

BEFORE THE
STATE OF RHODE ISLAND AND PROVIDENCE PLANTATIONS
PUBLIC UTILITIES COMMISSION

RE: THE NARRAGANSETT ELECTRIC)	
COMPANY d/b/a/ NATIONAL GRID)	
REVIEW OF POWER PURCHASE)	DOCKET NO. 4929
AGREEMENT PURSUANT TO)	
R.I. GEN. LAWS §39-31-1 TO 9)	

DIRECT TESTIMONY OF

MATTHEW I. KAHAL

ON BEHALF OF THE
DIVISION OF PUBLIC UTILITIES AND CARRIERS

APRIL 12, 2019

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I. QUALIFICATIONS

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Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A. My name is Matthew I. Kahal. I am employed as an independent consultant retained in this matter by the Division of Public Utilities and Carriers (“Division”). My business address is 1108 Pheasant Crossing, Charlottesville, Virginia 22901.

Q. PLEASE STATE YOUR EDUCATIONAL BACKGROUND.

A. I hold B.A. and M.A. degrees in economics from the University of Maryland and have completed course work and examination requirements for the Ph.D. degree in economics. My areas of academic concentration included industrial organization, economic development and econometrics.

Q. WHAT IS YOUR PROFESSIONAL BACKGROUND?

 I have been employed in the area of energy, utility and telecommunications consulting for the past 35 years working on a wide range of topics. Most of my work has focused on electric utility integrated planning, plant licensing, environmental issues, mergers and financial issues. I was a co-founder of Exeter Associates, and

1 from 1981 to 2001 I was employed at Exeter Associates as a Senior Economist and
2 Principal. During that time, I took the lead role at Exeter in performing cost of capital
3 and financial studies. In recent years, the focus of much of my professional work has
4 shifted to electric utility restructuring and competition.

5 Prior to entering consulting, I served on the Economics Department faculties
6 at the University of Maryland (College Park) and Montgomery College teaching
7 courses on economic principles, development economics and business.

8 A complete description of my professional background is provided in
9 Appendix A.

10 Q. HAVE YOU PREVIOUSLY TESTIFIED AS AN EXPERT WITNESS
11 BEFORE UTILITY REGULATORY COMMISSIONS?

12 A. Yes. I have testified before approximately two-dozen state and federal utility
13 commissions in more than 430 separate regulatory cases. My testimony has addressed
14 a variety of subjects including fair rate of return, resource planning, financial
15 assessments, load forecasting, competitive restructuring, rate design, purchased power
16 contracts, merger economics and various other regulatory policy issues. These cases
17 have involved electric, gas, water and telephone utilities. A list of these cases may be
18 found in Appendix A, with my statement of qualifications.

19 Q. WHAT PROFESSIONAL ACTIVITIES HAVE YOU ENGAGED IN SINCE
20 LEAVING EXETER AS A PRINCIPAL IN 2001?

21 A. Since 2001, I have worked on a variety of consulting assignments pertaining to
22 electric restructuring, purchase power contracts, environmental controls, cost of
23 capital and other regulatory issues. Current and recent clients include the U.S.
24 Department of Justice, U.S. Air Force, U.S. Department of Energy, the Federal
25 Energy Regulatory Commission, the U.S. Environmental Protection Agency,

1 Connecticut Attorney General, Pennsylvania Office of Consumer Advocate, New
2 Jersey Division of Rate Counsel, Rhode Island Division of Public Utilities, Louisiana
3 Public Service Commission, Arkansas Public Service Commission, the Ohio
4 Consumers Counsel, the New Hampshire Consumer Advocate, Maryland Department
5 of Natural Resources and Energy Administration, and private sector clients.

6 Q. HAVE YOU PREVIOUSLY TESTIFIED BEFORE THE RHODE ISLAND
7 COMMISSION?

8 A. Yes. I have testified on cost of capital and other matters before this Commission in
9 gas and electric cases during the past 25 years. This includes my testimony on fair
10 rate of return submitted in Narragansett Electric Company's 2009, 2012, and 2017
11 electric/gas base rate cases (Docket Nos. 4065, 4323, and 4770). A listing of those
12 cases is provided in my attached Statement of Qualifications.

13 Please note that in addition to my participation in past Rhode Island
14 Commission rate cases, I have assisted the Division with Narragansett's applications
15 in 2012 and 2017 for authority to issue long-term debt (Division Docket Nos. D-12-
16 12 and D-17-36). The Company's 2017 debt issue Application was resolved by a
17 settlement agreement approved by the Division.

II. INTRODUCTION AND SUMMARY

1 **A. Overview**

2 Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY IN THIS DOCKET?

3 A. I have been retained by the Division of Public Utilities and Carriers (“the Division”)
4 to assist in the review of one key aspect of a request by Narragansett Electric
5 Company (“NEC” or “the Company”) for approval of a 20-year power purchase
6 agreement (“PPA”) with a non-utility developer, DWW Rev 1, LLC (“DWW”).
7 Under this PPA the developer would sell to NEC the energy generation supply and
8 renewable energy certificates (“RECs”) from a 400 MW off-shore wind facility
9 (Revolution Wind) which will be constructed if the PPA is approved. This PPA
10 would be supported financially by the Company’s electric utility distribution
11 customers pursuant to a cost recovery mechanism to be approved by the Commission.

12 As part of the PPA regulatory approval process, the Company proposes that
13 its retail electric customers in Rhode Island pay a “Remuneration Rate”, over and
14 above all (over-market) net costs associated with the PPA, of 2.75 percent of contract
15 payments. This would amount to about \$4.4 million per year, or a total of about \$88
16 million per year over the life of the PPA. The Company has filed testimony in
17 support of that Remuneration Rate request, and I have been asked to evaluate the
18 validity of that supporting testimony and the Remuneration Rate itself.

19 Q. BEFORE TURNING TO ISSUES PERTAINING TO THE
20 REMUNERATION RATE, PLEASE PROVIDE YOUR UNDERSTANDING
21 OF THE PPA.

22 A. The background on and operation of the PPA are described in considerable detail by
23 Company witnesses Brennan and DiDomenico in their joint testimony (B/D
24 testimony). The Company, in conjunction with the Massachusetts electric

1 distribution utilities (including NEC’s corporate affiliate, Massachusetts Electric
2 Company), undertook a Request for Proposals (“RFP”) process for off-shore wind
3 energy PPAs. The Company’s participation has taken place pursuant to Rhode
4 Island’s Affordable Clean Energy Security Act (“ACES Act”). After conducting the
5 RFP process, the Company, in consultation with the Rhode Island Office of Energy
6 Resources (OER) and the DPUC, selected the Revolution Wind project in Rhode
7 Island. The Company and DWW proceeded to negotiate a PPA contract, which is
8 subject to this Commission’s approval. The target date for commercial operation is
9 January 15, 2024, and the Company expects that date to be met.

10 Q. PLEASE DESCRIBE THE PPA PRICING.

11 A. Under the PPA, NEC will purchase 100 percent of the Revolution Wind facility’s
12 output and pay a 20-year fixed rate of \$98.425 cents per MWh. There are no capacity
13 charges, and this is the delivered-to-the grid price. The pricing is fully defined in
14 Exhibit D to the PPA. Exhibit F to the PPA estimates that annual deliveries will be
15 1,631,795 MWh, which implies annual PPA payments by the Company of about \$161
16 million, or \$3.21 billion over the 20-year life of the contract.

17 Q. NEC IS A DISTRIBUTION UTILITY. WHAT WILL IT DO WITH THE
18 REVOLUTION WIND ENERGY IT PURCHASES UNDER THE PPA?

19 A. According to the Brennan/DiDomenico testimony (pages 40-41), the Company will
20 liquidate the purchased energy in ISO-NE wholesale energy market (presumably the
21 spot energy market). The RECs would be used to meet the Company’s Renewable
22 Energy Standard (“RES”) with any surplus sold into the RECs market through a
23 competitive process. All such revenue obtained by NEC will be used to defray the
24 contract payments to DWW under the PPA.

1 Q. HOW DOES THIS ARRANGEMENT AFFECT RHODE ISLAND
2 ELECTRIC UTILITY CUSTOMERS OF NEC?

3 A. The revenue received from selling the purchased energy and surplus RECs may only
4 partially offset the \$98.425 per MWh PPA payments. The Company therefore has
5 proposed to use a cost recovery mechanism (or a crediting mechanism if the PPA
6 energy is below market) for the difference, referred to as the Long-Term Contracting
7 for Renewable Energy Recovery (“LTCRER”) Provision. The approximately \$4.4
8 million annual Remuneration Rate would be recovered from utility customers under
9 that mechanism as well. The mechanism also provides for an annual reconciliation or
10 “true up” to ensure that NEC obtains dollar-for-dollar recovery of all PPA payments
11 and the applicable Remuneration Rate amount. It is my understanding that such a
12 cost recovery mechanism is permitted under the ACES legislation, subject to
13 Commission approval. Please note that throughout this testimony I assume that an
14 explicit cost recovery mechanism, such as that proposed by the Company, that would
15 provide full cost recovery if approved by the Commission for this PPA.

16 Q. DOES THE ACES LEGISLATION MANDATE THE 2.75 PERCENT
17 REMUNERATION?

18 A. No, it does not. It is essentially silent on this issue, neither mandating remuneration
19 nor prohibiting it, which I understand to mean that any remuneration awarded the
20 Company for this PPA would be entirely at the discretion of the Commission.

21 Q. ARE YOU MAKING ANY RECOMMENDATION CONCERNING
22 COMMISSION APPROVAL OF THIS PPA?

23 A. No, I am not as I have not performed a comprehensive review of this PPA or the RFP
24 process that gave rise to the PPA. My understanding is that the Division does support
25 approval of the PPA as in the public interest and concludes that it is likely to provide

1 substantial net energy, economic and environmental benefits for utility customers
2 over its 20-year life.

3 Q. ARE YOU SPONSORING A RECOMMENDATION OF THE PROPOSED
4 REMUNERATION RATE?

5 A. I do not support the 2.75 percent proposed Remuneration Rate which would collect
6 about \$88 million over and above all net PPA-related costs. My testimony explains
7 why this amount is excessive and unreasonable and why the arguments supporting the
8 Company's request either are incorrect, unpersuasive or unsupported. While I do not
9 support the award of a specific remuneration amount, the Division intends to provide
10 guidance to the Commission on this issue separate from my testimony.

11 Q. DOES THE COMPANY HAVE A WITNESS PROVIDING EVIDENCE
12 AND SUPPORT FOR THE 2.75 PERCENT REMUNERATION RATE?

13 A. Yes. Mr. Robert Hevert, an outside consultant, presents extensive testimony
14 supporting the proposed Remuneration Rate and why he believes it to be appropriate.
15 My testimony explains why his analysis and arguments are incorrect. In fact, other
16 than his reference to a non applicable law, his testimony does not support any
17 specific Remuneration Rate amount, merely the notion that some substantial
18 compensation to the Company would be appropriate.

19 **B. Summary of Findings**

20 Q. HOW DID THE COMPANY DETERMINE THAT \$88 MILLION, OR 2.75
21 PERCENT OF PPA PAYMENTS, IS THE CORRECT OR APPROPRIATE
22 AMOUNT OF REMUNERATION?

23 A. There is no calculation or computation performed by or for the Company
24 demonstrating a need for 2.75 percent or any specific amount of remuneration.
25 Instead, the stated rationale for the 2.75 percent figure is that this amount is

1 authorized in other Rhode Island legislation which does not cover this PPA,
2 specifically the Long-Term Contract Standard (“LTCS”) for Renewable Energy.
3 (Hevert testimony, page 6 and response to Division I - 5). In citing to that other, non-
4 applicable legislation (which does not cover the Revolution Wind PPA), Mr. Hevert
5 specifically concedes that the ACES Act—the legislation controlling this PPA—
6 provides for no remuneration at all. (Id.)

7 Q. HAS THE COMPANY ASSERTED ANY COST OR COST OF CAPITAL
8 BASIS FOR ITS PROPOSED REMUNERATION RATE?

9 A. No, it has not, at least not specifically. The Company’s testimony and data responses
10 do not identify any specific additional risk that the Company is taking on as a result
11 of the PPA, discussing in general terms the “burden” it would place on Company’s
12 balance sheet and alleged reduction in financial flexibility. Witness Hevert makes a
13 number of vague statements suggesting that credit rating agencies and possibly equity
14 investors may have concerns resulting from the Company entering into this very large
15 financial obligation. The result is that he suggests (without any specific evidence or
16 analysis) that it is possible that the PPA could cause an increase in the cost of capital.
17 But this possible increase is not quantified, and Company witness Hevert is not
18 definitive in asserting that such an increase would actually happen – merely that it is
19 possible. This asserted potential increase in the Company’s cost of capital due to the
20 PPA is part of the Company’s argument for approving the requested Remuneration
21 Rate as shareholder “compensation”.

22 Q. PLEASE SUMMARIZE YOUR MAIN FINDINGS CONCERNING THE
23 REQUESTED REMUNERATION RATE.

24 A. After reviewing the PPA, Company testimony and responses to Division data
25 responses, the following are my principal findings:

- 1 • The requested Remuneration Rate will produce a very large increase in profits
2 (about \$4.4 million per year or \$88 million over the life of the PPA) for the
3 Company at the expense of Rhode Island ratepayers. Using information from
4 last year’s NEC rate case settlement, I calculate that the requested \$4.4
5 million per year would increase the Company’s electric distribution return on
6 equity (ROE) by about 0.9 percentage points, increasing it from the settlement
7 authorized figure of 9.275 percent to about 10.2 percent. I note that the 10.2
8 percent figure approximates the ROE requested in that case by the Company
9 and sponsored by Mr. Hevert.

- 10 • While the Company discusses the need for “compensation” for taking on this
11 PPA, it has failed to clearly identify or quantify any additional costs that it
12 would incur as a result of the PPA. Thus, remuneration has not been shown to
13 be related to or supported by any additional utility costs caused by the PPA.

- 14 • Importantly, if NEC actually does incur any additional costs as a result of the
15 PPA (and my testimony discusses possible examples), all such costs would be
16 fully recovered as part of the normal utility ratemaking process. Hence, the
17 hypothesized additional costs speculatively and vaguely discussed by the
18 Company cannot serve to support the Remuneration Rate. That would
19 constitute “double recovery” and would be improper.

- 20 • The Company argues exhaustively that it is its strong balance sheet and the
21 willingness of investors to make that balance sheet available to the developer
22 that makes this beneficial PPA possible. While the Company certainly plays a
23 key role in facilitating the contract, it is really the utility customers who make
24 this PPA feasible by providing the developer and seller of the wind energy
25 (DWW) with a 20-year market pricing financial hedge. The Company’s role
26 is primarily one of administering the flow of funds between the developer and
27 utility customers of NEC.

- 28 • The PPA itself is really a market price hedge, i.e, the developer/seller receives
29 a 20-year fixed price for the delivered wind energy and therefore need not
30 accept any energy market or REC market pricing risk. That is the central
31 purpose and rationale for the PPA. Utility customers therefore will bear 100
32 percent of this market pricing risk, and NEC accepts none of the market price
33 risk. Of course, the Seller will bear all of the project development and facility
34 operational risks, including the risk of how much energy the project will
35 produce over the course of the PPA. These facts concerning risk allocation
36 undermine the Company’s argument over the Remuneration Rate, particularly
37 one the size that it has requested.

- 1 • The Company argues that the PPA exposes it to variability in its earnings and
2 cash flow, and this variability could weaken its credit quality. This argument
3 is largely incorrect as the cost recovery mechanism fully protects the
4 Company's earnings and cash flow over time.

- 5 • The Company complains that absent remuneration, it will not be compensated
6 for making its balance sheet capital available to the developer/seller to
7 facilitate the PPA. This is not true. NEC will receive a fair return on equity
8 of 9.275 percent (or whatever is approved in the future) for its balance sheet
9 equity that supports its rate base. My testimony identifies other potential
10 sources of NEC investor return as a result of this PPA.

- 11 • The Company complains that this \$3.21 billion financial obligation (larger
12 than the Company's equity base and net utility plant) is burdensome and an
13 enormous financial exposure. This portrayal of financial burden is highly
14 misleading. On an ongoing basis, the developer/seller will bill the Company
15 on average about \$13 million per month, and the Company will promptly
16 recover that amount (subject to a dollar-for-dollar true up) from the ISO-NE
17 energy market, the RECs market and utility customers within a few weeks.
18 While the Company has not analyzed or quantified this short-term cash need,
19 at most this suggests a very manageable increase in the Company's normal
20 cash working capital requirement. The Company intends to put this additional
21 working capital requirement (if there is any) in rate base and earn a return.

- 22 • No credible evidence has been provided that the PPA will weaken the
23 Company's credit ratings or quality in any way. Even if that were to happen
24 and the Company took remedial action (such as adding equity to its capital
25 structure to offset any weakening), the Company would be fully compensated
26 through the ratemaking process.

- 27 • Witness Hevert presents a very detailed analysis purporting to show that the
28 PPA serves to reduce the developer/seller's project cost of capital significantly
29 and that this is a utility customer benefit. While it is true that the PPA does
30 reduce financing costs for the developer, it is because the PPA transfers 100
31 percent of market pricing risk to utility customers. It is customer acceptance
32 of that risk that provides that savings for the developer/seller and renders the
33 Project viable. Mr. Hevert's developer cost of capital analysis simply has
34 nothing to do with and cannot support the requested Remuneration Rate.

- 35 • The provision of a utility profit component for a PPA is outside the
36 mainstream of public utility regulation. Utility's are not normally allowed a

1 return in the absence of any investment. Other than through legislation in
2 Massachusetts and Rhode Island, the Company could not cite any applicable
3 precedents for a remuneration rate of any amount.

4 • For all of the reasons listed above the Company's financial burden argument
5 for the Remuneration Rate is unpersuasive and in some instances just plain
6 wrong. The Company is correct, however, that its participation in what is
7 believed to be a beneficial PPA is voluntary. Thus, the valid basis for
8 remuneration of some reasonable amount would be that the Company is
9 cooperating with the State of Rhode Island and the Commission in providing a
10 beneficial transaction for utility customers and in addressing important policy
11 goals of the ACES Act. That should be the proper context for considering the
12 issue of remuneration.

13 • In 2018 net present value terms, it has been estimated that the net savings to
14 utility customers from this transaction is about \$91 million, whereas the
15 requested remuneration (when expressed as a 2018 net present value amount)
16 is about \$37 million. The remuneration request is unreasonably large relative
17 to the estimated benefits given the fact that it is utility customers that are
18 accepting 100 percent of the market price risk, thereby making this PPA
19 possible. The Company accepts virtually no risk. I recommend that the
20 Commission consider this risk bearing inequity when determining how much,
21 if any, remuneration amount is fair.

22 Q. PLEASE DESCRIBE THE REMAINDER OF YOUR TESTIMONY.

23 A. In Section III of my testimony, I begin by summarizing the arguments of the
24 Company and Witness Hevert concerning why the PPA constitutes a financial burden
25 for NEC that should be mitigated with the requested Remuneration Rate. The next
26 section evaluates those arguments explaining why they are incorrect. In that section, I
27 also consider the possibility that the PPA may cause NEC to incur some additional
28 costs other than PPA payments. I explain how those costs then would be fully
29 recovered by NEC under standard Commission ratemaking procedures. Section III
30 presents some brief conclusions concerning the remuneration issue.

1 **III. EVALUATION OF NEC'S REQUEST FOR THE REMUNERATION RATE**

2 **A. Witness Hevert's Financial Arguments**

3 Q. HOW DID THE COMPANY DETERMINE ITS 2.75 PERCENT
4 REMUNERATION RATE?

5 A. Based on developer estimates of energy supply under the PPA, the requested
6 Remuneration Rate would produce additional (pre-tax) profits for the Company of
7 \$4.4 million annually or about \$88 million over the life of the PPA. This additional
8 profit, without any additional identified investment, would be over and above the
9 ROE on electric distribution rate base currently authorized and to be authorized in
10 future rate cases over the life of the PPA. The Company and Witness Hevert readily
11 concede that they have no specific basis, supporting cost data or analysis justifying
12 this specific remuneration amount, and that their arguments for the request are
13 entirely qualitative. The 2.75 percent figure was selected because it was sanctioned
14 in previous legislation (the LTCS) that they concede does not cover this PPA.

15 Q. IF THE REQUEST IS APPROVED, HOW MUCH WILL IT ADD TO THE
16 COMPANY'S ELECTRIC DISTRIBUTION ROE?

17 A. I have developed an estimate using data from last year's rate case settlement
18 approved by the Commission in Docket No. 4770. The approved electric rate base
19 was \$729 million, and the approved equity ratio was 51 percent. Thus, adding in the
20 after-tax amount of the annual \$4.4 million remuneration revenue (about \$3.5 million
21 after income taxes), would produce the following ROE increment:

22 **$$\$3.5 \text{ million}/(\$729 \text{ million} \times 51\%) = 0.9\%$$**

23 This increment would increase the authorized 9.275 percent fair return on equity to
24 about 10.2 percent, a figure that slightly exceeds the Company's ROE request in the
25 rate case, a return that the Division vigorously contested as being excessive.

1 I note that the 0.9 percent is only an estimate and snapshot as the year-to-year
2 remuneration revenue amount is not known with certainty, and rate base undoubtedly
3 will change over time during the duration of the contract. Nonetheless, this is one
4 way of understanding the magnitude of the Company's request.

5 Q. SETTING ASIDE THE LTCS "PRECEDENT" AND THE COMPANY'S
6 INABILITY TO QUANTIFY ANY COSTS FROM ITS PARTICIPATION
7 IN THE PPA, WHAT ARE THE CONCEPTUAL ARGUMENTS
8 SUPPORTING A SUBSTANTIAL REMUNERATION FOR NEC?

9 A. As noted above, there is no quantitative evidence provided in support of NEC's
10 requested compensation, and all arguments are qualitative. Indeed, Witness Hevert
11 argues affirmatively that a proper remuneration and investor compensation by its
12 nature resist quantification. Consequently, the Company simply adopts the non
13 applicable LTCS as a touchstone for its dollar request for a profit adder.

14 Witness Hevert argues that despite an inability to quantify, a substantial
15 remuneration amount is not only justified but required due to the fact that the PPA is
16 made possible only because NEC is a credit worthy counterparty, which permits the
17 Project to be cost-effectively financed. Moreover, NEC's participation in the PPA
18 may adversely affect its risk profile and financial position thereby meriting
19 compensation. At page 2 of his testimony he states that the purpose of the
20 Remuneration Rate is that it:

21 compensates the Company for strategically utilizing its
22 strong balance sheet and credit ratings, which are derived
23 from investors' capital and the Company's prudent
24 management of that capital, to enable the cost-effective
25 financing of the [Revolution Wind] Project.

1 At page 3 of his testimony, he goes on to assert that the Remuneration Rate mitigates
2 and “addresses the likely adverse effects on [NEC’s] ongoing financial flexibility and
3 credit profile” due to the PPA.

4 Further, he notes that the PPA is expected to provide customer benefits, and
5 the Company’s role as a counterparty in the PPA substantially lowers the cost capital
6 for the developer and therefore the contract pricing. This benefit can only be realized,
7 he argues, because the Company is willing to accept the potentially adverse impacts
8 on its balance sheet, cash flow, financial flexibility, credit quality and investment risk
9 by entering into this PPA. He notes that compensation is necessary since NEC
10 investors earn no return either on the Project or the PPA.

11 In summary, Witness Hevert’s argument for a substantial Remuneration Rate
12 is essentially two-fold. First, the Company deserves compensation due to the fact that
13 it likely will be financially adversely affected by the PPA in various ways. It will
14 earn no return on the financial capital deployed on its balance sheet that makes the
15 PPA possible. Hence, he argues that the absence of remuneration would be
16 fundamentally unfair and would even weaken the Company. Second, he argues that
17 the Company’s participation in the PPA makes the project feasible and benefits
18 customers by lowering the cost of the PPA pricing. The resulting cost savings is
19 several times as large as the requested Remuneration Rate.

20 Q. CAN YOU PROVIDE A LISTING OF THE VARIOUS ADVERSE
21 IMPACTS ON NEC DUE TO THE PPA ALLEGED BY WITNESS
22 HEVERT?

23 A. Yes, they can be succinctly summarized. I read Witness Hevert as suggesting these
24 are potential adverse impacts on NEC, but he has no documented evidence that they
25 actually will occur. This would include:

- 1 • Possible harm to NEC’s credit quality for various reasons, which potentially
2 could increase its cost of debt;
- 3 • Equity investors may regard NEC as somewhat riskier because it has entered
4 into this enormous financial obligation;
- 5 • The PPA could induce NEC to strengthen its capitalization and capital
6 structure with additional equity to prevent financial or credit quality
7 weakening, and this additional equity has a cost and merits a return;
- 8 • The financial resources needed to cope with this enormous financial
9 obligation have an opportunity cost to the Company and could displace other
10 utility investments on which Company investors could earn a return; and
- 11 • The amount of payment obligations under this contract are enormous (over \$3
12 billion) and therefore have important adverse implications for both the
13 Company’s ongoing cash flow, its financial flexibility and its liquidity,
14 thereby placing a strain on the Company.

15 These expected or at least possible adverse impacts, coupled with the fact that the
16 Company earns no return, justifies a large remuneration award by the Commission as
17 a means of mitigating these impacts and/or compensating utility investors.

18 Q. WHAT IS THE COST SAVINGS BENEFIT ASSERTED BY WITNESS
19 HEVERT THAT RESULTS FROM THE COMPANY’S WILLINGNESS TO
20 PARTICIPATE IN THE PPA?

21 A. Nearly half of Witness Hevert’s testimony is a very detailed but hypothetical analysis
22 that estimates the reduction to the developer’s cost of capital for the project as a result
23 of the PPA with the Company. He finds that the PPA greatly lowers the developer’s
24 cost of capital as compared to the developer operating the Project as a pure merchant
25 with no long-term PPA. Assuming this resulting cost of capital savings for the
26 developer is flowed through the PPA, this lowers the PPA cost by 13.59 percent – a
27 cost reduction far larger than the requested 2.75 percent Remuneration Rate. This

1 analysis is central to Witness Hevert's argument that the requested Remuneration
2 Rate is fair to customers and is reasonable.

3 Q. DO YOU ACCEPT THE COMPANY'S CONTENTION THAT ITS
4 PARTICIPATION AS A COUNTER PARTY IN THE PPA IS ESSENTIAL
5 TO OBTAINING THE CUSTOMER BENEFITS FOR THE PROJECT?

6 A. Yes. The PPA and possibly the Revolution Wind Project could not go forward
7 without the participation of a creditworthy utility willing to serve as counterparty.
8 Witness Hevert is correct that the PPA and NEC's role as a counterparty do help the
9 developer obtain access to capital on reasonable terms, thereby making the Project
10 financially feasible. As I explain below, this fact does not support the requested \$88
11 million of remuneration. It also is not true that NEC is solely or even principally
12 responsible for cost savings or customer benefits that are several times as large as the
13 proposed Remuneration Rate.

14 **B. Detailed Reply to Witness Hevert's Arguments Supporting the Remuneration Rate**

15 Q. WHY DO YOU DISPUTE MR. HEVERT'S SUPPORTING ARGUMENTS?

16 A. There are several problems with his arguments in support of the proposed
17 Remuneration Rate. First, the alleged adverse financial effects are doubtful, and if
18 they occur at all, they are likely to be easily manageable. In fact, Witness Hevert has
19 no documented evidence or real analysis that any of these adverse effects will
20 actually occur, and if they do, whether they would be significant. Second, if such
21 adverse impacts were to occur, and NEC incurred costs to mitigate, offset or manage
22 the impacts, the Company would receive full cost recovery from utility customers. In
23 this regard, the requested Remuneration Rate constitutes "double recovery of costs",
24 i.e., recovery of the same costs through the Remuneration Rate and the utility cost of
25 service in rate cases. Third, Witness Hevert's argument that the Company deploys

1 financial capital in support of the PPA but receives no return is simply not correct or
2 at best is distorted. The PPA does not result in a capital deployment “opportunity
3 cost” that potentially displaces other investments on which the Company could
4 receive a return. Fourth, while the Division concurs the PPA can be expected to
5 provide a significant benefit, and the Company’s role facilitates that benefit, it is not
6 the benefit estimated by Witness Hevert. His benefits argument misstates the reason
7 why this PPA is able to go forward.

8 Q. IS THERE ANY INDICATION THAT THE PPA WILL HARM NEC’S
9 CREDIT RATINGS?

10 A. No, there is none at all. The responses to Division I – 3 and I – 4 indicate the
11 Company has had no communication with credit rating agencies indicating any
12 concerns with the PPA or any potential for downgrade due to the PPA. Indeed, credit
13 rating agencies have not expressed any such concern.

14 Normally, there could in theory be three reasons why a large, long-term PPA
15 could adversely affect the utility’s credit quality or ratings. The first question is
16 whether the PPA adversely affects the utility’s earnings or cash flow in any
17 significant or detrimental way. Second, the credit rating agency could choose to treat
18 the PPA or some portion of the PPA payments as a “debt equivalent” and impute
19 some amount to the balance sheet for purposes of calculating credit metrics thereby
20 weakening those metrics. Third, if the PPA reduces the utility’s liquidity or financial
21 flexibility by a substantial amount, this might have an effect on credit quality.

22 Q. WILL THE PPA ADVERSELY AFFECT NEC’S CASH FLOW OR
23 EARNINGS?

24 A. No, not in any significant way. The Company will be billed each month by the Seller
25 for the monthly energy deliveries from the Project (on average about \$13 million per

1 month), and the Company within a very short period of time (e.g., within weeks) will
2 receive payment for essentially that same \$13 million from the energy market, RECs
3 market (if applicable) and utility customers. Thus, while there may be a very short-
4 term effect on cash flow (due to a short payment lag of possibly a few weeks), over
5 the course of a year, the PPA has virtually no effect at all, and therefore there is no
6 material effect on credit metrics.

7 I discuss the short-term effects on cash flow (cash working capital) later in
8 this section.

9 Q. WOULD CREDIT RATING AGENCIES REGARD THE PPA AS A DEBT
10 EQUIVALENT?

11 A. Based on the explanations from both Moody's and Standard & Poor's ("S&P"), as
12 provided in response to Division I – 12, this seems very unlikely. Attachment I – 12
13 – 4 is a Moody's ratings report dated June 23, 2017 ("Ratings Methodology:
14 Regulated Electric and Gas Utilities"). The report at page 47 states:

15 Some utilities have the ability to pass through the cost of
16 purchased power under PPAs to their customers. As a
17 result, the utility takes no risk that the cost of power is
18 greater than the retail price it will receive. Accordingly, we
19 regard these PPA obligations as operating costs with no
20 long-term debt-like attributes.

21 The S&P assessment appears to be similar. (Attachment I – 12 – 8, page 14,
22 November 19, 2013, "Utilities: Key Credit Factors for the Regulated Utility
23 Industry".) I note that S&P does in some cases treat PPAs as debt equivalents for
24 credit metric purposes, but its decision to do so and the amount of debt imputed
25 depend to a great degree on the cost recovery mechanism granted the utility.

26 A 0% risk factor [meaning zero debt imputation by S&P]
27 indicates that the burden of the contractual payments rests

1 solely with ratepayers, as when the utility merely acts as a
2 conduit for the delivery of third party's electricity.

3 Both Moody's and S&P in those quotes describe cost recovery mechanisms
4 similar to NEC's mechanism. This implies that it is highly likely that no debt
5 imputation would take place. Witness Hevert does not suggest otherwise and does
6 not predict that debt imputation would actually occur in this case.

7 Q. WILL THE COMPANY'S LIQUIDITY BE ADVERSELY AFFECTED
8 THEREBY HARMING THE COMPANY'S CREDIT PROFILE?

9 A. No, it will not to any material extent. As explained above, under the contract NEC
10 will make monthly payments to the Seller and within a short period of time (e.g.,
11 weeks) will be repaid in full from the energy market and utility customers. The
12 Company has made no assessment at all on any potential effects of these very short-
13 term changes in cash flow on its liquidity. As noted in Attachment to Division I – 1,
14 the Moody's most recent NEC credit rating report regards NEC's liquidity (i.e.,
15 access to short-term funding) as being adequate due to its access to the National Grid
16 money pool and other parental sources of short-term debt made available as needed to
17 NEC. Thus, the expected increase in short-term funding needs resulting from the
18 PPA can readily be handled without difficulty. There is no reason to believe that the
19 lag of a few weeks between the payment to the Seller (about \$13 million per month)
20 and the receipt of the revenue covering that payment would create either a liquidity
21 problem or adversely affect credit quality to any meaningful extent.

22 Q. SUPPOSE, UNEXPECTEDLY, A CREDIT RATING AGENCY DID
23 IMPUTE DEBT TO NEC DUE TO THE PPA. WOULD THIS
24 FINANCIALLY WEAKEN THE COMPANY?

1 A. No, it would not. In that case, NEC would merely add an essentially equal amount of
2 equity to its capitalization and capital structure to avoid a weakening of credit quality.
3 Through the normal ratemaking process, the cost of this more expensive capital
4 structure (due to more equity) would be reflected and recovered in customer rates. In
5 other words, the cost (if any) would be fully borne by utility customers, with the
6 Company receiving the Commission authorized ROE on this additional equity
7 included in capital structure. Hence, the Company is fully protected, with ratepayers
8 covering all costs and providing that financial support. Ratepayers would also cover
9 the full costs in the event that the actions of the rating agency caused the NEC cost of
10 debt to increase.

11 Thus, due to the very complete and timely cost recovery of PPA payments on
12 a dollar-for-dollar basis, it seems very unlikely that there would be any adverse credit
13 quality problem or rating agency debt imputation as a result of the PPA. However, in
14 the event of some adverse impact, the Company is fully protected and compensated
15 by the ratemaking process with customers picking up any added costs.

16 Q. IS THE COMPANY'S ADVERSE CASH FLOW A SERIOUS CONCERN?

17 A. No, it is not. Witness Hevert seriously exaggerates the magnitude of this issue when
18 he refers in his testimony to the Company's \$3.2 billion PPA total financial
19 obligation, a figure larger than the Company's net plant and common equity balance.
20 In point of fact, the Company has performed no cash flow analysis at all. In response
21 to Division I – 6, the Company does suggest that the PPA could increase its cash
22 working capital needs, but it has no estimate.

23 Each month the Company must pay the Seller an estimated average \$13
24 million, but it will very soon collect that same amount from a combination of the
25 ISO-NE energy market and customers. If one assumes a one-month collection lag,

1 then the Company's cash working capital average balance would increase by that \$13
2 million – not \$3.2 billion. In this illustrative example, this \$13 million would be
3 added to the Company's rate base, and the Company would earn the Commission's
4 authorized rate of return on that amount of incremental cash working capital. The
5 Company confirmed that it would seek such rate recovery from its utility customers
6 in response to Division I – 7. This added return on rate base that the Company would
7 receive also would provide full recovery of any additional liquidity costs.

8 There is no merit to the unsubstantiated claims that the PPA would adversely
9 affect the Company's credit quality, cash flow, or liquidity given that the Company
10 would be fully compensated by ratepayers for any financial effects through the
11 normal ratemaking process.

12 Q. WOULD THE PPA INCREASE THE COMPANY'S COST OF EQUITY?

13 A. The Company's response to Division I – 8 and Mr. Hevert's testimony at page 28
14 stop short of affirmatively predicting an increased cost of equity for NEC due to the
15 PPA. However, that response and Witness Hevert's testimony note that this is a
16 subjective issue and a matter of "investor perception". Thus, he is willing to
17 recognize the possibility of a higher equity cost due to the PPA even though he has no
18 real evidence to support such speculation.

19 I find the arguments of an increased cost of equity for NEC due to the PPA to
20 be unpersuasive and even implausible. The Company's cost recovery mechanism for
21 this PPA provides dollar-for-dollar recovery of all PPA net costs (i.e., all costs not
22 covered by the energy market or sale of RECs). This means the PPA over time will
23 be earnings and cash flow neutral, with any PPA second order effects (such as
24 additional cash working capital requirements) fully recovered as part of normal retail

1 ratemaking. In this case there is no reason why investors would perceive the PPA as
2 adding to the Company's business risk and therefore its cost of equity.

3 Q. CAN YOU PLEASE SUMMARIZE "THE DOUBLE RECOVERY"
4 PROBLEM WITH THE PROPOSED REMUNERATION RATE?

5 A. Yes, Witness Hevert claims the PPA will adversely impact credit quality or credit
6 ratings, liquidity, cash working capital needs, financial flexibility and possibly even
7 the cost of capital. He claims these adverse impacts require mitigation and investor
8 compensation through the Remuneration Rate. There is no supporting evidence for
9 such adverse claims, and for the most part they appear unrealistic and doubtful. That
10 said, any adverse effects that do occur (with cash working capital increase or a need
11 for a thicker equity ratio to strengthen credit quality) would be fully paid for by utility
12 customers. In fact, such utility customer payments, if needed, would provide NEC
13 additional return on equity. In short, NEC will be fully compensated for any adverse
14 impacts from the PPA (if they do occur) without the Remuneration Rate. The
15 Company's proposal therefore is in effect charging ratepayers twice for the same cost.

16 **C. Justification for the Remuneration Rate**

17 Q. YOUR TESTIMONY EXPLAINS THAT THE PPA IS UNLIKELY TO
18 ADVERSELY AFFECT NEC'S FINANCIAL CONDITION OR CREDIT
19 QUALITY. HOWEVER, WITNESS HEVERT FURTHER ARGUES THAT
20 THE COMPANY NONETHELESS DESERVES ADDITIONAL
21 COMPENSATION BECAUSE THE PPA MAKES USE OF INVESTOR
22 CAPITAL AND THE COMPANY'S BALANCE SHEET. WHAT IS YOUR
23 RESPONSE?

24 A. This argument is incorrect. At page 7 of his testimony, he states

1 The Company’s proposed Remuneration Rate simply
2 compensates the Company and its investors for the use of
3 their capital.

4 Similarly, the response to Division I – 5 states that the Company incurs “an
5 opportunity cost to investors” if due to the PPA “the Company cannot acquire and
6 deploy capital as it otherwise would have”. The implication is that the PPA’s reliance
7 on the NEC balance sheet may result in the displacement of other utility investments
8 on which NEC could earn an equity return.

9 These arguments are fundamentally wrong. It is true that NEC’s financial
10 strength and balance sheet make it a favorable counterparty for the developer,
11 allowing DWW to finance the Project successfully. The Company’s role in the PPA
12 is an administrative one, serving (in the language of S&P) as a “conduit” or
13 intermediary between the Seller and customers. The Company pays for the delivered
14 energy each month, promptly liquidates it in the ISO-NE energy spot market and
15 collects any shortfall from customers through its dollar-for –dollar cost recovery
16 mechanism. By and large, the Company is financially unaffected by the conduct of
17 this administrative function as explained earlier.

18 Witness Hevert’s assertion that the Company requires compensation (over and
19 above full cost recovery) for the alleged use of its balance sheet and extending or
20 deploying investor capital is puzzling. The PPA requires no new capital investment
21 by NEC or its investors. Moreover, NEC is already being fully compensated for its
22 balance sheet capital to the extent that the capital supports utility rate base through the
23 normal ratemaking process. That is, its equity capital supporting rate base receives
24 the Commission-authorized ROE. Therefore, this capital does not require a second
25 return through the Remuneration Rate.

1 I am further puzzled by the claim that the PPA imposes “an opportunity cost”
2 on NEC apparently meaning that the PPA “ties up” NEC capital and preventing it
3 from undertaking certain other utility investments on which its investors could earn a
4 return. In fact, the PPA absolutely does not displace other utility investments in new
5 utility projects, and NEC has full access to capital for that purpose.

6 Witness Hevert’s argument that the Remuneration Rate is needed to
7 compensate NEC investors because the PPA somehow “uses” the balance sheet or
8 occupies investor capital is incorrect and has no merit.

9 Q. WITNESS HEVERT PRESENTS AN ANALYSIS FINDING A COST OF
10 CAPITAL SAVINGS FOR THE DEVELOPER AS A RESULT OF THE
11 PPA OF 13.59 PERCENT. IS THIS FINDING RELEVANT TO THE
12 REQUEST FOR THE REMUNERATION RATE?

13 A. No, it is not because the analysis is purely hypothetical. Witness Hevert conducts an
14 extensive analysis showing that the PPA lowers the developer’s cost of capital by a
15 large amount compared to the Project proceeding as a merchant plant facility with no
16 long-term PPA. This is both hypothetical and unrealistic because absent the PPA (or
17 some other contract) the Revolution Wind Project likely would not proceed. It is
18 therefore not a question of cost savings but whether the Project would exist at all. In
19 other words, absent the PPA, there would be no costs to save. Witness Hevert
20 himself seems to acknowledge this fact at page 12 of his testimony where he notes
21 that absent the PPA “the Project likely would not be viable”. The PPA allows the
22 Project to be financed and go forward.

23 Q. WHY DOES THE DEVELOPER NEED THE PPA TO PROCEED?

24 A. This is a fundamental question. The PPA serves a vital function for the developer –
25 price certainty for its energy output. The PPA fully hedges the price for energy that

1 the Seller will receive for a 20-year time period. (Of course, the developer still faces
2 construction and operational risks, but the price for energy that it receives will be
3 fixed and known with certainty.) It is, in fact, utility ratepayers and not the Company
4 that provides that hedge, with ratepayers absorbing all of that market risk and the
5 Company absorbing none. The Seller does not need the Company as a buyer of the
6 energy as it would be free on its own to sell all of its energy in the ISO-NE spot
7 energy market. Thus, NEC's role is a limited one of administering the payments and
8 serving as the financial intermediary between the Seller who requires the hedge and
9 utility customers providing that hedge. At the end of the day, this is a beneficial
10 arrangement for the Seller and utility customers alike (based on the Division's
11 assessment of the PPA), and NEC's administrative and intermediary functions are
12 essential to making this work. That said, it is ratepayers and not the Company that is
13 actually providing the market pricing hedge that DWW requires.

14 Witness Hevert's hypothetical merchant cost of capital analysis is not
15 supportive of the requested \$88 million Remuneration Rate because it fails to
16 recognize the central role of customers in absorbing all market risk in making the
17 PPA possible. Customers effectively are financially underwriting the PPA.

18 Q. CAN THE \$88 MILLION REMUNERATION RATE REQUEST BE
19 JUSTIFIED BASED ON THE APPLICATION OF PERFORMANCE-
20 BASED REGULATION?

21 A. Unfortunately, it cannot. This PPA and NEC's role do not fit very well within the
22 framework of performance-based regulation in which the utility is awarded additional
23 compensation for meeting or exceeding certain defined goals or benchmarks. As
24 noted above, NEC's role in the PPA – while vital – is essentially passive. NEC will
25 administer the PPA on a continual basis over its life, managing the monthly and day-

1 to-day cash flows. The Company will make monthly payments to the Seller based on
2 actual energy deliveries and will collect a like amount of money from the
3 combination of the energy market and utility customers. There are no performance
4 benchmarks, and the Company accepts no risk, performance or otherwise, nor does it
5 deploy any capital for purposes of this PPA (other than a minor amount to support
6 possible additional cash working capital). Moreover, the Company will be fully
7 compensated through the normal ratemaking process for the administrative expenses
8 it incurs pertaining to the PPA and any other ancillary costs such as cash working
9 capital.

10 Q. COULD THERE BE A BASIS FOR PROVIDING THE COMPANY AN
11 INCENTIVE AWARD OVER AND ABOVE FULL COST RECOVERY OF
12 PPA NET COSTS?

13 A. Yes, quite possibly. As the Brennan/DiDomenico testimony states (page 9), the
14 Company under the ACES legislation is not specifically required to enter into a long-
15 term contract. It has chosen to do so voluntarily, and the Division finds that the
16 resulting PPA can be expected to provide significant customer net benefits over the
17 20-year PPA life. As Witness Hevert correctly states at page 7 of his testimony, the
18 PPA succeeds in “advancing the public policy objectives that the ACES Act intends
19 to achieve”.

20 In my opinion, the only valid argument for providing the Company with some
21 added profit compensation over and above full cost recovery of PPA payments (and
22 other related costs) is the Company’s voluntary cooperation with and financial
23 commitment to achieving public policy goals in Rhode Island, including those
24 enumerated in ACES as well as broader energy, environmental and economic
25 development benefits that will accrue to Ocean State citizens, businesses and

1 ratepayers. At the same time, I urge the Commission to recognize that utility
2 customers must absorb all market risk associated with providing a 20-year market
3 pricing hedge. The Company accepts none of the risk. For that reason, the \$88
4 million requested Remuneration Rate seems greatly excessive. On a net present value
5 basis, the customer benefits from the PPA are estimated to be about \$91 million
6 expressed in 2018 net present value terms compare to the 2018 net present value of
7 the proposed Remuneration Rate of about \$37 million, or about 40 percent of the net
8 benefits. Given the allocation of risk between customers and the Company, this
9 seems highly inequitable.

10 Please note that I am not making a specific Remuneration Rate
11 recommendation. However, the Division will provide guidance to the Commission
12 separate from my testimony.

13 Q. WHAT IS THE PRECEDENT FOR AWARDING A UTILITY NON-
14 STATUTORILY MANDATED REMUNERATION ABOVE AND
15 BEYOND FULL COST RECOVERY FOR ENTERING INTO A LONG-
16 TERM PPA?

17 A. The Division queried the Company regarding its understanding of precedent for such
18 remuneration, and it was only able to cite to previous legislation in Rhode Island and
19 Massachusetts, but no state commission decisions. (Division I – 11) The response
20 also mentioned a rate of return adder provided to Virginia utilities as a result of
21 legislation in that state, but that adder is for the construction of certain utility-owned
22 power plants, not PPAs. The Company cited no other instances.

23 It has been my experience in working extensively over the years on PPA
24 reviews that utility commissions do not typically provide the purchasing utilities with
25 extra compensation over and above the rate recovery of the actual PPA expenses.

1 The reason for this typical treatment is easy to understand. The utility normally takes
2 little or no risk with the PPA and invests no capital in the PPA or the underlying
3 generation assets. Under accepted regulatory principles, a return is provided to the
4 utility only for accepting risks and investing capital.
5

1 **IV. CONCLUSION**

2 Q. PLEASE SUMMARIZE YOUR FINDINGS AND CONCLUSIONS
3 CONCERNING THE COMPANY’S REQUESTED REMUNERATION
4 RATE.

5 A. NEC is seeking compensation, over and above recovery of all PPA costs, for its
6 participation in a 400 MW wind energy PPA. It seeks this extraordinary
7 compensation even though it accepts none of the market risk associated with the
8 market price hedge that the Seller under the PPA requires and the PPA provides.
9 Instead, customers will be required to accept 100 percent of that market hedge risk
10 responsibility. Nonetheless, NEC justifies its request for compensation arguing that:

- 11 • The PPA may harm its credit quality, financial flexibility, cash flow and
12 liquidity;
- 13 • The PPA makes use of NEC’s balance sheet and investor-supplied capital,
14 with no return related to the PPA for shareholders. and this absence of a return
15 justifies the Remuneration Rate; and
- 16 • The PPA, made possible only by NEC’s participation as a counterparty,
17 greatly reduces the developer’s cost of capital thereby benefitting customers.

18 My testimony demonstrates that all of these arguments are either incorrect or
19 irrelevant given the circumstances. Moreover, in the event that the PPA causes NEC
20 to incur some indirect costs (such as additional cash working capital or the need to
21 add equity to the balance sheet to maintain credit quality), the Company will be fully
22 compensated by utility customers through the normal ratemaking process. The above
23 arguments supporting the excessively large Remuneration Rate sought by should be
24 rejected.

25 While I reject the Company’s incorrect arguments listed above, I commend
26 the Company for its voluntary cooperation in advancing Rhode Island’s energy,

1 economic and environmental public policy purposes interests consistent with the
2 ACES Act and entering into a PPA that is expected to benefit customers. The \$88
3 million Remuneration request (\$37 million expressed in net present value), however,
4 would be greatly in excess of what is proper and reasonable given these
5 circumstances.

6 Q. DOES THIS CONCLUDE YOUR DIRECT TESTIMONY?

7 A. Yes, it does.

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APPENDIX A

**STATEMENT OF QUALIFICATIONS OF
MATTHEW I. KAHAL**

MATTHEW I. KAHAL

Since 2001, Mr. Kahal has worked as an independent consulting economist, specializing in energy economics, public utility regulation, and utility financial studies. Over the past three decades, his work has encompassed electric utility integrated resource planning (IRP), power plant licensing, environmental compliance, and utility financial issues. In the financial area, he has conducted numerous cost of capital studies and addressed other financial issues for electric, gas, telephone, and water utilities. Mr. Kahal's work in recent years has expanded to electric power markets, mergers, and various aspects of regulation.

Mr. Kahal has provided expert testimony in more than 400 cases before state and federal regulatory commissions, federal courts, and the U.S. Congress. His testimony has covered need for power, integrated resource planning, cost of capital, purchased power practices and contracts, merger economics, industry restructuring, and various other regulatory and public policy issues.

Education

B.A. (Economics) – University of Maryland, 1971

M.A. (Economics) – University of Maryland, 1974

Ph.D. candidacy – University of Maryland, completed all course work and qualifying examinations.

Previous Employment

1981-2001 Founding Principal, Vice President, and President
Exeter Associates, Inc.
Columbia, MD

1980-1981 Member of the Economic Evaluation Directorate
The Aerospace Corporation
Washington, D.C.

1977-1980 Consulting Economist
Washington, D.C. consulting firm

1972-1977 Research/Teaching Assistant and Instructor (part time)
Department of Economics, University of Maryland (College Park)
Lecturer in Business and Economics
Montgomery College (Rockville and Takoma Park, MD)

Professional Experience

Mr. Kahal has more than thirty-five years' experience managing and conducting consulting assignments relating to public utility economics and regulation. In 1981, he and five colleagues founded the firm of Exeter Associates, Inc., and for the next 20 years he served as a Principal and corporate officer of the firm. During that time, he supervised multi-million dollar support contracts with the State of Maryland and directed the technical work conducted by both Exeter professional staff and numerous subcontractors. Additionally, Mr. Kahal took the lead role at Exeter in consulting to the firm's other governmental and private clients in the areas of financial analysis, utility mergers, electric restructuring, and utility purchase power contracts.

At the Aerospace Corporation, Mr. Kahal served as an economic consultant to the Strategic Petroleum Reserve (SPR). In that capacity, he participated in a detailed financial assessment of the SPR, and developed an econometric forecasting model of U.S. petroleum industry inventories. That study has been used to determine the extent to which private sector petroleum stocks can be expected to protect the U.S. from the impacts of oil import interruptions.

Before entering consulting, Mr. Kahal held faculty positions with the Department of Economics at the University of Maryland and with Montgomery College, teaching courses on economic principles, business, and economic development.

Publications and Consulting Reports

Projected Electric Power Demands of the Baltimore Gas and Electric Company, Maryland Power Plant Siting Program, 1979.

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A Review of Issues Concerning Electric Power Capacity Markets, prepared for the Maryland Power Plant Research Program, December 2001 (with B. Hobbs and J. Inon).

The Economic Feasibility of Air Emissions Controls at the Brandon Shores and Morgantown Coal-fired Power Plants, February 2005 (prepared for the Chesapeake Bay Foundation).

The Economic Feasibility of Power Plant Retirements on the Entergy System, September 2005, with Phil Hayet (prepared for the Louisiana Public Service Commission).

Expert Report on Capital Structure, Equity and Debt Costs, prepared for the Edmonton Regional Water Customers Group, August 30, 2006.

Maryland's Options to Reduce and Stabilize Electric Power Prices Following Restructuring, with Steven L. Estomin, prepared for the Power Plant Research Program, Maryland Department of Natural Resources, September 2006.

Expert Report of Matthew I. Kahal, on behalf of the U. S. Department of Justice, August 2008, Civil Action No. IP-99-1693C-MIS.

Conference and Workshop Presentations

Workshop on State Load Forecasting Programs, sponsored by the Nuclear Regulatory Commission and Oak Ridge National Laboratory, February 1982 (presentation on forecasting methodology).

Fourteenth Annual Conference of the Michigan State University Institute for Public Utilities, December 1982 (presentation on problems in forecasting).

Conference on Conservation and Load Management, sponsored by the Massachusetts Energy Facilities Siting Council, May 1983 (presentation on cost-benefit criteria).

Maryland Conference on Load Forecasting, sponsored by the Maryland Power Plant Siting Program and the Maryland Public Service Commission, June 1983 (presentation on overforecasting power demands).

The 5th Annual Meetings of the International Association of Energy Economists, June 1983 (presentation on evaluating weatherization programs).

The NARUC Advanced Regulatory Studies Program (presented lectures on capacity planning for electric utilities), February 1984.

The 16th Annual Conference of the Institute of Public Utilities, Michigan State University (discussant on phase-in and excess capacity), December 1984.

U.S. Department of Energy Utilities Conference, Las Vegas, Nevada (presentation of current and future regulatory issues), May 1985.

The 18th Annual Conference of the Institute of Public Utilities, Michigan State University, Williamsburg, Virginia, December 1986 (discussant on cogeneration).

The NRECA Conference on Load Forecasting, sponsored by the National Rural Electric Cooperative Association, New Orleans, Louisiana, December 1987 (presentation on load forecast accuracy).

The Second Rutgers/New Jersey Department of Commerce Annual Conference on Energy Policy in the Middle Atlantic States, Rutgers University, April 1988 (presentation on spot pricing of electricity).

The NASUCA 1988 Mid-Year Meeting, Annapolis, Maryland, June 1988, sponsored by the National Association of State Utility Consumer Advocates (presentation on the FERC electricity avoided cost NOPRs).

The Thirty-Second Atlantic Economic Society Conference, Washington, D.C., October 1991 (presentation of a paper on cost of capital issues for the Bell Operating Companies).

The NASUCA 1993 Mid-Year Meeting, St. Louis, Missouri, sponsored by the National Association of State Utility Consumer Advocates, June 1993 (presentation on regulatory issues concerning electric utility mergers).

The NASUCA and NARUC annual meetings in New York City, November 1993 (presentations and panel discussions on the emerging FERC policies on transmission pricing).

The NASUCA annual meetings in Reno, Nevada, November 1994 (presentation concerning the FERC NOPR on stranded cost recovery).

U.S. Department of Energy Utilities/Energy Management Workshop, March 1995 (presentation concerning electric utility competition).

The 1995 NASUCA Mid-Year Meeting, Breckenridge, Colorado, June 1995 (presentation concerning the FERC rulemaking on electric transmission open access).

The 1996 NASUCA Mid-Year Meeting, Chicago, Illinois, June 1996 (presentation concerning electric utility merger issues).

Conference on “Restructuring the Electric Industry,” sponsored by the National Consumers League and Electric Consumers Alliance, Washington, D.C., May 1997 (presentation on retail access pilot programs).

The 1997 Mid-Atlantic Conference of Regulatory Utilities Commissioners (MARUC), Hot Springs, Virginia, July 1997 (presentation concerning electric deregulation issues).

Power-Gen ‘97 International Conference, Dallas, Texas, December 1997 (presentation concerning utility embedded costs of generation supply).

Consumer Summit on Electric Competition, sponsored by the National Consumers League and Electric Consumers’ Alliance, Washington, D.C., March 2001 (presentation concerning generation supply and reliability).

National Association of State Utility Consumer Advocates, Mid-Year Meetings, Austin, Texas, June 16-17, 2002 (presenter and panelist on RTO/Standard Market Design issues).

Louisiana State Bar Association, Public Utility Section, Baton Rouge, Louisiana, October 2, 2002 (presentation on Performance-Based Ratemaking and panelist on RTO issues).

Virginia State Corporation Commission/Virginia State Bar, Twenty-Second National Regulatory Conference, Williamsburg, Virginia, May 10, 2004 (presentation on Electric Transmission System Planning).

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	<u>Docket Number</u>	<u>Utility</u>	<u>Jurisdiction</u>	<u>Client</u>	<u>Subject</u>
1.	27374 & 27375 October 1978	Long Island Lighting Company	New York Counties	Nassau & Suffolk	Economic Impacts of Proposed Rate Increase
2.	6807 January 1978	Generic	Maryland	MD Power Plant Siting Program	Load Forecasting
3.	78-676-EL-AIR February 1978	Ohio Power Company	Ohio	Ohio Consumers' Counsel	Test Year Sales and Revenues
4.	17667 May 1979	Alabama Power Company	Alabama	Attorney General	Test Year Sales, Revenues, Costs, and Load Forecasts
5.	None April 1980	Tennessee Valley Authority	TVA Board	League of Women Voters	Time-of-Use Pricing
6.	R-80021082	West Penn Power Company	Pennsylvania	Office of Consumer Advocate	Load Forecasting, Marginal Cost pricing
7.	7259 (Phase I) October 1980	Potomac Edison Company	Maryland	MD Power Plant Siting Program	Load Forecasting
8.	7222 December 1980	Delmarva Power & Light Company	Maryland	MD Power Plant Siting Program	Need for Plant, Load Forecasting
9.	7441 June 1981	Potomac Electric Power Company	Maryland	Commission Staff	PURPA Standards
10.	7159 May 1980	Baltimore Gas & Electric	Maryland	Commission Staff	Time-of-Use Pricing
11.	81-044-E-42T	Monongahela Power	West Virginia	Commission Staff	Time-of-Use Rates
12.	7259 (Phase II) November 1981	Potomac Edison Company	Maryland	MD Power Plant Siting Program	Load Forecasting, Load Management
13.	1606 September 1981	Blackstone Valley Electric and Narragansett	Rhode Island	Division of Public Utilities	PURPA Standards
14.	RID 1819 April 1982	Pennsylvania Bell	Pennsylvania	Office of Consumer Advocate	Rate of Return
15.	82-0152 July 1982	Illinois Power Company	Illinois	U.S. Department of Defense	Rate of Return, CWIP

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	<u>Docket Number</u>	<u>Utility</u>	<u>Jurisdiction</u>	<u>Client</u>	<u>Subject</u>
16.	7559 September 1982	Potomac Edison Company	Maryland	Commission Staff	Cogeneration
17.	820150-EU September 1982	Gulf Power Company	Florida	Federal Executive Agencies	Rate of Return, CWIP
18.	82-057-15 January 1983	Mountain Fuel Supply Company	Utah	Federal Executive Agencies	Rate of Return, Capital Structure
19.	5200 August 1983	Texas Electric Service Company	Texas	Federal Executive Agencies	Cost of Equity
20.	28069 August 1983	Oklahoma Natural Gas	Oklahoma	Federal Executive Agencies	Rate of Return, deferred taxes, capital structure, attrition
21.	83-0537 February 1984	Commonwealth Edison Company	Illinois	U.S. Department of Energy	Rate of Return, capital structure, financial capability
22.	84-035-01 June 1984	Utah Power & Light Company	Utah	Federal Executive Agencies	Rate of Return
23.	U-1009-137 July 1984	Utah Power & Light Company	Idaho	U.S. Department of Energy	Rate of Return, financial condition
24.	R-842590 August 1984	Philadelphia Electric Company	Pennsylvania	Office of Consumer Advocate	Rate of Return
25.	840086-EI August 1984	Gulf Power Company	Florida	Federal Executive Agencies	Rate of Return, CWIP
26.	84-122-E August 1984	Carolina Power & Light Company	South Carolina	South Carolina Consumer Advocate	Rate of Return, CWIP, load forecasting
27.	CGC-83-G & CGC-84-G October 1984	Columbia Gas of Ohio	Ohio	Ohio Division of Energy	Load forecasting
28.	R-842621 October 1984	Western Pennsylvania Water Company	Pennsylvania	Office of Consumer Advocate	Test year sales
29.	R-842710 January 1985	ALLTEL Pennsylvania Inc.	Pennsylvania	Office of Consumer Advocate	Rate of Return
30.	ER-504 February 1985	Allegheny Generating Company	FERC	Office of Consumer Advocate	Rate of Return

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<u>Docket Number</u>	<u>Utility</u>	<u>Jurisdiction</u>	<u>Client</u>	<u>Subject</u>
31. R-842632 March 1985	West Penn Power Company	Pennsylvania	Office of Consumer Advocate	Rate of Return, conservation, time-of-use rates
32. 83-0537 & 84-0555 April 1985	Commonwealth Edison Company	Illinois	U.S. Department of Energy	Rate of Return, incentive rates, rate base
33. Rulemaking Docket No. 11, May 1985	Generic	Delaware	Delaware Commission Staff	Interest rates on refunds
34. 29450 July 1985	Oklahoma Gas & Electric Company	Oklahoma	Oklahoma Attorney General	Rate of Return, CWIP in rate base
35. 1811 August 1985	Bristol County Water Company	Rhode Island	Division of Public Utilities	Rate of Return, capital Structure
36. R-850044 & R-850045 August 1985	Quaker State & Continental Telephone Companies	Pennsylvania	Office of Consumer Advocate	Rate of Return
37. R-850174 November 1985	Philadelphia Suburban Water Company	Pennsylvania	Office of Consumer Advocate	Rate of Return, financial conditions
38. U-1006-265 March 1986	Idaho Power Company	Idaho	U.S. Department of Energy	Power supply costs and models
39. EL-86-37 & EL-86-38 September 1986	Allegheny Generating Company	FERC	PA Office of Consumer Advocate	Rate of Return
40. R-850287 June 1986	National Fuel Gas Distribution Corp.	Pennsylvania	Office of Consumer Advocate	Rate of Return
41. 1849 August 1986	Blackstone Valley Electric	Rhode Island	Division of Public Utilities	Rate of Return, financial condition
42. 86-297-GA-AIR November 1986	East Ohio Gas Company	Ohio	Ohio Consumers' Counsel	Rate of Return
43. U-16945 December 1986	Louisiana Power & Light Company	Louisiana	Public Service Commission	Rate of Return, rate phase-in plan
44. Case No. 7972 February 1987	Potomac Electric Power Company	Maryland	Commission Staff	Generation capacity planning, purchased power contract
45. EL-86-58 & EL-86-59 March 1987	System Energy Resources and Middle South Services	FERC	Louisiana PSC	Rate of Return

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46.	ER-87-72-001 April 1987	Orange & Rockland	FERC	PA Office of Consumer Advocate	Rate of Return
47.	U-16945 April 1987	Louisiana Power & Light Company	Louisiana	Commission Staff	Revenue requirement update phase-in plan
48.	P-870196 May 1987	Pennsylvania Electric Company	Pennsylvania	Office of Consumer Advocate	Cogeneration contract
49.	86-2025-EL-AIR June 1987	Cleveland Electric Illuminating Company	Ohio	Ohio Consumers' Counsel	Rate of Return
50.	86-2026-EL-AIR June 1987	Toledo Edison Company	Ohio	Ohio Consumers' Counsel	Rate of Return
51.	87-4 June 1987	Delmarva Power & Light Company	Delaware	Commission Staff	Cogeneration/small power
52.	1872 July 1987	Newport Electric Company	Rhode Island	Commission Staff	Rate of Return
53.	WO 8606654 July 1987	Atlantic City Sewerage Company	New Jersey	Resorts International	Financial condition
54.	7510 August 1987	West Texas Utilities Company	Texas	Federal Executive Agencies	Rate of Return, phase-in
55.	8063 Phase I October 1987	Potomac Electric Power Company	Maryland	Power Plant Research Program	Economics of power plant site selection
56.	00439 November 1987	Oklahoma Gas & Electric Company	Oklahoma	Smith Cogeneration	Cogeneration economics
57.	RP-87-103 February 1988	Panhandle Eastern Pipe Line Company	FERC	Indiana Utility Consumer Counselor	Rate of Return
58.	EC-88-2-000 February 1988	Utah Power & Light Co. PacifiCorp	FERC	Nucor Steel	Merger economics
59.	87-0427 February 1988	Commonwealth Edison Company	Illinois	Federal Executive Agencies	Financial projections
60.	870840 February 1988	Philadelphia Suburban Water Company	Pennsylvania	Office of Consumer Advocate	Rate of Return

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61.	870832 March 1988	Columbia Gas of Pennsylvania	Pennsylvania	Office of Consumer Advocate	Rate of Return
62.	8063 Phase II July 1988	Potomac Electric Power Company	Maryland	Power Plant Research Program	Power supply study
63.	8102 July 1988	Southern Maryland Electric Cooperative	Maryland	Power Plant Research Program	Power supply study
64.	10105 August 1988	South Central Bell Telephone Co.	Kentucky	Attorney General	Rate of Return, incentive regulation
65.	00345 August 1988	Oklahoma Gas & Electric Company	Oklahoma	Smith Cogeneration	Need for power
66.	U-17906 September 1988	Louisiana Power & Light Company	Louisiana	Commission Staff	Rate of Return, nuclear power costs Industrial contracts
67.	88-170-EL-AIR October 1988	Cleveland Electric Illuminating Co.	Ohio	Northeast-Ohio Areawide Coordinating Agency	Economic impact study
68.	1914 December 1988	Providence Gas Company	Rhode Island	Commission Staff	Rate of Return
69.	U-12636 & U-17649 February 1989	Louisiana Power & Light Company	Louisiana	Commission Staff	Disposition of litigation proceeds
70.	00345 February 1989	Oklahoma Gas & Electric Company	Oklahoma	Smith Cogeneration	Load forecasting
71.	RP88-209 March 1989	Natural Gas Pipeline of America	FERC	Indiana Utility Consumer Counselor	Rate of Return
72.	8425 March 1989	Houston Lighting & Power Company	Texas	U.S. Department of Energy	Rate of Return
73.	EL89-30-000 April 1989	Central Illinois Public Service Company	FERC	Soyland Power Coop, Inc.	Rate of Return
74.	R-891208 May 1989	Pennsylvania American Water Company	Pennsylvania	Office of Consumer Advocate	Rate of Return

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	<u>Docket Number</u>	<u>Utility</u>	<u>Jurisdiction</u>	<u>Client</u>	<u>Subject</u>
75.	89-0033 May 1989	Illinois Bell Telephone Company	Illinois	Citizens Utility Board	Rate of Return
76.	881167-E1 May 1989	Gulf Power Company	Florida	Federal Executive Agencies	Rate of Return
77.	R-891218 July 1989	National Fuel Gas Distribution Company	Pennsylvania	Office of Consumer Advocate	Sales forecasting
78.	8063, Phase III Sept. 1989	Potomac Electric Power Company	Maryland	Depart. Natural Resources	Emissions Controls
79.	37414-S2 October 1989	Public Service Company of Indiana	Indiana	Utility Consumer Counselor	Rate of Return, DSM, off- system sales, incentive regulation
80.	October 1989	Generic	U.S. House of Reps. Comm. on Ways & Means	N/A	Excess deferred income tax
81.	38728 November 1989	Indiana Michigan Power Company	Indiana	Utility Consumer Counselor	Rate of Return
82.	RP89-49-000 December 1989	National Fuel Gas Supply Corporation	FERC	PA Office of Consumer Advocate	Rate of Return
83.	R-891364 December 1989	Philadelphia Electric Company	Pennsylvania	PA Office of Consumer Advocate	Financial impacts (surrebuttal only)
84.	RP89-160-000 January 1990	Trunkline Gas Company	FERC	Indiana Utility Consumer Counselor	Rate of Return
85.	EL90-16-000 November 1990	System Energy Resources, Inc.	FERC	Louisiana Public Service Commission	Rate of Return
86.	89-624 March 1990	Bell Atlantic	FCC	PA Office of Consumer Advocate	Rate of Return
87.	8245 March 1990	Potomac Edison Company	Maryland	Depart. Natural Resources	Avoided Cost
88.	000586 March 1990	Public Service Company of Oklahoma	Oklahoma	Smith Cogeneration Mgmt.	Need for Power

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	<u>Docket Number</u>	<u>Utility</u>	<u>Jurisdiction</u>	<u>Client</u>	<u>Subject</u>
89.	38868 March 1990	Indianapolis Water Company	Indiana	Utility Consumer Counselor	Rate of Return
90.	1946 March 1990	Blackstone Valley Electric Company	Rhode Island	Division of Public Utilities	Rate of Return
91.	000776 April 1990	Oklahoma Gas & Electric Company	Oklahoma	Smith Cogeneration Mgmt.	Need for Power
92.	890366 May 1990, December 1990	Metropolitan Edison Company	Pennsylvania	Office of Consumer Advocate	Competitive Bidding Program Avoided Costs
93.	EC-90-10-000 May 1990	Northeast Utilities	FERC	Maine PUC, et al.	Merger, Market Power, Transmission Access
94.	ER-891109125 July 1990	Jersey Central Power & Light	New Jersey	Rate Counsel	Rate of Return
95.	R-901670 July 1990	National Fuel Gas Distribution Corp.	Pennsylvania	Office of Consumer Advocate	Rate of Return Test year sales
96.	8201 October 1990	Delmarva Power & Light Company	Maryland	Depart. Natural Resources	Competitive Bidding, Resource Planning
97.	EL90-45-000 April 1991	Entergy Services, Inc.	FERC	Louisiana PSC	Rate of Return
98.	GR90080786J January 1991	New Jersey Natural Gas	New Jersey	Rate Counsel	Rate of Return
99.	90-256 January 1991	South Central Bell Telephone Company	Kentucky	Attorney General	Rate of Return
100.	U-17949A February 1991	South Central Bell Telephone Company	Louisiana	Louisiana PSC	Rate of Return
101.	ER90091090J April 1991	Atlantic City Electric Company	New Jersey	Rate Counsel	Rate of Return
102.	8241, Phase I April 1991	Baltimore Gas & Electric Company	Maryland	Dept. of Natural Resources	Environmental controls

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103.	8241, Phase II May 1991	Baltimore Gas & Electric Company	Maryland	Dept. of Natural Resources	Need for Power, Resource Planning
104.	39128 May 1991	Indianapolis Water Company	Indiana	Utility Consumer Counselor	Rate of Return, rate base, financial planning
105.	P-900485 May 1991	Duquesne Light Company	Pennsylvania	Office of Consumer Advocate	Purchased power contract and related ratemaking
106.	G900240 P910502 May 1991	Metropolitan Edison Company Pennsylvania Electric Company	Pennsylvania	Office of Consumer Advocate	Purchased power contract and related ratemaking
107.	GR901213915 May 1991	Elizabethtown Gas Company	New Jersey	Rate Counsel	Rate of Return
108.	91-5032 August 1991	Nevada Power Company	Nevada	U.S. Dept. of Energy	Rate of Return
109.	EL90-48-000 November 1991	Entergy Services	FERC	Louisiana PSC	Capacity transfer
110.	000662 September 1991	Southwestern Bell Telephone	Oklahoma	Attorney General	Rate of Return
111.	U-19236 October 1991	Arkansas Louisiana Gas Company	Louisiana	Louisiana PSC Staff	Rate of Return
112.	U-19237 December 1991	Louisiana Gas Service Company	Louisiana	Louisiana PSC Staff	Rate of Return
113.	ER91030356J October 1991	Rockland Electric Company	New Jersey	Rate Counsel	Rate of Return
114.	GR91071243J February 1992	South Jersey Gas Company	New Jersey	Rate Counsel	Rate of Return
115.	GR91081393J March 1992	New Jersey Natural Gas Company	New Jersey	Rate Counsel	Rate of Return
116.	P-870235, et al. March 1992	Pennsylvania Electric Company	Pennsylvania	Office of Consumer Advocate	Cogeneration contracts

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	<u>Docket Number</u>	<u>Utility</u>	<u>Jurisdiction</u>	<u>Client</u>	<u>Subject</u>
117.	8413 March 1992	Potomac Electric Power Company	Maryland	Dept. of Natural Resources	IPP purchased power contracts
118.	39236 March 1992	Indianapolis Power & Light Company	Indiana	Utility Consumer Counselor	Least-cost planning Need for power
119.	R-912164 April 1992	Equitable Gas Company	Pennsylvania	Office of Consumer Advocate	Rate of Return
120.	ER-91111698J May 1992	Public Service Electric & Gas Company	New Jersey	Rate Counsel	Rate of Return
121.	U-19631 June 1992	Trans Louisiana Gas Company	Louisiana	PSC Staff	Rate of Return
122.	ER-91121820J July 1992	Jersey Central Power & Light Company	New Jersey	Rate Counsel	Rate of Return
123.	R-00922314 August 1992	Metropolitan Edison Company	Pennsylvania	Office of Consumer Advocate	Rate of Return
124.	92-049-05 September 1992	US West Communications	Utah	Committee of Consumer Services	Rate of Return
125.	92PUE0037 September 1992	Commonwealth Gas Company	Virginia	Attorney General	Rate of Return
126.	EC92-21-000 September 1992	Entergy Services, Inc.	FERC	Louisiana PSC	Merger Impacts (Affidavit)
127.	ER92-341-000 December 1992	System Energy Resources	FERC	Louisiana PSC	Rate of Return
128.	U-19904 November 1992	Louisiana Power & Light Company	Louisiana	Staff	Merger analysis, competition competition issues
129.	8473 November 1992	Baltimore Gas & Electric Company	Maryland	Dept. of Natural Resources	QF contract evaluation
130.	IPC-E-92-25 January 1993	Idaho Power Company	Idaho	Federal Executive Agencies	Power Supply Clause

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<u>Docket Number</u>	<u>Utility</u>	<u>Jurisdiction</u>	<u>Client</u>	<u>Subject</u>
131. E002/GR-92-1185 February 1993	Northern States Power Company	Minnesota	Attorney General	Rate of Return
132. 92-102, Phase II March 1992	Central Maine Power Company	Maine	Staff	QF contracts prudence and procurements practices
133. EC92-21-000 March 1993	Entergy Corporation	FERC	Louisiana PSC	Merger Issues
134. 8489 March 1993	Delmarva Power & Light Company	Maryland	Dept. of Natural Resources	Power Plant Certification
135. 11735 April 1993	Texas Electric Utilities Company	Texas	Federal Executives Agencies	Rate of Return
136. 2082 May 1993	Providence Gas Company	Rhode Island	Division of Public Utilities	Rate of Return
137. P-00930715 December 1993	Bell Telephone Company of Pennsylvania	Pennsylvania	Office of Consumer Advocate	Rate of Return, Financial Projections, Bell/TCI merger
138. R-00932670 February 1994	Pennsylvania-American Water Company	Pennsylvania	Office of Consumer Advocate	Rate of Return
139. 8583 February 1994	Conowingo Power Company	Maryland	Dept. of Natural Resources	Competitive Bidding for Power Supplies
140. E-015/GR-94-001 April 1994	Minnesota Power & Light Company	Minnesota	Attorney General	Rate of Return
141. CC Docket No. 94-1 May 1994	Generic Telephone	FCC	MCI Comm. Corp.	Rate of Return
142. 92-345, Phase II June 1994	Central Maine Power Company	Maine	Advocacy Staff	Price Cap Regulation Fuel Costs
143. 93-11065 April 1994	Nevada Power Company	Nevada	Federal Executive Agencies	Rate of Return
144. 94-0065 May 1994	Commonwealth Edison Company	Illinois	Federal Executive Agencies	Rate of Return
145. GR94010002J June 1994	South Jersey Gas Company	New Jersey	Rate Counsel	Rate of Return

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146. WR94030059 July 1994	New Jersey-American Water Company	New Jersey	Rate Counsel	Rate of Return
147. RP91-203-000 June 1994	Tennessee Gas Pipeline Company	FERC	Customer Group	Environmental Externalities (oral testimony only)
148. ER94-998-000 July 1994	Ocean State Power	FERC	Boston Edison Company	Rate of Return
149. R-00942986 July 1994	West Penn Power Company	Pennsylvania	Office of Consumer Advocate	Rate of Return, Emission Allowances
150. 94-121 August 1994	South Central Bell Telephone Company	Kentucky	Attorney General	Rate of Return
151. 35854-S2 November 1994	PSI Energy, Inc.	Indiana	Utility Consumer Counsel	Merger Savings and Allocations
152. IPC-E-94-5 November 1994	Idaho Power Company	Idaho	Federal Executive Agencies	Rate of Return
153. November 1994	Edmonton Water	Alberta, Canada	Regional Customer Group	Rate of Return (Rebuttal Only)
154. 90-256 December 1994	South Central Bell Telephone Company	Kentucky	Attorney General	Incentive Plan True-Ups
155. U-20925 February 1995	Louisiana Power & Light Company	Louisiana	PSC Staff	Rate of Return Industrial Contracts Trust Fund Earnings
156. R-00943231 February 1995	Pennsylvania-American Water Company	Pennsylvania	Consumer Advocate	Rate of Return
157. 8678 March 1995	Generic	Maryland	Dept. Natural Resources	Electric Competition Incentive Regulation (oral only)
158. R-000943271 April 1995	Pennsylvania Power & Light Company	Pennsylvania	Consumer Advocate	Rate of Return Nuclear decommissioning Capacity Issues
159. U-20925 May 1995	Louisiana Power & Light Company	Louisiana	Commission Staff	Class Cost of Service Issues

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160.	2290 June 1995	Narragansett Electric Company	Rhode Island	Division Staff	Rate of Return
161.	U-17949E June 1995	South Central Bell Telephone Company	Louisiana	Commission Staff	Rate of Return
162.	2304 July 1995	Providence Water Supply Board	Rhode Island	Division Staff	Cost recovery of Capital Spending Program
163.	ER95-625-000, et al. August 1995	PSI Energy, Inc.	FERC	Office of Utility Consumer Counselor	Rate of Return
164.	P-00950915, et al. September 1995	Paxton Creek Cogeneration Assoc.	Pennsylvania	Office of Consumer Advocate	Cogeneration Contract Amendment
165.	8702 September 1995	Potomac Edison Company	Maryland	Dept. of Natural Resources	Allocation of DSM Costs (oral only)
166.	ER95-533-001 September 1995	Ocean State Power	FERC	Boston Edison Co.	Cost of Equity
167.	40003 November 1995	PSI Energy, Inc.	Indiana	Utility Consumer Counselor	Rate of Return Retail wheeling
168.	P-55, SUB 1013 January 1996	BellSouth	North Carolina	AT&T	Rate of Return
169.	P-7, SUB 825 January 1996	Carolina Tel.	North Carolina	AT&T	Rate of Return
170.	February 1996	Generic Telephone	FCC	MCI	Cost of capital
171.	95A-531EG April 1996	Public Service Company of Colorado	Colorado	Federal Executive Agencies	Merger issues
172.	ER96-399-000 May 1996	Northern Indiana Public Service Company	FERC	Indiana Office of Utility Consumer Counselor	Cost of capital
173.	8716 June 1996	Delmarva Power & Light Company	Maryland	Dept. of Natural Resources	DSM programs
174.	8725 July 1996	BGE/PEPCO	Maryland	Md. Energy Admin.	Merger Issues

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175.	U-20925 August 1996	Entergy Louisiana, Inc.	Louisiana	PSC Staff	Rate of Return Allocations Fuel Clause
176.	EC96-10-000 September 1996	BGE/PEPCO	FERC	Md. Energy Admin.	Merger issues competition
177.	EL95-53-000 November 1996	Entergy Services, Inc.	FERC	Louisiana PSC	Nuclear Decommissioning
178.	WR96100768 March 1997	Consumers NJ Water Company	New Jersey	Ratepayer Advocate	Cost of Capital
179.	WR96110818 April 1997	Middlesex Water Co.	New Jersey	Ratepayer Advocate	Cost of Capital
180.	U-11366 April 1997	Ameritech Michigan	Michigan	MCI	Access charge reform/financial condition
181.	97-074 May 1997	BellSouth	Kentucky	MCI	Rate Rebalancing financial condition
182.	2540 June 1997	New England Power	Rhode Island	PUC Staff	Divestiture Plan
183.	96-336-TP-CSS June 1997	Ameritech Ohio	Ohio	MCI	Access Charge reform Economic impacts
184.	WR97010052 July 1997	Maxim Sewerage Corp.	New Jersey	Ratepayer Advocate	Rate of Return
185.	97-300 August 1997	LG&E/KU	Kentucky	Attorney General	Merger Plan
186.	Case No. 8738 August 1997	Generic (oral testimony only)	Maryland	Dept. of Natural Resources	Electric Restructuring Policy
187.	Docket No. 2592 September 1997	Eastern Utilities	Rhode Island	PUC Staff	Generation Divestiture
188.	Case No.97-247 September 1997	Cincinnati Bell Telephone	Kentucky	MCI	Financial Condition

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189.	Docket No. U-20925 November 1997	Entergy Louisiana	Louisiana	PSC Staff	Rate of Return
190.	Docket No. D97.7.90 November 1997	Montana Power Co.	Montana	Montana Consumers Counsel	Stranded Cost
191.	Docket No. EO97070459 November 1997	Jersey Central Power & Light Co.	New Jersey	Ratepayer Advocate	Stranded Cost
192.	Docket No. R-00974104 November 1997	Duquesne Light Co.	Pennsylvania	Office of Consumer Advocate	Stranded Cost
193.	Docket No. R-00973981 November 1997	West Penn Power Co.	Pennsylvania	Office of Consumer Advocate	Stranded Cost
194.	Docket No. A-1101150F0015 November 1997	Allegheny Power System DQE, Inc.	Pennsylvania	Office of Consumer Advocate	Merger Issues
195.	Docket No. WR97080615 January 1998	Consumers NJ Water Company	New Jersey	Ratepayer Advocate	Rate of Return
196.	Docket No. R-00974149 January 1998	Pennsylvania Power Company	Pennsylvania	Office of Consumer Advocate	Stranded Cost
197.	Case No. 8774 January 1998	Allegheny Power System DQE, Inc.	Maryland	Dept. of Natural Resources MD Energy Administration	Merger Issues
198.	Docket No. U-20925 (SC) March 1998	Entergy Louisiana, Inc.	Louisiana	Commission Staff	Restructuring, Stranded Costs, Market Prices
199.	Docket No. U-22092 (SC) March 1998	Entergy Gulf States, Inc.	Louisiana	Commission Staff	Restructuring, Stranded Costs, Market Prices
200.	Docket Nos. U-22092 (SC) and U-20925(SC) May 1998	Entergy Gulf States and Entergy Louisiana	Louisiana	Commission Staff	Standby Rates
201.	Docket No. WR98010015 May 1998	NJ American Water Co.	New Jersey	Ratepayer Advocate	Rate of Return
202.	Case No. 8794 December 1998	Baltimore Gas & Electric Co.	Maryland	MD Energy Admin./Dept. Of Natural Resources	Stranded Cost/ Transition Plan

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203.	Case No. 8795 December 1998	Delmarva Power & Light Co.	Maryland	MD Energy Admin./Dept. Of Natural Resources	Stranded Cost/ Transition Plan
204.	Case No. 8797 January 1998	Potomac Edison Co.	Maryland	MD Energy Admin./Dept. Of Natural Resources	Stranded Cost/ Transition Plan
205.	Docket No. WR98090795 March 1999	Middlesex Water Co.	New Jersey	Ratepayer Advocate	Rate of Return
206.	Docket No. 99-02-05 April 1999	Connecticut Light & Power	Connecticut	Attorney General	Stranded Costs
207.	Docket No. 99-03-04 May 1999	United Illuminating Company	Connecticut	Attorney General	Stranded Costs
208.	Docket No. U-20925 (FRP) June 1999	Entergy Louisiana, Inc.	Louisiana	Staff	Capital Structure
209.	Docket No. EC-98-40-000, <u>et al.</u> May 1999	American Electric Power/ Central & Southwest	FERC	Arkansas PSC	Market Power Mitigation
210.	Docket No. 99-03-35 July 1999	United Illuminating Company	Connecticut	Attorney General	Restructuring
211.	Docket No. 99-03-36 July 1999	Connecticut Light & Power Co.	Connecticut	Attorney General	Restructuring
212.	WR99040249 Oct. 1999	Environmental Disposal Corp.	New Jersey	Ratepayer Advocate	Rate of Return
213.	2930 Nov. 1999	NEES/EUA	Rhode Island	Division Staff	Merger/Cost of Capital
214.	DE99-099 Nov. 1999	Public Service New Hampshire	New Hampshire	Consumer Advocate	Cost of Capital Issues
215.	00-01-11 Feb. 2000	Con Ed/NU	Connecticut	Attorney General	Merger Issues
216.	Case No. 8821 May 2000	Reliant/ODEC	Maryland	Dept. of Natural Resources	Need for Power/Plant Operations

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217.	Case No. 8738 July 2000	Generic	Maryland	Dept. of Natural Resources	DSM Funding
218.	Case No. U-23356 June 2000	Entergy Louisiana, Inc.	Louisiana	PSC Staff	Fuel Prudence Issues Purchased Power
219.	Case No. 21453, et al. July 2000	SWEPSCO	Louisiana	PSC Staff	Stranded Costs
220.	Case No. 20925 (B) July 2000	Entergy Louisiana	Louisiana	PSC Staff	Purchase Power Contracts
221.	Case No. 24889 August 2000	Entergy Louisiana	Louisiana	PSC Staff	Purchase Power Contracts
222.	Case No. 21453, et al. February 2001	CLECO	Louisiana	PSC Staff	Stranded Costs
223.	P-00001860 and P-0000181 March 2001	GPU Companies	Pennsylvania	Office of Consumer Advocate	Rate of Return
224.	CVOL-0505662-S March 2001	ConEd/NU	Connecticut Superior Court	Attorney General	Merger (Affidavit)
225.	U-20925 (SC) March 2001	Entergy Louisiana	Louisiana	PSC Staff	Stranded Costs
226.	U-22092 (SC) March 2001	Entergy Gulf States	Louisiana	PSC Staff	Stranded Costs
227.	U-25533 May 2001	Entergy Louisiana/ Gulf States	Louisiana Interruptible Service	PSC Staff	Purchase Power
228.	P-00011872 May 2001	Pike County Pike	Pennsylvania	Office of Consumer Advocate	Rate of Return
229.	8893 July 2001	Baltimore Gas & Electric Co.	Maryland	MD Energy Administration	Corporate Restructuring
230.	8890 September 2001	Potomac Electric/Connectivity	Maryland	MD Energy Administration	Merger Issues

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231.	U-25533 August 2001	Entergy Louisiana / Gulf States	Louisiana	Staff	Purchase Power Contracts
232.	U-25965 November 2001	Generic	Louisiana	Staff	RTO Issues
233.	3401 March 2002	New England Gas Co.	Rhode Island	Division of Public Utilities	Rate of Return
234.	99-833-MJR April 2002	Illinois Power Co.	U.S. District Court	U.S. Department of Justice	New Source Review
235.	U-25533 March 2002	Entergy Louisiana/ Gulf States	Louisiana	PSC Staff	Nuclear Uprates Purchase Power
236.	P-00011872 May 2002	Pike County Power & Light	Pennsylvania	Consumer Advocate	POLR Service Costs
237.	U-26361, Phase I May 2002	Entergy Louisiana/ Gulf States	Louisiana	PSC Staff	Purchase Power Cost Allocations
238.	R-00016849C001, et al. June 2002	Generic	Pennsylvania	Pennsylvania OCA	Rate of Return
239.	U-26361, Phase II July 2002	Entergy Louisiana/ Entergy Gulf States	Louisiana	PSC Staff	Purchase Power Contracts
240.	U-20925(B) August 2002	Entergy Louisiana	Louisiana	PSC Staff	Tax Issues
241.	U-26531 October 2002	SWEPSCO	Louisiana	PSC Staff	Purchase Power Contract
242.	8936 October 2002	Delmarva Power & Light	Maryland	Energy Administration Dept. Natural Resources	Standard Offer Service
243.	U-25965 November 2002	SWEPSCO/AEP	Louisiana	PSC Staff	RTO Cost/Benefit
244.	8908 Phase I November 2002	Generic	Maryland	Energy Administration Dept. Natural Resources	Standard Offer Service
245.	02S-315EG November 2002	Public Service Company of Colorado	Colorado	Fed. Executive Agencies	Rate of Return

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246.	EL02-111-000 December 2002	PJM/MISO	FERC	MD PSC	Transmission Ratemaking
247.	02-0479 February 2003	Commonwealth Edison	Illinois	Dept. of Energy	POLR Service
248.	PL03-1-000 March 2003	Generic	FERC	NASUCA	Transmission Pricing (Affidavit)
249.	U-27136 April 2003	Entergy Louisiana	Louisiana	Staff	Purchase Power Contracts
250.	8908 Phase II July 2003	Generic	Maryland	Energy Administration Dept. of Natural Resources	Standard Offer Service
251.	U-27192 June 2003	Entergy Louisiana and Gulf States	Louisiana	LPSC Staff	Purchase Power Contract Cost Recovery
252.	C2-99-1181 October 2003	Ohio Edison Company	U.S. District Court	U.S. Department of Justice, et al.	Clean Air Act Compliance Economic Impact (Report)
253.	RP03-398-000 December 2003	Northern Natural Gas Co.	FERC	Municipal Distributors Group/Gas Task Force	Rate of Return
254.	8738 December 2003	Generic	Maryland	Energy Admin Department of Natural Resources	Environmental Disclosure (oral only)
255.	U-27136 December 2003	Entergy Louisiana, Inc.	Louisiana	PSC Staff	Purchase Power Contracts
256.	U-27192, Phase II October/December 2003	Entergy Louisiana & Entergy Gulf States	Louisiana	PSC Staff	Purchase Power Contracts
257.	WC Docket 03-173 December 2003	Generic	FCC	MCI	Cost of Capital (TELRIC)
258.	ER 030 20110 January 2004	Atlantic City Electric	New Jersey	Ratepayer Advocate	Rate of Return
259.	E-01345A-03-0437 January 2004	Arizona Public Service Company	Arizona	Federal Executive Agencies	Rate of Return
260.	03-10001 January 2004	Nevada Power Company	Nevada	U.S. Dept. of Energy	Rate of Return

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261. R-00049255 June 2004	PPL Elec. Utility	Pennsylvania	Office of Consumer Advocate	Rate of Return
262. U-20925 July 2004	Entergy Louisiana, Inc.	Louisiana	PSC Staff	Rate of Return Capacity Resources
263. U-27866 September 2004	Southwest Electric Power Co.	Louisiana	PSC Staff	Purchase Power Contract
264. U-27980 September 2004	Cleco Power	Louisiana	PSC Staff	Purchase Power Contract
265. U-27865 October 2004	Entergy Louisiana, Inc. Entergy Gulf States	Louisiana	PSC Staff	Purchase Power Contract
266. RP04-155 December 2004	Northern Natural Gas Company	FERC	Municipal Distributors Group/Gas Task Force	Rate of Return
267. U-27836 January 2005	Entergy Louisiana/ Gulf States	Louisiana	PSC Staff	Power plant Purchase and Cost Recovery
268. U-199040 et al. February 2005	Entergy Gulf States/ Louisiana	Louisiana	PSC Staff	Global Settlement, Multiple rate proceedings
269. EF03070532 March 2005	Public Service Electric & Gas	New Jersey	Ratepayers Advocate	Securitization of Deferred Costs
270. 05-0159 June 2005	Commonwealth Edison	Illinois	Department of Energy	POLR Service
271. U-28804 June 2005	Entergy Louisiana	Louisiana	LPSC Staff	QF Contract
272. U-28805 June 2005	Entergy Gulf States	Louisiana	LPSC Staff	QF Contract
273. 05-0045-EI June 2005	Florida Power & Lt.	Florida	Federal Executive Agencies	Rate of Return
274. 9037 July 2005	Generic	Maryland	MD. Energy Administration	POLR Service
275. U-28155 August 2005	Entergy Louisiana Entergy Gulf States	Louisiana	LPSC Staff	Independent Coordinator of Transmission Plan

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276.	U-27866-A September 2005	Southwestern Electric Power Company	Louisiana	LPSC Staff	Purchase Power Contract
277.	U-28765 October 2005	Cleco Power LLC	Louisiana	LPSC Staff	Purchase Power Contract
278.	U-27469 October 2005	Entergy Louisiana Entergy Gulf States	Louisiana	LPSC Staff	Avoided Cost Methodology
279.	A-313200F007 October 2005	Sprint (United of PA)	Pennsylvania	Office of Consumer Advocate	Corporate Restructuring
280.	EM05020106 November 2005	Public Service Electric & Gas Company	New Jersey	Ratepayer Advocate	Merger Issues
281.	U-28765 December 2005	Cleco Power LLC	Louisiana	LPSC Staff	Plant Certification, Financing, Rate Plan
282.	U-29157 February 2006	Cleco Power LLC	Louisiana	LPSC Staff	Storm Damage Financing
283.	U-29204 March 2006	Entergy Louisiana Entergy Gulf States	Louisiana	LPSC Staff	Purchase power contracts
284.	A-310325F006 March 2006	Alltel	Pennsylvania	Office of Consumer Advocate	Merger, Corporate Restructuring
285.	9056 March 2006	Generic	Maryland	Maryland Energy Administration	Standard Offer Service Structure
286.	C2-99-1182 April 2006	American Electric Power Utilities	U. S. District Court Southern District, Ohio	U. S. Department of Justice	New Source Review Enforcement (expert report)
287.	EM05121058 April 2006	Atlantic City Electric	New Jersey	Ratepayer Advocate	Power plant Sale
288.	ER05121018 June 2006	Jersey Central Power & Light Company	New Jersey	Ratepayer Advocate	NUG Contracts Cost Recovery
289.	U-21496, Subdocket C June 2006	Cleco Power LLC	Louisiana	Commission Staff	Rate Stabilization Plan
290.	GR0510085 June 2006	Public Service Electric & Gas Company	New Jersey	Ratepayer Advocate	Rate of Return (gas services)

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291. R-000061366 July 2006	Metropolitan Ed. Company Penn. Electric Company	Pennsylvania	Office of Consumer Advocate	Rate of Return
292. 9064 September 2006	Generic	Maryland	Energy Administration	Standard Offer Service
293. U-29599 September 2006	Cleco Power LLC	Louisiana	Commission Staff	Purchase Power Contracts
294. WR06030257 September 2006	New Jersey American Water Company	New Jersey	Rate Counsel	Rate of Return
295. U-27866/U-29702 October 2006	Southwestern Electric Power Company	Louisiana	Commission Staff	Purchase Power/Power Plant Certification
296. 9063 October 2006	Generic	Maryland	Energy Administration Department of Natural Resources	Generation Supply Policies
297. EM06090638 November 2006	Atlantic City Electric	New Jersey	Rate Counsel	Power Plant Sale
298. C-2000065942 November 2006	Pike County Light & Power	Pennsylvania	Consumer Advocate	Generation Supply Service
299. ER06060483 November 2006	Rockland Electric Company	New Jersey	Rate Counsel	Rate of Return
300. A-110150F0035 December 2006	Duquesne Light Company	Pennsylvania	Consumer Advocate	Merger Issues
301. U-29203, Phase II January 2007	Entergy Gulf States Entergy Louisiana	Louisiana	Commission Staff	Storm Damage Cost Allocation
302. 06-11022 February 2007	Nevada Power Company	Nevada	U.S. Dept. of Energy	Rate of Return
303. U-29526 March 2007	Cleco Power	Louisiana	Commission Staff	Affiliate Transactions
304. P-00072245 March 2007	Pike County Light & Power	Pennsylvania	Consumer Advocate	Provider of Last Resort Service
305. P-00072247 March 2007	Duquesne Light Company	Pennsylvania	Consumer Advocate	Provider of Last Resort Service

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306.	EM07010026 May 2007	Jersey Central Power & Light Company	New Jersey	Rate Counsel	Power Plant Sale
307.	U-30050 June 2007	Entergy Louisiana Entergy Gulf States	Louisiana	Commission Staff	Purchase Power Contract
308.	U-29956 June 2007	Entergy Louisiana	Louisiana	Commission Staff	Black Start Unit
309.	U-29702 June 2007	Southwestern Electric Power Company	Louisiana	Commission Staff	Power Plant Certification
310.	U-29955 July 2007	Entergy Louisiana Entergy Gulf States	Louisiana	Commission Staff	Purchase Power Contracts
311.	2007-67 July 2007	FairPoint Communications	Maine	Office of Public Advocate	Merger Financial Issues
312.	P-00072259 July 2007	Metropolitan Edison Co.	Pennsylvania	Office of Consumer Advocate	Purchase Power Contract Restructuring
313.	EO07040278 September 2007	Public Service Electric & Gas	New Jersey	Rate Counsel	Solar Energy Program Financial Issues
314.	U-30192 September 2007	Entergy Louisiana	Louisiana	Commission Staff	Power Plant Certification Ratemaking, Financing
315.	9117 (Phase II) October 2007	Generic (Electric)	Maryland	Energy Administration	Standard Offer Service Reliability
316.	U-30050 November 2007	Entergy Gulf States	Louisiana	Commission Staff	Power Plant Acquisition
317.	IPC-E-07-8 December 2007	Idaho Power Co.	Idaho	U.S. Department of Energy	Cost of Capital
318.	U-30422 (Phase I) January 2008	Entergy Gulf States	Louisiana	Commission Staff	Purchase Power Contract
319.	U-29702 (Phase II) February, 2008	Southwestern Electric Power Co.	Louisiana	Commission Staff	Power Plant Certification
320.	March 2008	Delmarva Power & Light	Delaware State Senate	Senate Committee	Wind Energy Economics

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321. U-30192 (Phase II) March 2008	Entergy Louisiana	Louisiana	Commission Staff	Cash CWIP Policy, Credit Ratings
322. U-30422 (Phase II) April 2008	Entergy Gulf States - LA	Louisiana	Commission Staff	Power Plant Acquisition
323. U-29955 (Phase II) April 2008	Entergy Gulf States - LA Entergy Louisiana	Louisiana	Commission Staff	Purchase Power Contract
324. GR-070110889 April 2008	New Jersey Natural Gas Company	New Jersey	Rate Counsel	Cost of Capital
325. WR-08010020 July 2008	New Jersey American Water Company	New Jersey	Rate Counsel	Cost of Capital
326. U-28804-A August 2008	Entergy Louisiana	Louisiana	Commission Staff	Cogeneration Contract
327. IP-99-1693C-M/S August 2008	Duke Energy Indiana	Federal District Court	U.S. Department of Justice/ Environmental Protection Agency	Clean Air Act Compliance (Expert Report)
328. U-30670 September 2008	Entergy Louisiana	Louisiana	Commission Staff	Nuclear Plant Equipment Replacement
329. 9149 October 2008	Generic	Maryland	Department of Natural Resources	Capacity Adequacy/Reliability
330. IPC-E-08-10 October 2008	Idaho Power Company	Idaho	U.S. Department of Energy	Cost of Capital
331. U-30727 October 2008	Cleco Power LLC	Louisiana	Commission Staff	Purchased Power Contract
332. U-30689-A December 2008	Cleco Power LLC	Louisiana	Commission Staff	Transmission Upgrade Project
333. IP-99-1693C-M/S February 2009	Duke Energy Indiana	Federal District Court	U.S. Department of Justice/EPA	Clean Air Act Compliance (Oral Testimony)
334. U-30192, Phase II February 2009	Entergy Louisiana, LLC	Louisiana	Commission Staff	CWIP Rate Request Plant Allocation
335. U-28805-B February 2009	Entergy Gulf States, LLC	Louisiana	Commission Staff	Cogeneration Contract

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336. P-2009-2093055, et al. May 2009	Metropolitan Edison Pennsylvania Electric	Pennsylvania	Office of Consumer Advocate	Default Service
337. U-30958 July 2009	Cleco Power	Louisiana	Commission Staff	Purchase Power Contract
338. EO08050326 August 2009	Jersey Central Power Light Co.	New Jersey	Rate Counsel	Demand Response Cost Recovery
339. GR09030195 August 2009	Elizabethtown Gas	New Jersey	New Jersey Rate Counsel	Cost of Capital
340. U-30422-A August 2009	Entergy Gulf States	Louisiana	Staff	Generating Unit Purchase
341. CV 1:99-01693 August 2009	Duke Energy Indiana	Federal District Court – Indiana	U. S. DOJ/EPA, et al.	Environmental Compliance Rate Impacts (Expert Report)
342. 4065 September 2009	Narragansett Electric	Rhode Island	Division Staff	Cost of Capital
343. U-30689 September 2009	Cleco Power	Louisiana	Staff	Cost of Capital, Rate Design, Other Rate Case Issues
344. U-31147 October 2009	Entergy Gulf States Entergy Louisiana	Louisiana	Staff	Purchase Power Contracts
345. U-30913 November 2009	Cleco Power	Louisiana	Staff	Certification of Generating Unit
346. M-2009-2123951 November 2009	West Penn Power	Pennsylvania	Office of Consumer Advocate	Smart Meter Cost of Capital (Surrebuttal Only)
347. GR09050422 November 2009	Public Service Electric & Gas Company	New Jersey	Rate Counsel	Cost of Capital
348. D-09-49 November 2009	Narragansett Electric	Rhode Island	Division Staff	Securities Issuances
349. U-29702, Phase II November 2009	Southwestern Electric Power Company	Louisiana	Commission Staff	Cash CWIP Recovery
350. U-30981 December 2009	Entergy Louisiana Entergy Gulf States	Louisiana	Commission Staff	Storm Damage Cost Allocation

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351. U-31196 (ITA Phase) February 2010	Entergy Louisiana	Louisiana	Staff	Purchase Power Contract
352. ER09080668 March 2010	Rockland Electric	New Jersey	Rate Counsel	Rate of Return
353. GR10010035 May 2010	South Jersey Gas Co.	New Jersey	Rate Counsel	Rate of Return
354. P-2010-2157862 May 2010	Pennsylvania Power Co.	Pennsylvania	Consumer Advocate	Default Service Program
355. 10-CV-2275 June 2010	Xcel Energy	U.S. District Court Minnesota	U.S. Dept. Justice/EPA	Clean Air Act Enforcement
356. WR09120987 June 2010	United Water New Jersey	New Jersey	Rate Counsel	Rate of Return
357. U-30192, Phase III June 2010	Entergy Louisiana	Louisiana	Staff	Power Plant Cancellation Costs
358. 31299 July 2010	Cleco Power	Louisiana	Staff	Securities Issuances
359. App. No. 1601162 July 2010	EPCOR Water	Alberta, Canada	Regional Customer Group	Cost of Capital
360. U-31196 July 2010	Entergy Louisiana	Louisiana	Staff	Purchase Power Contract
361. 2:10-CV-13101 August 2010	Detroit Edison	U.S. District Court Eastern Michigan	U.S. Dept. of Justice/EPA	Clean Air Act Enforcement
362. U-31196 August 2010	Entergy Louisiana Entergy Gulf States	Louisiana	Staff	Generating Unit Purchase and Cost Recovery
363. Case No. 9233 October 2010	Potomac Edison Company	Maryland	Energy Administration	Merger Issues
364. 2010-2194652 November 2010	Pike County Light & Power	Pennsylvania	Consumer Advocate	Default Service Plan
365. 2010-2213369 April 2011	Duquesne Light Company	Pennsylvania	Consumer Advocate	Merger Issues

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366.	U-31841 May 2011	Entergy Gulf States	Louisiana	Staff	Purchase Power Agreement
367.	11-06006 September 2011	Nevada Power	Nevada	U. S. Department of Energy	Cost of Capital
368.	9271 September 2011	Exelon/Constellation	Maryland	MD Energy Administration	Merger Savings
369.	4255 September 2011	United Water Rhode Island	Rhode Island	Division of Public Utilities	Rate of Return
370.	P-2011-2252042 October 2011	Pike County Light & Power	Pennsylvania	Consumer Advocate	Default service plan
371.	U-32095 November 2011	Southwestern Electric Power Company	Louisiana	Commission Staff	Wind energy contract
372.	U-32031 November 2011	Entergy Gulf States Louisiana	Louisiana	Commission Staff	Purchased Power Contract
373.	U-32088 January 2012	Entergy Louisiana	Louisiana	Commission Staff	Coal plant evaluation
374.	R-2011-2267958 February 2012	Aqua Pa.	Pennsylvania	Office of Consumer Advocate	Cost of capital
375.	P-2011-2273650 February 2012	FirstEnergy Companies	Pennsylvania	Office of Consumer Advocate	Default service plan
376.	U-32223 March 2012	Cleco Power	Louisiana	Commission Staff	Purchase Power Contract and Rate Recovery
377.	U-32148 March 2012	Entergy Louisiana Energy Gulf States	Louisiana	Commission Staff	RTO Membership
378.	ER11080469 April 2012	Atlantic City Electric	New Jersey	Rate Counsel	Cost of capital
379.	R-2012-2285985 May 2012	Peoples Natural Gas Company	Pennsylvania	Office of Consumer Advocate	Cost of capital
380.	U-32153 July 2012	Cleco Power	Louisiana	Commission Staff	Environmental Compliance Plan

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381. U-32435 August 2012	Entergy Gulf States Louisiana LLC	Louisiana	Commission Staff	Cost of equity (gas)
382. ER-2012-0174 August 2012	Kansas City Power & Light Company	Missouri	U. S. Department of Energy	Rate of return
383. U-31196 August 2012	Entergy Louisiana/ Entergy Gulf States	Louisiana	Commission Staff	Power Plant Joint Ownership
384. ER-2012-0175 August 2012	KCP&L Greater Missouri Operations	Missouri	U.S. Department of Energy	Rate of Return
385. 4323 August 2012	Narragansett Electric Company	Rhode Island	Division of Public Utilities and Carriers	Rate of Return (electric and gas)
386. D-12-049 October 2012	Narragansett Electric Company	Rhode Island	Division of Public Utilities and Carriers	Debt issue
387. GO12070640 October 2012	New Jersey Natural Gas Company	New Jersey	Rate Counsel	Cost of capital
388. GO12050363 November 2012	South Jersey Gas Company	New Jersey	Rate Counsel	Cost of capital
389. R-2012-2321748 January 2013	Columbia Gas of Pennsylvania	Pennsylvania	Office of Consumer Advocate	Cost of capital
390. U-32220 February 2013	Southwestern Electric Power Co.	Louisiana	Commission Staff	Formula Rate Plan
391. CV No. 12-1286 February 2013	PPL et al.	Federal District Court	MD Public Service Commission	PJM Market Impacts (deposition)
392. EL13-48-000 February 2013	BGE, PHI subsidiaries	FERC	Joint Customer Group	Transmission Cost of Equity
393. EO12080721 March 2013	Public Service Electric & Gas	New Jersey	Rate Counsel	Solar Tracker ROE
394. EO12080726 March 2013	Public Service Electric & Gas	New Jersey	Rate Counsel	Solar Tracker ROE
395. CV12-1286MJG March 2013	PPL, PSEG	U.S. District Court for the District of Md.	Md. Public Service Commission	Capacity Market Issues (trial testimony)

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396. U-32628 April 2013	Entergy Louisiana and Gulf States Louisiana	Louisiana	Staff	Avoided cost methodology
397. U-32675 June 2013	Entergy Louisiana and Entergy Gulf States	Louisiana	Staff	RTO Integration Issues
398. ER12111052 June 2013	Jersey Central Power & Light Company	New Jersey	Rate Counsel	Cost of capital
399. PUE-2013-00020 July 2013	Dominion Virginia Power	Virginia	Apartment & Office Building Assoc. of Met. Washington	Cost of capital
400. U-32766 August 2013	Cleco Power	Louisiana	Staff	Power plant acquisition
401. U-32764 September 2013	Entergy Louisiana and Entergy Gulf States	Louisiana	Staff	Storm Damage Cost Allocation
402. P-2013-237-1666 September 2013	Pike County Light and Power Co.	Pennsylvania	Office of Consumer Advocate	Default Generation Service
403. E013020155 and G013020156 October 2013	Public Service Electric and Gas Company	New Jersey	Rate Counsel	Cost of capital
404. U-32507 November 2013	Cleco Power	Louisiana	Staff	Environmental Compliance Plan
405. DE11-250 December 2013	Public Service Co. New Hampshire	New Hampshire	Consumer Advocate	Power plant investment prudence
406. 4434 February 2014	United Water Rhode Island	Rhode Island	Staff	Cost of Capital
407. U-32987 February 2014	Atmos Energy	Louisiana	Staff	Cost of Capital
408. EL 14-28-000 February 2014	Entergy Louisiana Entergy Gulf States	FERC	LPSC	Avoided Cost Methodology (affidavit)
409. ER13111135 May 2014	Rockland Electric	New Jersey	Rate Counsel	Cost of Capital

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410.	13-2385-SSO, et al. May 2014	AEP Ohio	Ohio	Ohio Consumers' Counsel	Default Service Issues
411.	U-32779 May 2014	Cleco Power, LLC	Louisiana	Staff	Formula Rate Plan
412.	CV-00234-SDD-SCR June 2014	Entergy Louisiana Entergy Gulf	U.S. District Court Middle District Louisiana	Louisiana Public Service Commission	Avoided Cost Determination Court Appeal
413.	U-32812 July 2014	Entergy Louisiana	Louisiana	Louisiana Public Service Commission	Nuclear Power Plant Prudence
414.	14-841-EL-SSO September 2014	Duke Energy Ohio	Ohio	Ohio Consumer' Counsel	Default Service Issues
415.	EM14060581 November 2014	Atlantic City Electric Company	New Jersey	Rate Counsel	Merger Financial Issues
416.	EL15-27 December 2014	BGE, PHI Utilities	FERC	Joint Complainants	Cost of Equity
417.	14-1297-EL-SSO December 2014	First Energy Utilities	Ohio	Ohio Consumer's Counsel and NOPEC	Default Service Issues
418.	EL-13-48-001 January 2015	BGE, PHI Utilities	FERC	Joint Complainants	Cost of Equity
419.	EL13-48-001 and EL15-27-000 April 2015	BGE and PHI Utilities	FERC	Joint Complainants	Cost of Equity
420.	U- 33592 November 2015	Entergy Louisiana	Louisiana Public Service Commission	Commission Staff	PURPA PPA Contract
421.	GM15101196 April 2016	AGL Resources	New Jersey	Rate Counsel	Financial Aspects of Merger
422.	U-32814 April 2016	Southwestern Electric Power	Louisiana	Staff	Wind Energy PPAs
423.	A-2015-2517036, et.al. April 2016	Pike County	Pennsylvania	Consumer Advocate	Merger Issues

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of Matthew I. Kahal

<u>Docket Number</u>	<u>Utility</u>	<u>Jurisdiction</u>	<u>Client</u>	<u>Subject</u>
424. EM15060733 August 2016	Jersey Central Power & Light Company	New Jersey	Rate Counsel	Transmission Divestiture
425. 16-395-EL-SSO November 2016	Dayton Power & Light Company	Ohio	Ohio Consumer's Counsel	Electric Security Plan
426. PUE-2016-00001 January 2017	Washington Gas Light	Virginia	AOBA	Cost of Capital
427. U-34200 April 2017	Southwestern Electric Power Co.	Louisiana	Commission Staff	Design of Formula Rate Plan
428. ER-17030308 August 2017	Atlantic City Electric Co.	New Jersey	Rate Counsel	Cost of Capital
429. U-33856 October 2017	Southwestern Electric Power Co.	Louisiana	Commission Staff	Power Plant Prudence
430. 4:11 CV77RWS December 2017	Ameren Missouri	U.S. District Court	U.S. Department of Justice	Expert Report FGD Retrofit
431. D-17-36 January 2018	Narragansett Electric Co.	Rhode Island	Division Staff	Debt Issuance Authority