

EXHIBIT NO. ___(MJV-2)
DOCKET NO. UE-121697/UG-121705
DOCKET NO. UE-130137/UG-130138
WITNESS: DR. MICHAEL J. VILBERT

**BEFORE THE
WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION**

WASHINGTON UTILITIES AND
TRANSPORTATION COMMISSION,

Complainant,

v.

PUGET SOUND ENERGY, INC.,

Respondent.

DOCKET NOS. UE-121697
and UG-121705 (*consolidated*)

WASHINGTON UTILITIES AND
TRANSPORTATION COMMISSION,

Complainant,

v.

PUGET SOUND ENERGY, INC.,

Respondent.

DOCKET NOS. UE-130137
and UG-130138 (*consolidated*)

**FIRST EXHIBIT (PROFESSIONAL QUALIFICATIONS) TO THE
PREFILED DIRECT TESTIMONY OF
DR. MICHAEL J. VILBERT
ON BEHALF OF PUGET SOUND ENERGY, INC.**

NOVEMBER 5, 2014

PUGET SOUND ENERGY, INC.

**FIRST EXHIBIT (PROFESSIONAL QUALIFICATIONS) TO THE
PREFILED DIRECT TESTIMONY OF DR. MICHAEL J. VILBERT**

Q. Please state your name, business address, and occupation.

A. My name is Dr. Michael J. Vilbert. My business address is The Brattle Group,
201 Mission Street, Suite 2800, San Francisco, CA 94105.

Q. By whom are you employed and in what capacity?

A. I am Office Director of The Brattle Group's San Francisco office and have twenty
years of experience as an economic consultant.

Q. Please summarize your academic and business career.

A. I have received a Ph.D. in Financial Economics from the Wharton School of the
University of Pennsylvania, an MBA from the University of Utah, an M.S. from
the Fletcher School of Law and Diplomacy, Tufts University, and a B.S. degree
from the United States Air Force Academy. I joined The Brattle Group in 1994
after a career as an Air Force officer, where I served as a fighter pilot, intelligence
officer, and professor of finance at the Air Force Academy.

I regularly serve as an expert in cost of capital, financial planning and valuation
and have advised clients on these matters in the context of a wide variety of
investment and regulatory decisions. In the area of regulatory economics, I have
testified or submitted testimony on the cost of capital for regulated companies in
the water, electric, natural gas and petroleum industries in the U.S. and Canada.

My testimony has addressed the effect of regulatory policies such as decoupling or must-run generation on a regulated company's cost of capital and the appropriate way to estimate the cost of capital for companies organized as Master Limited Partnerships. I have analyzed issues associated with situations imposing asymmetric risk on utilities, the prudence of purchased power contracts, the economics of energy conservation programs, the appropriate incentives for investment in electric transmission assets and the effect of long-term purchased power agreements on the financial risk of a company. I have served as a neutral arbitrator in a contract dispute and analyzed the effectiveness of a company's electric power supply auction. I have also estimated economic damages and analyzed the business purpose and economic substance of tax related transactions, valued assets in arbitration for purchase at the end of the contract, estimated the stranded costs of resulting from the deregulation of electric generation and from the municipalization of an electric utility's distribution assets and addressed the appropriate regulatory accounting for depreciation and goodwill. Additionally, I have co-authored articles on the impact of revenue decoupling on the cost of capital for electric and natural gas utilities.

The details of my participation in regulatory proceedings and other professional qualifications are provided in more detail in Attachment A to this Exhibit No. ___(MJV-2).

Attachment A to
Exhibit No. ____ (MJV-2)

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ATTACHMENT A:

QUALIFICATIONS OF MICHAEL J. VILBERT

Dr. Michael J. Vilbert is Office Director of The Brattle Group’s San Francisco office and has 20 years of experience as an economic consultant. He is an expert in cost of capital, financial planning and valuation who has advised clients on these matters in the context of a wide variety of investment and regulatory decisions. In the area of regulatory economics, he has testified or submitted testimony on the cost of capital for regulated companies in the water, electric, natural gas and petroleum industries in the U.S. and Canada. His testimony has addressed the effect of regulatory policies such as decoupling or must-run generation on a regulated company’s cost of capital and the appropriate way to estimate the cost of capital for companies organized as Master Limited Partnerships. He analyzed issues associated with situations imposing asymmetric risk on utilities, the prudence of purchased power contracts, the economics of energy conservation programs, the appropriate incentives for investment in electric transmission assets and the effect of long-term purchased power agreements on the financial risk of a company. He has served as a neutral arbitrator in a contract dispute and analyzed the effectiveness of a company’s electric power supply auction. He has also estimated economic damages and analyzed the business purpose and economic substance of tax related transactions, valued assets in arbitration for purchase at the end of the contract, estimated the stranded costs of resulting from the deregulation of electric generation and from the municipalization of an electric utility’s distribution assets and addressed the appropriate regulatory accounting for depreciation and goodwill.

He received his Ph.D. in Financial Economics from the Wharton School of the University of Pennsylvania, an MBA from the University of Utah, an M.S. from the Fletcher School of Law and Diplomacy, Tufts University, and a B.S. degree from the United States Air Force Academy. He joined The Brattle Group in 1994 after a career as an Air Force officer, where he served as a fighter pilot, intelligence officer, and professor of finance at the Air Force Academy.

1 **REPRESENTATIVE CONSULTING EXPERIENCE**

- 2 ♦ Dr. Vilbert served as the consulting expert in several cases for the U.S.
3 Department of Justice and the Internal Revenue Service regarding the business
4 purpose and economic substance of a series of tax related transactions. These
5 projects required the analysis of a complex series of financial transactions
6 including the review of voluminous documentary evidence and required expertise
7 in financial theory, financial market as well as accounting and financial statement
8 analysis.
- 9 ♦ In a securities fraud case, Dr. Vilbert designed and created a model to value the
10 private placement stock of a drug store chain as if there had been full disclosure
11 of the actual financial condition of the firm. He analyzed key financial data and
12 security analysts' reports regarding the future of the industry in order to recreate
13 pro forma balance sheet and income statements under a variety of scenarios
14 designed to establish the value of the firm.
- 15 ♦ For pharmaceutical companies rebutting price-fixing claims in antitrust litigation,
16 Dr. Vilbert was a member of a team that prepared a comprehensive analysis of
17 industry profitability. The analysis replicated, tested and critiqued the major
18 recent analyses of drug costs, risks and returns. The analyses helped develop
19 expert witness testimony to rebut allegations of excess profits.
- 20 ♦ For an independent electric power producer, Dr. Vilbert created a model that
21 analyzed the reasonableness of rates and costs filed by a natural gas pipeline. The
22 model not only duplicated the pipeline's rates, but it also allowed simulation of a
23 variety of "what if" scenarios associated with cost recovery under alternative time
24 patterns and joint cost allocations. Results of the analysis were adopted by the
25 intervenor group for negotiation with the pipeline.
- 26 ♦ For the CFO of an electric utility, Dr. Vilbert developed the valuation model used
27 to support a stranded cost estimation filing. The case involved a conflict between
28 two utilities over the responsibility for out-of-market costs associated with a
29 power purchase contract between them. In addition, he advised and analyzed cost
30 recovery mechanisms that would allow full recovery of the stranded costs while
31 providing a rate reduction for the company's rate payers.
- 32 ♦ Dr. Vilbert has testified as well as assisted in the preparation of testimony and the
33 development of estimation models in numerous cost-of-capital cases for natural
34 gas pipeline, water utility and electric utility clients before the Federal Energy
35 Regulatory Commission ("FERC") and state regulatory commissions. These have
36 spanned standard estimation techniques (e.g., Discounted Cash Flow and Risk
37 Positioning models). He has also developed and applied more advanced models
38 specific to the industries or lines of business in question, e.g., based on the
39 structure and risk characteristics of cash flows, or based on multi-factor models
40 that better characterize regulated industries.

- 1 ♦ Dr. Vilbert has valued several large, residual oil-fired generating stations to
2 evaluate the possible conversion to natural gas or other fuels. In these analyses,
3 the expected pre- and post-conversion station values were computed using a range
4 of market electricity and fuel cost conditions.
- 5 ♦ For a major western electric utility, Dr. Vilbert helped prepare testimony that
6 analyzed the prudence of QF contract enforcement. The testimony demonstrated
7 that the utility had not been compensated in its allowed cost of capital for major
8 disallowances stemming from QF contract management.
- 9 ♦ Dr. Vilbert analyzed the economic need for a major natural gas pipeline
10 expansion to the Midwest. This involved evaluating forecasts of natural gas use
11 in various regions of the United States and the effect of additional supplies on the
12 pattern of natural gas pipeline use. The analysis was used to justify the expansion
13 before the FERC and the National Energy Board of Canada.
- 14 ♦ For a Public Utility Commission in the Northeast, Dr. Vilbert analyzed the
15 auction of an electric utility's purchase power agreements to determine whether
16 the outcome of the auction was in the ratepayers' interest. The work involved the
17 analysis of the auction procedures as well as the benefits to ratepayers of
18 transferring risk of the PPA payments to the buyer.
- 19 ♦ Dr. Vilbert led a team tasked to determine whether bridge tolls were "just and
20 reasonable" for a non-profit port authority. Determination of the cost of service
21 for the authority required estimation of the value of the authority's assets using
22 the trended original cost methodology as well as evaluation of the operations and
23 maintenance budgets. Investment costs, bridge traffic information and inflation
24 indices covering a 75 year period were utilized to estimate the value of four
25 bridges and a passenger transit line valued in excess of \$1 billion.
- 26 ♦ Dr. Vilbert helped a recently privatized railroad in Brazil develop an estimate of
27 its revenue requirements, including a determination of the railroad's cost of
28 capital. He also helped evaluate alternative rate structures designed to provide
29 economic incentives to shippers as well as to the railroad for improved service.
30 This involved the explanation and analysis of the contribution margin of
31 numerous shipper products, improved cost analysis and evaluation of bottlenecks
32 in the system.
- 33 ♦ For a utility in the Southeast, Dr. Vilbert quantified the company's stranded costs
34 under several legislative electric restructuring scenarios. This involved the
35 evaluation of all of the company's fossil and nuclear generating units, its contracts
36 with Qualifying Facilities and the prudence of those QF contracts. He provided
37 analysis concerning the impact of securitizing the company's stranded costs as a
38 means of reducing the cost to the ratepayers and several alternative designs for
39 recovering stranded costs.

- 1 “Issues for Cost of Capital Estimation,” with Bente Villadsen, *Edison Electric Institute*
2 *Cost of Capital Conference*, Chicago, IL, February 2004.
- 3 “Not Your Father’s Rate of Return Methodology,” *Utility Commissioners/Wall Street*
4 *Dialogue*, NY, May 2004.
- 5 “Utility Distribution Cost of Capital,” *EEI Electric Rates Advanced Course*, Madison,
6 WI, July 2004.
- 7 “Cost of Capital Estimation: Issues and Answers,” *MidAmerican Regulatory Finance*
8 *Conference*, Des Moines, IA, April 7, 2005.
- 9 “Cost of Capital - Explaining to the Commission - Different ROEs for Different Parts of
10 the Business,” *EEI Economic Regulation & Competition Analysts Meeting*, May 2, 2005.
- 11 “Current Issues in Cost of Capital,” with Bente Villadsen, *EEI Electric Rates Advanced*
12 *Course*, Madison, WI, 2005.
- 13 “Current Issues in Estimating the Cost of Capital,” *EEI Electric Rates Advanced Course*,
14 Madison, WI, 2006, 2007, 2008, 2009, 2010 and 2011.
- 15 “Revisiting the Development of Proxy Groups and Relative Risk Analysis,” Society of
16 Utility and Regulatory Financial Analysts: 39th Financial Forum, April 2007.
- 17 “Current Issues in Explaining the Cost of Capital to Utility Commissions,” Cost of
18 Capital Seminar, Philadelphia, PA, 2008.
- 19 “Impact of the Ongoing Economic Crisis on the Cost of Capital of the U.S. Utility
20 Sector,” New York Public Service Commission, Albany, NY, April 20, 2009.
- 21 “Impact of the Ongoing Economic Crisis on the Cost of Capital of the U.S. Utility
22 Sector,” National Association of Water Companies: New York Chapter, Albany, NY,
23 May 21, 2009.
- 24 “Introduction to Retail Rates,” presented to California Water Services Company, 18-19
25 November 2010.
- 26 “Point – Counterpoint: The Regulatory Compact and Pipeline Competition,” with
27 (Jonathan Lesser, Continental Economics), Energy Bar Association, Western Meeting,
28 February 22, 2013
- 29 “An Empirical Study of the Impact of Decoupling on the Cost of Capital,” Center for
30 Research in Regulated Industries, Shawnee on Delaware, PA, May 17, 2013.
- 31 “The Cost of Capital for Alabama Power Company,” Public Service Commission public
32 meeting, July 17, 2013.

1 **ARTICLES**

2 “Flaws in the Proposed IRS Rule to Reinstate Amortization of Deferred Tax Balances
3 Associated with Generation Assets Reorganized in Industry Restructuring,” by Frank C.
4 Graves and Michael J. Vilbert, white paper for *Edison Electric Institute* (EEI) to the IRS,
5 July 25, 2003.

6 “The Effect of Debt on the Cost of Equity in a Regulatory Setting,” by A. Lawrence
7 Kolbe, Michael J. Vilbert, Bente Villadsen and The Brattle Group, *Edison Electric*
8 *Institute*, April 2005.

9 “Measuring Return on Equity Correctly: Why current estimation models set allowed
10 ROE too low,” by A. Lawrence Kolbe, Michael J. Vilbert and Bente Villadsen, *Public*
11 *Utilities Fortnightly*, August 2005.

12 “Understanding Debt Imputation Issues,” by Michael J. Vilbert, Bente Villadsen and
13 Joseph B. Wharton, *Edison Electric Institute*, August 2008.

14 “Review of Regulatory Cost of Capital Methodologies,” (with Bente Villadsen and
15 Matthew Aharonian), Canadian Transportation Agency, September 2010.

16 “The Impact of Decoupling on the Cost of Capital – An Empirical Study,” Joseph B.
17 Wharton, Michael J. Vilbert, Richard E. Goldberg, and Toby Brown, Discussion Paper,
18 *The Brattle Group*, March 2011.

19 “Economic Impact on City of Portland of Allocation of Remediation Costs of Portland
20 Harbor Superfund Site,” with Professor David Sunding, March 2012.

21 “Survey of Cost of Capital Practices in Canada,” (with Bente Villadsen and Toby
22 Brown), prepared for British Columbia Utilities Commission, May 2012.

23 “Estimating the Cost of Equity for Regulated Companies,” (with P.R. Carpenter, Bente
24 Villadsen, T. Brown, and P. Kumar), prepared for the Australian Pipeline Industry
25 Association and filed with the Australian Energy Regulator and the Economic Regulation
26 Authority, Western Australia, February 2013.

27 “The Impact of Revenue Decoupling on the Cost of Capital for Electric Utilities: An
28 Empirical Investigation,” prepared for The Energy Foundation by Michael J. Vilbert,
29 Joseph B. Wharton, Charles Gibbons, Melanie Rosenberg, and Yang Wei Neo, March 20,
30 2014.

1 **TESTIMONY**

2 Direct and rebuttal testimony before the Alberta Energy and Utilities Board on behalf of
3 TransAlta Utilities Corporation in the matter of an application for approval of its 1999
4 and 2000 generation tariff, transmission tariff, and distribution revenue requirement,
5 Docket U99099, October 1998.

6 Direct testimony before the Federal Energy Regulatory Commission on behalf of Central
7 Maine Power in Docket No. ER00-982-000, December 1999.

8 Direct testimony before the Alberta Energy and Utilities Board on behalf of TransAlta
9 Utilities Corporation for approval of its 2001 transmission tariff, May 2000.

10 Direct testimony before the Federal Energy Regulatory Commission on behalf of
11 Mississippi River Transmission Corporation in Docket No. RP01-292-000, March 2001.

12 Written evidence, rebuttal, reply and further reply before the National Energy Board in
13 the matter of an application by TransCanada PipeLines Limited for orders pursuant to
14 Part I and Part IV of the *National Energy Board Act*, Order AO-1-RH-4-2001, May 2001,
15 Nov. 2001, Feb. 2002.

16 Written evidence before the Public Utility Board on behalf of Newfoundland & Labrador
17 Hydro - Rate Hearings, October 2001, Order No. P.U.7 (2002-2003), dated June 2002.

18 Direct testimony (with William Lindsay) before the Federal Energy Regulatory
19 Commission on behalf of DTE East China, LLC in Docket No. ER02-1599-000, April
20 2002.

21 Direct and rebuttal reports before the Arbitration Panel in the arbitration of stranded costs
22 for the City of Casselberry, FL, Case No. 00-CA-1107-16-L, July 2002.

23 Direct reports before the Arbitration Board for Petroleum products trade in the
24 Arbitration of the Military Sealift Command vs. Household Commercial Financial
25 Services, fair value of sale of the Darnell, October 2002.

26 Direct testimony and hearing before the Arbitration Panel in the arbitration of stranded
27 costs for the City of Winter Park, FL, In the Circuit Court of the Ninth Judicial Circuit in
28 and for Orange County, FL, Case No. C1-01-4558-39, December 2002.

29 Direct testimony before the Federal Energy Regulatory Commission on behalf of Florida
30 Power Corporation, dba Progress Energy Florida, Inc. in Docket No. SC03-1-000, March
31 2003.

32 Direct report before the Arbitration Panel in the arbitration of stranded costs for the Town
33 of Belleair, FL, Case No. 000-6487-C1-007, April 2003.

34 Direct and rebuttal reports before the Alberta Energy and Utilities Board in the matter of
35 the Alberta Energy and Utilities Board Act, R.S.A. 2000, c. A-17, and the Regulations

1 under it; in the matter of the Gas Utilities Act, R.S.A. 2000, c. G-5, and the Regulations
2 under it; in the matter of the Public Utilities Board Act, R.S.A. 2000, c. P-45, as
3 amended, and the Regulations under it; and in the matter of Alberta Energy and Utilities
4 Generic Cost of Capital Hearing, Application No. 1271597, July 2003, November 2003,
5 Decision 2004-052, dated July 2004.

6 Written evidence before the National Energy Board in the matter of the National Energy
7 Board Act, R.S.C. 1985, c. NB7, as amended, (Act) and the Regulations made under it;
8 and in the matter of an application by TransCanada PipeLines Limited for orders
9 pursuant to Part IV of the *National Energy Board Act*, for approval of Mainline Tolls for
10 2004, RH-2-2004, January 2004.

11 Direct and rebuttal testimony before the Public Service Commission of West Virginia, on
12 Cost of Capital for West Virginia-American Water Company, Case No 04-0373-W-42T,
13 May 2004.

14 Direct and rebuttal testimony before the Federal Energy Regulatory Commission on
15 Energy Allocation of Debt Cost for Incremental Shipping Rates for Edison Mission
16 Energy, Docket No. RP04-274-000, December 2004 and March 2005.

17 Direct testimony before the Arizona Corporation Commission, Cost of Capital for
18 Paradise Valley Water Company, a subsidiary of Arizona-American Water Company,
19 Docket No. WS-01303A-05, May 2005.

20 Written evidence before the Ontario Energy Board, Cost of Capital for Union Gas
21 Limited, Inc., Docket No. EB-2005-0520, January 2006.

22 Direct and rebuttal testimony before the Pennsylvania Public Utility Commission, Return
23 on Equity for Metropolitan Edison Company, Docket No. R-00061366 and Pennsylvania
24 Electric Company, Docket No. R-00061367, April 2006 and August 2006.

25 Expert report in the United States Tax Court, Docket No. 21309-05, 34th Street Partners,
26 DH Petersburg Investment, LLC and Mid-Atlantic Finance, Partners Other than the Tax
27 Matters Partner, Petitioner, v. Commissioner of Internal Revenue, Respondent, July 28,
28 2006.

29 Direct and supplemental testimony before the Federal Energy Regulatory Commission,
30 Docket No. ER06-427-003, on behalf of Mystic Development, LLC on the Cost of
31 Capital for Mystic 8 and 9 Generating Plants Operating Under Reliability Must Run
32 Contract, August 2006 and September 2006.

33 Direct testimony before the Federal Energy Regulatory Commission, Docket No. ER07-
34 46-000, on behalf of Northwestern Corporation on the Cost of Capital for Transmission
35 Assets, October 2006.

36 Direct and rebuttal testimony before the Tennessee Regulatory Authority, Case No. 06-
37 00290, on behalf of Tennessee American Water Company, on the Cost of Capital,

1 November, 2006 and April 2007.

2 Direct and rebuttal testimony before the Public Service Commission of Wisconsin,
3 Docket No. 5-UR-103, on behalf of Wisconsin Energy Corporation, on the Cost of
4 Capital for Wisconsin Electric Power Company and Wisconsin Gas LLC, May 2007 and
5 October 2007.

6 Rebuttal testimony before the California Public Utilities Commission, Docket No. A. 07-
7 01-036-39, on behalf of California-American Water Company, on the Cost of Capital,
8 May 2007.

9 Direct testimony before the Public Utilities Commission of the State of South Dakota,
10 Docket No. NG-07-013, on behalf of NorthWestern Corporation, on the Cost of Capital
11 for NorthWestern Energy Company's natural gas operations in South Dakota, June 2007.

12 Direct, supplemental and rebuttal testimony before the Public Utilities Commission of
13 Ohio, Case No. 07-551-EL-AIR, Case No. 07-552-EL-ATA, Case No. 07-553-EL-AAM,
14 and Case No. 07-554-EL-UNC, on behalf of Ohio Edison Company, The Toledo Edison
15 Company, and The Cleveland Electric Illuminating Company, on the cost of capital for
16 the FirstEnergy Company's Ohio electric distribution utilities, June 2007, January 2008
17 and February 2008.

18 Direct testimony before the Public Service Commission of West Virginia, Case No. 07-
19 0998-W-42T, on behalf of West Virginia American Water Company on cost of capital,
20 July 2007.

21 Direct and rebuttal testimony before the State Corporation Commission of Virginia, Case
22 No. PUE-2007-00066, on behalf of Virginia Electric and Power Company on the cost of
23 capital for its southwest Virginia coal plant, July 2007 and December 2007.

24 Direct and Supplemental testimony before the Public Utilities Commission of Ohio, Case
25 No. 07-829-GA-AIR, Case No. 07-830-GA-ALT, and Case No. 07-831-GA-AAM, on
26 behalf of Dominion East Ohio Company, on the rate of return for Dominion East Ohio's
27 natural gas distribution operations, September 2007 and June 2008.

28 Direct testimony before the Federal Energy Regulatory Commission, Docket No. ER08-
29 92-000 to Docket No. ER08-92-003, on behalf of Virginia Electric and Power Company,
30 on the Cost of Capital for Transmission Assets, October 2007.

31 Direct and rebuttal testimony before the California Public Utilities Commission, Docket
32 No. A. 07-01-022, on behalf of California-American Water Company, on the Effect of a
33 Water Revenue Adjustment Mechanism on the Cost of Capital, October 2007 and
34 November 2007.

35 Written direct and reply evidence before the National Energy Board in the matter of the
36 National Energy Board Act, R.S.C. 1985, c. NB7, as amended, and the Regulations made
37 thereunder; and in the matter of an application by Trans Québec & Maritimes PipeLines

1 Inc. (“TQM”) for orders pursuant to Part I and Part IV of the *National Energy Board Act*,
2 for determining the overall fair return on capital for tolls charged by TQM, December
3 2007 and September 2008, Decision RH-1-2008, dated March 2009.

4 Comments in support of The Interstate Natural Gas Association of America’s Additional
5 Initial Comments on the FERC’s Proposed Policy Statement with regard to the
6 Composition of Proxy Companies for Determining Gas and Oil Pipeline Return on
7 Equity, Docket No. PL07-2-000, December, 2007.

8 Direct and rebuttal testimony on the Cost of Capital before the Tennessee Regulatory
9 Authority, Case No. 08-00039, on behalf of Tennessee American Water Company,
10 March and August 2008.

11 Post-Technical Conference Affidavit on behalf of The Interstate Natural Gas Association
12 of America in response to the Reply Comments of the State of Alaska with regard the
13 FERC’s Proposed Policy Statement on to the Composition of Proxy Companies for
14 Determining Gas and Oil Pipeline Return on Equity, Docket No. PL07-2-000, March,
15 2008

16 Direct and rebuttal testimony before the California Public Utilities Commission, Docket
17 No. A.08-05-003, on behalf of California-American Water Company, concerning Cost of
18 Capital, May 2008 and August 2008.

19 Rebuttal testimony on the financial risk of Purchased Power Agreements, before the
20 Public Utilities Commission of the State of Colorado, Docket No. 07A-447E, in the
21 matter of the application of Public Service Company of Colorado for approval of its 2007
22 Colorado Resource Plan, June 2008.

23 Direct and rebuttal testimony before the Federal Energy Regulatory Commission, Docket
24 No. RP08-426-000, on behalf of El Paso Natural Gas Company, on the Cost of Capital
25 for Natural Gas Transmission Assets, June 2008 and August 2009.

26 Direct testimony before the Federal Energy Regulatory Commission, Docket No. ER08-
27 1207-000, on behalf of Virginia Electric and Power Company, on the incentive Cost of
28 Capital for investment in New Electric Transmission Assets, June 2008

29 Direct testimony before the Federal Energy Regulatory Commission, Docket No. ER08-
30 1233-000, on behalf of Public Service Electric and Gas Company, on the Cost of Capital
31 for Electric Transmission Assets, July 2008.

32 Direct and rebuttal testimony before the Public Service Commission of West Virginia,
33 Case No. 08-0900-W-42t, on behalf of West Virginia-American Water Company
34 concerning the Cost of Capital for Water Utility assets, July 2008 and November 2008.

35 Direct and rebuttal testimony before the Public Utilities Commission of Ohio, Case No.
36 08-935-EL-SSO, on behalf of Ohio Edison Company, The Toledo Edison Company, and
37 The Cleveland Electric Illuminating Company, with regard to the test to determine

1 Significantly Excessive Earnings within the context of Senate Bill No. 221, September
2 2008 and October 2008.

3 Direct testimony before the Federal Energy Regulatory Commission, Docket No. ER09-
4 249-000, on behalf of Public Service Electric and Gas Company, on the incentive Cost of
5 Capital for Mid-Atlantic Power Pathway Electric Transmission Assets, November 2008.

6 Direct and rebuttal testimony before the Public Service Commission of West Virginia,
7 Case No. 08-1783-G-PC, on behalf of Dominion Hope Gas Company concerning the
8 Cost of Capital for Gas Local Distribution Company assets, November 2008 and May
9 2009.

10 Written Evidence before the Alberta Utilities Commission in the matter of the Alberta
11 Utilities Commission Act, S.A. 2007, c. A-37.2, as amended, and the regulations made
12 thereunder; and IN THE MATTER OF the Gas Utilities Act, R.S.A. 2000, c. G-5, as
13 amended, and the regulations made thereunder; and IN THE MATTER OF the Public
14 Utilities Act, R.S.A. 2000, c. P-45, as amended, and the regulations made thereunder; and
15 IN THE MATTER OF Alberta Utilities Commission 2009 Generic Cost of Capital
16 Hearing, Application No. 1578571/Proceeding No. 85. 2009 Generic Cost of Capital
17 Proceeding on behalf of NGTL, November 2008.

18 Written and Reply Evidence before the Alberta Utilities Commission in the matter of the
19 Alberta Utilities Commission Act, S.A. 2007, c. A-37.2, as amended, and the regulations
20 made thereunder; and IN THE MATTER OF the Gas Utilities Act, R.S.A. 2000, c. G-5,
21 as amended, and the regulations made thereunder; and IN THE MATTER OF the Public
22 Utilities Act, R.S.A. 2000, c. P-45, as amended, and the regulations made thereunder; and
23 IN THE MATTER OF Alberta Utilities Commission 2009 Generic Cost of Capital
24 Hearing, Application No. 1578571/Proceeding No. 85. 2009 Generic Cost of Capital
25 Proceeding on behalf of AltaGas Utilities Inc., November 2008 and May 2009.

26 Direct testimony before the Federal Energy Regulatory Commission, Docket No. ER09-
27 548-000, on behalf of ITC Great Plains, LLC, on the Cost of Capital for Electric
28 Transmission Assets, January 2009.

29 Direct testimony before the Federal Energy Regulatory Commission, Docket No. ER09-
30 681-000, on behalf of Green Power Express, LLP, on the Cost of Capital for Electric
31 Transmission Assets, February 2009.

32 Written evidence before the Régie de l'Énergie on behalf of Gaz Métro Limited
33 Partnership, Cause Tarifaire 2010, R-3690-2009, on the Cost of Capital for natural gas
34 transmission assets, May 2009.

35 Direct and rebuttal testimony before the Public Service Commission of Wisconsin,
36 Docket No. 6680-UR-117, on behalf of Wisconsin Power and Light Company, on the
37 cost of capital for electric and natural gas distribution assets, May 2009 and September
38 2009.

1 Direct and rebuttal testimony before the State of New Jersey Board of Public Utilities in
2 the Matter of the Petition of Public Service Electric and Gas Company for Approval of an
3 Increase in Electric and Gas Rates and for Changes in the Tariffs for Electric and Gas
4 Service, B.P.U.N.J. No. 14 Electric and B.P.U.N.J No. 14 Gas Pursuant to N.J.S.A. 48:2-
5 21 and N.J.S.A. 48:2-21.1 and for Approval of a Gas Weather Normalization Clause; a
6 Pension Expense Tracker and for other Appropriate Relief BPU Docket No.
7 GR09050422, June 2009 and December 2009.

8 Rebuttal testimony before the Florida Public Service Commission in re: Petition for
9 Increase in Rates by Progress Energy Florida, Inc., Docket No. 090079-EI, August 2009.

10 Direct testimony before the Federal Energy Regulatory Commission, Docket No. ER10-
11 159-000, on behalf of Public Service Electric and Gas Company, on the incentive Cost of
12 Capital for the Branchburg-Roseland-Hudson 500 kV Line electric transmission project
13 (“BRH Project”), October 2009.

14 Direct and Rebuttal Testimony before the California Public Utilities Commission
15 regarding cost of service for San Joaquin Valley crude oil pipeline on behalf of Chevron
16 Products Company, Docket Nos. A.08-09-024, C.08-03-021, C.09-02-007 and C.09-03-
17 027, December 2009 and April 2010.

18 Direct testimony before the Federal Energy Regulatory Commission, Docket No. ER10-
19 516-000, on behalf of South Carolina Gas and Electric Company, on the Cost of Capital
20 for Electric Transmission Assets, December 2009.

21 Direct testimony before the Oklahoma Corporation Commission, Cause No. PUD
22 201000050, on behalf of Public Service Company of Oklahoma, regarding cost of service
23 for a regulated electric utility, June 2010.

24 Direct testimony before the Michigan Public Service Commission, Case No. U-16400, on
25 behalf of Michigan Consolidated Gas Company, regarding cost of service for natural gas
26 distribution assets, July 15, 2010

27 Direct testimony before the Public Utilities Commission of Ohio, Case No. 10-1265-EL-
28 UNC, In the Matter of the Determination of the Existence of Significantly Excessive
29 Earnings for 2009 Under the Electric Security Plan of Ohio Edison Company, The
30 Cleveland Electric Illuminating Company, and The Toledo Edison Company, September
31 2010.

32 Direct and rebuttal testimony before the Federal Energy Regulatory Commission, Docket
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2 and April 2011.

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13 Docket No. A.10-09-018, on behalf of California American Water Company, on
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31 2012 – 2013 toll application, RH-003-2011, September 2011 and May 2012.

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34 the Freight Rates and Conditions Associated with Respect to the Movement of Lumber
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36 Destinations in the Vancouver, British Columbia Area, October, 2011.

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2 Inc., 2010-2012 GRA Phase I, Application No. 1606694; Proceeding I.D. 904, October,
3 2011.

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7 October 2011.

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9 EL, on behalf of Gulf Power, a Southern Company, on the method to adjust the return on
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20 *Westside Mutual Water Company, LLC, Paramount Farming Company, LLC,*
21 *Defendants*, April 2012.

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23 *27283 Tahoe Park Water Company, Lake Forest Water Company, Defendants*, May
24 2012.

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28 Company, and The Toledo Edison Company, Case No. 12-1544-EL-UNC, May 2012.

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31 Water Company (U210W) for Authorization to increase its Revenues for Water Service,
32 Application 10-07-007, and In the Matter of the Application of California-American
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2 Pipeline Company LLC, regarding the cost of capital for an intrastate natural gas
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6 California Edison Company (U 338-E) For Authority to Establish Its Authorized Cost of
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8 Adjustment Mechanism , August 2012.

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11 an intrastate natural gas pipeline, Docket No. 13AL-143G, with Advice Letter No. 77,
12 January 2013 and October 2013.

13 Expert Report, with A. Lawrence Kolbe and Bente Villadsen, on cost of equity, non-
14 recovery of operating cost and asset retirement obligations on behalf of the AOSPL oil
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17 Partnership, Sinopec Oil Sands Partnership, Nexen Oil Sands Partnership, Mocal Energy
18 Limited and Murphy Oil Company Ltd- and - Alberta Oil Sands Pipeline Ltd. in its
19 capacity as General Partner of Pembina Oil Sands Pipeline L.P., April 2013.

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23 Illuminating Company, and The Toledo Edison Company, Case No. 13-1147-EL-UNC,
24 May 2013.

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27 July 2013.

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29 2412-000, on behalf of Trans Bay Cable LLC, regarding the appropriate ROE to include
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37 1332-000, on behalf of DATC Path 15, LLC, regarding the appropriate ROE to include in
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5 May 2014.

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18 Electric Company, Limited, Docket No. 2013-0141, with Dr. Toby Brown and Dr. Joseph B.
19 Wharton, May 2014 and September 2014.