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Before the Public Service Commission of the State of Missouri

Surrebuttal Testimony

of

John J. Reed

on behalf of

Evergy Missouri Metro, Inc. d/b/a Evergy Missouri Metro and Evergy Missouri West, Inc. d/b/a Evergy Missouri West

August 2022

SURREBUTTAL TESTIMONY OF JOHN REED CASE NO. ER-2022-0129/0130

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SURREBUTTAL TESTIMONY OF JOHN J. REED CASE NOS. ER-2022-0129/0130

1 I. INTRODUCTION

Q. Please state your name, business address, by whom you are employed and in what capacity.

A. My name is John J. Reed. My business address is 293 Boston Post Road West, Suite
500, Marlborough, Massachusetts 01752. I am Chairman and Chief Executive Officer
("CEO") of Concentric Energy Advisors, Inc. ("Concentric") and CE Capital Advisors,
Inc.

8 Q. On whose behalf are you testifying in this proceeding?

9 A. I am testifying on behalf of Evergy Missouri Metro, Inc. d/b/a Evergy Missouri Metro
10 ("EMM") and Evergy Missouri West, Inc. d/b/a Evergy Missouri West ("EMW")
11 (collectively, the "Company").

12 Q. Mr. Reed, please briefly describe your educational and professional background.

13 A. I have more than 45 years of experience in the North American energy industry. Prior 14 to my current position with Concentric, I have served in executive positions with 15 various consulting firms and as Chief Economist with Southern California Gas 16 Company, North America's largest gas distribution utility. I have provided expert 17 testimony on financial and economic matters on more than 200 occasions before the 18 National Energy Board ("NEB"), the Federal Energy Regulatory Commission 19 ("FERC"), numerous provincial and state utility regulatory agencies, various state and 20 federal courts, and before arbitration panels in the United States and Canada. A copy

of my résumé and a listing of the testimony I have sponsored in the past is included as

2

<u>Surrebuttal Schedule JJR-1</u>.

3 Q. Please briefly describe Concentric.

4 A. Concentric Energy Advisors was founded in 2002 by a small group of executive-level 5 consultants who were committed to establishing a mid-sized energy consulting firm 6 with capabilities and a reputation unsurpassed by any firm in North America. We 7 provide our clients with access to one of the nation's largest pools of expert witnesses in the field of utility regulation, with more than 20 individuals who have appeared as 8 9 experts in regulatory proceedings across North America, backed up by a team of 10 consultants that are experienced in all aspects of developing the financial, economic, 11 and technical data filed as part of regulatory proceedings. Currently, Concentric has 12 more than 60 employees who support the corporate headquarters in Marlborough, 13 Massachusetts, and our offices in Washington, DC and Calgary, Alberta, Canada. Our 14 energy industry experts have held positions with utility companies, regulatory agencies, 15 integrated energy companies, regional transmission organizations, retail marketing 16 companies, and utility management consulting firms. Many members of our team have 17 been working together for more than 30 years.

18 Q. Mr. Reed, have you previously testified before the Missouri Public Service 19 Commission ("Commission")?

20 A. Yes. I have testified before the Commission on 33 occasions, detailed below.

| SPONSOR | DATE | CASE/APPLICANT | DOCKET NO. | SUBJECT |
|---|-----------------------|--|-------------------------------|--|
| Missouri Gas Energy | 1/03 4/03 | Missouri Gas Energy | GR-2001-382 | Gas Purchasing Practices, Prudence |
| Aquila Networks | 2/04 | Aquila-MPS, Aquila L&P | ER-2004-0034 HR-2004-0024 | Cost of Capital, Capital Structure |
| Aquila Networks | 2/04 | Aquila-MPS, Aquila L&P | GR-2004-0072 | Cost of Capital, Capital Structure |
| Missouri Gas Energy | 11/05 2/06 7/06 | Missouri Gas Energy | GR-2002-348 GR-2003-0330 | Capacity Planning |
| Missouri Gas Energy | 11/10 1/11 | KCP&L | ER-2010-0355 | Natural Gas DSM |
| Missouri Gas Energy | 11/10 1/11 | KCP&L GMO | ER-2010-0356 | Natural Gas DSM |
| Laclede Gas Company | 5/11 | Laclede Gas Company | CG-2011-0098 | Affiliate Pricing Standards |
| Union Electric Company d/b/a Ameren Missouri | 2/12 8/12 | Union Electric Company | ER-2012-0166 | Return on Equity, Earnings Attrition, Regulatory Lag |
| Union Electric Company d/b/a Ameren Missouri | 6/14 | Noranda Aluminum Inc. | EC-2014-0223 | Ratemaking, Regulatory and Economic Policy |
| Union Electric Company d/b/a Ameren Missouri | 1/15 2/15 | Union Electric Company | ER-2014-0258 | Revenue Requirements, Ratemaking Policies |
| Great Plains Energy Kansas City Power and Light Company | 8/17 2/18 3/18 | Great Plains Energy, Kansas City Power & Light Company, and Westar Energy | EM-2018-0012 | Merger Standards, Transaction Value, Merger Benefits, Ring- Fencing, |
| Union Electric Company d/b/a Ameren Missouri | 6/19 | Union Electric Company d/b/a Ameren Missouri | EO-2017-0176 | Affiliate Transactions, Cost Allocation Manual |
| Union Electric Company d/b/a Ameren Missouri | 7/19 1/20 2/20 | Union Electric Company d/b/a Ameren Missouri | ER-2019-0335 | Reasonableness of Affiliate Services and Costs |
| Union Electric Company d/b/a Ameren Missouri | 3/21 | Union Electric Company d/b/a Ameren Missouri | GR-2021-0241 | Affiliate Transactions |
| Union Electric Company d/b/a Ameren Missouri | 3/21 10/21 | Union Electric Company d/b/a Ameren Missouri | ER-2021-0240 | Affiliate Transactions, Prudence Standard, Used and Useful Principle |
| Empire District Electric Company | 5/21 12/21 1/22 | Empire District Electric Company | ER-2021-0312 | Return on Equity |
| Empire District Gas Company | 8/21 3/22 | Empire District Gas Company | GR-2021-0320 | Return on Equity |
| Empire District Electric Company | 5/22 | Empire District Electric Company | EO-2022-0040; EO-2022-0193 | Prudence and Carrying Costs |

| | EMW | 7/22 Ev | ergy Missouri West | EF-2022-0155 | Prudence, Carrying Costs and Discount Rate | | |
|----|-----|--|--|---------------------|--|--|--|
| 1 | II. | PURPOSE OF SUR | REBUTTAL TES | <u>STIMONY</u> | | | |
| 2 | Q. | What is the purpose | of your surrebut | tal testimony in | this proceeding? | | |
| 3 | A. | The purpose of my S | urrebuttal Testimor | ny is to respond t | to the rebuttal testimony filed | | |
| 4 | | by: | | | | | |
| 5 | | • The Office | e of the Public Co | unsel ("OPC") w | itness Lena Mantle asserting | | |
| 6 | | EMW's re | source planning is | imprudent and re | commending (1) EMW's fuel | | |
| 7 | | and purch | ased power costs i | n this case be ba | sed on the weighted average | | |
| 8 | | dollars pe | dollars per megawatt-hour ("\$/MWh") of EMW and EMM normalized | | | | |
| 9 | | annual load, and (2) a "prudence factor" adjustment to FAC costs going | | | | | |
| 10 | | forward; and | | | | | |
| 11 | | • OPC with | ess David Murray | linking the cap | ital structure allowed in this | | |
| 12 | | proceeding to the Commission's decision regarding carrying costs in Case | | | | | |
| 13 | | No. EF-2022-0155. | | | | | |
| 14 | | My testimony addresses these issues from a regulatory policy perspective. I am | | | | | |
| 15 | | not an attorney and I | am not offering a | legal opinion. | Please see the testimonies of | | |
| 16 | | Company witnesses Darrin Ives, Kayla Messamore and Ann Bulkley for additional | | | | | |
| 17 | | responsive testimony | regarding the spec | ific facts and circ | cumstances of these issues. | | |
| 18 | Q. | What key conclusion | ns do you reach re | esponding to the | se witnesses? | | |
| 19 | А. | OPC witness Mantle | flatly ignores the | well-established | principles for performing a | | |
| 20 | | prudence review. She | e did not (1) cons | struct or apply a | proper prudence evaluation | | |
| 21 | | framework, (2) focus | on the reasonablen | ess of EMW's de | ecisions based on information | | |

1 that was known or reasonably knowable at the time, or (3) develop a recommended 2 disallowance based on quantifying the difference between actual costs and what she 3 concluded would have been the costs incurred under a "minimally-prudent" decision. Instead, she makes a series of unsubstantiated allegations (e.g., EMW lacks resource 4 5 planning), incorrect assertions (e.g., EMW does not have enough Southwest Power 6 Pool ("SPP") accredited capacity to meet its peak), and factually incorrect 7 characterizations (e.g., a utility owning a generating plant minimizes the potential for 8 loss of service to that utility's customers). Her argument that since EMM's fuel and 9 purchased power costs are lower than EMW's then EMW is imprudent is both 10 unreasonable and is a clear example of determining prudence based on hindsight/how 11 things turned out, which is entirely contrary to the established prudence standard. Her 12 proposed prudence disallowances are not based on an assessment of what reasonable 13 people would have done based on what was knowable at the time the decisions were 14 made and are without merit. Ms. Mantle's insistence that that being a net seller into 15 SPP is universally superior to being a net purchaser is simply wrong and her position 16 as to what constitutes prudent resource planning is not within the mainstream of utility 17 regulation. Based on the material I reviewed, the evidence is compelling that the 18 Company's resource planning and power purchases that have been challenged by Ms. 19 Mantle were reasonable, prudent and well within industry norms.

20 OPC witness Murray's attempt to link a decision in this case on capital structure 21 to EMW's pending securitization case, No. EF-2022-0155 is misguided and appears to 22 be a thinly veiled attempt to orchestrate a heads-I-win-tails-you-lose scenario where 23 the Company is denied the opportunity to recover its prudently incurred costs and earn 1 a reasonable return on its capital invested on behalf of customers and should be 2 rejected.

3 III. <u>THE PRUDENCE STANDARD</u>

Q. Before beginning your discussion of the prudence standard, do you have a significant amount of experience on the topic of prudence reviews as part of utility rate proceedings?

7 A. Yes. I have conducted more than 20 prudence reviews as part of ratemaking processes 8 over more than a 35-year period. These reviews have included construction programs 9 for utility assets, gas costs and power costs from energy procurement programs, system 10 planning issues and other topics. I have performed these analyses for utilities, 11 customers of utilities, and regulators. My experience with prudence reviews involves 12 the review of more than \$20 billion of utility expenditures and has often been part of 13 the largest prudence reviews ever conducted in the jurisdiction where my work was 14 being done. Recently, I have completed prudence reviews for a \$1.5 billion electric 15 transmission project, three separate nuclear refurbishment projects totaling more than 16 \$5 billion, wind project development, coal plant environmental controls, and for Winter 17 Storm Uri energy costs exceeding \$600 million. As part of these reviews, I have 18 provided expert testimony on the prudence standard and the quantification of prudence 19 disallowances in many cases in jurisdictions across North America. The conduct of 20 prudence reviews has been a major part of my career in energy consulting since 1985.

Q. Please generally describe the regulatory standard for prudence.

2 A. Under traditional cost-based ratemaking, a utility is permitted to include prudently-3 incurred costs in the revenue requirement used to set its rates. The standard for the evaluation of whether costs are, or are not, prudently incurred is built on four principles. 4 5 First, prudence relates to actions and decisions. Costs themselves are neither prudent 6 nor imprudent. It is the decision or action that led to cost incurrence that must be 7 reviewed and assessed, not the results of those decisions. In other words, prudence is a measure of the quality of decision-making, and does not reflect how the decisions 8 9 turned out.

10 The second feature is a presumption of prudence, which is often referred to as a 11 rebuttable presumption. The burden of showing that a decision is outside of reasonable 12 bounds falls, at least initially, on the party challenging the utility's actions. 13 The third feature is the total exclusion of hindsight from a properly constructed 14 prudence review. A utility's decisions must be judged based upon what was known or 15 reasonably knowable at the time the decision was made by the utility. Information that 16 was not known or reasonably knowable at the time of the decision being made cannot

be considered in evaluating the reasonableness of a decision, and subsequent
information on "how things turned out" cannot influence the evaluation of the prudence
of a decision.

The final feature is that decisions being reviewed need to be compared to a range of reasonable behavior; prudence does not require perfection, nor does prudence require achieving the lowest possible cost. This standard recognizes that reasonable people can differ and that there is a range of reasonable actions and decisions that is consistent with prudence. Simply put, a decision can only be labelled as imprudent if it can be shown that such a decision was outside the bounds of what a reasonable person would
 have done under those circumstances.

Q. Why is it appropriate and fair in utility ratemaking to exclude the real-world knowledge of "how things turned out" from the consideration of whether costs should be recoverable in rates?

- 6 A. This approach is essential in providing a regulatory framework for balancing the 7 interests of customers and utility investors. While it is not the only workable 8 framework, it is the one which is in use in nearly every utility regulatory jurisdiction in 9 North America. Utilities are typically not allowed to recover more than their actual 10 costs when very favorable results are achieved and are not asked to bear the results of 11 what turned out to be unfavorable outcomes as long as the decisions leading to a result 12 were reasonable. While there may be a desire to have the higher costs of unfortunate 13 and extraordinary weather occurrences shared between customers and investors, that 14 type of risk sharing is not appropriate when the utility operates under a cost-based 15 regulatory regime with the acknowledged standard for cost recovery being the 16 traditional prudence standard. Under the prudence standard, decisions are to be judged, 17 and the resulting costs, as they become known at a later date are not to enter into the 18 equation for determining the prudence of a decision. This approach is not only fair, it 19 is part of preserving the essential balance between customer and investor interests in 20 public utility regulation.
- 21

Q. What happens when a utility's action or inaction is deemed imprudent?

A. Generally, when an action, or inaction is deemed imprudent, the imprudently-incurred portion of the investments or costs are disallowed from cost recovery. If an action is ruled imprudent then a regulator should: 1) define the range of reasonable behavior; 2) 1 consider what the costs would have been if a "minimally prudent" course of action had 2 been followed; and 3) disallow only the amount of costs that are above those which would have been produced by a "minimally prudent" level of decision making. As an 3 example, if a utility adopted a \$50 million self-insurance level for storm-related costs 4 5 and the regulator determined that this was too high and prudent managers would have 6 decided to utilize a self-insurance level of \$10 million to \$30 million, it is only the cost 7 consequences of electing \$20 million of a higher self-insurance level (\$50 million 8 actual as compared to \$30 million that is minimally prudent) that can be considered for 9 disallowance.

10 Q. Does this Commission adhere to the prudence standard as you have laid it out?

11 Yes, the Commission reviewed and articulated its prudence standard in a 1985 case A. 12 involving the costs incurred by Union Electric Company in its construction of the Callaway Nuclear Plant.¹ The Commission adopted a standard established by the Court 13 14 of Appeals for the District of Columbia in 1981 to determine the costs to be included 15 in that case. Under this standard, the Commission recognizes that a utility's costs are 16 presumed to be prudently incurred, and that a utility need not demonstrate in its case-17 in-chief that all expenditures are prudent. "However, where some other participant in 18 the proceeding creates a serious doubt as to the prudence of an expenditure, then the 19 applicant has the burden of dispelling those doubts and proving the questioned

¹ Report & Order, In the Matter of the Determination of In-Service Criteria for the Union Electric Company's Callaway Nuclear Plant and Callaway Rate Base and Related Issues. In the Matter of Union Electric Company of St. Louis, Missouri, for Authority to File Tariffs Increasing Rates for Electric Service Provided to Customers in the Missouri Service Area of the Company, No. EO-85-17, 1985 Mo. PSC LEXIS 54, *24-26, 27 Mo. P.S.C. (N.S.) 183, 192-193 (1985).

expenditures to have been prudent."² The Commission, in the case involving the 1 2 Callaway Nuclear plant, further recognized that the prudence standard is not based on 3 hindsight, but upon a reasonableness standard applied to decisions. The Commission cited with approval a statement of the New York Public Service Commission that: 4 5 "...the company's conduct should be judged by asking whether the conduct was 6 reasonable at the time, under all the circumstances, considering that the company had 7 to solve its problem prospectively rather than in reliance on hindsight. In effect, our responsibility is to determine how reasonable people would have performed the tasks 8 that confronted the company."³ The Missouri courts have followed this standard.⁴ 9

Q. Is your framework for prudence reviews also consistent with the recent Supreme
 Court of Missouri's opinion pertaining to the recovery of rate case expenses?

A. Yes. The Supreme Court of Missouri addressed an appeal of a Commission decision issued in a Spire Missouri rate case.⁵ The primary issue addressed by the Court pertained to the Commission's disallowance of 50% of Spire's rate case expenses, driven by the view that a significant portion of these costs had not been incurred to deliver customer benefits, but rather to produce shareholder benefits. Nothing in that decision overturned the prudence standard espoused by the Commission in the Callaway case.

² *Id.* at 183, 193.

³ *Id.*, quoting Consolidated Edison Company of New York, Inc., 1982 WL 993165 *331, 45 P.U.R. 4th 331 (N.Y.P.S.C. 1982).

⁴ *State ex rel. Associated Natural Gas v. Pub. Serv. Comm'n*, 954 S.W.2d 520, 528-29 (Mo. App. W.D. 1997) (quoting with approval the Commission's adoption of the standard quoted in the Union Electric case involving Callaway).

⁵ Spire Mo., Inc. v. Pub. Serv. Comm'n, 618 S.W. 3d. 225 (Mo. 2021)

Q. What is its relevance of the Spire case to the ratemaking issues at hand?

A. The Spire case addressed the Commission's ability to disallow a portion of rate case
expenses it found to be excessive because "they served only to benefit shareholders and
minimize shareholder risk with no accompanying benefit (or potential benefit) to
ratepayers."⁶ That is not the case here. EMW's power supply costs were clearly
incurred to continue to provide electricity to customers and are entirely different from
Spire's rate case expenses.

8 Q. Has the Commission recently relied on the prudence standard specifically related 9 to an EMW filing?

A. Yes. In the Matter of the Eighth Prudence Review of Costs Subject to the CommissionApproved Fuel Adjustment Clause of KCP&L Greater Missouri Operations Company,
File No. EO-2019-0067, the Commission applied the traditional prudence standard in
its Report & Order at page 19, issued November 6, 2019. It concluded the Company's
costs were prudent.

15 Q. Is there national precedent for the definition of the prudence standard in the 16 United States?

- A. Yes. The original standard of prudence in ratemaking was expressed by Supreme Court
 Justice Louis Brandeis in 1923 as a means of guiding regulators conducting reviews of
 utility capital investments. As originally proffered, the test provides a basis for
 establishing a utility's investment or rate base based on the cost of such investment:
- 21There should not be excluded from the finding of the base,22investments which, under ordinary circumstances, would be deemed23reasonable. The term is applied for the purpose of excluding what

⁶ *Id.*, at 233.

| 1 2 3 4 5 6 7 8 9 10 11 | might be found to be dishonest or obviously wasteful or imprudent expenditures. Every investment may be assumed to have been made in the exercise of reasonable judgment, unless the contrary is shownThe adoption of the amount prudently invested as the rate base and the amount of the capital charge as the measure of the rate of return [would provide] a basis for decision which is certain and stable. The rate base would be ascertained as a fact, not determined as a matter of opinion. (Concurring Opinion of Justice Louis Brandeis, State ex. rel. Southwestern Bell Telephone Co. v. Public Service Commission of Missouri, 262 U.S. 276, 289 n. 1, 306-07 (1923)). |
|---|---|
| 12 | The position of Justice Brandeis was endorsed in 1935 when Supreme Court |
| 13 | Justice Benjamin N. Cardozo stated: |
| 14 15 16 17 18 | Good faith is to be presumed on the part of managers of a business. In the absence of a showing of inefficiency or improvidence, a court will not substitute its judgment for theirs as to the measure of a prudent outlay. (West Ohio Gas Co. v. Public Utilities Commission of Ohio, 294 U.S. 62, 72 (1935), Opinion of Justice Benjamin Cardozo). |
| 19 | The prudent investment test offered by Justice Brandeis was applied sparingly |
| 20 | for the first four decades following its pronouncement. It was not until the nuclear |
| 21 | power construction projects of the 1970s and 1980s that the prudent investment test, at |
| 22 | least in name, was applied frequently in various electric utility rate cases. The Federal |
| 23 | Energy Regulatory Commission ("FERC") offered its view of the prudent investment |
| 24 | test in 1984 by stating the following: |
| 25 26 27 28 29 30 31 | We note that while in hindsight it may be clear that a management decision was wrong, our task is to review the prudence of the utility's actions and the cost resulting therefrom based on the particular circumstances existing either at the time the challenged costs were actually incurred, or the time the utility became committed to incur those expenses. (New England Power Company, 31 FERC ¶ 61,047 (1985). |
| 32 | The National Regulatory Research Institute ("NRRI") advocated for similar |
| 33 | principles in a 1985 research paper entitled, "The Prudent Investment Test in the |

| 1 | | 1980s." In this paper, the NRRI stated that the prudent investment standard should |
|----|-----|---|
| 2 | | include the following four guidelines: |
| 3 | | • "a presumption that the investment decisions of the utilities are prudent" |
| 4 | | • "the standard of reasonableness under the circumstances" |
| 5 | | • "a proscription against the use of hindsight in determining prudence" |
| 6 | | • "determine prudence in a retrospective, factual inquiry. Testimony must |
| 7 | | present facts, not merely opinion, about the elements that did or could have |
| 8 | | entered into the decision at the time." (National Regulatory Research Institute, |
| 9 | | The Prudent Investment Test in the 1980s; (April 1985)). |
| 10 | Q. | How does the prudence standard apply in this case? |
| 11 | A. | Good ratemaking policy, as reflected in the foregoing authorities including the practice |
| 12 | | of this Commission, is that the prudence standard that should be the standard used to |
| 13 | | determine whether the costs at issue in this proceeding may be included in rates. |
| 14 | Q: | Did Company witness Kennedy address the regulatory standard for prudence in |
| 15 | | his direct and rebuttal testimonies and do you agree with his testimony? |
| 16 | A. | Yes, he did, and yes, our views on the prudence standard and its application to this case |
| 17 | | are aligned. |
| 18 | IV. | RESPONSE TO OPC PRUDENCE TESTIMONY |
| 19 | Q. | Did OPC witness Mantle apply the longstanding prudence standard in her review |
| 20 | | of EMW's resource planning process? |
| 21 | A. | No, she did not. In fact, much of her evidence ignores or contradicts the prudence |
| 22 | | standard. As discussed above, if a participant in a Missouri Commission proceeding |
| | | 13 |

1 creates a serious doubt as to the prudence of a decision that led to an expenditure, the 2 applicant has the burden of dispelling those doubts and proving the questioned 3 expenditures were prudently incurred. In this case, OPC has attempted to create doubt as to the prudence of the Company's normalized fuel and purchased power costs, 4 5 however this attempt amounts to little more than conclusory observations that are 6 founded on no substantive analysis or hard facts (e.g., that "Evergy West's resource 7 planning decisions have been imprudent because Evergy West is relying on Evergy 8 Metro's capacity to meet the SPP resource adequacy requirement and the energy from other utilities in the SPP to meet its customers' needs"⁷). Ms. Mantle does not discuss 9 10 the standard by which she considered the prudence of the Company's actions. She does 11 not discuss the Company's decision-making process, she does not discuss the range of 12 reasonable conduct based on what other firms have done, and she does not evaluate the 13 quality of EMW's decisions based on what was known or knowable at the time the 14 decisions were made. Instead, she makes baseless accusations, gets many of the facts 15 wrong, and relies on hindsight to support her assertion that EMW's resource planning 16 process is imprudent and to calculate her proposed disallowance. That approach is a 17 textbook example of how not to perform a prudence review, and why hindsight should 18 not be allowed to influence a regulator's determination of whether a utility's decisions 19 were reasonable and prudent.

- 20
- 21

Ms. Mantle ignores other fundamental premises of the prudence standard including that prudence does not require perfection, nor does it require achieving the

⁷ Mantle Rebuttal, at 6.

lowest possible cost. As I discuss later in my testimony, Ms. Mantle's definition of a
 prudent utility would establish an impossible standard which would require exceptional
 performance in every hour of every year.

4 Ms. Mantle fails to address, utilize, or satisfy the prudence standard of review. 5 Based on an unbiased review of the facts of this case, there is no reasonable indication 6 that the Company's decisions were imprudent. The evidence that has been presented 7 by Company witnesses Messamore, Ives and Kennedy is compelling that EMW's 8 resource planning process and the Company's decisions that have been challenged by 9 OPC – the normalized fuel and purchase power costs, the retirement of Sibley, and the 10 extraordinary costs incurred as a result of Storm Uri - were the product of decision-11 making that was reasonable, prudent and well within industry norms.

Q. Does Ms. Mantle's comparison at page 3 of her rebuttal testimony of Staff's estimated fuel and purchased power costs for EMW and for EMM meet the prudence standard?

A. No, such comparison is not part of the prudence standard and isn't informative in a
prudence context. Ms. Mantle's conclusion that since EMM's normalized fuel and
purchased power costs are less than EMW's then EMW must be imprudent is the
definition of a hindsight review/determining prudence based on how things turned out.
She does not consider at all the reasonableness of EMW's resource planning decisions
based on information that was known or reasonably knowable at the time.

15

Q. 1 Ms. Mantle also asserts that the results of EMW's last two FAC cases also 2 demonstrate that EMW's resource planning is imprudent. How do you respond? 3 A. Put simply, that is completely unsupportable. Ms. Mantle characterizes the fuel and 4 purchased power costs reflected in EMW's previous base rates as "normal," implicitly 5 characterizing the increases in the FAC since June 2021 as "abnormal." When natural gas prices increase from \$2.91/MMBtu in May 2021 to \$8.14/MMBtu in May 2022,⁸ 6 7 there is no "normal." By not examining the decisions EMW made, and focusing instead 8 on the way things turned out in an extraordinarily challenging market, Ms. Mantle 9 either loses focus on the ratemaking issues before this Commission or seeks to invent 10 and impose an entirely new cost recovery standard.

Q. You stated that Ms. Mantle puts forth an impossible standard of prudence. Please explain.

Ms. Mantle testifies that a prudent utility will, among other things, "provide generation 13 A. required by its customers every hour at a cost below market prices."⁹ By this 14 15 "standard," in order for its resource planning decisions to be prudent, the objective of 16 a load-serving entity ("LSE") must be to strive to beat the market in every hour of every 17 year. Not only is this naïve, but it is also impossible to achieve absent a crystal ball and 18 impossible to evaluate without total reliance on hindsight. This standard for cost 19 recovery is in many ways the antithesis of the prudence standard, i.e., it is all about 20 results being achieved and not at all about the quality of decision making. This 21 "standard" also violates other long-standing elements of what constitutes prudent utility

⁸ U.S. Energy Information Administration, Natural Gas, Data. <u>Henry Hub Natural Gas Spot Price (Dollars</u> per Million Btu) (eia.gov)

⁹ LMM-R-1, at 6.

actions, including that prudence does not require perfection or achieving the lowest possible cost.

Q. Ms. Mantle testifies that a prudent utility is one which "can meet its customers" needs on a stand-alone basis."¹⁰ Is this "standard" within the mainstream of utility conduct for utilities that are part of an RTO?

6 A. No. Ms. Mantle's position that it is inappropriate for a company to rely on energy 7 purchases from an RTO or ISO as part of the LSE's preferred resource plan is also 8 outside the mainstream of utility conduct. Utilities that are part of an RTO commonly 9 rely on market purchases as one source of electrical energy in their portfolio. LSEs 10 that are members of an RTO or ISO are typically required to maintain capacity, or 11 contractual capacity rights, that is sufficient to meet peak demands of the load they 12 serve. That is how these RTOs or ISOs ensure that reliability standards are met. 13 Neither reliability nor least-cost dispatch are assured through requiring that each utility 14 plan on an own-load basis, and design its generating portfolio to meet its needs without 15 regard to what may be available in the traded market. There is nothing that even hints 16 at imprudent behavior in planning to meet energy needs through surpluses that exist on 17 other parts of the integrated market as suggested by Ms. Mantle's testimony. Utilizing 18 the market in this manner is why integrated markets have become widespread where 19 sufficient transmission capacity exists to move power from one individual service area 20 to another. Ms. Mantle's insistence that only by owning generation and being a net 21 seller into the market may a utility be considered prudent demonstrates her lack of 22 understanding of both utility resource planning and how integrated markets function.

Ms. Mantle's position as to what constitutes prudent resource planning by an LSE is simply not within the mainstream of utility conduct. The Company's conduct is, however, well-within the mainstream regarding what reasonable utilities do and have done. Please see Ms. Messamore's testimony for a discussion of the Company's resource planning practices, and how these plans and decisions were carefully designed and evaluated to meet the customers' needs at a reasonable cost, based on what was known at the time the decisions had to be made.

8 Q. Does Ms. Mantle attempt to characterize how energy markets like SPP function?

9 Yes, and a number of Ms. Mantle's characterizations are inaccurate and misleading. A. 10 Ms. Mantle states that SPP charges the market price for the sale of energy to EMW. 11 However, SPP charges the market price for the energy load of *all* of its LSEs, including 12 EMW and EMM. EMW and EMM serve their customers' load in the identical way -13 they purchase the required energy from SPP. This is a very important point that Ms. Mantle seems to forget or ignore. She also states that a utility owning generation 14 minimizes loss of service to its customers.¹¹ That is not correct. Load is served by 15 SPP, and the reliability of service to the distribution system is a function of the 16 17 adequacy of resources for the pool as a whole and the reliability of regional 18 transmission. Whether an individual utility owns generation less than, equal to, or 19 greater than its load is not determinative of reliability for a LSE. The LSE is required 20 to maintain sufficient capacity, through owned and contracted resources, to satisfy their

¹¹ Mantle Rebuttal Testimony, at 6.

load plus a reserve margin. EMW does this as discussed by Company witness
 Messamore, despite what Ms. Mantle says.¹²

The only difference between a utility that owns more generation than it has load and a utility that owns less generation than it has load is the profit, or loss, the utility that is long generation will realize in the market. Ms. Mantle's insistence that being a net seller into the market is universally superior is also simply wrong. If this were the case, the market would respond, massive amounts of generation would be built, and the resulting disequilibrium would be priced into the market. Being a net buyer of energy from the market can be, and often is, the least cost strategy for a prudent utility.

Q. Please respond to Ms. Mantle's criticism of Evergy's resource planning whereby the combined resources and loads of its operating utilities are used to satisfy SPP's resource adequacy requirements.

13 A. Ms. Messamore's surrebuttal testimony explains why Ms. Mantle's testimony on this point is factually and fundamentally wrong. As discussed by Ms. Messamore, EMW 14 15 conducts its power planning to do what is best for EMW's customers, not to maximize 16 benefits for the rest of Evergy. In this context, where EMW determines that it requires 17 additional capacity resources to meet reliability standards, it could meet that need 18 through bilateral capacity-only purchases from other SPP members, or through 19 capacity contracting with affiliated entities. It is not at all surprising that EMW chose 20 to contract with other Evergy entities to meet this need. If Ms. Mantle is concerned 21 about the terms of this arrangement, it represents a cost allocation issue between EMW 22 and EMM, not a prudence issue. There is absolutely nothing in this type of arrangement that suggests that EMW's fuel and purchased power costs should be subject to a
 "prudence adjustment factor".

Q. Is this planned strategy of purchasing energy from the SPP market and separately securing capacity through bilateral PPAs inherently imprudent as suggested by Ms. Mantle?

6 A. No, and under the circumstances that EMW faced as it had to make its resource 7 planning decisions, this strategy was the best option for EMW's customers based on 8 what was known or reasonably knowable at the time, as demonstrated by the 9 Company's resource planning analyses and as discussed by Ms. Messamore. In any 10 organized market for electricity, many of the participants will be net negative in their 11 pool transactions and many others will be net positive. That is how a market balances, 12 and it is this process that reduces the cost of meeting load requirements for the entirety 13 of the pool. No pool participant will be worse off for having been active in pool 14 transactions; the very nature of pooling is that greater efficiency is achieved based on 15 a participant's substitution of more efficient pool resources for less efficient resources 16 that would have been available operating on a stand-alone basis. Ms. Mantle equates 17 a result of being net negative in pooled energy transactions with being imprudent in 18 resource planning; in fact, being net negative in energy transactions, while also 19 achieving the required level of reliable capacity, signifies that the participant's leastcost benefits from participation in the pool were substantial as compared to what would 20 21 have been achieved on a stand-alone basis. This certainly does not equate to having 22 made imprudent decisions.

1Q.How do you respond to Ms. Mantle's conclusion that much of the extraordinary2costs EMW incurred because of Winter Storm Uri were the consequence of3imprudent resource planning decisions?¹³

4 A. Ms. Mantle reaches this conclusion based on hindsight; without knowledge of how 5 things actually turned out, this statement cannot be defended. While Ms. Mantle states 6 that in the short-term "the fuel and purchase power costs EMW incurs are outside of its 7 control"¹⁴, and has also acknowledged that the risk of an event such as Winter Storm Uri are outside of EMW's control, she testifies this is "one of the assumed risks for 8 which the Commission has rewarded Evergy West for years".¹⁵ This is certainly not 9 10 the case. The risk that has been reflected within the allowed cost of capital is the risk 11 arising from fair and consistent application of regulatory standards to the rate 12 applications made by the utility. This includes application of the traditional prudence 13 standard, under which the utility is to be provided with a reasonable opportunity to earn a return on and of invested capital. Ms. Mantle's position is far outside of the 14 15 application of the traditional prudence standard, and EMW has certainly not been 16 compensated for the risk that the prudence standard would be abandoned in favor of a 17 "prudence factor adjustment" proposal that is both opportunistic and structurally biased 18 against recovery of prudently-incurred costs.

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The Company's resource plan, including its capacity contracts, market energy purchases and the retirement of the Sibley plant, reflected least-cost planning for EMW

¹³ Mantle Rebuttal, at 17.

¹⁴ *Id.*, at 11.

¹⁵ *Ibid*.

1 based on all of the planning information that was available at the time the decisions 2 were made. These resource plans also reflected uncertainty in fuel prices and other planning assumptions based on the range of expected values at the time the decisions 3 were made. As we now know, extraordinary events, including the unprecedented level 4 5 of fuel prices that occurred during Winter Storm Uri, can produce results that are 6 outside the range of what was anticipated in the resource planning process. Ms. Mantle 7 herself recognizes that "[t]here is no way to accurately plan for all extreme circumstances."¹⁶ Reasonable parties can disagree on specific inputs and assumptions 8 9 (although Ms. Mantle does not address this at all in her testimony). This is in part why 10 multiple scenarios are considered in a resource plan. As discussed in the surrebuttal 11 testimony of Ms. Messamore, the Company considered 18 different scenarios in its 12 2017 IRP and the selected resource plan was more economic than the alternatives in 13 100% of the modeled scenarios. Ultimately, management has to select its preferred plan 14 from the range of reasonable options based on the information available to it at that 15 time. That is what the Company did. That is within the mainstream of utility conduct, 16 consistent with industry norms and consistent with what a reasonable utility should do.

17 Q. Please summarize Ms. Mantle's proposed disallowance of fuel and purchase 18 power costs.

A. Ms. Mantle proposes to calculate EMW's fuel and purchased power expenses "using a
 weighted average dollars per megawatt-hour (\$/MWh) of Evergy West and Evergy
 Metro multiplied by Evergy West's normalized annual load in this case."¹⁷ Based on

¹⁶ *Id.*, at 10.

¹⁷ Mantle Rebuttal, at 2

this calculation, Ms. Mantle's proposed disallowance is \$47 million or a 21.5% reduction.¹⁸ Next, Ms. Mantle proposes that this "percentage of the normal fuel and purchase power expenses... be applied to actual FAC costs going forward to determine Evergy West's prudent actual costs until prudent resources are obtained by Evergy West."¹⁹ Finally, Ms. Mantle offers an alternative to her proposed ongoing FAC disallowances, namely EMW and EMM "could actually merge" and "allocate generation costs" between them.²⁰

8 Q. Please respond to Ms. Mantle's proposed disallowance.

A. Apart from and in addition to the obvious response that where there was no imprudent
conduct there cannot be imprudently incurred costs, there are glaring flaws in Ms.
Mantle's attempt to identify and quantify imprudent costs. As I have discussed earlier,
prudence relates to being within or outside a range of reasonable behavior. Any attempt
at quantifying the consequence of imprudent behavior needs to begin by recognizing
that *any* result that occurs from behavior that is *anywhere* within the range of
reasonable behavior cannot produce any claim of imprudently incurred costs.

16 Therefore, a quantification exercise needs to begin by carefully defining the 17 range of reasonable behavior, and then comparing actual costs to what would have 18 resulted from minimally prudent behavior. Ms. Mantle does not incorporate either a 19 range of reasonable behavior into her imprudence assertions or begin her quantification 20 process by determining what would have resulted from minimally prudent behavior. 21 Hers is an entirely results-driven proposal whereby Ms. Mantle fabricates a standard

¹⁸ *Id.*, at 19.

¹⁹ *Id.*, at 2.

²⁰ *Id.*, at 20.

with no basis, a conclusion with no analysis and a recommendation to continue to apply
 her "prudence factor" to future, not yet filed FACs. Ms. Mantle's calculation has no
 connection whatsoever to the prudence of EMW's resource planning process.

Q.

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Do you have any other response to Ms. Mantle's use of the weighted average \$/MWh total cost of EMW and EMM as a proxy for what she considers the prudent costs for EMW?

A. Yes. This approach, coupled with Ms. Mantle's alternative proposal make clear that
when you cut to the chase what Ms. Mantle is really concerned about is the allocation
of costs between EMW and EMM. She has no issue with the total costs. She testifies
that if EMW and EMM merge, then she would consider the total costs prudent. Ms.
Mantle simply wants EMW's proportion of the total costs to be lower. This is not a
prudence review.

Q. What is your conclusion regarding Ms. Mantle's assertions that EMW's resource planning is imprudent and customers have suffered as a consequence?

15 This is demonstrably false. Ms. Mantle's testimony regarding the planning and A. 16 operation of EMM's and EMW's resource plans are nothing more than unsubstantiated 17 allegations that attempt to distort the plain facts. EMW's resource planning process is 18 consistent with industry standards. The decision to retire the uneconomic coal-fired 19 Sibley plant and EMW's subsequent inclusion of energy to be purchased from SPP and 20 capacity-only contracts in its resource plan was reasonable was prudent by any 21 reasonable application of the prudence standard. As I have discussed, the use of net 22 energy purchases from SPP does not have anything to do with imprudence. It is a 23 measure of the economic superiority of pooled energy purchases over what would have been needed if only a utility's own capacity had been used to meet demand. 24

24

1 In even the most perfectly planned resource portfolio in terms of meeting own load 2 requirements (which is what Ms. Mantle advocates as being needed to be prudent), 3 there will often be opportunities for pooled dispatch to improve upon own-load 4 dispatch, which can result in a participant having net energy purchases from the pool. 5 There is nothing imprudent about that result. Ms. Mantle's proposed disallowance of 6 fuel and purchase power costs included in the revenue requirement decided in this case 7 and in blanket disallowance in future FAC cases is unreasonable and inappropriate and 8 should be rejected.

9 V. <u>CAPITAL STRUCTURE</u>

10 Q. Does Mr. Murray attempt to link a decision in this case on capital structure to 11 EMW's pending securitization Case No. EF-2022-0155?

A. Yes. Mr. Murray testifies if EMW "is allowed to charge carrying costs in its
 securitization case based on its composite cost of capital, short-term debts should be
 included in its ratemaking capital structure."²¹

15 Q. What is your response to Mr. Murray on this point?

A. As I testified in Case No. EF-2022-0155 when Mr. Murray first put forth this either-or proposition, Mr. Murray's assertion that if his proposal (i.e., carrying costs based on a short-term debt rate) is not used for Winter Storm Uri costs, then short-term debt must be included in the Company's capital structure in its rate proceeding is misguided at best and appears to be a thinly veiled attempt to orchestrate a heads-I-win-tails-youlose scenario where the Company's is denied the opportunity to recover its prudently

²¹ Murray Surrebuttal, at 32.

| 1 | | incurred costs and earn a reasonable return on its capital invested on behalf of |
|----|-----|--|
| 2 | | customers. Company witness Ann Bulkley discusses the appropriate capital structure |
| 3 | | for the Company. |
| 4 | VI. | CONCLUSIONS |
| 5 | Q: | Please summarize your key conclusions. |
| 6 | A. | My key conclusions include: |
| 7 | | • The regulatory principle relating to cost recovery has been clear for many |
| 8 | | decades—utilities are entitled to recover their prudently incurred costs, and |
| 9 | | a reasonable opportunity to earn a fair return on the assets that are the |
| 10 | | product of prudent investment. |
| 11 | | • Missouri precedent on these points is fully aligned with the national |
| 12 | | mainstream and with the National Regulatory Research Institute ("NRRI") |
| 13 | | standards. |
| 14 | | • Properly applied, in order for a prudence disallowance to be warranted, a |
| 15 | | party would have to show that EMW's conduct was outside the range of |
| 16 | | what a reasonable utility would have done based on what was known or |
| 17 | | reasonably knowable at the time the decision was made. |
| 18 | | • In fact, Ms. Mantle did not apply the established prudence standard at all. |
| 19 | | She did not (1) construct or apply a proper prudence evaluation framework, |
| 20 | | (2) focus on the reasonableness of the Company's decisions based on |
| 21 | | information that was known or reasonably knowable at the time, or (3) |
| 22 | | develop a recommended disallowance based on quantifying the difference |

| 1 | | between actual costs and what she concluded would have been the costs |
|----|----|---|
| 2 | | incurred under a "minimally-prudent" decision. |
| 3 | | • The basis of OPC's position is that because EMW's resources are different |
| 4 | | than EMM's, and EMW relies on capacity contracts and purchases energy |
| 5 | | from the SPP, EMW's resource planning process is imprudent. Ms. |
| 6 | | Mantle's analysis determines prudence based on how things turned out, not |
| 7 | | based on what reasonable people would have done based on what was |
| 8 | | knowable at the time the decision was made. |
| 9 | | • Ms. Mantle's attempt to depict the resource planning process for EMW and |
| 10 | | EMM as somehow intended to advantage Evergy and disadvantage the |
| 11 | | customers of EMW is completely unfounded. The EMW resource planning |
| 12 | | process is reasonable and well within industry norms. |
| 13 | | • OPC witness David Murray 's attempt to link a decision in this case on |
| 14 | | capital structure to EMW's pending securitization case, No. EF-2022-0155 |
| 15 | | is misguided at best and appears to be a thinly veiled attempt to orchestrate |
| 16 | | a heads-I-win-tails-you-lose scenario where the Company's is denied the |
| 17 | | opportunity to recover its prudently incurred costs and earn a reasonable |
| 18 | | return on its capital invested on behalf of customers and should be rejected. |
| 19 | Q. | Does this conclude your testimony at this time? |
| 20 | А. | Yes, it does. |

BEFORE THE PUBLIC SERVICE COMMISSION OF THE STATE OF MISSOURI

|) | |
|---|---|
|) | Case No. ER-2022-0129 |
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|) | Case No. ER-2022-0130 |
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AFFIDAVIT OF JOHN J. REED

STATE OF MASSACHUSETTS)) ss COUNTY OF MIDDLESEX)

John J. Reed, being first duly sworn on his oath, states:

 My name is John J. Reed. I work in Marlborough, Massachusetts, and I am Chairman and Chief Executive Officer of Concentric Energy Advisors, Inc. and CE Capital Advisors, Inc.

 Attached hereto and made a part hereof for all purposes is my Surrebuttal Testimony on behalf of Evergy Missouri Metro and Evergy Missouri West consisting of twenty-seven (<u>27</u>) pages, having been prepared in written form for introduction into evidence in the above-captioned docket.

3. I have knowledge of the matters set forth therein. I hereby swear and affirm that my answers contained in the attached testimony to the questions therein propounded, including any attachments thereto, are true and accurate to the best of my knowledge, information and belief.

Subscribed and sworn before me this D day of August 2022 otary Public My commission expires: H



JOHN J. REED

Chairman and Chief Executive Officer

Mr. Reed is a financial and economic consultant with more than 44 years of experience in the energy industry. Mr. Reed has also been the CEO of an NASD member securities firm, and Co-CEO of the nation's largest publicly traded management consulting firm (NYSE: NCI). He has provided advisory services in the areas of mergers and acquisitions, asset divestitures and purchases, strategic planning, project finance, corporate valuation, energy market analysis, rate and regulatory matters and energy contract negotiations to clients across North and Central America. Mr. Reed's comprehensive experience includes the development and implementation of nuclear, fossil, and hydroelectric generation divestiture programs with an aggregate valuation in excess of \$20 billion. Mr. Reed has also provided expert testimony on financial and economic matters on more than 400 occasions before the FERC, Canadian regulatory agencies, state utility regulatory agencies, various state and federal courts, and before arbitration panels in the United States and Canada. After graduation from the Wharton School of the University of Pennsylvania, Mr. Reed joined Southern California Gas Company, where he worked in the regulatory and financial groups, leaving the firm as Chief Economist in 1981. He served as an executive and consultant with Stone & Webster Management Consulting and R.J. Rudden Associates prior to forming REED Consulting Group (RCG) in 1988. RCG was acquired by Navigant Consulting in 1997, where Mr. Reed served as an executive until leaving Navigant to join Concentric as Chairman and Chief Executive Officer.

REPRESENTATIVE PROJECT EXPERIENCE

Executive Management

• As an executive-level consultant, worked with CEOs, CFOs, other senior officers, and Boards of Directors of many of North America's top electric and gas utilities, as well as with senior political leaders of the U.S. and Canada on numerous engagements over the past 25 years. Directed merger, acquisition, divestiture, and project development engagements for utilities, pipelines and electric generation companies, repositioned several electric and gas utilities as pure distributors through a series of regulatory, financial, and legislative initiatives, and helped to develop and execute several "roll-up" or market aggregation strategies for companies seeking to achieve substantial scale in energy distribution, generation, transmission, and marketing.

Financial and Economic Advisory Services

• Retained by many of the nation's leading energy companies and financial institutions for services relating to the purchase, sale or development of new enterprises. These projects included major new gas pipeline projects, gas storage projects, several non-utility generation projects, the purchase and sale of project development and gas marketing firms, and utility acquisitions. Specific services provided include the development of corporate expansion plans, review of acquisition candidates, establishment of divestiture standards, due diligence on



acquisitions or financing, market entry or expansion studies, competitive assessments, project financing studies, and negotiations relating to these transactions.

Litigation Support and Expert Testimony

- Provided expert testimony on more than 400 occasions in administrative and civil proceedings on a wide range of energy and economic issues. Clients in these matters have included gas distribution utilities, gas pipelines, gas producers, oil producers, electric utilities, large energy consumers, governmental and regulatory agencies, trade associations, independent energy project developers, engineering firms, and gas and power marketers. Testimony has focused on issues ranging from broad regulatory and economic policy to virtually all elements of the utility ratemaking process. Also frequently testified regarding energy contract interpretation, accepted energy industry practices, horizontal and vertical market power, quantification of damages, and management prudence. Has been active in regulatory contract and litigation matters on virtually all interstate pipeline systems serving the U.S. Northeast, Mid-Atlantic, Midwest, and Pacific regions.
- Also served on FERC Commissioner Terzic's Task Force on Competition, which conducted an industry-wide investigation into the levels of and means of encouraging competition in U.S. natural gas markets and served on a "Blue Ribbon" panel established by the Province of New Brunswick regarding the future of natural gas distribution service in that province.

Resource Procurement, Contracting and Analysis

- On behalf of gas distributors, gas pipelines, gas producers, electric utilities, and independent energy project developers, personally managed or participated in the negotiation, drafting, and regulatory support of hundreds of energy contracts, including the largest gas contracts in North America, electric contracts representing billions of dollars, pipeline and storage contracts, and facility leases.
- These efforts have resulted in bringing large new energy projects to market across North America, the creation of hundreds of millions of dollars in savings through contract renegotiation, and the regulatory approval of a number of highly contested energy contracts.

Strategic Planning and Utility Restructuring

• Acted as a leading participant in the restructuring of the natural gas and electric utility industries over the past fifteen years, as an advisor to local distribution companies, pipelines, electric utilities, and independent energy project developers. In the recent past, provided services to most of the top 50 utilities and energy marketers across North America. Managed projects that frequently included the redevelopment of strategic plans, corporate reorganizations, the development of multi-year regulatory and legislative agendas, merger, acquisition and divestiture strategies, and the development of market entry strategies. Developed and supported merchant function exit strategies, marketing affiliate strategies, and detailed plans for the functional business units of many of North America's leading utilities.



PROFESSIONAL HISTORY

Concentric Energy Advisors, Inc. (2002 – Present) Chairman and Chief Executive Officer

CE Capital Advisors (2004 – Present) Chairman, President, and Chief Executive Officer

Navigant Consulting, Inc. (1997 - 2002)

President, Navigant Energy Capital (2000 – 2002) Executive Director (2000 – 2002) Co-Chief Executive Officer, Vice Chairman (1999 – 2000) Executive Managing Director (1998 – 1999) President, REED Consulting Group, Inc. (1997 – 1998)

REED Consulting Group (1988 - 1997)

Chairman, President and Chief Executive Officer

R.J. Rudden Associates, Inc. (1983 – 1988)

Vice President

Stone & Webster Management Consultants, Inc. (1981 - 1983)

Senior Consultant Consultant

Southern California Gas Company (1976 - 1981)

Corporate Economist Financial Analyst Treasury Analyst

EDUCATION

Wharton School, University of Pennsylvania

B.S., Economics and Finance, 1976 Licensed Securities Professional: NASD Series 7, 63, 24, 79 and 99 Licenses

BOARDS OF DIRECTORS (PAST AND PRESENT)

Concentric Energy Advisors, Inc. Navigant Consulting, Inc. Navigant Energy Capital Nukem, Inc. New England Gas Association R. J. Rudden Associates REED Consulting Group



AFFILIATIONS

American Gas Association Energy Bar Association Guild of Gas Managers International Association of Energy Economists Northeast Gas Association Society of Gas Lighters Society of Utility and Regulatory Financial Analysts

ARTICLES AND PUBLICATIONS

"Maximizing U.S. federal loan guarantees for new nuclear energy," Bulletin of the Atomic Scientists (with John C. Slocum), July 29, 2009 "Smart Decoupling – Dealing with unfunded mandates in performance-based ratemaking," Public Utilities Fortnightly, May 2012



| SPONSOR | DATE | CASE/APPLICANT | DOCKET NO. | SUBJECT | | | |
|--|------------------------------|--|---|---------------------------------|--|--|--|
| Alaska Regulatory Commission | | | | | | | |
| Chugach Electric | 12/86 | Chugach Electric | U-86-11 | Cost Allocation | | | |
| Chugach Electric | 5/87 | Enstar Natural Gas Company | U-87-2 | Tariff Design | | | |
| Chugach Electric | 12/87 | Enstar Natural Gas Company | U-87-42 | Gas Transportation | | | |
| Chugach Electric | 11/87 2/88 | Chugach Electric | U-87-35 | Cost of Capital | | | |
| Anchorage Municipal Light & Power | 9/17 | Anchorage Municipal Light & Power | U-16-094 U-17-008 | Project Prudence | | | |
| Municipality of Anchorage ("MOA") d/b/a Municipal Light and Power | 8/19 10/19 | Municipality of Anchorage ("MOA") d/b/a Municipal Light and Power | U-18-102 U-19-020 U-19-021 | Merger Standard for Approval | | | |
| Alberta Utilities Co | Alberta Utilities Commission | | | | | | |
| Alberta Utilities (AltaLink, EPCOR, ATCO, ENMAX, FortisAlberta, AltaGas) | 1/13 | Alberta Utilities | Application 1566373, Proceeding ID 20 | Stranded Costs | | | |
| Arizona Corporati | on Comm | lission | I | | | | |
| Tucson Electric Power | 7/12 | Tucson Electric Power | E-01933A-12- 0291 | Cost of Capital | | | |
| UNS Energy and Fortis Inc. | 1/14 | UNS Energy, Fortis Inc. | E-04230A-00011 E-01933A-14- 0011 | Merger | | | |
| California Energy | Commiss | ion | • | | | | |
| Southern California Gas Co. | 8/80 | Southern California Gas Co. | 80-BR-3 | Gas Price Forecasting | | | |



| SPONSOR | DATE | CASE/APPLICANT | DOCKET NO. | SUBJECT |
|--|----------------|---------------------------------------|----------------|-----------------------------------|
| California Public U | Jtility Cor | nmission | | |
| Southern California Gas Co. | 3/80 | Southern California Gas Co. | TY 1981 G.R.C. | Cost of Service, Inflation |
| Pacific Gas Transmission Co. | 10/91 11/91 | Pacific Gas & Electric Co. | App. 89-04-033 | Rate Design |
| Pacific Gas Transmission Co. | 7/92 | Southern California Gas Co. | A. 92-04-031 | Rate Design |
| San Diego Gas & Electric Company | 4/19 8/19 | San Diego Gas & Electric Company | A. 19-04-017 | Risk Premium, Return on Equity |
| Colorado Public U | tilities Co | ommission | | 1 |
| AMAX Molybdenum | 2/90 | Commission Rulemaking | 89R-702G | Gas Transportation |
| AMAX Molybdenum | 11/90 | Commission Rulemaking | 90R-508G | Gas Transportation |
| Xcel Energy | 8/04 | Xcel Energy | 031-134E | Cost of Debt |
| Public Service Company of Colorado | 6/17 | Public Service Company of Colorado | 17AL-0363G | Return on Equity (Gas) |
| Connecticut Publi | c Utilities | Regulatory Authority | | |
| Connecticut Natural Gas | 12/88 | Connecticut Natural Gas | 88-08-15 | Gas Purchasing Practices |
| United Illuminating | 3/99 | United Illuminating | 99-03-04 | Nuclear Plant Valuation |
| Southern Connecticut Gas | 2/04 | Southern Connecticut Gas | 00-12-08 | Gas Purchasing Practices |
| Southern Connecticut Gas | 4/05 | Southern Connecticut Gas | 05-03-17 | LNG/Trunkline |
| Southern Connecticut Gas | 5/06 | Southern Connecticut Gas | 05-03-17PH01 | LNG/Trunkline |
| Southern Connecticut Gas | 8/08 | Southern Connecticut Gas | 06-05-04 | Peaking Service Agreement |



| SPONSOR | DATE | CASE/APPLICANT | DOCKET NO. | SUBJECT |
|---|-----------------------|---|--------------------------------------|--|
| SJW Group and Connecticut Water Service | 4/19 | SJW Group and Connecticut Water Service | 19-04-02 | Customer Benefits, Public Interest |
| District of Columb | ia PSC | 1 | 1 | I |
| Potomac Electric Power Company | 3/99 5/99 7/99 | Potomac Electric Power Company | 945 | Divestiture of Gen. Assets & Purchase Power Contracts |
| AltaGas Ltd./WGL Holdings | 4/17 8/17 10/17 | AltaGas Ltd./WGL Holdings | 1142 | Merger Standards, Public Interest Standard |
| Federal Energy Re | gulatory | Commission | | |
| Safe Harbor Water Power Corp. | 8/82 | Safe Harbor Water Power Corp. | - | Wholesale Electric Rate Increase |
| Western Gas Interstate Company | 5/84 | Western Gas Interstate Company | RP84-77 | Load Forecast Working Capital |
| Southern Union Gas | 4/87 5/87 | El Paso Natural Gas Company | RP87-16-000 | Take-or-Pay Costs |
| Connecticut Natural Gas | 11/87 | Penn-York Energy Corporation | RP87-78-000 | Cost Allocation/Rate Design |
| AMAX Magnesium | 12/88 1/89 | Questar Pipeline Company | RP88-93-000 | Cost Allocation/Rate Design |
| Western Gas Interstate Company | 6/89 | Western Gas Interstate Company | RP89-179-000 | Cost Allocation/Rate Design, Open-Access Transportation |
| Associated CD Customers | 12/89 | CNG Transmission | RP88-211-000 | Cost Allocation/Rate Design |
| Utah Industrial Group | 9/90 | Questar Pipeline Company | RP88-93-000, Phase II | Cost Allocation/Rate Design |
| Iroquois Gas Trans. System | 8/90 | Iroquois Gas Transmission System | CP89-634- 000/001 CP89-815-000 | Gas Markets, Rate Design, Cost of Capital, Capital Structure |



| SPONSOR | DATE | CASE/APPLICANT | DOCKET NO. | SUBJECT |
|---|----------------------|--|---|---|
| Boston Edison Company | 1/91 | Boston Edison Company | ER91-243-000 | Electric Generation Markets |
| Cincinnati Gas and Electric Co., Union Light, | 7/91 | Texas Gas Transmission Corp. | RP90-104-000 RP88-115-000 RP90-192-000 | Cost Allocation, Rate Design, Comparability of Service |
| Heat and Power Company, Lawrenceburg Gas Company | | | | |
| Ocean State Power II | 7/91 | Ocean State Power II | ER89-563-000 | Competitive Market Analysis, Self-dealing |
| Brooklyn Union/PSE&G | 7/91 | Texas Eastern | RP88-67, et al | Market Power, Comparability of Service |
| Northern Distributor Group | 9/92 11/92 | Northern Natural Gas Company | RP92-1-000, et al | Cost of Service |
| Canadian Association of Petroleum Producers and Alberta Pet. Marketing Comm. | 10/92 7/97 | Lakehead Pipeline Co. LP | IS92-27-000 | Cost Allocation, Rate Design |
| Colonial Gas, Providence Gas | 7/93 8/93 | Algonquin Gas Transmission | RP93-14 | Cost Allocation, Rate Design |
| Iroquois Gas Transmission | 94 | Iroquois Gas Transmission | RP94-72-000 | Cost of Service, Rate Design |
| Transco Customer Group | 1/94 | Transcontinental Gas Pipeline Corporation | RP92-137-000 | Rate Design, Firm to Wellhead |
| Pacific Gas Transmission | 2/94 3/95 | Pacific Gas Transmission | RP94-149-000 | Rolled-In vs. Incremental Rates, Rate Design |
| Tennessee GSR Group | 1/95 3/95 1/96 | Tennessee Gas Pipeline Company | RP93-151-000 RP94-39-000 RP94-197-000 RP94-309-000 | GSR Costs |
| PG&E and SoCal Gas | 8/96 9/96 | El Paso Natural Gas Company | RP92-18-000 | Stranded Costs |



| SPONSOR | DATE | CASE/APPLICANT | DOCKET NO. | SUBJECT |
|--|----------------------|---|--------------|--|
| Iroquois Gas Transmission System, LP | 97 | Iroquois Gas Transmission System, LP | RP97-126-000 | Cost of Service, Rate Design |
| BEC Energy - Commonwealth Energy System | 2/99 | Boston Edison Company/ Commonwealth Energy System | EC99-33-000 | Market Power Analysis – Merger |
| Central Hudson Gas & Electric, Consolidated Co. of New York, Niagara Mohawk Power Corporation, Dynegy Power Inc. | 10/00 | Central Hudson Gas & Electric, Consolidated Co. of New York, Niagara Mohawk Power Corporation, Dynegy Power Inc. | EC01-7-000 | Market Power 203/205 Filing |
| Wyckoff Gas Storage | 12/02 | Wyckoff Gas Storage | CP03-33-000 | Need for Storage Project |
| Indicated Shippers/Produce rs | 10/03 | Northern Natural Gas | RP98-39-029 | Ad Valorem Tax Treatment |
| Maritimes & Northeast Pipeline | 6/04 | Maritimes & Northeast Pipeline | RP04-360-000 | Rolled-In Rates |
| ISO New England | 8/04 2/05 | ISO New England | ER03-563-030 | Cost of New Entry |
| Transwestern Pipeline Company, LLC | 9/06 | Transwestern Pipeline Company, LLC | RP06-614-000 | Business Risk |
| Portland Natural Gas Transmission System | 6/08 | Portland Natural Gas Transmission System | RP08-306-000 | Market Assessment, Natural Gas Transportation, Rate Setting |
| Portland Natural Gas Transmission System | 5/10 3/11 4/11 | Portland Natural Gas Transmission System | RP10-729-000 | Business Risks, Extraordinary and Non-recurring Events Pertaining to Discretionary Revenues |



| SPONSOR | DATE | CASE/APPLICANT | DOCKET NO. | SUBJECT |
|--|----------------|--|---|--|
| Morris Energy | 7/10 | Morris Energy | RP10-79-000 | Impact of Preferential Rate |
| Gulf South Pipeline | 10/14 | Gulf South Pipeline | RP15-65-000 | Business Risk, Rate Design |
| BNP Paribas Energy Trading, GP South Jersey Resource Group, LLC | 2/15 | Transcontinental Gas Pipeline Corporation | RP06-569-008 RP07-376-005 | Regulatory Policy, Incremental Rates, Stacked Rate |
| Tallgrass Interstate Gas Transmission, LLC | 10/15 12/15 | Tallgrass Interstate Gas Transmission, LLC | RP16-137-000 | Market Assessment, Rate Design, Rolled-in Rate Treatment |
| Tennessee Valley Authority | 2/21 3/21 | Athens Utility Board, Gibson Electric Membership Corp., Joe Wheeler Electric Membership Corp., and Volunteer Energy Cooperative v. Tennessee Valley Authority | EL21-40-000 TX21-01-000 | Public Policy, Competition, Economic Harm |
| Florida Impact Est | imating (| Conference | | <u> </u> |
| Florida Power and Light Co. on behalf of the Florida Investor- Owned Utilities | 3/19 | Florida Power and Light Co. on behalf of the Florida Investor- Owned Utilities | Right to Competitive Energy Market for Customers of Investor-Owned Utilities; Allowing Energy Choice | Economic and Financial Impact of Deregulation on Customers and Market Design and Function |
| Florida Public Ser | vice Com | mission | | |
| Florida Power and Light Co. | 10/07 | Florida Power & Light Co. | 070650-EI | Need for New Nuclear Plant |



| SPONSOR | DATE | CASE/APPLICANT | DOCKET NO. | SUBJECT |
|--------------------------------|----------------------|--------------------------------|-------------------|--|
| Florida Power and Light Co. | 5/08 | Florida Power & Light Co. | 080009-EI | New Nuclear Cost Recovery, Prudence |
| Florida Power and Light Co. | 3/09 8/09 | Florida Power & Light Co. | 080677-EI | Benchmarking in Support of ROE |
| Florida Power and Light Co. | 3/09 5/09 8/09 | Florida Power & Light Co. | 090009-EI | New Nuclear Cost Recovery, Prudence |
| Florida Power and Light Co. | 3/10 5/10 8/10 | Florida Power & Light Co. | 100009-EI | New Nuclear Cost Recovery, Prudence |
| Florida Power and Light Co. | 3/11 7/11 | Florida Power & Light Co. | 110009-EI | New Nuclear Cost Recovery, Prudence |
| Florida Power and Light Co. | 3/12 7/12 | Florida Power & Light Co. | 120009-EI | New Nuclear Cost Recovery, Prudence |
| Florida Power and Light Co. | 3/12 8/12 | Florida Power & Light Co. | 120015-EI | Benchmarking in Support of ROE |
| Florida Power and Light Co. | 3/13 7/13 | Florida Power & Light Co. | 130009 | New Nuclear Cost Recovery, Prudence |
| Florida Power and Light Co. | 3/14 | Florida Power & Light Co. | 140009 | New Nuclear Cost Recovery, Prudence |
| Florida Power and Light Co. | 3/15 7/15 | Florida Power & Light Co. | 150009 | New Nuclear Cost Recovery, Prudence |
| Florida Power and Light Co. | 10/15 | Florida Power and Light Co. | 150001 | Recovery of Replacement Power Costs |
| Florida Power and Light Co. | 3/16 | Florida Power & Light Co. | 160021-EI | Benchmarking in Support of ROE |
| Florida Power and Light Co. | 3/21 7/21 | Florida Power & Light Co. | 20210015-EI | Benchmarking in Support of ROE |
| Florida Senate Co | mmittee o | on Communication, Ener | rgy and Utilities | |
| Florida Power and Light Co. | 2/09 | Florida Power & Light Co. | - | Securitization |



| SPONSOR | DATE | CASE/APPLICANT | DOCKET NO. | SUBJECT |
|---|-----------------------|---|----------------------------|--|
| Hawaiʻi Public Util | ity Comn | nission | I | |
| Hawaiian Electric Light Company, Inc. | 6/00 | Hawaiian Electric Light Company, Inc. | 99-0207 | Standby Charge |
| NextEra Energy, Inc. Hawaiian Electric Companies | 4/15 8/15 10/15 | Hawaiian Electric Company, Inc.; Hawaii Electric Light Company, Inc., Maui Electric Company, Ltd., NextEra Energy, Inc. | 2015-0022 | Merger Application |
| Idaho Public Utilit | ies Comn | nission | | |
| Hydro One Limited and Avista Corporation | 9/18 11/18 | Hydro One Limited and Avista Corporation | AVU-E-17-09 AVU-G-17-05 | Governance, Financial Integrity and Ring-fencing Merger Commitments |
| Illinois Commerce | Commis | sion | | |
| Renewables Suppliers (Algonquin Power Co., EDP Renewables North America, Invenergy, NextEra Energy Resources) | 3/14 | Renewables Suppliers | 13-0546 | Application for Rehearing and Reconsideration, Long- term Purchase Power Agreements |
| WE Energies Corporation | 8/14 12/14 2/15 | WE Energies/Integrys | 14-0496 | Merger Application |



| SPONSOR | DATE | CASE/APPLICANT | DOCKET NO. | SUBJECT |
|---|--------------|---|------------|--|
| Indiana Utility Reg | gulatory (| Commission | | |
| Northern Indiana Public Service Company | 10/01 | Northern Indiana Public Service Company | 41746 | Valuation of Electric Generating Facilities |
| Northern Indiana Public Service Company | 1/08 3/08 | Northern Indiana Public Service Company | 43396 | Asset Valuation |
| Northern Indiana Public Service Company | 8/08 | Northern Indiana Public Service Company | 43526 | Fair Market Value Assessment |
| Indianapolis Power & Light Company | 12/14 | Indianapolis Power & Light Company | 44576 | Asset Valuation |
| Indianapolis Power & Light Company | 12/16 | Indianapolis Power & Light Company | 44893 | Rate Recovery for New Plant Additions, Valuation of Electric Generating Facilities |
| Indianapolis Power & Light Company D/B/A AES Indiana | 8/21 | Indianapolis Power & Light Company D/B/A AES Indiana | 45591 | Power Project Development and PPA Evaluation |
| Iowa Utilities Boa | rd | 1 | I | 1 |
| Interstate Power and Light | 7/05 | Interstate Power and Light and FPL Energy Duane Arnold, LLC | SPU-05-15 | Sale of Nuclear Plant |
| Interstate Power and Light | 5/07 | City of Everly, Iowa | SPU-06-5 | Municipalization |
| Interstate Power and Light | 5/07 | City of Kalona, Iowa | SPU-06-6 | Municipalization |
| Interstate Power and Light | 5/07 | City of Wellman, Iowa | SPU-06-10 | Municipalization |
| Interstate Power and Light | 5/07 | City of Terril, Iowa | SPU-06-8 | Municipalization |
| Interstate Power and Light | 5/07 | City of Rolfe, Iowa | SPU-06-7 | Municipalization |



| SPONSOR | DATE | CASE/APPLICANT | DOCKET NO. | SUBJECT |
|---|------------------------------|--|---------------------|---|
| Kansas Corporatio | on Comm | ission | 1 | - |
| Great Plains Energy Kansas City Power and Light Company | 1/17 | Great Plains Energy, Kansas City Power & Light Company, and Westar Energy | 16-KCPE-593- ACQ | Merger Standards, Acquisition Premium, Ring- Fencing, Public Interest Standard |
| Great Plains Energy Kansas City Power and Light Company | 8/17 2/18 | Great Plains Energy, Kansas City Power & Light Company, and Westar Energy | 18-KCPE-095- MER | Merger Standards, Transaction Value, Merger Benefits, Ring-Fencing, |
| Maine Public Utili | ty Comm | ission | 1 | |
| Northern Utilities | 5/96 | Granite State and PNGTS | 95-480 95-481 | Transportation Service and PBR |
| Maine Water Company | 7/19 8/19 | Maine Water Company | 2019-00096 | Merger Standards, Net Benefits to Customers, Ring- fencing |
| Maryland Public S | ervice Co | ommission | 1 | 1 |
| Eastalco Aluminum | 3/82 | Potomac Edison | 7604 | Cost Allocation |
| Potomac Electric Power Company | 8/99 | Potomac Electric Power Company | 8796 | Stranded Cost & Price Protection |
| AltaGas Ltd./WGL Holdings | 4/17 9/17 1/18 2/18 | AltaGas Ltd./WGL Holdings | 9449 | Merger Standards, Public Interest Standard |
| Washington Gas Light Company | 8/20 | Washington Gas Light Company | 9622 | Regulatory Policy |
| Massachusetts Dep | partment | t of Public Utilities | ļ | -1 |
| Haverhill Gas | 5/82 | Haverhill Gas | DPU #1115 | Cost of Capital |
| New England Energy Group | 1/87 | Commission Investigation | - | Gas Transportation Rates |



| SPONSOR | DATE | CASE/APPLICANT | DOCKET NO. | SUBJECT |
|--|-------|---|-------------------------|---|
| Energy Consortium of Mass. | 9/87 | Commonwealth Gas Company | DPU-87-122 | Cost Allocation, Rate Design |
| Mass. Institute of Technology | 12/88 | Middleton Municipal Light | DPU #88-91 | Cost Allocation, Rate Design |
| Energy Consortium of Mass. | 3/89 | Boston Gas | DPU #88-67 | Rate Design |
| PG&E Bechtel Generating Co./ Constellation Holdings | 10/91 | Commission Investigation | DPU #91-131 | Valuation of Environmental Externalities |
| Coalition of Non- Utility Generators | 1991 | Cambridge Electric Light Co. & Commonwealth Electric Co. | DPU 91-234 EFSC 91-4 | Integrated Resource Management |
| The Berkshire Gas Company | 5/92 | The Berkshire Gas Company | DPU #92-154 | Gas Purchase Contract Approval |
| Essex County Gas Company | | Essex County Gas Company | | |
| Fitchburg Gas and Elec. Light Co. | | Fitchburg Gas & Elec. Light Co. | | |
| Boston Edison Company | 7/92 | Boston Edison | DPU #92-130 | Least-Cost Planning |
| Boston Edison Company | 7/92 | The Williams/Newcorp Generating Co. | DPU #92-146 | RFP Evaluation |
| Boston Edison Company | 7/92 | West Lynn Cogeneration | DPU #92-142 | RFP Evaluation |
| Boston Edison Company | 7/92 | L'Energia Corp. | DPU #92-167 | RFP Evaluation |
| Boston Edison Company | 7/92 | DLS Energy, Inc. | DPU #92-153 | RFP Evaluation |



| SPONSOR | DATE | CASE/APPLICANT | DOCKET NO. | SUBJECT |
|---------------------------------------|-------|-----------------------------------|---------------|--|
| Boston Edison Company | 7/92 | CMS Generation Co. | DPU #92-166 | RFP Evaluation |
| Boston Edison Company | 7/92 | Concord Energy | DPU #92-144 | RFP Evaluation |
| The Berkshire Gas Company | 11/93 | The Berkshire Gas Company | DPU #93-187 | Gas Purchase Contract Approval |
| Colonial Gas Company | | Colonial Gas Company | | |
| Essex County Gas Company | | Essex County Gas Company | | |
| Fitchburg Gas and Electric Company | | Fitchburg Gas and Electric Co. | | |
| Bay State Gas Company | 10/93 | Bay State Gas Company | 93-129 | Integrated Resource Planning |
| Boston Edison Company | 94 | Boston Edison | DPU #94-49 | Surplus Capacity |
| Hudson Light & Power Department | 4/95 | Hudson Light & Power Dept. | DPU #94-176 | Stranded Costs |
| Essex County Gas Company | 5/96 | Essex County Gas Company | 96-70 | Unbundled Rates |
| Boston Edison Company | 8/97 | Boston Edison Company | 97-63 | Holding Company Corporate Structure |
| Berkshire Gas Company | 6/98 | Berkshire Gas Mergeco Gas Co. | D.T.E. 98-87 | Merger Approval |
| Eastern Edison Company | 8/98 | Montaup Electric Company | D.T.E. 98-83 | Marketing for Divestiture of its Generation Business |
| Boston Edison Company | 98 | Boston Edison Company | D.T.E. 97-113 | Fossil Generation Divestiture |
| Boston Edison Company | 2/99 | Boston Edison Company | D.T.E. 98-119 | Nuclear Generation Divestiture |
| Eastern Edison Company | 12/98 | Montaup Electric Company | D.T.E. 99-9 | Sale of Nuclear Plant |



| SPONSOR | DATE | CASE/APPLICANT | DOCKET NO. | SUBJECT |
|--|----------------------|---|---------------------|--|
| NStar | 9/07 12/07 | NStar, Bay State Gas, Fitchburg G&E, NE Gas, W. MA Electric | DPU 07-50 | Decoupling, Risk |
| NStar | 6/11 | NStar, Northeast Utilities | DPU 10-170 | Merger Approval |
| Town of Milford | 1/19 3/19 5/19 | Milford Water Company | DPU 18-60 | Valuation Analysis |
| Massachusetts En | ergy Faci | lities Siting Council | <u> </u> | |
| Mass. Institute of Technology | 1/89 | M.M.W.E.C. | EFSC-88-1 | Least-Cost Planning |
| Boston Edison Company | 9/90 | Boston Edison | EFSC-90-12 | Electric Generation Markets |
| Silver City Energy Ltd. Partnership | 11/91 | Silver City Energy | D.P.U. 91-100 | State Policies, Need for Facility |
| Michigan Public Se | ervice Co | mmission | 1 | |
| Detroit Edison Company | 9/98 | Detroit Edison Company | U-11726 | Market Value of Generation Assets |
| Consumers Energy Company | 8/06 1/07 | Consumers Energy Company | U-14992 | Sale of Nuclear Plant |
| WE Energies | 12/11 | Wisconsin Electric Power Co | U-16830 | Economic Benefits, Prudence |
| Consumer Energy Company | 7/13 | Consumers Energy Company | U-17429 | Certificate of Need, Integrated Resource Plan |
| WE Energies | 8/14 3/15 | WE Energies/Integrys | U-17682 | Merger Application |
| Minnesota Public | Utilities (| Commission | I | |
| Xcel Energy/No. States Power | 9/04 | Xcel Energy/No. States Power | G002/GR-04- 1511 | NRG Impacts |
| Interstate Power and Light | 8/05 | Interstate Power and Light and FPL Energy Duane Arnold, LLC | E001/PA-05- 1272 | Sale of Nuclear Plant |



| SPONSOR | DATE | CASE/APPLICANT | DOCKET NO. | SUBJECT |
|--|------------------------|----------------------------------|--------------------------------|---------------------------------------|
| Northern States Power Company d/b/a Xcel Energy | 11/05 | Northern States Power Company | E002/GR-05- 1428 | NRG Impacts on Debt Costs |
| Northern States Power Company d/b/a Xcel Energy | 9/06 10/06 11/06 | NSP v. Excelsior | E6472/M-05- 1993 | PPA, Financial Impacts |
| Northern States Power Company d/b/a Xcel Energy | 11/06 | Northern States Power Company | G002/GR-06- 1429 | Return on Equity |
| Northern States Power | 11/08 05/09 | Northern States Power Company | E002/GR-08- 1065 | Return on Equity |
| Northern States Power | 11/09 6/10 | Northern States Power Company | G002/GR-09- 1153 | Return on Equity |
| Northern States Power | 11/10 5/11 | Northern States Power Company | E002/GR-10-971 | Return on Equity |
| Northern States Power Company | 1/16 | Northern States Power Company | E002/GR-15-826 | Industry Perspective |
| Northern States Power Company | 11/19 | Northern States Power Company | E002/GR-19-564 | Return on Equity |
| CenterPoint Energy | 10/21 1/22 | CenterPoint Energy | G008/M-21-138 71-2500-37763 | Prudence, Gas Purchasing Decisions |
| Missouri House Co | ommittee | on Energy and the Env | ironment | |
| Ameren Missouri | 3/16 | Ameren Missouri | HB 2816 | Performance-Based Ratemaking |
| Missouri Public Se | ervice Cor | nmission | <u> </u> | 1 |
| Missouri Gas Energy | 1/03 04/03 | Missouri Gas Energy | GR-2001-382 | Gas Purchasing Practices, Prudence |
| Aquila Networks | 2/04 | Aquila-MPS, Aquila L&P | ER-2004-0034 HR-2004-0024 | Cost of Capital, Capital Structure |



| SPONSOR | DATE | CASE/APPLICANT | DOCKET NO. | SUBJECT |
|---|-----------------------|--|-----------------------------|---|
| Aquila Networks | 2/04 | Aquila-MPS, Aquila L&P | GR-2004-0072 | Cost of Capital, Capital Structure |
| Missouri Gas Energy | 11/05 2/06 7/06 | Missouri Gas Energy | GR-2002-348 GR-2003-0330 | Capacity Planning |
| Missouri Gas Energy | 11/10 1/11 | KCP&L | ER-2010-0355 | Natural Gas DSM |
| Missouri Gas Energy | 11/10 1/11 | KCP&L GMO | ER-2010-0356 | Natural Gas DSM |
| Laclede Gas Company | 5/11 | Laclede Gas Company | CG-2011-0098 | Affiliate Pricing Standards |
| Union Electric Company d/b/a Ameren Missouri | 2/12 8/12 | Union Electric Company | ER-2012-0166 | Return on Equity, Earnings Attrition, Regulatory Lag |
| Union Electric Company d/b/a Ameren Missouri | 6/14 | Noranda Aluminum Inc. | EC-2014-0223 | Ratemaking, Regulatory and Economic Policy |
| Union Electric Company d/b/a Ameren Missouri | 1/15 2/15 | Union Electric Company | ER-2014-0258 | Revenue Requirements, Ratemaking Policies |
| Great Plains Energy Kansas City Power and Light Company | 8/17 2/18 3/18 | Great Plains Energy, Kansas City Power & Light Company, and Westar Energy | EM-2018-0012 | Merger Standards, Transaction Value, Merger Benefits, Ring-Fencing, |
| Union Electric Company d/b/a Ameren Missouri | 6/19 | Union Electric Company d/b/a Ameren Missouri | EO-2017-0176 | Affiliate Transactions, Cost Allocation Manual |
| Union Electric Company d/b/a Ameren Missouri | 7/19 1/20 2/20 | Union Electric Company d/b/a Ameren Missouri | ER-2019-0335 | Reasonableness of Affiliate Services and Costs |
| Union Electric Company d/b/a Ameren Missouri | 3/21 | Union Electric Company d/b/a Ameren Missouri | GR-2021-0241 | Affiliate Transactions |



| SPONSOR | DATE | CASE/APPLICANT | DOCKET NO. | SUBJECT |
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| Union Electric Company d/b/a Ameren Missouri | 3/21 10/21 | Union Electric Company d/b/a Ameren Missouri | ER-2021-0240 | Affiliate Transactions, Prudence Standard, Used and Useful Principle |
| Empire District Electric Company | 5/21 12/21 1/22 | Empire District Electric Company | ER-2021-0312 | Return on Equity |
| Empire District Gas Company | 8/21 3/22 | Empire District Gas Company | GR-2021-0320 | Return on Equity |
| Empire District Electric Company | 5/22 | Empire District Electric Company | E0-2022-0040 E0-2022-0193 | Prudence Policy |
| Missouri Senate Co | ommittee | e on Commerce, Consum | er Protection, Ene | ergy and the Environment |
| Ameren Missouri | 3/16 | Ameren Missouri | SB 1028 | Performance-Based Ratemaking |
| Montana Public Se | ervice Con | nmission | I | • |
| Great Falls Gas Company | 10/82 | Great Falls Gas Company | 82-4-25 | Gas Rate Adjustment Clause |
| National Energy B | oard (nov | w the Canada Energy Re | gulator) | |
| Alberta Northeast | 2/87 | Alberta Northeast Gas Export Project | GH-1-87 | Gas Export Markets |
| Alberta Northeast | 11/87 | TransCanada Pipeline | GH-2-87 | Gas Export Markets |
| Alberta Northeast | 1/90 | TransCanada Pipeline | GH-5-89 | Gas Export Markets |
| Independent Petroleum Association of Canada | 1/92 | Interprovincial Pipeline, Inc. | RH-2-91 | Pipeline Valuation, Toll |
| The Canadian Association of Petroleum Producers | 11/93 | Trans Mountain Pipeline | RH-1-93 | Cost of Capital |
| Alliance Pipeline LP | 6/97 | Alliance Pipeline LP | GH-3-97 | Market Study |



| SPONSOR | DATE | CASE/APPLICANT | DOCKET NO. | SUBJECT |
|--------------------------------------|---------------|---|-----------------------------------|---|
| Maritimes & Northeast Pipeline | 97 | Sable Offshore Energy Project | GH-6-96 | Market Study |
| Maritimes & Northeast Pipeline | 2/02 | Maritimes & Northeast Pipeline | GH-3-2002 | Natural Gas Demand Analysis |
| TransCanada Pipelines | 8/04 | TransCanada Pipelines | RH-3-2004 | Toll Design |
| Brunswick Pipeline | 5/06 | Brunswick Pipeline | GH-1-2006 | Market Study |
| TransCanada Pipelines Ltd. | 12/06 4/07 | TransCanada Pipelines Ltd.: Gros Cacouna Receipt Point Application | RH-1-2007 | Toll Design |
| Repsol Energy Canada Ltd | 3/08 | Repsol Energy Canada Ltd | GH-1-2008 | Market Study |
| Maritimes & Northeast Pipeline | 7/10 | Maritimes & Northeast Pipeline | RH-4-2010 | Regulatory Policy, Toll Development |
| TransCanada Pipelines Ltd | 9/11 5/12 | TransCanada Pipelines Ltd. | RH-3-2011 | Business Services and Tolls Application |
| Trans Mountain Pipeline LLC | 6/12 1/13 | Trans Mountain Pipeline LLC | RH-1-2012 | Toll Design |
| TransCanada Pipelines Ltd | 8/13 | TransCanada Pipelines Ltd | RE-001-2013 | Toll Design |
| NOVA Gas Transmission Ltd | 11/13 | NOVA Gas Transmission Ltd | OF-Fac-Gas- N081-2013-10 01 | Toll Design |
| Trans Mountain Pipeline LLC | 12/13 | Trans Mountain Pipeline LLC | OF-Fac-Oil- T260-2013-03 01 | Economic and Financial Feasibility, Project Benefits |
| Energy East Pipeline Ltd. | 10/14 | Energy East Pipeline | Of-Fac-Oil-E266- 2014-01 02 | Economic and Financial Feasibility, Project Benefits |



| SPONSOR | DATE | CASE/APPLICANT | DOCKET NO. | SUBJECT |
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| NOVA Gas Transmission Ltd | 5/16 | NOVA Gas Transmission Ltd | GH-003-2015 | Certificate of Public Convenience and Necessity |
| TransCanada PipeLines Limited | 4/17 9/17 | TransCanada PipeLines Limited | RH-003-2017 | Public Interest, Toll Design |
| NOVA Gas Transmission Ltd | 10/17 | NOVA Gas Transmission Ltd | MH-031-2017 | Toll Design |
| NOVA Gas Transmission Ltd | 3/19 11/19 | NOVA Gas Transmission Ltd | RH-001-2019 | Tolling Changes |
| Enbridge Pipelines Inc. | 12/19 6/20 8/20 4/21 | Enbridge Pipelines Inc. | RH-001-2020 | Market and Scarcity Conditions; Reasonableness of Tolls, Terms, and Conditions; Public Interest; Open Season Process |
| NOVA Gas Transmission LTD. | 5/21 12/21 | NOVA Gas Transmission LTD. | RH-001-2021 | Toll Design |
| New Brunswick Er | nergy and | l Utilities Board | | |
| Atlantic Wallboard/JD Irving Co | 1/08 | Enbridge Gas New Brunswick | MCTN #298600 | Rate Setting for EGNB |
| Atlantic Wallboard/Flakeb oard | 9/09 6/10 7/10 | Enbridge Gas New Brunswick | NBEUB 2009- 017 | Rate Setting for EGNB |
| Atlantic Wallboard/Flakeb oard | 1/14 | Enbridge Gas New Brunswick | NBEUB Matter 225 | Rate Setting for EGNB |
| New Hampshire P | ublic Util | ities Commission | - | |
| Bus & Industry Association | 6/89 | P.S. Co. of New Hampshire | DR89-091 | Fuel Costs |
| Bus & Industry Association | 5/90 | Northeast Utilities | DR89-244 | Merger & Acquisition Issues |
| Eastern Utilities Associates | 6/90 | Eastern Utilities Associates | DF89-085 | Merger & Acquisition Issues |



| SPONSOR | DATE | CASE/APPLICANT | DOCKET NO. | SUBJECT |
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| EnergyNorth Natural Gas | 12/90 | EnergyNorth Natural Gas | DE90-166 | Gas Purchasing Practices |
| EnergyNorth Natural Gas | 7/90 | EnergyNorth Natural Gas | DR90-187 | Special Contracts, Discounted Rates |
| Northern Utilities, Inc. | 12/91 | Commission Investigation | DR91-172 | Generic Discounted Rates |
| Public Service Co. of New Hampshire | 7/14 | Public Service Co. of NH | DE 11-250 | Prudence |
| Public Service Co. of New Hampshire | 7/15 11/15 | Public Service Co. of NH | 14-238 | Restructuring and Rate Stabilization |
| New Jersey Board | of Public | Utilities | <u> </u> | |
| Hilton/Golden Nugget | 12/83 | Atlantic Electric | BPU 832-154 | Line Extension Policies |
| Golden Nugget | 3/87 | Atlantic Electric | BPU 837-658 | Line Extension Policies |
| New Jersey Natural Gas | 2/89 | New Jersey Natural Gas | BPU GR89030335J | Cost Allocation, Rate Design |
| New Jersey Natural Gas | 1/91 | New Jersey Natural Gas | BPU GR90080786J | Cost Allocation, Rate Design |
| New Jersey Natural Gas | 8/91 | New Jersey Natural Gas | BPU GR91081393J | Rate Design, Weather Normalization Clause |
| New Jersey Natural Gas | 4/93 | New Jersey Natural Gas | BPU GR93040114J | Cost Allocation, Rate Design |
| South Jersey Gas | 4/94 | South Jersey Gas | BRC Dock No. GR080334 | Revised Levelized Gas Adjustment |
| New Jersey Utilities Association | 9/96 | Commission Investigation | BPU AX96070530 | PBOP Cost Recovery |
| Morris Energy Group | 11/09 | Public Service Electric & Gas | BPU GR 09050422 | Discriminatory Rates |



| SPONSOR | DATE | CASE/APPLICANT | DOCKET NO. | SUBJECT |
|---|-------------------------|---|--|---|
| New Jersey American Water Co. | 4/10 | New Jersey American Water Co. | BPU WR 1040260 | Tariff Rates and Revisions |
| Electric Customer Group | 1/11 | Generic Stakeholder Proceeding | BPU GR10100761 ER10100762 | Natural Gas Ratemaking Standards and pricing |
| New Mexico Public | c Service | Commission | 1 | |
| Gas Company of New Mexico | 11/83 | Public Service Co. of New Mexico | 1835 | Cost Allocation, Rate Design |
| Southwestern Public Service Co., New Mexico | 12/12 | SPS New Mexico | 12-00350-UT | Rate Case, Return on Equity |
| PNM Resources | 12/13 10/14 12/14 | Public Service Co. of New Mexico | 13-00390-UT | Nuclear Valuation, In Support of Stipulation |
| New York State Pu | blic Serv | ice Commission | | |
| Iroquois Gas Transmission | 12/86 | Iroquois Gas Transmission System | 70363 | Gas Markets |
| Brooklyn Union Gas Company | 8/95 | Brooklyn Union Gas Company | 95-6-0761 | Panel on Industry Directions |
| Central Hudson, ConEdison and Niagara Mohawk | 9/00 | Central Hudson, ConEdison and Niagara Mohawk | 96-E-0909 96-E-0897 94-E-0098 94-E-0099 | Section 70, Approval of New Facilities |
| Central Hudson, New York State Electric & Gas, Rochester Gas & Electric | 5/01 | Joint Petition of NiMo, NYSEG, RG&E, Central Hudson, Constellation and Nine Mile Point | 01-E-0011 | Section 70, Rebuttal Testimony |
| Rochester Gas & Electric | 12/03 | Rochester Gas & Electric | 03-E-1231 | Sale of Nuclear Plant |
| Rochester Gas & Electric | 1/04 | Rochester Gas & Electric | 03-E-0765 02-E-0198 03-E-0766 | Sale of Nuclear Plant; Ratemaking Treatment of Sale |



| SPONSOR | DATE | CASE/APPLICANT | DOCKET NO. | SUBJECT |
|--|-----------------------|--|---|--|
| Rochester Gas and Electric and NY State Electric & Gas Corp | 2/10 | Rochester Gas & Electric NY State Electric & Gas Corp | 09-E-0715 09-E-0716 09-E-0717 09-E-0718 | Depreciation Policy |
| National Fuel Gas Corporation | 9/16 9/16 | National Fuel Gas Corporation | 16-G-0257 | Ring-fencing Policy |
| NextEra Energy Transmission New York | 8/18 | NextEra Energy Transmission New York | 18-T-0499 | Certificate of Need for Transmission Line, Vertical Market Power |
| NextEra Energy Transmission New York | 2/19 8/19 | NextEra Energy Transmission New York | 18-E-0765 | Certificate of Need for Transmission Line, Vertical Market Power |
| Nova Scotia Utility | and Rev | iew Board | | 1 |
| Nova Scotia Power | 9/12 | Nova Scotia Power | P-893 | Audit Reply |
| Nova Scotia Power | 8/14 | Nova Scotia Power | P-887 | Audit Reply |
| Nova Scotia Power | 5/16 | Nova Scotia Power | 2017-2019 Fuel Stability Plan | Used and Useful Ratemaking |
| NSP Maritime Link ("NSPML") | 12/16 2/17 5/17 | NSP Maritime Link ("NSPML") | M07718 NSPML Interim Cost Assessment Application | Used and Useful Ratemaking |
| NSP Maritime Link ("NSPML") | 10/19 | NSP Maritime Link ("NSPML") | M09277 NSPML 2020 Interim Assessment Application | Recovery of Depreciation and Return, Costs and Customer Benefits, Debt Service Coverage Ratio |



| SPONSOR | DATE | CASE/APPLICANT | DOCKET NO. | SUBJECT | |
|--------------------------------------|----------------------|--|---|---|--|
| Nova Scotia Power | 2/21 | Nova Scotia Power | M10013 Annapolis Tidal Generation Station Retirement: Request for Accounting Treatment and Net Book Value Recovery | Generation Plant Cost Recovery | |
| NSP Maritime Link ("NSPML") | 8/21 | NSP Maritime Link ("NSPML") | M10206 NSPML Final Cost Assessment Application | Prudence Review | |
| Nova Scotia Power | 1/22 | Nova Scotia Power | 2022-2024 General Rate Application | Decarbonization Policy, Recovery of Energy Transition Costs | |
| Oklahoma Corpora | ation Con | nmission | • | | |
| Oklahoma Natural Gas Company | 6/98 | Oklahoma Natural Gas Company | PUD 980000177 | Storage Issues | |
| Oklahoma Gas & Electric Company | 5/05 9/05 | Oklahoma Gas & Electric Company | PUD 200500151 | Prudence of McLain Acquisition | |
| Oklahoma Gas & Electric Company | 3/08 | Oklahoma Gas & Electric Company | PUD 200800086 | Acquisition of Redbud Generating Facility | |
| Oklahoma Gas & Electric Company | 8/14 1/15 | Oklahoma Gas & Electric Company | PUD 201400229 | Integrated Resource Plan | |
| Ontario Energy Board | | | | | |
| Market Hub Partners Canada, LP | 5/06 | Natural Gas Electric Interface Roundtable | File No. EB- 2005-0551 | Market-based Rates for Storage | |
| Ontario Power Generation | 9/13 2/14 5/14 | Ontario Power Generation | EB-2013-0321 | Prudence Review of Nuclear Project Management Processes | |



| SPONSOR | DATE | CASE/APPLICANT | DOCKET NO. | SUBJECT | | | |
|---|------------------------------------|--|--------------|--|--|--|--|
| Oregon Public Util | Oregon Public Utilities Commission | | | | | | |
| Hydro One Limited and Avista Corporation | 8/18 10/18 | Hydro One Limited and Avista Corporation | UM 1897 | Reasonableness and Sufficiency of the Governance, Bankruptcy, and Financial Ring-Fencing Stipulated Settlement Commitments | | | |
| Pennsylvania Pub | lic Utility | Commission | 1 | | | | |
| АТОС | 4/95 | Equitrans | R-00943272 | Rate Design, Unbundling | | | |
| АТОС | 3/96 4/96 | Equitrans | P-00940886 | Rate Design, Unbundling | | | |
| Rhode Island Publ | ic Utilitie | es Commission | | | | | |
| Newport Electric | 7/81 | Newport Electric | 1599 | Rate Attrition | | | |
| South County Gas | 9/82 | South County Gas | 1671 | Cost of Capital | | | |
| New England Energy Group | 7/86 | Providence Gas Company | 1844 | Cost Allocation, Rate Design | | | |
| Providence Gas | 8/88 | Providence Gas Company | 1914 | Load Forecast, Least-Cost Planning | | | |
| Providence Gas Company and The Valley Gas Company | 1/01 3/02 | Providence Gas Company and The Valley Gas Company | 1673 1736 | Gas Cost Mitigation Strategy | | | |
| The New England Gas Company | 3/03 | New England Gas Company | 3459 | Cost of Capital | | | |
| PPL Corporation and PPL Rhode Island Holdings, LLC | 11/21 | PPL Corporation, PPL Rhode Island Holdings, LLC, National Grid USA, and The Narragansett Electric Company | 21-09 | Merger Approval Issues | | | |
| Texas Public Utilit | y Commi | ssion | l | | | | |
| Southwestern Electric | 5/83 | Southwestern Electric | - | Cost of Capital, CWIP | | | |



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| P.U.C. General Counsel | 11/90 | Texas Utilities Electric Company | 9300 | Gas Purchasing Practices, Prudence |
| Oncor Electric Delivery Company | 8/07 | Oncor Electric Delivery Company | 34040 | Regulatory Policy, Rate of Return, Return of Capital and Consolidated Tax Adjustment |
| Oncor Electric Delivery Company | 6/08 | Oncor Electric Delivery Company | 35717 | Regulatory policy |
| Oncor Electric Delivery Company | 10/08 11/08 | Oncor, TCC, TNC, ETT, LCRA TSC, Sharyland, STEC, TNMP | 35665 | Competitive Renewable Energy Zone |
| CenterPoint Energy | 6/10 10/10 | CenterPoint Energy/Houston Electric | 38339 | Regulatory Policy, Risk, Consolidated Taxes |
| Oncor Electric Delivery Company | 1/11 | Oncor Electric Delivery Company | 38929 | Regulatory Policy, Risk |
| Cross Texas Transmission | 8/12 11/12 | Cross Texas Transmission | 40604 | Return on Equity |
| Southwestern Public Service | 11/12 | Southwestern Public Service | 40824 | Return on Equity |
| Lone Star Transmission | 5/14 | Lone Star Transmission | 42469 | Return on Equity, Debt, Cost of Capital |
| CenterPoint Energy Houston Electric, LLC | 6/15 | CenterPoint Energy Houston Electric, LLC | 44572 | Distribution Cost Recovery Factor |
| NextEra Energy, Inc. | 10/16 2/17 | Oncor Electric Delivery Company LLC, NextEra Energy | 46238 | Merger Application, Ring- fencing, Affiliate Interest, Code of Conduct |
| CenterPoint Energy Houston Electric, LLC | 4/19 6/19 | CenterPoint Energy Houston Electric, LLC | 49421 | Incentive Compensation |



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| Sun Jupiter Holdings LLC and IIF US Holding 2 LP | 11/19 | Sun Jupiter Holdings LLC and IIF US Holding 2 LP Acquisition of El Paso Electric Company | 49849 | Public Interest Standard, Ring-fencing, Regulatory Commitments, Rate Credit and Economic Considerations, Ownership and Governance Post-closing, Tax Matters |
| Texas-New Mexico Power Company and Avangrid, Inc. and NM Green Holdings, Inc. | 3/21 | Texas-New Mexico Power Company and Avangrid, Inc. and NM Green Holdings, Inc. | 51547 | Merger Approval Conditions |
| Texas Railroad Co | mmissio | n | I | |
| Western Gas Interstate Company | 1/85 | Southern Union Gas Company | 5238 | Cost of Service |
| Atmos Pipeline Texas | 9/10 1/11 | Atmos Pipeline Texas | GUD 10000 | Ratemaking Policy, Risk |
| Atmos Pipeline Texas | 1/17 4/17 | Atmos Pipeline Texas | GUD 10580 | Ratemaking Policy, Return on Equity, Rate Design Policy |
| Texas State Legisla | ature | I | | |
| CenterPoint Energy | 4/13 | Association of Electric Companies of Texas | SB 1364 | Consolidated Tax Adjustment Clause Legislation |
| Utah Public Servic | e Commi | ssion | Į | |
| AMAX Magnesium | 1/88 | Mountain Fuel Supply Company | 86-057-07 | Cost Allocation, Rate Design |
| AMAX Magnesium | 4/88 | Utah P&L/Pacific P&L | 87-035-27 | Merger & Acquisition |
| Utah Industrial Group | 7/90 8/90 | Mountain Fuel Supply | 89-057-15 | Gas Transportation Rates |
| AMAX Magnesium | 9/90 | Utah Power & Light | 89-035-06 | Energy Balancing Account |
| AMAX Magnesium | 8/90 | Utah Power & Light | 90-035-06 | Electric Service Priorities |



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| Questar Gas Company | 12/07 | Questar Gas Company | 07-057-13 | Benchmarking in Support of ROE |
| Vermont Public Se | ervice Boa | ard | 1 | |
| Green Mountain Power | 8/82 | Green Mountain Power | 4570 | Rate Attrition |
| Green Mountain Power | 12/97 | Green Mountain Power | 5983 | Cost of Service |
| Green Mountain Power | 7/98 9/00 | Green Mountain Power | 6107 | Rate Development |
| Virginia Corporati | ion Comn | nission | <u> </u> | |
| Virginia Electric and Power Company d/b/a Dominion Energy Virginia | 3/21 5/21 | Virginia Electric and Power Company d/b/a Dominion Energy Virginia | PUR-2021- 00058 | Regulatory Policy |
| Washington Utilit | ies and T | ransportation Commiss | ion | |
| Hydro One Limited and Avista Corporation | 9/18 | Hydro One Limited and Avista Corporation | U-170970 | Reasonableness and Sufficiency of the Governance, Bankruptcy, and Financial Ring-Fencing Stipulated Settlement Commitments |
| Wisconsin Public | Service C | ommission | 1 | |
| WEC & WICOR | 11/99 | WEC | 9401-Y0-100 9402-Y0-101 | Approval to Acquire the Stock of WICOR |
| Wisconsin Electric Power Company | 1/07 | Wisconsin Electric Power Co. | 6630-EI-113 | Sale of Nuclear Plant |
| Wisconsin Electric Power Company | 10/09 | Wisconsin Electric Power Co. | 6630-CE-302 | CPCN Application for Wind Project |
| Northern States Power Wisconsin | 10/13 | Xcel Energy (dba Northern States Power Wisconsin) | 4220-UR-119 | Fuel Cost Adjustments |



| SPONSOR | DATE | CASE/APPLICANT | DOCKET NO. | SUBJECT |
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| Wisconsin Electric Power Company | 11/13 | Wisconsin Electric Power Co. | 6630-FR-104 | Fuel Cost Adjustment |
| Wisconsin Gas LLC | 5/14 | Wisconsin Gas LLC | 6650-CG-233 | Gas Line Expansion, Reasonableness |
| WE Energy | 8/14 1/15 3/15 | WE Energy/Integrys | 9400-YO-100 | Merger Approval |
| Wisconsin Public Service Corporation | 1/19 | Madison Gas and Electric Company and Wisconsin Public Service Corporation | 5-BS-228 | Evaluation of Models Used in Resource Investment Decisions |



| SPONSOR | DATE | CASE/APPLICANT | DOCKET NO. | SUBJECT |
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| American Arbitra | tion Asso | ciation | 1 | 1 |
| Michael Polsky | 3/91 | M. Polsky vs. Indeck Energy | - | Corporate Valuation, Damages |
| ProGas Limited | 7/92 | ProGas Limited v. Texas Eastern | - | Gas Contract Arbitration |
| Attala Generating Company | 12/03 | Attala Generating Co v. Attala Energy Co. | 16-Y-198- 00228-03 | Power Project Valuation, Breach of Contract, Damages |
| Nevada Power Company | 4/08 | Nevada Power v. Nevada Cogeneration Assoc. #2 | - | Power Purchase Agreement |
| Sensata Technologies, Inc./EMS Engineered Materials Solutions, LLC | 1/11 | Sensata Technologies, Inc./EMS Engineered Materials Solutions, LLC v. Pepco Energy Services | 11-198-Y- 00848-10 | Change in Usage Dispute, Damages |
| Sandy Creek Energy Associates, LP | 9/17 | Sandy Creek Energy Associates, LP vs. Lower Colorado River Authority | 01-16-0002- 6892 | Power Purchase Agreement, Analysis of Damages |
| Dynegy Midwest Generation, LLC | 1/21 2/21 | BNSF Railway Company and Norfolk Southern Railway Company v. Dynegy Midwest Generation, LLC | 01-18-0001- 3283 | Electric Generation Asset Management |
| Canadian Arbitrat | ion Pane | l | | · |
| Hydro-Québec | 4/15 5/16 7/16 | Hydro-Fraser et al v. Hydro-Québec | - | Electric Price Arbitration |
| Commonwealth of | f Massach | usetts, Appellate Tax B | oard | |
| NStar Electric Company | 8/14 | NStar Electric Company | F316346 F319254 | Valuation Methodology |



| SPONSOR | DATE | CASE/APPLICANT | DOCKET NO. | SUBJECT |
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| Western Massachusetts Electric Company | 2/16 | Western Massachusetts Electric Company v. Board of Assessors of The City of Springfield | 315550 319349 | Valuation Methodology |
| Commonwealth of | f Massach | usetts, Suffolk Superior | Court | |
| John Hancock | 1/84 | Trinity Church v. John Hancock | C.A. No. 4452 | Damages Quantification |
| Court of Common | Pleas of I | Philadelphia County, Civ | il Division | |
| Sunoco Marketing & Terminals LP | 11/16 | Sunoco Marketing & Terminals, LP v. South Jersey Resources Group | 150302520 | Damages Quantification |
| State of Colorado I | District C | ourt, County of Garfield | | |
| Questar Corporation, et al | 11/00 | Questar Corporation, et al. | 00CV129-A | Partnership Fiduciary Duties |
| State of Delaware, | Court of | Chancery, New Castle Co | ounty | |
| Wilmington Trust Company | 11/05 | Calpine Corporation vs. Bank of New York and Wilmington Trust Company | C.A. No. 1669-N | Bond Indenture Covenants |
| Illinois Appellate | Court, Fif | th Division | I | |
| Norweb, PLC | 8/02 | Indeck No. America v. Norweb | 97 CH 07291 | Breach of Contract, Power Plant Valuation |
| Independent Arbi | tration Pa | anel | | |
| Alberta Northeast Gas Limited | 2/98 | ProGas Ltd., Canadian Forest Oil Ltd., AEC Oil & Gas | - | |
| Ocean State Power | 9/02 | Ocean State Power vs. ProGas Ltd. | 2001/2002 Arbitration | Gas Price Arbitration |
| Ocean State Power | 2/03 | Ocean State Power vs. ProGas Ltd. | 2002/2003 Arbitration | Gas Price Arbitration |



| SPONSOR | DATE | CASE/APPLICANT | DOCKET NO. | SUBJECT |
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| Ocean State Power | 6/04 | Ocean State Power vs. ProGas Ltd. | 2003/2004 Arbitration | Gas Price Arbitration |
| Shell Canada Limited | 7/05 | Shell Canada Limited and Nova Scotia Power Inc. | - | Gas Contract Price Arbitration |
| International Cour | rt of Arbi | tration | | 1 |
| Wisconsin Gas Company, Inc. | 2/97 | Wisconsin Gas Co. vs. Pan-Alberta | 9322/CK | Contract Arbitration |
| Minnegasco, A Division of NorAm Energy Corp. | 3/97 | Minnegasco vs. Pan- Alberta | 9357/CK | Contract Arbitration |
| Utilicorp United Inc. | 4/97 | Utilicorp vs. Pan- Alberta | 9373/CK | Contract Arbitration |
| IES Utilities | 97 | IES vs. Pan-Alberta | 9374/CK | Contract Arbitration |
| Mitsubishi Heavy Industries, Ltd., and Mitsubishi Nuclear Energy Systems, Inc. | 12/15 2/16 | Southern California Edison Company, Edison Material Supply LLC, San Diego Gas & Electric Co., and the City of Riverside vs. Mitsubishi Heavy Industries, Ltd., and Mitsubishi Nuclear Energy Systems, Inc. | 19784/AGF/RD | Damages Arising Under a Nuclear Power Equipment Contract |
| International Chai | mber of C | ommerce | | |
| Senvion GmbH | 4/17 | Senvion GmbH v. EDF Renewable Energy, Inc. | 01-15-0005- 4590 | Breach-Related Damages, Unfair Competition, Unjust Enrichment |
| Senvion GmbH | 9/17 | Senvion GmbH v. EEN CA Lac Alfred Limited Partnership, et al. | 21535 | Breach-Related Damages |



| SPONSOR | DATE | CASE/APPLICANT | DOCKET NO. | SUBJECT | | |
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| Senvion GmbH | 12/17 | Senvion GmbH v. EEN CA Massif du Sud Limited Partnership, et al. | 21536 | Breach-Related Damages | | |
| EDF Inc. | 3/21 | Exelon Generating Company, LLC v. EDF Inc. | 25479/MK | Valuation of Nuclear Power Plants | | |
| State of New Jerse | y, Mercer | County Superior Court | | <u> </u> | | |
| Transamerica Corp., et al. | 7/07 10/07 | IMO Industries Inc. vs. Transamerica Corp., et al. | L-2140-03 | Breach-Related Damages, Enterprise Value | | |
| State of New York, | Nassau (| County Supreme Court | | <u> </u> | | |
| Steel Los III, LP | 6/08 | Steel Los II, LP & Associated Brook, Corp v. Power Authority of State of NY | Index No. 5662/05 | Property Seizure | | |
| State of South Care | olina, U.S | District Court for the D | istrict of South Car | olina | | |
| Toshiba Corporation | 4/20 | Lightsey v. Toshiba Corp. | Action No. 9:18- cv-190 | Project Delays and Cost Overruns Analyses | | |
| Province of Albert | a, Court o | of Queen's Bench | | I | | |
| Alberta Northeast Gas Limited | 5/07 | Cargill Gas Marketing Ltd. vs. Alberta Northeast Gas Limited | Action No. 0501- 03291 | Gas Contracting Practices | | |
| Quebec Superior Court, District of Gaspé | | | | | | |
| Senvion Canada and Senvion GmbH | 2/19 | Senvion Canada and Senvion GmbH v. Suspendem Rope Access | - | Breach-Related Damages, Reimbursement of Liquidated Damages, Reimbursement of Scheduled Maintenance Penalties | | |



| SPONSOR | DATE | CASE/APPLICANT | DOCKET NO. | SUBJECT |
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| State of New Hamp | oshire, Bo | oard of Tax and Land Ap | opeals | 1 |
| Public Service Company of New Hampshire d/b/a Eversource Energy | 11/18 | Appeal of Public Service Company of New Hampshire d/b/a Eversource Energy | 28873-14-15- 16-17PT | Valuation of Transmission and Distribution Assets |
| State of New Hamp | oshire, Ju | dicial Court-Rockingha | m Superior Court | · |
| Public Service Company of New Hampshire d/b/a Eversource Energy | 10/18 | Public Service Company of New Hampshire d/b/a Eversource Energy v. City of Portsmouth | 218-2016-CV- 00899 218-2017-CV- 00917 | Valuation of Transmission and Distribution Assets |
| State of New Hamp | oshire, Su | perior Court-Merrimac | ck County | |
| Public Service Company of New Hampshire d/b/a Eversource Energy | 3/18 | Public Service Company of New Hampshire d/b/a Eversource Energy v. Town of Bow | 217-2015-CV- 00469 217-2016-CV- 00474 217-2017-CV- 00422 | Valuation of Transmission and Distribution Assets |
| State of Rhode Isla | nd, Prov | idence City Court | | |
| Aquidneck Energy | 5/87 | Laroche vs. Newport | - | Least-Cost Planning |
| State of Texas, Hut | chinson | County Court | _ | |
| Western Gas Interstate | 5/85 | State of Texas vs. Western Gas Interstate Co. | 14,843 | Cost of Service |
| State of Utah, Thir | d Distric | Court | | |
| PacifiCorp & Holme, Roberts & Owen, LLP | 1/07 | USA Power & Spring Canyon Energy vs. PacifiCorp. et al. | Civil No. 050903412 | Breach-Related Damages |
| U.S. Bankruptcy Co | ourt, Dist | rict of New Hampshire | • | |
| EUA Power Corporation | 7/92 | EUA Power Corporation | BK-91-10525- JEY | Pre-Petition Solvency |



| SPONSOR | DATE | CASE/APPLICANT | DOCKET NO. | SUBJECT | | | |
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| U.S. Bankruptcy Court, District of New Jersey | | | | | | | |
| Ponderosa Pine Energy Partners, Ltd. | 7/05 | Ponderosa Pine Energy Partners, Ltd. | 05-21444 | Forward Contract Bankruptcy Treatment | | | |
| U.S. Bankruptcy Co | ourt, No. I | District of New York | <u></u> | 1 | | | |
| Cayuga Energy, NYSEG Solutions, The Energy Network | 09/09 | Cayuga Energy, NYSEG Solutions, The Energy Network | 06-60073-6-sdg | Going Concern | | | |
| U.S. Bankruptcy Co | ourt, So. I | District of New York | <u> </u> | 1 | | | |
| Johns Manville | 5/04 | Enron Energy Mktg. v. Johns Manville; Enron No. America v. Johns Manville | 01-16034 (AJG) | Breach of Contract, Damages | | | |
| U.S. Bankruptcy Co | ourt, Nort | thern District of Texas | | | | | |
| Southern Maryland Electric Cooperative, Inc., and Potomac Electric Power Company | 11/04 | Mirant Corporation, et al. v. SMECO | 03-4659; Adversary No. 04-4073 | PPA Interpretation, Leasing | | | |
| U.S. Bankruptcy Co | ourt, Sout | thern District of Texas | <u> </u> | | | | |
| Ultra Petroleum Corp. et al | 3/17 | Ultra Petroleum Corp. et al | 16-32202 (MI) | Valuation | | | |
| U.S. Court of Feder | ral Claims | 5 | I | 1 | | | |
| Boston Edison Company | 7/06 11/06 | Boston Edison Company v. United States | 99-447C 03-2626C | Spent Nuclear Fuel Breach, Damages | | | |
| Consolidated Edison Company | 7/07 | Consolidated Edison Company | 06-305T | Evaluation of Lease Purchase Option | | | |
| Consolidated Edison Company | 2/08 6/08 | Consolidated Edison Company v. United States | 04-0033C | Spent Nuclear Fuel Breach, Damages | | | |



| SPONSOR | DATE | CASE/APPLICANT | DOCKET NO. | SUBJECT |
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| Vermont Yankee Nuclear Power Corporation | 6/08 | Vermont Yankee Nuclear Power Corporation v. United States | 03-2663C | Spent Nuclear Fuel Breach, Damages |
| Virginia Electric and Power Company d/b/a Dominion Virginia Power | 3/19 | Virginia Electric and Power Company d/b/a Dominion Virginia Power v. United States | 17-464C | Double Recovery, Cost Recovery of Infrastructure Improvements |
| U.S. District Court | , Boulder | · County, Colorado | I | 1 |
| KN Energy, Inc. | 3/93 | KN Energy vs. Colorado GasMark, Inc. | 92 CV 1474 | Gas Contract Interpretation |
| U. S. District Court | , Norther | n California | | |
| Pacific Gas & Electric Co./PGT PG&E/PGT Pipeline Exp. Project | 4/97 | Norcen Energy Resources Limited | C94-0911 VRW | Fraud Claim |
| U. S. District Court | , District | of Connecticut | | |
| Constellation Power Source, Inc. | 12/04 | Constellation Power Source, Inc. v. Select Energy, Inc. | Civil Action 304 CV 983 (RNC) | ISO Structure, Breach of Contract |
| U.S. District Court, | Norther | n District of Illinois, Eas | tern Division | 1 |
| U.S. Securities and Exchange Commission | 4/12 | U.S. Securities and Exchange Commission v. Thomas Fisher, Kathleen Halloran, and George Behrens | 07 C 4483 | Prudence, PBR |
| U. S. District Court | , Massacl | nusetts | 1 | 1 |
| Eastern Utilities Associates & Donald F. Pardus | 3/94 | NECO Enterprises Inc. vs. Eastern Utilities Associates | Civil Action No. 92-10355-RCL | Seabrook Power Sales |



| SPONSOR | DATE | CASE/APPLICANT | DOCKET NO. | SUBJECT |
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| U. S. District Court | , Montan | a | | |
| KN Energy, Inc. | 9/92 | KN Energy v. Freeport MacMoRan | CV 91-40-BLG- RWA | Gas Contract Settlement |
| U.S. District Court, | New Har | npshire | | |
| Portland Natural Gas Transmission and Maritimes & Northeast Pipeline | 9/03 | Public Service Company of New Hampshire vs. PNGTS and M&NE Pipeline | С-02-105-В | Impairment of Electric Transmission Right-of-Way |
| U. S. District Court | , Souther | n District of New York | | 1 |
| Central Hudson Gas & Electric | 11/99 8/00 | Central Hudson v. Riverkeeper, Inc., Robert H. Boyle, John J. Cronin | Civil Action 99 Civ 2536 (BDP) | Electric Restructuring, Environmental Impacts |
| Consolidated Edison | 3/02 | Consolidated Edison v. Northeast Utilities | Case No. 01 Civ. 1893 (JGK) (HP) | Industry Standards for Due Diligence |
| Merrill Lynch & Company | 1/05 | Merrill Lynch v. Allegheny Energy, Inc. | Civil Action 02 CV 7689 (HB) | Due Diligence, Breach of Contract, Damages |
| U. S. District Court, | , Eastern | District of Virginia | | 1 |
| Aquila, Inc. | 1/05 2/05 | VPEM v. Aquila, Inc. | Civil Action 304 CV 411 | Breach of Contract, Damages |
| U. S. District Court | , Western | n District of Virginia | | |
| Washington Gas Light Company | 8/15 9/15 | Washington Gas Light Company v. Mountaineer Gas Company | Civil Action No. 5:14-cv-41 | Nominations and Gas Balancing, Lost and Unaccounted for Gas, Damages |



| SPONSOR | DATE | CASE/APPLICANT | DOCKET NO. | SUBJECT | | | |
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| U. S. District Court, Portland Maine | | | | | | | |
| ACEC Maine, Inc. et al. | 10/91 | CIT Financial vs. ACEC Maine | 90-0304-B | Project Valuation | | | |
| Combustion Engineering | 1/92 | Combustion Eng. vs. Miller Hydro | 89-0168P | Output Modeling, Project Valuation | | | |
| U.S. Securities and | l Exchang | e Commission | | | | | |
| Eastern Utilities Association | 10/92 | EUA Power Corporation | File No. 70-8034 | Value of EUA Power | | | |
| U.S. Tax Court in Il | llinois | L | I | I | | | |
| Exelon Corporation | 4/15 6/15 | Exelon Corporation, as Successor by Merger to Unicom Corporation and Subsidiaries et al. v. Commission of Internal Revenue | 29183-13 29184-13 | Valuation of Analysis of Lease Terms and Quantify Plant Values | | | |
| Council of the Dist | Council of the District of Columbia Committee on Consumer and Regulatory Affairs | | | | | | |
| Potomac Electric Power Co. | 7/99 | Potomac Electric Power Co. | Bill 13-284 | Utility Restructuring | | | |