Exhibit No. KGS-17T Docket UE-140762 *et al.* Witness: Kurt G. Strunk

BEFORE THE WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION

WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION,

DOCKETS UE-140762 and UE-140617 (consolidated)

Complainant,

v.

PACIFIC POWER & LIGHT COMPANY,

Respondent.

In the Matter of the Petition of

PACIFIC POWER & LIGHT COMPANY,

For an Order Approving Deferral of Costs Related to Colstrip Outage.

In the Matter of the Petition of

PACIFIC POWER & LIGHT COMPANY,

For an Order Approving Deferral of Costs Related to Declining Hydro Generation.

DOCKET UE-131384 (consolidated)

DOCKET UE-140094 (consolidated)

PACIFIC POWER & LIGHT COMPANY REBUTTAL TESTIMONY OF KURT G. STRUNK

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ATTACHED EXHIBITS

Exhibit No. KGS-18—Updated Summary of Cost of Equity Estimates

Exhibit No. KGS-19—Allowed ROEs for Other Electric Utilities

Exhibit No. KGS-20—Bloomberg Yield Forecasts

Exhibit No. KGS-21—VIX Index

Exhibit No. KGS-22—Large Company Stock Returns Over the Period 1987-2011 One-Year Returns

Exhibit No. KGS-23—CONFIDENTIAL Use of Pension Yields as Benchmark for Utility ROF.

Exhibit No. KGS-24—Comparison of Coal-fired Generation Capacity and Energy Production

Exhibit No. KGS-25—Proxy Group BR + SV

Exhibit No. KGS-26—Proxy Group S and V Estimation

Exhibit No. KGS-27—Proxy Group DCF Analysis

Exhibit No. KGS-28—Yield + Growth Model

Exhibit No. KGS-29—S&P 500 Forward Looking Market Risk Premium

Exhibit No. KGS-30—Proxy Group Capital Asset Pricing Model

Exhibit No. KGS-31—Bond Yield + Risk Premium

Exhibit No. KGS-32—Comparable Earnings

Exhibit No. KGS-33—Bloomberg Dividend Yields 1993—Present

Exhibit No. KGS-34—30 Year Treasury Yields 1993—Present

Exhibit No. KGS-35—Companies Used in Proxy Group and Comparison to PacifiCorp

Exhibit No. KGS-36—Proxy Group Screening Results

1	Q.	Are you the same Kurt G. Strunk who previously submitted direct testimony in
2		this case on behalf of Pacific Power & Light Company (Pacific Power or
3		Company), a division of PacifiCorp?
4	A.	Yes, I am. My curriculum vitae, which more fully details my educational, consulting
5		and testifying experience, is provided as Exhibit No. KGS-2, together with my direct
6		testimony in this proceeding.
7		I. PURPOSE OF TESTIMONY AND SUMMARY OF OPINIONS
8	Q.	Please explain the purpose of your testimony.
9	A.	My testimony responds to the testimonies of Messrs. David C. Parcell, Stephen G.
10		Hill, and Michael P. Gorman, who offer opinions on Pacific Power's cost of capital
11		on behalf of the Staff of the Washington Utilities and Transportation Commission
12		(Commission) Staff, Public Counsel, and Boise White Paper LLC (Boise),
13		respectively. I also provide an update to my cost-of-capital analysis in order to
14		present the Commission with a recommendation that reflects the most current
15		conditions in the capital markets. Mr. Bruce N. Williams provides related responsive
16		testimony on capital structure and credit metrics.
17	Q.	Please summarize your rebuttal of the other cost of capital experts.
18	A.	Based on a thorough review and analysis of these witnesses' testimony, I reach the
19		following conclusions:
20		1. There is no dispute regarding the standards against which a fair rate of return
21		should be judged.
22		2. A consensus exists among the experts on the objective of the exercise and the
23		use of several well-accepted financial models, including the Discounted Cash

1	Flow (DCF) and Capital Asset Pricing Model (CAPM) from which to derive
2	estimates of a fair return for Pacific Power.

- 3. While some dispute exists regarding the relevance of other models, the primary differences of opinion amongst the experts relate to the specifics of how the financial models are applied and which inputs are most appropriately relied upon.
- 4. In this regard, I find that Messrs. Parcell (for Staff), Hill (for Public Counsel) and Gorman (for Boise) rely upon invalid methods or inappropriate data sources or both, which causes them to understate the fair return estimate for Pacific Power. While I offer a detailed response in the body of my rebuttal testimony, I highlight here the key deficiencies in the analyses those witnesses present:
 - The Staff and intervenor cost-of-capital witnesses mischaracterize the trends in allowed returns granted by state regulators across the country since January 2013. My rebuttal testimony corrects errors they have made when assessing the average allowed return and presents a proper evaluation of the trends in allowed returns for vertically integrated utilities comparable to Pacific Power.
 - These witnesses present faulty analyses of capital structure. Each cost-ofcapital witness for the other parties recommends a hypothetical capital structure. None provides any evidence that actually supports their recommendations in this respect.

•	Further, they present invalid assessments of how a hypothetical capital
	structure changes the cost of equity capital. This leads Messrs. Parcell and
	Gorman to the incorrect and unsupportable conclusion that no leverage-
	based adjustment to return on equity (ROE) is necessary in the event the
	Commission elects to set rates using a hypothetical capital structure in
	place of the actual structure of the Company. Their testimonies on this
	subject ignore the elementary principle of finance that equity costs more as
	leverage increases because of the "financial risk" (a concept that is solidly
	part of the financial literature). Mr. Hill is correct to acknowledge that the
	ROE should be higher with a hypothetical capital structure, but his estimate
	of the increment is based on faulty assumptions.

Mr. Gorman chooses to use a 10-year GDP growth forecast as a measure of long-term earnings growth for electric utilities. In using a U.S. government GDP growth forecast as a proxy for the expected long-term earnings growth rate for utilities (i.e., the expected growth that runs beyond five-year projections available from securities analysts), Mr. Gorman assumes those two growth rates should converge to each other. That assumption is incorrect, given the accepted empirical studies that document persistently higher total factor productivity (TFP) growth rates for the electric utility industry than for the economy as a whole. Given the established empirical relationship between economy-wide (*i.e.*, GDP) growth and relative TFP growth for the electricity industry, using the former as a proxy for expected growth in DCF cost of equity measures of the latter is invalid and

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- Mr. Hill alleges that the forecast growth rates issued by securities analysts are biased upwards, and that consequently the cost of capital estimates derived therefrom are overstated. Yet he provides no evidence to support this claim. My rebuttal testimony demonstrates that there is no reason to expect systematic bias in the current market and regulatory context.
 Reputational concerns incentivize securities analysts to provide accurate forecasts. In addition, the Securities and Exchange Commission, in its oversight of the capital markets, took measures over ten years ago to address and resolve potential bias. The allegations of bias and "rosy forecasts" offered by Mr. Hill are disconnected from the current regulatory arrangements and the incentives associated with securities analyst forecasting.
- Finally, Messrs. Parcell, Hill, and Gorman present inaccurate analyses of the effects of their recommended capital structure and cost of capital on the Company's financial integrity and standard financial ratios. My rebuttal corrects these analyses and demonstrates that the returns recommended by these witnesses will lead to a weaker financial position for the Company.

Q. What is your updated recommendation for a fair ROE for Pacific Power?

As shown in Exhibit No. KGS-18, based on my updated analysis, I continue to recommend a ROE of 10.0 percent for the Company. The capital markets data I have reviewed and analyzed indicates that this return will allow the Company to preserve its financial integrity and attract capital on terms that are fair and reasonable to

1	customers. Additionally, this return corresponds to the average return granted to
2	other utilities so far this year and is therefore reasonably grounded in industry
3	practice.

0. Does this recommended return correspond to a specific equity ratio?

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5 A. Yes, it corresponds to the Company's actual common equity ratio of 51.73 percent. 6 Should the Commission elect to employ a hypothetical capital structure of 7 49.1 percent equity ratio, as proposed by Staff and intervenor witnesses, I recommend 8 an upward adjustment of 28 basis points to reflect the increased risk to the 9 Company's equity owners of the more highly-levered capital structure, as explained in my direct testimony. My rebuttal work papers contain an update to this analysis, 10

showing the continued applicability of the 28-basis-point adjustment.

Ο. How is the rest of your rebuttal testimony organized?

13 A. In Section II, I clarify the record with respect to the trends in allowed returns. In 14 Section III, I address the characterization of capital market conditions presented by 15 Messrs. Parcell, Hill and Gorman. In Section IV, I evaluate the claims of Messrs. 16 Parcell, Hill and Gorman as they pertain to an appropriate capital structure for 17 ratemaking purposes and the effects of capital structure on credit ratings and the cost 18 of equity. In Section V, I address the choice of models to be used in establishing a 19 fair rate of return and respond to these witnesses' claims about the choice of models. In Section VI, I address the appropriate inputs to the rate of return models. Section 20 VII covers purported corroboration of the rate of return estimates made by Staff and 22 intervenor witnesses, while Section VIII addresses the business and financial risks of 23 the Company's regulated Washington operations relative to the proxy group utilities

1		and the industry more broadly. In Section IX, I examine Pacific Power's financial
2		integrity under the ROEs proposed by Staff and intervenor witnesses. Section X
3		presents my updated analysis of the cost of equity capital.
4		II. CORRECTED ANALYSIS OF ALLOWED RETURNS
5	Q.	What is the purpose of this section of your testimony?
6	A.	Its purpose is to correct the record with regard to recent experience of the equity
7		returns allowed by state regulatory authorities in the United States. The Staff and
8		intervenor testimony characterizes the allowed returns as declining in 2014.
9		However, a careful analysis of the 2014 allowed returns proves them to be stable, not
10		declining.
11	Q.	Please summarize the Staff and intervenor testimony as it pertains to allowed
12		returns in other jurisdictions.
13	A.	Messrs. Parcell, Hill and Gorman characterize recent experience of
14		allowed/authorized returns as follows:
15		• Mr. Gorman contends that the correct average authorized return for 2013 is
16		9.8 percent. Mr. Gorman further argues that "authorized returns on equity are
17		decreasing," and that the average authorized return for the first six months of
18		2014 is 9.72 percent. ¹
19		• Mr. Parcell also alleges that "commission-authorized returns on equity have
20		declined over recent years." He claims that the average allowed return for

¹ Responsive Testimony of Michael P. Gorman, Exhibit No. MPG-1T at 65:23-66:3. ² Testimony of David C. Parcell, Exhibit No. DCP-1T at 44:16-17.

1	2013 should be 9.8 percent and that the first quarter 2014 average should be
2	9.57 percent. ³
3	Mr. Hill contands that "the average allowed return for electric utilities in 201

Mr. Hill contends that "the average allowed return for electric utilities in 2013 was 9.8%" and that the published Regulatory Research Associates (RRA) allowed return averages include cases that "were not based solely on the cost of capital."⁴

7 Q. What is wrong with these characterizations of allowed returns?

A. Messrs. Parcell, Hill, and Gorman remove the allowed returns for Virginia Power's generation facilities, claiming that they are not comparable, without removing other observations that would logically be excluded if a rigorous comparability screen were applied.

Q. Is it necessary to apply the screen proposed by these witnesses?

A. No. In my experience, investors tend to form expectations based on the published averages. In the market commentary and securities analysis I typically review in connection with the development of an ROE estimate, I often find reference to the published averages. In light of the weight the published averages are given by investment analysts, it is appropriate to use them as the proper benchmark for industry allowed returns.

Q. Could a rigorous screen be structured correctly to yield allowed returns that are directly comparable?

21 A. Yes. The allowed returns that comprise the 10.02 percent average for 2013 are

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³ *Id.* at 44:13-14.

⁴ Testimony of Stephen G. Hill, Exhibit No. SGH-1CT at 75:11-15.

returns that apply to a mix of business profiles within the electric utility industry. When taken as a group, they are appropriately reflective of investor expectations for the industry. However, as highlighted by the Virginia Power cases, some individual returns apply to generation-only businesses, others apply to distribution-only or transmission-only⁵ businesses, while the balance of cases deal with integrated utilities directly comparable to Pacific Power. Because generation-only, transmission-only and distribution-only businesses carry risk profiles that differ from that of an integrated utility, a rigorous screen would logically exclude entities only operating in one segment of the supply chain and include only integrated utilities as directly comparable.

Q. What is the result of such a screen?

A. Table 1 below presents the averages for the calendar year 2013 and for the first ten months of 2014. In addition, I provide company-by-company allowed ROEs in Exhibit No. KGS-19.

TABLE 1
Average Allowed ROE for Integrated Utilities Comparable to Pacific Power

Time Period	Average Integrated Utility Allowed Return
Calendar Year 2013	9.92 percent ⁶
January-October 2014	9.92 percent

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⁵ RRA tracks rates for transmission-only entities that are regulated by the Public Utilities Commission of Texas. *See* "Major Rate Case Decisions—Calendar 2013," *RRA Regulatory Focus* (Jan. 15, 2014).

⁶ This average incorporates a 9.0 percent ROE for Maui Electric. However, in Docket No. 2011-0092, the Hawaii Public Utilities Commission recognizes that the cost of capital is higher and awards 9.0 percent as a penalty. *See* "Final Report—Maui Electric Company," *RRA Regulatory Focus* at 2 (June 18, 2013).

1		Table 1 confirms that average authorized returns have remained stable from 2013 to
2		2014. The claims of Messrs. Gorman and Parcell that authorized returns are
3		declining is simply incorrect.
4	Q.	Staff and intervenor witnesses opine that the Virginia Power returns are not
5		comparable because they include incentives. Is it correct to exclude published
6		returns that incorporate incentives?
7	A.	No. Investor expectations depend on the total returns available to entities in the
8		sector. A reasonable reading of <i>Hope</i> and <i>Bluefield</i> suggests that total returns are the
9		correct focus and it is not how the return value was arrived at but whether at the end
10		of the day it is just and reasonable. Following this reasoning, it is total achievable
11		returns from comparable investments that should be considered when determining the
12		returns available from comparable investments. It would be unreasonable to assume
13		that returns available to comparable investments should be dissected and a portion of
14		such returns ignored for ROE evaluation purposes.
15	Q.	Is Virginia Power the only company whose published returns include incentives?
16	A.	No. The published returns for other utilities may also include the effects of any
17		incentives granted. For example, the allowed ROE published by RRA for Sierra
18		Pacific Power Company in Docket 13-06002 includes certain generation-related
19		incentives. ⁷

- Q. For electric utility rates overseen by the Federal Energy Regulatory Commission (FERC), have allowed returns on equity declined?
- 22 A. No. I have reviewed recent rate decisions by the FERC and the ROEs authorized for

⁷ "Final Report—Sierra Pacific Power," RRA Regulatory Focus at 2 (Mar. 11, 2014).

1		electric utility ratemaking purposes have remained stable and, in some instances,
2		increased. On June 19, 2014, the FERC authorized a base ROE of 10.57 percent for
3		the New England Transmission Owners, 8 which is comparable and, in several cases,
4		above prior base ROE decisions over the past several years.
5	Q.	Please summarize your rebuttal testimony on allowed returns.
6	A.	Contrary to the statements of Staff and intervenor witnesses, the trend in allowed
7		returns for electric utilities in the United States has not declined since January 2013.
8		There is no evidence to suggest a substantial decrease in allowed returns, as
9		contended by these witnesses. Rather, the average return for the first ten months of
10		2014 is equal to the 2013 average. In sum, I find the return on equity to be stable at
11		approximately 10 percent for electric utility rates overseen by state commissions and
12		above 10 percent for electric utility rates overseen by the FERC, before the addition
13		of incentives.
14 15		III. ASSESSMENT OF CAPITAL MARKET CONDITIONS AND UTILITY STOCKS
16	Q.	Mr. Gorman characterizes utility stocks as "low-risk securities." Is this a fair
17		characterization?
18	A.	No. Over a century of practical experience with and scholarly study of financial
19		markets demonstrates the statement to be false. Common equity, irrespective of the

issuer, is widely acknowledged to be among the riskiest classes of securities available

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⁸ See Coakley, Mass. Atty. Gen. v. Bangor Hydro-Elec. Co., Opinion No. 531, Docket No. EL11-66-001, 147 FERC \P 61,234 at 68 (June 19, 2014); see also Coakley, Mass. Atty. Gen. v. Bangor Hydro-Elec. Co., Opinion No. 531-A, Docket No. EL11-66-001, 149 FERC \P 61,032 at 6-7 (June 19, 2014).

⁹ Responsive Testimony of Michael P. Gorman, Exhibit No. MPG-1T at 4:1-4.

1	to investors. 10 While utilities' equities may be less sensitive to certain market news—
2	after all, their beta is below unity—they are certainly not immune to large fluctuations
3	in value and are by no means appropriately characterized as low-risk securities.

- Q. Please describe any updates you have with respect to trends in capital market conditions that provide context for your rate-of-return recommendations.
- 6 A. In my direct testimony, I characterize current capital market conditions as unique 7 from a historical perspective on the grounds that yields on long-term treasury bonds 8 have been suppressed by the Federal Reserve's bond-buying program and remain at 9 levels well below their historical average. The stock market continues to reflect these unique conditions. Although the Federal Reserve stopped its bond-buying program 10 11 on October 29, 2014, it has indicated that it intends to keep short-term rates low. 12 The effects of these recent changes on long-term Treasury yields have yet to be seen. 13 Market forecasters anticipate a rise in yields, expecting that they will again be over 14 four percent, as shown in Exhibit No. KGS-20.
- 15 Q. Please address volatility and the cost of equity for utility stocks.
- 16 A. Volatility is an important contributor to investment risk and to investor perceptions
 17 thereof. In my direct testimony, I note that utility stocks have been more volatile than
 18 broader stock indices since 2009. At the time of drafting this rebuttal testimony,
 19 uncertainty over the domestic economy, the Fed's continued intervention, and
 20 intervention of the European and Japanese Central Banks had led stock volatility
 21 indices to spike from under 15 percent to over 25 percent. The press has documented
 22 this trend of increased volatility. For example, an article in the Financial Times

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¹⁰ See Brealey, R., Myers, S., and Allen, F. Principles of Corporate Finance, 75, 161-162 (11th ed. 2014).

recently noted: "Investors are far from relaxed about the volatility spike, and understandably so." This article considers several explanations for the increased volatility, including, for example, a reaction to reduced intervention by the Federal Reserve and a decreasing effectiveness of its policies to contain market volatility. I illustrate the trend of increased volatility in Exhibit No. KGS-21. Although the volatility index has fallen since the spike, this event reflects the great uncertainty in the markets and concerns over the potential for a correction. The volatility index remains at an increased level relative to where it was when I performed the analysis to support my direct testimony, indicating higher risk.

IV. CAPITAL STRUCTURE, CREDIT RATINGS AND ASSOCIATED EFFECTS ON THE COST OF EQUITY

Q. Do you agree with the recommendation of Messrs. Parcell, Hill and Gorman that the use of a hypothetical capital structure instead of the Company's actual capital structure is appropriate for ratemaking purposes?

No. In regulatory practice, it is most common to rely upon the utility's actual capital structure. 12 Regulators typically employ a hypothetical capital structure when the actual capital structure of a utility is unreasonable, abnormal or imprudent and thus falls outside the zone of reasonableness. ¹³ To merit the imputation of a hypothetical capital structure, a utility's actual capital structure would need to obstruct the achievement of well-established ratemaking objectives, which, as this Commission has articulated, involve balancing financial safety and cost minimization.¹⁴

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¹¹ See "Three possible explanations have differing market implications," Financial Times (Nov. 3, 2014).

¹² Goodman, Leonard Saul. *The Process of Ratemaking, Volume I*, 651-52 (1998).

¹⁴ Wash. Utils. & Transp. Comm'n v. PacifiCorp, Docket UE-130043, Order 05 ¶¶25-26 (Dec. 4, 2013).

1		The actual capital structure equity ratio proposed by the Company is not
2		unreasonable, abnormal or imprudent. Rather, it is fully consistent with industry
3		practice and does not obstruct the achievement of an appropriate balance between
4		financial safety and cost minimization. No evidence put forth by the other cost-of-
5		capital experts provides any defensible basis to reject the Company's actual capital
6		structure. As I show below, the evidence of the other parties in this regard is based
7		on misleading comparisons and incorrect data or assumptions.
8	Q.	Is Mr. Gorman right to argue that a 49.1 percent equity ratio is consistent with
9		industry practice?
10	A.	No, that characterization fails to recognize important facts about ratemaking practice
11		for electric utilities. While the 49.1 percent equity ratio is, of course, consistent with
12		this Commission's decision in the Company's most recent rate case, which I am
13		informed is currently in the judicial review process, it falls on the low end of the zone
14		of reasonableness, as I explain below, and could not be implemented without
15		corresponding adjustments to the costs of debt and equity.
16		The equity ratios authorized by public utility commissions across the United
17		States establish the parameters that characterize industry practice. In fact, when
18		considered in this context, a 49.1 percent equity ratio falls on the low end of equity

ratios employed by other utilities for ratemaking purposes. I illustrate this in Table 2

below and in Exhibit No. KGS-22.

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TABLE 2 **Authorized Equity Ratios for Integrated Utilities Comparable to Pacific Power** January 2009 through October 2014

	Number of Cases	Percent of Cases
Cases with Equity Ratio Above 49.1	105	66%
Cases with Equity Ratio At or Below 49.1	53	34%

Table 2 confirms that it is considerably more common in the regulated electric utility industry to employ an equity ratio that exceeds these witnesses' proposal of 49.1 percent than one at or below that level. The suggestion by Mr. Gorman that a common equity ratio of 49.1 percent is squarely consistent with industry practice is incorrect and misleading.

- Mr. Parcell suggests that the use of a 49.1 percent equity ratio is somehow justified by the lack of significant short-term debt in the Company's capital structure. Is this a reasonable public policy recommendation?
- A. No. Mr. Parcell's suggestion is based upon misconceptions of the role of short-term 10 debt and its effect on utilities' financial integrity in today's markets. Typically, the role of short-term debt is *not* to provide a consistent source of funding for long-lived 12 assets like those carried on the books of public utilities. In addition, for many 13 companies, short-term debt can be seasonal in nature, or can be used intermittently, 14 with some periods showing balances and others showing no short-term debt. My 15 review of the Company's short-term debt over time shows significant volatility in the 16 quarter-end balances and does not suggest that it is a permanent source of funding for long-lived assets used to provide public utility services.

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	In addition, since today's capital markets are exhibiting extraordinary
	tendencies, one must consider whether it is appropriate public policy to include short-
	term debt under the current market conditions. The origin of the use of short-term
	debt as a component of the capital structure in ratemaking dates to the beginning of
	the 1980s. At that point, utilities began to propose the inclusion of short-term debt
	because it was necessary to do so to preserve their financial integrity in light of the
	extreme, sometimes negative, spreads observed between long-term and short-term
	debt instruments. A reversal of capital market conditions today warrants the
	exclusion of short-term debt from the capital structure for that same reason, i.e., in
	order to maintain financial strength. The current spreads between the cost of long-
	term and short-term debt are higher than average, which is precisely the opposite of
	the conditions under which short-term debt was initially considered for inclusion in
	the capital structure.
Q.	Is it standard, for ratemaking purposes, to include short-term debt in a utility's
	capital structure?
A.	No. As Leonard Saul Goodman explains in <i>The Process of Ratemaking</i> , "[i]nclusion
	of short-term debt in the capital structure is the exception, rather than the rule." The
	rule to which Professor Goodman refers is to account for only those sources of
	financing that are permanent.
	Short-term debt is appropriately included only in exceptional circumstances

such as those experienced in the 1980s. Additionally, commissions have in some

cases allowed short-term debt under two additional circumstances: either when short-

15 Goodman, Leonard Saul, *The Process of Ratemaking, Volume I*, 603 (1998).

term debt is a regular and continuing component of the Company's capital or when
short-term debt is expected to be converted to long-term debt. These conditions are
not present in this case. In sum, there is no basis to impute a level of short-term debt
in the capital structure.

Q. How does the FERC use short-term debt?

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A. The FERC specifies in its Uniform System of Accounts that short-term debt is to be
used to determine an appropriate Allowance for Funds Used During Construction

(AFUDC). Effectively, it assumes utilities will fund construction projects first with
short-term debt and then with permanent sources of financing such as long-term debt,
preferred stock and common equity. FERC does not apply the short-term debt rate
when determining the rate of return on assets that are in service and comprise a public
utility's rate base.

Q. Did Mr. Gorman testify in support of the Company's approach to the use of short-term debt in the Company's 2013 rate case?

15 A. Yes. I understand that Mr. Gorman testified that many utilities do not rely on short16 term debt and instead finance in a more conservative manner to lock in low interest
17 rates and mitigate risk associated with refinancing short-term securities. 17 According
18 to Mr. Gorman, the use of exclusively long-term debt is "generally consistent with a

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¹⁶ See 18 CFR Part 101 - Uniform System of Accounts Prescribed for Public Utilities and Licensees Subject to the Provisions of the Federal Power Act.

¹⁷ Wash. Utils. & Transp. Comm'n v. PacifiCorp, Docket UE-130043, Gorman, TR. 226:21-227:19 (Aug. 26, 2013).

1	conservative utility financing structure." Therefore, Mr. Gorman did not propose
2	the imputation of short-term debt. 19

longer uses debt-to-capital ratios to determine a utility's financial risk profile.²⁰

Please address Mr. Gorman's statement that Standard & Poor's (S&P) no

A. Mr. Gorman raises this issue in the context of evaluating whether the imputation of a 49.1 percent equity ratio would change the financial risk profile for this business, and would, as I state in my direct testimony, move it from a "Significant" to an "Aggressive" financial risk profile.

Although Mr. Gorman is technically correct to state that the guidance from S&P in late 2013 indicates a future focus on ratios other than debt-to-capital, ²¹ this new focus does not affect my conclusions with regards to the effect of a lower equity ratio on the financial risk profile. This is because the debt-to-capital ratio, long used by S&P, is but one indicator of leverage. The ratios that S&P now examines, including for example funds from operations (FFO)-to-debt and debt-to-earnings before interest, taxes, depreciation and amortization (EBITDA), are alternative indicators of leverage, which have traditionally been used in conjunction with the debt-to-capital ratio.

Ultimately the tool one uses to measure leverage is less important than the leverage itself. Just as an increase in leverage would manifest itself in the debt-to-

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¹⁸ *Id*.

²⁰ Responsive Testimony of Michael P. Gorman, Exhibit No. MPG-1T at 18:6-8.

²¹ The methodology for consideration of financial risk outlined in 2012 identified three financial benchmarks: funds from operations (FFO) to debt; debt to EBITDA; and debt to capital. In 2013, S&P updated its criteria for rating corporate industrial companies and utilities. To assist in determining the relative ranking of the financial risk of companies, S&P now only considers two core credit ratios: FFO to debt and debt to EBITDA. *See* "Corporate Methodology," *Standard & Poors Ratings Direct* at 30 (Nov. 19, 2013); *see also* "Methodology: Business Risk/Financial Risk Matrix Expanded," *Standard & Poors Ratings Direct* at 3-4 (Sep. 18, 2012).

1	capital ratio, it will also manifest itself in the FFO-to-debt ratio and in the debt-to-
2	EBITDA ratio. Notably, S&P's benchmarks for FFO-to-debt and debt-to-EBITDA
3	did not change in November 2013. Hence, there is no reason to believe that the
4	increase in leverage implied by a 49.1 percent hypothetical equity ratio would not
5	trigger a change in the financial risk profile for the business, consistent with the
6	guidelines that have long governed the S&P rating process.

- Q. Please comment on Mr. Hill's approach to assessing the premium on the cost of equity that would accompany the use of a 49.1 percent equity ratio.
- Mr. Hill computes an adder of eight basis points to be applied if the Commission imposes a hypothetical equity ratio of 49.1 percent in place of the Company's actual capital structure. The method Mr. Hill uses is nearly identical to the one I relied upon to determine my recommended adjustment of 28 basis points, the only conceptual difference being the fact that Mr. Hill assumes PacifiCorp's regulated operations in Washington would carry a higher market-to-book ratio. This is an assumption I disagree with and that Mr. Hill has not supported.
 - Q. Do you agree with Messrs. Parcell and Gorman that no adjustment is needed on the grounds that the Proxy Group purportedly already has an equivalent or even lower equity ratio?
- A. No. While I agree with these witnesses that the book value debt-to-capital ratio is a

 prima facie indicator of the level of financial risk employed, their analysis of the

 Proxy Group does not encompass sufficient detail from which to draw reliable

 conclusions. One problem is that these witnesses rely upon capital structure measures

 that do not necessarily convey the true financial risk that the proxy group and other

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1	industry benchmarks carry. Specifically, they elect to analyze debt before
2	adjustments are made to impute debt from long-term obligations such as the capacity
3	payments under power purchase agreements and other debt-like instruments. These
4	adjustments are critical to assessing a utility's true financial position. By ignoring
5	them, these witnesses do not make a proper comparison.
6	In contrast, when I sought to evaluate financial risk, I found that PacifiCorp
7	shows reasonable comparability to the Proxy Group companies when more detailed

In contrast, when I sought to evaluate financial risk, I found that PacifiCorp shows reasonable comparability to the Proxy Group companies when more detailed measures than the *prima facie* book value debt-to-capital ratio are considered. The detailed measures do not support the claim that PacifiCorp carries a lower financial risk profile than the Proxy Group. Specifically, I examined the following metrics for PacifiCorp and the Proxy Group companies to arrive at this conclusion:

- FFO coverage, from S&P. This is an important financial risk ratio considered by S&P when assessing financial risk in the ratings process and is also a key metric used by Moody's and Fitch. The Company's FFO coverage ratio falls reasonably in the range of that observed for the proxy group.
- Authorized equity ratios. I compared the Company's equity ratio of 51.73
 percent to those for proxy company utilities during 2013 and 2014. The
 Company's proposed equity ratio falls reasonably within the range of
 authorized equity ratios.

Furthermore, my proxy group screening criteria consider only companies that carry comparable credit ratings and are comparable in size. Although these initial screens are less granular than the above comparisons, they also help to assure general comparability as between the Company and the Proxy Group.

In sum, the evidence put forth by the other cost of capital experts is based on one *prima facie* indicator alone. More complete and more relevant data analysis indicates that the Proxy Group companies do not carry riskier financial profiles than

1		PacifiCorp. In this context, it is necessary to account for higher costs of equity
2		capital when imputing for ratemaking purposes a capital structure with more financial
3		risk than PacifiCorp and the Proxy Group companies.
4		V. CHOICE OF MODELS
5	Yield	l-Plus-Growth
6	Q.	Please comment on Mr. Gorman's statement that the Yield-Plus-Growth model
7		"is not a methodology that is appropriate for estimating a fair return for
8		PacifiCorp in this proceeding." ²²
9	A.	This statement is not correct. It is well established that the return expectations for the
10		industry as a whole influence investors' expectations for individual companies within
11		the industry. Often, when it is difficult to assess a company-specific or project-
12		specific cost of capital, practitioners rely upon the industry-average cost of capital in
13		its place. This confirms the relevance of industry return expectations. ²³ The record in
14		this proceeding would be wanting if estimates of expected industry returns were not
15		presented to the Commission.
16	Comparable Earnings	
17	Q.	Please comment on the testimony of Messrs. Parcell, Hill and Gorman as it
18		concerns the use of the Comparable Earnings model.
19	A.	No consensus exists among these experts on the applicability of the Comparable
20		Earnings model. Mr. Gorman contends that Comparable Earnings is not an
21		appropriate method for estimating ROE. Mr. Hill makes a similar claim. However,
22		their testimony in this regard is unsupported and contradicts the well-established

Responsive Testimony of Michael P. Gorman, Exhibit No. MPG-1T at 65:1-3.

In fact, reliance on industry return expectations is similar in nature to reliance on a proxy group.

principle in applied finance that past returns influence investors' forward-looking
expectations. To claim, as Mr. Gorman does, that the comparable earnings model is
flawed or irrelevant inappropriately ignores a key factor of influence for rate-of-
return expectations as well as the specific guidance of the Supreme Court's <i>Hope</i>
decision, where the Court makes specific reference to the need for an analysis of
comparable earnings.

I note that Staff's cost-of-capital expert, Mr. Parcell, lauds the use of the Comparable Earnings (CE) model: "The CE method is designed to measure the returns expected to be earned on the original cost book value of similar risk enterprises. Thus, it provides a direct measure of the fair return, since it translates into practice the competitive principle upon which regulation rests."²⁴

I understand that the Commission has also previously relied on the Comparable Earnings model, after first observing that it "appreciates and values a variety of perspectives and analytic results because these serve to better inform the judgment it must exercise than would a single model, or a single expert's opinion."

Modified Earnings-Price Ratio

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- Q. Please comment on the Modified Earnings-Price Ratio model advanced by Mr. Hill.
- A. Mr. Hill employs the modified earning-price ratio (MEPR) analysis and states it can be useful in a corroborative sense. It is well known that the Earnings-Price ratio understates the cost of capital when market-to-book ratios exceed unity. Although

²⁴ Testimony of David C. Parcell, Exhibit No. DCP-1T at 34:1-4.

²⁵ Wash. Utils. & Transp. Comm'n v. Puget Sound Energy Inc., Dockets UE-090704 and UG-090705, Order 11 ¶¶ 292-300 (Apr. 2, 2010).

Mr. Hill modifies the approach, his recommendation to use the midpoint of the bounds he identifies is arbitrary. The method remains inferior to other approaches and is not a good source of corroboration.²⁶

Importantly, it is not a model that is used by investors or relied upon in regulatory practice. It has been my experience that investors do not rely upon the earnings-price approach or the modified earnings-price approach to assess the cost of capital. In regulatory practice, Mr. Hill cites the generic financing proceeding Order No. 420, issued by the FERC in 1985, as support for this model. However, the FERC has adopted it neither as a method for estimating the ROE nor as a means of corroborating ROE estimates.

Market-to-Book

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- Q. Please comment on the Market-to-Book model advanced by Mr. Hill.
- A. In my experience, analysis of market-to-book ratios in the context of cost of capital determination often involves the use of econometrics. Mr. Hill's use of them does not employ econometric techniques. His analysis, as presented, provides little additional information and does not properly serve as a corroboration of the ROE estimates presented by Mr. Hill. Again, this is an approach that has little use by investors and by regulators in their practical assessments of utility costs of capital.

²⁶ See Kolbe, A.L., Read, J.A. & Hall, G.R. The Cost of Capital—Estimating the Rate of Return for Public Utilities, 55-57 (1984).

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VI. MODEL INPUTS

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3	Q.	Does Mr. Parcell's claim that you should not use current interest rates to
4		measure the equity risk premium have merit?

A. No. Mr. Parcell conflates two separate and distinct issues: (1) whether the historical equity risk premium applies in today's marketplace; and (2) how to estimate and use a forward-looking risk premium today. He attempts to tie my statement that the historical risk premium is inapplicable today to the question of how to estimate and use a forward-looking risk premium. Yet these have little to do with one another. My analysis of the Market Risk Premium is consistent as it assesses the premium based on the current level of rates and applies the premium to those rates. It would be inconsistent to do it in any other fashion.

upon is not reasonable because it is based on too high an expectation of growth.²⁷ To support this claim, Mr. Gorman compares the projected growth of corporate earnings to the projected US GDP growth. Mr. Gorman premises his criticism on the statement "It is simply not a rational expectation to believe that, for an extended period of time, the growth rate of companies will exceed the growth of the overall economy in which they sell their goods and services."28

Please address Mr. Gorman's claim that the Equity Risk Premium you rely

Mr. Gorman's analysis is flawed for several reasons. First, it fails to recognize that part of the growth in these companies derives from activities abroad.

²⁸ *Id.* at 57:13-16.

²⁷ Responsive Testimony of Michael P. Gorman, Exhibit No. MPG-1T at 57:3-6.

He assumes erroneously that these companies source their growth exclusively from	m
transactions in the US economy.	

A.

Second, historical stock market performance shows that Mr. Gorman's contention is wrong. The capital market data indicate an overall market return of 11.95 percent. As I show in Exhibit No. KGS-22, this return is consistent with actual returns achieved by investors in the S&P 500 Index, which is the index from which I develop the market return. Hence, the return assumption I rely upon—a forward-looking figure implied by equity markets pricing—is also well calibrated to historical conditions in those same markets. Mr. Gorman's criticisms are based on incorrect assumptions and data.

Q. Do you agree with Mr. Hill's and Mr. Parcell's equity risk premium assumptions of 6.0 percent and 5.85 percent, respectively?

No. These assumptions do not make sense and are disconnected from current capital market conditions. As I explain in my direct testimony, the spread between the risk-free rate and the required returns for holding equities has broadened as the Federal Reserve System has aggressively acted to keep long-term interest rates at record lows and stimulate the economy. Both Mr. Parcell and Mr. Hill rely on historical estimates that do not capture the uniqueness of current capital market conditions. Creating further problems, Mr. Parcell arrives at his estimate by blending in the geometric mean of historical equity return spreads with arithmetic mean estimates. As I demonstrate below, the use of geometric means for forward-looking cost-of-capital analysis is invalid. These flaws render their equity risk premium assumptions unreliable.

1 Q. Mr. Hill substitutes the equity risk premium used in Australia by the Australian Energy Regulator in your CAPM model.²⁹ Is Mr. Hill's substitution reasonable? 2 3 No. The specific value used by the Australian Energy Regulator has no direct A. 4 application to the cost of equity for Pacific Power, as Mr. Hill suggests it does. 5 Several factors make this so. First, the Australian Energy Regulator establishes the 6 equity risk premium for the Australian stock market, not the stock market in the 7 United States. In addition, the equity risk premium used is calculated with reference 8 to a 10-year bond yield, not a 30-year bond yield. In the context of an upward-9 sloping yield curve, this will produce an equity risk premium that is too low and 10 cannot be applied to a 30-year treasury yield. Mr. Hill erroneously applies it to a 30-

year treasury yield. For these reasons, Mr. Hill's comparisons are not relevant.

Proxy Group Selection

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- Q. Please comment on the proxy group selection of Messrs. Parcell, Hill and
 Gorman.
- 15 A. Mr. Gorman adopts the proxy group that I employed in my direct testimony, although 16 he removes Avista, Duke, Pepco Holdings and Wisconsin Energy due to "significant 17 merger and acquisition activity." I had not excluded Duke, Pepco Holdings and 18 Wisconsin Energy as that their merger announcements occurred after my testimony 19 was filed. As described in Section X, I also exclude the cost-of-capital parameters for 20 these three companies when I refresh the analysis for my Proxy Group. On balance, 21 the differences as between Mr. Gorman's proxy group and my Proxy Group are not 22 significant.

²⁹ Testimony of Stephen G. Hill, Exhibit No. SGH-1CT at 72:3-10.

1	Similarly, Mr. Parcell also adopts the Proxy Group from my direct testimony,
2	although he also determines himself another proxy group of seven companies. Given
3	the large pool of publicly-traded, electric utility holding companies, I find his seven-
4	company proxy group to be unnecessarily small in number and not sufficiently
5	diverse. The law of large numbers dictates that, all else equal, more companies yield
6	greater confidence in the results. It is also my understanding that the Commission has
7	previously criticized a seven company proxy group for having "questionable
8	statistical reliability." ³⁰
9	Mr. Hill, for his part, uses very strict criteria to arrive at a proxy group of 13
10	companies. He uses approximately one quarter of the entities considered by Value
11	Line to be electric utilities. Like that of Mr. Parcell, Mr. Hill's proxy group is less

13 **Dividend Yield Adjustment**

Q. Please explain the multiplier you used to convert the historical dividend yield to a forward-looking dividend yield for your DCF model.

likely to provide a robust result due to its small size than a larger proxy group.

- I rely on a full year of historical dividends to calculate the dividend yield. When

 converting that to a forward-looking dividend yield, I added one year of growth. This

 is the correct method to use when one relies on a full year of historical dividend data.

 In effect, each quarter of dividends is brought forward by a year in order to have a full

 year of expected future dividends.
 - Q. Does Mr. Hill take issue with this method?
- 22 A. Yes. He argues that I should have only applied half a year's growth. This would

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³⁰ Wash. Utils. & Transp. Comm'n v. PacifiCorp, Docket UE-100749, Order 06 ¶ 78 (Mar. 25, 2011).

- have been appropriate had I used six months of dividends, but with one year of
 historical dividends, the right growth factor is a full year of growth.
- 3 Q. Is Mr. Hill right to criticize your use of a half a year's growth in FERC
- 4 proceedings?
- 5 A. No. Mr. Hill has no basis for this criticism. Even where the application of a full

 6 year's growth is the proper approach,³¹ as a practical matter, there is virtually no

 7 room in a FERC proceeding to implement any alternative to the use of half a year's

 8 growth. The use of half a year's growth for the FERC DCF model is prescribed by

 9 federal case precedent³² that requires a very strict adherence to FERC's stated

 10 methodology and stated sources for data.
 - **Analyst Growth Forecasts**
- Q. Mr. Hill claims that "sell-side institutional analysts that are polled by IBES,

 Zacks, and similar services offer relatively 'rosy' expectations for the stock they

 follow. Simply put, some analysts overstate growth expectations to make the

 stocks they want to sell look more attractive." Please comment.
- A. Mr. Hill appears to be describing the conflicts of interest that were identified by the

 Securities and Exchange Commission (SEC) and were addressed in a series of

 reforms in 2003, although he fails to distinguish between questions of whether

 analysts' ratings ("Buy," "Sell" and the like) are optimistic and questions about the

 integrity of analyst's earnings forecasts. In any event, the SEC's reforms include

 Regulation AC and the Global Analyst Research Settlements. Regulation AC

³³ Testimony of Stephen G. Hill, Exhibit No. SGH-1CT at 44:8-11.

³¹ See, e.g., "Four Common Errors in Applying the DCF Model in Utility Rate Cases," NERA Working Paper, (Feb. 1, 1992).

³² See Southern Cal. Edison Co., Opinion No. 445, 92 FERC ¶ 61,070 at 17 (July 26, 2000).

1		requires securities analysts to make certain certifications regarding potential conflicts;
2		it is designed to promote the integrity of analyst reporting. In addition, the Global
3		Analyst Research Settlements required investment banks with research departments
4		to make structural reforms that separate research and investment banking activities.
5		Under the settlements, "analyst's compensation will be based in significant part on the
6		quality and accuracy of the analyst's research."34 Since the reforms, several academic
7		papers have documented improvement in the integrity of analyst guidance. ³⁵
8 9	Q.	Did Mr. Gorman rely on analyst growth rates in his constant growth DCF model?
10	A.	Yes. Mr. Gorman relies on analyst growth rates for his constant growth model on the
11		basis that, "As predictors of future returns, security analysts' growth estimates have
12		been shown to be more accurate than growth rates derived from historical data."36
13	Meas	sure of Central Tendency
14	Q.	Mr. Gorman suggests that your DCF analysis should have been based upon the
15		median, not the mean. ³⁷ Is he correct?
16	A.	No. His opinion in this regard is based upon his subjective judgment. The mean and
17		the median both provide useful information, but the information conveyed by each
18		measure is different. Mr. Gorman believes that certain individual company estimates

are outliers (both high and low) and should be excluded from the central tendency

analysis. Yet, he has no rational way to differentiate between outliers and data that

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³⁴ See SEC Fact Sheet on Global Analyst Research Settlements, available online at http://www.sec.gov/news/speech/factsheet.htm (accessed Nov. 12, 2014).
35 See, e.g., "Measure for Measure: The Relation between Forecast Accuracy and Recommendation Profitability

of Analysts," Journal of Accounting Research, Vol. 45, No. 3 at 604 (June 2007).

³⁶ Responsive Testimony of Michael P. Gorman, Exhibit No. MPG-1T at 25:3-4.

³⁷ *Id.* at 55:18-23.

truly can inform the Commission about the central tendency and the ROE. To ignore these estimates would be to limit unnecessarily and arbitrarily the data upon which the estimates are based. The end result of Mr. Gorman's use of the median is to lower the DCF-based estimate – falling a full 30 basis points below Mr. Gorman's own recommendation. This subjective and arbitrary choice of central tendency measure is unwarranted. Instead, the DCF results should be viewed, as I have viewed them, as a portfolio with an average expected return.

Screening Criteria

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- Q. Mr. Hill suggests that your screening methods somehow trigger adverse selection
 and bias your DCF results. Please respond.
- Mr. Hill believes that excluding utilities with negative earnings growth forecasts or 11 A. dividend cuts somehow assures an overstated ROE.³⁸ However, Mr. Hill is wrong to 12 13 believe this and to make this suggestion. Mr. Hill himself excludes companies that 14 have had dividend cuts. As for growth forecasts, one reason I exclude utilities with 15 negative earnings growth forecasts is that those companies typically have 16 idiosyncratic issues that cause the forecasts to be negative. It would be inappropriate 17 to assume that those idiosyncratic issues should be incorporated into a rate-of-return 18 estimate for a proxy group. A second reason I exclude utilities with negative earnings 19 growth forecasts is that incorporating them is not tractable. Importantly, my approach is commonly used in regulatory practice, and for good reason. 20

³⁸ See Testimony of Stephen G. Hill, Exhibit No. SGH-1CT at 60:13-18.

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Geometric versus Arithmetic Mean

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- 2 Q. On various occasions, Messrs. Parcell, Hill and Gorman rely upon the geometric
- mean of historical values in their ROE analyses. Is this defensible?
- A. No. Scholarly inquiry into whether the geometric or arithmetic mean is appropriate indicates a general preference for the arithmetic mean in the context of forward-looking rate-of-return estimation.³⁹ Roger Morin explains in his treatise, *Regulatory Finance*: "One major issue relating to the use of realized returns is whether to use the ordinary average (arithmetic mean) or the geometric mean return. Only arithmetic
- 9 means are correct for forecasting purposes and for estimating the cost of capital."⁴⁰

10 GDP Forecasts as Inputs to the DCF Model and Caps on Earnings Growth

- 11 Q. Please describe the purpose of this section of your testimony.
- 12 A. In this section, I address the proposed use of GDP forecasts as an input to the DCF
 13 model, an approach taken by Mr. Gorman. I further address Mr. Gorman's statement
 14 that "Utilities cannot indefinitely sustain a growth rate that exceeds the growth rate of
 15 the economy in which they sell services" and his contention that growth rates above
 16 GDP are unsustainable and should be removed from the DCF analysis.
- Q. Has the Washington Commission expressed reservations about the use of GDP
 growth rates for the DCF model in previous cases?
- 19 **A.** Yes. In the last two Pacific Power rate orders, the Commission rejected the
 20 Company's use of a GDP growth rate informed by historical GDP data in the DCF
 21 model. The Commission did indicate that it might consider short-term, forward22 looking GDP estimates as a DCF growth rate.

⁴⁰ Morin, Roger A. Regulatory Finance – Utilities' Cost of Capital, 275 (1994).

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³⁹ See, e.g., Brealey, R., Myers, S., and Allen, F. Principles of Corporate Finance, 162-163 (11th ed. 2014).

1	Q.	Is it correct to use short-term GDP forecasts as a proxy for the long-term
2		earnings growth of electric utilities?
3	A.	No. Use of short-term gross domestic product (GDP) growth forecasts, a national
4		income accounting statistic, as a proxy for the expected long-term earnings growth
5		rate of utilities has no theoretical basis. There is significant theoretical and empirical
6		support for the notion that utilities productivity (and in turn their earnings) grow at
7		different rates than that of the economy as a whole. A Total Factor Productivity
8		(TFP) Study can identify the differential TFP growth rates for various segments of
9		economic activity as compared to the economy as a whole. ⁴¹ Given the theoretical

Q. Does Mr. Gorman's approach, to exclude forecast earnings growth rates that exceed the GDP growth rate, make sense?

relationship between GDP growth and relative TFP growth, using the former as a

proxy for expected profitability of the latter is invalid and should not be an input to

15 A. No, Mr. Gorman's approach is incorrect. NERA's empirical studies, relying on
16 FERC Form 1 data, show that the total factor productivity growth of combination
17 electric/gas utilities during the period 1972 to 2009 averaged 0.96 percent. Over the
18 same period, the total factor productivity of the US economy grew at a slower pace of
19 0.91 percent. In other words, utilities were more productive than the economy as a
20 whole by more than 5 percent. These results, and those of similar TFP studies,

determine the fair rate of return.

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⁴¹ See, e.g., Re Rate Regulation Initiative, Alberta Utilities Commission, Proceeding ID No. 566, NERA Report: "Total Factor Productivity Study for Use in AUC Proceeding 566 – Rate Regulation Initiative" (Dec. 30, 2010). See also Re Central Maine Power Co. Request for New Alternative Rate Plan, Testimony of Mark N. Lowry, Maine Public Service Commission, Docket No. 2007-215, (May 1, 2007).

⁴² Re Rate Regulation Initiative, Alberta Utilities Commission, Proceeding ID No. 566, NERA Report: "Total Factor Productivity Study for Use in AUC Proceeding 566 – Rate Regulation Initiative" at 19 (Dec. 30, 2010).

1		consistently show that, contrary to Mr. Gorman's statements, utilities can sustain—
2		and, indeed, have sustained— growth rates that exceed the economy in which they
3		sell services. As such, it is not appropriate or logical to exclude forecast utility
4		earnings growth rates that are above the GDP growth forecast.
5	Q.	Please summarize your conclusions on the use of GDP growth forecasts in ROE
6		estimation in Washington.
7	A.	Short-term forecasts of GDP growth, a national income statistic, are not necessarily
8		tied in any way to the long-term growth of individual utilities. As such, it is not an
9		appropriate input for the DCF model and should not serve as a cap on sustainable
10		growth. Empirical studies show that utilities can grow at rates that exceed the growth
11		in the economy overall. Hence, insofar as Mr. Gorman relies upon it, such reliance
12		will lead to an underestimate of the ROE.
13	Com	pany Selection for Yield-Plus-Growth Model
14	Q.	Mr. Hill criticizes your yield-plus-growth model on the grounds that the "yield"
15		and "growth" inputs rely on distinct sets of companies. Please comment on this
16		criticism.
17	A.	Mr. Hill is factually correct that the Zacks growth forecast considers additional
18		companies to Value Line. Mr Hill is incorrect as to the implications of this for ROE
19		estimation. Mr. Hill's conclusions are incorrect for at least two reasons. The first is
20		that overlap exists as between the companies covered by Zacks growth forecast and
21		the Value Line dividend yield assessment. Zacks includes 47 of 49 electric utility
22		companies followed by Value Line. Second, both the Zacks growth forecast and the

Value Line dividend yield assessment serve to influence investor expectations for the

1	electric utilities industry generally. It is thus appropriate to rely on these metrics to
2	evaluate investor expectations. It is not uncommon for components of the broad
3	yield-plus-growth model calculation to cover slightly different sets of companies.

- Q. Mr. Hill presents an alternative calculation whereby he uses the Yahoo Finance industry growth forecast and the Value Line dividend yield. Please comment on this calculation.
- A. Mr. Hill claims that his alternative calculation relies on the same set of companies,
 but his statement in this regard is incorrect. Mr Hill relies upon the dividend yield
 data for 49 electric utilities covered by Value Line and then relies upon the growth
 forecast for 278 companies covered by Yahoo Finance. His calculation does not
 resolve the problem that he attributes to my analysis.

Specification of the Risk Premium Model

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- Q. Mr. Hill takes issue with your finding that the expected risk premium for utility stocks varies inversely with long-term treasury yields. Please respond.
- 15 Mr. Hill's claims in this regard are without merit. He characterizes the relationship as A. 16 "counter-intuitive." However, the finding is quite intuitive when viewed in the 17 context of investor sentiment. When investors perceive large risks associated with 18 holding risky assets, they flock to securities like long-term treasuries and other high-19 grade bonds. This drives up prices and drives down yields on such securities. The 20 spread between the cost of holding treasury and other high-grade bonds and the cost 21 of holding riskier assets expands. History demonstrates that the premium for holding 22 risky assets has expanded during times when investors have pursued a flight to 23 quality. While Mr. Hill may believe that this investor behavior is counter-intuitive, it

1		represents a trend in the capital markets. I cite in my direct testimony several
2		scholarly articles that arrive at the same finding with respect to this relationship.
3		VII. CORROBORATION OF COST OF EQUITY ESTIMATES
4	Use o	of Pension Fund Returns
5	Q.	Does Mr. Hill use expected pension fund returns as an alleged corroboration of
6		his estimated ROE?
7	A.	Yes. Mr. Hill relies upon the expected returns on certain index fund investments as a
8		point of comparison for his ROE recommendation for Pacific Power. These indices
9		are not utility indices and do not provide a direct comparison. Insofar as they might
10		be used to estimate a utility ROE—for example, by applying a utility beta to the risk
11		premium implied by the expected market return—the results demonstrate that this
12		benchmark falls outside of the zone of reasonableness. The benchmark falls closer to
13		the cost of debt than to the cost of equity for an electric utility and thus is not realistic.
14		See Confidential Exhibit No. KGS-23C.
15	Q.	Does the use of expected pension fund returns have any basis in regulatory
16		practice?
17	A.	No. I am unaware of any regulatory authority that has relied upon this type of
18		evidence when determining a just and reasonable rate of return for public utilities.
19	Allov	ved Returns
20	Q.	Can ROEs allowed by other state regulators serve to corroborate the estimated
21		ROE?
22	A.	Yes. State regulators make their findings as to a reasonable ROE based on the
23		evidence presented to them in rate cases. Their findings are thus based on a careful

review of capital market data and the processing of such data using models like the
DCF and CAPM, among others. As such, allowed returns provide an important
source of corroboration for the ROE estimates advanced by the parties. Furthermore
as I explain in my direct testimony, the returns allowed by regulators help to shape
investor expectations about the returns that their investments in the electric utilities
sector will deliver.

- Q. How do the allowed returns compare to the ROE you recommend and those recommended by the other cost-of-capital experts?
- A. As shown in Exhibit No. KGS-19, the allowed returns demonstrate that the ROE of 10 percent that I recommend for establishing Pacific Power's electric rates in Washington falls squarely within the zone of reasonableness. That return level is consistent with the return levels granted by state regulators and below the returns granted by FERC. In contrast, the experience from other regulatory proceedings does not support the ROE recommendations of Mr. Hill (8.9 percent), Mr. Parcell (9.0 percent) and Mr. Gorman (9.3 percent). These ROE recommendations fall close to 60 to 100 basis points below the average award issued by state commissions in forty-two rate cases during 2013 or 2014 and close to 300 basis points below the returns granted to certain transmission operators by the FERC. This underscores that my analysis provides a more reasonable view of the required return on equity for investments in utilities like Pacific Power.

VIII. BUSINESS AND FINANCIAL RISKS RELATIVE TO THE PROXY GROUP

- 2 Q. What is the purpose of this section of your testimony?
- 3 A. In this section, I summarize my response to Messrs. Parcell, Hill and Gorman with
- 4 respect to PacifiCorp's business and financial risk relative to the Proxy Group and
- 5 industry. These witnesses allege that PacifiCorp, and by implication its regulated
- 6 operations in Washington, is less risky than the Proxy Group.
- 7 Q. What are the basic types of business risks applicable to electric utilities?
- 8 A. My direct testimony summarizes the risks faced by Companies engaged in the
- 9 generation, distribution and sale of electric power at retail. Since I filed my direct
- testimony, the Environmental Protection Agency (EPA) released, on June 2, 2014, its
- 11 Clean Power Plan Proposal, which seeks to regulate greenhouse gas emissions from
- existing generation plants under Section 111(d) of the Clean Air Act. This plan, as
- proposed, will reduce CO₂ emissions to 30 percent below 2005 levels by 2030. It will
- require a shift in the fuel mix so that coal-fired generation has an increasingly less
- important role in supplying energy to regional electric markets. The EPA anticipates
- that increased natural gas generation, renewables and energy efficiency will fill the
- void left by reductions in base load coal-fired generation.
 - Q. How does the Clean Power Plan affect the risks to investors in the utilities
- 19 **sector?**

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- 20 A. While the EPA has not yet issued its final rule, and is not scheduled to do so until
- June 2015, investor perceptions of this new rule are that it will increase risks for
- 22 utilities that are heavily dependent on coal-fired generation, particularly those that do
- 23 not have or are unable to obtain explicit recovery mechanisms for asset retirements

1		and incremental generation dispatch costs (e.g., in the absence of a fuel adjustment
2		clause). In this sense, it underscores the need for a regulatory framework that is
3		flexible and makes a priority of preserving the financial strength of incumbent
4		utilities which need that strength to be able to facilitate the transition to cleaner fuels.
5		Financial strength is essential if incumbent utilities are to continue to contract with
6		independent power producers who rely on the credit of the offtaker to secure
7		financing. It is essential to enable the construction of new utility-owned facilities.
8		For its part, S&P noted at the time the Clean Power Plan was released that: "For some
9		regulated utilities, credit quality could suffer marginally if they are unable to fully
10		recover investments and incremental operating costs."43 Equity analysts share the
11		same view of risks as they could materialize for equity investors. For example,
12		Barclays notes in its Power & Utilities Energy Conference Review: "The negatives
13		included uncertainty around 111(d).** Barclays goes on to summarize investor
14		sentiment: "Key areas of uncertainty were 111(d), weak regulated sales in part due to
15		energy efficiency and the impact of elections on regulation particularly in Florida and
16		Massachusetts." ⁴⁵
17	Q.	Have you compared the share of coal-fired generation within the PacifiCorp
18		generation fleet to the typical share for the industry and for the Proxy Group
19		companies?
20	A.	Yes. Exhibit No. KGS-25 presents this comparison. This exhibit demonstrates that
21		PacifiCorp has more coal-fired generation than the average Rebuttal Proxy Group

^{43 &}quot;S&P's First Take On The EPA's Proposed CO2 Rules For Power Generators," *Standard & Poors Ratings Direct* at 5 (June 3, 2014).
44 "Energy Conference Review," *Barclays Power & Utilities* at 1 (Sept. 10, 2014) (emphasis added).
45 *Id.* at 4 (emphasis added).

company or the average company in the industry. As I illustrate in Table 3 below, this is true when measured both on a capacity basis and on an energy basis.

Table 3
Comparison of Coal-fired Generation Capacity and Energy Production

	Percent Coal Based on Operating Capacity (MW)	Percent Coal Net Generation (MWh)
PacifiCorp	60%	76%
Rebuttal Proxy		
Group	36%	40%
Industry	28%	39%
Source: SNL Energy.		

- Q. Please summarize your evaluation of the relative risks of proxy group companies
 as compared to Pacific Power.
 - As I found in my direct testimony, they are generally comparable in that they share the business risks that are typical of public utilities, as described in my direct testimony. In this regard, Pacific Power is comparable to the Proxy Group and to the industry more broadly. Furthermore, key financial metrics for the Company fall reasonably within the range of those observed for the proxy group companies.

Against this, two important risks stand out as affecting negatively investor perceptions of PacifiCorp. These are: the 111(d) risk I describe above and regulatory risk, particularly in Washington. As I mentioned in my direct testimony, Pacific Power faces certain challenges in Washington following the decision in its 2013 Washington rate case, Docket UE-130043, the outcome of which is currently undergoing judicial review. In his rebuttal testimony, Mr. Williams cites to recent

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1		rating agency comments expressing concerns about the Company's regulatory
2		support in Washington.
3		IX. FINANCIAL INTEGRITY ANALYSIS
4	Q.	Please describe the financial integrity analysis performed by Messrs. Parcell,
5		Hill and Gorman.
6	A.	These witnesses attempt to analyze the effects of their recommendations on the
7		Company's financial integrity. These witnesses purport to demonstrate that their
8		recommended 49.1 percent equity ratio coupled with returns on equity of 8.9 percent
9		(Mr. Hill), 9.0 percent (Mr. Parcell) or 9.3 percent (Mr. Gorman) will not be harmful
10		to the Company's financial health.
11	Q.	Please address Mr. Gorman's analysis of the Company's credit metrics using his
12		recommended return of 9.0 percent.
13	A.	Mr. Gorman's forecast credit metrics do not make sense in light of the PacifiCorp's
14		current financial ratios. The Company's FFO/Debt ratio is currently 20.49x, as of
15		year-end 2013. Mr. Gorman's suggestion that dropping the ROE by 20 basis points
16		from the currently allowed level of 9.5 percent to 9.3 percent would improve its ratio
17		is simply not credible. Mr. Gorman appears only able to infer such ratios by ignoring
18		part of the debt imputed by investors, a point discussed in more detail by Mr.
19		Williams. Dropping the ROE to the level proposed by Mr. Gorman could not raise
20		the Company's credit metrics, as he claims.
21	Q.	You note that Mr. Gorman excludes certain obligations that investors treat as
22		debt. Is this appropriate?
23	A.	No. It is not appropriate to exclude obligations that investors take into account when

1		making an assessment of utility risk and financial strength. Doing so results in a
2		biased analysis that does not reflect the true financial position of the Company.
3	Q.	Does Mr. Gorman's purported rationale for excluding them $-i.e.$, that these
4		obligations are controllable by management or not related to the cost of service –
5		have any merit?
6	A.	No, it does not. Whether these obligations are controllable by management does not
7		affect whether they should be considered as part of the Company's debt and taken
8		into account when assessing financial integrity. The fact that Mr. Gorman obtains the
9		level of imputed debt – which he then ignores – from a source that investors routinely
10		rely on confirms that they are viewed as debt by investors. As such, it is illogical and
11		inappropriate to exclude these obligations from the analysis of financial integrity.
12		Any assessment of whether a given ROE will allow the Company to maintain its
13		credit and preserve its financial integrity, as required by the <i>Hope</i> decision, must take
14		into account all obligations that the Company faces.
15		Moreover, Mr. Gorman errs in characterizing these obligations as unrelated to the
16		cost of service and has provided no support for such a characterization. Pacific
17		Power's operations in Washington exist to provide reliable electric service to
18		Washington consumers at reasonable, cost-based rates. The post-retirement
19		obligations for Pacific Power employees derive from its duties to serve the public.
20		They are not unrelated to the cost of service, as alleged by Mr. Gorman.

1	Q.	Please address the analysis of the Company's credit metrics made by Messrs.

2 Parcell and Hill using their recommended ROEs of 9.0 percent and 8.9 percent

respectively.

A. Each witness relies on a single credit metric to evaluate the Company's financial integrity under his recommended ROE: pre-tax interest coverage. Each performs an elementary calculation of this ratio. Mr. Parcell shows his in Exhibit No. DCP-15, while Mr. Hill offers his as Exhibit No. SGH-15. Mr. Parcell acknowledges that this metric is no longer used by S&P for risk rankings, yet he goes ahead and compares the resulting coverage ratio to the S&P benchmarks.

Importantly, neither Mr. Parcell nor Mr. Hill has taken into account imputed debt, which is an important factor considered by investors when assessing financial strength and credit quality. And, as pointed out by Mr. Williams, in their credit metrics analysis, none of the parties take into consideration the impact of the significant adjustments that they are proposing in this case or attrition, which I understand to be a real issue for the Company in Washington. As a result, these witnesses present ratios that are biased and suggest higher credit metrics and a stronger financial position than actually applies to the Company.

Interestingly, Mr. Hill's shows a pre-tax coverage ratio that corresponds to a BBB-ratings bracket on Mr. Parcell's benchmark ratios. Hence, Mr. Hill's analysis suggests financials that correspond to a lower credit rating than the Company currently carries with S&P. If adopted, these witnesses recommendations would not

1		yield the "credit-sustaining revenue" 46 that is necessary for the proper discharge of
2		the Company's duties.
3		X. UPDATED COST OF EQUITY ANALYSIS
4	Q.	Please describe your approach to updating the cost-of-capital models and
5		estimate.
6	A.	I applied the same criteria and same models that were used to develop my
7		recommendation for the Company's direct filing. The update performed simply
8		refreshes the analyses with data through early November of this year.
9	Q.	Did you update the proxy group in connection with the preparation of this
10		rebuttal testimony?
11	A.	Yes, it was necessary to update the proxy group in order to assure that that all
12		companies continue to pass the screens, and that consequently the models continue to
13		yield robust results.
14	Q.	Which companies do you include in your Rebuttal Proxy Group?
15	A.	The Proxy Group is comprised of the following twenty-six companies: 1) Alliant
16		Energy Corp.; 2) Ameren Corp.; 3) American Electric Power Co., Inc.; 4) Avista
17		Corp.; 5) Black Hills Corp.; 6) CenterPoint Energy, Inc.; 7) Consolidated Edison,
18		Inc.; 8) Dominion Resources, Inc.; 9) DTE Energy Company; 10) Edison
19		International; 11) El Paso Electric Co.; 12) Empire District Electric Co.; 13) Great
20		Plains Energy Inc.; 14) IDACORP, Inc.; 15) NextEra Energy Inc.; 16) Northeast
21		Utilities; 17) NorthWestern Corp.; 18) Pinnacle West Capital Corp.; 19) Portland
22		General Electric Company; 20) Public Service Enterprise Group Incorporated; 21)

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⁴⁶ See Bonbright, J. Principles of Public Utility Rates, 50 (1961).

1		SCANA Corporation; 22) Sempra Energy; 23) Southern Co.; 24) Vectren Corp.; 25)
2		Westar Energy, Inc.; and 26) Xcel Energy Inc.
3	Q.	Please identify the changes to your proxy group relative to the one used in your
4		direct testimony.
5	A.	The screening analysis performed called for the addition of seven companies to the
6		proxy group and the elimination of five companies. The rationale for addition or
7		elimination is set forth below:
8		Additions:
9		• I added Ameren Corp. because it now passes all screens, including the positive
10		five-year growth forecast screen.
11		• I added Edison International because it now passes all screens, including the
12		positive five-year growth forecast screen.
13		• I added Empire District Electric Co. because it now passes all screens,
14		including the non-negative dividend growth screen.
15		• I added Public Service Enterprise Group Incorporated because it now passes all
16		screens, including the positive five-year growth forecast screen. I added Great
17		Plains Energy Inc. because it now passes all screens, including the credit rating
18		screen.
19		• I added Sempra Energy as it now passes the revenue from regulated operations
20		screen.
21		Ladded Vectren Corp. as it now passes the revenue from regulated operations

screen.

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1 Eliminations:

- I eliminated Pepco Holdings Inc. because it does not pass the merger screen,
- due to its acquisition by Exelon Corporation. In addition, Pepco Holdings no
- 4 longer passes the sustainable growth screen.
- I eliminated Cleco Corp as it no longer passes the merger screen, as it is being
- 6 acquired by an investor group.
- I eliminated OGE Energy Corp as it no longer passes the non-negative
- 8 dividend growth screen.
- I eliminated Wisconsin Energy Corp. because it does not pass the merger
- screen, due to its acquisition of Integrys Energy Group.
- I eliminated Duke Energy Corp. because it does not pass the merger screen,
- due to assets sold to Dynergy.
- 13 Q. Have you prepared exhibits illustrating your updated calculations?
- 14 A. Yes. Exhibit Nos. KGS-26 through KGS-32, KGS-35, and KGS-36 contain my
- updated analysis and application of the rate-of-return models to the Rebuttal Proxy
- Group. Exhibit Nos. KGS-33 and KGS-34 contain updated charts showing trends in
- dividend yields for utilities and the broader market, and yields on long-term treasury
- bonds, respectively.
- 19 Q. Please summarize your updated recommendation.
- A. My updated analysis indicates that a reasonable rate of return for the Company's
- 21 equity owners is 10.0 percent. This rate of return reflects the opportunity cost of
- 22 capital for investments of comparable risks. It is reflective of current capital market

- 1 conditions and consistent with the returns that have been authorized for comparable
- 2 electric utilities.
- 3 Q. Does this conclude your rebuttal testimony?
- 4 A. Yes.