BEFORE THE

WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION

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WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION,

Complainant,

v.

PUGET SOUND ENERGY, INC.

Respondent.

Docket Nos. UE-072300/ UG-072301 (consolidated)

DIRECT TESTIMONY OF

MICHAEL P. GORMAN

ON BEHALF OF

THE INDUSTRIAL CUSTOMERS OF NORTHWEST UTILITIES

May 30, 2008

1 Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

- 2 A. My name is Michael Gorman, and my business address is 1215 Fern Ridge Parkway,
- 3 Suite 208, St. Louis, MO 63141-2000.

4 Q. WHAT IS YOUR OCCUPATION?

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

7 Q. PLEASE SUMMARIZE YOUR EDUCATIONAL BACKGROUND AND 8 EXPERIENCE.

9 A. These are set forth on Exhibit No. (MPG-2).

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

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

12 Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY IN THIS PROCEEDING?

A. I will recommend a fair return on common equity and an overall rate of return for Puget
Sound Energy, Inc. ("PSE" or the "Company").

15 Q. PLEASE SUMMARIZE YOUR RATE OF RETURN RECOMMENDATIONS.

- A. I recommend the Washington Utilities and Transportation Commission (the
 "Commission") award PSE a return on common equity of 10.12% and an overall rate of
 return of 8.30%, as shown on Exhibit No. (MPG-3).
- 19 My recommended return on equity for PSE is based on a Discounted Cash Flow 20 ("DCF"), a Risk Premium ("RP"), and a Capital Asset Pricing Model ("CAPM") 21 analyses.
- I demonstrate that my recommended return on equity and proposed capital structure for PSE will provide PSE with an opportunity to realize cash flow financial coverages and balance sheet strength that conservatively supports PSE's current bond

rating. Consequently, my recommended return on equity represents fair compensation
 for PSE's investment risk, and it will preserve PSE's financial integrity and credit
 standing.

4 I respond to PSE witness Dr. Roger Morin's recommended 11.2% return on 5 equity, which includes a 0.30% flotation cost return add-on. Dr. Morin's recommended 6 return on equity is excessive and should be rejected.

7Q.HOW DOES YOUR PROPOSED RETURN ON EQUITY OF 10.12% COMPARE8TO PSE'S LAST AUTHORIZED RETURN ON EQUITY?

9 A. PSE's last authorized return on equity was awarded in January 2007. In that proceeding,

- 10 PSE was authorized a return on equity of 10.4% with a hypothetical capital structure
- 11 containing a common equity component of 44%. Hence, the capital structure I set forth
- 12 below is comparable to the capital structure last authorized for PSE. My recommended
- 13 return on equity is approximately 28 basis points lower than PSE's last authorized return
- 14 on equity. I believe this is appropriate for the following reasons:
- 151. The Order in PSE's last rate case stated that Treasury bond yields during the
last case ranged from 4.97% to 5.30% and averaged 5.14%.^{1/} Currently,
Treasury bond yields over the last few months have ranged from about 4.3%
up to about 4.6%. Hence, Treasury bond yields at this time are about 50 basis
points lower than they were during PSE's last rate case.
- 20
 2. Treasury bond yield projections two years out are also lower in this case compared to PSE's last case. In January 2007, the *Blue Chip Financial Forecasts* projected Treasury bonds to increase to 5.1% through the second quarter of 2008.^{2/} As discussed in greater detail below, current projections of 30-year Treasury bond yields two years out are approximately 4.8%. Again, this is about a 30 basis point reduction to the Treasury bond projections in this case relative to the last case.
 - 3. Utility bond yields have been about flat in this case relative to the last case. During the last six months of 2006 and in January 2007, "Baa" rated utility

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 $[\]frac{1}{2}$ Docket Nos. UE-060266 and UG-060267, Order at 30.

² Blue Chip Financial Forecasts, January 1, 2007 at 2.

bond yields ranged from approximately 6.1% up to 6.6%. Currently, "Baa"
 rated utility bond yields have ranged from approximately 6.5% up to 6.7%.
 Hence, utility bond yields currently are very comparable to the yields that
 existed in 2007.

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Since current and projected interest rates have declined since PSE's last rate case,

6 it is appropriate to reflect that cost of capital decline in the authorized return on equity.

7 ELECTRIC UTILITY INDUSTRY MARKET PERSPECTIVE

8 Q. PLEASE DESCRIBE THE MARKET'S PERCEPTION OF THE ELECTRIC 9 UTILITY INDUSTRY OVER THE LAST SEVERAL YEARS.

- 10 A. The Edison Electric Institute ("EEI"), an electric utility industry trade organization,
- 11 provided an assessment of the credit rating history of U.S. electric utilities over the period
- 12 2002-2007. EEI's highlights of its credit rating assessment of the electric power industry
- 13 are stated as follows:
- 14 Highlights
 - Industry credit quality improved for the third consecutive year in 2007 as upgrades outnumbered downgrades by a 3:2 ratio.
- The industry's average credit rating remained at a solid BBB in 2007
 for a fourth consecutive year. The year's 121 total ratings actions, just above last year's 110, were also at a consistent level for a fourth year.
 Nearly half of the year's downgrades were tied to regulatory
 - Nearly half of the year's downgrades were tied to regulatory uncertainty in Texas. TXU received significant downgrades based on its debt-financed acquisition by a group of private equity investors.
 - As the year progressed, rising capital expenditures and the accompanying debt were becoming a more frequent concern cited by the ratings agencies.^{3/}
- 26 Further, Standard & Poor's ("S&P") also acknowledges the improving credit
- 27 standing of the electric utility industry in its report. S&P states:
 - Key Credit Trends
- The U.S. utility industry demonstrated stable credit quality in the fourth quarter of 2006, and should continue to do so in 2007 despite increasing capital spending needs related to reliability enhancements and environmental requirements. A general refocus by the industry in recent

³/ "Q4 2007 Credit Ratings," EEI Q4 2007 *Financial Update*.

years on restoring balance sheet health and selling noncore business
 operations has enhanced its ability to withstand the pressure that
 substantial capital spending will bring.

4 A credit element during this coming growth phase, however, will be fair 5 and equitable treatment by state regulators as utilities seek to recover the 6 capital expenditures they will incur to address declining reserve margins, 7 aging and increasingly fragile infrastructure, and environmental mandates. 8 Standard & Poor's Ratings Services expects that most utilities will seek 9 pre-approval from regulators of any substantial spending program, or at 10 least a broad understanding of the principles that regulators will apply in 11 granting recovery. Of comparable significance to supporting credit quality is regulatory approval for timely recovery of fuel costs, especially in an 12 environment of elevated commodity prices.^{$\frac{4}{}$} 13

14 The electric utility industry and utilities in general are currently in a capital spending cycle that is producing very strong growth in rate base, and in related earnings 15 16 and dividends. For the reasons set forth below, the industry is in a very strong growth period, which is tracking its capital expenditures for meeting growing demand, 17 18 environmental compliance, and system upgrades and improvements. This indicates that 19 the market is providing capital to the industry for significant capital improvements, and 20 the market is attracted to the safe investment characteristics of regulated utility companies, which generally receive supportive regulatory treatment in terms of cost 21 22 recovery of prudent and reasonable expenses. This is providing a vehicle for strong 23 growth over at least the next 3 to 5 years.

24 **OVERVIEW OF PSE**

25Q.PLEASE PROVIDE A BRIEF OVERVIEW OF PSE AND ITS INVESTMENT26CHARACTERISTICS.

A. PSE is owned by Puget Energy. Puget Energy has been in the process of divesting
 nonregulated investments and focusing on its regulated utility business. PSE's current

^{4/} "Despite Demands For Increased Capital Spending, U.S. Utility Ratings Should Remain Stable," Standard & Poor's *RatingsDirect*, January 12, 2007, at 1.

- 1 senior secured bond rating from S&P and Moody's is "BBB+" and "Baa2," respectively.
- 2 PSE's parent company, Puget Energy's, corporate credit rating from S&P and Moody's is
- 3 "BBB-" and "Ba1," respectively.^{5/}

4 PSE'S PROPOSED CAPITAL STRUCTURE

Q. WHAT CAPITAL STRUCTURE IS THE COMPANY REQUESTING TO USE TO DEVELOP ITS OVERALL RATE OF RETURN FOR ELECTRIC OPERATIONS IN THIS PROCEEDING?

8 A. PSE's proposed capital structure is shown below in Table 1.

TABLE 1 PSE's Proposed Capital Stru	icture
Description	Percent of Total Capital
Short-Term Debt	4.93%
Long-Term Debt	50.04%
Preferred Stock	0.03%
Common Equity	45.00%
Total Regulatory Capital Structure	100.00%
Source: Exhibit No. (DEG-1T) at 7.	

9Q.DOYOUBELIEVEPSE'SPROPOSEDCAPITALSTRUCTUREIS10REASONABLE FOR SETTING RATES?

11 A. Yes. Its capital structure reasonably reflects PSE's actual capitalization mix supporting 12 its utility operations. Its capital structure reflects the Company's actual capital structure 13 in the test year reflecting a \$300 million stock issuance in October 2007, and projected 14 debt issuances through the end of the rate effective year. Further, this capital structure 15 mix is reasonable given the Company's current bond rating and business risk assessment

16 by S&P.

⁵/ Puget Energy Inc., 2007 Securities and Exchange Form 10K at 53.

1Q.DO YOU PROPOSE ANY ADJUSTMENTS TO PSE'S COST OF SHORT-TERM2DEBT?

3 A. Yes. PSE's estimated cost of short-term debt is 5.92% (Exhibit No. (DEG-5C) at 3).

4 This cost of debt is based on a projected 3-month LIBOR rate plus a spread for both its 5 commercial paper, and a separate spread for its accounts receivable balance.

6 The adjustment I propose is an update of the 3-month LIBOR rate. In December 7 2007, when PSE made its filing, its projected 3-month LIBOR rate was between 5.03% and 5.29% as shown in Exhibit No. (DEG-5C), page 4. Since that presentation was 8 9 prepared, the Federal Reserve has cut short-term interest rates dramatically. As a result, 10 the current projected LIBOR rate is 2.58% over the four quarters ending Q_32009 . 11 Updating the Company's cost of commercial paper and accounts receivable lowers the 12 weighted average cost of short-term debt from the Company's original filing of 5.92% down to 2.89%. This revised short-term debt cost is shown on Exhibit No. (MPG-4). 13

14 **RETURN ON COMMON EQUITY**

15Q.PLEASE DESCRIBE WHAT IS MEANT BY A "UTILITY'S COST OF16COMMON EQUITY."

- A. A utility's cost of common equity is the return investors expect, or require, in order to
 make an investment. Investors expect to achieve their return requirement from receiving
 dividends and stock price appreciation.
- 20Q.PLEASE DESCRIBE THE FRAMEWORK FOR DETERMINING A21REGULATED UTILITY'S COST OF COMMON EQUITY.
- A. In general, determining a fair cost of common equity for a regulated utility has been
 framed by two decisions of the U.S. Supreme Court, in <u>Bluefield Water Works &</u>
 Improvement Co. v. Public Serv. Commission of West Virginia, 262 U.S. 679 (1923) and
- 25 Federal Power Commission v. Hope Natural Gas Co., 320 U.S. 591 (1944).

Michael P. Gorman Direct Testimony Docket Nos. UE-072300/UG-072301 1 These decisions identify the general standards to be considered in establishing the 2 cost of common equity for a public utility. Those general standards provide that the 3 authorized return should: (1) be sufficient to maintain financial integrity; (2) attract 4 capital under reasonable terms; and (3) be commensurate with returns investors could 5 earn by investing in other enterprises of comparable risk.

Q. PLEASE DESCRIBE THE METHODS YOU HAVE USED TO ESTIMATE THE 7 COST OF COMMON EQUITY FOR PSE.

- 8 A. I have used several models based on financial theory to estimate PSE's cost of common
- 9 equity. These models are: (1) a constant growth Discounted Cash Flow ("DCF") model;
- 10 (2) a two-stage growth DCF model; (3) a Risk Premium model; and (4) a Capital Asset
- 11 Pricing Model ("CAPM"). I have applied these models to a group of publicly traded
- 12 utilities that I have determined reflect similar investment risk to PSE.

Q. PLEASE DESCRIBE THE PROXY GROUP YOU USED TO ESTIMATE PSE'S RETURN ON EQUITY IN THIS PROCEEDING.

- 15 A. I developed a group of companies that proxy PSE's total investment risk as follows. I
- 16 first started with the companies classified by *Value Line* as electric utility companies and
- 17 then eliminated companies that failed to meet the following criteria:
- S&P's senior secured bond rating in the "BBB" and "lower A-range" categories, as published in the AUS Utility Reports.
- 20
 2. Moody's senior secured bond rating in the "Baa" and "lower A-range" categories, as published in the AUS Utility Reports.
- 22
 23
 3. Common equity ratios to total capital between 40% and 60% by *Value Line* and *AUS Utility Reports*.
- 24 4. Had not suspended dividends over the last two years.
- 25
 26
 5. Consensus analyst growth rates estimates available from at least two of the following: Zacks, Reuters and SNL Financial.
- 27 6. No significant divestiture, merger and acquisition activities.

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- 7. Classified as "Regulated" or "Mostly Regulated" by the EEI.
- 2
- 8. Not exposed to corporate or market restructuring.

3Q.HOW DOES YOUR PROXY GROUP'S INVESTMENT RISK COMPARE TO4PSE'S INVESTMENT RISK?

A. The proxy group is shown on Exhibit No. (MPG-5). This proxy group has an average
bond rating from S&P and Moody's of "BBB+" and "Baa1," respectively. PSE's S&P
and Moody's bond ratings are "BBB+" and "Baa2," respectively. This proxy group's
average bond rating is comparable to PSE's corporate credit ratings from S&P and
Moody's.

10 The proxy group has an average common equity ratio of 46.2% (including 11 short-term debt) from AUS and 50.3% (excluding short-term debt) from *Value Line*. The 12 common equity ratio for PSE is 45.0%, including short-term debt and 47.3%, excluding 13 short-term debt. As such, the proxy group has comparable financial risk to PSE.

14 The proxy group's average EEI operating risk assessment is "Regulated." EEI 15 rates publicly traded companies based on their relative exposure to regulated and non-regulated operating risk.^{6/} EEI rates publicly traded companies in three categories: 16 17 "Regulated," "Mostly Regulated" and "Diversified." The proxy group is made up 18 entirely of "Regulated" and "Mostly Regulated" companies as rated by EEI. There are 19 no "Diversified" companies included in the proxy group. PSE's EEI operating risk 20 assessment is "Regulated." Hence, the operating risk of the proxy group is comparable to 21 that of PSE.

EEI rates companies that have 80% or more of total assets in regulated operations and designates them as "Regulated" entities. "Mostly Regulated" entities are those companies that have 50% to 80% of total assets in regulated operations. Finally, EEI rates companies with less than 50% of assets in regulated enterprises as "Diversified" companies. EEI Dividends Q1 2008 Financial Update.

1		Based on this assessment, I believe the proxy group has reasonably comparable
2		total investment risk to PSE.
3	DISC	COUNTED CASH FLOW MODEL
4	Q.	PLEASE DESCRIBE THE DCF MODEL.
5	А.	The DCF model posits that a stock price is valued by summing the present value of
6		expected future cash flows discounted at the investor's required rate of return ("ROR") or
7		cost of capital. This model is expressed mathematically as follows:
8		Po = $\frac{D1}{(1+K)^1} + \frac{D2}{(1+K)^2} \dots \frac{D\infty}{(1+K)^{\infty}}$ where (Equation 1)
10		Po= Current stock price
11		$D = Dividends$ in periods 1 - ∞
12		K = Investor's required return
13		This model can be rearranged in order to estimate the discount rate or investor
14		required return, "K." If it is reasonable to assume that earnings and dividends will grow
15		at a constant rate, then Equation 1 can be rearranged as follows:
16		K = D1/Po + G (Equation 2)
17		K = Investor's required return
18		D1 = Dividend in first year
19		Po = Current stock price
20		G = Expected constant dividend growth rate
21		Equation 2 is referred to as the annual "constant growth" DCF model.
22 23	Q.	PLEASE DESCRIBE THE INPUTS TO YOUR CONSTANT GROWTH DCF MODEL.
24	A.	As shown under Equation 2 above, the DCF model requires a current stock price,
25		expected dividend, and expected growth rate in dividends.

1Q.WHAT STOCK PRICE AND DIVIDEND HAVE YOU RELIED ON IN YOUR2CONSTANT GROWTH DCF MODEL?

A. I relied on the average of the weekly high and low stock prices over a 13-week period
ended May 2, 2008. An average stock price is less susceptible to market price variations
than is a spot price. Therefore, an average stock price is less susceptible to aberrant
market price movements, which may not be reflective of the stock's long-term value.

A 13-week average stock price is short enough to contain data that reasonably reflects current market expectations, but is not so short a period as to be susceptible to market price variations that may not be reflective of the security's long-term value. Therefore, in my judgment, a 13-week average stock price is a reasonable balance between the need to reflect current market expectations and the need to capture sufficient data to smooth out aberrant market movements.

I used the most recently paid quarterly dividend, as reported in *The Value Line Investment Survey*. This dividend was annualized (multiplied by 4) and adjusted for next
 year's growth to produce the D1 factor for use in Equation 2 above.

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

A. There are several methods one can use in order to estimate the expected growth in
dividends. However, for purposes of determining the market required return on common
equity, one must attempt to estimate investors' consensus about what the dividend or
earnings growth rate will be, and not what an individual investor or analyst may use to
form individual investment decisions.

23 Security analysts' growth estimates have been shown to be more accurate 24 predictors of future returns than growth rates derived from historical data because they are more reliable estimates.^{1/2} Assuming the market generally makes rational investment
 decisions, analysts' growth projections are more likely the growth estimates considered
 by the market that influence observable stock prices than are growth rates derived from
 only historical data.

5 For my constant growth DCF analysis, I have relied on a consensus, or mean, of 6 professional security analysts' earnings growth estimates as a proxy for the investor 7 consensus dividend growth rate expectations. I used the average of three sources of 8 ratepayer growth rate estimates: Zacks, Reuters, and SNL Financial. All consensus 9 analysts' projections used were available on May 6, 2008, as reported on-line.

10 Each consensus growth rate projection is based on a survey of security analysts. 11 The consensus estimate is a simple arithmetic average, or mean, of surveyed analysts' 12 earnings growth forecasts. A simple average of the growth forecasts gives equal weight 13 to all surveyed analysts' projections. It is problematic as to whether any particular 14 analyst's forecast is most representative of general market expectations. Therefore, a 15 simple average, or arithmetic mean, of analyst forecasts is a good proxy for market 16 consensus expectations. The growth rates I used in my DCF analysis are shown on 17 Exhibit No. (MPG-6).

18 Q. WHAT ARE THE RESULTS OF YOUR CONSTANT GROWTH DCF MODEL?

A. As shown on Exhibit No. (MPG-7), the constant growth DCF return for the proxy
group is 11.39%.

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

1Q.DO YOU HAVE ANY COMMENTS CONCERNING THE RESULTS OF YOUR2CONSTANT GROWTH DCF ANALYSIS?

A. Yes. The constant growth DCF return is not reasonable and represents an inflated return
for PSE at this time. The average 3-5 year growth rate for the proxy group is 6.66%.
This growth rate is far too high to be a rational estimate of the proxy group's long-term
sustainable growth. Because the current 3-5 year growth rates are too high to be
reasonable long-term sustainable growth rate estimates, the constant growth DCF model
is currently producing an inflated DCF return and should not be used in the calculation of

9 PSE's return on equity.

10Q.WHY DO YOU BELIEVE THE PROXY GROUP'S 3-5 YEAR GROWTH RATE11IS IN EXCESS OF A RATIONAL ESTIMATE OF LONG-TERM SUSTAINABLE12GROWTH?

13 The proxy group's 3-5 year growth rate exceeds the growth rate of the overall U.S. A. 14 Based on consensus economic projections, as published by Blue Chip economy. 15 Economic Indicators, the nominal 5-year and 10-year Gross Domestic Product ("GDP") growth rate estimate is 5.0% and 4.8%, respectively.^{$\frac{8}{}$} A company cannot grow, 16 indefinitely, at a faster rate than the market in which it sells its products. The U.S. 17 18 economy, or GDP, growth projection represents a ceiling, or high-end, sustainable 19 growth rate for a utility over an indefinite period of time.

20Q.WHY IS THE GDP GROWTH PROJECTION CONSIDERED A CEILING21GROWTH RATE FOR A UTILITY?

A. Utilities cannot sustain a growth rate that exceeds the growth rate of the overall economy
 indefinitely. Utilities' earnings/dividend growth is created by increased utility
 investment or rate base. Utility plant investment, in turn, is driven by service area

⁸/ Blue Chip Economic Indicators, March 10, 2008 at 15.

1 economic growth and demand for utility service. In other words, utilities invest in plant 2 to meet sales demand growth, and sales growth in turn is tied to economic growth in their service areas. The Energy Information Administration ("EIA") has observed that utility 3 4 sales growth is less than U.S. economic growth, as shown on Exhibit No. (MPG-8). 5 Utility sales growth has lagged the GDP growth. Hence, nominal GDP growth is a very 6 conservative, albeit overstated, proxy for electric utility sales growth, rate base growth, 7 and earnings growth. Therefore, GDP growth is a reasonable proxy for the highest 8 sustainable long-term growth rate of a utility.

9 10

Q. HOW HAS THE PROXY GROUP'S HISTORICAL GROWTH COMPARED TO HISTORICAL NOMINAL GDP GROWTH?

A. As shown on Exhibit No. (MPG-9), the historical growth of the proxy group's dividend is substantially lower than the nominal GDP growth. Therefore, the proxy group's 3-5 year projected growth rate estimates are considerably higher than historical growth in relation to nominal GDP growth, and are thus unreasonable.

15Q.IS THERE REASON TO BELIEVE THAT THE PROXY GROUP'S GROWTH16COULD BE HIGHER GOING FORWARD THAN IT HAS BEEN17HISTORICALLY?

A. Yes. As shown on Exhibit No. (MPG-10), the Company's payout ratio has been decreasing considerably over the last few years, and is projected to decrease from approximately 69% in 2007 down to 62% over the next 3-5 years. This reduction in the dividend payout ratio corresponds to an increase in the earnings retention ratio which fuels stronger growth because more earnings are retained to invest in utility plant and grow earnings and dividends.

1Q.IS THERE RESEARCH THAT SUPPORTS YOUR CONTENTION THAT OVER2THE LONG TERM, A COMPANY'S EARNINGS AND DIVIDENDS CANNOT3GROW AT A RATE GREATER THAN THE GROWTH OF THE U.S. GDP?

4 A. Yes. This concept is supported both in published analyst literature and in academic work.

- 5 Specifically, in a textbook entitled "Fundamentals of Financial Management," published
- 6 by Eugene Brigham and Joel F. Houston, the authors stated as follows:
- 7 The constant growth model is most appropriate for mature companies with 8 a stable history of growth and stable future expectations. Expected growth 9 rates vary somewhat among companies, but dividends for mature firms are 10 often expected to grow in the future at about the same rate as nominal 11 gross domestic product (real GDP plus inflation).^{2/}
- 12 Also, Morningstar's Stocks, Bonds, Bills and Inflation 2008 Yearbook Valuation Edition tracked dividends of the stock market in comparison to GDP growth over the 13 period 1926 through the end of $2006.^{10/}$ Based on that study, the authors found that 14 15 earnings and dividends for the market have historically grown in tandem with the overall 16 economy. It is important to note that the growth of companies included in the overall 17 market will normally be higher than that of utility companies. These non-utility 18 companies achieve higher level of growth because they retain a larger percentage of their 19 earnings and pay out a much smaller percentage of their earnings as dividends. Retaining 20 higher percentages of total earnings fuels stronger growth for these non-utility 21 companies. Since the market in general grows at the overall GDP growth rate, it is very 22 conservative to assume that utility companies could achieve this same level of sustained 23 growth without a material reduction in their dividend payout ratios. As such, using the

 ^{9/} "Fundamentals of Financial Management," Eugene F. Grigham and Joel F. Houston, Eleventh Edition 2007, Thomson South-Western, a Division of Thomson Corporation at 298.

^{10/} Stocks, Bonds, Bills and Inflation 2008 Yearbook Valuation Edition (Morningstar, Inc.) at 92-93.

- 1 GDP as a maximum sustainable growth rate is a very conservative and high-end estimate
- 2 for utility companies.

3Q.WHY DO YOU BELIEVE GROWTH RATES FOR ELECTRIC UTILITY4COMPANIES ARE PROJECTED TO BE HIGHER OVER THE NEXT53-5 YEARS?

- 6 A. Electric utility companies are in the midst of major construction programs, which are
- 7 significantly increasing their outstanding capital and net plant investment. In the fourth
- 8 quarter 2007, EEI published a stock performance assessment for electric utility stocks.
- 9 EEI stated the following concerning rate base growth:

10 Accelerating Regulated Rate Base Growth

- 11 U.S. electricity demand is growing slowly but steadily and reserve 12 margins are shrinking in many power markets nationwide. The utility 13 industry is in the early stages of a sizeable long-term capital investment 14 cycle that includes rising spending on emissions control equipment, 15 transmission and distribution upgrades and, over the longer term, a new 16 round of baseload generation. Much of this will likely be built in 17 regulated rate base.
- 18 EEI's spring 2007 study of industry capital spending based on 10-K data 19 and discussions with companies indicated that the industry is projecting 20 \$73.1 billion of capital expenditures in 2007 - a 21.1% rise from the 21 \$60.3 billion spent in 2006 and 51.1% above the \$48.4 billion in 2005. 22 Based on current projections, industry capex should reach at least \$75 23 billion in 2008 and \$75.5 billion in 2009. And Wall Street analysts forecast strong investment by the industry beyond the end of the decade. 24 The prospect of carbon regulation adds to the potential longevity of the 25 current build cycle, should carbon capture and sequestration become the 26 most economically viable way of complying with likely future carbon 27 28 limits
- 29 EEI's assessment indicates that annual capital spending will increase through
- 30 2009. After that date, the amount of capital expenditures by utilities may stay at a 31 relatively constant rate, albeit one that is significantly higher than it had been in prior
- 32 years. This elevated capital spending level may continue over a relatively long period of

time. This indicates that rate base growth will drive earnings growth over the next
 3-5 years. Afterward, the relatively high level of capital expenditures and related
 increases in rate base and earnings will slow, but stay at an historically high level, near
 the GDP growth.

5 **Q.** 6

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IS THERE A WAY OF TESTING WHETHER IT IS RATIONAL TO EXPECT THAT THE ANALYSTS' 3-5 YEAR EARNINGS GROWTH OUTLOOKS CAN BE A REASONABLE ESTIMATE OF SUSTAINABLE LONG-TERM GROWTH?

8 A. Yes. This can be tested using an internal growth rate calculation for the companies 9 included in my comparable group using Value Line's 3-5 year earnings and dividends 10 projections, and estimated earned return on equity. An internal growth rate methodology 11 estimates the sustainable growth rate based on the percentage of the utility's earnings that 12 are retained in the company and reinvested in utility plant and equipment. These 13 reinvested earnings then increase the earnings base, and will increase the earned return on equity as those additional earnings are put into service and the company is allowed to 14 15 earn its authorized return on the additional investment.

As shown on Exhibit No.___(MPG-11), the average sustainable growth rate for my proxy group using this internal growth rate model is approximately 4.5%. This sustainable growth rate could be increased slightly by reflecting the issuance of additional shares at prices above book value, but that should only modestly increase this growth rate estimate.

In comparison, using the group average growth rate of 6.66%, and a 3-5 year dividend payout ratio of 62%, would require an earned return on book equity of 13.9%. In comparison, *Value Line* is projecting a group average return on book equity of 11.0%, and 10.0% excluding Exelon. I conclude from this estimate of a sustainable growth estimate, and a book return on equity needed to support the analysts' 3-5 year growth rate estimate, as evidence that the 3-5 year earnings growth rate estimates are much higher than a reasonable estimate of long-term sustainable growth for these companies. As such, an expansion of the traditional constant growth DCF model is appropriate in order to produce a reasonable and reliable DCF return estimate in this proceeding.

Q. SINCE YOU HAVE CONCLUDED THAT THE GROWTH RATES USED IN
 YOUR CONSTANT GROWTH DCF MODEL ARE HIGHER THAN THE
 LONG-TERM SUSTAINABLE GROWTH, DO YOU BELIEVE THAT YOUR
 CONSTANT GROWTH DCF RESULT IS REASONABLE?

A. No. My constant growth DCF analysis result is too high because the growth rate used in
this study, 6.66%, is higher than the maximum sustainable growth rate of 4.8% to 5.0%.
As a result, this DCF return is not reliable.

However, my constant growth DCF is based on consensus analysts' growth rate projections, so it is a reasonable reflection of rational investment expectations over the next 3-5 years. The limitation on the constant growth DCF model is that it cannot reflect a rational expectation that a period of high/low short-term growth can be followed by a change in growth to a rate that is more reflective of long-term sustainable growth. Hence, I performed a two-stage DCF analysis to reflect this outlook of changing growth expectations.

20 TWO-STAGE DCF MODEL

21 Q. PLEASE DESCRIBE YOUR TWO-STAGE DCF MODEL.

A. The two-stage DCF growth model reflects the possibility of non-constant growth for a
 company over time. The two-stage model reflects two growth periods: (1) a short-term
 growth period, which consists of the first 5 years; and (2) a long-term growth period,
 which consists of each year starting in year six through perpetuity. For the short-term

1		growth period, I relied on the consensus analysts' growth projections described above in
2		relationship to my constant growth DCF model. For the long-term growth period, I
3		assumed each company's growth would converge on the maximum sustainable growth
4		rate for a utility company as proxied by the consensus analysts' projected growth for the
5		U.S. GDP.
6 7	Q.	WHAT STOCK PRICE AND DIVIDEND DID YOU USE IN YOUR TWO-STAGE DCF ANALYSIS?
8	А.	I relied on the same 13-week stock price, the most recent quarterly dividend payment,
9		and consensus analysts' growth rate projections discussed above in my constant growth
10		DCF model. For the long-term sustainable growth rate starting in year six, I used 4.9%,
11		the average of the consensus economists' 5-10 year projected nominal GDP growth rate
12		(5.0% to 4.8%).
13	Q.	WHAT ARE THE RESULTS OF YOUR TWO-STAGE GROWTH DCF MODEL?
14	А.	As shown on Exhibit No(MPG-12), the two-stage DCF return on equity for the proxy
15		group is 9.86%.
16	RISK	PREMIUM MODEL
17	Q.	PLEASE DESCRIBE YOUR BOND YIELD PLUS RISK PREMIUM MODEL.
18	A.	This model is based on the principle that investors require a higher return to assume
19		greater risk. Common equity investments have greater risk than bonds because bonds
20		have more security of payment in bankruptcy proceedings than common equity and the
21		coupon payments on bonds represent contractual obligations. In contrast, companies are
22		not required to pay dividends on common equity, or to guarantee returns on common
23		equity investments. Therefore, common equity securities are considered to be more risky
24		than bond securities.

1 This risk premium model is based on two estimates of an equity risk premium. 2 First, I estimated the difference between the required return on utility common equity investments and Treasury bonds. The difference between the required return on common 3 4 equity and the bond yield is the risk premium. I estimated the risk premium on an annual 5 basis for each year over the period 1986 through 2007. The common equity required returns were based on regulatory commission-authorized returns for electric utility 6 7 companies. Authorized returns are typically based on expert witnesses' estimates of the 8 contemporary investor required return.

9 The second equity risk premium method is based on the difference between 10 regulatory commission-authorized returns on common equity and contemporary 11 "A" rated utility bond yields. The 1986-2007 time period was selected because over the 12 period 1986 through 2007, public utility stocks have consistently traded at a premium to book value. This is illustrated on Exhibit No. (MPG-13), where the market to book 13 14 ratio since 1986 for the electric utility industry was consistently above 1.0. Therefore, 15 over this time period, regulatory authorized returns were sufficient to support market 16 prices that at least exceeded book value. This is an indication that regulatory authorized 17 returns on common equity supported a utility's ability to issue additional common stock, 18 without diluting existing shares. It further demonstrates that utilities were able to access 19 equity markets without a detrimental impact on current shareholders.

Based on this analysis, as shown on Exhibit No.___(MPG-14), the average indicated equity risk premium over U.S. Treasury bond yields has been 5.05%. Of the 22 observations, 16 indicated risk premiums fall in the range of 4.40% to 5.89%. Since the risk premium can vary depending upon market conditions and changing investor risk perceptions, I believe using an estimated range of risk premiums provides the best
 method to measure the current return on common equity using this methodology.

As shown on Exhibit No.__(MPG-15), the average indicated equity risk premium over contemporary Moody's utility bond yields was 3.66% over the period 1986 through 2007. The equity risk premium estimates based on this analysis primarily fall in the range of 3.03% to 4.39% over this time period.

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

9 The equity risk premium should reflect the relative market perception of risk in the utility A. 10 industry today. I have gauged investor perceptions in utility risk today on Exhibit 11 No. (MPG-16). On that exhibit, I show the yield spread between utility bonds and 12 Treasury bonds over the last 28 years. As shown on this exhibit, the 2007 utility bond yield spreads over Treasury bonds for "A" rated and "Baa" rated utility bonds are 1.23% 13 14 and 1.49%, respectively. These utility bond yield spreads over Treasury bond yields are 15 among the lowest yield spreads in the last 28 years, and are below the 28-year average "A" and "Baa" yield spreads of 1.57% and 1.93%, respectively. The current spread 16 17 between spot 30-year Treasury bonds, 4.8%, and "A" rated utility bond yields, 6.2%, is 18 1.4 percentage points, which is about the average yield spread over the last 28 years. 19 Hence, this comparison of utility bond yield spreads indicates the market perception of 20 utility risk to be about average relative to this historical time period.

21Q.HOW DID YOU ESTIMATE PSE'S COST OF COMMON EQUITY WITH THIS22RISK MODEL?

A. I added a projected long-term Treasury bond yield to my estimated equity risk premium
 over Treasury yields. *Blue Chip Financial Forecasts* projects the 30-year Treasury bond

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1		yield to be 4.9%, and a 10-year Treasury bond yield to be 4.3% . ^{11/} Using the projected
2		30-year bond yield of 4.9%, and a Treasury bond risk premium of 4.40% to 5.89%,
3		produces an estimated common equity return in the range of 9.30% to 10.79%, with a
4		midpoint estimate of 10.05%.
5		I next added my equity risk premium over utility bond yields to a current 13-week
6		average yield on "Baa" rated utility bonds for the period ending April 4, 2008 of 6.69%.
7		This current "Baa" utility bond yield is developed on Exhibit No(MPG-17). Adding
8		the utility equity risk premium of 3.03% to 4.39% to a "Baa" rated bond yield of 6.69%,
9		produces a cost of equity in the range of 9.72% to 11.08%, with a midpoint of 10.40%.
10		My risk premium analyses produce a return estimate in the range of 10.05% to
11		10.40%, with a midpoint estimate of 10.23%.
12	CAP	ITAL ASSET PRICING MODEL
13	Q.	PLEASE DESCRIBE THE CAPM.
14	А.	The CAPM method of analysis is based upon the theory that the market required rate of
15		return for a security is equal to the risk-free rate, plus a risk premium associated with the
16		specific security. This relationship between risk and return can be expressed
17		mathematically as follows:
18		Ri = Rf + Bi x (Rm - Rf) where:
19 20 21 22		Ri =Required return for stock iRf =Risk-free rateRm =Expected return for the market portfolioBi =Beta - Measure of the risk for stock
23		The stock-specific risk term in the above equation is beta. Beta represents the
24		investment risk that cannot be diversified away when the security is held in a diversified

^{11/} Blue Chip Financial Forecasts, May 1, 2008 at 2.

portfolio. When stocks are held in a diversified portfolio, firm-specific risks can be eliminated by balancing the portfolio with securities that react in the opposite direction to firm-specific risk factors (<u>e.g.</u>, business cycle, competition, product mix and production limitations).

5 The risks that cannot be eliminated when held in a diversified portfolio are nondiversifiable risks. Nondiversifiable risks are related to the market in general and are 6 7 referred to as systematic risks. Risks that can be eliminated by diversification are regarded as nonsystematic risks. In a broad sense, systematic risks are market risks, and 8 nonsystematic risks are business risks. The CAPM theory suggests that the market will 9 10 not compensate investors for assuming risks that can be diversified away. Therefore, the 11 only risk that investors will be compensated for are systematic or nondiversifiable risks. 12 The beta is a measure of the systematic or nondiversifiable risks.

13 Q. PLEASE DESCRIBE THE INPUTS TO YOUR CAPM.

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

16Q.WHAT DID YOU USE AS AN ESTIMATE OF THE MARKET RISK-FREE17RATE?

- 18 A. Blue Chip Financial Forecasts' projected 30-year Treasury bond yield is 4.9%.^{12/} The
- 19 current 30-year bond yield is 4.4%. I used Blue Chip Financial Forecasts' projected
- 20 30-year Treasury bond yield of 4.9% for my CAPM analysis.

^{12/} Blue Chip Financial Forecasts, May 1, 2008 at 2.

1Q.WHY DID YOU USE LONG-TERM TREASURY BOND YIELDS AS AN2ESTIMATE OF THE RISK-FREE RATE?

3 Treasury securities are backed by the full faith and credit of the United States A. 4 government. Therefore, long-term Treasury bonds are considered to have negligible 5 credit risk. Also, long-term Treasury bonds have an investment horizon similar to that of 6 common stock. As a result, investor-anticipated long-run inflation expectations are 7 reflected in both common stock required returns and long-term bond yields. Therefore, 8 the nominal risk-free rate (or expected inflation rate and real risk-free rate) included in a 9 long-term bond yield is a reasonable estimate of the nominal risk-free rate included in 10 common stock returns.

11 Treasury bond yields, however, do include risk premiums related to unanticipated 12 future inflation and interest rates. Therefore, a Treasury bond yield is not a risk-free rate. 13 Risk premiums related to unanticipated inflation and interest rates are systematic or 14 market risks. Consequently, for companies with betas less than 1.0, using the Treasury 15 bond yield as a proxy for the risk-free rate in the CAPM analysis can produce an 16 overstated estimate of the CAPM return.

- 17 Q. WHAT BETA DID YOU USE IN YOUR ANALYSIS?
- 18 A. As shown on Exhibit No. (MPG-18), the proxy group average *Value Line* beta
 19 estimate is 0.85.
- 20 Based on this data, I will use a beta of 0.85 for my CAPM analysis.

12

Q. DO YOU RECOMMEND A CAREFUL CONSIDERATION OF A UTILITY BETA FOR USE IN A CAPM STUDY?

A. Yes. Utility betas have been increasing over the last 5 years, as shown on Exhibit
 No.__(MPG-18), largely because electric utility stocks have outperformed the overall
 market. While this increasing beta gives the impression of increasing risk, that
 interpretation is incorrect.

- Indeed, electric utility risk factors have been decreasing as these companies revert
 to a back-to-basics investment strategy that lowers their operating risks, and they have
- 9 been divesting non-regulated businesses to reduce debt and strengthen balance sheets,
- 10 which is lowering risk. *Value Line* notes this in a recent review of the electric utility
- 11 industry. *Value Line* states as follows:
 - Better Finances

13 This decade, utilities have distanced themselves from risky unregulated business forays, including commodities trading, 14 foreign energy operations, water services and aircraft leasing. 15 Currently, Dominion Resources plans to sell its oil and gas 16 production business, *Duke* is spinning its mid-stream gas 17 operations to shareholders, Northeast Utilities is divesting its 18 merchant power generation business, and *Progress Energy* is 19 shedding power plant and natural gas assets. Such actions have 20 improved earnings performance and strengthened capital ratios. 21 Companies are targeting a nearly equal weighting of debt and 22 23 equity on their balance sheets, a goal that should be met by 2009- $2011^{\frac{13}{13}}$ 24

- Further, *Value Line* notes an increase in the common equity ratio and fixed charge coverage ratio over the last 3-5 years. These *Value Line* parameters indicate lower financial risk and stronger earnings and cash flow coverages of financial obligations. This reduces utilities' risk and limits the variability to market factors that can inhibit the
- 29 utilities' ability to meet investors' earnings and cash flow expectations.

^{13/} The Value Line Investment Survey, Electric Utility (East) Industry, December 1, 2006 at 157.

1 These risk reductions have resulted in robust stock return performance for electric 2 utility stocks, as shown on Exhibit No.__(MPG-19). As illustrated on this exhibit, 3 electric utility stocks have outperformed the market over the last 5 years. This utility 4 stock performance has contributed to an increase in betas and given the impression that 5 electric utility stock variability is comparable to the overall market, but other risk factors 6 clearly show this to be a false indication.

7

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

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

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

Morningstar's Stocks, Bonds, Bills and Inflation 2008 Yearbook publication estimates the historical arithmetic average real market return over the period 1926-2007 as 9.0%. A current consensus analysts' inflation projection, as measured by the Consumer Price Index, is 2.3%.^{14/} Using these estimates, the expected market return is 11.51%.^{15/} The market premium then is the difference between the 11.51% expected market return, and my 4.9% risk-free rate estimate, or 6.61%.

The historical estimate of the market risk premium was also estimated by
Morningstar in Stocks, Bonds, Bills and Inflation 2008 Yearbook. Over the period 1926

^{14/} Blue Chip Financial Forecasts, May 1, 2008 at 2.

 $[\]frac{15}{1} \left\{ \left[(1+0.090) * (1+0.023) \right] - 1 \right] \right\} * 100.$

1	through 2007, Morningstar's study estimated that the arithmetic average of the achieved
2	total return on the S&P 500 was 12.30%, and the total return on long-term Treasury
3	bonds was 5.80%. The indicated equity risk premium is 6.50% (12.30% - 5.80% =
4	6.50%).

5 Q. WHAT ARE THE RESULTS OF YOUR CAPM ANALYSIS?

- A. As shown on Exhibit No. (MPG-20), based on my historical and prospective market
 risk premium of 6.50% and 6.61%, respectively, a beta of 0.85 and a risk-free rate of
 4.9%, my analysis produces a return range of 10.43% to 10.52%, with a midpoint of
- 9 10.47%.

10 RETURN ON EQUITY SUMMARY

11Q.BASED ON THE RESULTS OF YOUR RATE OF RETURN ON COMMON12EQUITY ANALYSES DESCRIBED ABOVE, WHAT RETURN ON COMMON13EQUITY DO YOU RECOMMEND FOR PSE?

14 A. Based on my analyses, I estimate PSE's current market cost of equity to be 10.12%.

TABLE 2	
Return on Common Equit	y Summary
Description	Results
Two-Stage Growth DCF Risk Premium CAPM	9.89% 10.23% 10.47%

15	My recommended return on equity of 10.12% is at the midpoint of my estimated
16	return on equity range for PSE of 9.89% to 10.35%. The high end of my estimated range
17	of 10.35% is based on the average of my CAPM, 10.47%, and my risk premium, 10.23%

((10.47% +10.23%)/2). The low end of my estimated range is based on my two-stage
 growth DCF analysis.

3 FINANCIAL INTEGRITY

4Q.WILL YOUR RECOMMENDED OVERALL RATE OF RETURN SUPPORT AN5INVESTMENT GRADE BOND RATING FOR PSE?

A. Yes. I have reached this conclusion by comparing the key credit rating financial ratios
for PSE at its proposed capital structure, and my return on equity to S&P's benchmark
financial ratios using S&P's new credit metric ranges. In addition, I compared PSE's key
credit financial ratios to S&P benchmark financial ratios and to the old S&P credit metric
ranges for an "A" rated utility and "BBB" rated utility with a business profile score
("BPS") of '4,' PSE's S&P rating under S&P's old credit metric benchmarks.

12Q.WHY ARE YOU COMPARING YOUR CREDIT METRIC CALCULATIONS TO13S&P'S NEW AND OLD CREDIT METRIC GUIDELINES?

14 S&P's new credit metrics are not as transparent and do not clearly identify utility-specific A. 15 credit metric guidance ranges based on S&P business risk assessment. Specifically, S&P 16 has not published a range, that I am aware of, where it sets out specific credit metric 17 ranges for a utility with an "Aggressive" financial rating, and a business rating score of 18 "Strong," PSE's current rating. However, S&P has published guidelines which appear to 19 be generally reflective of credit metrics at various credit rating levels. In order to more 20 clearly identify credit metric ranges that are appropriate to support PSE's credit ratings, I will use both S&P's old and new credit metric benchmarks. 21

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

A. S&P evaluates a utility's credit rating based on an assessment of its financial and
business risks. A combination of financial and business risks equates to the overall

assessment of PSE's total credit risk exposure. S&P publishes a matrix of financial ratios
 that defines the level of financial risk as a function of the level of business risk.

S&P publishes ranges for three primary financial ratios that it uses as guidance in
its credit review for utility companies. The three primary financial ratio benchmarks it
relies on in its credit rating process include: (1) funds from operations ("FFO") to debt
interest expense, (2) FFO to total debt, and (3) total debt to total capital.

Q. HOW DID YOU APPLY S&P'S FINANCIAL RATIOS TO TEST THE REASON 8 ABLENESS OF YOUR RATE OF RETURN RECOMMENDATIONS?

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

16 Q. PLEASE DESCRIBE THE RESULTS OF THIS CREDIT METRIC ANALYSIS 17 FOR PSE.

- 18 A. The S&P financial metric calculations for PSE are developed on Exhibit
 19 No. (MPG-21).
- As shown on Exhibit No.__(MPG-21), page 1, columns 1 and 3, based on an equity return of 10.12%, PSE will be provided an opportunity to produce an FFO to debt interest expense of 4.0x. This FFO to interest coverage ratio is within S&P's old

Michael P. Gorman Direct Testimony Docket Nos. UE-072300/UG-072301 benchmark ratio guideline of 4.2x to $3.5x^{16/}$ for an "A" rated utility company with a business profile score of '4,' and is slightly above (stronger than) S&P's new guideline range of 2.5x to $3.5x^{17/}$ This ratio supports an improvement of PSE's "BBB" bond rating to "A."

5 PSE's retail operations FFO to total debt coverage at a 10.12% equity return 6 would be 23%, which is within S&P's old credit metric guideline range of 20% to 28% 7 for an "A" bond rating and within the new metric guideline range of 10% to 30%. The 8 FFO/total debt ratio will support an "A" rated investment grade bond rating, an 9 improvement to PSE's current bond rating.

- Finally, PSE's total debt ratio to total capital is 58%. This is at about the midpoint of S&P's "BBB" rated utility old guideline range of 52% to 62%, and within the new guideline range of 45% to 60%. This total debt ratio will support a "BBB"
- 13 investment grade bond rating.
- 14 At PSE's proposed capital structure and my return on equity, PSE's financial 15 credit metrics are supportive of a strong "BBB" utility bond rating.
- 16 **RESPONSE TO PSE WITNESS DR. ROGER MORIN**

17 Q. WHAT RATE OF RETURN ON COMMON EQUITY IS PSE REQUESTING IN 18 THIS PROCEEDING?

- A. PSE is requesting a return on common equity of 10.8%. This return on common equity is
 at the low end of the range of 10.8% to 11.2% supported by PSE witness Dr. Roger
- 21 Morin.

Standard & Poor's: New Business Profile Scores Assigned to U.S. Utilities and Power Companies;
 Financial Guidelines Revised, June 2, 2004.

Standard & Poor's: U.S. Utilities Rating Analysis Now Portrayed in the S&P Corporate Ratings Matrix; November 30, 2007.

1Q.PLEASE DESCRIBE HOW DR. MORIN DEVELOPED HIS RETURN ON2EQUITY RANGE FOR PSE.

3	А.	Dr. Morin employed a capital asset pricing model and empirical capital asset pricing
4		model, two risk premium studies, and discounted cash flow studies in support of his
5		return on equity for PSE. Dr. Morin employed these models to three proxy groups
6		including: (1) PSE parent company; (2) a group of investment grade integrated utility
7		companies; and (3) the Moody's Electric Utility Index.
8		Dr. Morin's estimated return on equity for PSE is shown below in Table 3 under

- 9 column 1. Under column 2, I show adjustments to Dr. Morin's estimated return for PSE.
- 10 These adjustments are described in more detail below.

TABLE 3		
Summary of Dr. Morin's ROE Estimate	es	
Description	Result	Adjusted Result
САРМ	(1) 11.8%	(2) 10.25%
ECAPM	12.0% 11 0%	Reject
Average CALM	11.770	10,23 /0
Historical Risk Premium Electric	10.9%	10.4%
Allowed Risk Premium	10.6%	10.4%
Average Risk Premium	10.8%	10.4%
DCF Puget (Value Line Growth)	10.7%	Reject
DCF Puget (Zacks Growth)	10.2%	Reject
DCF Vertically Integrated Utilities (Value Line Growth)	10.1%	9.54%
DCF Vertically Integrated Utilities (Zacks Growth)	11.5%	9.78%
DCF Moody's Electric Utilities (<i>Value Line</i> Growth) 10.8%		9.44%
DCF Moody's Electric Utilities (Zacks Growth) 11.3%		9.51%
Average DCF	10.8%	9.57%
Source: Exhibit No (RAM-1T) at 57.		

1		As described in detail below, Dr. Morin's ROE estimates should be adjusted as
2		shown in Column 2 of Table 3. Based on these adjustments, Dr. Morin's return on equity
3		estimates support a return on equity for PSE in the range of 9.6% to 10.4%. Therefore,
4		my recommended return on equity of 10.12% represents a reasonable estimate of fair
5		return on equity for PSE.
6 7 8	Q.	IS DR. MORIN'S RECOMMENDED RETURN ON EQUITY OF 10.8% FOR HIS PROXY GROUP SUPPORTED BY REASONABLE APPLICATIONS OF FINANCIAL MODELS?

9 A. No. Dr. Morin's recommended return of 10.8% is overstated, and his analyses overstate

10 a fair return due to his use of inappropriate data and/or adjustments.

1

Q. PLEASE DESCRIBE DR. MORIN'S CAPM ANALYSIS.

A. Dr. Morin used a risk-free rate of 5.0%. This risk-free rate is based on 30-year Treasury
bond yield projected by *Value Line* in September 2007. He used a market risk premium
of 7.1%, and a beta of 0.92. With this data, Dr. Morin derived a CAPM estimate of
11.5%. He then adds 0.3% to his CAPM return estimate for flotation costs, to produce a
an estimate of 11.8%.^{18/}

7

Q. WHAT ISSUES DO YOU TAKE WITH DR. MORIN'S CAPM ANALYSIS?

- 8 A. Dr. Morin's CAPM analysis return estimate of 11.8% is overstated and unreasonable, due
 9 to his use of an unreasonably high market risk premium of 7.1% and a beta of 0.92.
- 10 As set forth below, a more reasonable estimate of the market risk premium and 11 utility beta, and an updated risk-free rate would reduce Dr. Morin's CAPM return 12 estimate down to 10.5% from 11.8%, excluding flotation costs.

As set forth below, Dr. Morin's proposed flotation cost adjustment is inappropriate and should be rejected. This adjustment should be rejected because it is not a known and measurable PSE cost, and it is, therefore, not appropriate for setting regulated utility rates.

17 Q. WHY IS DR. MORIN'S CAPM ANALYSIS INFLATED DUE TO HIS MARKET 18 RISK PREMIUM ESTIMATE?

A. Dr. Morin used a 7.1% market risk premium. Dr. Morin's market risk premium estimate
 is a high-end estimate and does not reflect a balanced market risk premium study. Using
 multiple reasonable estimates of market risk premiums would indicate that a market risk
 premium falls somewhere in the range of 6.2% to 7.1%.

<u>18/</u> Exhibit No. ___(RAM-1T) at 31.

1	I base this conclusion on several sources including many of those relied on by
2	Dr. Morin. First, Dr. Morin's reliance on Morningstar data for a market risk premium of
3	7.1% only considers Morningstar's highest market risk premium estimate. This 7.1%
4	market risk premium is based on the difference between the total market return on
5	common stocks (S&P 500) less the income return on Treasury bond investments.
6	However, Morningstar makes various estimates of the market risk premium with this
7	same methodology. For example, Morningstar found that if the New York Stock
8	Exchange (the "NYSE") was used as the market index rather than the S&P 500, that the
9	market risk premium would be 6.8% and not 7.1%. Further, if only the two deciles of the
10	largest companies included in the NYSE were considered, the market risk premium
11	would be $6.35\%.^{19/}$
12	Also, Morningstar found that the 7.1% market risk premium based on the S&P
13	500 was impacted by an abnormal expansion of price-to-earnings ("P/E") ratios relative
14	to earnings and dividend growth during the period 1980 through 2001. Morningstar
15	believes this abnormal P/E expansion is not sustainable. Therefore, Morningstar
16	proposed an adjustment to this market risk premium estimate to normalize the growth in
17	the P/E ratio to be more in line with the growth in dividends and earnings. Based on this
18	alternative methodology, Morningstar published a long-horizon supply-side market risk
19	premium of $6.2\%.^{\frac{20}{2}}$
•	

20

21

Thus, based on Morningstar data, the market risk premium falls somewhere in the range of 6.2% to 7.1%.

Morningstar observes that the S&P 500 and the NYSE Decile 1-2 are both large capitalization benchmarks. *Ibbotson SBBI 2008 Valuation Yearbook* (Morningstar, Inc.) at 72 and 74.
 Id. at 02.08

<u>Id.</u> at 92-98.

1Q.DO YOU TAKE ISSUE WITH THE DCF DERIVED MARKET RISK PREMIUM2ESTIMATED BY DR. MORIN?

3 Yes. Dr. Morin's prospective market risk premium estimate is based on a DCF return of A. 4 12.18% less the risk-free rate, 5.0%, producing a market risk premium of 7.18%. The 5 concern I have with Dr. Morin's DCF derived market risk premium is the growth rate 6 used in his market DCF return estimate. As part of Dr. Morin's DCF return estimate of 7 12.18%, he used a growth rate of 10.18%, along with a dividend yield of 1.62%. This 8 growth rate of 10.18% is not sustainable in the long term. Therefore, his DCF return on 9 the market is flawed and not reliable. The growth rate in the overall market cannot 10 sustain a level significantly higher than the U.S. GDP over a prolonged period of time. 11 Just like utility stocks, companies operating in the general marketplace must compete for 12 customers in the economies in which they provide their goods and services. It is simply not rational nor reasonable to expect that the growth rates of these companies can 13 14 significantly exceed the growth in the economy in which they operate over a prolonged 15 period of time. The constant growth version of the DCF model applied to the market is 16 the same as that applied to utility stocks. The growth rate must be a reasonable estimate 17 of long-term sustainable growth; otherwise, it will overstate a fair DCF return estimate.

18Q.IS THERE ANY EVIDENCE THAT THE GROWTH IN EARNINGS AND19DIVIDENDS OF THE S&P 500 TRACK THAT OF THE U.S. GDP?

20 A. Yes. Morningstar found that the dividends and earnings of the S&P 500 generally grew 21 in tandem with the nominal GDP.^{21/} Projections of nominal GDP are in the 5% area over 22 the next 5-10 years. Hence, Dr. Morin's DCF derived return on the market using a

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<u>21/</u> <u>Id.</u> at 92.

1		growth rate of more than twice the nominal GDP resulted in a DCF return that is inflated
2		and unreliable. Using an inflated DCF return inflated his market risk premium.
3 4	Q.	WHAT DO YOU CONCLUDE BASED ON YOUR ASSESSMENT OF DR. MORIN'S MARKET RISK PREMIUM STUDY?
5	А.	I believe Dr. Morin's use of the market risk premium of 7.1% reflects the high end of
6		reasonable market risk premium studies. Using Morningstar data, the range of reasonable
7		market risk premiums is somewhere in the range of 6.2% to 7.1%. The midpoint of that
8		range is 6.65%.
9 10	Q.	DO YOU BELIEVE THAT THE BETA OF 0.92 USED BY DR. MORIN IN HIS CAPM STUDY IS REASONABLE?
11	А.	No. That beta is derived only from the integrated utility companies included in
12		Dr. Morin's analysis on his Exhibit No (RAM-3). Dr. Morin also stated a beta of
13		0.94 for his Western utility group and a beta of 0.92 for his Moody's Electric Utility
14		Index group. $\frac{22}{}$
15		Dr. Morin's beta reflected information as of December 2007. Betas at that time
16		were at abnormally high levels relative to the last 5 years. As shown on Exhibit
17		No(MPG-18), utility betas have been consistently increasing over time largely as a
18		result of very strong stock performance over the last 5 years - the period over which
19		betas are measured. The stock performance has given the false impression that utility
20		risk is increasing when in fact it is actually decreasing as a result of utilities shedding
21		higher operating risk non-regulated business activities and focusing more on the core
22		competency of operating regulated utility operations. Utility stock prices have slowed

22/ Exhibit No. (RAM-3) through Exhibit No. (RAM-6).

2		update of Dr. Morin's betas for each of his proxy groups.
3		I have updated Dr. Morin's beta estimates for all three of his proxy groups shown
4		on Exhibit No(MPG-22). As shown on this exhibit, the betas previously estimated
5		by Dr. Morin of 0.92 have now fallen down to an average beta of 0.82. This updated beta
6		is more reasonable because it reflects more of the low-risk characteristics of regulated
7		utility betas, and is a more current assessment of the operating risk and beta estimates for
8		utility companies.
9 10	Q.	HOW WOULD DR. MORIN'S CAPM STUDY BE IMPACTED IF MORE REASONABLE DATA ARE USED?
11	А.	Using an updated beta of 0.82, a market risk premium of 6.65%, which is the midpoint of
12		the range of market risk premiums estimated by Morningstar, and an updated risk-free
13		rate of 4.8%, would indicate a CAPM return estimate of 10.25%.
14 15	Q.	PLEASE DESCRIBE DR. MORIN'S EMPIRICAL CAPM ("ECAPM") ANALYSIS.
16	А.	The ECAPM analysis adds two weighted risk premiums to a risk-free rate: a 75%
17		weighted risk premium based on a 0.92 utility beta, and a 25% weighted risk premium
18		based on a beta equal to the overall market beta of 1.0. The theory of the ECAPM is that
19		a beta of less than 1.0 will increase toward the market beta of 1.0 over time, which is
20		necessary because the risk of securities will be increasing over time.
21	Q.	WHAT ISSUES DO YOU TAKE WITH DR. MORIN'S ECAPM ANALYSIS?
22	А.	The ECAPM analysis should be rejected. The practical result of Dr. Morin's ECAPM is
23		that the CAPM return is based on a beta estimate of $0.94, \frac{23}{}$ instead of the actual Value

down, and betas are now retreating to more normalized levels. This is observable by an

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<u>23</u>/ Weighted at 75% utility proxy beta, plus the market beta of 1.0 weighted at 25%.

1		Line utility beta of 0.92. Indeed, the ECAPM analysis significantly overstates a utility
2		company-specific risk premium for use in a risk premium analysis. This is particularly
3		inappropriate since Dr. Morin relied on a beta estimate that was already significantly
4		overstated for low-risk regulated utility operations.
5	HIST	FORICAL RISK PREMIUM
6	Q.	PLEASE DESCRIBE DR. MORIN'S HISTORICAL RISK PREMIUM.
7	A.	Dr. Morin estimates the actual achieved return on electric utility stocks relative to that of
8		long-term Treasury bond securities over the period 1931 through end of year 2005. This
9		produced an achieved return on electric utility stocks above the achieved return on
10		Treasury bonds of 5.6% . ^{24/}
11		Dr. Morin then adds the estimated electric equity risk premium of 5.6% to his
12		projected yield on long-term Treasury bonds of 5.0%, to arrive at a risk premium
13		estimated return of 10.6%. Finally, he increased these results by 30 basis points to
14		include a flotation cost adder that produce a risk premium return of 10.9% . ^{25/}
15	Q.	WHAT ISSUE DO YOU TAKE WITH DR. MORIN'S RISK PREMIUM?
16	A.	Dr. Morin's achieved return on utility stocks, compared to Treasury securities, should be
17		given little weight in this proceeding for several reasons. First, Dr. Morin's analysis has
18		not been updated for the last two years of data, and it therefore skews the results of this
19		historical achieved return study. Dr. Morin's study was concluded in 2005. However,
20		excluding data from 2006 and 2007 likely has an impact on his study. Failing to update
21		this study diminishes the unbiased nature of the analysis and provides Dr. Morin a means
22		of misrepresenting this historical achieved return estimate. Excluding a few years from
	24	

 $[\]underbrace{\frac{24}{25}}_{25}$ Exhibit No. (RAM-7).

 $[\]underline{25}$ Exhibit No. (RAM-1T) at 36.

the analysis can make a difference. Hence, eliminating relevant recent information can skew the results in a meaningful way, as Dr. Morin has done.

Second, the achieved return on Treasury securities versus utility securities has been impacted significantly by the dramatic decrease in interest rates over the last 20 years. Hence, the achieved return on these securities is not as much an assessment of consistent or varying risk differentials and required return, as it is an assessment of the impact that declining interest rates and reduced inflation expectations have on stock versus bond investments.

9 Finally, the estimated risk premium from this methodology is sensitive to the 10 annual time period selected. Dr. Morin has used December to December as an annual time period. Had he used different months, for example July through July, his results 11 12 may have been very different. More thorough analyses, such as that performed by Morningstar, consider annual holding periods that can take place throughout the year. 13 14 That is, it considers each holding period for each month in the year. Dr. Morin's 15 estimated equity risk premium may be higher than average for 12-month holding periods simply by using end-of-year data. Hence, his analysis of an annual holding period's 16 achieved return is incomplete because it does not reflect the total breadth of possible 17 18 12-month holding periods for investments in utility and Treasury securities.

19Q.HOW WOULD DR. MORIN'S RISK PREMIUM ANALYSES CHANGE USING20MORE RECENT INFORMATION?

A. While I take issue with the method of development, just relying on a risk premium over
Treasury bonds of 5.6%, including the current projected Treasury bond yield of 4.8%,
would indicate a return on equity of 10.4%. For the reasons set forth below, I reject the
inclusion of a flotation cost adjustment in this case because Dr. Morin has failed to

Michael P. Gorman Direct Testimony Docket Nos. UE-072300/UG-072301

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Exhibit No.___(MPG-1T) Page 38 1

identify PSE-specific costs that are appropriate for including in its rate of return in this

2 proceeding.

3 ALLOWED RISK PREMIUM

4Q.PLEASE DESCRIBE DR. MORIN'S ALLOWED RISK PREMIUM ON5ELECTRIC UTILITIES.

- A. Dr. Morin estimates an equity risk premium by subtracting regulatory commission
 authorized returns on equity for U.S. electric utilities from the contemporary Treasury
 bond yield. He estimates the average ROE spread of authorized returns on equities over
 long-term Treasury yields to be 5.6% during the period 1998 through 2007.
- 10 Given the current Treasury bond yield of 5.0% and the risk premium of 5.6% 11 produced an ROE of 10.6%. Dr. Morin did not adjust his ROE estimate for flotation 12 costs.
- 13Q.PLEASE DESCRIBE THE ISSUES YOU TAKE WITH DR. MORIN'S14ALLOWED RISK PREMIUM.
- A. The only issue I have with Dr. Morin's allowed risk premium is the fact that he added a
 long-term Treasury bond yield that is outdated. Adding the most recent projected longterm Treasury yield of 4.8% to his risk premium of 5.6% will reduce Dr. Morin's return
 on equity estimate for PSE from 10.6% to 10.4%.

19 DCF ANALYSES

20 Q. PLEASE DESCRIBE DR. MORIN'S DCF ANALYSES.

A. Dr. Morin performed a constant growth DCF analysis on: 1) Puget Energy (PSE's parent company); 2) a group of integrated electric utilities; and 3) a group of the Moody's Electric Utilities. Dr. Morin constructed two DCF analyses for each of the utility groups

1		and Puget Energy using an analyst consensus growth rate projection from Zacks for one
2		DCF analysis and a second DCF analysis using Value Line's projected growth rate.
3		As shown on Exhibit No (RAM-9) and Exhibit No (RAM-14) through
4		Exhibit No (RAM-17), he relied on growth rate estimates in the range of 5.5% to
5		6.9% from both Value Line and Zacks to produce a DCF cost of equity in the range of
6		9.9% to 11.2%. He then added a 20-30 basis point flotation cost adjustment to arrive at
7		adjusted returns on equity in the range of 10.1% to 11.5%, with a midpoint of 10.8%.
8 9	Q.	PLEASE DESCRIBE THE ISSUES YOU TAKE WITH DR. MORIN'S DCF ANALYSES.
10	A.	I have three major issues with Dr. Morin's DCF model. First, Dr. Morin uses Value Line
11		growth rate estimates that are provided by a single analyst. Second, Dr. Morin's DCF on
12		a single company (Puget Energy) distorts the fair return on equity for PSE. Finally, he
13		uses growth rate estimates that are not sustainable in the long run.
14 15	Q.	WHY IS IT UNREASONABLE TO RELY ON GROWTH RATE ESTIMATES PROVIDED BY VALUE LINE?
16	А.	Value Line provides projected 3-5 year growth rates estimated by a single security
17		analyst. As discussed above, using a source that contains consensus analysts' growth rate
18		projections supplied by many analysts better reflects the market's growth expectations of
19		the underlying stock. Hence, Dr. Morin's DCF studies, based on his Zacks growth rate
20		projections, are superior to those produced from his Value Line growth rate projections.
21		Therefore, I recommend that the Commission give primary weight to Dr. Morin's
22		DCF return estimates based on his Zacks growth rate models, excluding his flotation cost
23		adjustment.

1Q.YOU STATED THAT DR. MORIN'S DCF MODEL ON A SINGLE COMPANY2DISTORTS THE FAIR RETURN FOR PSE. PLEASE EXPLAIN.

A. The DCF return for Puget Energy does not contain cross-sectional estimates of market
 valuations and it might be subject to abnormal events that will impact the Company's
 valuation. Indeed, Puget Energy is currently in the process of being acquired by an
 investor consortium. Further, using the average growth rate of several companies in a
 DCF analysis provides more accurate results because it is subject to smaller measurement
 error.

9 Hence, using Dr. Morin's DCF return estimates developed in his Exhibit
10 No.__(RAM-15) and Exhibit No.__(RAM-17) will produce the most reliable results,
11 adjusting for more reasonable growth rate estimates and excluding his flotation cost
12 adjustment.

Q. WHY ARE THE GROWTH RATE ESTIMATES USED IN DR. MORIN'S DCF STUDY NOT REASONABLE?

15 Dr. Morin average growth rates from Value Line and Zacks fall in the range of 5.5% to A. 16 6.9%. These growth rate estimates exceed the projected GDP growth rate of 5.0% and 17 4.8% for the next 5 and 10 years, respectively. As explained in detail above, the GDP 18 growth rate can be used as a proxy for long-term sustainable growth rate because it 19 represents the maximum growth rate of the U.S. economy. The growth rate estimates 20 used in Dr. Morin's DCF study exceed the projected GDP growth rate of 4.9% (the average of 5.0% and 4.8%) by 60-200 basis points, and inflate the DCF return on equity 21 22 results for PSE.

1Q.CAN DR. MORIN'S DCF MODEL BE MODIFIED TO REFLECT MORE22REASONABLE GROWTH RATE ESTIMATES?

- 3 A. Yes. In order to reflect the current industry environment of abnormal capital investments
- 4 that increase utility rate base and impacts analysts' growth rate projections, Dr. Morin's
- 5 constant growth DCF model can be modified into a two-stage DCF model that will reflect
- 6 a more reasonable growth rate in the second stage.

Q. DID DR. MORIN RECOGNIZE THE PROBLEMS WITH THE CONSTANT DCF MODEL IN THE CURRENT UTILITY INDUSTRY ENVIRONMENT?

- 9 A. Yes. At page 42 of Exhibit No. (RAM-1T), Dr. Morin emphasized the fact that the
- 10 constant DCF is applicable for mature industries with stable growth rate (utilities in the
- 11 past). However, considering the current dynamic industry, this approach is not
- 12 reasonable. Specifically, he states:
- For companies in a mature industry, such as the electric utility industry had been until recent years, it may be reasonable to assume a constant growth rate. For companies in a more dynamic evolving industry, such as the electric utility business today, this assumption may not be reasonable.^{26/}

18 Q. HOW WILL DR. MORIN'S DCF RESULT CHANGE IF WE APPLY THE TWO 19 STAGE DCF MODEL?

- 20 A. Setting aside the issues I have with Dr. Morin's use of the Value Line growth estimates, I
- 21 have applied the two-stage DCF model to his return estimates developed on Exhibit No.
- 22 (RAM-14) through Exhibit No. (RAM-17). Excluding Dr. Morin's flotation cost
- adjustment, the average DCF return will be reduced from 10.8% to 9.57% as shown on
- 24 Exhibit No. __(MPG-23).

<u>26/</u> Exhibit No. ___ (RAM-1T) at 42, lines 6-10.

1 FLOTATION COST ADJUSTMENT

2 Q. IS DR. MORIN'S PROPOSED FLOTATION COST ADJUSTMENT REASON-3 ABLE?

A. No. Flotation cost adjustments are a legitimate cost of issuing stock to the public. Actual
book costs, however, should be used for this adjustment so the Commission Staff, and
other interested intervenors, can audit the Company's actual common stock flotation
expenses for reasonableness and amount. Any adjustment to PSE's cost of service for
flotation cost expenses should be based only on known and measurable common stock
flotation expenses.

10 In significant contrast, Dr. Morin's proposed flotation cost adjustment is not 11 based on PSE's known, measurable, prudent, and reasonable common stock flotation 12 costs. Rather, it is based on a general study of market flotation costs that may or may not have any relationship to PSE's actual cost of issuing stock to the public. Indeed, 13 14 Dr. Morin acknowledges that PSE is not a publicly traded company, and therefore it is 15 unclear what, if any, PSE's common stock flotation cost expenses might be. Further, 16 while PSE receives its incremental equity capital from its parent company, it is not clear 17 whether that equity capital is being funded by public common stock issuances, debt 18 issuances, or internally generated funds. Hence, it simply is not known and measurable 19 what, if any, common stock flotation costs should be properly allocated to PSE and 20 should be reflected in its cost of service in this proceeding. For these reasons, 21 Dr. Morin's proposed flotation cost adjustment is not based on known and measurable 22 expenses and should be rejected.

23 Q. DOES THIS CONCLUDE YOUR DIRECT TESTIMONY?

24 A. Yes.

BEFORE THE

WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION

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WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION,

Complainant,

v.

PUGET SOUND ENERGY, INC.

Respondent.

Docket Nos. UE-072300/ UG-072301 (consolidated)

EXHIBIT NO.__(MPG-2)

QUALIFICATIONS OF MICHAEL P. GORMAN

May 30, 2008

1		Qualifications of Michael P. Gorman
2	Q.	PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.
3	A.	Michael P. Gorman. My business mailing address is P. O. Box 412000, 1215 Fern Ridge
4		Parkway, Suite 208, St. Louis, Missouri 63141-2000.
5	Q.	PLEASE STATE YOUR OCCUPATION.
6	А.	I am a consultant in the field of public utility regulation and a managing principal with
7		Brubaker & Associates, Inc., energy, economic and regulatory consultants.
8 9	Q.	PLEASE SUMMARIZE YOUR EDUCATIONAL BACKGROUND AND WORK EXPERIENCE.
10	А.	In 1983 I received a Bachelor of Science Degree in Electrical Engineering from Southern
11		Illinois University, and in 1986, I received a Master's Degree in Business Administration
12		with a concentration in Finance from the University of Illinois at Springfield. I have also
13		completed several graduate level economics courses.
14		In August of 1983, I accepted an analyst position with the Illinois Commerce
15		Commission ("ICC"). In this position, I performed a variety of analyses for both formal
16		and informal investigations before the ICC, including: marginal cost of energy, central
17		dispatch, avoided cost of energy, annual system production costs, and working capital. In
18		October of 1986, I was promoted to the position of Senior Analyst. In this position, I
19		assumed the additional responsibilities of technical leader on projects, and my areas of
20		responsibility were expanded to include utility financial modeling and financial analyses.
21		In 1987, I was promoted to Director of the Financial Analysis Department. In this
22		position, I was responsible for all financial analyses conducted by the staff. Among other
23		things, I conducted analyses and sponsored testimony before the ICC on rate of return,
24		financial integrity, financial modeling and related issues. I also supervised the

development of all Staff analyses and testimony on these same issues. In addition, I
 supervised the Staff's review and recommendations to the Commission concerning utility
 plans to issue debt and equity securities.

In August of 1989, I accepted a position with Merrill-Lynch as a financial consultant. After receiving all required securities licenses, I worked with individual investors and small businesses in evaluating and selecting investments suitable to their requirements.

8 In September of 1990, I accepted a position with Drazen-Brubaker & Associates, Inc. In April 1995 the firm of Brubaker & Associates, Inc. ("BAI") was formed. It 9 10 includes most of the former DBA principals and Staff. Since 1990, I have performed 11 various analyses and sponsored testimony on cost of capital, cost/benefits of utility 12 mergers and acquisitions, utility reorganizations, level of operating expenses and rate 13 base, cost of service studies, and analyses relating industrial jobs and economic develop-14 ment. I also participated in a study used to revise the financial policy for the municipal utility in Kansas City, Kansas. 15

16 At BAI, I also have extensive experience working with large energy users to distribute and critically evaluate responses to requests for proposals ("RFPs") for electric, 17 18 steam, and gas energy supply from competitive energy suppliers. These analyses include 19 the evaluation of gas supply and delivery charges, cogeneration and/or combined cycle 20 unit feasibility studies, and the evaluation of third-party asset/supply management 21 agreements. I have also analyzed commodity pricing indices and forward pricing 22 methods for third party supply agreements, and have also conducted regional electric 23 market price forecasts.

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In addition to our main office in St. Louis, the firm also has branch offices in Phoenix, Arizona and Corpus Christi, Texas.

3 Q. HAVE YOU EVER TESTIFIED BEFORE A REGULATORY BODY?

4 A. Yes. I have sponsored testimony on cost of capital, revenue requirements, cost of service 5 and other issues before the Federal Energy Regulatory Commission and numerous state regulatory commissions including: Arkansas, Arizona, California, Colorado, Delaware, 6 7 Florida, Georgia, Idaho, Illinois, Indiana, Iowa, Kansas, Louisiana, Michigan, Missouri, 8 Montana, New Jersey, New Mexico, New York, North Carolina, Oklahoma, Oregon, South Carolina, Tennessee, Texas, Utah, Vermont, Virginia, Washington, West Virginia, 9 10 Wisconsin, Wyoming, and before the provincial regulatory boards in Alberta and Nova 11 Scotia, Canada. I have also sponsored testimony before the Board of Public Utilities in 12 Kansas City, Kansas; presented rate setting position reports to the regulatory board of the 13 municipal utility in Austin, Texas, and Salt River Project, Arizona, on behalf of industrial 14 customers; and negotiated rate disputes for industrial customers of the Municipal Electric 15 Authority of Georgia in the LaGrange, Georgia district.

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Q.

PLEASE DESCRIBE ANY PROFESSIONAL REGISTRATIONS OR ORGANI-ZATIONS TO WHICH YOU BELONG.

A. I earned the designation of Chartered Financial Analyst ("CFA") from the CFA Institute.
The CFA charter was awarded after successfully completing three examinations which
covered the subject areas of financial accounting, economics, fixed income and equity
valuation and professional and ethical conduct. I am a member of the CFA Institute's
Financial Analyst Society.