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I. Introduction

1 **Q. Please state your names and positions.**

2 A. My name is Patrick G. Hager. I am the Manager of Regulatory Affairs at PGE. I am
3 responsible for analyzing PGE's cost of capital. My qualifications appear at the end of this
4 testimony.

5 My name is William J. Valach. I am the Director of Investor Relations for PGE. I am
6 responsible for managing the relationships and communications with PGE's shareholders
7 and the investing public. My qualifications appear at the end of this testimony.

8 **Q. What is the purpose of your testimony?**

9 A. The purpose of our testimony is to recommend PGE's cost of capital and capital structure
10 for the 2011 test year. PGE's requested cost of capital and capital structure will provide
11 PGE the opportunity to earn a fair return while keeping its costs reasonable. As Dr. Zepp
12 discusses in his testimony (PGE Exhibit 1200), guidance regarding cost of capital decisions
13 are provided by the Bluefield and Hope Supreme Court decisions¹ as well as ORS 756.040.

14 **Q. What are PGE's financial goals?**

15 A. PGE's overall goal is to be viewed in the financial markets as a well-performing, vertically
16 integrated utility. This includes:

- 17 • Maintaining investment grade bond ratings;
- 18 • Accessing financial markets to provide liquidity for operations and capital
19 expenditures;
- 20 • Attracting capital on reasonable terms;

¹ *Bluefield Waterworks & Improvement Co. v. Public Service Commission of West Virginia* (262 U.S. 679 (1923))
and *Federal Power Commission v. Hope Natural Gas Co.* (320 U.S. 591 (1944)).

- 1 • Achieving an actual return on equity that is at or above that achieved by a group
- 2 of utilities with similar characteristics, service territory, and business risks; and
- 3 • Setting prices at a sufficient level to recover prudently incurred costs, including
- 4 an overall return on utility investment.

5 **Q. What is PGE’s requested overall cost of capital for this filing?**

6 A. We request and support an 8.289% cost of capital for the 2011 test year. This cost of capital
7 includes a 10.50% Required Return on Equity (RROE) based on the recommendations of
8 Dr. Zepp in PGE Exhibit 1200, with adjustments applied at the direction of PGE’s CEO.
9 These adjustments are discussed in more detail in PGE Exhibit 100. This point estimate is
10 for revenue requirement purposes and is based on our recommended range of 8.289% to
11 9.039% for PGE’s cost of capital and a recommended range of 10.50% to 12.00.% for
12 PGE’s RROE. Table 1 below shows the recommended cost of the two components of
13 PGE’s capital, common equity and long-term debt. Table 1 also shows PGE’s 2011
14 forecasted capital structure.

15 **Q. How did you derive the overall recommended cost of capital?**

16 A. We first estimated the cost for the debt and equity components by considering the range,
17 PGE’s risks, and financing needs. We then determined the “weighted” cost by multiplying
18 the component’s cost by its weight (i.e., percent) in our recommended capital structure.
19 Finally, we summarized the weighted cost of each component to derive the weighted, or
20 composite, cost of capital. Table 1 summarizes these calculations.

Table 1
PGE's Weighted Cost of Capital
Test Year 2011

<u>Component</u>	<u>Average Outstanding</u> <u>(\$000) [1]</u>	<u>Percent of</u> <u>Capital [2]</u>	<u>Component</u> <u>Cost</u>	<u>Weighted</u> <u>Cost</u>
Long-term Debt	\$ 1,809,600	50.00%	6.077%	3.039%
Common Equity	<u>\$ 1,657,814</u>	<u>50.00%</u>	10.500%	<u>5.250%</u>
Total	\$ 3,467,414	100.00%		8.289%

[1] "Average Outstanding" reflects PGE's projected average values of long-term debt and common equity for 2011.

[2] "Percent of Capital" reflects PGE's long-term targeted capital structure of 50% debt, 50% equity, and is used to calculate PGE's weighted average cost of capital ("Weighted Cost").

1 **Q. How is the remainder of your testimony organized?**

2 A. In the following section, we discuss the impact of regulatory support and PGE's power cost
3 adjustment mechanism, decoupling, and collateral costs. In Section III, we provide a review
4 of the financial markets and economic activity. We then discuss PGE's long-term debt,
5 including new and redeemed issues, in Section IV. In Section V, we discuss PGE's capital
6 structure. Section VI provides our qualifications. In PGE Exhibit 1200, Dr. Zepp discusses
7 PGE's required return on equity. He provides the analysis and support for PGE's requested
8 RROE.

II. Regulatory Impact

1 **Q. What impact does regulatory support have on PGE’s credit quality?**

2 A. Regulatory support to recover prudent costs is essential to maintaining a stable, investment
3 grade credit rating. As discussed in Section V below, this support is especially important
4 given the significant size of PGE’s planned capital expenditures over the next few years.

5 Both Moody’s and Standard & Poor’s (S&P) consider regulatory support a key factor in
6 their determination of firms’ creditworthiness. Moody’s places equal weighting on
7 “Regulatory Framework” and “Ability to Recover Costs and Earn Returns” in its assessment
8 of electric and gas utilities.² S&P indicates that “[r]egulation is the most critical aspect that
9 underlies regulated integrated utilities’ creditworthiness.”³ Key characteristics in the
10 assessment of regulatory environments for both credit rating firms include the consistency
11 and predictability of decisions, as well as the ability for timely recovery of prudently
12 incurred costs. Good credit quality is critical to secure financing at reasonable rates and
13 maintain access to wholesale energy markets, especially in today’s volatile financial
14 environment.

15 **Q. You mentioned maintaining access to the financial markets as one of PGE’s financial**
16 **goals. Why does PGE need to maintain access to these markets?**

17 A. PGE needs to maintain access to the equity and credit markets to provide cash and liquidity
18 for operations, and to fund our significant capital expenditure program over the next five
19 years, as discussed in PGE’s pending 2009 Integrated Resource Plan (IRP), OPUC docket
20 LC 48. PGE’s IRP recommends significant investments in generation facilities and
21 transmission projects, among others. In this filing, PGE has included capital expenditure

² “Rating Methodology – Regulated Electric and Gas Utilities.” Moody’s Global Infrastructure Finance.

³ “Key Credit Factors: Business And Financial Risks In The Investor-Owned Utilities Industry.” Standard & Poor’s.

1 forecasts of approximately \$542 million in 2010, \$364 million in 2011, and increasing levels
2 in each of the following three years (see PGE Exhibit 300, Section VIII, for a discussion of
3 capital expenditures). In 2008 and 2009, PGE’s capital expenditures totaled approximately
4 \$370 million and \$700 million, respectively. As noted in Section V below, a high level of
5 capital expenditures increases the importance of supportive regulatory actions.

6 Additionally, PGE needs to maintain ready access to the credit markets to enable us to
7 actively manage our debt and credit arrangements in order to take advantage of favorable
8 opportunities for refinancing or restructuring. Through our portfolio management, PGE has
9 historically refinanced debt and renegotiated credit arrangements when prudent, which has
10 benefited customers by lowering PGE’s overall cost of debt. By maintaining a strong
11 financial profile and financial flexibility, PGE will be able to preserve its ability to raise
12 capital at reasonable terms under various market conditions as we did in 2009.

13 **Q. Have financial analysts noted any concerns regarding regulatory outcomes as they**
14 **pertain to PGE?**

15 A. Yes. Despite the fact that many credit and equity analysts have noted certain regulatory
16 outcomes and PGE’s regulatory environment as favorable aspects, they have also expressed
17 concerns in their reports regarding PGE’s Power Cost Adjustment Mechanism (PCAM) and,
18 to a lesser degree, the decoupling mechanism adopted in the UE 197 proceeding. We
19 address these two areas of concern, as well as PGE’s proposed treatment of collateral costs
20 below.

A. Power Cost Adjustment Mechanism

1 **Q. What have financial analysts said about the PCAM?**

2 A. Bank of America Merrill Lynch analysts cite concerns regarding the earnings volatility
3 created by PGE’s current PCAM. Their concerns surround the wide deadband and the
4 asymmetry of benefits allocation, which have resulted in “meaningful” impacts on PGE’s
5 earnings. Equity analysts at Wells Fargo noted PGE’s “above average earnings volatility”
6 caused by the PCAM as a risk that justified a reduced price target. Ladenburg Thalman
7 analysts also included PGE’s “earnings volatility associated with the Power Cost
8 Adjustment Mechanism” in formulating their rating decision.

9 **Q. How would increased earnings volatility impact PGE’s cost of capital?**

10 A. Increased volatility results in increased uncertainty or risk. Investors and creditors require
11 greater compensation for owning an investment with more risk, all else equal. A firm with
12 earnings that are expected to be more volatile, thus, will have a higher cost of capital than a
13 firm with more stable earnings. If the current PCAM structure creates a higher level of
14 earnings volatility relative to that faced by comparable firms, then investors’ required rate of
15 return for PGE will be higher as well.

16 **Q. Will the PCAM structure changes proposed by PGE affect its cost of capital?**

17 A. Yes. As discussed above, decreased earnings volatility will reduce PGE’s cost of capital.
18 That cost reduction will ultimately benefit customers. PGE has proposed three
19 enhancements to the PCAM that would help reduce PGE’s earnings volatility:

- 20 • Symmetrical deadband – PGE has proposed changing the deadband from
21 asymmetrical to symmetrical. The symmetrical deadband would help mitigate a
22 portion of the risk that PGE faces due to its reliance on hydroelectric power and

1 the variable nature of this resource. As has been demonstrated by PGE in prior
2 dockets,⁴ the power cost benefits in years that hydro production is “good” (above
3 average) are outweighed by the detrimental impacts in years that hydro
4 production is “bad” (below average). The current asymmetric deadband, which is
5 skewed towards PGE absorbing a larger portion of the power cost variance in
6 years that hydro production is likely poor, negatively amplifies this already
7 skewed distribution of hydro benefits.

- 8 • Dollar-defined deadband – PGE proposes that the deadband calculation be based
9 on an absolute dollar range of \$10.0 million, as opposed to a percentage of the
10 authorized ROE. This modification to the current approach restricts the deadband
11 from continually growing wider as capital additions are included in rate base and
12 results in a more predictable and stable deadband over time given PGE’s expected
13 large capital expenditures.
- 14 • Earnings test – PGE will share a power cost variance with customers to the extent
15 that earnings still meet the authorized ROE. In a year when the actual ROE is less
16 than that authorized by the Commission, PGE will not be forced to forfeit
17 earnings. This earnings test will not exacerbate under-earning or over-earning
18 due to a power cost variance. PGE will collect any power cost variance from
19 customers up (or refund down) to the point that actual ROE is equal to that
20 authorized by the Commission.

⁴ See for example, PGE Exhibit 301 filed in the UE 165 proceeding.

1 The principles of power cost adjustment mechanisms are discussed by Mr. Fetter in PGE
2 Exhibit 1300. The above modifications to PGE’s PCAM are addressed in PGE Exhibit 200
3 as well.

B. Decoupling

4 **Q. Please describe PGE’s current decoupling mechanism.**

5 A. PGE proposed a decoupling mechanism in the UE 197 proceeding with the intention of
6 removing the inherent disincentives that would otherwise exist for PGE to promote energy
7 efficiency. Decoupling applies to residential and small commercial/industrial customer rates
8 for a two-year trial period, as specified in OPUC Order No. 09-020. The Commission stated
9 that, “PGE’s risk will go down,” and, as a result, reduced PGE’s authorized ROE by 10
10 basis points.⁵ The potential for PGE to recover an amount greater than its fixed costs under
11 certain circumstances was taken into account in the authorized ROE reduction as well.

12 **Q. How does the financial community view PGE’s decoupling mechanism?**

13 A. Thus far, the decoupling mechanism appears to have been viewed in a largely favorable light
14 by the analyst community. If this view is representative of the broader financial market’s
15 view of decoupling, then it is likely that the mechanism has reduced the perceptions of
16 PGE’s risk in the market. Analysts, however, have also noted that the current decoupling
17 mechanism leaves PGE exposed to the load fluctuations of large industrial and commercial
18 customers, with an associated disproportionate impact on sales and revenues.

19 **Q. What were the results of decoupling in 2009?**

20 A. As discussed in PGE Exhibit 1500, we expect a refund to the residential customer class
21 (Schedule 7) and a decoupling-related surcharge for small non-residential customers

⁵ OPUC Order No. 09-020, pg. 28

1 (Schedule 32), resulting in an overall refund. This refund should be viewed in the context of
2 the substantial load decrease experienced by PGE in 2009 relative to both the 2008 actual
3 deliveries as well as the test year load forecast for 2009 in UE 197.

4 **Q. Are decoupling mechanisms becoming more prevalent in electric utility regulation?**

5 A. It appears that decoupling mechanisms are becoming more prevalent in the industry. A
6 recent report by the Edison Foundation indicated that 19 states had decoupling mechanisms
7 either in place or pending. In addition, seven more states had some form of lost revenue
8 recovery mechanism in place.⁶

C. Collateral Deposits

9 **Q. Please describe collateral deposits.**

10 A. PGE posts or receives collateral deposits (also know as margin deposits) related to
11 wholesale power and fuel contracts where delivery and/or settlement occur in the future.
12 The deposits made by PGE are held by the counterparties with which PGE transacts (e.g.,
13 utilities, power marketers, and clearing brokers). These deposits are based on the difference
14 in the contract price relative to the current market price, and in the case of deposits held by a
15 clearing broker may also include a maintenance component.

16 **Q. What was the collateral requirement amount included for the 2009 test year in**
17 **UE 197?**

18 A. For the 2009 test year, PGE forecasted an average balance of \$10.1 million in collateral
19 deposits.

20 **Q. What were PGE's actual collateral requirements in 2009?**

⁶ “State Energy Efficiency Regulatory Frameworks.” The Edison Foundation – Institute for Electric Efficiency.

1 A. The average month-end balance of posted collateral for 2009 was approximately \$308
2 million. At times in 2009, however, posted collateral exceeded \$425 million. These large
3 collateral postings resulted from a significant drop in the market price for fuel and power.

4 **Q. What are PGE's expected collateral requirements in 2011?**

5 A. For the 2011 test year, PGE forecasts an average collateral balance of \$88.9 million. This
6 assumes no decrease in the forward market price of fuel or power relative to December 17,
7 2009, the date the forecast was prepared.

8 **Q. How does PGE fund these levels of collateral requirements?**

9 A. PGE finances collateral deposits with unsecured revolving credit facilities. Cash and letters
10 of credit may be drawn against these facilities to fund the collateral deposits. As of
11 December 31, 2008, PGE's total unsecured revolving credit facilities totaled \$495 million.
12 The credit facilities were increased to \$600 million by December 31, 2009.

13 **Q. How does PGE plan to fund its collateral requirements in the future?**

14 A. We plan to increase the amount of revolving credit facilities from \$600 million to \$700
15 million, designating \$500 million to meet power supply collateral requirements.

16 **Q. What are PGE's expected costs associated with funding the collateral requirements in**
17 **2011?**

18 A. PGE forecasts a net cost of approximately \$2.6 million to fund collateral requirements in
19 2011. This amount represents the interest payments made on funds drawn from credit
20 facilities and the annual cost of the facilities designated to meet power supply needs, net of
21 the interest credited on collateral deposits. Funding collateral deposits has an expected
22 negative carry due to the difference in the rate at which interest on the deposits is credited
23 and PGE's costs of borrowing those funds. Interest is received only on the portion of

1 collateral posted with cash (estimated at one-third of the balance for 2011). PGE's forecast
2 assumes that the average annual interest rate paid to borrow cash will be 2.50%, while the
3 interest rate received on posted collateral will be 1.50% (the forecasted Treasury Bill rate,
4 less 50 basis points).

5 **Q. Why do collateral and the associated costs pose a risk to PGE?**

6 A. As market prices fluctuate, PGE may be required to significantly increase the amount of
7 collateral posted to support its contract positions, requiring PGE to maintain sufficient
8 liquidity to meet these collateral calls. As mentioned previously, PGE must also maintain
9 adequate liquidity to cover the net cost of the deposits.

10 **Q. Does the lead lag study performed by PGE account for the cost of collateral deposits?**

11 A. No. With regards to purchased power and fuel, the lead lag study evaluates the lag between
12 the month of delivery of power or fuel and the payment of the related invoice. It does not
13 capture the financing costs associated with movements in the value of a power or fuel
14 position prior to the month of delivery, which is the basis of collateral requirements.

15 **Q. How does PGE propose to incorporate collateral costs?**

16 A. PGE proposes to incorporate the costs associated with collateral deposits into PGE's net
17 variable power costs for ratemaking purposes. The variability of the amount of outstanding
18 collateral deposits is directly tied to PGE's power supply positions and is, therefore, directly
19 aligned with the Annual Update Tariff (AUT) filing and subsequent Power Cost Adjustment
20 Mechanism true-up. Collateral costs are also addressed in PGE Exhibit 400.

III. Financial Market and Economic Overview

1 **Q. Please provide an overview of the financial market conditions that existed during 2009.**

2 A. Equity and credit markets were both marked by periods of extreme volatility in 2008 and
3 2009 as the economic downturn, or “Great Recession,” wore on. A partial list of factors that
4 may have contributed to the equity and credit market conditions include: the
5 housing/mortgage crisis in the U.S. and other developed countries, the increased perceptions
6 of counterparty risk globally following the failure of Lehman Brothers and subsequent
7 “bailout” of other financial firms, a severe lack of liquidity in some market sectors, and the
8 implications of a protracted global recession.

9 The sell-off in equities began accelerating late in the third quarter of 2008 and drove the
10 S&P 500 index down to mid-1990s levels. At its nadir in March 2009, the index had fallen
11 25% from the first of the year and more than 50% relative to its historical peak in October
12 2007. From March, the index rallied nearly 65% by year-end 2009, but was still
13 approximately 30% below its October 2007 peak.⁷

14 **Q. You mentioned that the equity markets are more volatile than in the past. Does a
15 readily available indicator or measure of volatility in the U.S. equity market exist?**

16 A. Yes. The Chicago Board Options Exchange (CBOE) Volatility Index (VIX) measures
17 option investors’ consensus views of future expected stock market (as represented by the
18 S&P 500 Index) volatility. The index measures the 30-day volatility implied by the prices
19 of near-term and next-term S&P 500 Index options (in other words, the nearest two months’
20 option contracts that have at least one week until expiration).⁸ The VIX is often referred to

⁷ Index data retrieved from <http://www.snl.com>

⁸ “The CBOE Volatility Index – VIX.” <http://www.cboe.com/micro/vix/vixwhite.pdf>

1 as the “fear index” or “investor fear gauge” because expected volatility tends to rise in
2 periods of market turmoil.



3 **Q. Based on the VIX, has volatility increased in the equity markets?**

4 A. Yes. In the midst of the market panic in the fourth-quarter of 2008, the VIX breached 80; a
5 level more than four-times its daily average close for the preceding 19 years. Prior to this
6 massive financial turmoil, the high closing mark for the index was just over 45, a point
7 reached only three times in its history: twice in 1998 and once in 2002. During the current
8 financial crisis, the index closed above 45 a total of 83 days between September 2008 and
9 the end of March 2009, as can be seen in the chart above, which is also provided as PGE

1 Exhibit 1102.⁹ This is indicative of the heightened levels of investor concern and volatility
2 present in the equity markets during portions of 2008 and 2009.

3 In the year preceding each of PGE’s two previous general rate case filings (UE 180 and
4 UE 197, filed in 2006 and 2008), the index average was approximately 15, much lower than
5 its current level, and much lower than the average of 31 in 2009. Although these are
6 historical, not forward-looking, volatility figures, as noted by Dr. Zepp in his testimony,
7 investors are “still wary about what that future will bring” given this recent market
8 environment.

9 **Q. Was the “volatility” and “turmoil” limited to the equity markets?**

10 A. No. Extremely tough conditions existed in the credit markets as well during the period,
11 which we address in Section IV below.

12 **Q. Has the economy in the United States recovered?**

13 A. No. The timing and extent of any general economic recovery remains a highly debated
14 topic. The statement released on December 16, 2009 by the Federal Reserve following the
15 Federal Open Market Committee (FOMC) meeting suggests that while economic conditions
16 in the United States are improving, significant risks remain. The FOMC noted that although
17 it is likely to remain weak for some time, economic activity in the country had “continued to
18 pick up” since its prior meeting. Also, when discussing their outlook on December 8, 2009
19 for the U.S. economy in 2010, Standard & Poor’s economists opined that, “although most of
20 the bad things have stopped happening, there are few good things boosting growth.”¹⁰

⁹ Index data retrieved from <http://www.cboe.com/micro/VIX/historical.aspx>

¹⁰ “U.S. Economic Forecast: An Imperfect '10.” Standard & Poor’s.

1 **Q. Does the FOMC statement mention any risks or specific areas of concern in the**
2 **economy?**

3 A. Yes. The December FOMC statement mentions factors such as the weak labor market, tight
4 credit availability, and the decrease in business fixed investment that continue to weigh on
5 the economy.¹¹ The unemployment rate in the country (as reported by the Bureau of Labor
6 Statistics) was 10.0% in December 2009, which is down slightly from October 2009.¹²
7 Goldman Sachs forecasts the unemployment rate in the U.S. to remain “near or above 10%
8 through 2010.”¹³ Generally dependent upon the rate of economic growth, the timing and
9 extent of improvement in the nation’s unemployment rate is, thus, uncertain as well.

10 **Q. Do other potential risks remain in the U.S. or global economy?**

11 A. Yes. S&P notes that non-residential construction remains the “major negative left” in the
12 U.S. economy and is not likely to recover until 2011.¹⁴ Others note that commercial real
13 estate represents a major risk, as does the growing U.S. deficit.¹⁵ According to a report in
14 the Wall Street Journal, delinquency rates on commercial mortgages reached 6.07% in
15 December 2009. This marks the highest recorded delinquency rate since the commercial
16 mortgage-backed security market began.¹⁶

17 Non-U.S. entities with credit problems continue to make headlines as of December
18 2009. Dubai World (a corporation run by the emirate) announced on November 26th that it
19 was seeking to delay payments on a portion of its \$59 billion of outstanding debt. Markets
20 were initially shaken by the news, but recovered when it was revealed that less than half of

¹¹ <https://www.federalreserve.gov/newsevents/press/monetary/20091216a.htm>

¹² Data retrieved from <http://www.bls.gov/>

¹³ “United States: Utilities: Power – Electric Utilities.” Goldman Sachs Global Investment Research

¹⁴ “U.S. Economic Forecast: An Imperfect '10.” Standard & Poor’s.

¹⁵ “Crisis in sovereign, commercial debt seen.” <http://www.reuters.com/article/idUSTRE5B64B920091207>

¹⁶ “Commercial Mortgage Delinquencies Spike, But There Is Hope.” http://online.wsj.com/article/BT-CO-20100107-710296.html?mod=dist_smartbrief

1 the outstanding debt needed to be restructured.¹⁷ On December 16, 2009, the credit rating
2 for Greece was cut by S&P as a result of the country’s current debt load, which was reported
3 to be 12.7% of GDP, and the failure of an announced reform plan to adequately address the
4 steps to reduce the debt level. This move came a week after Fitch also downgraded the
5 country’s debt.¹⁸

6 **Q. With all of the conditions discussed above, was PGE still able to maintain access to the**
7 **financial markets during 2009?**

8 A. Yes. As we discuss in Section IV below, PGE was able to issue \$580 million of debt during
9 2009. PGE’s solid, investment grade credit ratings and positive credit quality allowed PGE
10 continued access to credit markets. Additionally, PGE issued 12.5 million shares of
11 common stock, raising \$176 million, in March 2009, albeit at a price substantially below
12 book value.

13 **Q. What is the impact on existing shareholders of issuing equity at a price that is below**
14 **the firm’s book value per share?**

15 A. The price at which new shares are issued is dependent upon the maximum price that the
16 market will bear at that time. A firm that is faced with issuing shares at a price that is less
17 than the book value per share dilutes the stakes of existing shareholders. The new
18 stockholders are essentially paying less for their ownership share, or contributing less equity
19 per share to the company, than the value of the existing shareholders’ stake that is reflected
20 on the balance sheet. Any claim to earnings, however, is still shared equally by the owners.

21 Following the announcement of PGE’s equity issuance in March 2009, Shields & Company

¹⁷ “Limited Risk to Euro-Area Banks Seen From Dubai Debt.”

http://www.bloomberg.com/apps/news?pid=20601085&sid=atEJ7E_SUTb8

¹⁸ “Greece attacks S&P over downgrade.” http://www.ft.com/cms/s/0/d4bdc8f2-eb13-11de-a0e1-00144feab49a.dwp_uuid=2b8f1fea-e570-11de-81b4-00144feab49a.html

1 published a report describing the decision to issue equity below book value as one of the
2 rules that should never be violated by a utility, but one that was nonetheless necessitated by
3 capital expenditures and potential concerns related to credit rating metrics.¹⁹ Diluting
4 existing shareholders with an equity issuance priced below book value is clearly not a
5 preferred or sustainable method of securing financing, especially for a firm that needs to
6 continue raising funds in the equity market in the future.

¹⁹ “POR to Issue Equity Below Book Value.” Shields & Company. March 5, 2009.

IV. Cost of Long-Term Debt

1 **Q. How did you calculate the cost of long-term debt for 2011?**

2 A. PGE Exhibit 1101 shows the amount and the effective cost of PGE’s outstanding long-term
3 debt for the test year. This includes existing bond issues as of December 31, 2009, as well
4 as bond issuances and retirements expected in 2010 and 2011. We included the applicable
5 adjustments to debt as approved in OPUC Order No. 07-015 when calculating the amount of
6 debt outstanding. The full amount and cost for each issuance of debt outstanding at year end
7 is included. We then multiply the amount outstanding by the effective interest rate for each
8 bond issue. The effective interest rate represents the internal rate of return for each of the
9 cash flows associated with each debt issue, including all unamortized call premiums and
10 issuance expenses for debt issues replaced before maturity with less expensive financings.
11 PGE’s annual cost of long-term debt for the 2011 test year has decreased from that
12 authorized in UE 197 by 49 basis points, a significant decline. Table 2 below summarizes
13 PGE’s cost of long-term debt for 2011.

Table 2
PGE’s Cost of Long-Term Debt (\$000)

	<u>2011</u>	<u>UE 197 (2009)</u>	<u>Difference</u>
Principal Amount	\$ 1,809,600	\$ 1,613,950	\$ 195,650
Annual Interest Cost	<u>\$ 109,969</u>	<u>\$ 105,988</u>	<u>\$ 3,981</u>
Effective Interest Rate	6.077%	6.567%	-0.490%

A. Credit Market Conditions

14 **Q. How have the credit markets changed since PGE filed its last general rate case in early**
15 **2008?**

1 A. As we noted above, markets were very turbulent in 2008. Credit markets regained some
2 semblance of normalcy by the end of 2009; however, a great deal of turmoil existed
3 throughout the year. A combination of ‘flight-to-quality’ and government intervention sent
4 Treasury yields to historic lows. The lowest market yields in history for Treasury securities
5 all occurred in the period from mid-December 2008 through December 2009 (based on daily
6 reported market yields).²⁰

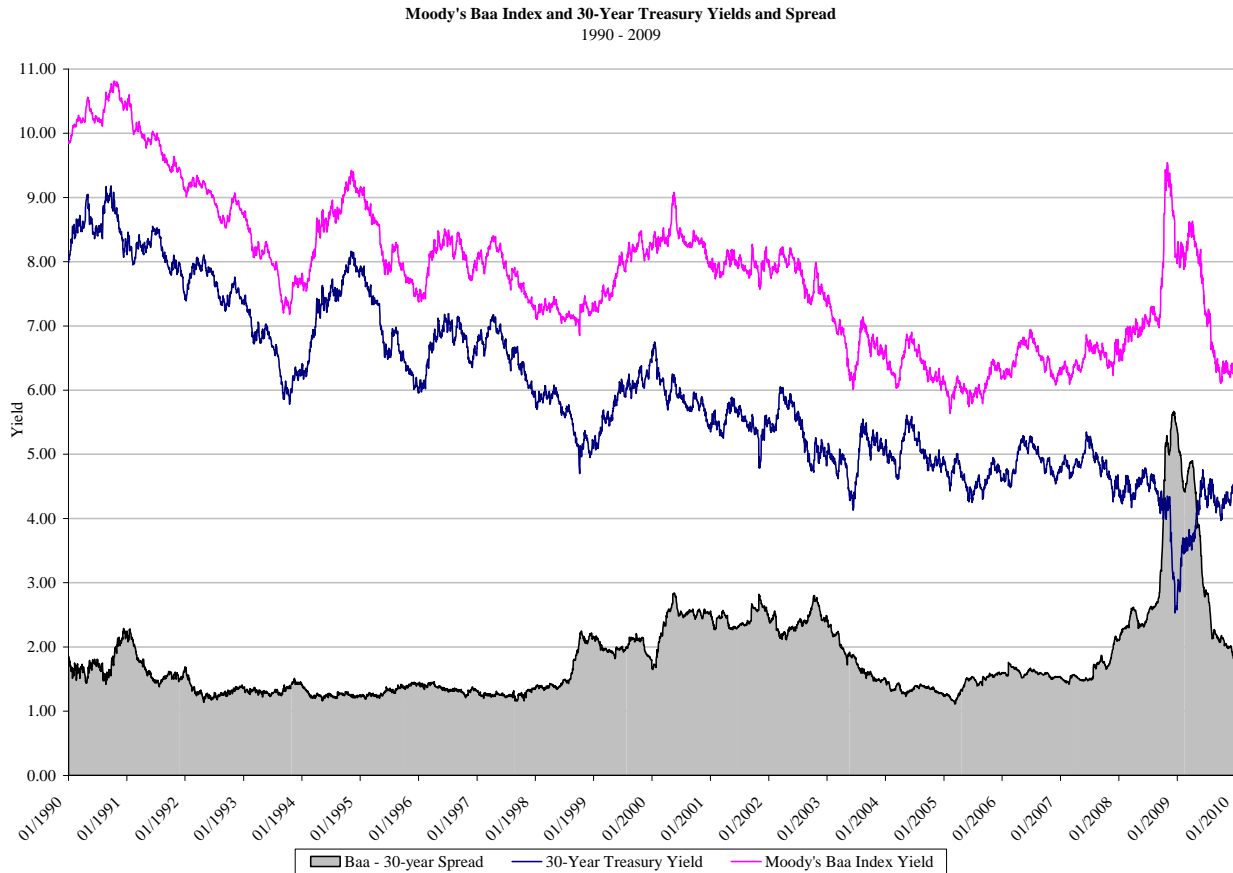
7 The low yields on Treasury securities and the low Federal Funds rate would seem to
8 indicate low borrowing costs. Additional factors, however, are at play in the determination
9 of market interest rates such as the spread applied to the Treasury rate. This spread, or
10 difference in yield, is typically referred to as a “credit spread” that compensates the lender
11 for credit quality differences from U.S. Treasuries. The total spread may also include an
12 amount to compensate for illiquidity as well.

13 **Q. What impact did this ‘flight-to-quality’ have on market interest rates?**

14 A. ‘Flight-to-quality’ drove Treasury yields down, but also had the effect of widening the credit
15 spreads. For the most part, spreads peaked in December 2008 during the fallout from the
16 Lehman Brothers bankruptcy and the AIG (among others) bailout. At that point, the spread
17 between the yield on the Moody’s Seasoned Corporate Bond Baa index and the 30-year U.S.
18 Treasury Bond constant maturity index was more than 560 basis points (bps). Over the
19 course of the nearly 17.5 years prior to the onset of the credit crisis, the spread had averaged
20 approximately 167 bps. By mid-June 2009, the spread was back under 300 bps and, as of

²⁰ Data retrieved from <https://www.federalreserve.gov/datadownload/>

1 December 31, 2009, had declined to less than 200 bps.²¹ This relationship is detailed in the
2 graph below, which is also provided as PGE Exhibit 1103.



3 Increased spreads mean that a borrower will pay more in interest to its creditors for the
4 ability to borrow the funds.

5 **Q. Given these widened spreads, did PGE pay more for its debt issuances in 2009 than it**
6 **has historically?**

7 A. Fortunately, no. Regulated utilities tended to be viewed more favorably in the markets
8 during this period than other corporate borrowers, and, thus, were not subject to the full

²¹ Ibid.

1 extent of the widened spreads.²² The timing of issuances was important as well, as indicated
2 by the decline in spreads by June 2009. PGE was able to take advantage of this environment
3 and reduce its cost of debt since the last general rate case filing in UE 197.

4 **Q. Have PGE's credit ratings changed since UE 197 was filed in 2008?**

5 A. Yes. On January 29, 2010, PGE's corporate credit rating was reduced from 'BBB+' to
6 'BBB' with a 'Stable' outlook by Standard & Poor's.²³ At the same time, S&P reduced
7 PGE's Senior Secured rating one notch from 'A' to 'A-'. PGE's issuer rating with Moody's
8 remains unchanged at 'Baa2'.²⁴ PGE's credit ratings are provided in PGE Exhibit 1104.

B. Debt Issuances and Redemptions

9 **Q. What future debt issuances did you include in your analysis?**

10 A. We expect to issue \$180 million in debt during the remainder of 2010. Approximately \$121
11 million of this amount will be in the form of two pollution control bond (PCB) issues that
12 PGE plans to remarket. As discussed below, these bonds were put-back to PGE by investors
13 in 2009. The remaining \$59 million, along with the expected interest rate and issuance cost,
14 has been incorporated into PGE's cost of long-term debt presented in PGE Exhibit 1101.
15 PGE does not expect to issue long-term debt in 2011.

16 **Q. What is the expected term, coupon rate, and issuance cost for the bonds still to be**
17 **issued in 2010?**

18 A. PGE currently expects the two PCB issues representing \$23.6 million and \$97.8 million to
19 be remarketed for the remainder of their 23-year terms with coupon rates of 5.0% and 5.1%.

²² "U.S. Utility And Power Sector Refinancing Requirements Remain Manageable For The Next Few Years."
Standard & Poor's.

²³ "Research Update: S&PCORRECT: Portland General Electric Co. Corporate Credit Rating Lowered To 'BBB' On
Weak Economy." January 29, 2010. Standard & Poor's.

²⁴ "Credit Opinion: Portland General Electric Company." September 24, 2009. Moody's Investors Service.

1 The \$59 million bond issuance is expected to carry a coupon rate of approximately 4% for a
2 term of 7 years. The actual rates and terms are subject to change based on prevailing market
3 conditions as PGE seeks the lowest cost financing option at the time of issuance. We will
4 update our cost of debt when new information becomes available.

5 **Q. How were the expected coupon rates and issuance costs derived by PGE?**

6 A. The rates and issuance costs are based on an indicative new issue pricing analysis provided
7 by an investment banking firm, and PGE's expectations and prior experiences when issuing
8 debt.

9 **Q. Is any long-term debt maturing in 2010 or 2011?**

10 A. Yes. Three issues are maturing in 2010, representing approximately \$186 million. Two
11 Trojan PCB issues with face amounts totaling \$36.90 million, originally issued in 1985 for
12 terms of 25 years, are maturing in April and June 2010. In addition, an unsecured note with
13 \$149.25 million of principal outstanding originally issued in 2000 for a term of 10 years is
14 maturing in March 2010. There are no long-term debt issues maturing in 2011.

15 **Q. Has PGE issued or redeemed any long-term debt since PGE filed UE 197 in 2008?**

16 A. Yes. In UE 197, PGE expected to issue \$250 million for 30 years at 6.890% in 2009 but
17 instead issued a total of \$580 million for terms ranging from 5 to 30 years at rates between
18 5.430% and 6.800%. \$70 million was issued for a term of 5 years at a 3.460% rate in
19 January 2010. These debt issuances are detailed in PGE Exhibit 1101.

20 Much of this additional financing activity occurred because in UE 197, PGE expected to
21 remarket three PCB issues totaling \$142.4 million during 2009. These three PCB issues
22 were contractually put-back, or returned, to PGE in May 2009, at which point PGE decided
23 to hold them because market conditions were unfavorable. The interest received by an

1 investor from holding pollution control bonds is tax-exempt, and, thus, the PCBs should
2 theoretically carry coupon rates and trade at yields that are less than their taxable
3 equivalents. Due to certain concerns and stress in the credit markets during 2009, however,
4 yields on pollution control bonds were at times actually higher than taxable bonds of an
5 equivalent term. Given these market conditions, PGE chose not to remarket the PCBs, but
6 rather to use taxable first mortgage bonds (FMBs).

7 Conditions in the credit markets in the first quarter of 2010 have made some PCBs a
8 cost-effective financing option once again. As discussed above, PGE plans to remarket two
9 of these three issues for \$121.4 million in the first quarter of 2010. PGE retains the ability
10 to remarket the remaining PCB issue at a later date if market conditions improve and
11 remarketing becomes cost effective.

12 **Q. How did PGE incorporate the unamortized issuance costs related to the PCBs into the**
13 **cost of debt calculation?**

14 A. For the two PCB issues that PGE plans to remarket, the remaining issuance costs from the
15 prior remarketing have been incorporated as unamortized issuance costs and will be
16 amortized over the 23-year life of the bonds. For the one PCB issue that PGE does not plan
17 to remarket at this time, the issuance costs that remained unamortized at the time the issue
18 was put-back to PGE were assumed to be amortized on a straight-line basis over the course
19 of the remaining life of the bond and included as a loss on reacquired debt.

20 **Q. What impact did PGE's decision to seek alternative forms of financing vis-à-vis**
21 **remarketing the PCBs have on customers?**

1 A. PGE’s decision to issue FMBs rather than remarket the PCBs resulted in a lower cost of
2 debt. This lower cost of debt means that PGE will spend less annually in interest payments,
3 resulting in lower costs for customers.

4 **Q. Since UE 197, what impact have PGE’s overall financing activities had on customers?**

5 A. At the 2011 outstanding effective interest rate, PGE will incur almost \$9 million less in
6 interest and related charges (issuance costs and charges related to the amortization of losses
7 on reacquired debt) than if the same debt balance was outstanding at the UE 197 effective
8 interest rate.²⁵ PGE has been able to secure nearly \$196 million in additional financing
9 while incurring roughly \$4 million in additional annual interest and related charges.

²⁵ (6.567% - 6.077%) x \$1.8096 billion

V. Capital Structure

1 **Q. How did you determine the appropriate level of common equity for 2011?**

2 A. We evaluated PGE's capital structure using the forecasted income statement and balance
3 sheet for 2011, as well as our expected financings through 2011. Additionally, we
4 considered several factors, including PGE's need to maintain its financial strength,
5 flexibility and adequate liquidity; its ability to maintain reliable and economical access to
6 the capital markets; minimizing the cost of capital to customers and shareholders; and the
7 Commission's Orders in UE 180 (Order No. 07-015) and UE 197 (Order No. 09-020).

8 **Q. Does PGE expect to issue equity in 2011?**

9 A. PGE's decision to issue common equity in 2011 will be dependent upon planned capital
10 expenditures. As mentioned above, PGE's pending IRP illustrates a significant capital
11 expenditure program. Those projects and their costs, however, are subject to change. As the
12 projects change, PGE's financing needs will change as well, which will impact the amount
13 and timing of any equity issuance. Assumptions regarding future financing needs will be
14 updated as more current information becomes available during the course of this proceeding.

15 **Q. Are you seeking a different capital structure than that in UE 197?**

16 A. No. In UE 180, Order No. 07-015 set PGE's regulated capital structure at 50% equity and
17 50% debt. The stipulation reached in UE 197, Order No. 09-020, reaffirmed this regulated
18 capital structure. PGE's long-term goal continues to be to maintain our capital structure at
19 50% equity and 50% debt; however, the equity ratio does fluctuate around the 50% target
20 level, due to the timing and size of debt and equity issuances. PGE expects the level of
21 regulated equity to exceed 50% by the end of the test year, but we continue to recommend a
22 50% equity and 50% debt capital structure.

1 **Q. Why does PGE intend to maintain a 50% equity, 50% debt capital structure?**

2 A. The equity portion of PGE’s capital structure is important to offset the leverage and risk that
3 PGE will encounter, in part, as it continues to implement a large capital expenditure
4 program over the next few years. It is also required to offset the leverage imputed by the
5 rating agencies due to its above-average reliance on purchased power. Additionally, PGE
6 faces many risks in today’s environment and it must be able to maintain a solid capital
7 structure and financial flexibility in order to help contain customer costs and retain
8 shareholder value.

9 **Q. Has the Commission noted any specific risks facing PGE?**

10 A. Yes. In UE 180, Order No. 07-015, the Commission noted that PGE has significant
11 exposure to the wholesale market, especially when compared with PacifiCorp. In particular,
12 PGE faces risk related to the volatility of wholesale electricity prices. Volatility in these
13 markets can affect the availability and the prices of purchased power and demand for energy
14 sales. This volatility can result in the deterioration of market liquidity, increase counterparty
15 credit risk, and impair PGE’s ability to manage its energy portfolio. While PGE’s power
16 cost adjustment mechanism (PCAM) mitigates this risk to some degree, it does not provide
17 full recovery of all costs outside the cost sharing features. In Order No. 07-015, the
18 Commission found that an additional 10 basis points on ROE was appropriate to balance
19 PGE’s risk exposure in this area.

20 **Q. Aside from the risks discussed above, what other types of risks does PGE encounter**
21 **today?**

22 A. PGE faces a multitude of other risks and uncertainties, including:

- 1 • Imputed debt from purchased power contracts: Some rating agencies impute debt
2 on PGE’s purchased power contracts and operating leases. This has an indirect
3 impact on PGE’s credit rating. Based on third quarter 2009 financial information,
4 Standard & Poor’s method for calculating the imputed debt of these contracts
5 added approximately 2.2% of additional debt to PGE’s capital structure.
- 6 • SB 408 and related earnings volatility: Oregon law SB 408 adjusts the way that
7 PGE and other Oregon investor-owned utilities recover income tax expense from
8 customers. SB 408 has financial impacts on PGE, especially earnings volatility.
9 As discussed above with regard to PGE’s Power Cost Adjustment Mechanism,
10 earnings volatility increases risks for PGE and its investors, requiring a higher
11 return than otherwise.
- 12 • Large capital program over the next five years: PGE has begun a large capital
13 expenditure program that will continue for at least the next five years if the
14 projects set forth in PGE’s pending 2009 Integrated Resource Plan are pursued.
15 As discussed in Section II above, access to the capital markets is critical to fund
16 these expenditures. In the financial markets, PGE has the risk of experiencing
17 higher than expected costs or a lack of market liquidity to fund its capital
18 program. A strong balance sheet and a higher return on equity reflective of this
19 risk is necessary to remain a marketable company in these volatile financial
20 markets.

21 Regulatory support to recover these investments is a crucial consideration in
22 maintaining PGE’s access to credit as well. Moody’s credit rating methodology
23 notes that, “[t]he ability to recover prudently incurred costs in a timely manner is

1 perhaps the single most important credit consideration for regulated utilities.”

2 The methodology, dated August 2009, goes on to state that, “the utility industry’s
3 sizable capital expenditure requirements for infrastructure needs will create a
4 growing and ongoing need for rate relief of recovery of these expenditures at a
5 time when the global economy has slowed.”²⁶

- 6 • Hydro and wind availability and weather volatility: Weather conditions can
7 adversely affect PGE’s revenues and costs. Weather creates risk for PGE in
8 several ways, including:

- 9 • Lower than average stream flows;
10 • Lower than average wind flows; and
11 • Volatility in electricity usage because of sudden, unexpected, weather
12 changes.

13 All of the above can potentially force PGE to purchase more spot energy, when
14 the markets may be tight. The higher costs resulting from these purchases
15 combined with the volatility of weather conditions can increase costs to PGE and
16 its investors, requiring a higher return than otherwise.

- 17 • Regional economic weakness: Regional economic weakness can adversely affect
18 PGE’s revenues. Weakness in the regional economy, and thus the state of
19 Oregon, can lead to a decline in electricity usage as customers become more
20 conservative. This can negatively impact PGE’s revenues, thereby reducing
21 PGE’s profits, which negatively affect PGE’s retained earnings and returns to
22 investors. Lower retained earnings affect our ability to reinvest in the business.

²⁶ “Rating Methodology – Regulated Electric and Gas Utilities.” Moody’s Global Infrastructure Finance.

1 Oregon's economy was especially hard-hit during the recession that began in
2 2007. Unemployment in the state may have peaked in May 2009 at a rate of
3 12.2%. The preliminary estimate for the state of Oregon unemployment rate in
4 December 2009 (the most recent month for which data is available) was 11.0%,
5 still exceedingly high. As discussed above, the national unemployment rate in
6 December 2009 was 10.0%.²⁷

- 7 • Renewable Portfolio Standard (RPS) compliance risk: Oregon's RPS requires
8 that PGE serve at least 25% of its retail load from renewable resources by the year
9 2025, with interim requirements in years 2011, 2015 and 2020. PGE faces the
10 risk that lower cost renewables will be acquired by other utilities or will be
11 unavailable in a timely manner. In addition, PGE will incur other potential risks
12 when placing these resources into rate base, including regulatory risk,
13 transmission congestion, resource availability, etc. PGE faces further potential
14 risks when seeking to efficiently integrate certain of these renewable resources
15 into its energy portfolio.
- 16 • Uncertainty regarding an adverse Trojan decision: There is uncertainty in the
17 financial markets regarding the ultimate outcome of the legal proceedings related
18 to PGE's recovery of its investment in the Trojan Nuclear Plant. This risk is
19 discussed by several financial analysts in their publications. In Standard and
20 Poor's February 2009 and August 2009 reviews of PGE, the uncertainties
21 associated with Trojan, including the difficulty of quantifying the potential
22 exposure and estimating the timing of a final outcome, were listed as weaknesses.

²⁷ Data retrieved from <http://www.bls.gov/>

1 Standard & Poor’s noted that an adverse outcome could have a negative impact
2 on PGE’s credit rating.

3 • Uncertain federal energy policy: The federal government’s potential policies
4 regarding renewable energy mandates and the potential for restrictions on carbon
5 emissions remain unclear. Passage of the American Clean Energy and Security
6 Act (also know as the Waxman-Markey bill) in the U.S. House of Representatives
7 is perhaps the first step in a move to pass legislation aimed at managing carbon
8 emissions in the United States. The ultimate form of any policy, and the impacts
9 on regulated utilities, cannot be known at this point.

10 **Q. Do the financial markets agree that these are risks for PGE?**

11 A. Yes. Recent reports from Standard & Poor’s, Moody’s, and various equity analysts include
12 at least one of the risks listed above.

13 **Q. How does PGE manage these risks?**

14 A. PGE can manage some of these risks, but others it cannot. Risks PGE cannot manage
15 include those associated with the government or regulatory framework, such as SB 408. For
16 many risks, even though PGE can partially manage them, PGE remains significantly
17 exposed.

18 **Q. In total, how do the risks addressed above impact the cost of capital you request?**

19 A. PGE is subject to a variety of risks that must be considered in the determination of an
20 appropriate overall cost of capital. If those risks are not mitigated to the point that PGE is
21 comparable to its peers, the cost of long-term debt and the cost of equity will increase, with
22 a resulting long term cost impact on customers.

VI. Qualifications

1 **Q. Mr. Hager, please state your educational background and experience.**

2 A. I received a Bachelor of Science degree in Economics from Santa Clara University in 1975
3 and a Master of Arts degree in Economics from the University of California at Davis in
4 1978. In 1995, I passed the examination for the Certified Rate of Return Analyst (CRRA).
5 In 2000, I obtained the Chartered Financial Analyst (CFA) designation.

6 I have taught several introductory and intermediate classes in economics at the
7 University of California at Davis and at California State University Sacramento. In addition,
8 I taught intermediate finance classes at Portland State University. Between 1996 and 2004, I
9 served on the Board of Directors for the Society of Utility and Regulatory Financial
10 Analysts.

11 I have been employed at PGE since 1984, beginning as a business analyst. I have
12 worked in a variety of positions at PGE since 1984, including power supply. My current
13 position is Manager, Regulatory Affairs.

14 **Q. Mr. Valach, please state your educational background and experience.**

15 A. I received a Bachelor of Science degree in Business Administration from the University of
16 Montana in 1979. I received a Masters in Business Administration from the University of
17 Oregon in 1986 with an emphasis in Finance. I joined PGE in 1991 as a Business Analyst
18 and was Manager of Corporate Finance and Assistant Treasurer from July 1997 to
19 September 2005 and from August 1, 2009 to February 4, 2010. Since Fall of 2005, I have
20 also held the title of Director of Investor Relations.

21 **Q. Does this conclude your testimony?**

22 A. Yes.

List of Exhibits

<u>PGE Exhibit</u>	<u>Description</u>
1101	PGE's Cost of Long-Term Debt Estimate – December 31, 2011
1102	VIX Index Daily Close graph
1103	Moody's Baa Yield vs. 30-Year Treasury Yield graph
1104	PGE's Credit Ratings