy group average but within the  
18 variance of the proxy group.

19 I also compared PSE's business risk to the business risk of my proxy group  
20 based on S&P's ranking methodology. PSE has an S&P business risk profile of  
21 "Excellent," which is identical to the S&P business risk profile of the proxy group.  
22 The S&P business risk profile score indicates that PSE's business risk is comparable  
23 to that of the proxy group.

24 S&P ranks the business risk of a utility company as part of its corporate credit  
25 rating review. (S&P considers total investment risk in assigning bond ratings to



1 issuers, including utility companies. In analyzing total investment risk, S&P considers  
2 both the business risk and the financial risk of a corporate entity, including a utility  
3 company.) S&P’s business risk profile score is based on a five-notch credit rating  
4 starting with “Vulnerable” (highest risk) to “Excellent” (lowest risk). The business  
5 risk of most utility companies falls within the lowest risk category, “Excellent,” or the  
6 category one notch higher, “Strong.”<sup>11/</sup>

7 Based on these proxy group selection criteria, I believe that the proxy group  
8 reasonably approximates the investment risk of PSE, and that it can be used to  
9 estimate a fair return on equity for PSE.

#### 10 **Discounted Cash Flow Model**

#### 11 **Q. PLEASE DESCRIBE THE DCF MODEL.**

12 **A.** The DCF model posits that a stock price is valued by summing the present value of  
13 expected future cash flows discounted at the investor’s required rate of return or cost  
14 of capital. This model is expressed mathematically as follows:

$$15 \quad P_0 = \frac{D_1}{(1+K)^1} + \frac{D_2}{(1+K)^2} + \dots + \frac{D_\infty}{(1+K)^\infty} \quad \text{where} \quad \text{(Equation 1)}$$

16  
17  $P_0$  = Current stock price

18  $D$  = Dividends in periods 1 -  $\infty$

19  $K$  = Investor’s required return

20 This model can be rearranged in order to estimate the discount rate or investor  
21 required return, “K.” If it is reasonable to assume that earnings and dividends will  
22 grow at a constant rate, then Equation 1 can be rearranged as follows:

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<sup>11/</sup> Standard & Poor’s: “U.S. Utilities Ratings Analysis Now Portrayed in the S&P Corporate Ratings Matrix,” November 30, 2007.



1 **Q. WHAT DIVIDEND DID YOU USE IN YOUR CONSTANT GROWTH DCF**  
2 **MODEL?**

3 **A.** I used the most recently paid quarterly dividend, as reported in *The Value Line*  
4 *Investment Survey*.<sup>12/</sup> This dividend was annualized (multiplied by 4) and adjusted for  
5 next year's growth to produce the  $D_1$  factor for use in Equation 2 above.

6 **Q. WHAT DIVIDEND GROWTH RATES HAVE YOU USED IN YOUR**  
7 **CONSTANT GROWTH DCF MODEL?**

8 **A.** There are several methods that can be used to estimate the expected growth in  
9 dividends. However, regardless of the method, for purposes of determining the market  
10 required return on common equity, one must attempt to estimate investors' consensus  
11 about what the dividend or earnings growth rate will be, and not what an individual  
12 investor or analyst may use to make individual investment decisions.

13 As predictors of future returns, security analysts' growth estimates have been  
14 shown to be more accurate than growth rates derived from historical data.<sup>13/</sup> That is,  
15 assuming the market generally makes rational investment decisions, analysts' growth  
16 projections are more likely to influence observable stock prices than growth rates  
17 derived only from historical data.

18 For my constant growth DCF analysis, I have relied on a consensus, or mean,  
19 of professional security analysts' earnings growth estimates as a proxy for investor  
20 consensus dividend growth rate expectations. I used the average of analysts' growth  
21 rate estimates from three sources: Zacks, SNL Financial and Reuters. All such  
22 projections were available on November 23, 2011, and all were reported online.

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<sup>12/</sup> *The Value Line Investment Survey*, September 23, November 4 and November 25, 2011.

<sup>13/</sup> See, e.g., David Gordon, Myron Gordon, and Lawrence Gould, "Choice Among Methods of Estimating Share Yield," *The Journal of Portfolio Management*, Spring 1989.

1           Each consensus growth rate projection is based on a survey of security  
2 analysts. The consensus estimate is a simple arithmetic average, or mean, of surveyed  
3 analysts' earnings growth forecasts. A simple average of the growth forecasts gives  
4 equal weight to all surveyed analysts' projections. It is problematic as to whether any  
5 particular analyst's forecast is more representative of general market expectations.  
6 Therefore, a simple average, or arithmetic mean, of analyst forecasts is a good proxy  
7 for market consensus expectations.

8 **Q.   WHAT ARE THE GROWTH RATES YOU USED IN YOUR CONSTANT**  
9 **GROWTH DCF MODEL?**

10 **A.**   The growth rates I used in my DCF analysis are shown in Exhibit No.\_\_(MPG-6).  
11       The average and median growth rates for my proxy group are 6.43% and 5.79%,  
12       respectively.

13 **Q.   WHAT ARE THE RESULTS OF YOUR CONSTANT GROWTH DCF**  
14 **MODEL?**

15 **A.**   As shown in Exhibit No.\_\_(MPG-7), the average and median constant growth DCF  
16       returns for the proxy group are 10.75% and 10.29%, respectively.

17 **Q.   DO YOU HAVE ANY COMMENTS CONCERNING THE RESULTS OF**  
18 **YOUR CONSTANT GROWTH DCF ANALYSIS?**

19 **A.**   Yes. The three- to five-year growth rate exceeds a long-term sustainable growth rate  
20       as required by the constant growth DCF model.

21 **Q.   WHY DO YOU BELIEVE THE PROXY GROUP'S THREE- TO FIVE-YEAR**  
22 **GROWTH RATE IS IN EXCESS OF A LONG-TERM SUSTAINABLE**  
23 **GROWTH?**

24 **A.**   The three- to five-year growth rate of the proxy group exceeds the growth rate of the  
25       overall U.S. economy. As developed below, the consensus of published economists  
26       projects that the U.S. Gross Domestic Product ("GDP") will grow at a rate of no more

1 than 5.0% and 4.7% over the next 5 and 10 years, respectively. A company cannot  
2 grow, indefinitely, at a faster rate than the market in which it sells its products. The  
3 U.S. economy, or GDP, growth projection represents a ceiling, or high-end,  
4 sustainable growth rate for a utility over an indefinite period of time.

5 **Q. WHY IS THE GDP GROWTH PROJECTION CONSIDERED A CEILING**  
6 **GROWTH RATE FOR A UTILITY?**

7 **A.** Utilities cannot sustain indefinitely a growth rate that exceeds the growth rate of the  
8 overall economy. Utilities' earnings/dividend growth is created by increased utility  
9 investment or rate base. Such investment, in turn, is driven by service area economic  
10 growth and demand for utility service. In other words, utilities invest in plant to meet  
11 sales demand growth, and sales growth, in turn, is tied to economic growth in their  
12 service areas. The Energy Information Administration ("EIA") has observed that  
13 utility sales growth is less than U.S. GDP growth, as shown in Exhibit  
14 No.\_\_(MPG-8). Utility sales growth has lagged behind GDP growth for more than a  
15 decade. Hence, nominal GDP growth is a very conservative, albeit overstated, proxy  
16 for electric utility sales growth, rate base growth, and earnings growth. Therefore,  
17 GDP growth is a conservative proxy for the highest sustainable long-term growth rate  
18 of a utility.

19 **Q. IS THERE RESEARCH THAT SUPPORTS YOUR POSITION THAT, OVER**  
20 **THE LONG TERM, A COMPANY'S EARNINGS AND DIVIDENDS CANNOT**  
21 **GROW AT A RATE GREATER THAN THE GROWTH OF THE U.S. GDP?**

22 **A.** Yes. This concept is supported in both published analyst literature and academic  
23 work. Specifically, in a textbook entitled "Fundamentals of Financial Management,"  
24 published by Eugene Brigham and Joel F. Houston, the authors state as follows:

25 The constant growth model is most appropriate for mature  
26 companies with a stable history of growth and stable future

1 expectations. Expected growth rates vary somewhat among  
2 companies, but dividends for mature firms are often expected to  
3 grow in the future at about the same rate as nominal gross  
4 domestic product (real GDP plus inflation).<sup>14/</sup>

5 **Sustainable Growth DCF**

6 **Q. PLEASE DESCRIBE HOW YOU ESTIMATED A SUSTAINABLE**  
7 **LONG-TERM GROWTH RATE FOR YOUR SUSTAINABLE GROWTH DCF**  
8 **MODEL.**

9 **A.** A sustainable growth rate is based on the percentage of the utility's earnings that is  
10 retained and reinvested in utility plant and equipment. These reinvested earnings  
11 increase the earnings base (rate base). Earnings grow when plant funded by reinvested  
12 earnings are put into service, and the utility is allowed to earn its authorized return on  
13 such additional rate base investment.

14 The internal growth methodology is tied to the percentage of earnings retained  
15 in the company and not paid out as dividends. The earnings retention ratio is 1 minus  
16 the dividend payout ratio. As the payout ratio declines, the earnings retention ratio  
17 increases. An increased earnings retention ratio will fuel stronger growth because the  
18 business funds more investments with retained earnings. As shown in Exhibit  
19 No.\_\_(MPG-9), *Value Line* projects that the proxy group will have a declining  
20 dividend payout ratio over the next three to five years. These dividend payout ratios  
21 and earnings retention ratios then can be used to develop a sustainable long-term  
22 earnings retention growth rate. A sustainable long-term retention ratio will help us  
23 gauge whether analysts' current three- to five-year growth rate projections can be  
24 sustained over an indefinite period of time.

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<sup>14/</sup> "Fundamentals of Financial Management," Eugene F. Brigham and Joel F. Houston, Eleventh Edition 2007, Thomson South-Western, a Division of Thomson Corporation at 298.

1           The data used to estimate the long-term sustainable growth rate is based on the  
2 Company's current market to book ratio and on *Value Line's* three- to five-year  
3 projections of earnings, dividends, earned returns on book equity, and stock issuances.

4           As shown in Exhibit No.\_\_\_\_(MPG-10) at 1, the average and median  
5 sustainable growth rates for the proxy group using this internal growth rate model are  
6 4.93% and 4.87%, respectively.

7 **Q.   WHAT IS THE CONSTANT GROWTH DCF ESTIMATE USING THESE**  
8 **SUSTAINABLE LONG-TERM GROWTH RATES?**

9 **A.**   A DCF estimate based on these sustainable growth rates is developed in Exhibit  
10 No.\_\_\_\_(MPG-11). As shown there, a sustainable growth DCF analysis produces  
11 proxy group average and median DCF results of 9.19% and 9.51%, respectively.

12           The sustainable growth DCF result is based on the dividend and price data  
13 used in my constant growth DCF study (using analyst growth rates) and the  
14 sustainable growth rates discussed above and developed in Exhibit No.\_\_\_\_(MPG-10).

15 **Multi-Stage Growth DCF Model**

16 **Q.   HAVE YOU CONDUCTED ANY OTHER DCF STUDIES?**

17 **A.**   Yes. My first constant growth DCF is based on consensus analysts' growth rate  
18 projections, so it is a reasonable reflection of rational investment expectations over the  
19 next three to five years. The limitation on the constant growth DCF model is that it  
20 cannot reflect a rational expectation that a period of high/low short-term growth can be  
21 followed by a change in growth to a rate that is more reflective of long-term  
22 sustainable growth. Hence, I performed a multi-stage growth DCF analysis to reflect  
23 this outlook of changing growth expectations.

1 **Q. PLEASE DESCRIBE YOUR MULTI-STAGE GROWTH DCF MODEL.**

2 **A.** The multi-stage growth DCF model reflects the possibility of non-constant growth for  
3 a company over time. The multi-stage growth DCF model reflects three growth  
4 periods: (1) a short-term growth period, which consists of the first five years; (2) a  
5 transition period, which consists of the next five years (6 through 10); and (3) a  
6 long-term growth period, starting in year 11 through perpetuity.

7 For the short-term growth period, I relied on the consensus analysts' growth  
8 projections described above in relationship to my constant growth DCF model. For  
9 the transition period, the growth rates were reduced or increased by an equal factor,  
10 which reflects the difference between the analysts' growth rates and the GDP growth  
11 rate. For the long-term growth period, I assumed each company's growth would  
12 converge to the maximum sustainable growth rate for a utility company as proxied by  
13 the consensus analysts' projected growth for the U.S. GDP of 4.9%.

14 **Q. HOW DID YOU DETERMINE THE CONSENSUS REASONABLE,**  
15 **SUSTAINABLE LONG-TERM GROWTH RATE?**

16 **A.** A reasonable growth rate that can be sustained in the long run should be based on  
17 consensus analysts' projections. *Blue Chip Economic Indicators* publishes consensus  
18 GDP growth projections twice a year. Based on its latest issue, the consensus  
19 economists' published GDP growth rate outlook is 5.0% to 4.7% over the next 5 and  
20 10 years, respectively.<sup>15/</sup>

21 Therefore, I propose to use the midpoint (4.85% rounded to 4.9%) of the  
22 consensus economists' projected average 5-year and 10-year GDP consensus growth  
23 rates, as published by *Blue Chip Economic Indicators*, as an estimate of sustainable

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<sup>15/</sup> *Blue Chip Economic Indicators*, October 10, 2011 at 14.



1 long-term growth. This consensus GDP growth forecast represents the most likely  
2 views of market participants because it is based on published economist projections.  
3 *Blue Chip Economic Indicators*' projections provide real GDP growth projections of  
4 2.8% and 2.5%, and GDP inflation of 2.1% and 2.1%<sup>16/</sup> over the 5-year and 10-year  
5 projection periods, respectively.

6 **Q. DO YOU CONSIDER OTHER SOURCES OF PROJECTED LONG-TERM**  
7 **GDP GROWTH?**

8 **A.** Yes. The U.S. EIA in its Annual Energy Outlook projects the real GDP out until  
9 2035. In its 2011 Annual Report, the EIA projects real GDP through 2035 to be in the  
10 range of 2.1% to 3.2%, with a midpoint or reference case of 2.7%.<sup>17/</sup>

11 Also, the Congressional Budget Office ("CBO") makes long-term economic  
12 projections. The CBO is projecting real GDP growth of 3.4% to 2.4% during the next  
13 5 and 10 years, respectively, with GDP price inflation of 1.6% to 2.0%. The CBO's  
14 real GDP projections are higher than the consensus but its GDP inflation is lower than  
15 the consensus economists.

16 The real GDP and nominal GDP growth projections made by the U.S. EIA and  
17 those made by the CBO support the use of the consensus analyst 5-year and 10-year  
18 projected GDP growth outlooks as a reasonable market assessment of long-term  
19 prospective GDP growth.

20 **Q. WHAT STOCK PRICE, DIVIDEND AND GROWTH RATES DID YOU USE**  
21 **IN YOUR MULTI-STAGE GROWTH DCF ANALYSIS?**

22 **A.** I relied on the same 13-week stock price and the most recent quarterly dividend  
23 payment data discussed above. For stage one growth, I used the consensus analysts'

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<sup>16/</sup> GDP growth is the product of real and inflation GDP growth.

<sup>17/</sup> DOE/EIA Annual Energy Outlook 2011 With Projections to 2035, April 2011.

1 growth rate projections discussed above in my constant growth DCF model. The  
2 transition period begins in year 6 and ends in year 10. For the long-term sustainable  
3 growth rate starting in year 11, I used 4.9%, the average of the consensus economists'  
4 5-year and 10-year projected nominal GDP growth rates.

5 **Q. WHAT ARE THE RESULTS OF YOUR MULTI-STAGE GROWTH DCF**  
6 **MODEL?**

7 **A.** As shown in Exhibit No.\_\_\_\_(MPG-12), the average and median DCF returns on equity  
8 for the proxy group are 9.54% and 9.62%, respectively.

9 **Q. PLEASE SUMMARIZE THE RESULTS FROM YOUR DCF ANALYSES.**

10 **A.** The results from my DCF analyses are summarized in Table 3 below:

<b>TABLE 3</b>	
<b><u>Summary of DCF Results</u></b>	
<b><u>Description</u></b>	<b><u>Return</u></b>
Constant Growth DCF Model (Analysts' Growth)	10.75%
Constant Growth DCF Model (Sustainable Growth)	9.19%
Multi-Stage Growth DCF Model	<u>9.54%</u>
Average DCF Return	9.83%

11 For reasons set forth above, I believe my constant growth DCF model based on  
12 analysts' growth is overstated because short-term analyst growth rate projections  
13 exceed reasonable estimates of long-term sustainable growth. Therefore, the DCF  
14 model based on analysts' growth rate estimates should not be used on a stand-alone  
15 basis. I recommend it be averaged with my other DCF estimates to produce a  
16 reasonable DCF point estimate that can be used to derive PSE's return on equity. The  
17 constant growth DCF model based on the sustainable growth approach produces a  
18 growth rate that is sustainable in the long term in comparison to GDP growth, but that

1 growth rate may not reflect analysts' short-term growth outlooks. The multi-stage  
2 growth DCF model return reflects the expectation of changing growth rates over time.  
3 Based on all my DCF studies, I find that a reasonable DCF return estimate is 9.83%.

4 **Risk Premium Model**

5 **Q. PLEASE DESCRIBE YOUR BOND YIELD PLUS RISK PREMIUM MODEL.**

6 **A.** This model is based on the principle that investors require a higher return to assume  
7 greater risk. Common equity investments have greater risk than bonds because bonds  
8 have more security of payment in bankruptcy proceedings than common equity and  
9 the coupon payments on bonds represent contractual obligations. In contrast,  
10 companies are not required to pay dividends or guarantee returns on common equity  
11 investments. Therefore, common equity securities are considered to be more risky  
12 than bond securities.

13 This risk premium model is based on two estimates of an equity risk premium.  
14 First, I estimated the difference between the required return on utility common equity  
15 investments and U.S. Treasury bonds. The difference between the required return on  
16 common equity and the Treasury bond yield is the risk premium. I estimated the risk  
17 premium on an annual basis for each year over the period 1986 through the third  
18 quarter of 2011. The common equity required returns were based on regulatory  
19 commission-authorized returns for electric utility companies. Authorized returns are  
20 typically based on expert witnesses' estimates of the contemporary investor required  
21 return.

22 The second equity risk premium estimate is based on the difference between  
23 regulatory commission-authorized returns on common equity and contemporary  
24 "A" rated utility bond yields. I selected the period 1986 through the third quarter of

1 2011 because public utility stocks consistently traded at a premium to book value  
2 during that period. This is illustrated in Exhibit No.\_\_\_\_(MPG-13), which shows that  
3 the market to book ratio since 1986 for the electric utility industry was consistently  
4 above 1.0. Over this period, regulatory authorized returns were sufficient to support  
5 market prices that at least exceeded book value. This is an indication that regulatory  
6 authorized returns on common equity supported a utility's ability to issue additional  
7 common stock without diluting existing shares. It further demonstrates that utilities  
8 were able to access equity markets without a detrimental impact on current  
9 shareholders.

10 Based on this analysis, as shown in Exhibit No.\_\_\_\_(MPG-14), the average  
11 indicated equity risk premium over U.S. Treasury bond yields has been 5.22%. Of the  
12 26 observations, 20 indicated risk premiums fall in the range of 4.40% to 6.09%.  
13 Since the risk premium can vary depending upon market conditions and changing  
14 investor risk perceptions, I believe using an estimated range of risk premiums provides  
15 the best method to measure the current return on common equity using this  
16 methodology.

17 As shown in Exhibit No.\_\_\_\_(MPG-15), the average indicated equity risk  
18 premium over contemporary Moody's utility bond yields was 3.80% over the period  
19 1986 through the third quarter of 2011. The indicated equity risk premium estimates  
20 based on this analysis primarily fall in the range of 3.03% to 4.62% over this time  
21 period.

1 **Q. DO YOU BELIEVE THAT THESE EQUITY RISK PREMIUM ESTIMATES**  
2 **ARE BASED ON A TIME PERIOD THAT IS TOO LONG OR TOO SHORT**  
3 **TO DRAW ACCURATE RESULTS CONCERNING CONTEMPORARY**  
4 **MARKET CONDITIONS?**

5 **A.** No. Contemporary market conditions can change dramatically during the period that  
6 rates determined in this proceeding will be in effect. A relatively long period of time  
7 where stock valuations reflect premiums to book value is an indication that the  
8 authorized returns on equity and the corresponding equity risk premiums were  
9 supportive of investors' return expectations and provided utilities access to the equity  
10 markets under reasonable terms and conditions. Further, this time period is long  
11 enough to smooth abnormal market movement that might distort equity risk  
12 premiums. While market conditions and risk premiums do vary over time, this  
13 historical time period is a reasonable period to estimate contemporary risk premiums.

14 The time period I use in this risk premium study is a generally accepted period  
15 to develop a risk premium study using "expectational" data. Conversely, studies have  
16 recommended that use of "actual achieved return data" should be based on very long  
17 historical time periods. The studies find that achieved returns over short time periods  
18 may not reflect investors' expected returns due to unexpected and abnormal stock  
19 price performance. However, these short-term abnormal actual returns would be  
20 smoothed over time and the achieved actual returns over long time periods would  
21 approximate investors' expected returns. Therefore, it is reasonable to assume that  
22 averages of annual achieved returns over long time periods will generally converge on  
23 the investors' expected returns.

24 My risk premium study is based on expectational data, not actual returns, and,  
25 thus, need not encompass very long time periods.

1 **Q. BASED ON HISTORICAL DATA, WHAT RISK PREMIUM HAVE YOU**  
2 **USED TO ESTIMATE PSE'S COST OF EQUITY IN THIS PROCEEDING?**

3 **A.** The equity risk premium should reflect the relative market perception of risk in the  
4 utility industry today. I have gauged investor perceptions in utility risk today in  
5 Exhibit No.\_\_(MPG-16). On that exhibit, I show the yield spread between utility  
6 bonds and Treasury bonds over the last 30 years. As shown in this exhibit, the 2008  
7 utility bond yield spreads over Treasury bonds for "A" rated and "Baa" rated utility  
8 bonds are 2.25% and 2.97%, respectively. The utility bond yield spreads over  
9 Treasury bonds for "A" and "Baa" rated utility bonds for 2009 are 1.96% and 2.98%,  
10 respectively. In 2010, these spreads declined to 1.21% and 1.71%, respectively.  
11 These utility bond yield spreads over Treasury bond yields are now lower than the  
12 30-year average spreads of 1.59% and 1.99%, respectively.

13 A current 13-week average "A" rated utility bond yield of 4.46%, when  
14 compared to the current Treasury bond yield of 3.19% as shown in Exhibit  
15 No.\_\_(MPG-17) at 1, implies a yield spread of around 1.27%. This current utility  
16 bond yield spread is lower than the 30-year average spread for "A" utility bonds of  
17 1.59%. The current spread for the "Baa" utility yields of 1.94% is also lower than the  
18 30-year average spread of 1.99%.

19 These reduced utility bond yield spreads are clear evidence that the market  
20 considers the utility industry to be a relatively low risk investment and demonstrates  
21 that utilities continue to have strong access to capital.

22 **Q. HOW DID YOU ESTIMATE PSE'S COST OF COMMON EQUITY WITH**  
23 **THIS RISK PREMIUM MODEL?**

24 **A.** I added a projected long-term Treasury bond yield to my estimated equity risk  
25 premium over Treasury yields. The 13-week average 30-year Treasury bond yield,

1 ending November 18, 2011 was 3.19%, as shown in Exhibit No.\_\_\_\_(MPG-17) at 1.  
2 *Blue Chip Financial Forecasts* projects the 30-year Treasury bond yield to be 3.80%,  
3 and a 10-year Treasury bond yield to be 2.80%.<sup>18/</sup> Using the projected 30-year bond  
4 yield of 3.80%, and a Treasury bond risk premium of 4.40% to 6.09%, as developed  
5 above, produces an estimated common equity return in the range of 8.20% (3.80% +  
6 4.40%) to 9.89% (3.80% + 6.09%), with a midpoint of 9.05%. Because of the very  
7 large difference between current and projected Treasury bond rates, I recommend an  
8 equity risk premium above the midpoint of my estimated range. Therefore, rather than  
9 relying on the 9.05% midpoint of this range, I recommend moving it halfway between  
10 the midpoint (9.05%) and the high-end range of 9.89%. Therefore, my proposed  
11 equity risk premium return is 9.47%, rounded to 9.50%. I believe this is a reasonable  
12 return estimate recognizing the unusually low level of long-term Treasury bond yields  
13 in the current market.

14 I next added my equity risk premium over utility bond yields to a current  
15 13-week average yield on “Baa” rated utility bonds for the period ending  
16 November 18, 2011 of 5.13%. Adding the utility equity risk premium of 3.03% to  
17 4.62%, as developed above, to a “Baa” rated bond yield of 5.13%, produces a cost of  
18 equity in the range of 8.16% (5.13% + 3.03%) to 9.75% (5.13% + 4.62%), with a  
19 midpoint of 8.96%. Again, recognizing the low bond yields currently, I recommend  
20 moving to halfway between the midpoint (8.96%) and high-end (9.75%), or 9.36%,  
21 rounded to 9.40%.

22 My risk premium analyses produce a return estimate in the range of 9.50% to  
23 9.40%, with a midpoint estimate of approximately 9.45% (rounded to 9.50%).

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<sup>18/</sup> *Blue Chip Financial Forecasts*, November 1, 2011 at 2.

1 **Capital Asset Pricing Model (“CAPM”)**

2 **Q. PLEASE DESCRIBE THE CAPM.**

3 **A.** The CAPM method of analysis is based upon the theory that the market required rate  
4 of return for a security is equal to the risk-free rate, plus a risk premium associated  
5 with the specific security. This relationship between risk and return can be expressed  
6 mathematically as follows:

7 
$$R_i = R_f + B_i \times (R_m - R_f) \text{ where:}$$

8  $R_i$  = Required return for stock i

9  $R_f$  = Risk-free rate

10  $R_m$  = Expected return for the market portfolio

11  $B_i$  = Beta - Measure of the risk for stock

12 The stock-specific risk term in the above equation is beta. Beta represents the  
13 investment risk that cannot be diversified away when the security is held in a  
14 diversified portfolio. When stocks are held in a diversified portfolio, firm-specific  
15 risks can be eliminated by balancing the portfolio with securities that react in the  
16 opposite direction to firm-specific risk factors (e.g., business cycle, competition,  
17 product mix, and production limitations).

18 The risks that cannot be eliminated when held in a diversified portfolio are  
19 nondiversifiable risks. Nondiversifiable risks are related to the market in general and  
20 are referred to as systematic risks. Risks that can be eliminated by diversification are  
21 regarded as non-systematic risks. In a broad sense, systematic risks are market risks,  
22 and non-systematic risks are business risks. The CAPM theory suggests that the  
23 market will not compensate investors for assuming risks that can be diversified away.

24 Therefore, the only risk that investors will be compensated for are systematic or



1 non-diversifiable risks. The beta is a measure of the systematic or non-diversifiable  
2 risks.

3 **Q. PLEASE DESCRIBE THE INPUTS TO YOUR CAPM.**

4 **A.** The CAPM requires an estimate of the market risk-free rate, the company's beta, and  
5 the market risk premium.

6 **Q. WHAT DID YOU USE AS AN ESTIMATE OF THE MARKET RISK-FREE**  
7 **RATE?**

8 **A.** As previously noted, *Blue Chip Financial Forecasts'* projected 30-year Treasury bond  
9 yield is 3.8%.<sup>19/</sup> The current 30-year Treasury bond yield is 3.70%. I used *Blue Chip*  
10 *Financial Forecasts'* projected 30-year Treasury bond yield of 3.8% for my CAPM  
11 analysis.

12 **Q. WHY DID YOU USE LONG-TERM TREASURY BOND YIELDS AS AN**  
13 **ESTIMATE OF THE RISK-FREE RATE?**

14 **A.** Treasury securities are backed by the full faith and credit of the United States  
15 government. Therefore, long-term Treasury bonds are considered to have negligible  
16 credit risk. Also, long-term Treasury bonds have an investment horizon similar to that  
17 of common stock. As a result, investor-anticipated long-run inflation expectations are  
18 reflected in both common-stock required returns and long-term bond yields.  
19 Therefore, the nominal risk-free rate (or expected inflation rate and real risk-free rate)  
20 included in a long-term bond yield is a reasonable estimate of the nominal risk-free  
21 rate included in common stock returns.

22 Treasury bond yields, however, do include risk premiums related to  
23 unanticipated future inflation and interest rates. A Treasury bond yield is not a  
24 risk-free rate. Risk premiums related to unanticipated inflation and interest rates are

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<sup>19/</sup> *Blue Chip Financial Forecasts*, November 1, 2011 at 2.

1 systematic or market risks. Consequently, for companies with betas less than 1.0,  
2 using the Treasury bond yield as a proxy for the risk-free rate in the CAPM analysis  
3 can produce an overstated estimate of the CAPM return.

4 **Q. WHAT BETA DID YOU USE IN YOUR ANALYSIS?**

5 **A.** As shown in Exhibit No.\_\_\_\_(MPG-18), the proxy group average *Value Line* beta  
6 estimate is 0.75.

7 **Q. HOW DID YOU DERIVE YOUR MARKET RISK PREMIUM ESTIMATE?**

8 **A.** I derived two market risk premium estimates, a forward-looking estimate and one  
9 based on a long-term historical average.

10 The forward-looking estimate was derived by estimating the expected return  
11 on the market (as represented by the S&P 500) and subtracting the risk-free rate from  
12 this estimate. I estimated the expected return on the S&P 500 by adding an expected  
13 inflation rate to the long-term historical arithmetic average real return on the market.  
14 The real return on the market represents the achieved return above the rate of inflation.

15 Morningstar's *Stocks, Bonds, Bills and Inflation 2011 Classic Yearbook*  
16 publication estimates the historical arithmetic average real market return over the  
17 period 1926 to 2010 as 8.7%.<sup>20/</sup> A current consensus analysts' inflation projection, as  
18 measured by the Consumer Price Index, is 2.3%.<sup>21/</sup> Using these estimates, the  
19 expected market return is 11.20%.<sup>22/</sup> The market risk premium then is the difference  
20 between the 11.20% expected market return, and my 3.8% risk-free rate estimate, or  
21 7.40%.

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<sup>20/</sup> Morningstar, Inc. Ibbotson *SBBI 2011 Classic Yearbook* at 86.

<sup>21/</sup> *Blue Chip Financial Forecasts*, November 1, 2011 at 2.

<sup>22/</sup>  $\{ [ (1 + 0.087) * (1 + 0.023) ] - 1 \} * 100$ .

1           The historical estimate of the market risk premium was also estimated by  
2 Morningstar in *Stocks, Bonds, Bills and Inflation 2011 Classic Yearbook*. Over the  
3 period 1926 through 2010, Morningstar's study estimated that the arithmetic average  
4 of the achieved total return on the S&P 500 was 11.9%,<sup>23/</sup> and the total return on  
5 long-term Treasury bonds was 5.9%.<sup>24/</sup> The indicated market risk premium is 6.0%  
6 (11.9% - 5.9% = 6.0%).

7 **Q. HOW DOES YOUR ESTIMATED MARKET RISK PREMIUM RANGE**  
8 **COMPARE TO THAT ESTIMATED BY MORNINGSTAR?**

9 **A.** Morningstar's analysis indicates that a market risk premium falls somewhere in the  
10 range of 6.0% to 6.7%. My market risk premium falls in the range of 6.0% to 7.4%.  
11 My average market risk premium of 6.7% is at the high end of Morningstar's range.

12           Morningstar estimates a forward-looking market risk premium based on actual  
13 achieved data from the historical period of 1926 through 2010. Using this data,  
14 Morningstar estimates a market risk premium derived from the total return on large  
15 company stocks (S&P 500), less the income return on Treasury bonds. The total  
16 return includes capital appreciation, dividend or coupon reinvestment returns, and  
17 annual yields received from coupons and/or dividend payments. The income return, in  
18 contrast, only reflects the income return received from dividend payments or coupon  
19 yields. Morningstar argues that the income return is the only true risk-free rate  
20 associated with Treasury bonds and is the best approximation of a truly risk-free rate.  
21 I disagree with this assessment from Morningstar, because it does not reflect a true  
22 investment option available to the marketplace and therefore does not produce a  
23 legitimate estimate of the expected premium of investing in the stock market versus

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<sup>23/</sup> Morningstar, Inc. Ibbotson *SBBI 2011 Classic Yearbook* at 86.

<sup>24/</sup> *Id.*

1 that of Treasury bonds. Nevertheless, I will use Morningstar's conclusion to show the  
2 reasonableness of my market risk premium estimates.

3 Morningstar's range is based on several methodologies. First, Morningstar  
4 estimates a market risk premium of 6.7% based on the difference between the total  
5 market return on common stocks (S&P 500) less the income return on Treasury bond  
6 investments. Second, Morningstar found that if the New York Stock Exchange (the  
7 "NYSE") was used as the market index rather than the S&P 500, that the market risk  
8 premium would be 6.5% and not 6.7%. Third, if only the two deciles of the largest  
9 companies included in the NYSE were considered, the market risk premium would be  
10 6.0%.<sup>25/</sup>

11 Finally, Morningstar found that the 6.7% market risk premium based on the  
12 S&P 500 was impacted by an abnormal expansion of price-to-earnings ("P/E") ratios  
13 relative to earnings and dividend growth during the period 1980 through 2001.  
14 Morningstar believes this abnormal P/E expansion is not sustainable. Therefore,  
15 Morningstar adjusted this market risk premium estimate to normalize the growth in the  
16 P/E ratio to be more in line with the growth in dividends and earnings. Based on this  
17 alternative methodology, Morningstar published a long-horizon supply-side market  
18 risk premium of 6.0%.<sup>26/</sup>

19 **Q. WHAT ARE THE RESULTS OF YOUR CAPM ANALYSIS?**

20 **A.** As shown in Exhibit No.\_\_(MPG-19), based on Morningstar's high-end market risk  
21 premium of 6.7%, a risk-free rate of 3.8%, and a beta of 0.75, my CAPM analysis  
22 produces a return of 8.83%. I propose to round this CAPM estimate to 9.0%.

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<sup>25/</sup> Morningstar observes that the S&P 500 and the NYSE Decile 1-2 are both large capitalization benchmarks. Morningstar, Inc. *Ibbotson S&P 500 Valuation Yearbook* at 54.

<sup>26/</sup> *Id.* at 66.

1 **Return on Equity Summary**

2 **Q. BASED ON THE RESULTS OF YOUR RETURN ON COMMON EQUITY**  
3 **ANALYSES DESCRIBED ABOVE, WHAT RETURN ON COMMON EQUITY**  
4 **DO YOU RECOMMEND FOR PSE?**

5 **A.** Based on my analyses, I estimate PSE's current market cost of equity to be 9.70%.

<b>TABLE 4</b>	
<b><u>Return on Common Equity Summary</u></b>	
<b><u>Description</u></b>	<b><u>Results</u></b>
DCF	9.83%
Risk Premium	9.50%
CAPM	9.00%

6 My recommended return on common equity of 9.70% is the approximate  
7 midpoint of my estimated range of 9.50% to 9.85%. The low-end of my range is  
8 based on my risk premium estimate, and the high-end is based on my DCF estimate. I  
9 am placing minimal weight on my CAPM study at this time due to unusually low  
10 Treasury bond yields. The CAPM study, however, is useful to check the  
11 reasonableness of the DCF and Risk Premium analysis, and supports the adoption of  
12 an ROE at the lower end of midpoint or other studies.

13 **Financial Integrity**

14 **Q. WILL YOUR RECOMMENDED OVERALL RATE OF RETURN SUPPORT**  
15 **AN INVESTMENT GRADE BOND RATING FOR PSE?**

16 **A.** Yes. I have reached this conclusion by comparing the key credit rating financial ratios  
17 for PSE at its proposed capital structure, and my return on equity to S&P's benchmark  
18 financial ratios using S&P's new credit metric ranges.

1 **Q. PLEASE DESCRIBE THE MOST RECENT S&P FINANCIAL RATIO**  
2 **CREDIT METRIC METHODOLOGY.**

3 **A.** S&P publishes a matrix of financial ratios that correspond to its assessment of the  
4 business risk of the utility company and related bond rating. On May 27, 2009 S&P  
5 expanded its matrix criteria<sup>27/</sup> by including additional business and financial risk  
6 categories. Based on S&P's most recent credit matrix, the business risk profile  
7 categories are "Excellent," "Strong," "Satisfactory," "Fair," "Weak," and  
8 "Vulnerable." Most electric utilities have a business risk profile of "Excellent" or  
9 "Strong." The financial risk profile categories are "Minimal," "Modest,"  
10 "Intermediate," "Significant," "Aggressive," and "Highly Leveraged." Most of the  
11 electric utilities have a financial risk profile of "Aggressive." PSE has an "Excellent"  
12 business risk profile and an "Aggressive" financial risk profile.

13 **Q. PLEASE DESCRIBE S&P'S USE OF THE FINANCIAL BENCHMARK**  
14 **RATIOS IN ITS CREDIT RATING REVIEW.**

15 **A.** S&P evaluates a utility's credit rating based on an assessment of its financial and  
16 business risks. A combination of financial and business risks equates to the overall  
17 assessment of PSE's total credit risk exposure. S&P publishes a matrix of financial  
18 ratios that defines the level of financial risk as a function of the level of business risk.

19 S&P publishes ranges for three primary financial ratios that it uses as guidance  
20 in its credit review for utility companies. The three primary financial ratio  
21 benchmarks it relies on in its credit rating process include: (1) debt to Earnings Before  
22 Interest, Taxes, Depreciation and Amortization ("EBITDA"); (2) Funds From  
23 Operations ("FFO") to total debt; and (3) total debt to total capital.

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<sup>27/</sup> S&P updated its original 2007 credit metric guidelines in 2009, and incorporated utility metric benchmarks with the general corporate rating metrics.

1 **Q. HOW DID YOU APPLY S&P'S FINANCIAL RATIOS TO TEST THE**  
2 **REASONABLENESS OF YOUR RATE OF RETURN**  
3 **RECOMMENDATIONS?**

4 A I calculated each of S&P's financial ratios based on PSE's cost of service for retail  
5 operations. While S&P would normally look at total consolidated financial ratios in  
6 its credit review process, my investigation in this proceeding is to judge the  
7 reasonableness of my proposed cost of capital for rate-setting in PSE's regulated  
8 utility operations. Hence, I am attempting to determine whether the rate of return and  
9 cash flow generation opportunity reflected in my proposed rate of return for PSE will  
10 support target investment grade bond ratings and PSE's financial integrity.

11 **Q. DID YOU INCLUDE ANY OFF-BALANCE SHEET DEBT ("OBSD")?**

12 A. Yes. As shown in Exhibit No.\_\_(MPG-20), page 4 of 4, I used an OBSD amount of  
13 \$334.2 million. This OBSD is attributed to PSE's operating leases and purchase  
14 power agreements as estimated by S&P.

15 **Q. HOW DID YOU ESTIMATE PSE'S OBSD?**

16 A. The OBSD is estimated by S&P and can be found in Exhibit No.\_\_(MPG-20) at 4.  
17 Because I am focused on Washington retail operations, I included only the amount of  
18 total PSE OBSD that is clearly tied to provision of retail electric utility service in  
19 Washington. Therefore, I only included the amount of OBSD attributable to operating  
20 leases and purchase power agreements.

21 **Q. PLEASE DESCRIBE THE RESULTS OF THIS CREDIT METRIC ANALYSIS**  
22 **FOR PSE.**

23 A. The S&P financial metric calculations for PSE at a 9.70% return are developed on  
24 Exhibit No.\_\_(MPG-20) at 1.

1 As shown on Exhibit No.\_\_(MPG-20) at 1, column 1, based on an equity  
2 return of 9.70%, PSE will be provided an opportunity to produce a debt to EBITDA  
3 ratio of 3.5x. This is within S&P's new "Significant" guideline range of 3.0x to  
4 4.0x.<sup>28/</sup> This ratio supports an investment grade credit rating.

5 PSE's retail operations FFO to total debt coverage at a 9.70% equity return  
6 would be 17%, which is within the new "Aggressive" metric guideline range of 12%  
7 to 20%. The FFO/total debt ratio will support an investment grade bond rating.

8 Finally, PSE's total debt ratio to total capital is 56%. This is within the new  
9 "Aggressive" guideline range of 50% to 60%. This total debt ratio will support an  
10 investment grade bond rating.

11 At my recommended return on equity of 9.70% and my proposed capital  
12 structure, the Company's financial credit metrics are supportive of its current "BBB"  
13 utility bond rating.

14 **Q. DID YOU COMPUTE THESE CREDIT METRICS AT A 9.50% RETURN ON**  
15 **EQUITY?**

16 **A.** Yes. The S&P financial metric calculations for PSE at a 9.50% return are developed  
17 on Exhibit No.\_\_(MPG-21) at 1.

18 As shown on Exhibit No.\_\_(MPG-21) at 1, column 1, based on an equity  
19 return of 9.50%, PSE will be provided an opportunity to produce a debt to EBITDA  
20 ratio of 3.5x. This is within S&P's new "Significant" guideline range of 3.0x to  
21 4.0x.<sup>29/</sup> This ratio supports an investment grade credit rating.

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<sup>28/</sup> Standard & Poor's RatingsDirect: "Criteria Methodology: Business Risk/Financial Risk Matrix Expanded," May 27, 2009.

<sup>29/</sup> *Id.*



1 PSE's retail operations FFO to total debt coverage at a 9.50% equity return  
2 would be 16%, which is within the new "Aggressive" metric guideline range of 12%  
3 to 20%. The FFO/total debt ratio will support an investment grade bond rating.

4 Finally, PSE's total debt ratio to total capital is 56%. This is within the new  
5 "Aggressive" guideline range of 50% to 60%. This total debt ratio will support an  
6 investment grade bond rating.

7 At my recommended ROE of 9.50% and my proposed capital structure, the  
8 Company's financial credit metrics are supportive of its current "BBB" utility bond  
9 rating.

10 **Q. DO YOU BELIEVE THIS CREDIT METRIC EVALUATION OF PSE AT**  
11 **YOUR PROPOSED RETURN ON EQUITY PROVIDES MEANINGFUL**  
12 **INFORMATION TO HELP THE COMMISSION DETERMINE THE**  
13 **APPROPRIATENESS OF YOUR RECOMMENDATION?**

14 **A.** Yes. While S&P calculates these credit metrics based on total Company operations,  
15 and not the retail operations of PSE (as I have performed in this study), they still  
16 provide meaningful information to evaluate the reasonableness of my proposed rate of  
17 return for PSE in this case. Further, while credit rating agencies also consider other  
18 financial metrics and qualitative considerations, these metrics are largely driven by the  
19 cost of service items of depreciation expense and return on equity. Hence, to the  
20 extent these important aspects of cost of service impact PSE's internal cash flows, the  
21 relative impact on PSE will be measured by these credit metrics. As illustrated above,  
22 an authorized return on equity of 9.70% or 9.50% will support internal cash flows that  
23 will be adequate to maintain PSE's current investment grade bond rating.

1 **Rebuttal to Dr. Charles Olson**

2 **Q. WHAT RETURN ON EQUITY DOES DR. OLSON RECOMMEND FOR PSE**  
3 **IN THIS PROCEEDING?**

4 **A.** Dr. Olson recommends a return on equity for PSE in this proceeding in the range of  
5 11.0% to 13.0%. He states he develops this recommended range based on a DCF  
6 study of a group of comparable risk utility companies to PSE, but he also performs a  
7 risk premium and CAPM study to support his return on equity recommendation.  
8 Ultimately, PSE proposes to adjust rates in this proceeding using a return on equity of  
9 10.8%, below Dr. Olson’s recommended return on equity range.

10 **Q. DO YOU BELIEVE DR. OLSON’S RECOMMENDED RETURN ON EQUITY**  
11 **RANGE OF 11.0% TO 13.0% ACCURATELY MEASURES PSE’S MARKET**  
12 **COST OF EQUITY?**

13 **A.** No. As shown in Table 5 below, with proper adjustments, Dr. Olson’s own DCF, risk  
14 premium and CAPM studies would support much lower returns on equity for PSE if  
15 appropriate data were used and risk adjustments were recognized. Dr. Olson’s own  
16 studies would support a return on equity for PSE in this proceeding of 9.70% with  
17 these adjustments.

<b><u>Dr. Olson’s Recommended Return on Equity</u></b>		
<b><u>Description</u></b>	<b><u>Dr. Olson’s Recommendation</u></b>	<b><u>Adjusted Estimate</u></b>
DCF	11.60% - 12.10%	10.1%
Risk Premium	10.45% - 12.35%	10.0%
CAPM	<u>10.65% - 10.82%</u>	<u>8.9%</u>
Average Result Range	10.90% - 11.76%	9.7%

1 **Q. HOW DID DR. OLSON DEVELOP A DCF ESTIMATE FOR PSE IN THIS**  
2 **PROCEEDING?**

3 **A.** Dr. Olson's DCF study on his proxy group companies is shown on his Exhibit  
4 No.\_\_\_\_(CEO-5). As shown on that exhibit, Dr. Olson estimates a proxy group  
5 average return of 12.1%, a proxy group median of 11.6%, and a modified median of  
6 11.8% which consists of removing the group's two highest and two lowest return  
7 estimates. As shown on my Exhibit No.\_\_\_\_(MPG-22), Dr. Olson's DCF studies  
8 produce unreliable and inflated DCF return estimates for PSE because the growth rates  
9 used in his analysis substantially exceed reasonable estimates of long-term sustainable  
10 growth. As shown on that exhibit, the growth rates used for the proxy group mean,  
11 median and modified median are 7.81%, 7.81%, and 7.28%, respectively. All of these  
12 growth rate estimates are excessive because they substantially exceed the long-term  
13 projected growth of the U.S. GDP.

14 **Q. CAN DR. OLSON'S DCF STUDY BE MODIFIED TO PRODUCE A MORE**  
15 **REASONABLE RETURN ON EQUITY ESTIMATE FOR PSE IN THIS**  
16 **PROCEEDING?**

17 **A.** Yes. Using Dr. Olson's data, and reflecting a multi-stage growth DCF model can  
18 produce a more reasonable DCF return estimate for PSE. A multi-stage growth DCF  
19 model can capture the abnormally high growth rate outlooks for the companies  
20 included in Dr. Olson's study, but those growth rates will eventually decline to a lower  
21 sustainable level. Like PSE, many utility companies are experiencing abnormally high  
22 short-term growth because of very large capital improvement programs which are  
23 inflating rate base, and growing their earned rate of return at a much higher clip than  
24 can be sustained indefinitely. As discussed in more detail above with respect to my  
25 own DCF study, the general consensus outlook by investors is that utility companies

1 will be involved in an accelerated growth period, but that growth period will  
2 eventually subside to a more normal level. A multi-stage growth DCF study can  
3 capture this rational investor outlook.

4 **Q. HOW DID YOU DEVELOP A MULTI-STAGE GROWTH DCF STUDY**  
5 **USING DR. OLSON'S DATA?**

6 **A.** I modeled the multi-stage growth DCF study with three growth periods. The first  
7 period reflects Dr. Olson's three- to five-year analyst growth rate outlooks as included  
8 in his *Yahoo* growth rate source. The third stage growth reflected the projected  
9 long-term growth on the U.S. economy of 4.9%. This growth rate represents the  
10 highest rational outlook for a sustainable long-term growth rate for a company. The  
11 intermediate stage, or Stage 2, reflects a transition from the high short-term growth  
12 rate stage, down to the long-term sustainable growth rate. Using this methodology, a  
13 multi-stage growth DCF return estimate for Dr. Olson's study is 10.05% (rounded to  
14 10.1%) as developed in my Exhibit No.\_\_(MPG-23).

15 **Q. BASED ON THE DATA DR. OLSON USES IN HIS DCF STUDY, WHAT**  
16 **WOULD BE AN APPROPRIATE RETURN ON EQUITY FOR PSE?**

17 **A.** The range of DCF return estimates using Dr. Olson's data and proxy group, using a  
18 DCF model, indicates a range of 11.6% (Dr. Olson's modified median estimate) to  
19 12.1% (Dr. Olson's average estimate). The midpoint of this range is 11.9%. My  
20 multi-stage DCF analysis indicates a return of 10.1%. Hence, given equal  
21 consideration to Dr. Olson's inflated constant growth DCF model and a more  
22 appropriate and accurate multi-stage growth DCF analysis, would conservatively  
23 support a DCF return estimate of 11.0% for PSE. However, the low-end of this range  
24 is more of a reasonable estimate of PSE's actual cost of capital in today's very low  
25 capital market cost environment.

1 **Q. PLEASE DESCRIBE DR. OLSON'S RISK PREMIUM STUDY.**

2 **A.** Dr. Olson relied on Morningstar's historical achieved return on the stock market  
3 versus Treasury bond markets to develop an arithmetic average and a geometric actual  
4 achieved return on stock investments versus Treasury bonds. Recognizing the total  
5 achieved return on stocks, less the income return on Treasury bonds over the period  
6 1926 to 2009, Dr. Olson estimated an arithmetic risk premium estimate of 5.2%, and a  
7 geometric risk premium estimate of 4.7%. To these estimates of risk premiums for the  
8 stock market, he included his projected Treasury bond yield of 5.75% to produce a  
9 risk premium estimate for PSE in the range of 12.35% to 10.45%. Exhibit No.  
10 \_\_\_\_ (CEO-1T) at 27-28.

11 **Q. DOES DR. OLSON'S RISK PREMIUM STUDY PRODUCE A REASONABLE**  
12 **ESTIMATE FOR PSE IN THIS PROCEEDING?**

13 **A.** No. Dr. Olson's risk premium study is designed to estimate an expected return on the  
14 market, not an expected return on utility stock investments. This is significant because  
15 utility stock investments are generally regarded as below market risk investments.  
16 Hence, Dr. Olson's risk premium study produces a return on equity that exceeds fair  
17 compensation for PSE.

18 **Q. CAN DR. OLSON'S RISK PREMIUM STUDY BE ADJUSTED TO REFLECT**  
19 **AN APPROPRIATE RISK-ADJUSTED RETURN FOR PSE?**

20 **A.** Dr. Olson's risk premium study cannot be corrected because it simply is a  
21 mis-specified and erroneous model. However, using his point estimate of 12.35% as  
22 the expected return on the market, and reducing that by a reasonable risk spread  
23 between the market and utility bonds may indicate an appropriate return on equity for  
24 PSE. Dr. Olson's own study indicates that systematic risk of utility companies is  
25 about 75% of that of the overall market. If this is the case, then his risk premium of

1 6.6% for the overall market would equate to about a 4.9% risk premium for utility  
2 companies. Adding to that the current observable “Baa” utility bond yield of 5.1%  
3 would indicate a risk premium return of 10.0%. Again, this is a rough estimate  
4 because it is not an accurate risk adjusted return for PSE.

5 **Q. PLEASE DESCRIBE DR. OLSON’S CAPM STUDY.**

6 **A.** Dr. Olson uses two market risk premiums: one of 6.6% and a second of 6.85%. He  
7 relies on *Value Line* beta estimates for his proxy group of 0.74. With this risk  
8 premium data and these beta estimates, he estimates an appropriate risk-adjusted risk  
9 premium for his proxy utility group of 5.07%. To this estimate he adds his projected  
10 Treasury bond yield of 5.75%, to produce CAPM return estimates of 10.63% and  
11 10.82%. Exhibit No. \_\_\_\_ (CEO-1T) at 28-29.

12 **Q. IS DR. OLSON’S CAPM RETURN ESTIMATE FOR PSE REASONABLE?**

13 **A.** No. Dr. Olson’s projected Treasury bond yield of 5.75% substantially exceeds current  
14 observable Treasury bond yields, and the consensus projection of Treasury bond  
15 yields made by independent economists out over the next two years. As noted above  
16 with respect to my CAPM return estimate, consensus economists’ published projected  
17 Treasury bond yields reflect an expectation of 3.8% Treasury bond yields out over the  
18 next two years. As such, Dr. Olson’s CAPM return estimate is substantially  
19 overstated because it does not reflect consensus market participant outlooks for future  
20 Treasury bond yields.

1 **Q. CAN DR. OLSON'S CAPM RETURN ESTIMATE BE MODIFIED TO**  
2 **PRODUCE A MORE REASONABLE RETURN ON EQUITY ESTIMATE FOR**  
3 **PSE?**

4 **A.** Yes. Using Dr. Olson's risk premium estimate for utilities of 5.07%, and a projected  
5 Treasury bond yield of 3.8%, indicates a return on equity for PSE of 8.87% (rounded  
6 to 8.9%).

7 **Q. DOES THIS CONCLUDE YOUR RESPONSIVE TESTIMONY?**

8 **A.** Yes, it does.