

PUCO EXHIBIT FILING

Date of Hearing: 11/5/14Case No. 14-841-EL-SSO/14-842-EL-ATAPUCO Case Caption: In the Matter of the Application of DukeEnergy Ohio for Authority to Establish a Standard ServiceOffer Pursuant to Section 4928.143, Revised Code, in theForm of an Electric Security Plan, Accounting Modificationsand Tariffs for Generation and In the Matter of the Application
of Duke Energy Ohio for Authority to Amend its Certified Supply and
P.U.C.O. No. 20.

List of exhibits being filed:

Volume XI

OCC 43

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Reporter's Signature:

Karen Sue Gibson

Date Submitted:

11/21/13

BEFORE THE PUBLIC UTILITIES COMMISSION OF OHIO

- - -

In the Matter of the :
Application of Duke Energy:
Ohio for Authority to :
Establish a Standard :
Service Offer Pursuant to :
Section 4928.143, Revised : Case No. 14-841-EL-SSO
Code, in the Form of an :
Electric Security Plan, :
Accounting Modifications :
and Tariffs for Generation:
Service. :

- - -

In the Matter of the :
Application of Duke Energy:
Ohio for Authority to : Case No. 14-842-EL-ATA
Amend its Certified :
Supplier Tariff, P.U.C.O. :
No. 20. :

- - -

PROCEEDINGS

before Ms. Christine M.T. Pirik and Mr. Nick Walstra,
Attorney Examiners, at the Public Utilities
Commission of Ohio, 180 East Broad Street, Room 11-A,
Columbus, Ohio, called at 8:30 a.m. on Wednesday,
November 5, 2014.

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VOLUME XI

- - -

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- - -

OCC EXHIBIT NO. 43

**BEFORE
THE PUBLIC UTILITIES COMMISSION OF OHIO**

In the Matter of the Application of Duke)
Energy Ohio for Authority to Establish a) Case No. 14-841-EL-SSO
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.)

In the Matter of the Application of Duke)
Energy Ohio for Authority to Amend its) Case No. 14-842-EL-ATA
Certified Supplier Tariff, P.U.C.O.)
No. 20.)

**DIRECT TESTIMONY
OF
JAMES F. WILSON**

**On Behalf of
The Office of the Ohio Consumers' Counsel
10 West Broad Street, Suite 1800
Columbus, Ohio 43215-3485**

September 26, 2014

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EXHIBITS

Exhibits JFW-1 to JFW-3

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Attachment JFW-1

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On Behalf of the Office of the Ohio Consumers' Counsel
PUCO Case Nos. 14-841-EL-SSO, et al.

1 **I. INTRODUCTION**

2

3 ***Q1. PLEASE STATE YOUR NAME, POSITION AND BUSINESS ADDRESS.***

4 ***A1.*** My name is James F. Wilson. I am an economist and principal of Wilson Energy
5 Economics. My business address is 4800 Hampden Lane Suite 200, Bethesda,
6 MD 20814.

7

8 ***Q2. PLEASE DESCRIBE YOUR EXPERIENCE AND QUALIFICATIONS.***

9 ***A2.*** I have thirty years of consulting experience to the electric power and natural gas
10 industries. Many of my past assignments have focused on the economic and
11 policy issues arising from the introduction of competition into these industries,
12 including restructuring policies, market design, and market power. Other
13 engagements have included contract litigation and damages; pipeline rate cases;
14 forecasting and market assessment; evaluating allegations of market
15 manipulation; probabilistic modeling of utility planning problems; and a wide
16 range of other issues arising in these industries. I also spent five years in Russia
17 in the early 1990s advising on the reform, restructuring, and development of the
18 Russian electricity and natural gas industries for the World Bank and other
19 clients. I have submitted affidavits and presented testimony in proceedings of the
20 Federal Energy Regulatory Commission, state regulatory agencies, and a U.S.
21 district court.

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1 I have been involved in electricity restructuring and wholesale market design for
2 over twenty years in PJM, New England, Ontario, California, Russia, and other
3 regions. With regard to the PJM system, I have been involved in a broad range of
4 market design, planning and capacity market issues over the past several years. I
5 hold a B.A. in Mathematics from Oberlin College and an M.S. in Engineering-
6 Economic Systems from Stanford University. My curriculum vitae, summarizing
7 my experience and listing past testimony, is Attachment JFW-1 attached hereto.

8
9 ***Q3. HAVE YOU PREVIOUSLY TESTIFIED BEFORE THE PUBLIC UTILITIES***
10 ***COMMISSION OF OHIO ("PUCO")?***

11 ***A3.*** Yes. I testified in Case No. 13-2385-EL-SSO (the application of Ohio Power
12 Company for approval of an Electric Security Plan); Case No. 12-426-EL-SSO
13 (the application of The Dayton Power and Light Company for approval of a
14 Market Rate Offer); Case No. 12-1230-EL-SSO (the application of The Ohio
15 Edison Company, The Cleveland Electric Illuminating Company, and The Toledo
16 Edison Company for approval of an Electric Security Plan); and Case No. 09-906-
17 EL-SSO (the application of the FirstEnergy Companies for approval of a Market
18 Rate Offer).

19
20 ***Q4. WHAT IS THE PURPOSE AND SCOPE OF YOUR TESTIMONY?***

21 ***A4.*** In this proceeding Duke Energy Ohio, Inc. ("Duke Ohio") seeks approval of a
22 new electric security plan ("ESP") for the period June 1, 2015 through May 31,

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1 2018 (the "ESP Period"). My assignment was to review Duke Ohio's application,
2 supporting testimony, workpapers and discovery in this proceeding, focusing on
3 the proposed Price Stabilization Rider ("PSR"). Under that rider, Duke Ohio
4 would collect from customers the costs (net of market revenues) associated with
5 its contractual arrangement ("ICPA")¹ with the Ohio Valley Electric Corporation
6 ("OVEC"). I was asked to review Duke Ohio's estimate of the cost to customers
7 under the proposed PSR; to evaluate its potential impact on customer price
8 stability; to evaluate the PSR as a regulatory mechanism for collection of these
9 costs; to evaluate other claimed benefits of the PSR arrangement; and to make
10 recommendations with respect to the proposed PSR and the treatment of OVEC
11 costs.

12
13 **II. SUMMARY AND RECOMMENDATIONS**

14
15 **Q5. PLEASE DESCRIBE THE OVEC ASSETS.**

16 **A5. OVEC (together with a wholly-owned subsidiary) owns a transmission system**
17 and two coal-fired power plants: the 1,086 MW Kyger Creek Plant at Cheshire,

¹ Amended and Restated Inter-Company Power Agreement ("ICPA"), available at
<http://elibrary.ferc.gov/idmws/common/opennat.asp?fileID=12594881>.

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1 Ohio, and the 1,304 MW Clifty Creek Plant located near Madison, Indiana.² Both
2 plants began operation in 1955.

3
4 ***Q6. PLEASE DESCRIBE DUKE OHIO'S RELATIONSHIP WITH OVEC.***

5 ***A6.*** Under the ICPA, Duke Ohio, as a "Sponsoring Company," is entitled to a share
6 (9.0 percent) of the capacity and energy provided by the OVEC plants, and is also
7 allocated this same portion of OVEC fixed and variable costs. In addition, Duke
8 Ohio owns 9.0 percent of OVEC's stock.³

9
10 ***Q7. THE STIPULATION THAT RESOLVED ALL OF THE ISSUES IN DUKE***
11 ***OHIO'S ESP II PROCEEDING CALLED FOR DUKE OHIO TO TRANSFER***
12 ***ITS OWNERSHIP INTERESTS IN GENERATION (STIPULATION AND***
13 ***RECOMMENDATION IN CASE NO. 11-3549-EL-SSO, p. 25). DID THIS***
14 ***PROVISION APPLY TO DUKE'S INTEREST IN OVEC?***

15 ***A7.*** No. Duke Ohio's position is that the stipulation did not require it to transfer the
16 OVEC entitlement.⁴ On pages 26-27, the Stipulation specifically addressed
17 contractual obligations arising before the signing of the Stipulation, stating that
18 those contractual obligations "shall be permitted to remain with Duke Ohio

² OVEC Annual Report – 2013 p. 1, available at <http://www.ovec.com/FinancialStatements/AnnualReport-2013-Signed.pdf>.

³ OVEC Annual Report – 2013 p. 1.

⁴ Direct Testimony of William Don Wathen Jr. in Support of Duke Ohio's Electric Security Plan at 11.

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1 without Commission approval for the remaining period of the contract but only to
2 the extent that assuming or transferring such obligations is prohibited by the terms
3 of the contract or would result in substantially increased liabilities for Duke Ohio
4 if Duke Ohio were to transfer such obligations to its subsidiary or affiliate." The
5 ICPA does not prohibit transfer of entitlements but specifies an approval process
6 for any such transfer.

7
8 **Q8, PLEASE EXPLAIN HOW DUKE OHIO PROPOSES TO TREAT THE OVEC**
9 **ENTITLEMENT UNDER THE PROPOSED ELECTRIC SECURITY PLAN.**

10 **A8,** Duke Ohio does not propose to use the OVEC output to serve the loads of non-
11 shopping customers who remain under the Standard Service Offer ("SSO").
12 Instead, Duke Ohio plans to offer its share of the OVEC capacity and energy into
13 the PJM markets. Under the proposed PSR, Duke Ohio would collect from
14 customers, on a non-bypassable basis, its portion of the OVEC costs net of the
15 energy and capacity market revenues earned from selling its share of the OVEC
16 output in the PJM markets. Thus, the PSR could increase or decrease customer
17 bills, depending upon whether the OVEC costs turn out to be greater or less than
18 the associated market revenues.

19
20 Duke Ohio proposes to extend this arrangement beyond the ESP Period to 2040,
21 the end of the contractual commitment under the ICPA.

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1 **Q9. DID DUKE OHIO QUANTIFY THE IMPACT OF THE PROPOSED PSR ON**
2 **CUSTOMER RATES DURING THE ESP PERIOD?**

3 **A9.** No. In discovery Duke Ohio produced estimates of the OVEC costs, revenues
4 and net costs that customers would pay under the PSR during the ESP Period.
5 However, no such estimates were presented in Duke Ohio's application or
6 testimony, and for the purpose of Duke Ohio's estimates of customer rates, the
7 impact of the PSR was assumed to be \$0.⁵

8
9 **Q10. DID DUKE OHIO PROVIDE ANY FORECASTS OF FUTURE OVEC COSTS**
10 **AND REVENUES?**

11 **A10.** Yes. In discovery, Duke Ohio provided an estimate of the costs, revenues and net
12 revenues of its OVEC entitlement on an annual basis for 2015 through 2024, with
13 some monthly details ("OVEC Analysis").⁶

⁵ OCC-INT-02-11 part a, attached hereto, with other non-confidential data responses, in Attachment JFW-2.

⁶ OEG-DR-01-001 Highly Confidential Attachment, IGS-POD-01-003 Highly Confidential Attachment (which includes workpapers to OEG-DR-01-001 Highly Confidential Attachment), and OCC-INT-16-413 Highly Confidential Attachment (which provides further details of the same analysis); (collectively "OVEC Analysis"), attached hereto, with other highly confidential data responses, in Attachment JFW-3 Highly Confidential.

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1 **Q11. WHAT NET COST OF THE OVEC ENTITLEMENT WOULD CUSTOMERS**
2 **PAY DURING THE ESP PERIOD, ACCORDING TO DUKE OHIO'S OVEC**
3 **ANALYSIS?**

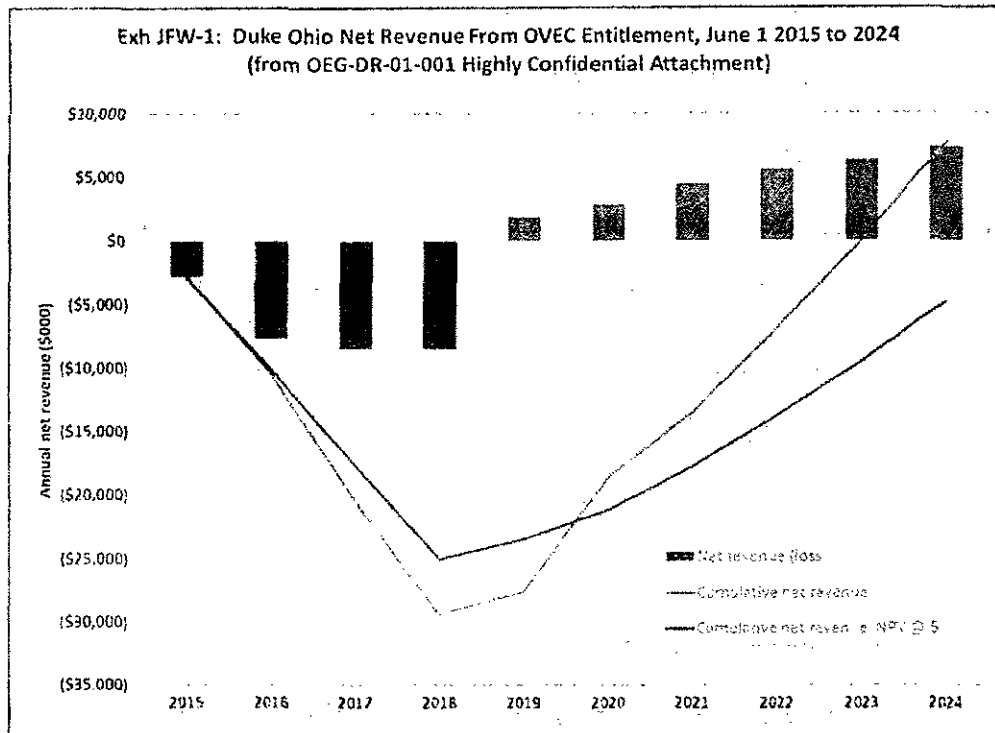
4 **A11.** Under Duke Ohio's estimate, the cumulative net cost to customers of Duke
5 Ohio's OVEC entitlement over the ESP Period would be \$22 million. That is, the
6 cost would exceed the market value of Duke Ohio's entitlement to the OVEC
7 output by \$22 million, or \$[REDACTED] per MWh on average, and this net cost would be
8 collected from Duke Ohio's customers through the PSR.

9
10 The annual net revenues according to the OVEC Analysis, and on a cumulative
11 basis from June 1 2015, are shown in Exhibit JFW-1. The net revenue is
12 negative, representing a net cost, throughout the ESP Period (2015 to 2018).

13
14 **Q12. WHAT NET COST OF THE OVEC ENTITLEMENT WOULD BE CHARGED**
15 **TO CUSTOMERS OVER THE PROPOSED DURATION OF THE PSR (TO**
16 **2040), ACCORDING TO DUKE OHIO'S OVEC ANALYSIS?**

17 **A12.** There is no such estimate; Duke Ohio's OVEC Analysis extends only to 2024.
18 According to the OVEC Analysis, annual net revenue is forecast to become
19 positive in 2019 and remain positive through 2024, and the cumulative net cost
20 from June 2015 to 2023 is approximately zero, as shown in Exhibit JFW-1. On a
21 present value basis using a five percent discount rate, the cumulative net revenue
22 remains negative through 2024 according to the OVEC Analysis.

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1

2 **Q13. HAVE YOU REVIEWED THE ASSUMPTIONS UNDERLYING THE OVEC**
3 **ANALYSIS?**

4 **A13.** Yes, to the extent provided. However, only limited, aggregated details were
5 provided.

6

7 **Q14. PLEASE SUMMARIZE YOUR ASSESSMENT OF THE NET COST**
8 **ESTIMATE REPRESENTED BY DUKE OHIO'S OVEC ANALYSIS.**

9 **A14.** I offer four observations regarding the OVEC Analysis.

10 i. First, any analysis of a resource's future costs and market
11 revenues relies upon multiple, uncertain assumptions,

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1 including energy and capacity market prices, fuel prices,
2 environmental and other regulations, the resource's fixed
3 costs, and the resource's operation and generation.

4 Consequently, the results of the OVEC Analysis are
5 necessarily highly uncertain.

6 ii. Second, because Duke Ohio has not provided some of the
7 key inputs or results from its OVEC Analysis (such as
8 energy price assumptions, or hourly generation), I was not
9 able to fully evaluate the projections or compare them to
10 the best available information, such as current energy
11 forward prices. However, the limited information that was
12 provided indicates that at least some of the assumptions are
13 out of date. This evidence is described later in my
14 testimony.

15 iii. Third, while Duke Ohio states that its OVEC Analysis was
16 based on a detailed, sophisticated hourly dispatch model,
17 some of the information provided suggests otherwise, or
18 that a highly simplified representation was used. This
19 evidence is also described later in my testimony.

20 iv. Finally, the OVEC plants are operated according to the
21 requests of the multiple sponsors under the ICPA, and this
22 introduces inefficiencies into the operation and

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1 management of the plants. These inefficiencies lead to
2 additional costs that customers would pay through the PSR,
3 but these additional costs are difficult to model and are
4 likely ignored in the OVEC Analysis.
5

6 Consequently, I conclude that Duke Ohio's OVEC Analysis represents an
7 unreliable estimate of the potential future net costs to customers of the OVEC
8 entitlement through the proposed PSR, due to the highly uncertain and speculative
9 nature of the assumptions used in the analysis, and also apparent shortcomings or
10 simplifications that were adopted in performing the analysis. The net cost to
11 customers of the proposed PSR, especially over the longer term, could be much
12 greater (or much less) than suggested by Duke Ohio's OVEC Analysis.
13

14 ***Q15. PLEASE SUMMARIZE YOUR CONCLUSIONS REGARDING THE PSR AS***
15 ***A REGULATORY MECHANISM FOR TREATMENT OF THE OVEC***
16 ***COSTS.***

17 ***A15.*** The proposed PSR is an example of a "cost tracker" – a regulatory mechanism
18 through which the actual costs of a function performed or undertaken by a utility
19 are periodically passed through to customers, outside of a rate case. State
20 regulatory commissions typically approve cost trackers under extraordinary
21 circumstances, for costs that are largely outside the control of the utility and
22 unpredictable and volatile, such as fuel costs. However, Duke Ohio proposes to

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1 recover all OVEC costs, including fixed costs and variable operations and
2 maintenance costs, net of market revenues, through the PSR. This is not an
3 appropriate regulatory mechanism for such costs, which are neither outside utility
4 control, nor especially unpredictable. Treating the OVEC net costs in this manner
5 would eliminate any Duke Ohio incentive to manage and minimize these costs
6 and to maximize the operation of the resource and the net revenues it earns,
7 ultimately increasing the cost to customers.

8
9 ***Q16. DOES DUKE OHIO CLAIM THERE ARE BENEFITS FROM TREATING***
10 ***THE OVEC ENTITLEMENT IN THIS MANNER?***

11 ***A16.*** Yes. Duke Ohio witness William Don Wathen Jr. claims there are three primary
12 benefits of the company's proposal.⁷ First, he claims that under the arrangement,
13 the OVEC entitlement would serve as "a long-term hedge (or insurance) against
14 the volatility of future market prices." Second, Mr. Wathen claims that the
15 arrangement is "competitively neutral" and would not impact the competitive
16 retail electric market, and he considers this a benefit. Finally, Mr. Wathen claims
17 that plants such as the OVEC plants may be more reliable than some other types
18 of generation resources, and he suggests that the proposal would result in
19 "continued access to the benefit of the reliable power available from the OVEC
20 generating assets."

⁷ Wathen Direct Testimony at 13.

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1 ***Q17. PLEASE SUMMARIZE YOUR CONCLUSIONS REGARDING THE***
2 ***POTENTIAL BENEFIT OF THE PSR AS A LONG-TERM HEDGE (OR***
3 ***INSURANCE) AGAINST THE VOLATILITY OF FUTURE MARKET***
4 ***PRICES.***

5 ***A17.*** Customers under the proposed Standard Service Offer will be served under one-
6 to three-year full requirements contracts established through periodic auctions,
7 and, therefore, would not be exposed to substantial market price volatility. The
8 PSR would add a potentially volatile element to such customers' bills.

9
10 Customers choosing competitive retail electric service would select among the
11 available offerings according to their preferences, and could choose offerings that
12 hedge prices and provide greater stability to the extent that is desired. For such
13 customers, the PSR could potentially move contrary to, or in the same direction
14 as, the market-based prices they pay at any time. This is because the proposed
15 PSR would be updated on a quarterly basis, so the net OVEC cost incurred in one
16 quarter would appear in customers' bills the next quarter.

17
18 In any case, the OVEC entitlement corresponds to about [REDACTED] percent of Duke
19 Ohio's customer load,⁸ and generation cost is about half the customers' bill, so to

⁸ Compare forecast OVEC GWh generation allocated to Duke Ohio of [REDACTED] GWh for 2016, from the OVEC Analysis, to Duke Ohio's total GWh sales in 2013 of 24,557 from Duke Energy's 2013 Annual Report, p. 31.

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1 the extent the PSR affects the volatility of the rates customers pay, it would have a
2 very modest impact.

3

4 I conclude that the potential for the proposed PSR to act as a hedge of volatile
5 market prices or contribute to price stability is doubtful (due to the time lag).

6 Additionally, if it does act as a hedge, its impact on the total bills customers pay
7 will be insignificant in magnitude.

8

9 ***Q18. PLEASE SUMMARIZE YOUR CONCLUSIONS REGARDING THE OTHER***
10 ***TWO BENEFITS CLAIMED BY WITNESS WATHEN.***

11 ***A18.*** The other two claimed benefits of the proposed PSR are not benefits at all. Mr.
12 Wathen's claim that the arrangement is "competitively neutral" is not a benefit of
13 the arrangement; at best, this is simply a claim that the arrangement does not harm
14 competition. And his suggestion that the OVEC plants may be more reliable than
15 some other types of generation resources, if true, is irrelevant, because Duke Ohio
16 does not claim that the OVEC plants' continued operation is dependent upon
17 approval of the PSR.

18

19 ***Q19. PLEASE SUMMARIZE YOUR RECOMMENDATIONS REGARDING THE***
20 ***PROPOSED PSR AND THE TREATMENT OF OVEC COSTS.***

21 ***A19.*** I recommend that the PSR be rejected. The PSR would impose onto customers
22 the net cost and risk associated with Duke Ohio's contractual relationship with

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1 OVEC. This net cost could be considerable; according to Duke Ohio's OVEC
2 Analysis, \$22 million over the ESP Period, and it could of course be much more.
3 In addition, because the PSR simply passes the net cost through to customers, the
4 incentive to manage the costs, and to maximize revenues, is eliminated. And any
5 incremental price stability the arrangement might provide by serving as a type of
6 hedge (which I consider very doubtful), would be insignificant compared to the
7 expected net cost, and risk of even higher cost to customers.

8
9 **Q20. IF THE PUCO CHOOSES TO APPROVE THE PSR IN SOME FORM, DO**
10 **YOU HAVE ANY RECOMMENDATIONS REGARDING THE STRUCTURE**
11 **OF THE PSR?**

12 **A20.** Yes. If the PUCO chooses to approve the PSR in some form, I recommend that it
13 be modified to reduce the cost and risk to customers and restore some incentive to
14 control costs and maximize operation and revenue. This could be accomplished
15 by setting a benchmark for the PSR net cost and using a sharing mechanism for
16 net costs or benefits relative to the benchmark, rather than collecting 100 percent
17 of the net cost from customers. I describe how such an incentive mechanism
18 could be designed in the last section of my testimony.

19
20 **Q21. HOW IS THE REMAINDER OF YOUR TESTIMONY ORGANIZED?**

21 **A21.** The next section of my testimony discusses the forecasted net cost to customers
22 under the proposed PSR, based on the Duke Ohio's OVEC Analysis. In Section

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1 IV, I evaluate the Duke Ohio witnesses' claim that the proposed PSR would serve
2 as a hedge and contribute to customer price stability. Section V discusses the
3 proposed PSR as an example of a cost tracker, and evaluates whether this is an
4 appropriate regulatory mechanism for treatment of the OVEC costs. The final
5 section of my testimony addresses other claimed benefits of the PSR and presents
6 my recommendations for treatment of the OVEC costs.

7
8 **III. ESTIMATED COST TO CUSTOMERS OF THE PROPOSED PSR**

9
10 ***Q22. HAS DUKE OHIO PREPARED AN ESTIMATE OF THE DOLLAR***
11 ***AMOUNTS THAT WOULD BE COLLECTED FROM CUSTOMERS UNDER***
12 ***THE PROPOSED PSR?***

13 ***A22.*** No. Duke Ohio states that it has not prepared any financial modeling or forecasts
14 of the expected rate impacts of the proposed PSR for the ESP Period, or for the
15 remainder of the ICPA.⁹ Duke Ohio also states that there are no documents
16 showing forecasts/estimates of the quarterly amounts that customers would pay
17 through the PSR over the ESP Period.¹⁰

18

⁹ IEU-INT-01-001, IEU-INT-01-002 (Att. JFW-2).

¹⁰ OCC-POD-03-020 (Att. JFW-2).

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1 ***Q23. HAS DUKE OHIO PREPARED ANY ESTIMATES OF THE REVENUES***
2 ***AND COSTS ASSOCIATED WITH THE OVEC ENTITLEMENT THAT IT***
3 ***PROPOSES TO FLOW THROUGH THE PSR?***

4 ***A23.*** Yes. In response to OEG-DR-01-001, Duke Ohio provided forecasts of the costs
5 and revenues associated with the OVEC entitlement for 2015 to 2024; further
6 details were provided in later data responses (the "OVEC Analysis", cited earlier).
7 In data responses, Duke Ohio claimed that its OVEC Analysis represents the
8 estimated cost and/or benefit to Duke Ohio retail customers from the proposed
9 PSR over the ESP Period,¹¹ and that the OVEC Analysis assesses the economic
10 value of Duke's share of the capacity and energy from OVEC to its retail
11 customers.¹²

12

13 ***Q24. PLEASE DESCRIBE THE INFORMATION PROVIDED IN THE OVEC***
14 ***ANALYSIS.***

15 ***A24.*** The OVEC Analysis provides data on a calendar year basis for 2015 to 2024. The
16 workpapers provide some of the data on a monthly basis. The OVEC Analysis
17 shows estimated OVEC cost, revenue, and net cost, reflecting amounts allocated
18 to Duke Ohio:

¹¹ KROGER-INT-01-001 (Att. JFW-2).

¹² OCC-POD-09-068 (Att. JFW-2).

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- 1 i. The OVEC MW capacity, and a forecast of calendar year
2 average capacity prices and revenues based on PJM's
3 Reliability Pricing Model ("RPM") capacity construct;
- 4 ii. The forecast Demand Charges;
- 5 iii. The forecast Generation Volumes;
- 6 iv. The forecast Energy Revenues;
- 7 v. The forecast cost of generation;
- 8 vi. The resulting "cash flow", reflecting all revenues minus all
9 costs.

10

11 ***Q25. WHAT IS THE ESTIMATED NET REVENUE DURING THE ESP PERIOD***
12 ***BASED ON THE OVEC ANALYSIS?***

13 ***A25.*** The annual net revenue according to the OVEC Analysis was shown in Exhibit
14 JFW-1. The annual net revenue is negative, representing a net cost, for 2015,
15 2016, 2017 and 2018. On a cumulative basis, the net cost reaches \$29 million by
16 the end of 2018. For the ESP Period (June 1 2015 through May 31 2018), the net
17 cost is \$22 million.

18

19 ***Q26. WHAT IS THE ESTIMATED NET REVENUE BEYOND THE ESP PERIOD***
20 ***BASED DUKE OHIO'S OVEC ANALYSIS?***

21 ***A26.*** According to the OVEC Analysis, net revenue becomes positive in 2019 and
22 remains positive through 2024, the last year represented in the OVEC Analysis.

23

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1 On a cumulative basis from June 1 2015, the total net revenue is approximately
2 zero over the 2015 through 2023 period. If future costs and revenues are
3 discounted to the present using a five percent discount rate, the present value of
4 the net revenues is approximately minus \$7 million through 2024.

5
6 **Q27. WHY DOES THE OVEC NET REVENUE TURN POSITIVE BEGINNING IN**
7 **2019, ACCORDING TO DUKE OHIO'S OVEC ANALYSIS?**

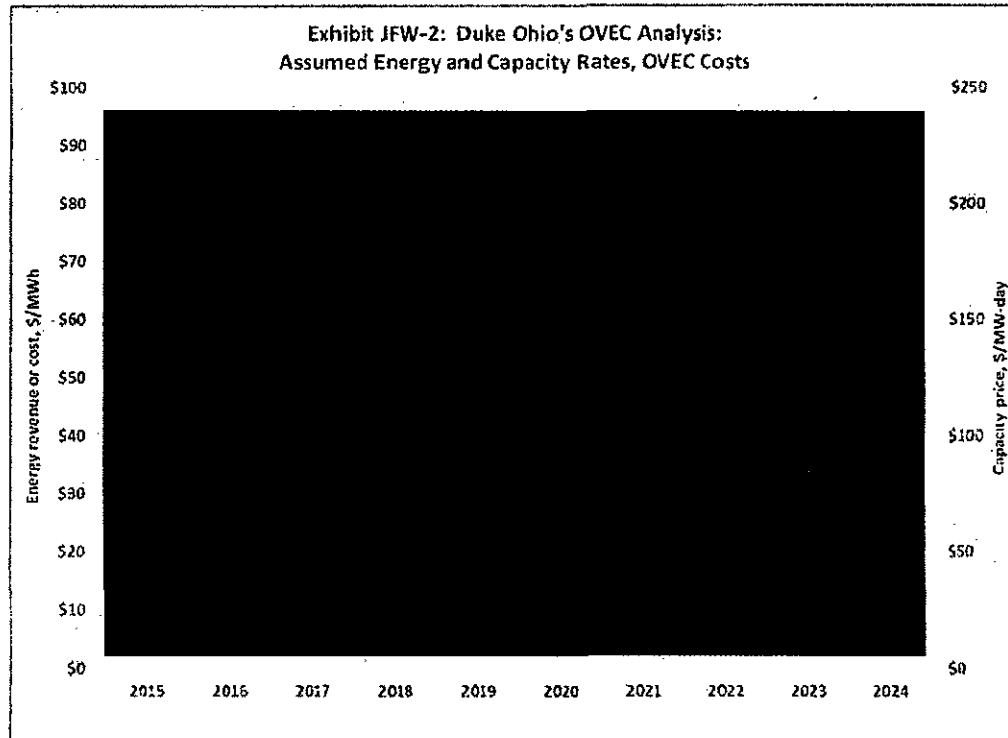
8 **A27.** The OVEC Analysis assumes that capacity prices, energy prices, and OVEC
9 generation will all [REDACTED] in [REDACTED] or [REDACTED]. The OVEC Analysis also
10 assumes that the OVEC plant costs will [REDACTED] at that time, but not
11 [REDACTED] to [REDACTED] the [REDACTED] in generation and revenues. These assumptions are
12 illustrated in Exhibit No. JFW-2.

13
14 Specifically, the OVEC Analysis has OVEC energy revenues nearly [REDACTED]
15 from [REDACTED] to [REDACTED] (from \$ [REDACTED] to \$ [REDACTED]) while capacity revenues [REDACTED]
16 almost [REDACTED] percent (from \$ [REDACTED] to \$ [REDACTED]).¹³ The energy cost [REDACTED]
17 percent from [REDACTED] to [REDACTED], due to assumed [REDACTED] costs.¹⁴

18
¹³ OVEC Analysis, sheet: Summary.

¹⁴ OCC-INT-16-420 Highly Confidential part g; OCC-INT-16-421 Highly Confidential part g (showing, for both plants, CO2 cost/MWh [REDACTED] in all years through [REDACTED] to \$ [REDACTED]/MWh in [REDACTED], and [REDACTED] in the following years).

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1 **Q28. PLEASE COMMENT ON DUKE OHIO'S ASSUMPTIONS ABOUT**
2 **CAPACITY AND ENERGY PRICES IN ITS OVEC ANALYSIS.**

3 **A28.** These assumptions are highly speculative, to say the least. Forward prices for the
4 western PJM region reflect no such tendency toward [REDACTED] in the out
5 years.¹⁵

¹⁵ Specifically, AEP Dayton Hub ("AD Hub") forward prices were accessed September 15, 2014 from CME Group. CME Group is the world's leading and most diverse derivatives marketplace. The AD Hub futures prices accessed were PJM AEP Dayton Hub Day-Ahead Calendar-Month 5 MW Futures, Peak and Off-Peak (contracts D7 and R7), available at http://www.cmegroup.com/trading/energy/electricity/pjm-aep-dayton-hub-off-peak-calendar-month-day-ahead-lmp-swap-futures_contract_specifications.html and http://www.cmegroup.com/trading/energy/electricity/pjm-aep-dayton-hub-peak-calendar-month-day-ahead-lmp-swap-futures_contract_specifications.html.

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1 In addition, the OVEC Analysis is apparently based on forward prices that are out
2 of date. For instance, the revenues per MWh are [REDACTED] in the coming years in
3 the months of [REDACTED] and [REDACTED]. Such expectations were reflected in AD
4 Hub forward prices last spring following the polar vortex weather event, but more
5 recently forward prices for coming winter months have [REDACTED].

6
7 With respect to capacity prices, PJM has seen new gas-fired generation enter the
8 market with capacity prices in the \$120/MW-day range (the OVEC Analysis
9 assumes capacity prices close to \$[REDACTED]/MW-day).

10
11 ***Q29. PLEASE COMMENT ON DUKE OHIO'S ASSUMPTIONS ABOUT FUTURE***
12 ***OVEC GENERATION.***

13 ***A29.*** The OVEC Analysis assumes the OVEC generation will [REDACTED] over [REDACTED] percent
14 from [REDACTED] to [REDACTED]. The assumed [REDACTED] in OVEC generation
15 presumably reflects the assumed [REDACTED] in [REDACTED]. However, due to
16 the assumed [REDACTED] in [REDACTED], the OVEC plants' margin on
17 energy sales [REDACTED]. Consequently, the [REDACTED] in generation in
18 around [REDACTED] also seems highly speculative and doubtful.

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1 **Q30. PLEASE COMMENT ON THE ASSUMED GENERATION COSTS AND**
2 **QUANTITIES FOR THE TWO OVEC PLANTS.**

3 **A30.** Of the two plants, Clifty Creek has a [REDACTED] heat rate and uses [REDACTED]
4 coal, resulting in a generation cost over \$ [REDACTED] /MWh during the ESP Period, and
5 roughly \$ [REDACTED] /MWh [REDACTED] than the Kyger Creek plant, according to OVEC's
6 forecasts and also its FERC Form 1 filings.¹⁶ Accordingly, it is to be expected
7 that the [REDACTED] Kyger Creek plant would be dispatched [REDACTED] and have
8 [REDACTED] utilization rates.

9
10 However, despite the differences in heat rates and coal costs, in the OVEC
11 Analysis, [REDACTED] units of [REDACTED] plants have the [REDACTED] generation cost per MWh at
12 any time (dividing the cost of generation by the MWh generation, for each unit
13 and month). Apparently as a result of ignoring the [REDACTED] between the
14 two plants, the two plants also have [REDACTED] utilization in the OVEC Analysis
15 (dividing the MWh of generation by plant capacity for each unit and month).

¹⁶ OVEC, *Power Cost Projection, Construction, and Departmental Operating Budgets for 2014, 2015, 2016, 2017 and 2018*, Bates Nos. 00136 to 00139 (showing, for each plant on a monthly basis through 2018, coal costs, plant net heat rates, and projected energy cost \$/MWh); see also the OVEC and IKEC FERC Form 1 filings, page 402 (Att. JFW-2).

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1 **Q31. HOW DID DUKE OHIO PREPARE THE PROJECTIONS OF OVEC**
2 **GENERATION AND OVEC MARKET REVENUES REFLECTED IN THE**
3 **OVEC ANALYSIS?**

4 **A31.** Duke Ohio states that it used a sophisticated Monte Carlo hourly dispatch model
5 that "commits and dispatches the Company's generating units based on
6 economics, subject to operational and environmental constraints" and that is
7 designed to [REDACTED]
8 [REDACTED].¹⁷ However, the fact that the generation costs
9 per MWh [REDACTED] the two plants, or [REDACTED] the [REDACTED] of the
10 year, or between [REDACTED] and [REDACTED], suggests that the OVEC Analysis
11 may have relied upon a greatly simplified version of this model.

12
13 **Q32. HAVE YOU REVIEWED OTHER ASSUMPTIONS AND CALCULATIONS**
14 **USED IN DUKE OHIO'S OVEC ANALYSIS?**

15 **A32.** Yes. I reviewed other assumptions and calculations underlying Duke Ohio's
16 OVEC Analysis to the extent the details were provided in response to data
17 requests. Some key details, such as the specific energy price forecasts, or any
18 hourly details, were not provided.

¹⁷ OCC-INT-16-414 Highly Confidential parts b, c.

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1 **Q33. PLEASE COMMENT ON THE CAPACITY QUANTITY USED IN THE**
2 **OVEC ANALYSIS.**

3 **A33.** The OVEC Analysis uses [REDACTED] MW as Duke Ohio's share of the OVEC
4 "unforced capacity" ("UCAP") that may be sold into PJM's Reliability Pricing
5 Model ("RPM") capacity market. However, due to impacts of recent
6 environmental upgrades, the OVEC plants' UCAP has [REDACTED], and Duke Ohio
7 was able to offer only [REDACTED] MW in the most recent RPM auction.¹⁸ Thus, the
8 OVEC Analysis appears to [REDACTED] the capacity quantity.

9
10 **Q34. PLEASE COMMENT ON THE FORCED AND MAINTENANCE OUTAGE**
11 **RATES ASSUMED IN THE OVEC ANALYSIS.**

12 **A34.** There are two questionable aspects to the assumed outage rates, which were
13 provided in a data response.¹⁹

14 i. First, while the forced outage rates are assumed to [REDACTED]
15 from [REDACTED] to [REDACTED] at all five Kyger Creek units, and at four
16 of the six Clifty Creek units, the forced outage rates are
17 then assumed to be [REDACTED] through 2024. A trend toward
18 increasing forced outage rates is to be expected at such old
19 plants.

¹⁸ OCC-INT-16-417 Highly Confidential, part a.

¹⁹ OCC-INT-16-420 Highly Confidential, part a, and OCC-INT-16-421 Highly Confidential, part a.

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1 ii. Second, the forced and maintenance outage rates were
2 assumed to be the [REDACTED] of each year.
3 However, maintenance outages are typically scheduled
4 during the off-peak spring and fall seasons, and forced
5 outage rates also tend to vary by season.
6

7 **Q35. BASED ON YOUR REVIEW, WHAT DO YOU CONCLUDE ABOUT THE**
8 **PROJECTION OF OVEC NET REVENUES REFLECTED IN DUKE**
9 **OHIO'S OVEC ANALYSIS?**

10 **A35.** According to Duke Ohio's own OVEC Analysis, the PSR would result in a net
11 cost to customers throughout the ESP Period. While the OVEC Analysis suggests
12 that revenues would exceed costs after the ESP Period, this is based on assumed
13 [REDACTED] in energy and capacity prices, among other speculative
14 assumptions.
15

16 I conclude that the OVEC Analysis is an unreliable estimate of the potential
17 future net costs to customers of the OVEC entitlement through the proposed PSR,
18 due to the uncertain and speculative nature of the assumptions used in the
19 analysis, and also apparent shortcomings or simplifications that were adopted in
20 performing the analysis. The net cost to customers of the proposed PSR,
21 especially over the longer term, could be much greater (or much less) than
22 suggested by Duke Ohio's OVEC Analysis.

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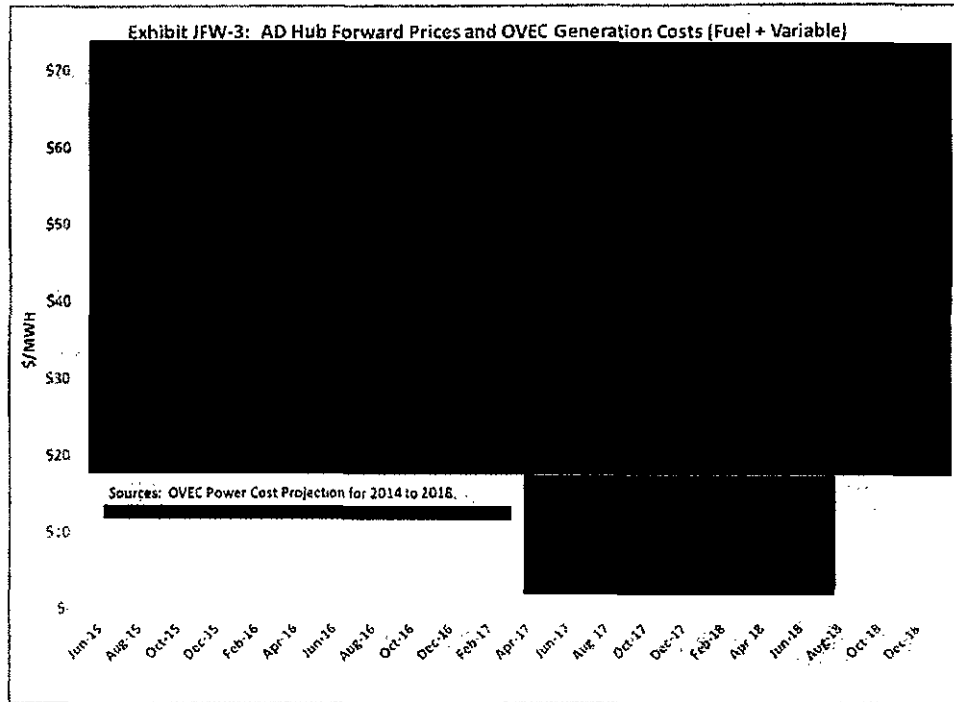
1 **Q36. ACCORDING TO DUKE OHIO'S OVEC ANALYSIS, THE OVEC**
2 **ENTITLEMENT RESULTS IN A NET COST TO CUSTOMERS OVER THE**
3 **ESP PERIOD. DOES THIS SUGGEST THAT THE OVEC PLANTS MAY**
4 **NO LONGER BE ECONOMIC TO OPERATE?**

5 **A36.** Yes. This analysis does call into question whether the OVEC plants are
6 economic, and suggests that perhaps the plants (or some units) should instead be
7 retired or repowered.²⁰ Of the two plants, Clifty Creek has a [REDACTED] heat rate and
8 uses [REDACTED] coal, resulting in a generation cost over \$ [REDACTED] MWh during the
9 ESP Period, according to OVEC's forecasts.²¹ This generation cost is in excess of
10 recent [REDACTED] prices for [REDACTED] in most months of the ESP
11 Period, as shown in Exhibit No. JFW-3, suggesting that this plant might be
12 [REDACTED] and called to run [REDACTED] hours in the
13 coming years.

²⁰ Repowering is the process of replacing older power stations with newer ones, which may result in improved efficiency, increased capacity, or reduced environmental impacts.

²¹ OVEC, *Power Cost Projection, Construction, and Departmental Operating Budgets for 2014, 2015, 2016, 2017 and 2018*, Bates Nos. 00136 to 00139 (showing, for each plant on a monthly basis through 2018, coal costs, plant net heat rates, and projected energy cost \$/MWH).

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1 IV. POTENTIAL IMPACT OF THE PROPOSED PSR ON THE STABILITY
2 OF CUSTOMERS' RATES
3

4 Q37. YOU NOTED EARLIER THAT DUKE OHIO'S WITNESS WATHEN
5 SUGGESTS THAT CUSTOMERS ARE EXPOSED TO PRICE VOLATILITY,
6 AND THAT THE PSR WOULD PROVIDE A HEDGE AGAINST MARKET
7 VOLATILITY. DID DUKE OHIO PROVIDE ANY ANALYSIS OF
8 CUSTOMERS' EXPOSURE TO PRICE VOLATILITY?

9 A37. No. Witness Wathen states that Duke Ohio has not performed such analysis²² and
10 there are no documents that demonstrate that any of Duke Ohio's customers are at
11 present subject to price volatility.²³
12

13 Q38. DID DUKE OHIO PROVIDE ANY EXAMPLES OR ESTIMATES OF THE
14 POTENTIAL IMPACT OF THE PSR ON THE STABILITY OF
15 CUSTOMERS' RATES?

16 A38. No. Witness Wathen states that Duke Ohio has not performed such analysis.²⁴

²² OCC-POD-03-021 (Att. JFW-2).

²³ OCC-POD-03-024, OCC-POD-03-025 (Att. JFW-2).

²⁴ OCC-POD-03-022 (Att. JFW-2).

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1 ***Q39. HAS DUKE OHIO PERFORMED ANY ANALYSIS SUGGESTING THAT***
2 ***THE PSR WOULD PROVIDE CUSTOMERS WITH VALUE AS A HEDGE?***

3 ***A39.*** No. Witness Wathen states that there are no such documents.²⁵

4

5 ***Q40. WOULD THE PSR TEND TO SERVE AS A HEDGE AND STABILIZE SSO***
6 ***CUSTOMERS' RATES?***

7 ***A40.*** No, it would not have this effect to any appreciable extent. Under the ESP, SSO
8 customers will be served by one- to three-year full requirements contracts
9 resulting from competitive auctions. As a result of this process, the rates SSO
10 customers will pay will be established through blending the results of multiple
11 auctions held months or years in advance of delivery. The rate resulting from
12 each auction will tend to reflect forward prices at the time of the auction plus a
13 markup. Forward prices for delivery periods several months or a few years out
14 tend to be fairly stable. Consequently, the rates paid by SSO customers will tend
15 to be fairly stable over time. This has been seen in the auctions held over the past
16 several years to serve various Ohio utilities' SSO customers.

17

18 By contrast, the OVEC net cost will reflect potentially relatively volatile PJM
19 market revenues, netted from relatively stable OVEC plant costs. Duke Ohio
20 states that the OVEC output would generally be offered into the PJM day-ahead

²⁵ OCC-POD-03-023 (Att. JFW-2).

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1 and real-time markets.²⁶ Unlike forward prices for delivery periods months or
2 years in advance, such market prices can reflect extreme weather, unexpected
3 plant outages, and various other unanticipated circumstances, as has occurred over
4 the past year. The PSR amounts will potentially reflect this volatility, although
5 they will be cumulated over a quarterly period. Consequently, the PSR would add
6 a relatively volatile component to the SSO customers' rates that otherwise do not
7 include any such volatile components.

8
9 In addition, the PSR amounts will be lagged at least one quarter (essentially, one
10 season), because the PSR will be calculated quarterly.²⁷ As a result, the PSR
11 amounts to be collected from customers in one quarter will tend to be positive
12 [negative] when PJM market prices were lower [higher] than expected in a *prior*
13 quarter, which would generally occur due to the peculiar weather and other
14 conditions of that season. Thus, as SSO customers' rates change from year to
15 year reflecting movements in forward prices, the changes in the relatively volatile
16 quarterly PSR amounts are perhaps about as likely to move the same direction as
17 the opposite direction to SSO rates, and will move four times per year. It cannot
18 be assumed, therefore, that the PSR will tend to hedge or stabilize SSO
19 customers' rates.

²⁶ Response to OCC-INT-16-418 Highly Confidential part a.

²⁷ Mr. Wathen states the PSR would be lagged by one additional month to allow collection and processing of the data. Deposition of William Don Wathen, Jr., September 16, 2014 at 81.

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1 Regardless of how the PSR component might move relative to the SSO
2 customers' supply cost, the impact on the customers' bill will be very small.
3 Duke Ohio's entitlement under the ICPA is forecast to be no greater than [REDACTED]
4 Gwh²⁸ over the next four years, compared to total end use consumption by Duke
5 Ohio's customers of 24.6 million MWh per year.²⁹ Thus, the OVEC entitlement
6 corresponds to only about [REDACTED] percent of Duke Ohio's customers' total load.
7 The PSR, accordingly, can be understood to, in effect, re-price [REDACTED] percent of
8 each customer's total supply cost. In addition, generation supply is only about
9 half of the customers' bill. So however the PSR amounts move over time relative
10 to the rest of the customer's bill, the effect on the bill will be very small.

11
12 ***Q41. FOR CUSTOMERS WHO ARE SUPPLIED BY COMPETITIVE RETAIL***
13 ***SUPPLIERS, WOULD THE PSR TEND TO STABILIZE THEIR RATES?***

14 ***A41.*** Customers who are instead served by competitive retail suppliers may be exposed
15 to market price fluctuations, or may pay fairly stable rates, depending upon the
16 choices they make that reflect their preferences. The potential impact of the
17 proposed PSR on the trajectory of such customers' rates would also depend on the
18 extent to which the OVEC net costs in one quarter are uncorrelated or anti-
19 correlated with the costs at which the customer will be supplied in the following

²⁸ OVEC Analysis, page 1.

²⁹ Duke Energy 2013 Annual Report and Form 10-K, p. 31.

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1 quarter, when the OVEC net costs will be collected through the PSR. To the
2 extent the PSR amounts might be uncorrelated with market price fluctuations and
3 tend to stabilize some customers' bills, they would do so primarily for those
4 customers who have by their choices indicated a preference for market-based
5 prices rather than stable prices.

6
7 In addition, natural gas and coal price movements tend to be correlated due to
8 inter-fuel competition, and energy prices tend to be correlated with fuel prices
9 because they are set by marginal generation costs. In western PJM, energy prices
10 are set by the marginal cost of coal generation in many hours. Accordingly,
11 OVEC's coal generation provides only a partial hedge of market electric energy
12 costs.

13
14 Again, the proposed PSR would be lagged at least one quarter, and corresponds to
15 only about [REDACTED] percent of the Duke Ohio load. Consequently, to the extent the
16 PSR would provide some shopping customers some price stability despite the lag,
17 the impact would be very small.

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**V. EVALUATION OF THE PROPOSED PSR AS A REGULATORY
MECHANISM**

Q42. WHAT TYPE OF REGULATORY MECHANISM IS THE PROPOSED PSR?

A42. The proposed PSR is an example of a cost tracker – a regulatory mechanism through which the actual costs of a utility function are periodically passed through to customers, outside of a rate case. Under the proposed PSR, the quarterly net OVEC costs (all costs net of energy and capacity revenues) would be passed through to customers in their rates the following quarter.

Q43. FOR WHAT TYPES OF COSTS ARE COST TRACKERS CONSIDERED AN APPROPRIATE REGULATORY MECHANISM FOR THEIR COLLECTION FROM CUSTOMERS?

A43. Under traditional regulation, the collection of costs from customers is subject to regulatory review through periodic rate cases. As noted in a report by the National Regulatory Research Institute (“NRRI Report”),³⁰ state regulatory commissions typically approve cost trackers under extraordinary circumstances, for costs that are (1) largely outside the control of the utility, and (2) unpredictable and volatile.³¹ The NRRI Report notes that regulatory commissions

³⁰ Costello, Ken, *How Should Regulators View Cost Trackers*, National Regulatory Research Institute Report No. 09-13, September, 2009.

³¹ NRRI Report, p. 8.

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1 often, but not always, also consider whether the costs are substantial and
2 recurring.

3

4 ***Q44. WHY DO REGULATORY COMMISSIONS USE COST TRACKERS ONLY***
5 ***UNDER THESE CIRCUMSTANCES?***

6 ***A44.*** Regulatory commissions use cost trackers for costs that are unpredictable,
7 substantial, and outside utility control primarily to protect a utility from
8 potentially severe financial consequences that are not a result of utility
9 performance. Compared to traditional regulation, a cost tracker provides revenues
10 that adjust more rapidly and fully to increases or decreases in cost. When the
11 costs are largely outside of the utility's control, the need for and potential value of
12 regulatory oversight is less. However, by providing for the collection of costs
13 from customers without the traditional regulatory process, a cost tracker results in
14 even weaker incentives for cost control than are provided by traditional
15 regulation.

16

17 ***Q45. CAN YOU PROVIDE AN EXAMPLE OF COSTS THAT MAY BE***
18 ***APPROPRIATE FOR COLLECTION FROM CUSTOMERS THROUGH A***
19 ***COST TRACKER?***

20 ***A45.*** A common example of a cost tracker is the fuel adjustment clause, under which a
21 utility passes through to customers the actual cost of fuel purchased for electric

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1 generation. Fuel market prices, and also fuel requirements, are largely outside
2 utility control and these costs can be substantial and volatile.

3
4 ***Q46. DOES THE PSR ADDRESS A CIRCUMSTANCE FOR WHICH A COST***
5 ***TRACKER IS APPROPRIATE?***

6 ***A46.*** No. Duke Ohio's relationship to the OVEC power plants, including the ICPA and
7 its partial ownership of OVEC, are essentially equivalent to (partial) ownership of
8 the OVEC power plants. The costs (other than fuel) associated with utility-owned
9 power plants are typically subject to traditional regulation. The fixed costs, and
10 variable operations and maintenance costs, are very much under the utility's
11 control, and they are not unpredictable or volatile; consequently, they are not
12 appropriate costs for collection from customers through a cost tracker mechanism.
13 The fuel costs also reflect how the OVEC plants are offered into the PJM markets
14 and, as a result, dispatched.

15
16 Traditional regulation of such costs ensures the utility has some incentive to strive
17 to minimize the costs. Under a cost tracker, such as the proposed PSR, it is
18 unclear what regulatory oversight of these costs would occur. Under these
19 circumstances, a cost tracker, such as the proposed PSR, is inferior to traditional
20 regulation, as it eliminates incentives to control costs, and may eliminate
21 regulatory oversight.

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1 **Q47. THE OVEC PLANTS ARE OPERATED BY OVEC, NOT DUKE OHIO.**

2 **DOES THIS MAKE THE COST TRACKER APPROACH MORE**
3 **ACCEPTABLE?**

4 **A47.** No. To the extent Duke Ohio and the other sponsors and owners lack control over
5 OVEC, OVEC's costs are even more removed from any market or regulatory
6 incentives, and imposing these costs on customers is no more justified.

7
8 **Q48. YOU HAVE COMPARED THE PSR TO TRADITIONAL COST-OF-**
9 **SERVICE REGULATION. HOWEVER, UNDER SENATE BILLS 3 AND**
10 **221, OHIO IS TRANSITIONING ELECTRIC GENERATION FROM A**
11 **COST-BASED, REGULATED COMMODITY TO A MARKET-BASED**
12 **COMMODITY. IS THE PSR CONSISTENT WITH THIS STATE POLICY**
13 **DIRECTION?**

14 **A48.** No. This transition recognizes that electric generation, like other commodities, is
15 produced most efficiently when the associated costs, benefits, and risks are borne
16 by the parties best able to manage them. When competitive providers build, own
17 and operate power plants, and bear the risks of their decisions to build, own and
18 operate power plants, they have full incentive to make sound decisions and to
19 operate efficiently. By contrast, it has long been recognized that when there is
20 full cost recovery, the incentives to make sound decisions and to operate
21 efficiently are weak or absent, so comprehensive regulatory oversight of costs and
22 operations is required.

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1 Under the proposed PSR, Duke Ohio would fully collect from customers all
2 OVEC-related costs, as in the regulated world. However, it is not clear whether
3 the PUCO would have the authority and access to review OVEC operations, and
4 to assess the prudence of those operations and the resulting costs, as it has with
5 the regulated distribution assets of Ohio utilities. Consequently, the PSR could
6 create an arrangement that not only lacks market incentives and is inferior to
7 market-based provision of generation; it is also inferior to traditional regulation,
8 to the extent the PUCO's oversight is more limited or nonexistent.

9
10 ***Q49. CAN YOU GIVE A SPECIFIC EXAMPLE OF THE PROBLEMATIC***
11 ***INCENTIVES RESULTING FROM THE PSR?***

12 ***A49.*** Yes. Consider, for example, future programs to reduce OVEC fixed costs that
13 would reduce the OVEC demand charges passed through the PSR. Under market
14 arrangements, if OVEC were able to reduce these fixed costs, it would increase
15 the profits to OVEC's owners, including Duke Ohio. Consequently, OVEC's
16 owners would have incentives to pressure OVEC management to accomplish any
17 such potential cost improvements.

18
19 By contrast, under the proposed PSR, OVEC's actual costs net of market revenues
20 would be passed through to retail customers. OVEC's owners operating under
21 such arrangements would, therefore, see no benefit from any such cost reductions,
22 and would have little if any reason to encourage management to pursue them.

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1 **Q50. DUKE OHIO'S AFFILIATES OWN OTHER ELECTRIC GENERATION**
2 **THAT COMPETES IN THE PJM MARKETS. DOES THIS RAISE ANY**
3 **ISSUES WITH REGARD TO THE PROPOSED PSR?**

4 **A50.** Yes. The OVEC plants compete with Duke Ohio's affiliates' unregulated
5 generation in the PJM markets. Under the PSR, Duke Ohio would not benefit
6 from incremental OVEC sales and net revenues, as these would pass through to
7 customers. However, incremental output from the OVEC plants will tend to
8 reduce the energy prices available to the affiliated plants in the western PJM
9 market area. Therefore, Duke Ohio would have some incentive to exercise its
10 control and influence over OVEC, including both its rights to schedule output and
11 also its influence over management and operations as an owner, in a manner that
12 would benefit the affiliated unregulated generation. This could lead to realizing
13 less than the full value of the OVEC assets in the PJM markets, and higher net
14 costs to customers under the PSR.

15
16 **Q51. DOES THE FACT THAT OVEC HAS MULTIPLE OWNERS AND**
17 **SPONSORS RAISE ANY CONCERNS ABOUT THE PSR?**

18 **A51.** Yes. The ICPA determines how the OVEC output is requested and shared, and
19 how costs that are not associated with output (such as Minimum Loading Event
20 Costs, ICPA Article 5) are allocated. This arrangement can lead to inefficient
21 decision-making with regard to, among other actions, plant operation,
22 maintenance, and investment. For example, some sponsors, such as Duke Ohio,

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1 may offer their shares of the OVEC output into the PJM markets, causing these
2 shares to be dispatched when and only when market prices are high enough.
3 However, other sponsors apparently use the output to serve load,³² and some are
4 not in the PJM markets.³³ These sponsors' decisions to call on OVEC output may
5 reflect the availability of other resources in their portfolios and other
6 considerations, and may not always be consistent with prevailing PJM market
7 prices. Under the ICPA, OVEC runs the plants to meet the output requested by
8 sponsors, even when only a small quantity is selected, and even when the output
9 is more costly than market purchases.³⁴ This can lead to inefficient operation that
10 increases the cost of OVEC power to sponsors. Inefficient dispatch of some
11 resources will also tend to raise the prevailing market prices, with a negative
12 impact on other consumers.

13
14 In addition, ownership by multiple parties, and the contractual obligations under
15 the ICPA, may present a barrier to difficult decisions, such as the retirement or
16 repowering of generating units that are no longer economic.

17
18 Consequently, while there are reasons to doubt whether the OVEC plants are
19 economic, the ICPA, and the awkward multi-owner relationship it creates,

³² Deposition of John D. Brodt, September 15, 2014 at 37.

³³ Brodt deposition at 37.

³⁴ Brodt deposition at 49-50.

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1 introduce additional inefficiencies in the use of the plants. The proposed PSR
2 would shift Duke Ohio's share of the additional costs and risks resulting from
3 these inefficiencies to Duke Ohio's customers.

4
5 ***Q52. PLEASE SUMMARIZE THIS SECTION OF YOUR TESTIMONY,***
6 ***REGARDING THE PROPOSED PSR AS A REGULATORY MECHANISM.***

7 ***A52.*** It is not appropriate for Duke Ohio to collect the net costs of its entitlement to
8 OVEC output from customers through a cost tracker such as the proposed PSR.
9 This would impose the cost and risk of the assets onto customers, while
10 eliminating incentives to control these costs.

11
12 **VI. RECOMMENDATIONS FOR THE TREATMENT OF THE OVEC**
13 **ENTITLEMENT**

14
15 ***Q53. YOU STATED THAT THE PSR MAY BE COSTLY TO DUKE OHIO'S***
16 ***CUSTOMERS, WHILE ALSO ELIMINATING INCENTIVES TO INCREASE***
17 ***REVENUES AND MINIMIZE COSTS ASSOCIATED WITH THE OVEC***
18 ***ASSETS. HOWEVER, DUKE OHIO WITNESSES CLAIM THERE ARE***
19 ***BENEFITS TO THE PROPOSED PSR. PLEASE SUMMARIZE THE***
20 ***CLAIMED BENEFITS.***

21 ***A53.*** Mr. Wathen claims three benefits. First, he claims that under the arrangement, the
22 OVEC entitlement would serve as "a long-term hedge (or insurance) against the

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1 volatility of future market prices.” I addressed this in an earlier section of my
2 testimony.

3 Second, Mr. Wathen states that the arrangement is “competitively neutral” and
4 would not impact the competitive retail electric market, and he considers this a
5 benefit.

6
7 Finally, Mr. Wathen claims that plants such as the OVEC plants may be more
8 reliable than some other types of generation resources. He suggests that the
9 company’s proposal would result in “continued access to the benefit of the
10 reliable power available from the OVEC generating assets.”

11

12 ***Q54. DO YOU AGREE THAT THE PROPOSED PSR IS COMPETITIVELY***
13 ***NEUTRAL AND WOULD NOT IMPACT THE COMPETITIVE RETAIL***
14 ***ELECTRIC MARKET?***

15 ***A54.*** The arrangement would make Duke Ohio’s portion of the OVEC generation
16 unavailable to competitive suppliers, which would tend to reduce competition. In
17 any case, even if the arrangement is “competitively neutral,” this is not a benefit
18 of the arrangement, it simply means the arrangement is benign with respect to
19 retail competition.

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1 **Q55. WOULD THE PROPOSED PSR RESULT IN CONTINUED ACCESS TO**
2 **RELIABLE POWER?**

3 **A55.** No. Duke Ohio does not claim that the OVEC plants' continued operation is
4 dependent upon approval of the PSR.³⁵ Consequently, the OVEC plants'
5 contribution to reliability is unrelated to the PSR. Furthermore, it has not been
6 established that the OVEC plants are more reliable than the capacity that might
7 replace them if they were retired. Subsidizing older power plants, as the proposed
8 PSR would do, will delay investment in new plants that may be more efficient and
9 have superior environmental and operational characteristics.

10

11 **Q56. WHAT DO YOU RECOMMEND WITH REGARD TO THE PROPOSED PSR**
12 **AND ASSOCIATED OVEC COSTS AND REVENUES?**

13 **A56.** I recommend that the PUCO simply deny Duke Ohio's request for the PSR,
14 finding that the costs, benefits and risks of Duke Ohio's OVEC entitlement should
15 not be passed through to customers. The proposed PSR would shift the costs and
16 risks associated with the OVEC plants to customers, and that should not be
17 allowed.

³⁵ OCC-INT-03-051, OCC-INT-09-173 (Att. JFW-2).

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1 ***Q57. IF THE PUCO DOES NOT DENY DUKE OHIO'S REQUESTED PSR, ARE***
2 ***THERE WAYS THAT IT COULD BE MODIFIED TO PROVIDE SOME***
3 ***PROTECTION TO CUSTOMERS?***

4 ***A57.*** Yes. A less preferred option would be to modify the PSR so that it is cost-neutral
5 for customers, at least in an ex ante, forecast expected value sense, and so that the
6 actual net cost or benefit of the OVEC capacity would be shared between Duke
7 Ohio and customers. Such a sharing rule would provide customers some
8 protection, and would also restore some of the incentives to maximize revenues
9 and minimize costs that the PSR, as proposed, eliminates.

10

11 ***Q58. PLEASE ELABORATE ON HOW SUCH A SHARING RULE MIGHT WORK.***

12 ***A58.*** A sharing rule could take the form of a typical incentive mechanism. First, a
13 “benchmark” for the OVEC net cost would be established. The benchmark could
14 be established based on a one-time forecast of expected OVEC value, or it could
15 be determined based on a formula that takes into account actual market prices and
16 perhaps other uncertainties over time.

17

18 Then if the actual OVEC net cost in a month equals the market-based benchmark
19 value, the PSR would be zero and have no effect. Whenever actual net cost
20 differs from the benchmark, the sharing rule would take effect. For instance, the
21 sharing rule might call for half of the net cost or benefit to be passed through to
22 customers through the PSR, with half retained by Duke Ohio.

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1 Under this approach, in effect, Duke Ohio would be rewarded through the PSR
2 when the OVEC entitlement is more valuable than the market-based benchmark,
3 and Duke Ohio would bear half the cost when the OVEC entitlement is costly
4 relative to the benchmark. But the risk to Duke Ohio would be reduced by
5 sharing the cost or benefit 50/50 with customers. The risk to customers would
6 similarly be reduced by 50 percent compared to the PSR as proposed by Duke
7 Ohio.

8
9 ***Q59. WHAT ARE THE ADVANTAGES OF THIS APPROACH COMPARED TO***
10 ***THE PSR AS DUKE OHIO HAS PROPOSED IT?***

11 ***A59.*** There are three advantages to this modification of the PSR.

- 12 i. First, by establishing in advance an explicit benchmark (or
13 benchmark formula) based on expected market value, there
14 is no built-in subsidy or ex ante expected amount to be
15 collected from customers through the PSR. Under the PSR
16 as proposed, the cost to customers over the ESP Period is
17 expected to be \$22 million under Duke Ohio's estimate. If
18 the benchmark reflects an unbiased estimate of the
19 expected market value, the expected cumulative value over
20 the ESP Period of the PSR would be zero, at least at the
21 time it is established.

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1 ii. Second, as a result of the sharing rule, Duke Ohio would
2 have more incentive to maximize revenues and minimize
3 costs, incentives that are eliminated under the proposed
4 PSR.

5 iii. Third, the risk to customers would be 50 percent mitigated
6 by such a sharing rule, compared to the proposed PSR (in
7 addition to removing the subsidy).
8

9 ***Q60. IN ITS APPLICATION (P. 16), DUKE OHIO REQUESTS A RIGHT TO***
10 ***TERMINATE THE ELECTRIC SECURITY PLAN ONE YEAR EARLY, IF***
11 ***THERE IS A SUBSTANTIVE CHANGE TO OHIO OR FEDERAL LAWS OR***
12 ***REGULATORY RULES, OR TO PJM MARKET RULES, TARIFFS OR***
13 ***AGREEMENTS, THAT AFFECT IT. SHOULD DUKE OHIO BE***
14 ***PERMITTED TO TERMINATE THE PSR ON THIS OR ANY OTHER***
15 ***BASIS?***

16 ***A60.*** No. If the PSR is approved, it should not be included under any such “regulatory
17 out” option, during or after the ESP Period. Instead, Duke Ohio should only be
18 allowed to terminate the PSR if authorized by the PUCO after all parties have the
19 opportunity to be heard.
20

21 Allowing Duke Ohio to terminate the PSR early would potentially allow it to
22 impose the net cost of the OVEC plants on customers for some period, and then,

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1 if conditions change and the plants are anticipated to become economic, terminate
2 the PSR and retain the net benefits. That would be unfair to customers and should
3 not be allowed.

4

5 An arrangement that allowed Duke Ohio to terminate the PSR early would also
6 create an incentive to maximize capital and maintenance expenses while such
7 costs are being passed through to customers, reducing the need for such
8 expenditures during a later period when net profits are retained.

9

10 **Q61. DOES THIS COMPLETE YOUR PRE-FILED TESTIMONY?**

11 **A61.** Yes it does. However, I understand that I may be asked to update or supplement
12 my testimony based on new information that may become available.

CERTIFICATE OF SERVICE

I hereby certify that a true copy of the foregoing *Direct Testimony of James F. Wilson, CONFIDENTIAL VERSION, on Behalf of the Office of the Ohio Consumers' Counsel* was served via electronic transmission this 26th day of September, 2014 upon the parties below.


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SUMMARY

James F. Wilson is an economist with 30 years of consulting experience, primarily in the electric power and natural gas industries. Many of his assignments have pertained to the economic and policy issues arising from the interplay of competition and regulation in these industries, including restructuring policies, market design, market analysis and market power. Other recent engagements have involved resource adequacy and capacity markets, contract litigation and damages, forecasting and market evaluation, pipeline rate cases and evaluating allegations of market manipulation. Mr. Wilson has been involved in electricity restructuring and wholesale market design for over twenty years in California, PJM, New England, Ontario, Russia and other regions. He also spent five years in Russia in the early 1990s advising on the reform, restructuring and development of the Russian electricity and natural gas industries.

Mr. Wilson has submitted affidavits and testified in Federal Energy Regulatory Commission and state regulatory proceedings. His papers have appeared in the *Energy Journal*, *Electricity Journal*, *Public Utilities Fortnightly* and other publications, and he often presents at industry conferences.

Prior to founding Wilson Energy Economics, Mr. Wilson was a Principal at LECG, LLC. He has also worked for ICF Resources, Decision Focus Inc., and as an independent consultant.

EDUCATION

MS, Engineering-Economic Systems, Stanford University, 1982
BA, Mathematics, Oberlin College, 1977

RECENT ENGAGEMENTS

- Various consulting assignments on wholesale electric capacity market design issues in PJM, New England, the Midwest, Texas, and California.
- Cost-benefit analysis of a new natural gas pipeline.
- Evaluation of the impacts of demand response on electric generation capacity mix and emissions.
- Panelist on a FERC technical conference on capacity markets.
- Affidavit on the potential for market power over natural gas storage.
- Executive briefing on wind integration and linkages to short-term and longer-term resource adequacy approaches.
- Affidavit on the impact of a centralized capacity market on the potential benefits of participation in a Regional Transmission Organization (RTO).
- Participated in a panel teleseminar on resource adequacy policy and modeling.
- Affidavit on opt-out rules for centralized capacity markets.
- Affidavits on minimum offer price rules for RTO centralized capacity markets.
- Evaluated electric utility avoided cost in a tax dispute.

- Advised on pricing approaches for RTO backstop short-term capacity procurement.
- Affidavit evaluating the potential impact on reliability of demand response products limited in the number or duration of calls.
- Evaluated changing patterns of natural gas production and pipeline flows, developed approaches for pipeline tolls and cost recovery.
- Evaluated an electricity peak load forecasting methodology and forecast; evaluated regional transmission needs for resource adequacy.
- Participated on a panel teleseminar on natural gas price forecasting.
- Affidavit evaluating a shortage pricing mechanism and recommending changes.
- Testimony in support of proposed changes to a forward capacity market mechanism.
- Reviewed and critiqued an analysis of the economic impacts of restrictions on oil and gas development.
- Advised on the development of metrics for evaluating the performance of Regional Transmission Organizations and their markets.
- Prepared affidavit on the efficiency benefits of excess capacity sales in readjustment auctions for installed capacity.
- Prepared affidavit on the potential impacts of long lead time and multiple uncertainties on clearing prices in an auction for standard offer electric generation service.

EARLIER PROFESSIONAL EXPERIENCE

LECG, LCC, Washington, DC 1998–2009.

Principal

- Reviewed and commented on an analysis of the target installed capacity reserve margin for the Mid Atlantic region; recommended improvements to the analysis and assumptions.
- Evaluated an electric generating capacity mechanism and the price levels to support adequate capacity; recommended changes to improve efficiency.
- Analyzed and critiqued the methodology and assumptions used in preparation of a long run electricity peak load forecast.
- Evaluated results of an electric generating capacity incentive mechanism and critiqued the mechanism's design; prepared a detailed report. Evaluated the impacts of the mechanism's flaws on prices and costs and prepared testimony in support of a formal complaint.
- Analyzed impacts and potential damages of natural gas migration from a storage field.
- Evaluated allegations of manipulation of natural gas prices and assessed the potential impacts of natural gas trading strategies.
- Prepared affidavit evaluating a pipeline's application for market-based rates for interruptible transportation and the potential for market power.
- Prepared testimony on natural gas industry contracting practices and damages in a contract dispute.
- Prepared affidavits on design issues for an electric generating capacity mechanism for an eastern US regional transmission organization; participated in extensive settlement discussions.
- Prepared testimony on the appropriateness of zonal rates for a natural gas pipeline.
- Evaluated market power issues raised by a possible gas-electric merger.
- Prepared testimony on whether rates for a pipeline extension should be rolled-in or incremental under Federal Energy Regulatory Commission ("FERC") policy.
- Prepared an expert report on damages in a natural gas contract dispute.
- Prepared testimony regarding the incentive impacts of a ratemaking method for natural gas pipelines.
- Prepared testimony evaluating natural gas procurement incentive mechanisms.
- Analyzed the need for and value of additional natural gas storage in the southwestern US.

- Evaluated market issues in the restructured Russian electric power market, including the need to introduce financial transmission rights, and policies for evaluating mergers.
- Affidavit on market conditions in western US natural gas markets and the potential for a new merchant gas storage facility to exercise market power.
- Testimony on the advantages of a system of firm, tradable natural gas transmission and storage rights, and the performance of a market structure based on such policies.
- Testimony on the potential benefits of new independent natural gas storage and policies for providing transmission access to storage users.
- Testimony on the causes of California natural gas price increases during 2000-2001 and the possible exercise of market power to raise natural gas prices at the California border.
- Advised a major US utility with regard to the Federal Energy Regulatory Commission's proposed Standard Market Design and its potential impacts on the company.
- Reviewed and critiqued draft legislation and detailed market rules for reforming the Russian electricity industry, for a major investor in the sector.
- Analyzed the causes of high prices in California wholesale electric markets during 2000 and developed recommendations, including alternatives for price mitigation. Testimony on price mitigation measures.
- Summarized and critiqued wholesale and retail restructuring and competition policies for electric power and natural gas in select US states, for a Pacific Rim government contemplating energy reforms.
- Presented testimony regarding divestiture of hydroelectric generation assets, potential market power issues, and mitigation approaches to the California Public Utilities Commission.
- Reviewed the reasonableness of an electric utility's wholesale power purchases and sales in a restructured power market during a period of high prices.
- Presented an expert report on failure to perform and liquidated damages in a natural gas contract dispute.
- Presented a workshop on Market Monitoring to a group of electric utilities in the process of forming an RTO.
- Authored a report on the screening approaches used by market monitors for assessing exercise of market power, material impacts of conduct, and workable competition.
- Developed recommendations for mitigating locational market power, as part of a package of congestion management reforms.
- Provided analysis in support of a transmission owner involved in a contract dispute with generators providing services related to local grid reliability.
- Authored a report on the role of regional transmission organizations in market monitoring.
- Prepared market power analyses in support of electric generators' applications to FERC for market-based rates for energy and ancillary services.
- Analyzed western electricity markets and the potential market power of a large producer under various asset acquisition or divestiture strategies.
- Testified before a state commission regarding the potential benefits of retail electric competition and issues that must be addressed to implement it.
- Prepared a market power analysis in support of an acquisition of generating capacity in the New England market.
- Advised a California utility regarding reform strategies for the California natural gas industry, addressing market power issues and policy options for providing system balancing services.

ICF RESOURCES, INC., Fairfax, VA, 1997-1998.

Project Manager

- Reviewed, critiqued and submitted testimony on a New Jersey electric utility's restructuring proposal, as part of a management audit for the state regulatory commission.
- Assisted a group of US utilities in developing a proposal to form a regional Independent System Operator (ISO).

- Researched and reported on the emergence of Independent System Operators and their role in reliability, for the Department of Energy.
- Provided analytical support to the Secretary of Energy's Task Force on Electric System Reliability on various topics, including ISOs. Wrote white papers on the potential role of markets in ensuring reliability.
- Recommended near-term strategies for addressing the potential stranded costs of non-utility generator contracts for an eastern utility; analyzed and evaluated the potential benefits of various contract modifications, including buyout and buydown options; designed a reverse auction approach to stimulating competition in the renegotiation process.
- Designed an auction process for divestiture of a Northeastern electric utility's generation assets and entitlements (power purchase agreements).
- Participated in several projects involving analysis of regional power markets and valuation of existing or proposed generation assets.

IRIS MARKET ENVIRONMENT PROJECT, 1994–1996.

Project Director, Moscow, Russia

Established and led a policy analysis group advising the Russian Federal Energy Commission and Ministry of Economy on economic policies for the electric power, natural gas, oil pipeline, telecommunications, and rail transport industries (*the Program on Natural Monopolies*, a project of the IRIS Center of the University of Maryland Department of Economics, funded by USAID):

- Advised on industry reforms and the establishment of federal regulatory institutions.
- Advised the Russian Federal Energy Commission on electricity restructuring, development of a competitive wholesale market for electric power, tariff improvements, and other issues of electric power and natural gas industry reform.
- Developed policy conditions for the IMF's \$10 billion Extended Funding Facility.
- Performed industry diagnostic analyses with detailed policy recommendations for electric power (1994), natural gas, rail transport and telecommunications (1995), oil transport (1996).

Independent Consultant stationed in Moscow, Russia, 1991–1996

Projects for the WORLD BANK, 1992-1996:

- Bank Strategy for the Russian Electricity Sector. Developed a policy paper outlining current industry problems and necessary policies, and recommending World Bank strategy.
- Russian Electric Power Industry Restructuring. Participated in work to develop recommendations to the Russian Government on electric power industry restructuring.
- Russian Electric Power Sector Update. Led project to review developments in sector restructuring, regulation, demand, supply, tariffs, and investment.
- Russian Coal Industry Restructuring. Analyzed Russian and export coal markets and developed forecasts of future demand for Russian coal.
- World Bank/IEA Electricity Options Study for the G-7. Analyzed mid- and long-term electric power demand and efficiency prospects and developed forecasts.
- Russian Energy Pricing and Taxation. Developed recommendations for liberalizing energy markets, eliminating subsidies and restructuring tariffs for all energy resources.

Other consulting assignments in Russia, 1991–1994:

- Advised on projects pertaining to Russian energy policy and the transition to a market economy in the energy industries, for the Institute for Energy Research of the Russian Academy of Sciences.
- Presented seminars on the structure, economics, planning, and regulation of the energy and electric power industries in the US, for various Russian clients.

DECISION FOCUS INC., Mountain View, CA, 1983–1992
Senior Associate, 1985-1992.

- For the Electric Power Research Institute, led projects to develop decision-analytic methodologies and models for evaluating long term fuel and electric power contracting and procurement strategies. Applied the methodologies and models in numerous case studies, and presented several workshops and training sessions on the approaches.
- Analyzed long-term and short-term natural gas supply decisions for a large California gas distribution company following gas industry unbundling and restructuring.
- Analyzed long term coal and rail alternatives for a midwest electric utility, including alternative coal supply regions, suppliers and contract structures; spot/contract mix; rail arrangements; power purchases; conversion to gas.
- Evaluated bulk power purchase alternatives and strategies for a New Jersey electric utility.
- Performed a financial and economic analysis of a proposed hydroelectric project.
- For a natural gas pipeline company serving the Northeastern US, forecasted long-term natural gas supply and transportation volumes. Developed a forecasting system for staff use.
- Analyzed potential benefits of diversification of suppliers for a natural gas pipeline company.
- Evaluated uranium contracting strategies for an electric utility.
- Analyzed telecommunications services markets under deregulation, developed and implemented a pricing strategy model. Evaluated potential responses of residential and business customers to changes in the client's and competitors' telecommunications services and prices.
- Analyzed coal contract terms and supplier diversification strategies for an eastern electric utility.
- Analyzed oil and natural gas contracting strategies for an electric utility.

TESTIMONY AND AFFIDAVITS

In the Matter of the Application of Ohio Power Company for Authority to Establish a Standard Service Offer in the Form of an Electric Security Plan, Public Utilities Commission of Ohio Case No. 13-2385-EL-SSO: Direct Testimony on Behalf of the Office of the Ohio Consumers' Counsel, May 6, 2014; deposition, May 29, 2014.

PJM Interconnection, L.L.C., FERC Docket No. ER14-504 (Clearing of Demand Response in RPM), Affidavit in Support of the Protest of the Joint Consumer Advocates and Public Interest Organizations, December 20, 2013.

New England Power Generators Association, Inc. v. ISO New England Inc., FERC Docket No. EL14-7, Testimony in Support of the Protest of the New England States Committee on Electricity, November 27, 2013.

Midwest Independent Transmission System Operator, Inc., FERC Docket No. ER11-4081, Affidavit In Support of Brief of the Midwest TDUs, October 11, 2013.

ANR Storage Company, FERC Docket No. RP12-479, Prepared Answering Testimony on behalf of the Joint Intervenor Group, April 2, 2013; Prepared Cross-answering Testimony, May 15, 2013; testimony at hearings, September 4, 2013.

In the Matter of the Application of The Dayton Power and Light Company for Approval of its Market Rate Offer, Public Utilities Commission of Ohio Case No. 12-426-EL-SSO: Direct Testimony on Behalf of the Office of the Ohio Consumers' Counsel, March 5, 2013; deposition, March 11, 2013.

PJM Interconnection, L.L.C., FERC Docket No. ER13-535 (Minimum Offer Price Rule), Affidavit in Support of the Protest and Comments of the Joint Consumer Advocates, December 28, 2012.

In the Matter of the Application of Ohio Edison Company, et al for Authority to Provide for a Standard Service Offer in the Form of an Electric Security Plan, Public Utilities Commission of Ohio Case No. 12-1230-EL-SSO: Direct Testimony on Behalf of the Office of the Ohio Consumers' Counsel, May 21, 2012; deposition, May 30, 2012; testimony at hearings, June 5, 2012.

PJM Interconnection, L.L.C., FERC Docket No. ER12-513, Affidavit in Support of Protest of the Joint Consumer Advocates and Demand Response Supporters (changes to RPM), December 22, 2011.

People of the State of Illinois *ex rel.* Leon A. Greenblatt, III v Commonwealth Edison Company, Circuit Court of Cook County, Illinois, deposition, September 22, 2011; interrogatory, Feb. 22, 2011.

In the Matter of the Application of Union Electric Company for Authority to Continue the Transfer of Functional Control of its Transmission System to the Midwest Independent Transmission System Operator, Inc., Missouri PSC Case No. EO-2011-0128, Testimony in hearings, February 9, 2012; Rebuttal Testimony and Response to Commission Questions On Behalf Of The Missouri Joint Municipal Electric Utility Commission, September 14, 2011.

PJM Interconnection, L.L.C., and PJM Power Providers Group v. PJM Interconnection, L.L.C., FERC Docket Nos. ER11-2875 and EL11-20 (Minimum Offer Price Rule), Affidavit in Support of Protest of New Jersey Division of Rate Counsel, March 4, 2011, and Affidavit in Support of Request for Rehearing and for Expedited Consideration of New Jersey Division of Rate Counsel, May 12, 2011.

PJM Interconnection, L.L.C., FERC Docket No. ER11-2288 (Demand response "saturation" issue), Affidavit in Support of Protest and Comments of the Joint Consumer Advocates, December 23, 2010.

North American Electric Reliability Corporation, FERC Docket No. RM10-10, Comments on Proposed Reliability Standard BAL-502-RFC-02: Planning Resource Adequacy Analysis, Assessment and Documentation, December 23, 2010.

In the Matter of the Reliability Pricing Model and the 2013/2014 Delivery Year Base Residual Auction Results, Maryland Public Service Commission Administrative Docket PC22, Comments and Responses to Questions On Behalf of Southern Maryland Electric Cooperative, October 15, 2010.

PJM Interconnection, L.L.C., FERC Docket No. ER09-1063-004 (PJM compliance filing on pricing during operating reserve shortages): Affidavit In Support of Comments and Protest of the Pennsylvania Public Utility Commission, July 30, 2010.

ISO New England, Inc. and New England Power Pool, FERC Docket No. ER10-787-000 on Forward Capacity Market Revisions: Direct Testimony On Behalf Of The Connecticut Department of Public Utility Control, March 30, 2010; Direct Testimony in Support of First Brief of the Joint Filing Supporters, July 1, 2010; Supplemental Testimony in Support of Second Brief of the Joint Filing Supporters, September 1, 2010.

PJM Interconnection, L.L.C., FERC Docket No. ER09-412-006: Affidavit In Support of Protest of Indicated Consumer Interests, January 19, 2010.

In the Matter of the Application of Ohio Edison Company, et al for Approval of a Market Rate Offer to Conduct a Competitive Bidding Process for Standard Service Offer Electric Generation Supply, Public Utilities Commission of Ohio Case No. 09-906-EL-SSO: Direct Testimony on Behalf of the Office of the Ohio Consumers' Counsel, December 7, 2009; deposition, December 10, 2009, testimony at hearings, December 22, 2009.

Application of PATH Allegheny Virginia Transmission Corporation for Certificates of Public Convenience and Necessity to Construct Facilities: 765 kV Transmission Line through Loudon, Frederick and Clarke Counties, Virginia State Corporation Commission Case No. PUE-2009-00043: Direct Testimony on Behalf of Commission Staff, December 8, 2009.

PJM Interconnection, L.L.C., FERC Docket No. ER09-412-000: Affidavit On Proposed Changes to the Reliability Pricing Model On Behalf Of RPM Load Group, January 9, 2009; Reply Affidavit, January 26, 2009.

PJM Interconnection, L.L.C., FERC Docket No. ER09-412-000: Affidavit In Support of the Protest Regarding Load Forecast To Be Used in May 2009 RPM Auction, January 9, 2009.

Maryland Public Service Commission et al v. PJM Interconnection, L.L.C., FERC Docket No. EL08-67-000: Affidavit in Support Complaint of the RPM Buyers, May 30, 2008; Supplemental Affidavit, July 28, 2008.

PJM Interconnection, L.L.C., FERC Docket No. ER08-516: Affidavit On PJM's Proposed Change To RPM Parameters On Behalf Of RPM Buyers, March 6, 2008.

PJM Interconnection, L.L.C., Reliability Pricing Model Compliance Filing, FERC Docket Nos. ER05-1410 and EL05-148: Affidavit Addressing RPM Compliance Filing Issues on Behalf of the Public Power Association of New Jersey, October 15, 2007.

TXU Energy Retail Company LP v. Leprino Foods Company, Inc., US District Court for the Northern District of California, Case No. C01-20289: Testimony at trial, November 15-29, 2006; Deposition, April 7, 2006; Expert Report on Behalf of Leprino Foods Company, March 10, 2006.

Gas Transmission Northwest Corporation, Federal Energy Regulation Commission Docket No. RP06-407: Reply Affidavit, October 26, 2006; Affidavit on Behalf of the Canadian Association of Petroleum Producers, October 18, 2006.

PJM Interconnection, L.L.C., Reliability Pricing Model, FERC Docket Nos. ER05-1410 and EL05-148: Supplemental Affidavit on Technical Conference Issues, June 22, 2006; Supplemental Affidavit Addressing Paper Hearing Topics, June 2, 2006; Affidavit on Behalf of the Public Power Association of New Jersey, October 19, 2005.

Maritimes & Northeast Pipeline, L.L.C., FERC Docket No. RP04-360-000: Prepared Cross Answering Testimony, March 11, 2005; Prepared Direct and Answering Testimony on Behalf of Firm Shipper Group, February 11, 2005.

Dynegy Marketing and Trade v. Multiut Corporation, US District Court of the Northern District of Illinois, Case. No. 02 C 7446: Deposition, September 1, 2005; Expert Report in response to Defendant's counterclaims, March 21, 2005; Expert Report on damages, October 15, 2004.

Application of Pacific Gas and Electric Company, California Public Utilities Commission proceeding A.04-03-021: Prepared Testimony, Policy for Throughput-Based Backbone Rates, on behalf of Pacific Gas and Electric Company, May 21, 2004.

Gas Market Activities, California Public Utilities Commission Order Instituting Investigation I.02-11-040: Testimony at hearings, July, 2004; Prepared Testimony, Comparison of Incentives Under Gas Procurement Incentive Mechanisms, on behalf of Pacific Gas and Electric Company, December 10, 2003.

Application of Red Lake Gas Storage, L.P., FERC Docket No. CP02-420, Affidavit in support of application for market-based rates for a proposed merchant gas storage facility, March 3, 2003.

Application of Pacific Gas and Electric Company, California Public Utilities Commission proceeding A.01-10-011: Testimony at hearings, April 1-2, 2003; Rebuttal Testimony, March 24, 2003; Prepared Testimony, Performance of the Gas Accord Market Structure, on behalf of Pacific Gas and Electric Company, January 13, 2003.

Application of Wild Goose Storage, Inc., California Public Utilities Commission proceeding A.01-06-029: Testimony at hearings, November, 2001; Prepared testimony regarding policies for backbone expansion and tolls, and potential ratepayer benefits of new storage, on behalf of Pacific Gas and Electric Company, October 24, 2001.

Public Utilities Commission of the State of California v. El Paso Natural Gas Co., FERC Docket No. RP00-241: Testimony at hearings, May-June, 2001; Prepared Testimony on behalf of Pacific Gas and Electric Company, May 8, 2001.

Application of Pacific Gas and Electric Company, California Public Utilities Commission proceeding A.99-09-053: Prepared testimony regarding market power consequences of divestiture of hydroelectric assets, December 5, 2000.

San Diego Gas & Electric Company, *et al*, FERC Docket No. EL00-95: Prepared testimony regarding proposed price mitigation measures on behalf of Pacific Gas and Electric Company, November 22, 2000.

Application of Harbor Cogeneration Company, FERC Docket No. ER99-1248: Affidavit in support of application for market-based rates for energy, capacity and ancillary services, December 1998.

Application of and Complaint of Residential Electric, Incorporated vs. Public Service Company of New Mexico, New Mexico Public Utility Commission Case Nos. 2867 and 2868: Testimony at

hearings, November, 1998; Direct Testimony on behalf of Public Service Company of New Mexico on retail access issues, November, 1998.

Management audit of Public Service Electric and Gas' restructuring proposal for the New Jersey Board of Public Utilities: Prepared testimony on reliability and basic generation service, March 1998.

PUBLISHED ARTICLES

Forward Capacity Market CONEfusion, Electricity Journal Vol. 23 Issue 9, November 2010.

Reconsidering Resource Adequacy (Part 2): Capacity Planning for the Smart Grid, Public Utilities Fortnightly, May 2010.

Reconsidering Resource Adequacy (Part 1): Has the One-Day-in-Ten-Years Criterion Outlived Its Usefulness? Public Utilities Fortnightly, April 2010.

A Hard Look at Incentive Mechanisms for Natural Gas Procurement, with K. Costello, National Regulatory Research Institute Report No. 06-15, November 2006.

Natural Gas Procurement: A Hard Look at Incentive Mechanisms, with K. Costello, Public Utilities Fortnightly, February 2006, p. 42.

After the Gas Bubble: An Economic Evaluation of the Recent National Petroleum Council Study, with K. Costello and H. Huntington, Energy Journal Vol. 26 No. 2 (2005).

High Natural Gas Prices in California 2000-2001: Causes and Lessons, Journal of Industry, Competition and Trade, vol. 2:1/2, November 2002.

Restructuring the Electric Power Industry: Past Problems, Future Directions, Natural Resources and Environment, ABA Section of Environment, Energy and Resources, Volume 16 No. 4, Spring, 2002.

Scarcity, Market Power, Price Spikes, and Price Caps, Electricity Journal, November, 2000.

The New York ISO's Market Power Screens, Thresholds, and Mitigation: Why It Is Not A Model For Other Market Monitors, Electricity Journal, August/September 2000.

ISOs: A Grid-by-Grid Comparison, Public Utilities Fortnightly, January 1, 1998.

Economic Policy in the Natural Monopoly Industries in Russia: History and Prospects (with V. Capelik), Voprosi Ekonomiki, November 1995.

Meeting Russia's Electric Power Needs: Uncertainty, Risk and Economic Reform, Financial and Business News, April 1993.

Russian Energy Policy through the Eyes of an American Economist, Energeticheskoye Stroitelstvo, December 1992, p 2.

Fuel Contracting Under Uncertainty, with R. B. Fancher and H. A. Mueller, IEEE Transactions on Power Systems, February, 1986, p. 26-33.

OTHER ARTICLES, REPORTS AND PRESENTATIONS

Panel on centralized capacity market design going forward, Centralized Capacity Markets in Regional Transmission Organizations and Independent System Operators, Docket No. AD13-7, September 25, 2013; post-conference comments, January 8, 2014.

Economics of Planning for Resource Adequacy, NARUC Summer Meetings, Denver, Colorado, July 21, 2013.

The Increasing Need for Flexible Resources: Considerations for Forward Procurement, EUCI Conference on Fast and Flexi-Ramp Resources, Chicago, Illinois, April 23-24, 2013.

Panel on RPM Issues: Long Term Vision and Recommendations for Now, Organization of PJM States, Inc. Spring Strategy Meeting, April 3, 2013.

Comments On: The Economic Ramifications of Resource Adequacy Whitepaper, peer review of whitepaper prepared for EISPC and NARUC, March 24, 2013.

Resource Adequacy: Criteria, Constructs, Emerging Issues, Coal Finance 2013, Institute for Policy Integrity, NYU School of Law, March 19, 2013.

Panel Discussion – Alternative Models and Best Practices in Other Regions, Long-Term Resource Adequacy Summit, California Public Utilities Commission and California ISO, San Francisco, California, February 26, 2013.

Fundamental Capacity Market Design Choices: How Far Forward? How Locational? EUCI Capacity Markets Conference, October 3, 2012.

One Day in Ten Years? Economics of Resource Adequacy, Mid-America Regulatory Conference Annual Meeting, June 12, 2012.

Reliability and Economics: Separate Realities? Harvard Electricity Policy Group Sixty-Fifth Plenary Session, December 1, 2011.

National Regulatory Research Institute Teleseminar: The Economics of Resource Adequacy Planning: Should Reserve Margins Be About More Than Keeping the Lights On?, panelist, September 15, 2011.

Improving RTO-Operated Wholesale Electricity Markets: Recommendations for Market Reforms, American Public Power Association Symposium, panelist, January 13, 2011.

Shortage Pricing Issues, panelist, Organization of PJM States, Inc. Sixth Annual Meeting, October 8, 2010.

National Regulatory Research Institute Teleseminar: Forecasting Natural Gas Prices, panelist, July 28, 2010.

Comments on the NARUC-Initiated Report: Analysis of the Social, Economic and Environmental Effects of Maintaining Oil and Gas Exploration Moratoria On and Beneath Federal Lands (February 15, 2010) submitted to NARUC on June 22, 2010.

Forward Capacity Market CONefusion, Advanced Workshop in Regulation and Competition, 29th Annual Eastern Conference of the Center for Research in Regulated Industries, Rutgers University, May 21, 2010.

One Day in Ten Years? Resource Adequacy for the Smart Grid, revised draft November 2009.

Approaches to Local Resource Adequacy, presented at Electric Utility Consultants' Smart Capacity Markets Conference, November 9, 2009.

One Day in Ten Years? Resource Adequacy for the Smarter Grid, Advanced Workshop in Regulation and Competition, 28th Annual Eastern Conference of the Center for Research in Regulated Industries, Rutgers University, May 15, 2009.

Resource Adequacy in Restructured Electricity Markets: Initial Results of PJM's Reliability Pricing Model (RPM), Advanced Workshop in Regulation and Competition, 27th Annual Eastern Conference of the Center for Research in Regulated Industries, Rutgers University, May 15, 2008.

Statement at Federal Energy Regulatory Commission technical conference, Capacity Markets in Regions with Organized Electric Markets, Docket No. AD08-4-000, May 7, 2008.

Raising the Stakes on Capacity Incentives: PJM's Reliability Pricing Model (RPM), presentation at the University of California Energy Institute's 13th Annual POWER Research Conference, Berkeley, California, March 21, 2008.

Raising the Stakes on Capacity Incentives: PJM's Reliability Pricing Model (RPM), report prepared for the American Public Power Association, March 14, 2008.

Comments on GTN's Request for Market-Based Rates for Interruptible Transportation, presentation at technical conference in Federal Energy Regulatory Commission Docket No. RP06-407, September 26-27, 2006 on behalf of Canadian Association of Petroleum Producers.

Comments on Policies to Encourage Natural Gas Infrastructure, and Supplemental Comments on Market-Based Rates Policy For New Natural Gas Storage, State of the Natural Gas Industry Conference, Federal Energy Regulatory Commission Docket No. AD05-14, October 12 and 26, 2005.

After the Gas Bubble: A Critique of the Modeling and Policy Evaluation Contained in the National Petroleum Council's 2003 Natural Gas Study, with K. Costello and H. Huntington, presented at the 24th Annual North American Conference of the USAEE/IAEE, July 2004.

Comments on the Pipeline Capacity Reserve Concept, State of the Natural Gas Industry Conference, Federal Energy Regulatory Commission Docket No. PL04-17, October 21, 2004.

Southwest Natural Gas Market and the Need for Storage, Federal Energy Regulatory Commission's Southwestern Gas Storage Technical Conference, docket AD03-11, August 2003.

Assessing Market Power in Power Markets: the "Pivotal Supplier" Approach and Variants, presented at Electric Utility Consultants' Ancillary Services Conference, November 1, 2001.

Scarcity and Price Mitigation in Western Power Markets, presented at Electric Utility Consultants' conference: What To Expect In Western Power Markets This Summer (conference chair), May 1-2, 2001.

Market Power: Definition, Detection, Mitigation, pre-conference workshop, with Scott Harvey, January 24, 2001.

Market Monitoring in the U.S.: Evolution and Current Issues, presented at the Association of Power Exchanges' APEX 2000 Conference, October 25, 2000.

Ancillary Services and Market Power, presented at the Electric Utility Consultants' Ancillary Services Conference (New Business Opportunities in Competitive Ancillary Services Markets), Sept. 14, 2000.

Market Monitoring Workshop, presented to RTO West Market Monitoring Work Group, June 2000.

Screens and Thresholds Used In Market Monitoring, presented at the Conference on RTOs and Market Monitoring, Edison Electric Institute and Energy Daily, May 19, 2000.

The Regional Transmission Organization's Role in Market Monitoring, report for the Edison Electric Institute attached to their comments on the FERC's NOPR on RTOs, August, 1999.

The Independent System Operator's Mission and Role in Reliability, presented at the Electric Utility Consultants' Conference on ISOs and Transmission Pricing, March 1998.

Independent System Operators and Their Role in Maintaining Reliability in a Restructured Electric Power Industry, ICF Resources for the U. S. Department of Energy, 1997.

Rail Transport in the Russian Federation, Diagnostic Analysis and Policy Recommendations, with V. Capelik and others, IRIS Market Environment Project, 1995.

Telecommunications in the Russian Federation: Diagnostic Analysis and Policy Recommendations, with E. Whitlock and V. Capelik, IRIS Market Environment Project, 1995.

Russian Natural Gas Industry: Diagnostic Analysis and Policy Recommendations, with I. Sorokin and V. Eskin, IRIS Market Environment Project, 1995.

Russian Electric Power Industry: Diagnostic Analysis and Policy Recommendations, with I. Sorokin, IRIS Market Environment Project, 1995.

PROFESSIONAL ASSOCIATIONS

United States Association for Energy Economics

Natural Gas Roundtable

Energy Bar Association

September 2014

**Duke Energy Ohio
Case No. 14-841-EL-SSO
OCC Second Set Interrogatories
Date Received: June 13, 2014**

OCC-INT-02-011

REQUEST:

If Duke's response to the prior Interrogatory, part (c) indicates that no Price Stabilization Rider revenue and/or cost was included in the pro forma financial projections:

- a. How were revenue and costs associated with Duke's OVEC generation "entitlement" treated for these projections?
- b. For each year, what was the annual amount of revenue and cost associated with Duke's OVEC generation "entitlement"?

RESPONSE:

- a. The forecast assumed that margins on Duke Energy Ohio's contractual entitlement in OVEC were \$0 for the term of the proposed ESP.
- b. See response to OCC-INT-02-11(a).

PERSON RESPONSIBLE: Patty A. Mullins

**Duke Energy Ohio
Case No. 14-841-EL-SSO
IEU First Set Interrogatories
Date Received: June 12, 2014**

IEU-INT-01-001

REQUEST:

Has Duke prepared any financial modeling or forecasts of the expected rate impacts of the proposed Price Stabilization Rider for the term of the proposed electric security plan?

RESPONSE:

No.

PERSON RESPONSIBLE: William Don Wathen Jr.

**Duke Energy Ohio
Case No. 14-841-EL-SSO
IEU First Set Interrogatories
Date Received: June 12, 2014**

IEU-INT-01-002

REQUEST:

Has Duke prepared any financial modeling or forecasts of the expected rate impacts of the proposed Price Stabilization Rider for the remaining term of Duke's contract with Ohio Valley Electric Corporation ("OVEC")?

RESPONSE:

No.

PERSON RESPONSIBLE: William Don Wathen Jr.

**Duke Energy Ohio
Case No. 14-841-EL-SSO, 14-842-EL-ATA
OCC Third Set Production of Documents
Date Received: June 25, 2014**

OCC-POD-03-020

REQUEST:

Referring to Mr. Wathen's Testimony at page 11, line 19 and page 13, line 22, please provide any and all documents showing forecasts/estimates of the quarterly amounts ("economic value") that would flow through the Price Stability Rider ("PSR") over the ESP period.

RESPONSE:

See response to IEU-INT-01-002.

PERSON RESPONSIBLE: William Don Wathen Jr.

**Duke Energy Ohio
Case No. 14-841-EL-SSO
KROGER First Set Interrogatories
Date Received: July 30, 2014**

KROGER-INT-01-001

REQUEST:

Please provide an estimated cost and/or benefit to Duke Energy Ohio retail customers from the proposed Price Stabilization Rider for each year of the proposed Electric Security Plan (ESP).

RESPONSE:

Objection. This Interrogatory is unduly burdensome in that it is duplicative of OEG-DR-01-001 and thus must be seen as intended to harass. Without waiving said objection, to the extent discoverable and in the spirit of discovery, see response to Highly Confidential OEG-DR-01-001.

PERSON RESPONSIBLE: As to objection: Legal

As to response: William Don Wathen Jr.

Duke Energy Ohio
Case No. 14-841-EL-SSO, 14-842-EL-ATA
OCC Ninth Set Production of Documents
Date Received: July 25, 2014

OCC-POD-09-068

REQUEST:

Referring to Mr. Wathen's testimony at page 11, line 18, Mr. Wathen testifies that the Company is offering the economic value of its share of the capacity and energy from OVEC to its retail customers for the duration of Duke Energy Ohio's entitlement. Please provide all documents that assess the economic value of Duke's share of the capacity and energy from OVEC to its retail customers

- a. For the period of the ESP; and,
- b. For the duration of Duke Energy Ohio's entitlement.

RESPONSE:

- a. See confidential response to OEG-DR-01-001.
- b. The Company has not prepared any forecasts that extend to June 30, 2040.

PERSON RESPONSIBLE: William Don Wathen Jr.

THIS FILING IS	
Item 1: <input type="checkbox"/> An Initial (Original) Submission	OR <input checked="" type="checkbox"/> Resubmission No. _____

Att. JFW-2 page 7 of 17

Form 1 Approved
OMB No.1902-0021
(Expires 12/31/2014)

Form 1-F Approved
OMB No.1902-0029
(Expires 12/31/2014)

Form 3-Q Approved
OMB No.1902-0205
(Expires 05/31/2014)



FERC FINANCIAL REPORT

FERC FORM No. 1: Annual Report of Major Electric Utilities, Licensees and Others and Supplemental Form 3-Q: Quarterly Financial Report

These reports are mandatory under the Federal Power Act, Sections 3, 4(a), 304 and 309, and 18 CFR 141.1 and 141.400. Failure to report may result in criminal fines, civil penalties and other sanctions as provided by law. The Federal Energy Regulatory Commission does not consider these reports to be of confidential nature

Exact Legal Name of Respondent (Company) Indiana-Kentucky Electric Corporation	Year/Period of Report End of <u>2013/Q4</u>
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Name of Respondent Indiana-Kentucky Electric Corporation		This Report is: (1) <input type="checkbox"/> An Original (2) <input checked="" type="checkbox"/> A Resubmission		Date of Report (Mo, Da, Yr) 12/31/2013	Year/Period of Report Att. JFW-2 page 8 of 11/04		
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STEAM-ELECTRIC GENERATING PLANT STATISTICS (Large Plants)							
<p>1. Report data for plant in Service only. 2. Large plants are steam plants with installed capacity (name plate rating) of 25,000 Kw or more. Report in this page gas-turbine and internal combustion plants of 10,000 Kw or more, and nuclear plants. 3. Indicate by a footnote any plant leased or operated as a joint facility. 4. If net peak demand for 60 minutes is not available, give data which is available, specifying period. 5. If any employees attend more than one plant, report on line 11 the approximate average number of employees assignable to each plant. 6. If gas is used and purchased on a therm basis report the Btu content of the gas and the quantity of fuel burned converted to Mcl. 7. Quantities of fuel burned (Line 38) and average cost per unit of fuel burned (Line 41) must be consistent with charges to expense accounts 501 and 547 (Line 42) as show on Line 20. 8. If more than one fuel is burned in a plant furnish only the composite heat rate for all fuels burned.</p>							
Line No.	Item (a)	Plant Name: CLIFTY CREEK (b)	Plant Name: (c)				
1	Kind of Plant (Internal Comb, Gas Turb, Nuclear)	STEAM					
2	Type of Constr (Conventional, Outdoor, Boiler, etc)	CONVENTIONAL					
3	Year Originally Constructed	1955					
4	Year Last Unit was Installed	1955					
5	Total Installed Cap (Max Gen Name Plate Ratings-MW)	1303.58	0.00				
6	Net Peak Demand on Plant - MW (60 minutes)	1254	0				
7	Plant Hours Connected to Load	8760	0				
8	Net Continuous Plant Capability (Megawatts)	1284	0				
9	When Not Limited by Condenser Water	0	0				
10	When Limited by Condenser Water	1284	0				
11	Average Number of Employees	395	0				
12	Net Generation, Exclusive of Plant Use - KWh	5505076000	0				
13	Cost of Plant: Land and Land Rights	1129193	0				
14	Structures and Improvements	393879800	0				
15	Equipment Costs	927048018	0				
16	Asset Retirement Costs	0	0				
17	Total Cost	1322057011	0				
18	Cost per KW of Installed Capacity (line 17/5) Including	1014.1888	0				
19	Production Expenses: Oper, Supv, & Engr	3480109	0				
20	Fuel	175831024	0				
21	Coolants and Water (Nuclear Plants Only)	0	0				
22	Steam Expenses	7832506	0				
23	Steam From Other Sources	0	0				
24	Steam Transferred (Cr)	0	0				
25	Electric Expenses	3945575	0				
26	Misc Steam (or Nuclear) Power Expenses	11871480	0				
27	Rents	0	0				
28	Allowances	94896	0				
29	Maintenance Supervision and Engineering	2554494	0				
30	Maintenance of Structures	2466342	0				
31	Maintenance of Boiler (or reactor) Plant	26376414	0				
32	Maintenance of Electric Plant	7167313	0				
33	Maintenance of Misc Steam (or Nuclear) Plant	1559884	0				
34	Total Production Expenses	243109817	0				
35	Expenses per Net KWh	0.0442	0.0000				
36	Fuel: Kind (Coal, Gas, Oil, or Nuclear)	COAL	OIL				
37	Unit (Coal-Tons/Oil-barrels/Gas-mcf/Nuclear-indicate)	TONS	GALLONS				
38	Quantity (Units) of Fuel Burned	2824409	547049	0	0	0	0
39	Avg Heat Cont - Fuel Burned (btu/indicate if nuclear)	10708	136000	0	0	0	0
40	Avg Cost of Fuel/unit, as Delvd f.o.b. during year	59.291	3.279	0.000	0.000	0.000	0.000
41	Average Cost of Fuel per Unit Burned	58.136	3.268	0.000	0.000	0.000	0.000
42	Average Cost of Fuel Burned per Million BTU	270.843	2402.638	0.000	0.000	0.000	0.000
43	Average Cost of Fuel Burned per KWh Net Gen	0.000	0.000	0.000	0.000	0.000	0.000
44	Average BTU per KWh Net Generation	10281.000	0.000	0.000	0.000	0.000	0.000

THIS FILING IS

Item 1: ☒ An Initial (Original) Submission OR ☐ Resubmission No. _____

Att. JFW-2 page 9 of 14
Form 1 Approved
OMB No.1902-0021
(Expires 12/31/2014)
Form 1-F Approved
OMB No.1902-0029
(Expires 12/31/2014)
Form 3-Q Approved
OMB No.1902-0205
(Expires 05/31/2014)



FERC FINANCIAL REPORT
FERC FORM No. 1: Annual Report of
Major Electric Utilities, Licensees
and Others and Supplemental
Form 3-Q: Quarterly Financial Report

These reports are mandatory under the Federal Power Act, Sections 3, 4(a), 304 and 309, and 18 CFR 141.1 and 141.400. Failure to report may result in criminal fines, civil penalties and other sanctions as provided by law. The Federal Energy Regulatory Commission does not consider these reports to be of confidential nature

Exact Legal Name of Respondent (Company)

Ohio Valley Electric Corporation

Year/Period of Report

End of 2013/Q4

Name of Respondent Ohio Valley Electric Corporation		This Report is: (1) <input checked="" type="checkbox"/> An Original (2) <input type="checkbox"/> A Resubmission		Date of Report (Mo, Da, Yr) 12/31/2013		Year/Period of Report Att. JFW-2 page 10 of 13/C4	
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STEAM-ELECTRIC GENERATING PLANT STATISTICS (Large Plants)							
<p>1. Report data for plant in service only. 2. Large plants are steam plants with installed capacity (name plate rating) of 25,000 Kw or more. Report in this page gas-turbine and internal combustion plants of 10,000 Kw or more, and nuclear plants. 3. Indicate by a footnote any plant leased or operated as a joint facility. 4. If net peak demand for 60 minutes is not available, give data which is available, specifying period. 5. If any employees attend more than one plant, report on line 11 the approximate average number of employees assignable to each plant. 6. If gas is used and purchased on a term basis report the Btu content of the gas and the quantity of fuel burned converted to Mct. 7. Quantities of fuel burned (Line 38) and average cost per unit of fuel burned (Line 41) must be consistent with charges to expense accounts 501 and 547 (Line 42) as show on Line 20. 8. If more than one fuel is burned in a plant furnish only the composite heat rate for all fuels burned.</p>							

Line No.	Item (a)	Plant Name: KYGER CREEK (b)	Plant Name: (c)				
1	Kind of Plant (Internal Comb, Gas Turb, Nuclear)	STEAM					
2	Type of Constr (Conventional, Outdoor, Boiler, etc)	CONVENTIONAL					
3	Year Originally Constructed	1955					
4	Year Last Unit was Installed	1955					
5	Total Installed Cap (Max Gen Name Plate Ratings-MW)	1086.30	0.00				
6	Net Peak Demand on Plant - MW (60 minutes)	1014	0				
7	Plant Hours Connected to Load	8308	0				
8	Net Continuous Plant Capability (Megawatts)	0	0				
9	When Not Limited by Condenser Water	1070	0				
10	When Limited by Condenser Water	0	0				
11	Average Number of Employees	451	0				
12	Net Generation, Exclusive of Plant Use - KWh	4856617000	0				
13	Cost of Plant: Land and Land Rights	3029810	0				
14	Structures and Improvements	293381083	0				
15	Equipment Costs	863681387	0				
16	Asset Retirement Costs	0	0				
17	Total Cost	1260372090	0				
18	Cost per KW of Installed Capacity (line 17/5) Including	1160.2431	0				
19	Production Expenses: Oper, Supv, & Engr	3456448	0				
20	Fuel	118621803	0				
21	Coolants and Water (Nuclear Plants Only)	0	0				
22	Steam Expenses	7758017	0				
23	Steam From Other Sources	0	0				
24	Steam Transferred (Cr)	0	0				
25	Electric Expenses	2317790	0				
26	Misc Steam (or Nuclear) Power Expenses	19780599	0				
27	Rents	37900	0				
28	Allowances	40324	0				
29	Maintenance Supervision and Engineering	2233350	0				
30	Maintenance of Structures	6825589	0				
31	Maintenance of Boiler (or reactor) Plant	24064734	0				
32	Maintenance of Electric Plant	6687399	0				
33	Maintenance of Misc Steam (or Nuclear) Plant	2010416	0				
34	Total Production Expenses	193814169	0				
35	Expenses per Net KWh	0.0390	0.0000				
36	Fuel: Kind (Coal, Gas, Oil, or Nuclear)	COAL	OIL				
37	Unit (Coal-tons/Oil-barrel/Gas-mcf/Nuclear-indicate)	TONS	GALLONS				
38	Quantity (Units) of Fuel Burned	2128934	371666	0	0	0	0
39	Avg Heat Cont - Fuel Burned (btu/indicate if nuclear)	12088	136000	0	0	0	0
40	Avg Cost of Fuel/unit, as Delvd f.o.b. during year	51.945	3.200	0.000	0.000	0.000	0.000
41	Average Cost of Fuel per Unit Burned	53.303	3.242	0.000	0.000	0.000	0.000
42	Average Cost of Fuel Burned per Million BTU	220.540	2383.746	0.000	0.000	0.000	0.000
43	Average Cost of Fuel Burned per KWh Net Gen	0.000	0.000	0.000	0.000	0.000	0.000
44	Average BTU per KWh Net Generation	1050000	0.000	0.000	0.000	0.000	0.000

Duke Energy Ohio
Case No. 14-841-EL-SSO, 14-842-EL-ATA
OCC Third Set Production of Documents
Date Received: June 25, 2014

OCC-POD-03-021

REQUEST:

Referring to Mr. Wathen's Testimony at page 12, line 8, please provide any and all documents and analysis that have been prepared by DEO showing the nature and magnitude of DEO's customers' exposure to price volatility.

RESPONSE:

The Company has not performed this analysis.

PERSON RESPONSIBLE: William Don Wathen Jr.

Duke Energy Ohio
Case No. 14-841-EL-SSO, 14-842-EL-ATA
OCC Third Set Production of Documents
Date Received: June 25, 2014

OCC-POD-03-024

REQUEST:

Referring to Mr. Wathen's Testimony at page 14, line 15, please provide any and all documents and analysis that demonstrate that "most of Duke Energy Ohio's customers are subject to varying degrees of volatility."

RESPONSE:

None. No documents or analyses are necessary to recognize that any instance where a customer's generation price is adjusted, there will be the potential for volatility in that customer's price. CRES contracts are for varying lengths of time and some may contain provisions for tracking market prices. Similarly, SSO prices are subject to at least annual changes. Because the thousands of shopping customers have contracts with numerous different provisions for price, duration, and other terms, there are unquestionably 'varying degrees of volatility' experienced by Duke Energy Ohio's customers.

PERSON RESPONSIBLE: William Don Wathen Jr.

Duke Energy Ohio
Case No. 14-841-EL-SSO, 14-842-EL-ATA
OCC Third Set Production of Documents
Date Received: June 25, 2014

OCC-POD-03-025

REQUEST:

Referring to Mr. Wathen's Testimony at page 14, line 15, please provide any and all documents and analysis that demonstrate that any of Duke Energy Ohio's customers are at present subject to price volatility.

RESPONSE:

See response to OCC-POD-03-024.

PERSON RESPONSIBLE: William Don Wathen Jr.

Duke Energy Ohio
Case No. 14-841-EL-SSO, 14-842-EL-ATA
OCC Third Set Production of Documents
Date Received: June 25, 2014

OCC-POD-03-022

REQUEST:

Referring to Mr. Wathen's Testimony at page 13, line 18 and page 14, line 5 where he states that the PSR will "temper price volatility," please provide any and all documents and analysis of the impact of the PSR as a hedge of prices.

RESPONSE:

The Company has not performed this analysis.

PERSON RESPONSIBLE: William Don Wathen Jr.

Duke Energy Ohio
Case No. 14-841-EL-SSO, 14-842-EL-ATA
OCC Third Set Production of Documents
Date Received: June 25, 2014

OCC-POD-03-023

REQUEST:

Referring to Mr. Wathen's Testimony at page 13, line 18, please provide any and all documents and analysis of the value to customers of the PSR as a hedge.

RESPONSE:

Objection. This Interrogatory is overly burdensome and must be seen as intending to harass given that it is duplicative of OCC-POD-03-022. Without waiving said objection and in the spirit of discovery, none.

PERSON RESPONSIBLE: As to objection - Legal
As to response - William Don Wathen Jr.

Duke Energy Ohio
Case No. 14-841-EL-SSO, 14-842-EL-ATA
OCC Third Set Interrogatories
Date Received: June 25, 2014

OCC-INT-03-051

REQUEST:

Referring to Mr. Wathen's Testimony at page 15, lines 16-20, is it DEO's contention that without the PSR, the OVEC capacity would be retired? If not, then please explain how the fact that OVEC generation "steel in the ground" is a benefit of the PSR?

RESPONSE:

Objection. The question is susceptible to different interpretations and Duke Energy Ohio would have to engage in speculation or conjecture to ascertain the intended meaning of this request, as it misstates the testimony of Mr. Wathen. Without waiving said objection and in the spirit of discovery, as reflected in the cited testimony, the generating stations owned by OVEC responded favorably during the recent polar vortex in that they were on line and providing reliable service. Dedication of the value of these assets to retail load essentially gives customers the value of dependable capacity from the "steel in the ground" associated with the generation facilities owned by OVEC.

PERSON RESPONSIBLE: As to Objection -- Legal
As to response -- William Don Wathen Jr.

Duke Energy Ohio
Case No. 14-841-EL-SSO, 14-842-EL-ATA
OCC Ninth Set Interrogatories
Date Received: July 25, 2014

OCC-INT-09-173

REQUEST:

Please reference your response to OCC-03-051. Is it DEO's contention that without the PSR, the OVEC capacity would be retired?

RESPONSE:

Objection. This Interrogatory misstates Duke Energy Ohio's response to OCC-DR-03-051, which did not suggest that OVEC's generating capacity would be retired, for any reason, earlier than June 30, 2040. This Interrogatory is further objectionable in that it causes Duke Energy Ohio to engage in impermissible speculation and is otherwise duplicative of OCC-DR-03-051 and, as such, must be seen as intended to harass.

PERSON RESPONSIBLE: Legal

Duke Energy Ohio
Case No. 14-841-EL-SSO, 14-842-EL-ATA
OEG First Set Data Requests
Date Received: July 9, 2014

OEG-DR-01-001 HIGHLY CONFIDENTIAL
FOR ATTORNEYS EYES ONLY

REQUEST:

Please provide Duke Energy Ohio's most recent forecast of the following attributes, costs, or benefits associated with Duke Energy Ohio's entitlement/portion of the OVEC generating assets for 2015-2024. Please note the date(s) that the forecasted values in response to this question were developed.

- a. OVEC Capacity ICAP (in MW)
- b. OVEC Capacity UCAP (in MW)
- c. OVEC Generation (in GWh)
- d. OVEC Demand Charge (in \$000): expected capacity-related cost obligations associated with Duke Energy Ohio's expected portion of OVEC costs; if possible, please provide component details (e.g., depreciation, return on rate base, taxes, fixed O&M costs, etc.). If Duke Energy Ohio has no such forecast, what were the three most recently available years' demand charges and does Duke Energy Ohio expect its OVEC capacity-related cost obligations to increase, remain flat, or decrease going forward?
- e. OVEC Energy Costs (in \$000): expected energy-related costs associated with Duke Energy Ohio's expected portion of OVEC generation; if possible, please provide component details (e.g., fuel costs, variable O&M costs, start costs, SO2 costs, CO2 costs, etc.).
- f. PJM RPM price for capacity (in \$/MW-Day); if Duke Energy Ohio does not have any such forecast, please provide Duke Energy Ohio's forecast of net CONE costs (in \$/MW-day) for the requested time period.
- g. PJM RPM Capacity Revenue (in \$000); if this is not the product of items (b) and (f), please describe why and describe how these revenue estimates were developed.
- h. PJM Energy Market Price (in \$/MWh): the PJM day-ahead energy market prices that would be applicable to sales of energy from the OVEC facilities.
- i. Energy Revenue (in \$000): expected energy-related revenues from providing Duke Energy Ohio's expected portion of OVEC generation into the PJM day-ahead market;

if this is not the product of items (c) and (h), please describe why and describe how these revenue estimates were developed.

Please provide such information in electronic format, preferably in a MicroSoft Excel spreadsheet, and in at least an annual format. If some or all of the information is available in a monthly format, please provide that as well. If any portion of the requested information is not available or forecasted for the requested period, please provide it for as many years as such information is available.

RESPONSE:

HIGHLY CONFIDENTIAL PROPRIETARY TRADE SECRET
FOR ATTORNEYS EYES ONLY

Produced for purposes of PUCO Case No. 14-841 and 14-842 only.

- a. Objection to the extent this Interrogatory seeks to elicit privileged, confidential, trade secret and competitively sensitive information. Without waiving said objection and in the spirit of discovery, Duke Energy Ohio states that it uses 203 MW as a forecast for ICAP for the period between 2015 and 2024.
- b. Objection to the extent this Interrogatory seeks to elicit privileged, confidential, trade secret and competitively sensitive information. Without waiving said objection and in the spirit of discovery, Duke Energy Ohio states that it uses [REDACTED] MW as a forecast for UCAP for the period between 2015 and 2024.
- c. Objection to the extent this Interrogatory seeks to elicit privileged, confidential, trade secret and competitively sensitive information. Without waiving said objection and in the spirit of discovery, see Attachment OEG-DR-01-001 Highly Confidential.
- d. Objection to the extent this Interrogatory seeks to elicit privileged, confidential, trade secret and competitively sensitive information. Without waiving said objection and in the spirit of discovery, see Attachment OEG-DR-01-001 Highly Confidential.
- e. Objection to the extent this Interrogatory seeks to elicit privileged, confidential, trade secret and competitively sensitive information. Without waiving said objection and in the spirit of discovery, see Attachment OEG-DR-01-001 Highly Confidential.
- f. Objection to the extent this Interrogatory seeks to elicit privileged, confidential, trade secret and competitively sensitive information. Additionally, this Interrogatory cannot be answered as posed, as PJM has not completed the base residual auctions for planning years subsequent to the 2017/2018 planning year. Additionally, for those planning years for which the base residual auction has already occurred, this Interrogatory seeks to elicit information that is in the public record and thus equally accessible to the Ohio Energy Group. Without waiving said objection and in the spirit of discovery, see Attachment OEG-DR-01-001 Highly Confidential.

- g. *Objection to the extent this Interrogatory seeks to elicit privileged, confidential, trade secret and competitively sensitive information. Additionally, this Interrogatory cannot be answered as posed, as PJM has not completed the base residual auctions for planning years subsequent to the 2017/2018 planning year. Additionally, for those planning years for which the base residual auction has already occurred, this Interrogatory seeks to elicit information that is in the public record and thus equally accessible to the Ohio Energy Group. Without waiving said objection and in the spirit of discovery, see Attachment OEG-DR-01-001 Highly Confidential.*
- h. *Objection to the extent this Interrogatory seeks to elicit privileged, confidential, trade secret and competitively sensitive information. Additionally, this Interrogatory cannot be answered as posed, as prices for the PJM energy market for the entire period between 2015 and 2024 do not exist. Additionally, for those planning years for which PJM energy prices are available, this Interrogatory seeks to elicit information that is in the public record and thus equally accessible to the Ohio Energy Group. Without waiving said objection and in the spirit of discovery, see Attachment OEG-DR-01-001 Highly Confidential.*
- i. *Objection to the extent this Interrogatory seeks to elicit privileged, confidential, trade secret and competitively sensitive information. Additionally, this Interrogatory cannot be answered as posed, as prices for the PJM energy market for the entire period between 2015 and 2024 do not exist. Additionally, for those planning years for which PJM energy prices are available, this Interrogatory seeks to elicit information that is in the public record and thus equally accessible to the Ohio Energy Group. Without waiving said objection and in the spirit of discovery, see Attachment OEG-DR-01-001 Highly Confidential.*

PERSON RESPONSIBLE: Legal, as to objection; Bryan Dougherty as to response.

OVEC Analysis

Capacity (MW)
UCAP (MW)

2015	2016	2017	2018	2019	2020	2021	2022	2023	2024

Generation Volumes (GWhs)

PJM Capacity (\$/MW-Day)

\$131.86	\$91.07	\$94.92							

Revenue (\$000s)

Energy
Capacity
Dividends
Total Revenue

Costs (\$000s)

Energy
Demand
Transmission
Total Costs

Cash Flow (\$000s)

(\$4,784)	(\$7,611)	(\$8,439)	(\$8,442)	\$1,923	\$2,878	\$4,566	\$5,626	\$6,295	\$7,355
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Energy Revenue Rate (\$/MWh)
Energy Cost Rate (\$/MWh)

Onpeak	ONREC CC1	May-15	Jun-15	Jul-15	Aug-15	Sep-15	Oct-15	Nov-15
Onpeak	ONREC CC2							
Onpeak	ONREC CC3							
Onpeak	ONREC CC4							
Onpeak	ONREC CC5							
Onpeak	ONREC CC6							
Onpeak	ONREC CC1							
Onpeak	ONREC CC2							
Onpeak	ONREC CC3							
Onpeak	ONREC CC4							
Onpeak	ONREC CC5							
Onpeak	ONREC CC6							
Onpeak	ONREC KC1							
Onpeak	ONREC KC2							
Onpeak	ONREC KC3							
Onpeak	ONREC KC4							
Onpeak	ONREC KC5							
Onpeak	ONREC CC1							
Onpeak	ONREC CC2							
Onpeak	ONREC CC3							
Onpeak	ONREC CC4							
Onpeak	ONREC CC5							
Onpeak	ONREC CC6							
Onpeak	ONREC KC1							
Onpeak	ONREC KC2							
Onpeak	ONREC KC3							
Onpeak	ONREC KC4							
Onpeak	ONREC KC5							
Total	ONREC CC1							
Total	ONREC CC2							
Total	ONREC CC3							
Total	ONREC CC4							
Total	ONREC CC5							
Total	ONREC CC6							
Total	ONREC KC1							
Total	ONREC KC2							
Total	ONREC KC3							
Total	ONREC KC4							
Total	ONREC KC5							


Onpeak	ONEC C01	Dec-16	Jan-17	Feb-17	Mar-17	Apr-17	May-17	Jun-17	Jul-17	Aug-17	Sep-17	Oct-17	Nov-17	Dec-17	Jan-18	Feb-18
Onpeak	ONEC C02															
Onpeak	ONEC C03															
Onpeak	ONEC C04															
Onpeak	ONEC C05															
Onpeak	ONEC C06															
Onpeak	ONEC C07															
Onpeak	ONEC C08															
Onpeak	ONEC C09															
Onpeak	ONEC C10															
Onpeak	ONEC C11															
Onpeak	ONEC C12															
Onpeak	ONEC C13															
Onpeak	ONEC C14															
Onpeak	ONEC C15															
Onpeak	ONEC C16															
Onpeak	ONEC C17															
Onpeak	ONEC C18															
Onpeak	ONEC C19															
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Onpeak	ONEC C148															
Onpeak	ONEC C149															
Onpeak	ONEC C150															
Onpeak	ONEC C151															

Oct-16 Nov-15 Dec-15 Jan-17 Feb-17 Mar-17 Apr-17 May-17 Jun-17 Jul-17 Aug-17 Sep-17 Oct-17 Nov-17

Onpeak QVEC C01
Onpeak QVEC C02
Onpeak QVEC C03
Onpeak QVEC C04
Onpeak QVEC C05
Onpeak QVEC C06
Onpeak QVEC K01
Onpeak QVEC K02
Onpeak QVEC K03
Onpeak QVEC K04
Onpeak QVEC K05

Onpeak QVEC C01
Onpeak QVEC C02
Onpeak QVEC C03
Onpeak QVEC C04
Onpeak QVEC C05
Onpeak QVEC C06
Onpeak QVEC K01
Onpeak QVEC K02
Onpeak QVEC K03
Onpeak QVEC K04
Onpeak QVEC K05

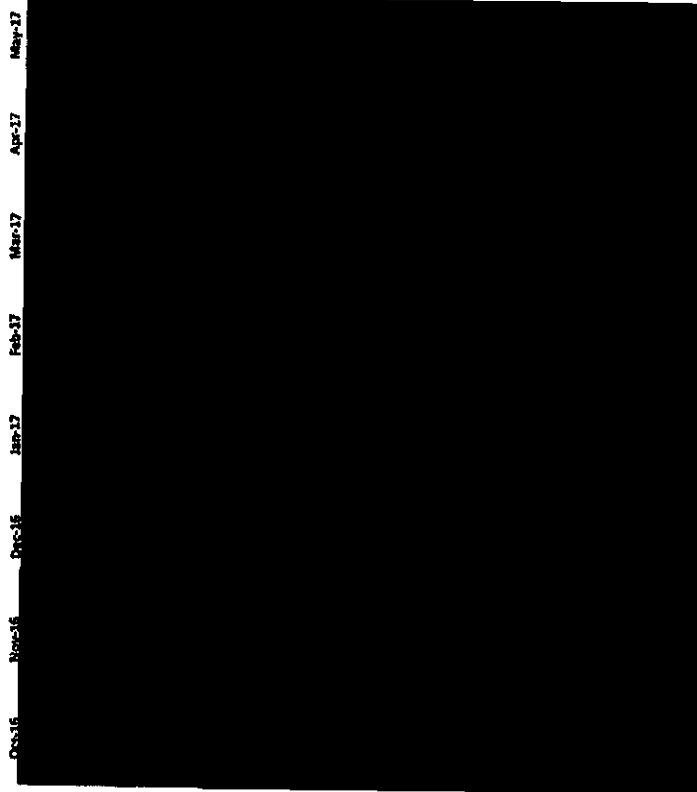
Total QVEC C01
Total QVEC C02
Total QVEC C03
Total QVEC C04
Total QVEC C05
Total QVEC C06
Total QVEC K01
Total QVEC K02
Total QVEC K03
Total QVEC K04
Total QVEC K05

Onpeak	Offpeak	OnFEC C01		2015	2016	2017	2018
Onpeak	Offpeak	OnFEC C02					
Onpeak	Offpeak	OnFEC C03					
Onpeak	Offpeak	OnFEC C04					
Onpeak	Offpeak	OnFEC C05					
Onpeak	Offpeak	OnFEC C06					
Onpeak	Offpeak	OnFEC K01					
Onpeak	Offpeak	OnFEC K02					
Onpeak	Offpeak	OnFEC K03					
Onpeak	Offpeak	OnFEC K04					
Onpeak	Offpeak	OnFEC K05					
Onpeak	Offpeak	OnFEC C01					
Onpeak	Offpeak	OnFEC C02					
Onpeak	Offpeak	OnFEC C03					
Onpeak	Offpeak	OnFEC C04					
Onpeak	Offpeak	OnFEC C05					
Onpeak	Offpeak	OnFEC C06					
Onpeak	Offpeak	OnFEC K01					
Onpeak	Offpeak	OnFEC K02					
Onpeak	Offpeak	OnFEC K03					
Onpeak	Offpeak	OnFEC K04					
Onpeak	Offpeak	OnFEC K05					
Total		OnFEC C01					
Total		OnFEC C02					
Total		OnFEC C03					
Total		OnFEC C04					
Total		OnFEC C05					
Total		OnFEC C06					
Total		OnFEC K01					
Total		OnFEC K02					
Total		OnFEC K03					
Total		OnFEC K04					
Total		OnFEC K05					

Onpeak ONEC OC1
Onpeak ONEC OC2
Onpeak ONEC OC3
Onpeak ONEC OC4
Onpeak ONEC OC5
Onpeak ONEC OC6
Onpeak ONEC KC1
Onpeak ONEC KC2
Onpeak ONEC KC3
Onpeak ONEC KC4
Onpeak ONEC KC5

Onpeak ONEC OC1
Onpeak ONEC OC2
Onpeak ONEC OC3
Onpeak ONEC OC4
Onpeak ONEC OC5
Onpeak ONEC OC6
Onpeak ONEC KC1
Onpeak ONEC KC2
Onpeak ONEC KC3
Onpeak ONEC KC4
Onpeak ONEC KC5

Total ONEC OC1
Total ONEC OC2
Total ONEC OC3
Total ONEC OC4
Total ONEC OC5
Total ONEC OC6
Total ONEC KC1
Total ONEC KC2
Total ONEC KC3
Total ONEC KC4
Total ONEC KC5



Onpeak	OWEC C01	2015	2016	2017	2018
Onpeak	OWEC C02				
Onpeak	OWEC C03				
Onpeak	OWEC C04				
Onpeak	OWEC C05				
Onpeak	OWEC C06				
Onpeak	OWEC M01				
Onpeak	OWEC M02				
Onpeak	OWEC M03				
Onpeak	OWEC M04				
Onpeak	OWEC M05				
Onpeak	OWEC C01				
Onpeak	OWEC C02				
Onpeak	OWEC C03				
Onpeak	OWEC C04				
Onpeak	OWEC C05				
Onpeak	OWEC C06				
Onpeak	OWEC M01				
Onpeak	OWEC M02				
Onpeak	OWEC M03				
Onpeak	OWEC M04				
Onpeak	OWEC M05				
Total	OWEC C01				
Total	OWEC C02				
Total	OWEC C03				
Total	OWEC C04				
Total	OWEC C05				
Total	OWEC C06				
Total	OWEC M01				
Total	OWEC M02				
Total	OWEC M03				
Total	OWEC M04				
Total	OWEC M05				

Year	UnitName	Revenue	YOMCost
	2019 OVEC C01		
	2019 OVEC C02		
	2019 OVEC C03		
	2019 OVEC C04		
	2019 OVEC C05		
	2019 OVEC C06		
	2019 OVEC K01		
	2019 OVEC K02		
	2019 OVEC K03		
	2019 OVEC K04		
	2019 OVEC K05		
	2020 OVEC C01		
	2020 OVEC C02		
	2020 OVEC C03		
	2020 OVEC C04		
	2020 OVEC C05		
	2020 OVEC C06		
	2020 OVEC K01		
	2020 OVEC K02		
	2020 OVEC K03		
	2020 OVEC K04		
	2020 OVEC K05		
	2021 OVEC C01		
	2021 OVEC C02		
	2021 OVEC C03		
	2021 OVEC C04		
	2021 OVEC C05		
	2021 OVEC C06		
	2021 OVEC K01		
	2021 OVEC K02		
	2021 OVEC K03		
	2021 OVEC K04		
	2021 OVEC K05		
	2022 OVEC C01		
	2022 OVEC C02		
	2022 OVEC C03		
	2022 OVEC C04		
	2022 OVEC C05		
	2022 OVEC C06		
	2022 OVEC K01		
	2022 OVEC K02		
	2022 OVEC K03		
	2022 OVEC K04		
	2022 OVEC K05		
	2023 OVEC C01		
	2023 OVEC C02		
	2023 OVEC C03		
	2023 OVEC C04		
	2023 OVEC C05		
	2023 OVEC C06		
	2023 OVEC K01		
	2023 OVEC K02		
	2023 OVEC K03		
	2023 OVEC K04		
	2023 OVEC K05		
	2024 OVEC C01		
	2024 OVEC C02		
	2024 OVEC C03		



2024 OVEC C04
2024 OVEC C05
2024 OVEC C06
2024 OVEC K01
2024 OVEC K02
2024 OVEC K03
2024 OVEC K04
2024 OVEC K05

v12-11-13 Published

Ohio Valley Electric Corporation
Inter-Company Power Agreement (ICPA) Biliable Cost Summary
In thousands of dollars

	2015	2016	2017
Demand Charge			
Projected Annual Capital Improvement Costs (excluding SCR, PRB Coal Switch, FGD, Dry Fly Ash, 316B and Other Financed Projects)			
Projected Debt Expense and Short-Term Debt Costs (Including Dry Fly Ash, 316B Clean Water Act, and Landfill Expansion Interim Debt)			
\$445 Million - 5.80% Senior Unsecured Notes - Series 2006-A (\$62 million refinanced 6.40%)			
\$300 Million - 5.90% Senior Unsecured Notes - Series 2007-A-C (\$46.9 million refinanced 6.50%)			
\$50 Million - 5.92% Senior Unsecured Notes - Series 2008-A			
\$300 Million - 6.71% Senior Unsecured Notes - Series 2008-B-C (\$90.3 million refinanced 6.91%)			
\$100 Million - Floating Rate LOC Backed Bonds - OAQDA Tax Exempt 2009-A-D			
\$100 Million - 5.625% Bonds - OAQDA Tax Exempt 2009-E			
\$200 Million - Floating Rate Bonds - IFA Tax Exempt 2010-A&B			
\$200 Million - 5.00% Bonds - IFA Tax Exempt 2012-A			
\$100 Million - Floating Rate - IFA Tax Exempt 2012-B&C			
\$100 Million - Floating Rate Notes - Series 2013-A			
Projected			
Projected Capital Improvements and Debt Costs (ICPA Component A)			
Projected Operation and Maintenance Costs (ICPA Component B)			
Projected Administration and General Costs (ICPA Component B)			
Projected Transmission and Dispatch Costs (ICPA Component B)			
Projected Taxes (ICPA Component C)			
Projected ROE Costs (ICPA Component D)			
Projected Postretirement Benefit Obligation (ICPA Component E)			
Projected Decommissioning and Demolition Obligation (ICPA Component F)			
Total Projected Demand Costs (ICPA Components A, B, C, D, E & F)			

	2015	2016	2017
Dividend			
Projected Dividend			

**Duke Energy Ohio
Case No. 14-841-EL-SSO, 14-842-EL-ATA
OCC Sixteenth Set of Interrogatories
Date Received: September 8, 2014**

**OCC-INT-16-413 HIGHLY CONFIDENTIAL
ATTORNEYS EYES ONLY**

REQUEST:

According to the response to KROGER-INT-01-001, the response to OEG-DR-01-001 HIGHLY CONFIDENTIAL identifies an estimated cost and/or benefit to Duke Energy Ohio retail customers from the proposed Price Stabilization Rider for each year of the proposed ESP.

- a. Confirm that the information in OEG-DR-01-001 provides data on a calendar year basis (January to December).
- b. Identify/provide this same data on the basis of the ESP period (ESP Year 1 is June 1 2015 to May 31 2016, ESP Year 2 is June 1 2016 to May 31 2017, ESP Year 3 is June 1 2017 to May 31 2018).
- c. Identify/provide this same data on a monthly basis, to the extent monthly details are available.
- d. Identify/provide this same data on an hourly basis, to the extent hourly details are available.

RESPONSE:

**HIGHLY CONFIDENTIAL PROPRIETARY TRADE SECRET
ATTORNEYS EYES ONLY
Produced for purposes of PUCO Case Nos. 14-841 and 14-842 only**

- a. Confirmed.
- b. Please see OCC-INT-16-413 Attachment B HIGHLY CONFIDENTIAL.
- c. Please see OCC-INT-16-413 Attachment B HIGHLY CONFIDENTIAL.
- d. Objection. This Interrogatory is overly broad, unduly burdensome, and subjects Duke Energy Ohio to undue expense given that it seeks information that is not retained in the the ordinary course of business.

PERSON RESPONSIBLE: As to objection – Legal
As to response – Bryan Dougherty

PUCO Case No. 14-00142-00, 14-00142-01
00000000-0000-0000-0000-00000000
PUCO Case No. 14-00142-00, 14-00142-01
00000000-0000-0000-0000-00000000
Page 1 of 11

EXHIBIT C-001, INFORMATIONAL TRAILER
Produced for purposes of PUCO Case Nos. 14-00142-00 and 14-00142-01

GWEC Analysis	2013.0	
Capacity (MW)		
UCAP (MW)		
Generation Volume (GWh)		
PMA Capacity (\$/MWh-Day)	\$136.08	\$588.37
		\$128.00
Revenue (\$000s)		
Energy		
Capacity		
Outlets		
Total Revenue		
Costs (\$000s)		
Energy		
Outlets		
Transmission		
Total Costs		
Cash Flow (\$000s)		
Energy Revenue Rate (\$/MWh)		
Energy Cost Rate (\$/MWh)		

Notes:
ESP Year 1 = Jan 1, 2013 - May 31, 2013
ESP Year 2 = Jun 1, 2013 - May 31, 2014
ESP Year 3 = Jun 1, 2014 - May 31, 2015

Product for purposes of FICCO Case Nos. 14-001 and 14-002 only

[illegible]

Duke Energy Ohio
Case No. 14-841-EL-SSO, 14-842-EL-ATA
OCC Sixteenth Set of Interrogatories
Date Received: September 8, 2014

OCC-INT-16-420 HIGHLY CONFIDENTIAL
ATTORNEYS EYES ONLY

REQUEST:

For OVEC's Clifty Creek plant:

- a. Identify the forecast forced and planned outage rates for the 2015 to 2024 period on an annual basis, and on a monthly basis.
- b. Identify the actual plant availability from 2011 to the present, on an annual basis, and on a monthly basis if data is available.
- c. From which coal producing region is the majority of the coal sourced?
- d. Identify the coal prices that were assumed for the purposes of the response to OEG-DR-01-001 HIGHLY CONFIDENTIAL.
- e. Identify the coal transportation costs.
- f. Identify this plant's net heat rate.
- g. Identify the non-fuel variable costs assumed for the purposes of the response to OEG-DR-01-001 HIGHLY CONFIDENTIAL.

RESPONSE:

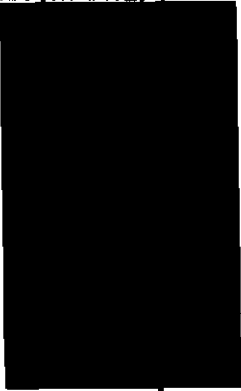
HIGHLY CONFIDENTIAL PROPRIETARY TRADE SECRET
ATTORNEYS EYES ONLY

Produced for purposes of PUCO Case Nos. 14-841 and 14-842 only

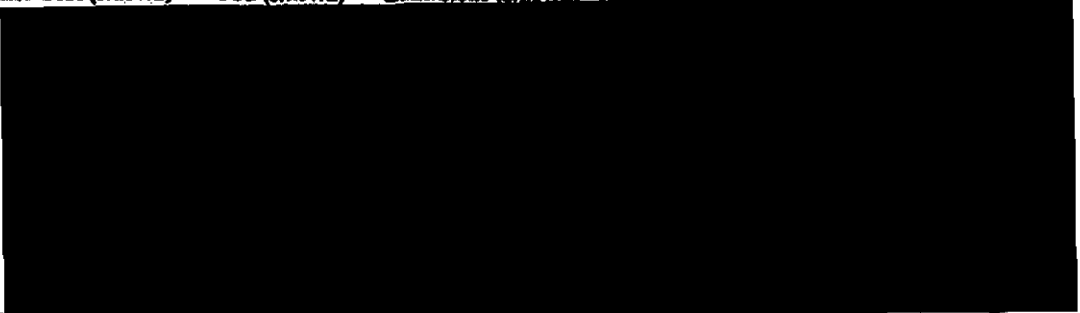
- a. The table below shows the forced and maintenance outage rates. These annual rates are applied to each month in the particular year.

Clifty Creek Forced Outage Rate						
Year	CC1	CC2	CC3	CC4	CC5	CC6
2015						
2016						
2017						
2018						
2019						
2020						
2021						
2022						
2023						
2024						
Clifty Creek Maintenance Outage Rate						
Year						
2015						
2016						
2017						
2018						
2019						
2020						
2021						
2022						
2023						
2024						

- b. Objection. This Interrogatory seeks to elicit information that is of public record and thus is equally accessible to the Office of the Ohio Consumers' Counsel. Answering further, the information requested is not within the custody or control of Duke Energy Ohio. Without waiving said objection, to the extent discoverable, and in the spirit of discovery, see <http://www.ovec.com/FinancialStatements/AnnualReport-2013-Signed.pdf>
- c. Objection. This Interrogatory seeks to elicit information that is of public record and thus is equally accessible to the Office of the Ohio Consumers' Counsel. Answering further, the information requested is not within the custody or control of Duke Energy Ohio.
- d. The table below shows the projected Clifty Creek coal costs:

Clifty Creek Projected Coal Cost	
Year	Coal Cost (\$/MWh)
2015	
2016	
2017	
2018	
2019	
2020	
2021	
2022	
2023	
2024	

- e. Objection. This Interrogatory seeks to elicit information that is not within the custody or control of Duke Energy Ohio.
- f. Objection. This Interrogatory seeks to elicit information that is of public record and thus is equally accessible to the Office of the Ohio Consumers' Counsel. Answering further, the information requested is not within the custody or control of Duke Energy Ohio.
- g. The table below shows the projected Clifty Creek non-coal costs:

Clifty Creek Projected Non-Coal Cost					
Year	Other Cost (\$/MWh)	CO2 (\$/MWh)	Lime/Stone (\$/MWh)	Ammonia (\$/MWh)	Non-Coal (\$/MWh)
2015					
2016					
2017					
2018					
2019					
2020					
2021					
2022					
2023					
2024					

PERSON RESPONSIBLE: As to objection -- Legal
 As to response --
 Bryan Dougherty -- (a), (d), (g)
 William Don Wathen Jr. -- (b)

**Duke Energy Ohio
Case No. 14-841-EL-SSO, 14-842-EL-ATA
OCC Sixteenth Set of Interrogatories
Date Received: September 8, 2014**

**OCC-INT-16-421 HIGHLY CONFIDENTIAL
ATTORNEYS EYES ONLY**

REQUEST:

For OVEC's Kyger Creek plant:

- a. Identify the forecast forced and planned outage rates for the 2015 to 2024 period on an annual basis, and on a monthly basis if data is available.
- b. Identify the actual plant availability from 2011 to the present, on an annual basis, and on a monthly basis if data is available.
- c. From which coal producing region is the majority of the coal sourced?
- d. Identify the coal prices that were assumed for the purposes of the response to OEG-DR-01-001 HIGHLY CONFIDENTIAL.
- e. Identify the coal transportation costs.
- f. Identify this plant's net heat rate.
- g. Identify the non-fuel variable costs assumed for the purposes of the response to OEG-DR-01-001 HIGHLY CONFIDENTIAL.

RESPONSE:

**HIGHLY CONFIDENTIAL PROPRIETARY TRADE SECRET
ATTORNEYS EYES ONLY
Produced for purposes of PUCO Case Nos. 14-841 and 14-842 only**

- a. The table below shows the forced and maintenance outage rates. These annual rates are applied to each month in the particular year.

Kyger Creek Forced Outage Rate					
Year	KC1	KC2	KC3	KC4	KC5
2015					
2016					
2017					
2018					
2019					
2020					
2021					
2022					
2023					
2024					

Kyger Creek Maintenance Outage Rate					
Year	KC1	KC2	KC3	KC4	KC5
2015					
2016					
2017					
2018					
2019					
2020					
2021					
2022					
2023					
2024					

- b. Objection. This Interrogatory seeks to elicit information that is of public record and thus is equally accessible to the Office of the Ohio Consumers' Counsel. Answering further, the information requested is not within the custody or control of Duke Energy Ohio. Without waiving said objection, to the extent discoverable, and in the spirit of discovery, see <http://www.ovec.com/FinancialStatements/AnnualReport-2013-Signed.pdf>
- c. Objection. This Interrogatory seeks to elicit information that is of public record and thus is equally accessible to the Office of the Ohio Consumers' Counsel. Answering further, the information requested is not within the custody or control of Duke Energy Ohio.
- d. The table below shows the projected Kyger Creek coal costs:

Kyger Creek Projected Coal Cost	
Year	Coal Cost (\$/MWh)
2015	
2016	
2017	
2018	
2019	
2020	
2021	
2022	
2023	
2024	

- e. Objection. This Interrogatory seeks to elicit information that is not within the custody or control of Duke Energy Ohio.
- f. Objection. This Interrogatory seeks to elicit information that is of public record and thus is equally accessible to the Office of the Ohio Consumers' Counsel. Answering further, the information requested is not within the custody or control of Duke Energy Ohio.
- g. The table below shows the projected Kyger Creek non-coal costs:

Kyger Creek Projected Non-Coal Cost					
Year	Coal Cost (\$/MWh)	CO ₂ (\$/MWh)	Lime/Stene (\$/MWh)	Ammonia (\$/MWh)	Non-Coal (\$/MWh)
2015					
2016					
2017					
2018					
2019					
2020					
2021					
2022					
2023					
2024					

PERSON RESPONSIBLE: As to objection – Legal
 As to response –
 Bryan Dougherty – (a), (d), (g)
 William Don Wathen Jr. – (b)



**OHIO VALLEY ELECTRIC CORPORATION
INDIANA-KENTUCKY ELECTRIC CORPORATION**

**POWER COST PROJECTION,
CONSTRUCTION AND
DEPARTMENTAL OPERATING BUDGETS
FOR 2014, 2015, 2016, 2017
AND 2018**

Projected Fuel Costs 2014-2018

OVEC-IKEC Energy Cost Projection

Jan-14 Feb-14 Mar-14 Apr-14 May-14 Jun-14 Jul-14 Aug-14 Sep-14 Oct-14 Nov-14 Dec-14 2014

Clifty Creek

Projected Net Generation - MWH
 Projected Delivered Power Sales - \$MMH
 Projected Coal Burn - Tons
 Projected Coal Burn - MMBTU
 Net Heat Rate - BTU/MWH
 Projected Coal Cost (Delivered)
 Projected Delivered Coal Pricing - \$MMBTU
 Projected Allowance Cost
 Projected Other Fuel-Related Costs
 Urea
 Limestone
 Trona
 Fuel Oil
 Labor & Handling
 Byproducts

Total Projected Energy Cost - \$
 Projected Energy Cost - \$/MWH

Kyle Creek

Projected Net Generation - MWH
 Projected Delivered Power Sales - \$MMH
 Projected Coal Burn - Tons
 Projected Coal Burn - MMBTU
 Net Heat Rate - BTU/MWH
 Projected Coal Cost (Delivered)
 Projected Delivered Coal Pricing - \$MMBTU
 Projected Allowance Cost
 Projected Other Fuel-Related Costs
 Urea
 Limestone
 Trona
 Fuel Oil
 Labor & Handling
 Byproducts

Total Projected Energy Cost - \$
 Projected Energy Cost - \$/MWH

OVEC-IKEC System Total

Projected Net Generation - MWH
 Projected Delivered Power Sales - \$MMH
 Projected Coal Burn - Tons
 Projected Coal Burn - MMBTU
 Net Heat Rate - BTU/MWH
 Projected Coal Cost (Delivered)
 Projected Delivered Coal Pricing - \$MMBTU
 Projected Allowance Cost
 Projected Other Fuel-Related Costs
 Urea
 Limestone
 Trona
 Fuel Oil
 Labor & Handling
 Byproducts

Total Projected Energy Cost - \$
 Projected Energy Cost - \$/MWH
 Projected Sponsor Use Factor

OVEC-KEC Energy Cost Projection

Jan-15 Feb-15 Mar-15 Apr-15 May-15 Jun-15 Jul-15 Aug-15 Sep-15 Oct-15 Nov-15 Dec-15 2016

Clifty Creek

Projected Net Generation - MMH
 Projected Delivered Power Sales - MMH
 Projected Coal Burn - Tons
 Projected Coal Burn - MMBTU
 Net Heat Rate - BTU/MMH
 Projected Coal Cost (Delivered)
 Projected Delivered Coal Pricing - \$/MMBTU
 Projected Allowance Cost
 Projected Other Fuel-Related Costs
 Urea
 Limestone
 Trona
 Fuel Oil
 Labor & Handling
 Byproducts

Total Projected Energy Cost - \$
 Projected Energy Cost - \$/MMH

Kyle Creek

Projected Net Generation - MMH
 Projected Delivered Power Sales - MMH
 Projected Coal Burn - Tons
 Projected Coal Burn - MMBTU
 Net Heat Rate - BTU/MMH
 Projected Coal Cost (Delivered)
 Projected Delivered Coal Pricing - \$/MMBTU
 Projected Allowance Cost
 Projected Other Fuel-Related Costs
 Urea
 Limestone
 Trona
 Fuel Oil
 Labor & Handling
 Byproducts

Total Projected Energy Cost - \$
 Projected Energy Cost - \$/MMH

OVEC-KEC System Total

Projected Net Generation - MMH
 Projected Delivered Power Sales - MMH
 Projected Coal Burn - Tons
 Projected Coal Burn - MMBTU
 Net Heat Rate - BTU/MMH
 Projected Coal Cost (Delivered)
 Projected Delivered Coal Pricing - \$/MMBTU
 Projected Allowance Cost
 Projected Other Fuel-Related Costs
 Urea
 Limestone
 Trona
 Fuel Oil
 Labor & Handling
 Byproducts

Total Projected Energy Cost - \$
 Projected Energy Cost - \$/MMH
 Projected Sponsor Use Factor

OVEC-KEC Energy Cost Projection

Jan-16 Feb-16 Mar-16 Apr-16 May-16 Jun-16 Jul-16 Aug-16 Sep-16 Oct-16 Nov-16 Dec-16 2016

Citrus Creek

Projected Net Generation - MWH
 Projected Delivered Power Sales - \$MMH
 Projected Coal Burn - Tons
 Projected Coal Burn - MMBTU
 Net Heat Rate - BTU/MWh
 Projected Coal Cost (Delivered)
 Projected Delivered Coal Pricing - \$/MMBTU
 Projected Allowance Cost
 Projected Other Fuel-Related Costs
 Urea
 Limestone
 Trona
 Fuel Oil
 Labor & Handling
 Byproducts

Total Projected Energy Cost - \$
 Projected Energy Cost - \$/MMH

Kyle Creek

Projected Net Generation - MWH
 Projected Delivered Power Sales - \$MMH
 Projected Coal Burn - Tons
 Projected Coal Burn - MMBTU
 Net Heat Rate - BTU/MWh
 Projected Coal Cost (Delivered)
 Projected Delivered Coal Pricing - \$/MMBTU
 Projected Allowance Cost
 Projected Other Fuel-Related Costs
 Urea
 Limestone
 Trona
 Fuel Oil
 Labor & Handling
 Byproducts

Total Projected Energy Cost - \$
 Projected Energy Cost - \$/MMH

OVEC-KEC System Total

Projected Net Generation - MWH
 Projected Delivered Power Sales - \$MMH
 Projected Coal Burn - Tons
 Projected Coal Burn - MMBTU
 Net Heat Rate - BTU/MWh
 Projected Coal Cost (Delivered)
 Projected Delivered Coal Pricing - \$/MMBTU
 Projected Allowance Cost
 Projected Other Fuel-Related Costs
 Urea
 Limestone
 Trona
 Fuel Oil
 Labor & Handling
 Byproducts

Total Projected Energy Cost - \$
 Projected Energy Cost - \$/MMH

Projected Sponsor Unit Factor

OVEC-KEC Energy Cost Projection

Jan-17 Feb-17 Mar-17 Apr-17 May-17 Jun-17 Jul-17 Aug-17 Sep-17 Oct-17 Nov-17 Dec-17 2017

Clifty Creek

Projected Net Generation - MMH
 Projected Delivered Power Sales - \$MMH
 Projected Coal Burn - Tons
 Projected Coal Burn - MMBTU
 Net Heat Rate - BTU/MWh
 Projected Coal Cost (Delivered)
 Projected Delivered Coal Pricing - \$/MMBTU
 Projected Allowance Cost
 Projected Other Fuel-Related Costs
 Urea
 Limestone
 Trona
 Fuel Oil
 Labor & Handling
 Byproducts

Total Projected Energy Cost - \$
 Projected Energy Cost - \$/MMH

Kyger Creek

Projected Net Generation - MMH
 Projected Delivered Power Sales - \$MMH
 Projected Coal Burn - Tons
 Projected Coal Burn - MMBTU
 Net Heat Rate - BTU/MWh
 Projected Coal Cost (Delivered)
 Projected Delivered Coal Pricing - \$/MMBTU
 Projected Allowance Cost
 Projected Other Fuel-Related Costs
 Urea
 Limestone
 Trona
 Fuel Oil
 Labor & Handling
 Byproducts

Total Projected Energy Cost - \$
 Projected Energy Cost - \$/MMH

OVEC-KEC System Total

Projected Net Generation - MMH
 Projected Delivered Power Sales - \$MMH
 Projected Coal Burn - Tons
 Projected Coal Burn - MMBTU
 Net Heat Rate - BTU/MWh
 Projected Coal Cost (Delivered)
 Projected Delivered Coal Pricing - \$/MMBTU
 Projected Allowance Cost
 Projected Other Fuel-Related Costs
 Urea
 Limestone
 Trona
 Fuel Oil
 Labor & Handling
 Byproducts

Total Projected Energy Cost - \$
 Projected Energy Cost - \$/MMH
 Projected Sponsor Use Factor

OVEC-IKEC Energy Cost Projection

Jan-18 Feb-18 Mar-18 Apr-18 May-18 Jun-18 Jul-18 Aug-18 Sep-18 Oct-18 Nov-18 Dec-18 2018

Cully Creek

Projected Net Generation - MMWh
 Projected Delivered Power Sales - \$MMWh
 Projected Coal Burn - Tons
 Projected Coal Burn - MMBTU
 Net Heat Rate - BTU/MWh
 Projected Coal Cost (Delivered)
 Projected Delivered Coal Pricing - \$/MMBTU
 Projected Allowance Cost
 Projected Other Fuel-Related Costs
 Urea
 Limestone
 Trona
 Fuel Oil
 Labor & Handling
 Byproducts

Total Projected Energy Cost - \$
 Projected Energy Cost - \$/MMWh

Kyle Creek

Projected Net Generation - MMWh
 Projected Delivered Power Sales - \$MMWh
 Projected Coal Burn - Tons
 Projected Coal Burn - MMBTU
 Net Heat Rate - BTU/MWh
 Projected Coal Cost (Delivered)
 Projected Delivered Coal Pricing - \$/MMBTU
 Projected Allowance Cost
 Projected Other Fuel-Related Costs
 Urea
 Limestone
 Trona
 Fuel Oil
 Labor & Handling
 Byproducts

Total Projected Energy Cost - \$
 Projected Energy Cost - \$/MMWh

OVEC-IKEC System Total

Projected Net Generation - MMWh
 Projected Delivered Power Sales - \$MMWh
 Projected Coal Burn - Tons
 Projected Coal Burn - MMBTU
 Net Heat Rate - BTU/MWh
 Projected Coal Cost (Delivered)
 Projected Delivered Coal Pricing - \$/MMBTU
 Projected Allowance Cost
 Projected Other Fuel-Related Costs
 Urea
 Limestone
 Trona
 Fuel Oil
 Labor & Handling
 Byproducts

Total Projected Energy Cost - \$
 Projected Energy Cost - \$/MMWh
 Projected System Use Factor

**Duke Energy Ohio
Case No. 14-841-EL-SSO, 14-842-EL-ATA
OCC Sixteenth Set of Interrogatories
Date Received: September 8, 2014**

**OCC-INT-16-414 HIGHLY CONFIDENTIAL
ATTORNEYS EYES ONLY**

REQUEST:

According to the response to RESA-INT-01-018 HIGHLY CONFIDENTIAL, the response to OEG-DR-01-001 HIGHLY CONFIDENTIAL identifies the projected sale price per MWh from the sale of OVEC power for each of the calendar years of ESP III.

- a. Confirm that the "Energy Revenue Rate (\$/MWh)", the second to last line of data in OEG-DR-01-001, is the "projected sale price per MWh". If not, identify where the response provides the project sale price of OVEC power.
- b. Are these sale price values aggregates or averages based on more granular sale price per MWh data (such as hourly or monthly data)? If so, identify/provide the data on which the sale price values are based, in the most granular form available, for 2015 to 2024, or at least for the ESP III period. If not, identify the source of the values.
- c. Explain in detail how the values for the projected sale price of OVEC power per MWh were developed. If a model was used, describe the model in detail.
- d. Describe all of the data inputs to the determination of the sale price per MWh values.
- e. If forward prices were an input to the determination, identify the specific forward prices used (publisher(s), exact trade date(s), location(s), peak and off-peak, and any other forward price components necessary utilized for this input). Identify/provide the actual forward prices that were used. Explain what prices were used for years for which forward prices are not yet available.

RESPONSE:

HIGHLY CONFIDENTIAL PROPRIETARY TRADE SECRET
ATTORNEYS EYES ONLY

Produced for purposes of PUCO Case Nos. 14-841 and 14-842 only

- a. Objection to the extent this Interrogatory seeks to elicit privileged, confidential, trade secret and competitively sensitive information. Without waiving said objection and in the spirit of discovery, yes.
- b. Objection to the extent this Interrogatory seeks to elicit privileged, confidential, trade secret and competitively sensitive information. Without waiving said objection and in the spirit of discovery, they are averages from CBM (see below) run outputs. CBM is a Monte Carlo simulation based system of the [REDACTED], so the projected sale revenues referred here are the [REDACTED] and across all hours of each [REDACTED].
- c. Objection to the extent this Interrogatory seeks to elicit privileged, confidential, trade secret and competitively sensitive information. Without waiving said objection and in the spirit of discovery, the Commercial Business Model (CBM) was used for the projected sale price of OVEC power. CBM is a Monte Carlo simulation based system that commits and dispatches the Company's generating units based on [REDACTED], subject to [REDACTED] and [REDACTED]. The key market inputs are [REDACTED], [REDACTED], and [REDACTED], while the key engineering physical constraints include [REDACTED]. [REDACTED], and [REDACTED]. This model builds upon the traditional approaches of [REDACTED], and incorporates sound financial theory with essential physical and engineering structures. The model is designed to [REDACTED], and [REDACTED], so that users can value and quantify the risk of [REDACTED] and [REDACTED] whose values are contingent on the [REDACTED] between [REDACTED] and [REDACTED]. After formal validations by PWC and Global Risk Management, the commercial business model has been used by Duke Midwest Commercial Generation to actively manage its positions of power, fuels, and emissions allowances, as well as to value structured products and to perform budgeting, planning, and asset valuations.
- d. Objection to the extent this Interrogatory seeks to elicit privileged, confidential, trade secret and competitively sensitive information. Without waiving said objection and in the spirit of discovery, the main inputs include [REDACTED] and [REDACTED] (\$ per MWhr) provided by OVEC. The power curve's front portion is based on market while the rest of the curve is based on Duke's fundamental curve.

e. Objection to the extent this Interrogatory seeks to elicit privileged, confidential, trade secret and competitively sensitive information. Without waiving said objection and in the spirit of discovery, the front curve was from the 2014 5x7 CBM run for 2015 – 2018, while the 2019 – 2024 was from EVA fundamental curves.

PERSON RESPONSIBLE: As to objections -- Legal
As to response -- Bryan Dougherty

**Duke Energy Ohio
Case No. 14-841-EL-SSO, 14-842-EL-ATA
OCC Sixteenth Set of Interrogatories
Date Received: September 8, 2014**

**OCC-INT-16-417 HIGHLY CONFIDENTIAL
ATTORNEYS EYES ONLY**

REQUEST:

The response to OCC-INT-09-169 HIGHLY CONFIDENTIAL states that Duke Energy Ohio offered and cleared [REDACTED] MW, [REDACTED] MW and [REDACTED] MW of its entitlement to OVEC capacity in the RPM base residual auctions for 2015/16, 2016/17 and 2017/18 respectively.

- a. What explains the [REDACTED] in the quantity offered and cleared over this period?
- b. The response to OEG-DR-01-001 HIGHLY CONFIDENTIAL, part b, states that Duke Energy Ohio uses [REDACTED] MW as a forecast for UCAP for the period between 2015 and 2024. Explain the basis for this assumption.

RESPONSE:

**HIGHLY CONFIDENTIAL PROPRIETARY TRADE SECRET
ATTORNEYS EYES ONLY
Produced for purposes of PUCO Case Nos. 14-841 and 14-842 only**

Objection to the extent this Interrogatory seeks to elicit privileged, confidential, trade secret and competitively sensitive information. Without waiving said objection, to the extent discoverable, and in the spirit of discovery:

- a. At the time of the 2015/16 auction, Duke Energy Ohio's entitlement to OVEC was treated as part of an overall portfolio and no attempt was made to reflect assumptions about forced outages; consequently, the UCAP equaled the ICAP.

For the 2016/17, Duke Energy Ohio's entitlement to OVEC was addressed separately including outage assumptions; consequently, the change from 2015/16 to 2016/17 is due to recognizing the UCAP.

After the 2016/17 auction and as a result of the environmental equipment installed at OVEC's generating stations, the ICAP for Kyger Creek and Clifty Creek was reduced.

Consequently, the combination of assumed EFOR rates and the lower ICAP values, the available capacity associated with Duke Energy Ohio's entitlement to OVEC capacity for 2017/18 was [REDACTED] from the 2016/17 values.

- b. The [REDACTED] MW value had been used in prior long term forecasts and was assumed to continue for the entire forecast period. This was a simplifying assumption that did not factor in the actual capacity bid into the auctions.

PERSON RESPONSIBLE:

As to objection - Legal

As to response -

(a) William Don Wathen Jr.

(b) Bryan Dougherty

Duke Energy Ohio
Case No. 14-841-EL-SSO, 14-842-EL-ATA
OCC Sixteenth Set of Interrogatories
Date Received: September 8, 2014

OCC-INT-16-418 HIGHLY CONFIDENTIAL
ATTORNEYS EYES ONLY

REQUEST:

The response to KROGER-INT-01-002 states that the response to OEG-DR-01-001 HIGHLY CONFIDENTIAL provides an estimate of the revenues expected from selling Duke Energy Ohio's share of the output from OVEC into the PJM markets.

- a. Describe in detail how Duke Energy Ohio will sell its share of the output from OVEC into the PJM markets; whether the energy will be offered into the day-ahead or real-time markets, or in some other manner.
- b. Identify the PJM LMP point(s) at which the energy will be sold.
- c. If specific plans for how the output will be sold do not exist, describe the basis upon which the strategy for selling the output will be determined.

RESPONSE:

HIGHLY CONFIDENTIAL PROPRIETARY TRADE SECRET
ATTORNEYS EYES ONLY
Produced for purposes of PUCO Case Nos. 14-841 and 14-842 only

- a. Capacity will be sold in the BRA and energy would be sold in the Day-Ahead and Real-Time markets.
- b. OVEC (Pnode ID = 34509945)
- c. Not applicable.

PERSON RESPONSIBLE: William Don Wathen Jr.