OCC EXHIBIT NO. ______

BEFORE
THE PUBLIC UTILITIES COMMISSION OF OHIO

In the Matter of the Application of Duke Energy Ohio, Inc., for an Increase in Electric Distribution Rates.	)))	Case No. 17-0032-EL-AIR
In the Matter of the application of Duke Energy Ohio, Inc., for Tariff Approval.	))	Case No. 17-0033-EL-ATA
In the Matter of the Application of Duke Energy Ohio, Inc. for Approval to Change Accounting Methods.	))	Case No. 17-0034-EL-AAM
In the Matter of the Application of Duke Energy Ohio, Inc. for Approval to Modify Rider PSR.	)))	Case No. 17-0872-EL-RDR
In the Matter of the Application of Duke Energy Ohio, Inc. for Approval to Amend Rider PSR.	)))	Case No. 17-0873-EL-ATA
In the Matter of the Application of Duke Energy Ohio, Inc. for Approval to Change Accounting Methods.	)))	Case No. 17-0874-EL-AAM
In the Matter of the Application of Duke Energy Ohio, Inc. for Authority to Establish a Standard Service Offer Pursuant to Section 4928.143, Revised Code, in the Form of an Electric Security Plan, Accounting Modifications and Tariffs for Generation Service.	)))))))	Case No. 17-1263-EL-SSO
In the Matter of the Application of Duke Energy Ohio, Inc. for Authority to Amend Its Certified Supplier Tariff, P.U.C.O. No. 20.	))))	Case No. 17-1264-EL-ATA
In the Matter of the Application of Duke Energy Ohio, Inc. for Authority to Defer Vegetation Management Costs.	)))	Case No. 17-1265-EL-AAM

In the Matter of the Application of Duke Energy Ohio, Inc. to Establish Minimum Reliability Performance Standards Pursuant to Chapter 4901:1-10, Ohio Administrative Code.	)))))	Case No. 16-1602-EL-ESS

DIRECT TESTIMONY
OF
MATTHEW I. KAHAL

IN OPPOSITION TO THE JOINT STIPULATION AND RECOMMENDATION

On Behalf of
The Office of the Ohio Consumers' Counsel
65 East State Street, 7th Floor
Columbus, Ohio 43215-4213

June 25, 2018

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I. QUALIFICATIONS

Q1. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A1. My name is Matthew I. Kahal. I am employed as an independent consultant retained by the Office of the Ohio Consumers' Counsel ("OCC") to address certain issues in this docket. My business address is 1108 Pheasant Crossing, Charlottesville, VA 22901.

Q2. PLEASE STATE YOUR EDUCATIONAL BACKGROUND.

A2. 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.

Q3. WHAT IS YOUR PROFESSIONAL BACKGROUND?

A3. 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 during my consulting career has focused on electric utility integrated planning, power plant licensing, environmental compliance issues, mergers, and utility financial issues. I was a co-founder of Exeter Associates, Inc. ("Exeter"), and from 1981 to 2001, and I was employed at Exeter as a Senior Economist and Principal. During that time, I took the lead role at Exeter in performing cost of capital and financial studies. In recent years, the focus of much of my professional work has expanded to include electric utility markets, power supply procurement, and industry restructuring.

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

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

Q4. HAVE YOU PREVIOUSLY TESTIFIED AS AN EXPERT WITNESS BEFORE UTILITY REGULATORY COMMISSIONS?

A4. Yes. I have testified before approximately two dozen state and federal utility commissions, federal courts, and the U.S. Congress in more than 400 separate regulatory cases. My testimony has addressed a variety of subjects including fair rate of return, resource planning, financial assessments, load forecasting, competitive restructuring, rate design, purchased power contracts, environmental compliance, merger economics, and other regulatory policy issues. These cases have involved electric, gas, water, and telephone utilities. A list of these cases is set forth in Appendix A, with my statement of qualifications.

Q5. WHAT PROFESSIONAL ACTIVITIES HAVE YOU ENGAGED IN SINCE LEAVING EXETER AS A PRINCIPAL IN 2001?

A5. Since 2001, I have worked on a variety of consulting assignments pertaining to electric restructuring, purchase power contracts, environmental controls, cost of capital, and other regulatory issues. Current and recent clients include the U.S. Department of Justice, U.S. Air Force, U.S. Department of Energy, the Federal Energy Regulatory Commission, Connecticut Attorney General, Pennsylvania Office of Consumer Advocate, the Ohio Consumers' Counsel, New Jersey Division of Rate Counsel, Rhode Island Division of Public Utilities, Louisiana Public Service Commission, Arkansas Public Service Commission, the Maryland Public Service Commission, the Maine Public Advocate, the New Hampshire Consumer Advocate, the Maryland Department of Natural Resources, the Maryland Energy Administration, and certain private clients.

Q6. HAVE YOU PREVIOUSLY TESTIFIED ON THE SUBJECTS OF ELECTRIC RESTRUCTURING, TRANSITION TO COMPETITION, AND RETAIL DEFAULT SERVICE?

A6. Yes. I have testified on these topics on numerous occasions during the past ten to 15 years. This includes the design of programs to provide generation supply service for those retail electric customers requiring default service, including past cases in recent years regarding Ohio Electric Security Plans ("ESPs") involving AEP Ohio (Case No. 13-2385-EL-SSO), Duke Energy Ohio (Case No. 14-841-

EL-SSO), the three FirstEnergy Utilities (Case No. 14-1297-EL-SSO), and Dayton Power & Light Company (Case No. 16-395-EL-SSO).

II. OVERVIEW AND SUMMARY

A. Purpose of Testimony

Q7. WHAT IS THE PURPOSE OF YOUR DIRECT TESTIMONY?

A7. I was retained by the Office of the Ohio Consumer's Counsel ("OCC") to address certain issues pertaining to the June 1, 2017 filing by Duke Energy Ohio ("DEO" or "the Utility") of its ESP. In October 2017, the procedural case schedule was suspended to permit the parties to engage in settlement negotiations. On April 13, 2018, the Utility submitted a comprehensive Stipulation and Recommendation ("Settlement") that seeks to resolve the ESP case and nine other DEO cases pending before the Public Utilities Commission of Ohio ("PUCO"). Most notably, this includes the pending 2017 base rate case, the Price Stability Rider ("PSR") case, and a 2016 review of reliability performance standards.

The purpose of my direct testimony at this time is to address the merits of the Settlement based on the PUCO's "three prong" test of reasonableness. My main focus is with the proposed ESP (as modified by the Settlement), and in particular, one ESP element —the Rider PSR cost recovery proposal. In Rider PSR, DEO is charging consumers for the difference in the costs under the OVEC Agreement and revenue from OVEC. I believe that Rider PSR is the most problematic feature of the proposed ESP and therefore the Settlement. Some of the new or modified riders proposed in the new ESP include the Distribution Capital Investment ("DCI") Rider, the PowerForward Rider ("Rider PF") and Electric Service Reliability Rider ("Rider ESRR"). I note that the Settlement withdraws two other proposed riders included in the June 1, 2017 ESP filing, a Regulatory Mandate rider and an Incentive Ratemaking rider that was to be linked to the annual Significantly Excess Earnings Test ("SEET"). The ESP per the Settlement, if approved, would remain in effect for about seven years, i.e., from the date of PUCO approval of the Settlement to May 31, 2025.

Q8. ARE OTHER OCC WITNESSES ADDRESSING ASPECTS OF THE SETTLEMENT?

A8. Yes, other OCC witnesses raise important issues and objections pertinent to components of the Settlement that argue against the approval of the Settlement as filed. They will speak for themselves, but a very brief summary may put my testimony in context. Mr. David Effron notes that the base rate case outcome failed to properly incorporate the recent reduction in the federal corporate income tax rate, and the Settlement fails to adequately flow through those savings to consumers. Dr. Daniel Duann explains why the 9.84 percent return on equity ("ROE") used in the base rate case settlement and to be used in certain capital cost recovery riders pursuant to the ESP is excessive based on market evidence. Ms. Barbara Alexander addresses the appropriateness and prudence of certain

SmartGrid expenditures. Mr. Paul Alvarez addresses Rider PF expenditures and the cost recovery provided under the Settlement, arguing that at least a portion of such costs and therefore cost recovery is inappropriate. Mr. Peter Lanzalotta critiques service quality issues. Mr. James Wilson estimates the impacts and burdens on Utility customers of the proposed Rider PSR and the absence of asserted "hedge" benefits. Mr. James Williams discusses objections to the extension of Rider DCI and why Rider ESRR is inappropriate. Mr. Wilson Gonzales critiques the use of Rider SCR pertaining to net metering.

Q9. HAS THE UTILITY FILED TESTIMONY TO SUPPORT THE SETTLEMENT?

A9. Yes. On June 6, 2018, the Utility filed extensive testimony in support of the Settlement. While some of the testimony is quite detailed, several broad themes are emphasized in advocating for approval. This includes the assertions that the Settlement is a carefully crafted compromise, broadly supported by a range of parties to this case; that the Settlement will promote retail rate stability over its approximately seven-year term; that the Settlement is consistent with state and PUCO policy goals; and that the Settlement will protect the Utility's financial condition and credit quality.

Based on these broad themes, Utility witnesses (particularly witnesses Wathen and Spiller) argue that the Settlement is fair, in the public interest, and should be approved by the PUCO, as filed. They note that the Settlement provides for a market-based Standard Service Offer ("SSO"), reduces base rates by $19.2 million, protects DEO's already very strong credit ratings, and facilitates reliability of service, and grid modernization.

Q10. DO YOU SUPPORT APPROVAL OF THE AS-FILED SETTLEMENT?

A10. No. The Settlement, as filed, either should be rejected by the PUCO or modified in accordance with the findings and recommendations of OCC witnesses.

The Settlement should be rejected or modified because it is unnecessarily expensive for customers, would produce rates that are not just and reasonable, reflects improper regulatory or ratemaking features, allows for collection from customers of imprudently-incurred costs, covers too long a time period, and for other reasons discussed by OCC witnesses. With respect to specific provisions, my testimony focuses on why the expected net costs associated with Rider PSR should not be forced on Utility customers.

Q11. DO THE BROAD THEMES CITED BY UTILITY WITNESSES PERSUASIVELY SUPPORT PUCO APPROVAL?

A11. As a general matter, they do not. DEO witnesses point out that the Settlement provides for a market-based, efficient SSO supply, with pricing that provides DEO full recovery of all costs, and market access for customers that choose to shop for generation supply. This is true, and to my knowledge, this aspect of the Settlement is uncontested. However, this is not by itself a persuasive argument for approving the Settlement as it is not a settlement concession or compromise by the Utility. The SSO auction proposal and Utility cost recovery mechanisms in the Settlement are essentially the same as in the ESP filed case and what DEO has used in past years. As this is almost certainly what would take place under a "status quo" without the Settlement (i.e., including under an MRO), it cannot be used on the basis for approving the Settlement.

Supporting testimony further asserts that the Settlement promotes rate stability for Utility customers. But the basis and meaning of that assertion is unclear. The Utility has not shown that rates will be more stable with this Settlement than absent the Settlement. In fact, the Settlement's various rate riders (e.g., Riders DCI, ESSR, and PF) provide for continual rate increases over time. Moreover, even if the Settlement does lead to a rate path more stable on a year-to-year basis than absent the Settlement (with its various escalating rate riders), it does so only by "stabilizing" customer retail rates at a higher level than they should be. In other words, the asserted rate stability benefit, if it exists at all, would come at a high price for customers.

An argument set forth supporting approval of the Settlement is the $19.2 million base rate case reduction. While base rate relief for customers certainly is welcome, the $19.2 million figure is too small. Mr. Effron points out that it omits the statutory income tax reduction savings (which are also not fully accounted for in Rider DCI), and Dr. Duann demonstrates that the 9.84 percent ROE embedded in the rate case outcome is too high. The $19.2 million base rate reduction provided in the Settlement is inadequate. The base rate reduction that should occur absent the Settlement should be even larger for consumers.

DEO witnesses argue that the various terms of the Settlement —particularly Rider PSR— are needed to protect the Utility's credit ratings and financial integrity. Those assertions are unpersuasive and do not support the Settlement's requirement that Utility customers must subsidize DEO's earnings. As shown by witnesses Fetter and Sullivan, DEO's corporate and secured credit ratings presently are very strong and do not require Utility subsidies. While I do not endorse credit support riders for local distribution companies, I note that DEO does not confront the same credit rating challenges of Dayton Power & Light Company or FirstEnergy (two recent ESP cases referenced by Utility witnesses) and does not need Rider PSR to maintain reasonable, investment grade credit ratings. Financial integrity ultimately is the responsibility of Utility management and should not require the extraction of customer subsidies, as mandated in the Settlement.

I discuss the flawed financial integrity/credit rating defense of Rider PSR later in my testimony.

Q12. DOES THE SETTLEMENT PASS THE PUCO'S THREE-PRONG STANDARD OF APPROVAL?

A12. No, it does not. While Staff and certain other parties do explicitly support the Settlement, others do not, notably the OCC, which represents the interests of the Utility's residential customers. More substantively, the Settlement is far too expensive for consumers, violates important regulatory principles, and is contrary to the public interest. I discuss this three-prong test further in Section III of my testimony.

Q13. DEO'S FILING IN SUPPORT OF THE SETTLEMENT FINDS THAT IT PASSES THE STATUTORILY-REQUIRED ESP VERSUS MARKET RATE OFFER ("MRO") TEST. WHAT IS YOUR UNDERSTANDING OF THAT TEST?

A13. Under the General Assembly's test, an electric security plan cannot be adopted unless the PUCO finds that the ESP is more favorable in the aggregate for customers than would be the result of a market rate offer. The test is addressed in the June 1, 2017 ESP testimony of witness Wathen at pp. 31-34. His testimony at that time concedes that there is no quantified benefit associated with the ESP IV as compared to an MRO. This is based on two assertions. First, the charges for the SSO generation would be the same under ESP IV and the MRO since in both cases the generation products would be competitively procured by auction from the wholesale generation market. Second, although the new ESP includes a number of non-generation rate riders, he argues those same rate riders could be approved and implemented even if DEO were to be operating under an MRO. Thus, he finds that both the cost of SSO and the non-SSO rate riders quantitatively would be "a wash."[1]

Mr. Wathen then turns to qualitative attributes. He sets forth some very brief and general arguments that the ESP IV provides qualitative benefits that would not be provided by the MRO.[2]

Mr. Wathen again addresses this test in his July 6, 2018 Second Supplemental testimony at pp. 31-33. There he argues that the ESP test should include the entire Settlement, not just the ESP provisions, including the $19.2 million base rate reduction as a quantified benefit.

Q14. DO YOU CONCUR WITH WITNESS WATHEN CONCERNING THE ESP VERSUS MRO TEST?

A14. No, I do not. I believe that the proposed ESP under the Settlement would, on balance, likely lead to higher customer rates than under an MRO, even though there is not sufficient information to fully quantify the increased cost. In particular, Rider PSR alone would likely add on the order of $77 million (Mr. Rose's net present value estimate) to $95 million (Mr. Wilson's net present value estimate) of unnecessary charges to customer bills. I also do not agree that the

[1] Wathen 2017 testimony, at 33.

[2] *Id*., at 34.

new ESP provides overall qualitative benefits. DEO has not met its burden of demonstrating that its proposed ESP IV is more favorable in the aggregate than a market rate offer.

The PUCO should reject the DEO ESP IV proposal in this case. Moreover, the concept of the ESP has outlived any purpose it may have served for customer protection (if it ever did protect customers) under Senate Bill 221. As even witness Wathen appears to concede, an ESP is simply not needed to provide customers with the benefits of competitive pricing. The MRO is fully capable of providing customers with competitive market benefits. Specifically, the SSO based upon a wholesale auction can be accomplished through the MRO.

In this regard, former PUCO Chairman Snitchler in 2014 wrote a concurring opinion to propose eliminating the use of electric security plans as soon as 2015:

> The fundamental structural changes that have occurred since 2011 including resolving generation ownership and corporate separation of all investor owned utilities eliminates the need for the ESP or MRO filing…For these reasons, the requirement that such filings be made should be eliminated from the statute starting in 2015 or

> at the time 100% of the Standard Service Offer (SSO) load is secured at wholesale auction.[3]

I understand that the PUCO may modify an ESP. Modifications to the Utility's plan should include replacing the ESP so that the SSO is provided through an MRO instead.

Under an MRO, much of the added costs that customers are being asked to pay through an ESP would be eliminated. Whatever amount of the charges are allowed in a base rate case, using traditional standards, would then be collected through base distribution rates. This approach would save customers money and is consistent with the fact that the Utility is offering standard service through a competitively bid auction, as envisioned under a market rate offering.

[3] In *the Matter of the Commission's Investigation of Ohio Retail Electric Service Market,* PUCO Case 12-3151-EL-COI Concurring Opinion at 3 (March 26, 2014).

Q15. YOU RECOMMEND THAT THE PUCO REJECT THE AS-FILED SETTLEMENT AS NOT MEETING THE STATUTORY ESP VERSUS MRO TEST. IN THE EVENT THAT THE PUCO IS INCLINED TO APPROVE A SETTLEMENT, WHAT ARE YOUR MAIN FINDINGS AND RECOMMENDATIONS CONCERNING THE SPECIFIC RIDERS?

A15. The Settlement incorporates several new or materially expanded riders in order to impose charges on customers outside of traditional base rate cases. The most serious concern is Rider PSR's requirement that Utility customers be required to subsidize DEO's earnings. In addition, the costs associated with other riders are better addressed in base rate cases where the costs can be examined in detail and considered in the broader context of the Utility's financial need and earnings position. Two themes that are problematic for customers result from this massive shift from traditional ratemaking in a base rate case to ongoing rate riders. The first is a reduction or weakening of regulatory oversight, and the second is a substantial mitigation of DEO's business risk at customer expense.

My specific recommendations in the event that the PUCO allows an ESP to proceed include the following:

1. <u>Limit the ESP to a three-year term</u>. DEO proposes a departure of its past practice of a three-year ESP, here proposing a seven-year term from June 1, 2018 – May 31, 2025. Little in the way of analysis or support is provided for moving to a seven-year plan. Given the proliferation of

largely automatic riders, this more than doubling of the term risks a weakening of the PUCO's regulatory oversight. The three-year term now used for ESP III is also appropriate for this new ESP, with the riders proposed in this new ESP sun setting at that time.

2. <u>Require a base distribution rate case filing no later than May 31, 2021</u>. One of the fortunate attributes of this pending ESP is that it coincides with a base distribution rate case. Conceptually, this has the benefit of setting DEO's base distribution rates at the "right" levels at the outset of this new ESP with its new, extended or modified rate riders. The Settlement, however, allows DEO total discretion as to when to file a new base rate case, with an outer limit of May 31, 2024. This is simply too far in the future. If the PUCO approves a seven-year ESP, that is even more reason to set a May 31, 2021 rate case filing deadline.

3. <u>Rider DCI requirements</u>. OCC witness Williams recommends ending Rider DCI in favor of base rate case cost collection of distribution costs. In the event this rider continues, the authorized return on equity used in this rider should be reduced in a manner that reflects the rider's very low investment risk and lower cost of equity. The

Settlement approved ROE of 9.84 percent is simply too high for consumers to pay. Please also see OCC witness Duann's testimony on this issue.

4. Rider PSR. Do not allow DEO to collect from customers the above-market purchase power costs of the Ohio Valley Electric Corporation ("OVEC") (including the proposed 2018 deferred asset) in Rider PSR. This rider is unrelated to the provision of either SSO or Utility distribution service and would impose a large and unnecessary financial penalty on Utility customers. It also is not required for DEO to maintain reasonable credit quality.

In addition to these specific riders, I recommend that the PUCO incorporate the other modifications to the Settlement sponsored by other OCC witnesses for consumer protection. This modifications to the Settlement should include increasing the $19.2 million base rate reduction for DEO's income tax savings (per Mr. Effron) and a more appropriate ROE (per Dr. Duann) and disallowing certain Rider PF costs (Mr. Alvarez).

B. Testimony Organization

Q16. HOW IS THE REMAINDER OF YOUR TESTIMONY ORGANIZED?

A16. Section III of my testimony discusses the PUCO's three-prong test and why this Settlement fails to meet that test. Section IV discusses specific changes to the Settlement that I recommend. Section IV focuses mostly on why Rider PSR is both harmful to customers and inappropriate, but I also briefly discuss the ROE issue and the need for an ESP term no longer than three years. Section V provides my discussion of the ESP versus MRO test and why I believe that the as-proposed ESP does not pass that test. Section VI briefly summarizes my findings and conclusions.

III. THE PUCO'S THREE-PRONG TEST FOR THE SETTLEMENT

Q17. HAS THE COMMISSION ESTABLISHED STANDARDS OF REVIEW FOR EVALUATING PROPOSED SETTLEMENTS?

A17. Yes, it has. The PUCO approved a settlement in the FirstEnergy ESP III case in which it articulated the criteria for evaluating the reasonableness of a proposed settlement. The PUCO stated:

> "In considering the reasonableness of a Stipulation, the Commission has used the following criteria:
>
> 1. Is the settlement a product of serious bargaining among capable, knowledgeable parties?

2. Does the settlement package violate any important regulatory principle or practice?
3. Does the settlement, as a package, benefit ratepayers and the public interest?"[4]

In addition to these three criteria, the PUCO also routinely considers whether the parties to a settlement represent diverse interests.

My testimony applies all three of the PUCO criteria to the proposed Settlement, and in doing so, I respond to DEO's supporting testimony. I explain that the proposed Settlement fails to pass the PUCO's three-pronged test.

In addition to the three-prong test, the Settlement's proposal for fulfilling the obligation to provide SSO service, as reflected in the proposed Settlement, must pass the ESP versus MRO test. I discuss the ESP test in more detail in Section V of my testimony.

[4] Case No. 12-1230-EL-SSO, *In the Matter of Ohio Edison Company, The Cleveland Electric Illuminating Company and the Toledo Edison Company for Authority to Provide a Standard Service Offer Pursuant to Section 4928.143*, Revised Code in the Form of an Electric Security Plan, June 18, 2012, Opinion and Order, at p. 24.

A. PUCO Criterion (1)

Q18. PLEASE STATE YOUR UNDERSTANDING OF CRITERION (1).

A18. This first criterion requires a settlement to be the product of serious bargaining among capable, knowledgeable parties. The PUCO has in the past looked at the diversity of interests as evidence of serious bargaining. DEO Witness Spiller asserts at pages 26-27 of her testimony that this is indeed the case with this Settlement. Her testimony states that the filed Settlement is the result of many months of negotiations among the parties, all of whom were well represented by experienced counsel. Among the numerous parties to these dockets, the PUCO Staff and five intervening parties support the settlement, and four signed as non-opposing. The supporting parties include low-income advocates, a hospital association group, and the City of Cincinnati. The non-opposing parties are all commercial or industrial customers or groups.

Based on this negotiation process and the diverse nature of the signatory parties, Witness Spiller concludes that the PUCO's first criterion has been satisfied.

Q19. WHAT IS YOUR ASSESSMENT OF THE ADEQUACY OF THE NEGOTIATION PROCESS OF THE SIGNATORY PARTIES?

A19. As I did not participate in the negotiation process, I cannot comment on how that process was conducted or the capabilities of the signatory parties and their representatives. I therefore take no position on Witness Spiller's factual assertions regarding these aspects.

However, my concern regarding this Settlement is the somewhat narrow and limited support from the intervening parties. While Staff and five intervening parties do support the Settlement, numerous other parties either do not support it or signed only as not opposing.

The PUCO should take note of the active opposition of the OCC, the party charged with representing the interests of DEO residential customers who are the vast majority of the retail Utility customers and a very large portion of total electric sales. Moreover, it appears to be the case that among the supporting interveners, there are special narrow provisions that address their specific interests. This includes some funding of low-income programs, a cooperative agreement pertaining to issues with the City of Cincinnati, and a working group arrangement with the hospital association group. These provisions hardly support the broader or "core" (and more controversial) provisions of the Settlement such as the base rate case outcome, Rider PSR, and the extension of Rider DCI.

As of this writing, I have not seen any testimony for the Settlement from any of these supporting parties advocating for PUCO approval. This makes it difficult to determine whether their support is based on anything more than the narrow provisions that were added to address their specific and special interests as mentioned above. The Staff is scheduled to file its supporting testimony on June 25. It should be further noted that footnote 13 on page 18 of the Settlement specifically states that three of the signatory (not opposing) parties do not support the provision providing for Rider PSR. I have already stated that even if the PUCO is inclined to approve the Settlement, it should condition such approval on the elimination of the Rider PSR provision.

B. PUCO Criterion (2)

Q20. WHAT IS YOUR UNDERSTANDING OF PUCO CRITERION (2)?

A20. This second criterion considers whether a settlement package violates any important regulatory principle or practice. This criterion is briefly addressed by DEO Witness Spiller at page 27, where she states, "I believe that it complies with all relevant and important principles and practices" and that it also "promotes state policy." While her testimony (and that of other DEO witnesses) does focus on certain policy goals, it does not go into detail on how the Settlement comports with established regulatory principles.

Q21. DOES THE SETTLEMENT MEET THE PUCO'S SECOND CRITERION?

A21. No, in some important ways it violates accepted regulatory practice and principles. Most prominently, the proposed Rider PSR is completely inconsistent with accepted regulatory principles. Specifically, it forces distribution Utility customers to pay in retail Utility rates the losses that the Utility is expected to incur (i.e., the above market costs for merchant capacity) for a non-regulated investment, completely unrelated to the Utility distribution service that the PUCO regulates. As far as I can determine, DEO witnesses are unable to deny or hide the fact that Rider PSR is reasonably expected to impose massive net charges on customers, and in return, customers receive no benefit. While the Utility implies that this rider would provide a "hedge" benefit (i.e., an almost certain loss), there is no persuasive evidence that this alleged hedge has any significant value or that customers even want the hedge. Given this lack of persuasiveness regarding the hedge benefit, DEO witnesses turn to the argument that Rider PSR is needed to maintain the Utility's financial integrity. But as explained in Section IV of my testimony, that argument is also unpersuasive. There is simply no accepted regulatory principle that can support the imposition of an onerous above-market subsidy for a non-regulated investment on captive Utility distribution customers.

Other OCC witnesses discuss a number of other violations of regulatory principles in the Settlement. In particular, OCC Witness Mr. Effron demonstrates that the Settlement fails to fully flow through to customers the reduction in the federal statutory corporate income tax rate, thereby violating the principle of cost of service based ratemaking. OCC Witness Mr. Alvarez demonstrates that the Settlement provides for recovery of imprudently-incurred costs. OCC Witness Mr. Williams takes issue with the appropriateness of the Settlement's inclusion of Riders DCI for distribution investment costs and Rider ESSR for vegetative management expenses, costs that properly belong in base rates.

I conclude that the Settlement, as filed, does not meet the PUCO's second criterion of consistency with accepted regulatory principles and practices and therefore should be rejected or appropriately modified.

C. PUCO Criterion (3)

Q22. WHAT IS YOUR UNDERSTANDING OF PUCO CRITERIA (3)?

A22. Criterion (3) concerns whether the proposed Settlement, as a package, harms customers and benefits the public interest. The net public interest and customer impact benefits of the proposed Settlement should be compared with the relevant alternative – an MRO that would benefit consumers and the public interest with no Rider PSR and a more appropriate base rate case resolution.

Q23. WHAT PUBLIC INTEREST BENEFITS ARE ASSERTED BY DEO WITNESSES IN SUPPORT OF THE SETTLEMENT?

A23. DEO witnesses (particularly witnesses Spiller and Wathen) assert a range of public interest rate and policy benefits from the Settlement, including: a market-based SSO (and customer access to CRES offers), a base rate reduction, credit rating support, low-income funding, reliability commitments, and promotion of the Commission's emerging PowerForward initiative. DEO also claims the Settlement is consistent with utility rate stability.

The question must be asked whether these same policy goals could be addressed under a different regulatory arrangement and at significantly lower cost to consumers than provided under the Settlement. I am not suggesting that the Settlement fails to provide and/or address public interest objectives. Rather, I am suggesting that such benefits are largely obtainable without – and are more than offset by – the unnecessary and excessive cost of the Settlement to consumers.

To start with, Rider PSR is not in any way needed to meet the policy objectives that DEO claims that the Settlement provides, as I demonstrate in the next section of my testimony. It accomplishes no policy goal, it is contrary to giving consumers the benefits of the competitive market, and only serves to raise customer charges as captive Utility customers provide an unwarranted subsidy for a non-utility investment. With regard to the base rate case, there is nothing inherently wrong with resolving such a case through a settlement. However, the $19.2 million revenue reduction in this base rate case is insufficiently small for the reasons discussed by OCC Witnesses Effron (income taxes) and Duann (ROE). In addition, OCC Witness Alvarez discusses the collection from utility customers under the Settlement of Rider PF costs that he finds to be imprudently incurred.

In summary, while the Settlement does address public interest objectives, it does so at a cost for utility customers that is unnecessarily high. The public interest requires not only that public interest goals be appropriately addressed but that the Utility does so at lowest reasonable cost. As aptly summarized by DEO Witness

Mr. Fetter at page 16 of his supporting testimony, the utility's obligation is to provide safe and reliable service at the lowest reasonable cost. The Settlement fails to do so. Therefore, the Settlement does not pass this third criterion and should either be rejected or appropriately modified to be consistent with the lowest reasonable cost standard.

IV. DISCUSSION OF ISSUES

A. Authorized ROE and Proposed Rider DCI

Q24. WHY IS ROE AN ISSUE IN THE SETTLEMENT?

A24. Rate of return was a contested issue in the pending base rate case as normally occurs in base rate cases. Section III.D.1. of the Settlement sets the rate case ROE at 9.84 percent to be in effect until completion of the next base rate case, which may not take place until after the year 2024. The 9.84 percent is not merely the authorized ROE from the rate case, but it also will be used for the various capital recovery riders (principally Rider DCI) approved under the Settlement. Hence, the ROE determined in the Settlement affects both the magnitude of the base rate reduction and the magnitude of rate increases going forward through capital recovery riders.

Q25. IS THE SETTLEMENT ROE OF 9.84 PERCENT REASONABLE?

A25. While it is more appropriate than the 10.4 percent figure sought by DEO in the rate case, this figure still exceeds a reasonable estimate of the DEO cost of equity given the Utility's status as a very low-risk delivery service utility.

The technical aspects of the cost of equity estimation are addressed in some detail in OCC witness Duann's testimony, and I defer to him on that subject. His testimony demonstrates that a lower ROE should be awarded than the 9.84 percent in the Settlement.

Q26. HOW DOES THE 9.84 PERCENT ROE COMPARE WITH ROE AWARDS RECENTLY GRANTED BY STATE COMMISSION'S TO ELECTRIC UTILITIES?

A26. It is somewhat higher. Regulatory Research Associates ("RRA") conducts quarterly surveys of gas and electric state rate cases and reports on the ROE awards. For 2017, the average ROE granted in electric general rate cases was 9.68 percent, declining to 9.59 percent for the first quarter of 2018. However, most electric rate cases involve vertically-integrated utilities meaning that they reflect the risks of generation supply operations. RRA also reports separately on ROE awards for distribution electrics which typically are lower than for vertically integrated electrics. The average ROE award in 2017 for distribution electrics was 9.43 percent and 9.0 percent for the first quarter of 2018.[5]

[5] *RRA Regulatory Focus: Major Rate Case Decisions January – March 2018,* April 17, 2018.

I make two general observations. First, the Settlement ROE award (that consumers would pay) is high compared to recent ROE awards generally granted to distribution electrics. Second, distribution electrics seem to have had little difficulty maintaining financial integrity (such as strong credit ratings) with these ROE awards. There clearly is room to lower the Settlement ROE for DEO from the 9.84 percent award.

Q27. IS THE 9.84 PERCENT ROE APPROPRIATE GOING FORWARD FOR CAPITAL RECOVERY RIDERS SUCH AS RIDER DCI?

A27. No, this ROE that consumers would pay is excessive. First, it is excessive as an ROE award in a rate case. In addition, the 9.84 percent does not take into account the very low risk attributes of trackers. Rider DCI allows the Utility to file for incremental capital cost recovery on a quarterly basis without the normal lags and intense scrutiny associated with base rate cases. The Utility under this rider is not required to demonstrate an overall earnings deficiency in order to obtain prompt rate recovery for incremental capital. In addition, nothing in the Settlement in any way restricts the Utility's ability to file a base rate case if it believes a rate case is needed to support earnings during the seven-year term of the Settlement. Hence, the Utility may employ both cost recovery trackers and base rate cases, as needed.

Due to the low-risk, favorable features of DCI and other trackers, the 9.84 percent ROE award is excessive and exceeds the distribution cost of equity.

B. Rider PSR

Q28. WHAT DOES THE SETTLEMENT PROVIDE FOR RIDER PSR?

A28. As a matter of back ground, DEO is a nine percent co-owner of OVEC, a wholesale utility that owns two major coal-fired stations originally constructed in the 1950s. This ownership and entitlement amounts to about 200 MW. Along with its partial ownership, DEO receives nine percent of the power supply from the two plants priced on a cost of service basis, with the entitlement defined under the Inter-Company Power Agreement ("ICPA" or "OVEC Agreement"). Because DEO is a distribution electric utility, the OVEC Agreement power supply (equivalent to about 200 MW) is not used for supplying power to DEO retail customers, but is instead sold into the PJM wholesale market for market prices and revenue. In other words, Ride PSR is purely financial and has nothing to do with the physical provision of electric service to Utility customers. If wholesale market revenue exceeds what DEO is charged under the OVEC Agreement, then DEO receives a net gain. However, if that wholesale market revenue falls short of the OVEC Agreement charges, then DEO incurs a loss.

DEO has sought to shift this market risk from itself and its shareholders to its utility customers in Case No. 17-872-EL-RDR by implementation of a Price Stability Rider (or Rider PSR). Utility customers under this rider would be credited if DEO receives a net gain. And under the rider, customers would pay DEO for any loss. At the present time Rider PSR, if in effect, would produce a very substantial net loss that distribution customers would be required to subsidize through payments to DEO. That result is to customers' detriment.

The Rider PSR proposal and docket is resolved in Section III.D.9. of the Settlement. Subject to certain conditions (including DEO making reasonable efforts to transfer its OVEC Agreement entitlement), DEO is permitted to impose its Rider PSR on distribution customers retroactive to January 1, 2018 until May 31, 2025, or about seven and a half years. The Settlement is silent regarding what happens after that, but is does not rule out an extension, if requested by DEO.

Again, it must be noted that Rider PSR is purely financial and has nothing to do with the physical provision of electric service to Utility customers.

Q29. HAS DEO IN ANY WAY SUGGESTED THAT RIDER PSR IS REQUIRED TO ENSURE CONTINUED OPERATION OF THE TWO OVEC POWER PLANTS?

A29. No, to my knowledge such a claim has not been made by any DEO witness in these dockets. Indeed, such a claim would not be credible since DEO's entitlement is only nine percent. Rather, the purpose of Rider PSR is to protect DEO's earnings against financial losses over the life of the Settlement, i.e., until June 2025.

Q30. IS RIDER PSR IN ANY WAY RELATED TO DEO'S UTILITY SERVICE?

A30. No, it is not. DEO provides retail distribution and SSO service to its Utility customers. Under the OVEC Agreement arrangement, DEO is functionally equivalent to being the owner of 200 MW of coal-fired merchant capacity on a non-regulated basis. Such an investment and/or business arrangement could be either profitable or unprofitable depending on market conditions. At the present time, it appears to be highly unprofitable, and this unprofitability seems unlikely to change any time soon if ever. And under Rider PSR that unprofitability means consumers would be subsidizing DEO above the market price of power.

Q31. WHAT IS THE PRESENT COST TO DEO OF POWER UNDER THE OVEC AGREEMENT?

A31. According to OVEC's FERC Form 1 for 2017 (the most recent public data), DEO paid \$57.7 million for 1.074 million MWh, or a cost of \$53.73 per MWh. Based on current and near-term market data supplied by DEO witness Rose, this OVEC Agreement price is well above current and near-term market. Witness Rose reports actual 2017 spot energy prices for the OVEC plants of \$28.20 per MWh.[6] Based on published forward market data (using the AEP-Dayton trading hub as a proxy), this is expected to increase only modestly during 2018-2021 as compared to 2017[7]. Mr. Rose also reports actual 2018-2021 capacity prices from the PJM

[6] Rose, June 1, 2018 testimony, at 52.

[7] *Id*., at 59.

capacity auctions averaging $43.90 per kWh-year,[8] or roughly $8 per MWh if a 60 percent capacity factor is assumed.

Those data imply that the wholesale market value at present and in the near term for the OVEC power is about $38 per MWh (capacity plus energy). This compares with an average cost in 2017 paid by DEO of about $54 per MWh. This suggests a current and near-term going forward loss of about $16 per MWh or about $17 million annually for 1.1 MWh of annual sales.

These data document current and near-term losses associated with the DEO OVEC Agreement entitlement and therefore Rider PSR. Formal projections of Rider PSR gains or losses are presented in the modeling studies of DEO witness Rose and OCC witness Wilson. These two witnesses project net losses over 2018 to May 2025 of about $77 million and $95 million for witnesses Rose and Wilson, respectively.

[8] *Id*., at 63.

Q32. GIVEN THIS OUTLOOK FOR RIDER PSR, WHAT JUSTIFICATION DOES DEO PROVIDE FOR IMPOSING THIS RIDER ON DISTRIBUTION CUSTOMERS?

A32. Utility witnesses advance several arguments in support of requiring utility customers to pay for the DEO share of OVEC above-market costs as required under the Settlement, both in the 2017 Rider PSR testimony (filed March 31, 2017) and in the Settlement testimony. Their testimony includes:

- Utility distribution customers should pay these ABOVE-market costs to support DEO's profitability and cash flow credit metrics, thereby protecting credit quality.

- Even though Rider PSR may impose a net cost on Utility customers, since the OVEC costs are relatively stable (as compared with spot generation markets), this rider has "hedge value" to customers.
- Charging utility distribution customers for DEO's non-utility merchant plant losses under Rider PSR is justified due to the unique history of OVEC and the OVEC Agreement which extend back to the early 1950s.
- DEO witnesses observe that similar OVEC riders were approved by the PUCO for two other Ohio electric utilities, AEP Ohio and Dayton Power & Light Company, and regulatory consistency justifies its approval in this case.

DEO witness supporting these various arguments include Mr. Wathen, Mr. Rose, Mr. Sullivan, and Mr. Fetter. None of these witnesses appear to contest the notions that Rider PSR under this Settlement has the potential to substantially increase customer rates, nor does any witness contend that Rider PSR is payment for the provision of distribution service. In reality, Rider PSR would make DEO consumers pay a generation-related subsidy.

Q33. WHY DO UTILITY WITNESSES CONTEND THAT THE CUSTOMER SUBSIDIZATION OF DEO EARNINGS IS JUSTIFIED BY THE HISTORY OF OVEC?

A33. The current and historical background on OVEC is presented in the March 31, 2017 PSR testimony of Mr. Rose at pages 6-8. OVEC was formed and its two very large coal-fired plants constructed in the early 1950s in order to provide power supply to U.S. uranium enrichment facilities located at Portsmouth, Ohio. This arrangement therefore helped to support the U.S. nuclear weapons program and therefore contributed in important ways to national security. This power supply contracting arrangement continued for decades until the U.S. Department of Energy ("DOE") gave advanced notice under the terms of the contract to terminate the contract pursuant to contract terms. Mr. Rose reports that the supply contract ended in 2003 and "OVEC is a legacy of a pre-deregulation era."[9]

[9] Rose, 2017 PSR testimony, page 8.

It appears that the implication of this background discussion is that DEO (i.e., the predecessor utility) and the other co-owners constructed this supply arrangement to serve and support national security requirements. When the decades long arrangement ended, the OVEC co-owners were left with the legacy costs of the two coal-fired power plants. DEO witnesses suggest that this legacy and history justifies imposing the over-market costs (due in large part to the legacy costs) 100 percent on Utility customers rather than DEO shareholders.

Q34. DO YOU AGREE WITH THIS BACKGROUND DESCRIPTION?

***A34*.** I believe Mr. Rose's background description and those of other DEO witnesses do not provide the full picture, and therefore additional information is needed to fully understand why the Rider PSR could be so costly and onerous for customers.

I accept the description that the OVEC capacity was constructed to serve DOE needs and did so for nearly 50 years, with the contract ending in 2003. However, during that time period the two power plants (and associated transmission) was almost entirely depreciated and costs largely if not fully recovered. I have tried to examine OVEC investment patterns since the DOE contract termination notice was given (which was in 2001) and actual termination in 2003 using FERC Form data to the extent available. For example, the 2001 OVEC FERC Form 1 reports that total utility plant that year was $347.1 million, but beginning year net plant was a mere $21.8 million.[10] Hence, the plant was more than 90 percent depreciated, and the resulting fixed costs for OVEC would be quite modest for consumers to pay.

Beginning in 2001, OVEC began an expensive retrofit program to add selective catalytic reduction controls to both plants at a cost of about $335 million as reported in the OVEC FERC Form 1. By the end of 2003, the OVEC net utility plant (for both plants) had risen to $385.1 million, a dramatic increase. The investment spending did not stop there. During the more recent time period 2011-2013, OVEC spent many hundreds of millions of dollars at the two plants to install flue gas desulfurization ("FGD") equipment. The OVEC 2017 FERC Form 1 reports that at December 31, 2017, gross utility plant (for both power plants) totaled $2.78 billion and net plant of $1.34 billion.[11] Comparing gross utility plant in 2004 to 2017 implies an increase and therefore capital investment by OVEC on the order of about $1.7 billion over those 13 years.

Q35. WHAT IS THE IMPLICATION OF THIS INVESTMENT PATTERN FOR OVEC OVER THE PAST 15 OR SO YEARS?

A35. It shows that the DEO description is incomplete and even somewhat misleading. The Utility seeks to tie the large OVEC legacy contract to the need to serve DOE

[10] Note that OVEC only reports net plant data for one of the plants (that is in Ohio) as the other plant (in Indiana) is owned by its subsidiary, Indiana-Kentucky Electric Corporation, which does not report a FERC Form 1 for that year. Thus, the two figures cited probably must be doubled to obtain a full picture.
[11] FERC Form 1 data indicates 2017 gross utility plant of $2.78 billion versus $1.13 billion in 2004.

needs and that OVEC costs are a "legacy of a [by gone] deregulation era." This is not the case. The two plants were almost fully depreciated when DOE gave notice to end the contract and the power supply no longer was needed. Instead, the co-owners—including DEO—chose to invest massively in those plants in order to ensure many decades long of additional operation. As Mr. Rose reports, the OVEC co-owners chose in 2011 to extend the OVEC Agreement to 2040. This extension made perfect sense to them at the time since they had invested well over $1 billion in recent years to permit continued operation.

The co-owners could have chosen to retire the plants when almost fully depreciated but did not, instead investing nearly $2 billion. This may have been based on a business judgment in recent years by the co-owners (including DEO) that the power plants would have market value greatly exceeding the cost of those investments.

That business judgment may or may not have been reasonable at the time, but that is not the point. Had the co-owners been correct in their business judgment, OVEC and the OVEC Agreement could have turned out to be a lucrative investment and contract for DEO. In such a case, as the OVEC investment and OVEC Agreement is a non-utility venture, DEO would have no obligation to share any profits with retail customers. They would be retained entirely for Duke shareholders. Instead, the OVEC co-owners and DEO guessed wrong about the market, undertook massive investments that now appear to be uneconomic and therefore want Utility distribution customers to subsidize the investment losses – in effect bail them out. It seems the Utility is now attempting to socialize OVEC losses to consumers while it previously intended to privatize the OVEC profits to the benefit of its shareholders had market conditions been more favorable for coal plants.

The DOE national defense argument is really a red-herring as the lion share of the OVEC "legacy" costs reflect recent, post-DOE contract investments, intended to generate lucrative unregulated profits.

Q36. BASED ON THE HISTORICAL BACKGROUND, IS THERE A POLICY JUSTIFICATION FOR RIDER PSR?

A36. No. This is merely a recent unregulated merchant plant investment that failed to meet profit expectations. This is a familiar story in the unregulated generation market for older coal-fired plants. Rider PSR is merely an attempt to procure for the Utility subsidy from captive customers for that failed investment and is nothing less than an unwarranted transfer of wealth from monopoly Utility customers to DEO and Duke Energy Corporation shareholders. This request to subsidize a failed non-utility investment, as a policy matter, is highly improper. I also understand that OCC, through counsel, will be presenting to the PUCO the position that Rider PSR is unlawful as an improper subsidy charge to consumers.

Q37. DOES "HEDGE VALUE" JUSTIFY RIDER PSR?

A37. No, it does not. This argument—which was never persuasive to begin with—was originally based on the notion that the Rider PSR would extend to 2040. The shorter, roughly seven-year term, undermines that already questionable argument. More importantly, if customers were clamoring for such a hedge, then one could be obtained far less expensively in the form of a six or seven-year unit contingent contract for, say, 200 MWs of coal capacity, at a fixed capacity price. However, I have seen no customer interest at all in such a hedge.

The hedge issue is discussed in more detail by OCC witness Wilson.

Q38. THE SETTLEMENT REQUIRES GOOD FAITH, ON-GOING EFFORTS BY DEO TO TRANSFER THE OVEC AGREEMENT ENTITLEMENT. IS THIS HELPFUL?

A38. Unfortunately, not. As Utility customers are forced to subsidize DEO's failed investment to enhance DEO's profits, Rider PSR removes any incentive for DEO to transfer the entitlement, as doing so would only serve to reduce its profits.

Q39. WITNESS FETTER ARGUES THAT BECAUSE THE PUCO APPROVED SIMILAR ARRANGEMENTS FOR OTHER UTILITIES IN OHIO, DEO IS ENTITLED TO THE SAME BENEFIT. DO YOU AGREE?

A39. Mr. Fetter sets forth this "consistency" argument at pages 14-15 of his Settlement testimony. I believe this argument is flawed because it fails to take into account the different facts and circumstances, based on record evidence at the time, in those two very different cases. For example, in the AEP Ohio case of several years ago, there was a very different record on wholesale market price projections.[12] While the PUCO identified at that time a potential benefit from the OVEC power (a finding very much in dispute even at that time), there is now a clear consensus, even among DEO witnesses, that the Rider PSR and OVEC Agreement would impose losses on customers. Consequently, it appears very unlikely that the PUCO could find a rate benefit at this time and under this Settlement for the proposed Rider PSR. In the present case, the evidence is different with far greater evidence from both Utility and OCC witnesses of utility customer harm. Similarly, the Dayton Power & Light Company case involved different facts and circumstances including financial distress allegations that are not relevant here.[13]

[12] I note also that AEP Ohio's proposal is on appeal to the Ohio Supreme Court as violative of Ohio law and preempted. *See* Supreme Court Case Nos. 17-749 and 752.

[13] I understand that OCC has sought rehearing on the PUCO's approve of the Reconciliation Rider.

This "precedent" or "me too" argument cannot be a valid basis for approving a 2018 Settlement provision that imposes an onerous Rider PSR on DEO customers.

Q40. IS THE CREDIT RATING ARGUMENT PERSUASIVE?

A40. The financial integrity/credit rating arguments of DEO witnesses Fetter and Sullivan are a desperate attempt to justify the subsidization by utility customers of DEO's profits and to cover an uneconomic (post DOE) investment. It is ultimately unpersuasive for two main reasons. The first is that—unlike the FirstEnergy and Dayton parent companies—DEO does not have an acute credit quality problem or threat even if the Rider PSR subsidy is not approved (not that those issues would justify the subsidy). The second problem is that even if it could be shown that rejection of the Rider PSR would seriously weaken DEO's credit ratings, this would be a problem that should be addressed by DEO management and the Duke Energy Corporation parent, not distribution Utility customers. Management is ultimately responsible for ensuring the Utility is properly capitalized, not customers, who have no say over regulated investments and corporate financial policies.

Q41. PLEASE ADDRESS THE FIRST ARGUMENT CONCERNING THE ADEQUACY OF DEO'S CREDIT RATINGS?

A41. The testimony of both Mr. Fetter and Mr. Sullivan demonstrates that DEO has very strong credit ratings—corporate ratings of Baa1 (Moody's) and A- (S&P).

More importantly, at page 5 of his Settlement testimony, Mr. Sullivan documents secured debt ratings of medium single A, i.e., A2 (Moody's) and A (S&P). S&P rates DEO's business risk profile as "Excellent" and the outlook of both credit agencies is stable or positive, as noted at page 6 by Mr. Fetter and at page 5 by Mr. Sullivan.

It is important also to note that DEO's credit rating history in recent years has been quite stable. The Utility has maintained these strong low to medium single A ratings without having the benefit of a Rider PSR subsidy. For that reason, the argument that DEO cannot sustain a reasonable credit quality without the Rider PSR subsidy is unpersuasive.

To analyze this issue further, Mr. Sullivan conducted an analysis of Rider PSR assuming that it collects from customers an annual subsidy of $18 million. While Mr. Sullivan indicates the $18 million for the DEO subsidy is only an illustrative figure, it does seem to roughly be in line with my own current and near-term estimate of the above-market cost based entirely on publicly published data. At page 9 of his testimony, Mr. Sullivan shows that an $18 million profit subsidy would improve DEO's cash flows/debt ratio (as one reasonably would expect), but the improvement is not very pronounced—from about 19.4 percent to 20.3 percent.[14] There is no clear evidence of either a credit rating problem or Rider

[14] From the analysis on page 9 of his testimony, it is not clear whether Mr. Sullivan accounted for income tax on the $18 million of Rider PSR charges. If not, then his credit metric analysis may be overstated.

PSR being a solution to a (nonexistent) problem. As noted above, DEO's credit ratings have been very strong and stable for many years without Rider PSR.

Q42. SUPPOSE IT COULD BE SHOWN THAT REJECTION OF RIDER PSR WOULD SIGNIFICANTLY IMPAIR DEO'S CREDIT QUALITY. WOULD THIS JUSTIFY IMPOSING THIS SUBSIDY COST ON CUSTOMERS?

A42. No. Neither witness Sullivan nor Fetter has shown serious dangers with DEO's credit quality absent Rider PSR, which after all, is the status quo and has been for years. However, even if they had made a persuasive showing, this would not justify requiring Utility customers to subsidize this non-utility investment and transaction. This is because it is ultimately the responsibility of DEO management and its parent to ensure financial integrity of the Utility and that the Utility is properly capitalized. DEO operates under the financial umbrella of Duke Energy Corporation, a diverse energy company with a market equity capitalization of $55 billion and annual cash flow of over $8 billion.[15]
Credit weakening can be caused by excessive debt relative to a utility's regulated, cost of service cash flow. The level of debt and capitalization are entirely under the control of management. If DEO incurs losses under the OVEC Agreement, management can adjust its financial polices as needed and as appropriate to maintain reasonable credit ratings. This is no less than management's public utility responsibility.

[15] Value Line Investment Survey, May 18, 2018.

C. The Proposed Seven-Year ESP Term

Q43. WHY DOES THE SETTLEMENT PROPOSE A SEVEN-YEAR TERM?

A43. This is really not clearly explained in the Settlement testimony, but I note that the 2017 filed ESP proposed a similar six-year term to May 31, 2024. Both the filed ESP and the Settlement provide for an updated ESP versus MRO test to take place in year (4) of the seven-year term, which I understand is required by statute. That said, DEO already has not shown a rigorous approach to the statutory ESP-versus-MRO test for consumer protection. And thus its approach to the test does not bode well for a consumer-protection outcome from applying the statutory test in year (4) of the server-year term.

Q44. DO YOU BELIEVE A SIX- OR SEVEN-YEAR TERM FOR THE PROPOSED ESP IV IS APPROPRIATE?

A44. No. The Settlement includes several new (or modified) rate riders that could have substantial but unknown impacts on customers. This includes Riders DCI, ESRR, PF, PSR and cost collection for the competitive bid process ("CBP") for SSO customers. The Rider DCI is particularly important as it could involve many tens of millions of dollars over the seven-year ESP term.

My testimony and that of other OCC witnesses oppose the proposed Settlement and several of its new or revised riders that would impact customers. However, if the PUCO chooses to accept the Settlement and the ESP, either as filed or with modifications, I recommend the PUCO limit the term to three years consistent with the currently-approved ESP. Reducing the term to three years would be an important consumer protection. Further, at the end of the three-year term (or by May 31, 2021), DEO should file a distribution base rate case in the event that it chooses to file for a new ESP to replace or extend the current ESP. This will help ensure that the levels and structure of rates are appropriate at the starting point of a new ESP after the end of a three-year term. I note that customers benefitted from the requirement that DEO file its 2017 base rate case as it has led to a rate reduction that might not have happened absent that requirement.

Q45. WHY DO YOU FIND THREE YEARS TO BE A MORE APPROPRIATE TERM OF THE ESP?

A45. DEO is proposing rate riders or mechanisms that in some cases are new and can have far reaching effects on customers. I therefore am concerned that a six- or seven-year ESP essentially would put rate regulation on "automatic pilot" for such an extended period of time. That is simply too long for any rider to remain in place without a careful and thoughtful regulatory review. I believe that it is more appropriate for the Utility to be required to make an ESP filing after three years, if it wishes to continue to operate under an ESP, to justify the continuing need and customer benefits for each rider. The MRO-versus-ESP test in year four, as the test is currently being applied, is inadequate for consumer protection. A three-year term would provide for more effective regulatory oversight and customer protection.

Q46. THE ESP IV RIDERS WOULD BE SUBJECT TO AUDIT. DOES THIS PROVIDE ADEQUATE REGULATORY OVERSIGHT?

A46. While audits provide an essential tool to protect against misapplication of the rider or overcharges due to misapplication of the rider tariff or even clerical error, audits do not substitute for periodic analysis and careful policy review of each of the riders to ensure that they are achieving their intended purposes and benefitting customers. The review at the end of three years can determine whether individual riders should continue in their current form, be modified, or be eliminated. It also allows for new proposals. After all, after a six- or seven-year time period there can be important changes in circumstances that warrant termination of or changes for each rider that consumers are being charged.

V. THE ESP VERSUS MRO TEST

Q47. WHAT IS YOUR UNDERSTANDING OF THE REQUIREMENT FOR PUCO APPROVAL OF AN ESP?

A47. Electric distribution utilities ("EDUs") in Ohio may satisfy the requirement to provide a standard service offer either through an ESP or an MRO.[16] The requirements for an MRO include a competitive bid process ("CBP") that adhere to certain standards, procedures and criteria specified in Ohio Revised Code, Section 4928.142. An MRO addresses the price for generation, nothing more,

[16] R.C. 4928.141(A).

nothing less. The requirements and potential features of an ESP are specified in Ohio Revised Code, Section 4928.143. This section of the code addresses the establishment of SSO generation rates and identifies provisions that are permissible, including "distribution infrastructure and modernization." There are no similar provisions that can be included as part of a market rate offer.

The ESP statute also provides the test for PUCO approval of an ESP. If a utility proposes an ESP, the PUCO:

> shall approved or modify and approve an application filed under subsection A of this section if it finds that the electric security plan so approved, including its pricing and all other terms and conditions, including any deferrals and any future recovery of deferrals, is more favorable in the aggregate as compared to the expected results that otherwise apply under Section 4928.142 of the Revised Code.[17]

The statute further states that a utility has the burden of proof under this provision.

[17] Ohio Revised Code, Section 4928.143(C)(1).

Q48. PLEASE DESCRIBE HOW DEO HAS APPLIED THIS STATUTORY TEST.

***A48*.** The ESP versus MRO test was originally presented by witness Wathen at pages 31-34 of his June 1, 2017 ESP testimony. Witness Wathen begins his analysis by comparing the pricing of SSO service under the proposed ESP IV versus an MRO and concludes that they would be the same.[18] This is because under both regimes generation supply would be competitively procured from the wholesale market. Under the ESP, DEO is simply flowing through the cost of procuring SSO power supply to customers with no additional charges.[19]

Next, he turns to the quantitative impacts of the other non-SSO rate riders being proposed in ESP IV. Here, he makes a very simple argument, citing Staff positions in another case, for support. He argues that virtually any of the (non-SSO) rate riders being proposed by the Utility as part of the ESP could also be proposed (and presumably approved by the PUCO) under an MRO regime—either directly as part of an MRO or by some other means. Consequently, he concludes that the net effect on consumers from this vast array of ESP IV rate riders must, by definition, be zero. That is, any and all riders pursuant to ESP IV would exist in exactly the same form and timing absent ESP IV. Therefore, there can be no quantitative impact.[20]

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[18] He finds, "the cost of generation service to customers under the ESP is necessarily equal to the cost of generation service under an MRO." 2017 testimony at 31.

[19] Id.

[20] Wathen 2017 testimony, at 32-33.

Q49. WITNESS WATHEN FINDS THAT THE ESP AND THE MRO ALTERNATIVE ARE QUANTITATIVELY IDENTICAL. DOES HE NEXT CONSIDER QUALITATIVE ATTRIBUTES?

A49. Yes, he does, although his qualitative review is very brief, summarized in a single paragraph on page 34 of his testimony. His testimony on qualitative benefits says little in the way of specifies regarding ESP IV but rather makes four arguments that are very general in nature, with two being quotes from Staff testimony from another proceeding. These are:

1. The ESP process provides a forum for "refining" tariffs to better reflect competitive conditions.

2. The ESP process is "flexible" allowing the Utility to propose various riders.

3. The proposed ESP can enhance reliability and promote grid modernization.

4. Rider IRM rewards customers when earnings exceed a certain threshold and protects DEO's financial integrity when earnings fall below a threshold.

Q50. WHAT IS YOUR RESPONSE TO THE MANNER IN WHICH WITNESS WATHEN APPROACHED THE STATUTORY TEST?

A50. At the outset, I am in agreement with witness Wathen that there would be no material difference in SSO generation prices for consumers between the proposed ESP and the MRO alternative as both would involve competitive procurement of generation supply from the same wholesale market.

Beyond those points of agreement or potential agreement, I am troubled by his application of the statutory test. The test is part of Ohio law and is included in the statute as an important consumer protection in order to provide a required vetting of a utility's ESP proposal. This statutory requirement exists for a reason. Witness Wathen's approach to the statutory test is dismissive and renders this important consumer protection as meaningless merely by defining it away. That is, he asserts that anything included in proposed ESP also could be proposed outside of an ESP, and therefore—by definition—there can be no adverse (or any) difference between the proposed ESP and the MRO alternative. But he is missing the point that traditional base rate cases have different (and better) ratemaking standards for consumer protection than the standards for ESPs. For example, riders are not allowed in the ratemaking for traditional rate cases. And traditional rate cases avoid the problem for consumers where the protection of the ESP-versus-MRO test has been eroded by allowing consideration of qualitative benefits. Witness Wathen's dismissive attempt to render the statutory ESP test meaningless should not be accepted.

Q51. DO YOUR SAME CRITICISMS APPLY TO THE QUALITATIVE ANALYSIS?

A51. Strangely, witness Wathen finds a qualitative benefit for the ESP relative to the MRO alternative. This seems inconsistent and makes no sense since he claims in his testimony that any ESP rate rider, cost deferral or tariff refinement also could be proposed under an MRO regime (e.g., in a rate case). Assuming that is the case, then again by definition there can be no qualitative difference between a utility's ESP and the MRO alternative. His assumptions define away the statutory test and render it meaningless on both a quantitative and qualitative basis. Given his study assumption of identical riders with and without the proposed ESP, it is illogical to claim an "in the aggregate" qualitative benefit for the proposed ESP.

Q52. PLEASE ADDRESS HIS FOUR SPECIFIC QUALITATIVE ARGUMENTS.

A52. The first two arguments do not even deal with the substance or specific provisions proposed in the ESP but merely state that it provides a useful forum for considering tariff refinements and new rate riders. There are, of course, other PUCO forums for considering tariff refinements and rate proposals, and these two arguments do not in any way address the intrinsic merits of DEO's Application for the proposed ESP.

The third argument pertains to reliability and grid modernization with those benefits presumably to be provided by Riders DCI, ESRR, and PF. However, there has been no Utility showing of a reliability issue or problem that would require Rider DCI as a required solution or that there is any tangible, material reliability benefit from that rider for utility customers. Base rate cases can provide needed cost recovery for distribution reliability spending as they have in the past.

The fourth qualitative argument pertains to the "incentive mechanism." Given the Settlement, which now withdraws that proposed rider, this issue has become moot and need not be discussed in this section.

Q53. WHAT IS YOUR APPROACH TO THE ESP VERSUS MRO TEST?

A53. I believe that the proposed ESP should be evaluated based on what is actually being proposed without the hypothetical of assuming that exactly the same riders and cost deferrals could be proposed (and would be approved) absent an ESP. We simply do not know if that hypothetical is in fact true. It appears that Mr. Wathen's hypothetical is designed to render the statutory test meaningless.

Q54. IS THERE A QUANTITATIVE IMPACT FROM THE PROPOSED ESP?

A54. Yes, there is likely to be an adverse impact upon customer rates from the proposed ESP although it cannot be fully quantified at this time. Nonetheless, the most readily quantifiable harm from the proposed ESP is the above-market costs that utility customers would be forced to bear under Rider PSR. While this harm can only be estimated using projections data, credible evidence today would suggest that over the seven-and-a-half-year recovery period in the Settlement the net cost to DEO retail distribution customers would be on the order of about $77 million (Mr. Rose's net present value estimate) to $95 million (Mr. Wilson's net present value estimate). In addition, OCC witness Alvarez testifies to substantial Rider PF costs that he finds to be imprudent but that are inappropriately recovered under the Settlement. It is clear that the proposed ESP, both as originally filed and per the Settlement, does not pass the quantitative portion of the statutory test.

Q55. ARE THERE QUALITATIVE BENEFITS FOR ESP IV?

A55. On balance, I believe that the proposed ESP does not provide qualitative benefits that would leave one to conclude that the ESP is more beneficial than the MRO alternative. DEO has proposed a vast array of single-issue ratemaking adders that run the risk of overcharging customers and blunting efficiency incentives relative to incentives under standard ratemaking. Please see the discussion of these riders in the testimony by other OCC witnesses. I also have explained above why I do not agree with witness Wathen's qualitative benefits argument.

Q56. YOU HAVE DISCUSSED MR. WATHEN'S APPLICATION OF THE STATUTORY TEST PRESENTED IN HIS 2017 TESTIMONY. DID HE ALSO ADDRESS THIS TEST AS PART OF HIS JUNE 2018 SETTLEMENT TESTIMONY?

A56. Yes, he did at pages 31-33 of his Second Supplemental Testimony filed in support of the Settlement ("settlement testimony"). Here, Mr. Wathen did not so much alter his 2017 application of the test as he expanded it. In his new settlement testimony, he argues that the appropriate statutory test now must encompass all provisions of the settlement, including those from other dockets outside of the bounds of the originally filed ESP case, including in particular the base rate case settlement that reduces rates by $19.2 million. He cites no precedent or other authoritative support for that position. He cannot. A rate reduction in a base rate case should not be considered, and cannot be considered, in an analysis of an ESP under the ESP statute.

He goes on to argue at page 31 of that testimony that additional benefits (beyond the base rate case savings) must now include the Settlement's low-income funding, withdrawal of certain originally proposed riders (Riders RMR and IRM), reliability commitments and individual party cooperative agreements. That said, the only quantified impacts he can identify outside of the base rate case reduction would be low-income funding, which is $522,000 per year in base rates and $250,000 per year additionally until the next base rate case is complete. Mr. Wathen concludes that these additional Settlement provisions (especially the base rate case outcome) reinforce and enhance his original finding that the ESP passes the statutory test.

Q57. DO YOU AGREE WITH WITNESS WATHEN THAT THE SETTLEMENT ENHANCES THE BENEFITS ASSOCIATED WITH THE ESP STATUTORY TEST?

A57. No, I disagree for several reasons. First, it is indisputable that the base rate case is outside the boundaries of the DEO proposed ESP. A beneficial base rate case outcome (which the OCC believes this is not, according to witness Duann) cannot rescue an ESP filing that on its own merits is judged to be harmful to customers relative to the MRO alternative, and it therefore cannot pass the statutory test. Second, Mr. Wathen wants "credit" (i.e., count as a benefit) proposing flawed riders (Riders RM and IRM) and then subsequently withdrawing them in a settlement. I agree that withdrawing flawed originally-proposed riders could reduce harm to consumers. But it is a flawed premise that the utility (DEO) can initially request riders that are bad for consumers and then later claim a benefit under the MRO-versus-ESP standard by withdrawing the request for the riders. Withdrawing the request for the riders cannot be considered an affirmative benefit enabling an ESP to pass the statutory test. Third, low-income programs (particularly if funded by shareholders) could be considered a quantified benefit. But the problem is that this dollar benefit for a relatively small subset of consumers pales in comparison with the massive cost penalty that all customers (including low-income customers) will incur under Rider PSR in the Settlement. The PUCO should arrange for assistance to low-income consumers in some other manner than allowing the utility in an ESP to use signatures of low-income representatives on the Settlement that increases the electric rates of all consumers.

A fourth and crucial point is that OCC witnesses do not find the $19.2 million base rate reduction to be a favorable outcome (even if were proper to reflect it in the ESP test). Consumers should receive a larger rate reduction to capture tax cut benefits and a lower ROE as discussed in the OCC testimony of witnesses Effron and Duann.

Finally, Mr. Wathen warns us that the $19.2 million base rate reduction cannot be assumed absent the Settlement. However, as I noted earlier, the Utility has the burden of proof regarding the ESP test. It does not seem credible that DEO would voluntarily accept the $19.2 million reduction in the base rate case if they expected a substantially different (better for the Utility) result with no Settlement. His apparent assumption that the $19.2 million rate reduction is a net benefit that would not have occurred absent both the Settlement and the ESP is simply neither credible nor reasonable.

Q58. WHAT DO YOU CONCLUDE REGARDING THE STATUTORY TEST?

A58. I conclude that the proposed ESP fails the statutory test. It includes rate riders and cost deferrals that could adversely affect customer rates as compared to an MRO alternative even though there is insufficient information available to fully quantify all the adverse impacts. The Rider PSR quantitative impact can be reasonably estimated, and such estimates demonstrate substantial harm to Utility customers that DEO witnesses do not seem to dispute. The adverse impacts on customer charges would not be offset by qualitative benefits. If anything, proposed ESP would result in qualitative harm relative to the MRO alternative. I therefore recommend that the PUCO reject the proposed ESP in the Settlement for failing to pass the statutory ESP versus MRO test.

VI. CONCLUSIONS

Q59. WHAT ARE YOUR OVERALL FINDINGS CONCERNING THE PROPOSED ESP AND SETTLEMENT?

A59. For the reasons described above, the Settlement as a package does not meet the PUCO's three-prong test for approval and therefore should be rejected. The proposed ESP, as part of the Settlement, consists of new or expanded rate riders and cost deferrals that will adversely impact customer rates in a substantial way. The most serious and tangibly harmful proposal in the ESP and Settlement that I address is the Rider PSR, which requires Utility customers improperly to subsidize DEO's non-utility investment and power purchase contract with OVEC. DEO's ratemaking paradigm of cost collection through rate riders, coupled with a more than seven-year ESP, also serve to reduce the degree and effectiveness of regulatory oversight. The ESP proposed in the Settlement therefore does not pass the statutory ESP versus MRO test and therefore should be rejected.

Q60. GIVEN YOUR OVERALL ASSESSMENT, WHAT ARE YOUR SPECIFIC RECOMMENDATIONS IN THE EVENT THE PUCO DECIDES TO APPROVE THE ESP IN SOME FORM?

A60. There are a number of modifications the PUCO should consider if it is inclined to approve the Settlement. These recommendations are discussed in my testimony and those of other OCC witnesses. First, the ESP should have a term no longer than three years, with a base rate case at the end of the initial three-year period (filed by May 31, 2021) to establish the correct starting point base rates for the next ESP (or MRO). The rate case filing of 2021 should be included (in place of the May 31, 2024 requirement) even if the seven-year term for the ESP is accepted.

If the PUCO elects to continue Rider DCI and implement other capital recovery riders, the rate of return should be set and possibly be reduced to reflect the true (lower) business risk attributes and cost of equity of these riders. OCC witness Williams makes other recommendations concerning Rider DCI.

Rider PSR should be rejected as improper from a regulatory policy point of view and recognized as being very costly to customers, as discussed in my testimony and the testimony of OCC witness Wilson. I understand that OCC, through counsel, will also explain that it would be an unlawful subsidy to subject consumers to paying Rider PSR.

While the base rate case outcome is not the subject of my testimony, I note that OCC witnesses Effron and Duann present compelling reasons why that Settlement rate reduction may be insufficient and lead to unjust and unreasonable base rate charges to consumers.

Q61. DOES THIS CONCLUDE YOUR DIRECT TESTIMONY?

A61. Yes, it does. However, I reserve my right to supplement or modify my testimony as discovery and other new information become available.

CERTIFICATE OF SERVICE

I hereby certify that a true copy of the foregoing *Direct Testimony of Matthew I. Kahal on Behalf of the Office of the Ohio Consumers' Counsel*, was served via electronic transmission to the persons listed below on this 25th day of June 2018.

/s/ William J. Michael
William J. Michael
Assistant Consumers' Counsel

SERVICE LIST

Case No. 17-0872-EL-RDR et al. Steven.beeler@ohioattorneygeneral.gov cmooney@ohiopartners.org mkurtz@BKLlawfirm.com kboehm@BKLlawfirm.com jkylercohn@BKLlawfirm.com dborchers@bricker.com dparram@bricker.com whitt@whitt-sturtevant.com campbell@whitt-sturtevant.com glover@whitt-sturtevant.com rsahli@columbus.rr.com mleppla@theoec.org tdougherty@theOEC.org	 Jeanne.kingery@duke-energy.com Elizabeth.watts@duke-energy.com Rocco.dascenzo@duke-energy.com chris.michael@icemiller.com Mike.Mizell@icemiller.com Kay.pashos@icemiller.com Camal.Robinson@duke-energy.com fdarr@mwncmh.com mpritchard@mwncmh.com Bojko@carpenterlipps.com perko@carpenterlipps.com paul@carpenterlipps.com joliker@igsenergy.com kboehm@BKLlawfirm.com
Case No. 17-0032-EL-AIR et al. Steven.beeler@ohioattorneygeneral.gov Robert.eubanks@ohioattorneygeneral.gov cmooney@ohiopartners.org mfleisher@elpc.org fdarr@mwncmh.com mpritchard@mwncmh.com paul@carpenterlipps.com mleppla@theOEC.org tdougherty@theOEC.org dborchers@bricker.com dparram@bricker.com whitt@whitt-sturtevant.com campbell@whitt-sturtevant.com glover@whitt-sturtevant.com	Jeanne.kingery@duke-energy.com Elizabeth.watts@duke-energy.com Rocco.dascenzo@duke-energy.com chris.michael@icemiller.com Mike.Mizell@icemiller.com Kay.pashos@icemiller.com Camal.Robinson@duke-energy.com mkurtz@BKLlawfirm.com kboehm@BKLlawfirm.com jkylercohn@BKLlawfirm.com joliker@igsenergy.com eakhbari@bricker.com

mjsettineri@vorys.com
glpetrucci@vorys.com
talexander@calfee.com
jlang@calfee.com
slesser@calfee.com
talexander@calfee.com
mkeaney@calfee.com

Case No. 17-1263-EL-SSO et al.

Steven.beeler@ohioattorneygeneral.gov
fdarr@mwncmh.com
mpritchard@mwncmh.com
mkurtz@BKLlawfirm.com
jkylercohn@BKLlawfirm.com
cmooney@ohiopartners.org
Bojko@carpenterlipps.com
dressel@carpenterlipps.com
slesser@calfee.com
jlang@calfee.com
talexander@calfee.com
mkeaney@calfee.com
eakhbari@bricker.com
nhewell@bricker.com
paul@carpenterlipps.com
whitt@whitt-sturtevant.com
campbell@whitt-sturtevant.com
glover@whitt-sturtevant.com
rsahli@columbus.rr.com
tony.mendoza@sierraclub.org

Case No. 16-1602-EL-ESS

Thomas.lindgren@ohioattorneygeneral.gov
Elizabeth.watts@duke-energy.com

nhewell@bricker.com
mdortch@kravitzllc.com
Bojko@carpenterlipps.com
dressel@carpenterlipps.com
mnugent@igsenergy.com
swilliams@nrdc.org
daltman@environlaw.com
jnewman@environlaw.com
jweber@environlaw.com
rdove@attorneydove.com

Jeanne.kingery@duke-energy.com
Elizabeth.watts@duke-energy.com
Rocco.dascenzo@duke-energy.com
chris.michael@icemiller.com
Mike.Mizell@icemiller.com
Kay.pashos@icemiller.com
Camal.Robinson@duke-energy.com
charris@spilmanlaw.com
dwilliamson@spilmanlaw.com
lbrandfass@spilmanlaw.com
mfleisher@elpc.org
tdougherty@theOEC.org
mleppla@theOEC.org
joliker@igsenergy.com
mnugent@igsenergy.com
dborchers@bricker.com
dparram@bricker.com
mjsettineri@vorys.com
glpetrucci@vorys.com
mdortch@kravitzllc.com
sean.mcglone@ohiohospitals.org

APPENDIX A

QUALIFICATIONS OF

MATTHEW I. KAHA

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.

Projected Electric Power Demands of the Allegheny Power System, Maryland Power Plant Siting Program, January 1980.

An Econometric Forecast of Electric Energy and Peak Demand on the Delmarva Peninsula, Maryland Power Plant Siting Program, March 1980 (with Ralph E. Miller).

A Benefit/Cost Methodology of the Marginal Cost Pricing of Tennessee Valley Authority Electricity, prepared for the Board of Directors of the Tennessee Valley Authority, April 1980.

An Evaluation of the Delmarva Power and Light Company Generating Capacity Profile and Expansion Plan, (Interim Report), prepared for the Delaware Office of the Public Advocate, July 1980 (with Sharon L. Mason).

Rhode Island-DOE Electric Utilities Demonstration Project, Third Interim Report on Preliminary Analysis of the Experimental Results, prepared for the Economic Regulatory Administration, U.S. Department of Energy, July 1980.

Petroleum Inventories and the Strategic Petroleum Reserve, The Aerospace Corporation, prepared for the Strategic Petroleum Reserve Office, U.S. Department of Energy, December 1980.

Alternatives to Central Station Coal and Nuclear Power Generation, prepared for Argonne National Laboratory and the Office of Utility Systems, U.S. Department of Energy, August 1981.

"An Econometric Methodology for Forecasting Power Demands," Conducting Need-for-Power Review for Nuclear Power Plants (D.A. Nash, ed.), U.S. Nuclear Regulatory Commission, NUREG-0942, December 1982.

State Regulatory Attitudes Toward Fuel Expense Issues, prepared for the Electric Power Research Institute, July 1983 (with Dale E. Swan).

"Problems in the Use of Econometric Methods in Load Forecasting," Adjusting to Regulatory, Pricing and Marketing Realities (Harry Trebing, ed.), Institute of Public Utilities, Michigan State University, 1983.

Proceedings of the Maryland Conference on Electric Load Forecasting (editor and contributing author), Maryland Power Plant Siting Program, PPES-83-4, October 1983.

"The Impacts of Utility-Sponsored Weatherization Programs: The Case of Maryland Utilities" (with others), in Government and Energy Policy (Richard L. Itteilag, ed.), 1983.

Power Plant Cumulative Environmental Impact Report, contributing author (Paul E. Miller, ed.) Maryland Department of Natural Resources, January 1984.

Projected Electric Power Demands for the Potomac Electric Power Company, three volumes (with Steven L. Estomin), prepared for the Maryland Power Plant Siting Program, March 1984.

"An Assessment of the State-of-the-Art of Gas Utility Load Forecasting" (with Thomas Bacon, Jr. and Steven L. Estomin), published in the Proceedings of the Fourth NARUC Biennial Regulatory Information Conference, 1984.

"Nuclear Power and Investor Perceptions of Risk" (with Ralph E. Miller), published in The Energy Industries in Transition: 1985-2000 (John P. Weyant and Dorothy Sheffield, eds.), 1984.

The Financial Impact of Potential Department of Energy Rate Recommendations on the Commonwealth Edison Company, prepared for the U.S. Department of Energy, October 1984.

"Discussion Comments," published in Impact of Deregulation and Market Forces on Public Utilities: The Future of Regulation (Harry Trebing, ed.), Institute of Public Utilities, Michigan State University, 1985.

An Econometric Forecast of the Electric Power Loads of Baltimore Gas and Electric Company, two volumes (with others), prepared for the Maryland Power Plant Siting Program, 1985.

A Survey and Evaluation of Demand Forecast Methods in the Gas Utility Industry, prepared for the Public Utilities Commission of Ohio, Forecasting Division, November 1985 (with Terence Manuel).

A Review and Evaluation of the Load Forecasts of Houston Lighting & Power Company and Central Power & Light Company – Past and Present, prepared for the Texas Public Utility Commission, December 1985 (with Marvin H. Kahn).

Power Plant Cumulative Environmental Impact Report for Maryland, principal author of three of the eight chapters in the report (Paul E. Miller, ed.), PPSP-CEIR-5, March 1986.

"Potential Emissions Reduction from Conservation, Load Management, and Alternative Power," published in Acid Deposition in Maryland: A Report to the Governor and General Assembly, Maryland Power Plant Research Program, AD-87-1, January 1987.

Determination of Retrofit Costs at the Oyster Creek Nuclear Generating Station, March 1988, prepared for Versar, Inc., New Jersey Department of Environmental Protection.

Excess Deferred Taxes and the Telephone Utility Industry, April 1988, prepared on behalf of the National Association of State Utility Consumer Advocates.

Toward a Proposed Federal Policy for Independent Power Producers, comments prepared on behalf of the Indiana Consumer Counselor, FERC Docket EL87-67-000, November 1987.

Review and Discussion of Regulations Governing Bidding Programs, prepared for the Pennsylvania Office of Consumer Advocate, June 1988.

A Review of the Proposed Revisions to the FERC Administrative Rules on Avoided Costs and Related Issues, prepared for the Pennsylvania Office of Consumer Advocate, April 1988.

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Power Plant Cumulative Environmental Impact Report for Maryland (Thomas E. Magette, ed.), authored two chapters, November 1988, PPRP-CEIR-6.

Resource Planning and Competitive Bidding for Delmarva Power & Light Company, October 1990, prepared for the Maryland Department of Natural Resources (with M. Fullenbaum).

Electric Power Rate Increases and the Cleveland Area Economy, prepared for the Northeast Ohio Areawide Coordinating Agency, October 1988.

An Economic and Need for Power Evaluation of Baltimore Gas & Electric Company's Perryman Plant, May 1991, prepared for the Maryland Department of Natural Resources (with M. Fullenbaum).

The Cost of Equity Capital for the Bell Local Exchange Companies in a New Era of Regulation, October 1991, presented at the Atlantic Economic Society 32nd Conference, Washington, D.C.

A Need for Power Review of Delmarva Power & Light Company's Dorchester Unit 1 Power Plant, March 1993, prepared for the Maryland Department of National Resources (with M. Fullenbaum).

The AES Warrior Run Project: Impact on Western Maryland Economic Activity and Electric Rates, February 1993, prepared for the Maryland Power Plant Research Program (with Peter Hall).

An Economic Perspective on Competition and the Electric Utility Industry, November 1994, prepared for the Electric Consumers' Alliance.

PEPCO's Clean Air Act Compliance Plan: Status Report, prepared for the Maryland Power Plant Research Plan, January 1995 (w/Diane Mountain, Environmental Resources Management, Inc.).

The FERC Open Access Rulemaking: A Review of the Issues, prepared for the Indiana Office of Utility Consumer Counselor and the Pennsylvania Office of Consumer Advocate, June 1995.

A Status Report on Electric Utility Restructuring: Issues for Maryland, prepared for the Maryland Power Plant Research Program, November 1995 (with Daphne Psacharopoulos).

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The CSEF Electric Deregulation Study: Economic Miracle or the Economists' Cold Fusion?, prepared for the Electric Consumers' Alliance, Indianapolis, Indiana, October 1996.

Reducing Rates for Interstate Access Service: Financial Impacts on the Bell Regional Holding Companies, prepared for MCI Corporation, May 1997.

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An Analysis of Electric Utility Embedded Power Supply Costs, prepared for Power-Gen International Conference, Dallas, Texas, December 1997.

Market Power Outlook for Generation Supply in Louisiana, December 2000, prepared for the Louisiana Public Service Commission (with others).

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).

Expert Testimony
of Matthew I. Kahal

	Docket Number	Utility	Jurisdiction	Client	Subject
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

Expert Testimony
of Matthew I. Kahal

	Docket Number	Utility	Jurisdiction	Client	Subject
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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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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75.	89-0033 May 1989	Illinois Bell Telephone Company	Illinois	Citizens Utility Board	Rate of Return
76.	881167-EI 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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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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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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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, et al. 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	SWEPCO	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	SWEPCO	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	SWEPCO/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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	Docket Number	Utility	Jurisdiction	Client	Subject
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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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
432.	4770 April 2018	Narragansett Electric Co.	Rhode Island	Division Staff	Cost of Capital
433.	4800 June 2018	Suez Water	Rhode Island	Division Staff	Cost of Capital