

**BEFORE THE
PUBLIC UTILITIES COMMISSION OF OHIO**

In the Matter of the Review of the Power) Case No. 18-1004-EL-RDR
Purchase Agreement Rider of Ohio Power)
Company for 2018.)

In the Matter of the Review of the Power)
Purchase Agreement Rider of Ohio Power) Case No. 18-1759-EL-RDR
Company for 2019.)



**DIRECT TESTIMONY
OF
DEVI GLICK**

On Behalf of
Office of the Ohio Consumers' Counsel
65 East State Street Suite 700
Columbus, Ohio 43215

December 29, 2021

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1 **I. INTRODUCTION AND PURPOSE OF TESTIMONY**

2

3 ***Q1. PLEASE STATE YOUR NAME AND OCCUPATION.***

4 ***A1.*** My name is Devi Glick. I am a Principal Associate at Synapse Energy
5 Economics, Inc. My business address is 485 Massachusetts Avenue, Suite 3,
6 Cambridge, Massachusetts 02139.

7

8 ***Q2. PLEASE DESCRIBE SYNAPSE ENERGY ECONOMICS.***

9 ***A2.*** Synapse is a research and consulting firm specializing in energy and
10 environmental issues, including electric generation, transmission and distribution
11 system reliability, ratemaking and rate design, electric industry restructuring and
12 market power, electricity market prices, stranded costs, efficiency, renewable
13 energy, environmental quality, and nuclear power.


14

15 Synapse's clients include state consumer advocates, public utilities commission
16 staff, attorneys general, environmental organizations, federal government
17 agencies, and utilities.

1 **Q3. PLEASE SUMMARIZE YOUR WORK EXPERIENCE AND EDUCATIONAL**
2 **BACKGROUND.**

3 **A3.** At Synapse, I conduct economic analysis and write testimony and publications
4 that focus on a variety of issues related to electric utilities. These issues include
5 power plant economics, power plant operations in organized electricity markets,
6 utility resource planning practices, valuation of distributed energy resources, and
7 utility handling of coal combustion residuals waste. I have submitted expert
8 testimony on unit commitment practices, plant economics, utility resource needs,
9 and solar valuation before state utility regulators in Arizona, Arkansas,
10 Connecticut, Florida, Indiana, Michigan, Nevada, New Mexico, North Carolina,
11 Ohio, South Carolina, Texas, Virginia, and Wisconsin. In the course of my work,
12 I develop in-house electricity system models and perform analysis using industry-
13 standard electricity system models.

14
15 Before joining Synapse, I worked at Rocky Mountain Institute, focusing on a
16 wide range of energy and electricity issues. I have a master's degree in public
17 policy and a master's degree in environmental science from the University of
18 Michigan, as well as a bachelor's degree in environmental studies from
19 Middlebury College. I have more than eight years of professional experience as a
20 consultant, researcher, and analyst. A copy of my current resume is attached as
21 DG-1.


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1 **Q4. DO YOU HAVE ANY EXPERIENCE WITH THE PJM AND MISO**
2 **ELECTRICITY MARKETS?**

3 **A4.** Yes, I have evaluated how utilities commit and operate their power plants in the
4 PJM and MISO electricity markets across multiple states, including Ohio,
5 Indiana, Michigan, Minnesota, and Wisconsin, for expert testimony and expert
6 reports. I provide a list of proceedings where I have given testimony with my
7 resume as DG-1.

8
9 **Q5. ON WHOSE BEHALF ARE YOU TESTIFYING IN THIS CASE?**

10 **A5.** I am testifying on behalf of the Office of the Ohio Consumers' Counsel ("OCC").

11


12 **Q6. HAVE YOU TESTIFIED PREVIOUSLY BEFORE THE PUBLIC UTILITIES**
13 **COMMISSION OF OHIO ("PUCO")?**

14 **A6.** Yes. I provided testimony to this Commission on October 26, 2021 in Case No.
15 20-167-EL-RDR.

16

17 **Q7. WHAT IS THE PURPOSE OF YOUR TESTIMONY IN THIS**
18 **PROCEEDING?**

19 **A7.** In my testimony for this proceeding, I review the costs charged in 2018 and 2019
20 to the Ohio Power Company ("AEP Ohio" or "the Company") by the Ohio Valley
21 Electric Corporation ("OVEC") under the Inter-Company Power Agreement


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1 (“OVEC Agreement”), the revenue that AEP Ohio receives for selling the power
2 provided by the generation assets under OVEC’s management into the PJM
3 market, and the resulting costs and revenues passed on to AEP Ohio consumers
4 through the Power Purchase Agreement Rider. Next, I review AEP Ohio’s
5 projections for how much it would charge consumers under the Power Purchase
6 Agreement Rider in 2018 and 2019 and compare those projections to other
7 contemporary analysis assessing the long-term cost of remaining in the OVEC
8 Agreement, and to the costs AEP Ohio actually paid. Finally, I review the
9 prudence of OVEC’s unit commitment practices, and AEP Ohio’s oversight of
10 operational and planning decisions made at the OVEC units in 2018 and 2019.

11
12 ***Q8. HOW IS YOUR TESTIMONY STRUCTURED?***

13 ***A8.*** In Section 2, I summarize my findings and recommendations for the PUCO.

14
15 In Section 3, I provide background on the OVEC plants and the contract that
16 governs the plants’ operations.

17
18 In Section 4, I evaluate the costs paid by AEP Ohio’s consumers under the Power
19 Purchase Agreement Rider in 2018 and 2019. I discuss how AEP Ohio has paid
20 unreasonable charges significantly above the market value of energy and capacity
21 in PJM to OVEC, and now seeks to pass on these excess costs to its consumers


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1 through the Power Purchase Agreement Rider. I present several different metrics
2 that can be used to value the services provided by OVEC.

3
4 In Section 5, I review contemporaneous analysis conducted by AEP Ohio and
5 other OVEC sponsors on the OVEC plants economics' during audit period.

6
7 In Section 6, I review the prudence of OVEC's plant operations in 2018 and 2019.
8 I present evidence of OVEC's uneconomic operational practices that are driving
9 the substantial losses at the units. Next, I discuss AEP Ohio's oversight of the
10 operational and planning decisions at the OVEC units in 2018 and 2019. Finally, I
11 summarize AEP Ohio's role in managing OVEC's planning and plant operations
12 under the OVEC Agreement.

13
14 ***Q9. WHAT DOCUMENTS DID YOU USE FOR YOUR ANALYSIS, FINDINGS,
15 AND OBSERVATIONS?***

16 ***A9.*** My analysis relies primarily upon the following information: (1) the audit report
17 ("Audit Report") performed in this proceeding by London Economics
18 International, LLC ("LEI"); (2) OVEC's 2020 annual report; (3) discovery
19 responses of AEP Ohio associated with the audit; and (4) information filed with
20 the U.S. Bankruptcy Court when FirstEnergy Solutions attempted to cancel its
21 obligations under the OVEC Agreement; (5) the Public Version of my Direct

[REDACTED]
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1 Testimony in Case No. 20-0167-EL-RDR relating to Duke Energy Ohio's Price
2 Stabilization Rider; (6) Public Discovery Responses from Case No. 20-0167-EL-
3 RDR; (7) Confidential exhibits from Case No, 14-1693-EL-RDR. I also rely on
4 some public information associated with prior proceedings relating to the OVEC
5 plants and, to a limited extent, I rely on certain external, publicly available
6 documents such as State of the Market reports for PJM. I also rely on my prior
7 knowledge of the OVEC plants from other cases in which I testified regarding
8 OVEC.¹

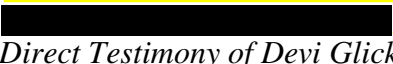
9
10 **II. FINDINGS AND RECOMMENDATIONS**

11
12 ***Q10. PLEASE SUMMARIZE YOUR FINDINGS.***

13 ***A10.*** My primary findings are:

- 14
15 1. In 2018 and 2019, AEP Ohio incurred \$74.5 million in above-market costs
16 for power from the OVEC plants and passed those costs on to consumers.
- 17 2. OVEC's above-market costs in 2018 and 2019 were [REDACTED] larger
18 than forecasted by AEP Ohio experts when the Company obtained the
19 PUCO's approval in 2016 to collect OVEC costs under the Power
20 Purchase Agreement Rider. Specifically, AEP Ohio projected to pass on to
21 consumers [REDACTED] in credits under the Rider during the audit period,
22 but instead it charged \$74.5 million to consumers.

¹ PUCO Case No. 20-167-EL-RDR and Michigan Cases U-20224, U-20530, U-20804.


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- 1 3. OVEC uneconomically operated its two power plants, Kyger Creek and
2 Clifty Creek, which led to lower market revenues and therefore higher net
3 costs to operate the plants than it would have incurred if it had limited
4 operations to periods when the plant's production costs equaled or were
5 below energy market prices. These additional costs, which it seeks to pass
6 on to consumers, could have been mitigated with more prudent unit
7 commitment practices.
8
9 4. AEP Ohio imprudently managed the OVEC Agreement during 2018 and
10 2019 and did not take sufficient steps to minimize costs and losses during
11 that period despite its own analysis projecting that the units would incur
12 net losses if they were operated at certain times.
13 5. OVEC will incur significant costs to comply with the U.S. Environmental
14 Protection Agency's ("EPA") Coal Combustion Residuals rules ("CCR")
15 and Effluent Limitation Guideline ("ELG") rules. Spending on these
16 capital investments will increase OVEC demand charges and make the
17 plants even less competitive with the market than they currently are. But
18 to date there has been almost zero regulatory oversight of these
19 investments by any of the state commissions where the OVEC owners are
20 located.


21

22 ***Q11. PLEASE SUMMARIZE YOUR RECOMMENDATIONS.***

23 ***AI1.*** Based on my findings, I offer the following chief recommendations:

24

- 25 1. The PUCO should disallow the \$74.5 million in above-market energy and
26 capacity charges collected from consumers related to the OVEC plants for
27 2018 and 2019 and find that AEP Ohio acted imprudently by including
28 these costs in the Power Purchase Agreement Rider.
29 2. The PUCO should find that the OVEC plants were uneconomically
30 committed, and thus incurred additional excess costs under the Power
31 Purchase Agreement Rider.


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- 1 3. Going forward, the PUCO should require that AEP Ohio provide
2 documentation of the daily unit commitment decisions used for the OVEC
3 plants.
- 4 4. The PUCO should put AEP Ohio on notice that it will not permit the
5 Company to develop its next Electric Security Plan (“ESP”), or other
6 proceeding to extend the Power Purchase Agreement Rider, based on the
7 assumption that AEP Ohio will continue allowing OVEC to run the power
8 plants at above market prices. AEP Ohio should conduct a transparent and
9 comprehensive retirement study for the OVEC plants (that includes
10 evaluation of a switch to seasonal operations at both plants) or develop a
11 competitive bidding process demonstrating that it is prudent to continue
12 purchasing OVEC power.
- 13 5. The PUCO should put AEP Ohio on notice that it will not permit AEP
14 Ohio to collect costs from consumers for OVEC under the Legacy
15 Generation Rider in the future related to the Coal Combustion Residuals
16 rules (“CCR”) or Effluent Limitation Guideline (“ELG”) compliance
17 unless AEP Ohio demonstrates in a transparent and comprehensive
18 manner that any planned investments to comply with the EPA’s CCR and
19 ELG rules are prudent and reasonable.
- 20
21 6. The PUCO should put AEP Ohio on notice that it will disallow collection
22 in future cases for OVEC costs incurred as a result of imprudent unit
23 commitment decisions.

1 **III. AEP OHIO PURCHASES POWER FROM OVEC UNDER THE OVEC**
2 **AGREEMENT.**

3


4 ***Q12. WHAT IS OVEC AND HOW IS IT RELATED TO AEP OHIO'S***
5 ***CONSUMERS?***

6 ***A12.*** OVEC is jointly owned by twelve utilities in Ohio, Indiana, Michigan, Kentucky,
7 West Virginia, and Virginia. OVEC operates two 1950s-era coal-fired power
8 plants— (1) Kyger Creek, a five-unit, 1,086 MW plant in Gallia County, Ohio,
9 and (2) Clifty Creek, a six-unit, 1,303 MW plant, in Jefferson County, Indiana.
10 The OVEC plants were originally built to provide power for the Piketon uranium
11 enrichment facility, but the facility ceased doing uranium enrichment and OVEC
12 ceased selling power to the Department of Energy for the Piketon plant effective
13 September 30, 2003.²

14

15 Today, the plants provide their output to the twelve owners under the OVEC
16 Agreement long-term contract. Two of OVEC's owning utilities, namely Ohio
17 Power Company and Columbus Power, are in turn owned by AEP Ohio, and as a
18 result AEP Ohio maintains the highest ownership share of OVEC participants at
19 19.93 percent. The OVEC agreement was originally signed on July 10, 1953 and

² Ohio Valley Electric Corporation, Annual Report – 2019 (p. 1).


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1 then amended on August 11, 2011, extending the operation of the plants and the
2 owner's commitment to take the power produced by the plants.³ It governs each
3 company's rights and duties as to the power produced by the OVEC plants.
4 OVEC bills the sponsoring companies for their shares of energy, capacity, and
5 ancillary services under the OVEC Agreement. Each sponsoring company's
6 power is sold into the PJM market, and each company receives the resulting
7 revenues. In Ohio, a Power Purchase Agreement Rider was approved by the
8 PUCO which flowed to AEP Ohio customers the net impact of the Company's
9 contractual entitlements associated with OVEC (i.e. the positive or negative
10 difference between the OVEC costs billed to AEP Ohio under the OVEC
11 Agreement and OVEC revenues received from the PJM market).⁴ To date, AEP
12 consumers have only received charges under the PPA rider, no credits.

13
14 ***Q13. DO YOU HAVE ANY PRIOR EXPERIENCE WITH THE OVEC PLANTS?***

15 ***A13.*** Yes. I filed testimony before this Commission on the prudence of OVEC's costs
16 paid by Duke Energy Ohio ratepayers and the long-term cost-effectiveness of the
17 OVEC Plants in Case No. 20-167-EL-DR.⁵

³ *Id.*

⁴ *In the Matter of the Application Seeking Approval of Ohio Power Company's Proposal to Enter into an Affiliate Purchase Power Agreement*, PUCO Case 14-1693-EL-RDR, Opinion and Order, Concurring Opinion of Chairman Haque at p.5 (March 31, 2016).

⁵ Direct Testimony of Devi Glick, PUCO Case No. 20-167-EL-RDR.

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1 I also filed testimony before the Michigan Public Service Commission assessing
2 the prudence of power supply costs incurred by Indiana Michigan Power, a
3 different subsidiary of American Electric Power Company (“AEP”) that obtains
4 power from the OVEC plants for its consumers in Indiana and Michigan. Table 1
5 below lists all the cases in which I have filed testimony on the prudence of the
6 OVEC plants and agreement:

7 **Table 1: Prior testimony filed by Devi Glick related to OVEC costs**

State	Case #	Date of Testimony	On Behalf of
Ohio	20-167-EL-RDR	October 26, 2021	Ohio Consumers’ Counsel
Michigan	U-20530	August 21, 2021	Attorney General of Michigan
Michigan	U-20804	March 12, 2021	Sierra Club
Michigan	U-20224	October 23, 2020	Sierra Club

8
9 ***Q14. BASED ON YOUR EXPERIENCE WITH OVEC IN THE CURRENT CASE***
10 ***AND THESE OTHER DOCKETS, ARE THESE PLANTS PROVIDING***
11 ***VALUE TO THE CONSUMERS?***

12 ***A14.*** No. These plants are old, inefficient, and costly to maintain and operate. They
13 are also increasingly uncompetitive in the market, due in large part to the entry
14 and abundance of new renewable generation and gas facilities that are coming
15 online. As a result, OVEC’s costs for energy and capacity are significantly
16 higher than market prices for energy and capacity. These high costs are all
17 passed on to the consumers of the twelve OVEC companies.

████████████████████
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1 **Q15. WHAT PORTION OF OVEC IS AEP OHIO RESPONSIBLE FOR?**

2 **A15.** AEP Ohio consists of Ohio Power Company, which holds a 15.49 percent share
3 of OVEC, as well as Columbus Southern Power, which holds a 4.44 percent
4 share. Combined, AEP Ohio's total ownership share of OVEC, called a Power
5 Participation Ratio ("PPR"), is 19.93 percent. This means that AEP Ohio is
6 responsible for 19.93 percent of OVEC's fixed and variable costs while also being
7 entitled to a 19.93 percent share of OVEC's revenues from the PJM markets. AEP
8 Ohio includes both subsidiaries' power participation shares in its calculation of
9 costs and revenues associated with the Power Participation Ratio.⁶ According to
10 AEP Ohio's responses to the auditor's discovery requests, this translated into an
11 installed capacity ("ICAP") share of ████████ MW.⁷


12
13 **Q16. HOW DOES AEP OHIO COLLECT OVEC COSTS FROM CONSUMERS?**

14 **A16.** My understanding is that the PUCO approved a Power Purchase Agreement Rider
15 to allow AEP Ohio to collect these costs.⁸ Under the Power Purchase Agreement
16 Rider, AEP Ohio provides consumers with the net costs or net revenues
17 associated with AEP Ohio's ownership share of the OVEC plants and its

⁶ Audit of the OVEC Power Purchase Agreement Rider of Ohio Power Company, Public Version. ("Audit Public Version"). Prepared for the Public Utilities Commission of Ohio by London Economics International, LLC. Page 26.

⁷ AEP Ohio Response to LEI Interrogatory 1.1.2 CONFIDENTIAL Attachment 1.

⁸ Audit Public Version. Page 26.


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1 entitlement to 19.93 percent of OVEC's output under the OVEC Agreement. This
2 means that if OVEC's costs exceed market revenues in a given year, AEP Ohio's
3 consumers pay the difference.

4
5 When the PUCO initially approved the Rider, then-PUCO Chairman Asim Haque
6 stated in a concurring opinion, "This should not be perceived as a blank check,
7 and consumers should not be treated like a trust account."⁹ This authorization of
8 the Rider extended through 2024.¹⁰

9 In 2019, the Ohio legislature approved H.B. 6, which replaced the Power
10 Purchase Agreement Rider with the Legacy Generation Rider effective January 1,
11 2020 and extended the collection of OVEC costs by AEP Ohio through 2030.¹¹


12
13 ***Q17. DID THE BANKRUPTCY OF FIRSTENERGY SOLUTIONS ("FES")***
14 ***IMPACT AEP OHIO'S OVEC ENTITLEMENT DURING THE AUDIT***
15 ***PERIOD?***

16 ***A17.*** Yes. Starting in September 2018, OVEC allocated to AEP Ohio a portion of FES'
17 4.85 percent share of energy and capacity based on AEP Ohio's proportional

⁹ *In the Matter of the Application Seeking Approval of Ohio Power Company's Proposal to Enter into an Affiliate Purchase Power Agreement*, PUCO Case 14-1693-EL-RDR, Opinion and Order, Concurring Opinion of Chairman Haque at p.5 (March 31, 2016).

¹⁰ *In re Ohio Power Co.*, PUCO Case No. 16-1852-EL-SSO, Opinion and Order (April 25, 2018).

¹¹ House Bill 6, Sec. 4928.148. (A), effective October 22, 2019. Available at <https://www.legislature.ohio.gov/legislation/legislationsummary?id=GA133-HB-6>.


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1 ownership of the OVEC plants. AEP Ohio paid the variable energy costs
2 associated with this additional entitlement but was not responsible for any FES
3 fixed costs or demand charges.¹²
4

5 ***Q18. HOW LONG IS AEP OHIO UNDER CONTRACT WITH OVEC UNDER THE***
6 ***OVEC AGREEMENT?***

7 ***A18.*** The current OVEC Agreement expires in 2040.¹³ The Clifty Creek and Kyger
8 Creek Plants will each be 85 years old by then. As shown in Figure 1, Clifty
9 Creek and Kyger Creek are the oldest utility-owned coal fired power plants in the
10 United States (over 20 MW in size) without a scheduled retirement date.
11


12 ***Q19. IS THIS TIMELINE CONSISTENT WITH INDUSTRY-WIDE COAL***
13 ***GENERATION TRENDS?***

14 ***A19.*** No. AEP and Duke Energy have both recently announced accelerated retirement
15 dates for many of their coal plants based on the declining economics of operating
16 aging coal plants.¹⁴ All of these plants were built after the Eisenhower-era OVEC
17 units, which have no firm retirement dates.

¹² AEP Ohio Response to London Economics International LLC's ("LEI") Interrogatory 12.6.1.

¹³ AEP Ohio Response to LEI Interrogatory 1.6.1 Attachment 3.

¹⁴ Darren Sweeney, S&P Global. *AEP to retire more than 1,600 MW of coal capacity*. November 2020. Available at <https://www.spglobal.com/marketintelligence/en/news-insights/latest-news-headlines/aep-to-retire-more-than-1-600-mw-of-coal-capacity-61144417>; Darren Sweeney, S&P Global. *AEP to close both*


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1 AEP CEO Nicholas Akins echoed these sentiments in AEP’s “Powering Forward
2 to Net Zero” report, where he touted AEP’s efforts to retire or sell nearly 13,500
3 megawatts of coal-fueled generation during the past decade, and went on to state
4 that as AEP “continue[s] to balance the remaining operating life and economic
5 viability of each of our remaining coal-fueled generating units with other options
6 for delivering power to customers, the sources of our generation will become
7 cleaner.”¹⁵ Despite this assertion, and the presence of lower cost alternatives, AEP
8 Ohio plans to continue charging consumers high-cost power from OVEC’s aging
9 power plants.

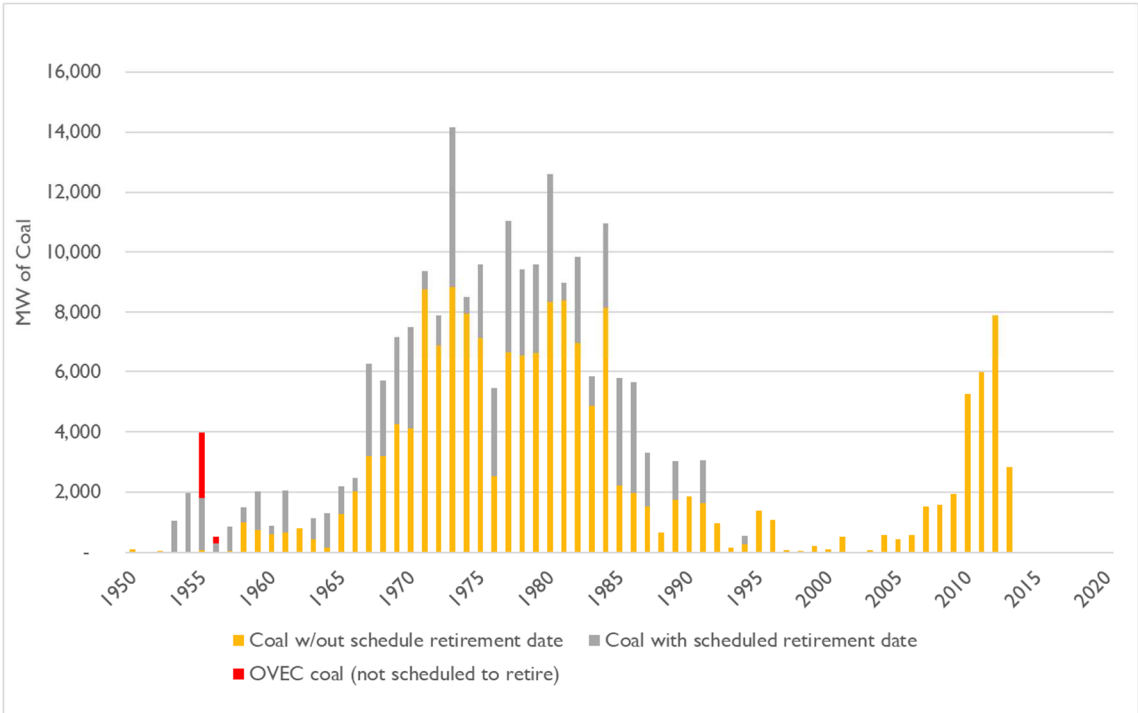
10

units at 2,600 MW Rockport coal plant by end of 2028. September 2021. Available at <https://ieefa.org/aep-to-close-both-units-at-2600mw-rockport-coal-plant-by-end-of-2028/>. Darren Sweeny, Krizka Danielle, and Del Rosario, S&P Global. *Duke Energy considering retiring 9,000 MW Of coal, adding vast amounts of storage.* September 2020. Available at <https://www.spglobal.com/marketintelligence/en/news-insights/latest-news-headlines/duke-energy-considers-retiring-9-000-mw-of-coal-adding-vast-amounts-of-storage-60476894>.

¹⁵ American Electric Power. Powering Forward to Net-Zero. March 2021. Accessed at: <http://www.aepsustainability.com/performance/report/docs/AEPs-Climate-Impact-Analysis-2021.pdf>.

1

Figure 1: Retirement status of current coal capacity by year online



2
3
4
5

Source: U.S. Energy Information Administration (“EIA”), form 860, supplemented by public information on updated unit retirement dates.

1 **IV. AEP OHIO PASSED ON TO CONSUMERS UNREASONABLE CHARGES**
2 **FOR OVEC POWER UNDER THE POWER PURCHASE AGREEMENT**
3 **RIDER IN 2018 AND 2019.**

4
5 **A. AEP Ohio's consumers are paying unreasonable costs under the**
6 **Power Purchase Agreement Rider.**

7
8 ***Q20. HOW DOES AEP OHIO SERVE CONSUMER LOAD, AND WHICH***
9 ***ASSOCIATED COSTS ARE AT ISSUE IN THIS CASE?***

10 **A20.** AEP Ohio serves consumers who choose to buy their power from AEP Ohio as
11 the provider of last resort. AEP Ohio buys power for these consumers through a
12 descending clock auction to obtain the lowest reasonable prices. This is known as
13 the Standard Service Offer ("SSO") price. Under the Power Purchase Agreement
14 Rider, OVEC sells its output into the PJM market and the difference between
15 OVEC's costs and the market price is flowed through to consumers as either a
16 credit or charge. AEP Ohio's share of the OVEC output is not used to supply any
17 of AEP Ohio's consumers.

[REDACTED]
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1 **Q21. WHAT DOES IT MEAN THAT AEP OHIO IS PAYING ABOVE-MARKET**
2 **COSTS FOR OVEC'S POWER AND PASSING THOSE COSTS ON TO**
3 **CONSUMERS UNDER THE POWER PURCHASE AGREEMENT RIDER?**

4 **A21.** OVEC's costs are substantially higher than PJM market prices for the same
5 energy, capacity, and ancillary services during the audit period. When OVEC
6 sells its output into the PJM market, the difference between OVEC's costs and the
7 PJM market prices are charged or credited to AEP Ohio's consumers under the
8 Power Purchase Agreement Rider.

9
10 **Q22. DOES THE POWER PURCHASE AGREEMENT RIDER PROVIDE**
11 **VALUE TO AEP OHIO CONSUMERS?**

12 **A22.** No. I compared the total cost billed to members of the OVEC Agreement by
13 adding demand and transmission charges to the energy charges I already
14 reviewed. I compared this cost to the value of the energy, capacity, and ancillary
15 services provided by OVEC as sold into the PJM market. OVEC Agreement
16 billing statements show that OVEC charged AEP Ohio [REDACTED] for
17 [REDACTED] MWh in 2018 and 2019, for an average cost of [REDACTED].¹⁶ In
18 contrast, the value of the market revenue that OVEC obtained for the energy,
19 capacity, and ancillary services it sold into the PJM market was equivalent to only

¹⁶ Calculated based on AEP Ohio responses to LEI Interrogatory 1.2.21 CONFIDENTIAL Attachment 1 (Monthly Bills); and LEI Interrogatory 4.1.2 CONFIDENTIAL Attachment 1.

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1 [REDACTED] for AEP Ohio in 2018 and 2019.¹⁷ This is well below the cost
2 OVEC is charging AEP Ohio, and as a result, substantial costs were passed on to
3 AEP Ohio's consumers under the Power Purchase Agreement Rider in 2018 and
4 2019.

5
6 This continues a pattern of exceptionally high prices paid under the OVEC
7 Agreement (relative to the market value) over the past five years. As shown in
8 Table 2, OVEC's average cost per MWh across all owners has regularly been
9 substantially above the market value of its energy and capacity combined.

10

¹⁷ Calculated based on AEP Ohio Response to LEI Interrogatory 4.1.1 CONFIDENTIAL Attachment 1 (Energy Revenue); AEP Ohio Response to LEI Interrogatory 5.1.1 CONFIDENTIAL Attachment 1 (Capacity revenue); AEP Ohio Response to LEI 4.1.3 Attachment 1 (A/S Revenue)..

1 **Table 2: OVEC power costs and revenues under the OVEC**
 2 **Agreement vs. market prices**


	MWh Electricity	Total OVEC Charges billed (\$Million)	OVEC (\$/MWh)	Energy and capacity market value* (\$/MWh)	Total above- market costs (\$Million)
2015	8,681,829	\$559.1	\$64.40	\$44.61	\$171.85
2016	9,946,877	\$571.7	\$58.66	\$38.50	\$200.55
2017	11,940,259	\$636.3	\$54.27	\$37.85	\$196.00
2018	12,146,856	\$644.1	\$54.29	\$44.28	\$121.56
2019	11,238,298	\$640.8	\$57.04	\$35.91	\$237.45
2020	9,033,056	\$605.3	\$67.0	\$31.76	\$318.41

3 Note: The total costs for the OVEC plants in this table differ slightly from
 4 the totals implied by the excess costs we calculated for just AEP Ohio's
 5 share of the plant. We relied on AEP Ohio's own Company data for AEP
 6 Ohio's share of the plants, but we had to rely on public data to calculate
 7 the total revenues for the entire OVEC plant. Energy value is load
 8 weighted. Capacity value is based on the BRA Base Residual Auction
 9 results from each relevant year.

10 Source: OVEC annual report 2019, page 44; OVEC annual report 2020,
 11 page 45; PJM locational marginal pricing from PJM data miner 2 available
 12 at https://dataminer2.pjm.com/feed/da_hrl_lmpps; hourly load data
 13 downloaded from U.S. Clean Air Markets Database using EPA's *Field*
 14 *Audit Checklist Tool*; Capacity prices from PJM State of the Market
 15 Reports 2014-2020.

16
 17 ***Q23. HOW MUCH IN EXCESS COSTS WERE AEP OHIO'S CONSUMERS***
 18 ***CHARGED UNDER THE POWER PURCHASE AGREEMENT RIDER IN***
 19 ***2018 AND 2019?***

20 ***A23.*** In 2018 and 2019, AEP Ohio collected [REDACTED] million and [REDACTED] million
 21 respectively, for a total of \$74.5 million in excess costs under the Power Purchase
 22 Agreement Rider while providing consumers no additional value. In figure 2


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1 below, I show the all-in monthly charges and monthly market revenues for OVEC
2 being passed through to AEP Ohio's consumers, and the net difference between
3 the two that AEP Ohio consumers are paying in each month under the Power
4 Purchase Agreement Rider. This shows that in every month during the audit
5 period (with the exception of January 2018), AEP Ohio consumers were paying
6 substantial additional costs under the Power Purchase Agreement Rider.
7

[REDACTED]
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[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

1 **Q24. HOW DO YOU CALCULATE THE COST TO CONSUMERS UNDER THE**
2 **POWER PURCHASE AGREEMENT RIDER?**

3 **A24.** The public version of the Audit contained the actual PPA charges AEP Ohio
4 incurred under the Rider, but these charges were not broken down by energy and
5 capacity.¹⁸ To calculate the energy and capacity shares, AEP Ohio provided the
6 monthly billing from OVEC for 2018 and 2019 which includes MWh sold,
7 energy, demand, and transmission charges, along with PJM expenses and fees.¹⁹
8 The Company also provided hourly unit energy revenue²⁰ and ancillary services
9 revenue²¹ for the power that OVEC sold into the PJM market. I used monthly
10 energy share allocation values through the audit period to account for AEP Ohio's
11 share of First Energy Solutions' energy costs and revenues starting in September
12 2018.²² AEP Ohio did not provide monthly capacity revenues, but it did provide
13 data on the capacity (MW) it bid into the capacity performance auction, and the
14 auction price.²³ We used this data to calculate the implied monthly capacity
15 revenues. We then scaled the result by the difference between the total Riders
16 charges we calculated and the total charges reported in the Audit to find the total
17 monthly capacity revenues.

¹⁸ Audit, Public Version. Page 35.

¹⁹ AEP Ohio Response to LEI Interrogatory 1.2.21 CONFIDENTIAL Attachment 1.

²⁰ AEP Ohio Response to LEI Interrogatory 4.1.1 CONFIDENTIAL Attachments.

²¹ AEP Ohio Response to LEI Interrogatory 4.1.3.

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1 To find the net value or cost passed on to consumers under the Power Purchase
2 Agreement Rider, I assumed the cost of the OVEC contract was equivalent to the
3 monthly billing from OVEC. I assumed the value of the OVEC Agreement would
4 be equal to the sum of the energy, ancillary services, and capacity value. Figure 3
5 below shows AEP Ohio's share of the monthly OVEC billing versus AEP Ohio's
6 share of the revenue that OVEC obtained from selling the energy, ancillary
7 services, and capacity into the PJM market for 2018 and 2019. During every
8 month of the audit period (with the exception of January 2018), AEP Ohio
9 consumers were paying substantial additional costs—an average of [REDACTED] million
10 per month—under the Power Purchase Agreement rider for each month of the
11 audit period.

²² See: AEP Ohio Response to LEI Interrogatory 15.6.1.

²³ AEP Ohio Response to LEI Interrogatory 1.1.2 CONFIDENTIAL Attachment 1.

[REDACTED]
[REDACTED]
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[REDACTED]
[REDACTED]


3
4

[REDACTED]

5
6

[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

11


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1 ***Q25. WHAT DO YOU CONCLUDE WITH RESPECT TO THE POWER***
2 ***PURCHASE AGREEMENT RIDER?***

3 ***A25.*** Based on AEP Ohio’s own data, I find that under the Power Purchase Agreement
4 Rider, in 2018 and 2019 alone, the total billed charges cost AEP Ohio’s
5 consumers \$74.5 million more than the market price for the same amount of
6 energy, capacity, and ancillary services. This is consistent with the auditor’s
7 finding published in September 2020.²⁴ As explained in the Direct Testimony of
8 OCC Witness Michael Haugh, the auditor initially opined in her report that
9 “running the plants was not in the best interest of ratepayers.”²⁵ However, the
10 auditor later removed that opinion from the final report at the PUCO Staff’s
11 request. I concur with the auditor’s preliminary opinion contained in the draft
12 audit report that was subsequently removed at Staff’s request—running the OVEC
13 plants is not in the best interest of AEP Ohio’s consumers.

²⁴ Audit of the OVEC Power Purchase Agreement Rider of Ohio Power Company. Prepared by London Economics International, LLC for Public Utilities Commission of Ohio. September 2020.


²⁵ Direct Testimony of Michael Haugh, Case No. 20-004-EL-RDR.

1 **B. A reasonable price to pay for power under the Power Purchase**
2 **Agreement Rider should be measured based on the cost billed for**
3 **similar services or the cost of replacement resources.**

4
5 ***Q26. ARE THERE ANY METRICS THAT CAN BE USED TO EVALUATE***
6 ***THE REASONABLENESS OF AEP OHIO'S CHARGES UNDER THE***
7 ***POWER PURCHASE AGREEMENT RIDER?***


8 **A26.** Yes. First and foremost, AEP Ohio procures electricity for consumers as the
9 provider of last resort using a descending clock auction. This ensures that the
10 price that AEP Ohio charges consumers through the SSO reflects the lowest
11 reasonable cost for power. The Power Purchase Agreement Rider is not
12 associated with any additional power supply, but instead charges or credits
13 consumers based on how much above or below market prices AEP Ohio paid to
14 OVEC. The difference between the SSO price and the additional charges under
15 the Power Purchase Agreement Rider in 2018 and 2019 show that the Power
16 Purchase Agreement Rider charges are unreasonable.

17
18 In addition to the SSO price obtained through the descending clock auction, there
19 are several long-term supply comparisons we can use to evaluate whether the
20 costs charged under the Power Purchase Agreement Rider in 2018 and 2019 are
21 reasonable. These include: (1) The costs billed or paid by other entities for similar


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1 services provided under long-term power purchase agreements (“PPA”); (2) the
2 cost of replacement capacity resources as represented by Cost of New Entry
3 (“CONE”); (3) The cost of replacement capacity and energy resources as
4 represented by responses to requests for proposals (RFP) and other Company
5 information; (4) and the PJM short-term capacity and energy market.


6
7 Table 3 below summarizes the alternative benchmarks discussed in this section on
8 a \$/MWh basis and calculates the total excess costs incurred under the Power
9 Purchase agreement Rider in 2019 relative to each benchmark.


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1 **Table 3: OVEC cost benchmarks**

	\$/MWh	Excess costs incurred (\$ Million) <i>Excess cost = Quantity (MWh) x (OVEC \$/MWh cost – alternative benchmark \$/MWh cost)</i>
OVEC cost¹	\$54.50	NA
Cost of similar services		
MPPA billing from Consumers Energy for Campbell Unit 3 in 2020²	\$28.87	\$122.6
Consumers PPA expense for MVC in 2020³	\$48.89	\$26.9
Value of CONE & PJM Base Residual Auction		
CONE – combined cycle plant⁴	\$48.92	\$26.7
CONE – combustion turbine⁴	\$47.23	\$34.8
PJM Base Residual Auction⁵	\$30.40	\$83.7
Replacement resource PPA prices		
I&M renewable RFP results (average)⁶		
Medium solar	\$50.00	\$21.6
Large solar	\$44.00	\$50.3
Wind	\$45.00	\$45.5
NIPSCO RFP Results⁷		
Solar PV	\$39.30	\$72.8
Solar PV + battery storage	\$43.30	\$53.6
Wind	\$37.10	\$83.3

2 Sources: ¹OVEC 2019 Annual Report; ² Consumers billing statements to MPPA
 3 for JH Campbell Unit 3 Power in 2020; Consumers Response to MEC Request
 4 1.9 in Case No. U-21090; ³DTE billing statements to MPPA for Bell River Power
 5 in 2020; DTE Response to MEC Request 4.1 in Case No. U-20528; ⁴ Exhibit A-17
 6 (JLR-1) in Case No U-20526; ⁵ PJM, Default MOPR Floor Offer Prices for New
 7 Generation Capacity Resources. March 11, 2020; ⁶ State of the Market Report for
 8 PJM, 2018. Page 288. State of the Market Report for PJM, 2019. Page 287; ⁷
 9 Indiana Michigan Power: 2021 Integrated Resource Plan, Public Stakeholder


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1 *Meeting #3A, July 27, 2021;*⁸ *NIPSCO's 2019 Request for Proposals Results,*
2 *February 18, 2020.*

3
4
5 ***Q27. HOW DID THE COST OF POWER UNDER THE POWER PURCHASE***
6 ***AGREEMENT RIDER IN 2018 AND 2019 COMPARE TO THE BILLED***
7 ***COSTS FOR SIMILAR PPAS?***

8 ***A27.*** The cost of power under the Power Purchase Agreement Rider in 2018 and 2019
9 is much higher than the cost paid for power under several similar PPAs in the
10 region. I reviewed Michigan Public Power Agency (“MPPA”) billing statements
11 from Consumers for J.H. Campbell 3²⁶ and calculated the average cost billed for
12 power charged for this unit. J.H. Campbell 3 is a 1,420 MW multi-unit coal-fired
13 generating plant located in Western Michigan and owned by CMS Energy, the
14 parent company of Consumers Energy. I find that in 2020, Consumers Energy
15 billed MPPA an average of \$28.87/MWh for power purchased from J.H.
16 Campbell 3.²⁷ These charges covered the construction, fuel, and operations and
17 maintenance (“O&M”) expenses from similar thermal resources and provided
18 both energy and capacity to MPPA.

²⁶ Consumers billing statements to MPPA for JH Campbell Unit 3 Power in 2020 obtained under FOIA. Calculations based on expenses before adjustments. Generation from Ex AG-11, Consumers Response to MEC Request 1.9, Docket No. U21090.

²⁷ The billing data provided by Consumers was different than the cost data provided in the individual monthly bills sent by Consumers to MPPA. The average cost of \$29.03/MWh in 2020.


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1 I also reviewed Consumers' purchased power costs and found that for 2020
2 Consumers paid \$48.89/MWh for power from Michigan Cogeneration Venture
3 ("MCV").²⁸ MCV is a natural gas-fired electrical and steam co-generation plant
4 located in Midland, Michigan.

5
6 ***Q28. WHAT IS COST OF NEW ENTRY ("CONE") AND HOW DOES THE***
7 ***VALUE OF CONE COMPARE TO THE COST PAID UNDER THE OVEC***
8 ***AGREEMENT?***

9 ***A28.*** CONE is a conservative measure of value that represents the cost of building new
10 gas-fired generation capacity. If AEP Ohio were capacity-constrained, the
11 capacity-related portion of the Power Purchase Agreement Rider costs could be
12 valued at PJM's CONE. The PJM value of CONE for a new combined cycle unit
13 is \$320/MW-Day and for a new combustion turbine unit it is \$294/MW-Day.²⁹
14 This works out to a total value of \$48.11/MWh and \$46.40/MWh when the
15 capacity-related portion of the Power Purchase Agreement Rider costs is valued
16 based on CONE of a new combined cycle unit and combustion turbine
17 respectively.

²⁸ Exhibit A-17 (JLR-1), Case No U-20526.

²⁹ Default MOPR Floor Offer Prices for New Generation Capacity Resources. March 11, 2020. Accessed at <https://www.pjm.com/-/media/committees-groups/committees/mic/2020/20200311/20200311-item-06c-default-mopr-cone.ashx>.

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1 I arrived at these values by multiplying the \$/MW-Day CONE values by the [REDACTED]
2 MW³⁰ of capacity that AEP Ohio receives and then multiplying that by 365 days
3 in a year. I then added the energy and ancillary revenues associated with AEP
4 Ohio's share of OVEC from the PJM market to find the total value of the power
5 produced by OVEC. Finally, I divided that total value of the power by AEP
6 Ohio's share of the MWh of generation produced by the OVEC plants to find the
7 total \$/MWh.

8
9 ***Q29. FOR CONTEXT, HOW DOES THE VALUE OF CONE COMPARE TO THE***
10 ***CAPACITY PRICE FROM PJM'S MOST RECENT CAPACITY AUCTION?***

11 ***A29.*** CONE is much higher than the cleared capacity value (auction price) from PJM's
12 most recent 2022/2023 Base Residual Auction because there remains surplus
13 capacity available for participation in the PJM capacity market. This auction
14 produced a capacity price of only \$50/MW-Day for years 2022–2023, which is
15 the lowest it has been in the past five auctions.³¹

³⁰ AEP Ohio bid slightly different amounts of capacity into the PJM Base Residual Auction in the 2018/2019 and 2019/2020 delivery years. For the 2018/2019 year, AEP Ohio calculated an installed capacity of [REDACTED] MW. *See:* AEP Ohio Response to LEI Interrogatory 1.1.2 CONFIDENTIAL Attachment 1.

³¹ PJM, 2022/2023 RPM Base Residual Auction Results. June 2, 2021. Accessed at: <https://www.pjm.com/-/media/markets-ops/rpm/rpm-auction-info/2022-2023/2022-2023-base-residual-auction-report.ashx>.

1 **Q30. DO YOU EXPECT THIS EFFECTIVE RESET OF PJM CAPACITY PRICE**
2 **TRENDS TO CONTINUE?**

3 **A30.** Yes, Capacity prices are expected to continue to drop moving forward, based on
4 downward pressure from three main sources: (1) lower demand, as loads continue
5 to drop below what utilities project due in large part to increasing levels of energy
6 efficiency investment and adoption of behind the meter solar PV;³² (2) increased
7 supply from the massive quantities of solar and wind (and even gas resources) in
8 the PJM interconnection queue, many of which are coming online in the coming
9 years;³³ and (3) relaxation of the MOPR, which more fully allows for capacity
10 credit of new renewables and other subsidized generation to show up in the PJM
11 capacity auctions. These factors have combined to reduce PJM prices from
12 inordinately high historical levels down to what was seen in the 2022/2023 base
13 residual auction clearing prices in April of 2021 and will continue to reduce prices
14 in future PJM auctions.

³² PJM, 2023/2024 RPM Base Residual Auction Planning Period Parameters. Accessed at <https://www.pjm.com/-/media/markets-ops/rpm/rpm-auction-info/2023-2024/2023-2024-planning-period-parameters-for-base-residual-auction-pdf.ashx>.

³³ PJM, Interconnection Process Reform Task Force Update, May 11, 2021. Accessed at <https://www.pjm.com/-/media/committees-groups/committees/pc/2021/20210511/20210511-item-11-interconnection-process-reform-task-force-update.ashx>.

1 **Q31. WHAT IS THE RELEVANT CONCLUSION YOU DRAW FROM THESE**
2 **FACTS?**

3 **A31.** In future years, the amount by which OVEC's costs exceed PJM market prices is
4 expected to increase.

5
6 **Q32. WHAT ARE YOUR CONCLUSIONS REGARDING THESE METRICS FOR**
7 **EVALUATING THE VALUE OF CAPACITY AND ENERGY PROVIDED?**

8 **A32.** The costs that AEP Ohio collected from consumers under the Power Purchase
9 Agreement Rider in 2018 and 2019 are extremely high by any reasonable
10 measure. I have presented a number of reasonable alternatives in this section, for
11 both current fossil resources contracted under similar PPAs, new fossil resources,
12 and new renewable resource bid prices that demonstrate this point. Yet AEP Ohio
13 consumers are paying as much as [REDACTED] million per year in excess of the cost of
14 PJM market prices for energy and capacity. They are also well above the other
15 long-term supply comparisons I described. These other resources discussed
16 above, or similar resources, could have been used as a hedge against the SSO
17 price under the Power Purchase Agreement Rider. These other resources could
18 have been obtained at much lower cost than the OVEC plants. I found no
19 evidence that AEP Ohio did any competitive bidding process before selecting the
20 OVEC plants as a price hedge for the SSO price. That was imprudent, and the

1 PUCO should disallow the \$74.5 million in above-market costs ([REDACTED] million for
2 2018 and [REDACTED] million for 2019).


3
4 **V. CONTEMPORANEOUS ANALYSIS INDICATED THAT THE COMPANY**
5 **WOULD PAY SUBSTANTIALLY ABOVE MARKET FOR OVEC POWER**
6 **UNDER THE POWER PURCHASE AGREEMENT RIDER.**


7
8 ***Q33. WHAT COSTS RELATED TO THE OVEC PLANTS DID AEP OHIO***
9 ***COLLECT FROM CONSUMERS UNDER THE POWER PURCHASE***
10 ***AGREEMENT RIDER IN 2018 AND 2019?***

11 **A33.** AEP Ohio included \$74.5 million in costs under the Power Purchase Agreement
12 Rider. This is the amount by which the OVEC costs for energy and capacity
13 production exceeded the PJM market price for energy and capacity. At no time
14 during the audit period were consumers credited through the PPA Rider.

15
16 ***Q34. DID AEP OHIO CONDUCT ANY ANALYSIS TO SUPPORT ITS ORIGINAL***
17 ***APPLICATION FOR THE POWER PURCHASE AGREEMENT RIDER?***

18 **A34.** Yes. AEP Ohio claims it relied on two pieces of analysis that were determinative
19 of the OVEC plants as least-cost resources for providing a financial hedge for
20 AEP Ohio's consumers when it first applied for the Power Purchase Agreement


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1 Rider.³⁴ These two reports are: 1) analysis performed by Company Witness
2 Kelley Pearce in Case No. 14-1693-EL-RDR, which was updated and re-
3 presented multiple times throughout the docket as IGC Confidential Ex 1 and is
4 included as Attachment DG-5 to my testimony;³⁵ and 2) a Benchmark Study
5 conducted in 2011 that was part of the Amended and Restated Inter-Company
6 Power Agreement. AEP Ohio's analysis presented at the hearing in Case No. 14-
7 1693-EL-RDR projected that the Rider would pass on to AEP Ohio consumers
8 between  in credits per year depending on
9 load growth assumptions.³⁶ This large range indicates the high level of uncertainty
10 with AEP Ohio's results and therefore the sizable risk that the PPA was set to
11 impose on its consumers.


12
13 The Company also referenced the findings of the original Benchmark Study
14 conducted back in 2011 in support of its application for the Rider.³⁷ This study
15 contains a year-by-year projection of expected OVEC costs vs expected PJM
16 market revenues which is at Attachment DG-6 to my testimony, at Bates number

³⁴ Attachment DG-4, AEP Ohio Response to OCC Request for Discovery OCC-DEP-006.

³⁵ Final version of the analysis was included in the transcript as IGS Confidential Exhibit 1, and also included in the PUCO's Opinions and Orders in Case No. 14-1693-EL-RDR and is at Attachment DG-5 to my testimony.


³⁶ Attachment DG-5, IGS Confidential Exhibit 1/IEY_RPD-1-003 Competitively Sensitive Confidential Second Supplemental Attachment 1A. Case No, 14-1693-EL-RDR.

³⁷ Attachment DG-4, AEP Ohio Response to OCC Request for Discovery OCC-DEP-006.


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1 21. But this Benchmark Study was out of date at the time the Rider application
2 was approved in 2016. The auditor discussed the Benchmark Study, noting that
3 the high gas price forecasts the study relied on from 2010 drove the high market
4 price forecast used in the study.³⁸ As a result, the value of the OVEC Rider
5 appeared to exceed the plants' projected costs. But gas prices, and therefore actual
6 market prices, have been much lower than projected in 2010, and therefore the
7 OVEC Rider has not provided even close to the value projected. In fact, it has
8 imposed substantial costs on Ohio consumers, and there is no indication that this
9 trend is likely to change in the near future. Given the outdated inputs of the
10 Benchmark Study and the auditor's note that the Benchmark Study conflicts with
11 more timely inputs, I do not believe that the Benchmark Study is a helpful
12 indicator of economic viability.

³⁸ Audit of the OVEC Power Purchase Agreement Rider of Ohio Power Company. Prepared for the Public Utilities Commission of Ohio by London Economics International. September 16, 2020. Page 24.


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1 **Q35. DOES THE INFORMATION PROVIDED BY AEP OHIO DEMONSTRATE**
2 **ANY EFFORT TO USE A LEAST-COST PROCUREMENT PROCESS TO**
3 **OBTAIN A FINANCIAL HEDGE FOR AEP OHIO CONSUMERS?**

4 **A35.** No, it does not. The Benchmark Study and information presented in Case No. 14-
5 1693-EL-RDR are projections of future OVEC costs. Neither report shows that
6 AEP Ohio used any type of competitive solicitation process, or even a survey of
7 available alternatives, before procuring the OVEC plants as a financial hedge for
8 AEP Ohio consumers.³⁹ Even if the Commission were to accept the analyses
9 presented by AEP Ohio, they would not be sufficient to show that the OVEC PPA
10 was the best available option for AEP Ohio consumers.

11

12 **Q36. HOW CLOSELY DID AEP OHIO'S PROJECTIONS OF THE IMPACT OF**
13 **THE POWER PURCHASE AGREEMENT RIDER ALIGN WITH THE**
14 **CHARGES/ CREDITS THAT WERE PASSED ON TO ITS CUSTOMERS?**

15 **A36.** AEP Ohio substantially over-projected the net benefits that the Power Purchase
16 Agreement would deliver to its consumers in 2016 when it first applied for the
17 Rider in Case No. 14-1693-EL-RDR. After normalizing for weather, the
18 Company projected that the Rider would provide \$110 million in *credits* to

³⁹ Attachment DG-4, AEP Ohio Response to OCC Request for Discovery OCC-DEP-005.

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1 consumers over the period 2015 – 2024⁴⁰ [REDACTED]
2 [REDACTED] of which was projected to be earned between
3 2016 and 2020 [REDACTED]⁴¹
4 Notably, the Commission cited AEP Ohio's \$110 million benefits projections
5 several times in its approval of the OVEC-only PPA rider in 2016.⁴² But instead
6 of earning credits since its adoption, the PPA Rider has actually incurred
7 substantial *charges* each year totaling [REDACTED] Million between 2016 and 2020 [REDACTED]
8 million when including capacity performance revenue). Figure 4 shows the
9 Company's projected performance of the Power Purchase Agreement Rider and
10 the actual charges that have been incurred in the years since the rider was
11 approved.

⁴⁰ Application for Rehearing of Ohio Power Company, Filed May 2, 2016. Case No. 14-1693-EL-RDR.

⁴¹ IEY_RPD-1-003 Competitively Sensitive Confidential Second Supplemental Attachment 1A. Case No, 14-1693-EI-RDR.

⁴² This \$110 figure was first mentioned in the Second Entry on Rehearing, PUCO Case No. 14-1693-EL-RDR. Filed November 3, 2016. Pages 31, 38, 41, 81, 103, 111, and 112. The PUCO approved the OVEC-only PPA Rider in its Fifth Entry on Rehearing (April 5, 2017), where the PUCO states at page 16 that it is approving the PPA Rider based on information presented at the hearing showing that the rider will produce a net credit of \$100 million over the lifetime of the rider. This comes from IGS Confidential Ex 1 presented at the hearing.

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[REDACTED]



4
[REDACTED]

[REDACTED]

16
17
18
19
20

These substantial charges were incurred in part due to AEP Ohio's failure to prudently manage the operations and planning of the OVEC units. Figure 5 shows the cumulative difference between the credits that AEP Ohio projected to pass on to consumers and the charges that it has actually passed on to consumers between

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1 2016 and 2020. In total, there was a [REDACTED] difference between the credits
2 that AEP Ohio expected to earn and the charges that it actually incurred between
3 2016 and 2020.

4 [REDACTED]
5 [REDACTED]
6 [REDACTED]

7 *Source: See Figure 4.*

8
9 During just the audit period of 2018 and 2019, the Rider charges were [REDACTED]
10 [REDACTED] larger than forecasted by AEP Ohio. Specifically, AEP Ohio projected to
11 would earn [REDACTED] in *credits*, but instead it incurred 74.5 million in *charges*
12 to consumers.

1 **Q37. HOW DOES AEP OHIO JUSTIFY ITS SPENDING ON ABOVE-MARKET**
2 **ENERGY COSTS FROM OVEC THROUGH THE POWER PURCHASE**
3 **AGREEMENT RIDER?**

4 **A37.** When AEP Ohio submitted its application for the Power Purchase Agreement
5 Rider, the Company cited not just the project's projected savings, but also the
6 hedging value of the Rider. Specifically, AEP Ohio claimed that the OVEC PPA
7 was a "financial hedging mechanism" that would provide "rate stability benefits"
8 to customers.⁴³

9

10 **Q38. BASED ON YOUR REVIEW OF OVEC'S ACTUAL ECONOMIC**
11 **PERFORMANCE, HAS THE POWER PURCHASE AGREEMENT BEEN AN**
12 **EFFECTIVE FINANCIAL HEDGE FOR AEP OHIO CONSUMERS?**

13 **A38.** No. Figure 4 shows that the OVEC PPA has incurred substantial charges in each
14 year since its approval in 2016, and actual economic performance has been
15 substantially more expensive than even AEP Ohio's worst-case projections. The
16 Power Purchase Agreement Rider has not effectively hedged market prices to date
17 and based on my review of available alternatives and market price trends the
18 OVEC PPA will not be able to effectively hedge prices in the future. Any

⁴³ Second Entry on Rehearing, PUCO Case No. 14-1693-EL-RDR. Filed November 3, 2016. Page 23.

1 justification of the Power Purchase Agreement as an economic hedge is simply
2 not supported by available data.

3
4 ***Q39. WILL THE PPA RIDER RESULT IN A CREDIT OF \$110 MILLION TO AEP***
5 ***OHIO CONSUMERS THROUGH 2024?***

6 ***A39.*** My analysis, outlined above, demonstrates that to date the PPA Rider has
7 generated a [REDACTED] million charge to consumers between 2016 and 2020 ([REDACTED]
8 when including capacity revenues), rather than the projected credit. Further, I do
9 not see any scenario where the economic trends that have rendered the OVEC
10 plants uneconomic rapidly reverse for the next few years. These findings are
11 consistent with the auditors' findings that the OVEC plants are not likely to be
12 viable on a going-forward basis.⁴⁴ In support of this finding, the auditor cited
13 evidence that the OVEC plants' cost at over \$50/MWh is consistently higher than
14 both the levelized cost of energy⁴⁵ for a new combined cycle gas turbine in PJM,
15 which ranged between \$42 to \$47/MWh in 2018, and higher than the price of
16 energy and capacity in PJM in 2018, which totaled \$41.25/MWh. This means that
17 assuming market prices stay low as they are today, the OVEC plants are not only

⁴⁴ Audit of the OVEC Power Purchase Agreement Rider of Ohio Power Company, Public Version. ("Audit Public Version"). Prepared for the Public Utilities Commission of Ohio by London Economics International, LLC. Page 26.

⁴⁵ Levelized Cost of Energy, or LCOE, takes the lifetime cost of an asset and spreads it out over the lifetime generation of the asset. It spreads out the present value of building, operating, and maintaining the plant over the lifetime of the lifetime MWh generation of the plant.

1 more expensive than energy and capacity in the market, but also more expensive
2 than the cost required to recover the investment on a new CCGT plant in the PJM
3 market.


4
5 ***Q40. WERE THERE OTHER CONTEMPORANEOUS ANALYSES OF OVEC'S***
6 ***ECONOMIC VIABILITY CONDUCTED DURING THE AUDIT PERIOD?***

7 ***A40.*** Yes. The results of these analyses showed that the costs of the OVEC plants
8 would exceed PJM revenues by a substantial amount. These analyses support a
9 finding that the PPA Rider is not in the best interest of ratepayers.

10
11 Duke Energy Ohio had analysis prepare by Judah Rose of ICF to support its
12 application to form a Price Stabilization Rider in 2018. This analysis showed that
13 the OVEC plant's projected energy and demand charges will exceed forecasted
14 market revenues by [REDACTED] million on a net present value basis over the analysis
15 period (2018–2025).

16
17 Additionally, in April 2018, Judah Rose of ICF International, Inc. submitted an
18 affidavit on behalf of the Debtors as part of the FirstEnergy Solutions (“FES”)
19 Bankruptcy proceeding⁴⁶ (attached as DG-2 to my testimony). The purpose of his

⁴⁶ Expert Declaration of Judah L. Rose, Chapter 11, Case No. 18-50757. Filed April 1, 2018.


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1 affidavit was to support FES' claim that it should be allowed to cancel its rights
2 and obligations under the OVEC Agreement contract because it was projected to
3 lose a substantial amount of money under the contract. As part of this affidavit,
4 Mr. Rose evaluated the cost of maintaining the OVEC Agreement.⁴⁷ The full
5 results were presented in the Declaration of FES executive Kevin Warvell
6 (attached as DG-3 to my testimony).

7
8 Rose projected FES would lose \$268 million under the OVEC contract on an
9 undiscounted basis over the life of the contract through 2040.⁴⁸ The OVEC costs
10 are the same on a unit basis across all owners, so the \$268 million loss for FES'
11 4.85 percent share of OVEC can be scaled up to find the collective projected costs
12 for all owners, which works out to \$5.5 billion. For AEP Ohio's 19.93 percent
13 share, that works out to \$1.1 billion in losses through 2040. In other words, AEP
14 Ohio's consumers were projected to pay \$1.1 billion in above-market costs for
15 energy and capacity over the remaining life of the contract for AEP Ohio's share
16 of the contract. This is consistent with the auditor's finding that "AEP Ohio
17 customers could be locked into paying a premium for energy and capacity from
18 the OVEC plants for up to another 20 years."⁴⁹

⁴⁷ Expert Declaration of Judah L. Rose. Chapter 11, Case No. 18-50757. Filed April 1, 2018.

⁴⁸ Expert Declaration of Kevin T Warvell, page 8. Chapter 11, Case No. 18-50757. Filed April 1, 2018.

⁴⁹ Audit Public Version. Page 31.


1 **VI. AEP OHIO IMPRUDENTLY MANAGED ITS OVEC AGREEMENT BY**
2 **FAILING TO TAKE ACTION TO INFLUENCE OPERATIONAL AND**
3 **PLANNING DECISIONS MADE AT THE CLIFTY CREEK AND KYGER**
4 **CREEK PLANTS**

5
6 ***Q41. HOW ARE THE OVEC UNITS OPERATED AND MANAGED?***

7 ***A41.*** According to the Amended and Restated OVEC Agreement that was in effect in
8 2019,⁵⁰ management of the OVEC units is governed by the 15-person Board of
9 Directors, and operational decisions are delegated to the Operating Committee.
10 Specifically:

11 Decisions with respect to OVEC's operations are made by OVEC's
12 management, with oversight and approval of annual capital expense
13 budgets by OVEC's Board of Directors...Certain decisions, including
14 those regarding procedures for scheduling delivery of available energy,
15 and recommendations as to scheduling, operating, testing and maintenance
16 procedures and other related matters, are delegated to the 'Operating
17 Committee' ...the unanimous approval of the Operating Committee
18 (excluding OVEC's representative) is required to change the commitment
19 status of 'Must Run' with respect to the offer of the 'PJM Sponsors'

⁵⁰ The OVEC Agreement was subsequently updated in October 7, 2019 and effective November 15, 2019.


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1 aggregate share of reserved Available Energy into PJM's Day-Ahead
2 Energy Market.⁵¹

3
4 ***Q42. IS THERE OVERLAP BETWEEN THE MANAGEMENT OF AEP AND***
5 ***OVEC?***

6 ***A42.*** Yes. There is substantial overlap between AEP and OVEC. OVEC's executive
7 leadership includes several employees of American Electric Power Company. In
8 2020, the President of OVEC and IKEC also held the position of Executive Vice
9 President — Generation at AEP.⁵² AEP companies own a combined 43.47 percent
10 of OVEC through Ohio Power Company, Appalachian Power Company, and
11 Indiana Michigan Power Company (I&M).⁵³ In a May 2021 ruling, the Michigan
12 Public Service Commission stated:


13 On a going forward basis, the Commission will closely scrutinize costs
14 incurred under this contract between affiliates, reminds I&M of its...
15 “continuing duty to support its long-term contracts and affiliate
16 transactions,” and “will expect to see evidence that the company has taken
17 steps to minimize the cost of [power], including efforts to renegotiate
18 contracts, and will look to comparisons with other long-term supply
19 options.”⁵⁴
20

⁵¹ AEP Response to OCC-INT 06-10.

⁵² Audit Public Version. Page 16; OVEC 2020 Annual Report, page 45. Available at <https://ovec.com/FinancialStatements/AnnualReport-2020-Signed.pdf>.

⁵³ OVEC Annual Report, page 1. Available at <https://www.ovec.com/FinancialStatements/AnnualReport-2020-Signed.pdf>.

⁵⁴ Michigan Public Service Commission Case No. U-20529, Order filed May 13, 2021, page 13.


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1 In the MPSC’s most recent ruling on OVEC matters, the Commission reaffirmed
2 the affiliate relationship and then went one step further to warn AEP Company
3 I&M that it is unlikely to permit the Company to recover uneconomic costs from
4 its ratepayers in future dockets “without good faith efforts to manage existing
5 contracts such as meaningful attempts to renegotiate contract provisions to ensure
6 continued value for ratepayers.”⁵⁵ Specifically the Commission warned AEP
7 Company I&M that it may not be allowed recovery of its full costs under the
8 OVEC agreement in the next reconciliation docket.⁵⁶

⁵⁵ Michigan Public Service Commission, Case No. U-20804, Order filed November 18, 2021, page 13.

⁵⁶ Michigan Public Service Commission, Case No. U-20804, Order filed November 18, 2021, page 20.

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1 **A. OVEC operates its two power plants, Clifty Creek and Kyger Creek,**
2 **uneconomically and incurs additional losses relative to market energy**
3 **prices.**


4
5 ***Q43. HOW OFTEN DID OVEC OPERATE ITS PLANTS IN 2018 AND 2019?***

6 **A43.** OVEC operated the Clifty Creek and Kyger Creek plants at 56 percent and 61
7 percent capacity factors in 2018 and 50 and 58 percent capacity factors in 2019,⁵⁷
8 respectively, despite both units incurring substantial revenue losses relative to the
9 market. In fact, during the audit period, at least one unit was online at the Clifty
10 Creek and Kyger Creek plants during 100 percent of the time respectively. This
11 shows that OVEC is not taking action to limit incurring negative energy margins
12 at its plants, and instead is operating its plants even when it projects that doing so
13 will incur negative margins.

14
15 ***Q44. IS THERE EVIDENCE THAT OVEC OPERATED ITS PLANTS***
16 ***UNECONOMICALLY DURING MANY HOURS OF THE YEAR IN 2018***
17 ***AND 2019?***

18 **A44.** Yes. During 2018 and 2019, OVEC's variable costs exceeded market locational
19 marginal prices over half the time the units were online. As discussed above, this

⁵⁷ AEP Ohio Response to LEI Interrogatory 4.1.2.



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1 contributed to a total of \$74.5 million in above-market costs across the two plants
2 for AEP Ohio's consumers.⁵⁸ Coal plants such as Clifty Creek and Kyger Creek
3 require high capital costs to stay online, and therefore they need large positive
4 energy margins (or sufficient capacity payments) to cover these fixed costs. When
5 a plant loses money on a variable operating basis, that means that not only is it not
6 covering its fuel and variable O&M costs, it is also carrying no net revenues to
7 offset significant fixed O&M and capital costs.

8
9 ***Q45. HOW DID THE OVEC UNITS INCUR SIGNIFICANT LOSSES IF THEY***
10 ***WERE OPERATING WITHIN THE PJM MARKET?***

11 ***A45.*** Generators operating within the PJM market generally commit their available
12 units as either economic or must-run. For units committed economically, the
13 market operator, PJM, has the responsibility for unit commitment and dispatch
14 decisions. Those decisions prioritize reliability for the system as a whole, but then
15 select plants to commit and dispatch based on short-term economics to ensure
16 consumers are served by the lowest-cost resources available to the system. A
17 plant committed as “economic” will operate only if it is the least-cost option
18 available to the market (i.e., has a lower average commitment period cost than
19 other resources available at the time).

⁵⁸ *Id.*


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1 While economic commitment and dispatch tends to be the norm for dispatchable
2 power plants, for units such as OVEC's coal-fired power plants with long start-up
3 and shut-down times, utilities often instead elect to maintain control of unit
4 commitment decisions and utilize a must-run commitment status. For these units,
5 the utility determines independently when to commit a unit. A unit designated as
6 must-run will operate with a power output no less than its minimum operating
7 level.⁵⁹ The unit receives market revenue (and incurs variable operational costs)
8 but does not set the market price of energy. If the market price of energy falls
9 below its operational cost, a must-run unit will not turn off and can incur losses
10 that a utility often seeks to collect from consumers.

11
12 Because units operated by the market follow short-term economic signals, they
13 tend to cycle off when market prices are low and therefore do not generally incur
14 significant operational losses. The OVEC units, on the other hand, stayed online
15 for the vast majority of 2018 and 2019, despite incurring significant net revenue
16 losses. This is because the plants were predominantly self-committed with a must-
17 run status whenever they were available,⁶⁰ without regard for the impact on AEP

⁵⁹ Minimum operating level is an output threshold often determined operationally, and below which a generator is either less stable or operates inefficiently. Once the unit commitment decision is made, the level of generation output (above the minimum) is generally left to the market. The operating level is based upon the marginal running cost assumptions provided by the owner in the form of offers or bids to PJM.

⁶⁰ AEP Ohio Response to LEI Interrogatory 5.1.3.

1 Ohio's consumers' interests. OVEC used no daily analysis to drive its unit
2 commitment decisions during 2018 and 2019, as discussed below.

3
4 **Q46. WHAT COULD DRIVE A POWER PLANT OPERATOR SUCH AS OVEC TO**
5 **UNECONOMICALLY SELF-COMMIT ITS UNITS?**

6 **A46.** There are many factors that could drive a power plant operator to uneconomically
7 self-commit their units, but four main ones are: (1) a failure to evaluate the
8 economics of daily unit commitment decisions; (2) failure to follow the results of
9 daily unit commitment analysis; (3) incomplete accounting of variable unit costs
10 in unit dispatch bids; and (4) minimum take provisions in fuel contracts that “lock
11 in” costs that would otherwise be variable.

12
13 In the case of OVEC in 2018 and 2019, it is clear that the Company did not
14 evaluate the economics of operating the plants on a daily basis (as will be
15 discussed in the next section). There is also evidence that the Company did not
16 include the total variable cost of operation in its commitment and dispatch bids,
17 and in fact [REDACTED]

18 [REDACTED].⁶¹ This practice resulted in the
19 plants being dispatched more than they would have based on their true marginal

⁶¹ AEP Response to OCC 05-003, Confidential Attachments 1 and 2.


1 costs. If OVEC moves to economic commitment, this practice will also result in
2 the plants being committed more than they should.

3

4 ***Q47. DOES OVEC HAVE AN ECONOMIC INCENTIVE TO AVOID RUNNING***
5 ***ITS PLANTS IN UNECONOMIC CONDITIONS?***

6 ***A47.*** No. The OVEC Agreement assigns plant operating costs and PJM revenues to
7 OVEC's sponsoring organizations, effectively holding OVEC's revenues
8 harmless during uneconomic generation. This dynamic allowed OVEC to
9 maintain a net income in 2018 and 2019⁶² even while the OVEC plants' variable
10 costs exceeded locational marginal prices. In the absence of action by utility
11 Commissions to disallow recovery of the full Rider cost, OVEC owners have no
12 incentive to demand that the OVEC units change their practices and operate more
13 economically.

⁶² Audit Public Version. Page 30.


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1 costs versus marginal prices.⁶⁶ Public discovery responses from Case No 20-167-
2 EL-RDR indicated that in 2019, OVEC did not conduct analysis on a daily basis
3 to inform its unit commitment process. The decision to move to a daily analysis
4 system was not made until 2020.⁶⁷ Instead, during 2018 and 2019, the available
5 OVEC plants (except Clifty Creek Unit 6 during summer ozone non-attainment
6 periods) were committed into the PJM day-ahead market with a “Must-Run”
7 status at all times, except when units were unavailable due to scheduled
8 maintenance or forced outages.⁶⁸

9
10 ***Q50. DID ANY SPONSORING ORGANIZATION CONDUCT A DAILY ANALYSIS***
11 ***TO MONITOR AND PROJECT ENERGY MARKET REVENUES FROM***
12 ***OPERATION OF THE OVEC UNITS?***

13 ***A50.*** Yes, during Duke Energy’s 2019 audit period, Duke indicated that it prepared a
14 “daily profit and loss forecast report that shows a 21-day forecast of OVEC unit
15 participation in the PJM Day-Ahead Energy Market.”⁶⁹ Duke’s analysis showed

⁶⁶ AEP Ohio Response to LEI Interrogatory 5.1.3.

⁶⁷ Duke Response to OCC-RFA-03-006, Case No. 20-167-EF-RDR.

⁶⁸ Duke Response to OCC-RFA-03-002, Case No. 20-167-EF-RDR.

⁶⁹ Direct Testimony of Devi Glick, PUCO Case No. 20-167-EF-RDR. Page 43.

1 that there were days during 2019 when its analysis showed that market revenues
2 were projected to be less than variable operating costs for the OVEC units.⁷⁰

3
4 ***Q51. HAVE OVEC'S UNIT COMMITMENT PRACTICES CHANGED IN THE***
5 ***YEAR AND A HALF SINCE THE AUDIT PERIOD ENDED?***

6 ***A51.*** Yes. In the Spring of 2020, OVEC received approval from the full Operating
7 Committee to begin offering some of its units with a commitment status of
8 “Economic.”⁷¹


9
10 ***Q52. WHAT ARE STANDARD INDUSTRY PRACTICES UNDERTAKEN BY***
11 ***REGULATED UTILITIES TO ENSURE PLANTS THAT THEY CO-OWN***
12 ***ARE PRUDENTLY OPERATED?***

13 ***A52.*** Prudent utility management practices dictate a utility would do the following in
14 managing the operation of a plant that it co-owns to manage the costs passed on to
15 its consumers:

- 16
17 1. Exercise oversight and have knowledge of the operational decisions that
18 impact the costs passed on to its consumers.
19
20 2. Evaluate and undertake measures to reduce operational costs at the units
21 that are operating at a loss relative to alternatives or the market.

⁷⁰ *Id.* P. 44.


⁷¹ Direct Testimony of Devi Glick, PUCO Case No. 20-167-EL-RDR.


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1 Based on my review of the materials available in this proceeding, there is no
2 evidence that AEP Ohio attempted to ascertain the operational costs of the OVEC
3 plants relative to alternatives, nor did it exercise any prudent oversight on relevant
4 operational decisions and their attendant costs.

5
6 ***Q53. WHAT DO YOU CONCLUDE REGARDING AEP OHIO'S MANAGEMENT***
7 ***OF THE OVEC AGREEMENT?***

8 ***A53.*** AEP Ohio failed to exercise prudent oversight over operational decisions and
9 costs associated with the OVEC Plants, despite consistent charges on the Power
10 Purchase Agreement Rider indicating that the plant could not operate
11 economically during the audit period. Ultimately, AEP Ohio's inaction led to
12 excess costs for its consumers.


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1 economics of operational changes at the OVEC plants, including seasonal
2 operation⁷³ and lower each unit's minimum operating level.⁷⁴

3
4 There is also no evidence that the Company re-evaluated the prudence of using
5 the OVEC units as a hedge on the SSO price, or that the Company solicited any
6 competitive bids for a PPA to provide an alternative hedge service.

7
8 Finally, the Company also did not present any evidence of analysis on the cost of
9 complying with the EPA's Coal Combustion Residuals and Effluent Limitation
10 Guideline rules.⁷⁵ Instead, the Company rejected to OCC's efforts to get this
11 information.


12
13 ***Q55. IS THERE EVIDENCE THAT A RETIREMENT STUDY COULD HELP***
14 ***THE COMMISSION IN EVALUATING THE PRUDENCE OF CONTINUED***
15 ***INVESTMENT IN THE OVEC PLANTS?***

16 ***A55.*** Yes. Duke Energy conducted a retirement study as part of its most recent
17 integrated resource plan filed with the South Carolina Public Service Commission
18 on August 27, 2021, and this resulted in the acceleration of the retirement dates

⁷³ AEP Ohio Response to OCC INT-05-008.

⁷⁴ AEP Ohio Response to OCC INT-05-009.

⁷⁵ AEP Ohio Response to OCC INT-6-09.


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1 for its South Carolina coal plants by ten years or more. If AEP Ohio was required
2 to do the same for the OVEC plants, the PUCO would have more information
3 about the projected savings (through the elimination of the PPA Rider) consumers
4 would see from an early retirement of the OVEC plants.


5
6 ***Q56. IS THERE EVIDENCE THAT SEASONAL OPERATIONS CAN BE***
7 ***DEPLOYED AT COAL PLANTS TO LOWER CONSUMER COSTS?***

8 ***A56.*** Yes, seasonal operation can be achieved by either (1) taking a unit offline and
9 only offering it into the market during certain months, or (2) by economically
10 dispatching a high-cost unit (instead of self-committing it). These practice have
11 been utilized by utilities around the country to shut down coal plants during the
12 shoulder season when electricity demand is lower and leads to lower market
13 prices.⁷⁶ For example, Xcel Energy in Minnesota officially switched two coal
14 plants to seasonal operation in 2020,⁷⁷ and Tucson Electric Power announced that
15 it will switch one unit to seasonal operations in 2023.⁷⁸ Southwest Electric Power

⁷⁶ Mark Morey, Alex Gorski. *EIA. As U.S. coal-fired capacity and utilization decline, operators consider seasonal operation.* Available at <https://www.eia.gov/todayinenergy/detail.php?id=44976>.

⁷⁷ Catherine Morehouse. *Minnesota approves Xcel request to operate 2 coal plants seasonally.* July 16, 2020. Available at <https://www.utilitydive.com/news/minnesota-approves-xcel-request-to-operate-2-coal-plants-seasonally/581729/>.

⁷⁸ Jeff St. John. *2 more western utilities move to close coal plants early, shirting to renewables and storage.* June 29, 2020. Available at https://www.greentechmedia.com/articles/read/two-more-western-utilities-move-to-close-coal-plants-early-shift-to-renewables-and-storage?utm_source=feedburner&utm_medium=feed&utm_campaign=Feed%3A+greentechmedia%2Fnews+%28Greentech+Media%3A+News%29.


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1 Company (SWEPCO), an AEP company, also switched Dolet Hills to seasonal
2 operation in 2020, before ultimately shutting the plant down.⁷⁹ But for high-cost
3 units such as the OVEC ones, switching a plant from must-run commitment to
4 economic commitment would likely result in seasonal shut downs based purely on
5 economics.

6
7 ***Q57. EXPLAIN YOUR CONCERNS WITH OVEC'S APPROACH TO***
8 ***ENVIRONMENTAL COMPLIANCE.***

9 ***A57.*** I expect that OVEC will incur substantial costs to comply with the Effluent
10 Limitation Guideline (“ELG”) and Coal Combustion Residuals (“CCR”) rules if
11 the plants are allowed to operate beyond 2028. This will increase OVEC’s
12 demand charges, which covers the plant’s fixed and capital costs, for all owners.
13 Commissions across the country have been conducting oversight of the prudence
14 of utility compliance with the ELG and CCR rules. In Virginia⁸⁰ and Kentucky,⁸¹
15 for example, commissions recently rejected AEP’s request for approval to collect
16 costs to comply with the ELG rules for three separate plants, all of which are
17 newer than the OVEC plants. The auditor discusses the status of OVEC’s

⁷⁹ SWEPCO to Seek Regulatory Approval to Retire Dolet Hills Power Plant by End of 2026.
<https://www.swepco.com/company/news/view?releaseID=4358>.

⁸⁰ Order Granting Rate Adjustment Clause, August 2021. Virginia Division of Public Utility Regulation.
Case No. PUR-2020-00258.

⁸¹ Order, July 2021. Kentucky Public Service Commission Case No. 2021-000004.

1 compliance with various environmental laws and regulations on pages 77-89 of
2 the audit. But to date, no Commission has required a review the prudence of
3 compliance with the ELG and CCR rules for any of the owners of the OVEC
4 plants.

5
6 **VII. RECOMMENDATIONS**

7
8 ***Q58. DO YOU HAVE ANY RECOMMENDATIONS REGARDING OVEC'S***
9 ***ENVIRONMENTAL COMPLIANCE PRACTICES?***

10 **A58.** Yes. The PUCO should put AEP Ohio on notice that it will not permit AEP Ohio
11 to collect CCR-related or ELG-related costs for OVEC from consumers under the
12 Legacy Generation Rider in the future unless AEP Ohio demonstrates in advance
13 that any planned investments to comply with the EPA's CCR and ELG rules are
14 prudent and reasonable.

1 **Q59. DO YOU HAVE ANY RECOMMENDATION REGARDING STUDIES OR**
2 **ANALYSIS THAT AEP OHIO SHOULD CONDUCT ON THE OVEC**
3 **PLANTS?**

4 **A59.** Yes. The PUCO should require AEP Ohio to conduct or obtain a retirement
5 study for the OVEC plants and file the results with the PUCO by April 1, 2022.
6 Such a study for the OVEC Units would show a reasonable retirement date and
7 provide guidance to the PUCO on whether to approve collection of costs for
8 future investments for environmental compliance, which I discussed earlier in
9 my testimony.

10
11 The PUCO should also require that AEP Ohio evaluate operational changes at the
12 OVEC units, including switching to seasonal operations to keep the plans offline
13 during months with low market prices, and lowering the minimum operating level
14 of the units so that OVEC has more flexibility to ramp each unit down when they
15 are online during periods of low market prices.

16
17 **Q60. WHAT ARE YOUR RECOMMENDATIONS TO THE COMMISSION**
18 **REGARDING DISALLOWANCES RELATING TO THE OVEC UNITS?**

19 **A60.** The PUCO should disallow in this proceeding \$74.5 million in above-market
20 costs that AEP Ohio collected from consumers under the Power Purchase
21 Agreement Rider.

1 **VIII. CONCLUSION**

2

3 ***Q61. DOES THIS CONCLUDE YOUR TESTIMONY?***

4 ***A61.*** Yes.

CERTIFICATE OF SERVICE

I hereby certify that a true copy of the foregoing *Direct Testimony of Devi Glick, on Behalf of the Office of the Ohio Consumers' Counsel* (████████████████████) was served via electronic transmission upon the parties below this 29th day of December 2021.

/s/ John Finnegan
John Finnegan
Assistant Consumers' Counsel

The PUCO's e-filing system will electronically serve notice of the filing of this document on the following parties:

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PROFESSIONAL EXPERIENCE

Synapse Energy Economics Inc., Cambridge, MA. *Principal Associate*, June 2021- Present; *Senior Associate*, April 2019 – June 2021; *Associate*, January 2018 – March 2019.

Conducts research and provides expert witness and consulting services on energy sector issues.

Examples include:

- Modeling for resource planning using PLEXOS and Encompass utility planning software to evaluate the reasonableness of utility IRP modeling.
- Modeling for resource planning to explore alternative, lower-cost and lower-emission resource portfolio options.
- Providing expert testimony in rate cases on the prudence of continued investment in, and operation of, coal plants based on the economics of plant operations relative to market prices and alternative resource costs.
- Providing expert testimony and analysis on the reasonableness of utility coal plant commitment and dispatch practice in fuel and power cost adjustment dockets.
- Serving as an expert witness on avoided cost of distributed solar PV and submitting direct and surrebuttal testimony regarding the appropriate calculation of benefit categories associated with the value of solar calculations.
- Reviewing and assessing the reasonableness of methodologies and assumptions relied on in utility IRPs and other long-term planning documents for expert report, public comments, and expert testimony.
- Evaluating utility long-term resource plans and developing alternative clean energy portfolios for expert reports.
- Co-authoring public comments on the adequacy of utility coal ash disposal plans, and federal coal ash disposal rules and amendments.
- Analyzing system-level cost impacts of energy efficiency at the state and national level.

Rocky Mountain Institute, Basalt, CO. August 2012 – September 2017

Senior Associate

- Led technical analysis, modeling, training and capacity building work for utilities and governments in Sub-Saharan Africa around integrated resource planning for the central electricity grid energy. Identified over one billion dollars in savings based on improved resource-planning processes.
- Represented RMI as a content expert and presented materials on electricity pricing and rate design at conferences and events.

- Led a project to research and evaluate utility resource planning and spending processes, focusing specifically on integrated resource planning, to highlight systematic overspending on conventional resources and underinvestment and underutilization of distributed energy resources as a least-cost alternative.

Associate

- Led modeling analysis in collaboration with NextGen Climate America which identified a CO2 loophole in the Clean Power Plan of 250 million tons, or 41 percent of EPA projected abatement. Analysis was submitted as an official federal comment which led to a modification to address the loophole in the final rule.
- Led financial and economic modeling in collaboration with a major U.S. utility to quantify the impact that solar PV would have on their sales and helped identify alternative business models which would allow them to recapture a significant portion of this at-risk value.
- Supported the planning, content development, facilitation, and execution of numerous events and workshops with participants from across the electricity sector for RMI's Electricity Innovation Lab (eLab) initiative.
- Co-authored two studies reviewing valuation methodologies for solar PV and laying out new principles and recommendations around pricing and rate design for a distributed energy future in the United States. These studies have been highly cited by the industry and submitted as evidence in numerous Public Utility Commission rate cases.

The University of Michigan, Ann Arbor, MI. *Graduate Student Instructor*, September 2011 – July 2012

The Virginia Sea Grant at the Virginia Institute of Marine Science, Gloucester Point, VA. *Policy Intern*, Summer 2011

Managed a communication network analysis study of coastal resource management stakeholders on the Eastern Shore of the Delmarva Peninsula.

The Commission for Environmental Cooperation (NAFTA), Montreal, QC. *Short Term Educational Program/Intern*, Summer 2010

Researched energy and climate issues relevant to the NAFTA parties to assist the executive director in conducting a GAP analysis of emission monitoring, reporting, and verification systems in North America.

Congressman Tom Allen, Portland, ME. *Technology Systems and Outreach Coordinator*, August 2007 – December 2008

Directed Congressman Allen's technology operation, responded to constituent requests, and represented the Congressman at events throughout southern Maine.

EDUCATION

The University of Michigan, Ann Arbor, MI

Master of Public Policy, Gerald R. Ford School of Public Policy, 2012

Master of Science, School of Natural Resources and the Environment, 2012

Masters Project: *Climate Change Adaptation Planning in U.S. Cities*

Middlebury College, Middlebury, VT

Bachelor of Arts, 2007

Environmental Studies, Policy Focus; Minor in Spanish

Thesis: *Environmental Security in a Changing National Security Environment: Reconciling Divergent Policy Interests, Cold War to Present*

PUBLICATIONS

Glick, D., P. Eash-Gates, J. Hall, A. Takasugi. 2021. *A Clean Energy Future for MidAmerican and Iowa*. Synapse Energy Economics for Sierra Club, Iowa Environmental Council, and the Environmental Law and Policy Center.

Glick, D., S. Kwok. 2021 *Review of Southwestern Public Service Company's 2021 IRP and Tolk Analysis*. Synapse Energy Economics for Sierra Club.

Glick, D., P. Eash-Gates, S. Kwok, J. Taberner, R. Wilson. 2021. *A Clean Energy Future for Tampa*. Synapse Energy Economics for Sierra Club.

Glick, D. 2021. *Synapse Comments and Surreply Comments to the Minnesota Public Utility Commission in response to Otter Tail Power's 2021 Compliance Filing Docket E-999/CI-19-704*. Synapse Energy Economics for Sierra Club.

Eash-Gates, P., D. Glick, S. Kwok, R. Wilson. 2020. *Orlando's Renewable Energy Future: The Path to 100 Percent Renewable Energy by 2020*. Synapse Energy Economics for the First 50 Coalition.

Eash-Gates, P., B. Fagan, D. Glick. 2020. *Alternatives to the Surry-Skiffes Creek 500 kV Transmission Line*. Synapse Energy Economics for the National Parks Conservation Association.

Biewald, B., D. Glick, J. Hall, C. Odom, C. Roberto, R. Wilson. 2020. *Investing in Failure: How Large Power Companies are Undermining their Decarbonization Targets*. Synapse Energy Economics for Climate Majority Project.

Glick, D., D. Bhandari, C. Roberto, T. Woolf. 2020. *Review of benefit-cost analysis for the EPA's proposed revisions to the 2015 Steam Electric Effluent Limitations Guidelines*. Synapse Energy Economics for Earthjustice and Environmental Integrity Project.

Glick, D., J. Frost, B. Biewald. 2020. *The Benefits of an All-Source RFP in Duke Energy Indiana's 2021 IRP Process*. Synapse Energy Economics for Energy Matters Community Coalition.

- Camp, E., B. Fagan, J. Frost, N. Garner, D. Glick, A. Hopkins, A. Napoleon, K. Takahashi, D. White, M. Whited, R. Wilson. 2019. *Phase 2 Report on Muskrat Falls Project Rate Mitigation, Revision 1 – September 25, 2019*. Synapse Energy Economics for the Board of Commissioners of Public Utilities, Province of Newfoundland and Labrador.
- Camp, E., A. Hopkins, D. Bhandari, N. Garner, A. Allison, N. Peluso, B. Havumaki, D. Glick. 2019. *The Future of Energy Storage in Colorado: Opportunities, Barriers, Analysis, and Policy Recommendations*. Synapse Energy Office for the Colorado Energy Office.
- Glick, D., B. Fagan, J. Frost, D. White. 2019. *Big Bend Analysis: Cleaner, Lower-Cost Alternatives to TECO's Billion-Dollar Gas Project*. Synapse Energy Economics for Sierra Club.
- Glick, D., F. Ackerman, J. Frost. 2019. *Assessment of Duke Energy's Coal Ash Basin Closure Options Analysis in North Carolina*. Synapse Energy Economics for the Southern Environmental Law Center.
- Glick, D., N. Peluso, R. Fagan. 2019. *San Juan Replacement Study: An alternative clean energy resource portfolio to meet Public Service Company of New Mexico's energy, capacity, and flexibility needs after the retirement of the San Juan Generating Station*. Synapse Energy Economics for Sierra Club.
- Suphachalasai, S., M. Touati, F. Ackerman, P. Knight, D. Glick, A. Horowitz, J.A. Rogers, T. Amegroud. 2018. *Morocco – Energy Policy MRV: Emission Reductions from Energy Subsidies Reform and Renewable Energy Policy*. Prepared for the World Bank Group.
- Camp, E., B. Fagan, J. Frost, D. Glick, A. Hopkins, A. Napoleon, N. Peluso, K. Takahashi, D. White, R. Wilson, T. Woolf. 2018. *Phase 1 Findings on Muskrat Falls Project Rate Mitigation*. Synapse Energy Economics for Board of Commissioners of Public Utilities, Province of Newfoundland and Labrador.
- Allison, A., R. Wilson, D. Glick, J. Frost. 2018. *Comments on South Africa 2018 Integrated Resource Plan*. Synapse Energy Economics for Centre for Environmental Rights.
- Hopkins, A. S., K. Takahashi, D. Glick, M. Whited. 2018. *Decarbonization of Heating Energy Use in California Buildings: Technology, Markets, Impacts, and Policy Solutions*. Synapse Energy Economics for the Natural Resources Defense Council.
- Knight, P., E. Camp, D. Glick, M. Chang. 2018. *Analysis of the Avoided Costs of Compliance of the Massachusetts Global Warming Solutions Act*. Supplement to 2018 AESC Study. Synapse Energy Economics for Massachusetts Department of Energy Resources and Massachusetts Department of Environmental Protection.
- Fagan, B., R. Wilson, S. Fields, D. Glick, D. White. 2018. *Nova Scotia Power Inc. Thermal Generation Utilization and Optimization: Economic Analysis of Retention of Fossil-Fueled Thermal Fleet to and Beyond 2030 – M08059*. Prepared for Board Counsel to the Nova Scotia Utility Review Board.
- Ackerman, F., D. Glick, T. Vitolo. 2018. *Report on CCR proposed rule*. Prepared for Earthjustice.
- Lashof, D. A., D. Weiskopf, D. Glick. 2014. *Potential Emission Leakage Under the Clean Power Plan and a Proposed Solution: A Comment to the US EPA*. NextGen Climate America.

Smith, O., M. Lehrman, D. Glick. 2014. *Rate Design for the Distribution Edge*. Rocky Mountain Institute.

Hansen, L., V. Lacy, D. Glick. 2013. *A Review of Solar PV Benefit & Cost Studies*. Rocky Mountain Institute.

TESTIMONY

Michigan Public Service Commission (Case No. U-20528): Direct Testimony of Devi Glick in the matter of the Application of DTE Electric Company for reconciliation of its power supply cost recovery plan (Case No. U-20527) for the 12-month period ending December 31, 2020. On behalf of Michigan Environmental Council. November 23, 2021.

Public Utilities Commission of Ohio (Case No. 20-167-EL-RDR): Direct Testimony of Devi Glick in the Matter of the Review of the Reconciliation Rider of Duke Energy Ohio, Inc. On behalf of The Office of the Ohio Consumer's Counsel. October 26, 2021.

Public Utilities Commission of Nevada (Docket No. 21-06001): Phase III Direct Testimony of Devi Glick in the joint application of Nevada Power Company d/b/a NV Energy and Sierra Pacific Power Company d/b/a NV Energy for approval of their 2022-2041 Triennial Intergrade Resource Plan and 2022-2024 Energy Supply Plan. On behalf of Sierra Club and Natural Resource Defense Council. October 6, 2021.

Public Service Commission of South Carolina (Docket No, 2021-3-E): Direct Testimony of Devi Glick in the matter of the annual review of base rates for fuel costs for Duke Energy Carolinas, LLC (for potential increase or decrease in fuel adjustment and gas adjustment). On behalf of the South Carolina Coastal Conservation League and the Southern Alliance for Clean Energy. September 10, 2021.

North Carolina Utilities Commission (Docket No. E-7, Sub 1250): Direct Testimony of Devi Glick in the matter of the application of Duke Energy Progress, LLC pursuant to N.C.G.S § 62-133.2 and commission R8-5 relating to fuel and fuel-related change adjustments for electric utilities. On behalf of Sierra Club. August 31, 2021.

Michigan Public Service Commission (Docket No. U-20530): Direct Testimony of Devi Glick in the application of Indiana Michigan Power Company for a Power Supply Cost Recovery Reconciliation proceeding for the 12-month period ending December 31, 2020. On behalf of the Michigan Attorney General. August 24, 2021.

Public Utilities Commission of Nevada (Docket No. 21-06001): Phase I Direct Testimony of Devi Glick in the joint application of Nevada Power Company d/b/a NV Energy and Sierra Pacific Power Company d/b/a NV Energy for approval of their 2022-2041 Triennial Intergrade Resource Plan and 2022-2024 Energy Supply Plan. On behalf of Sierra Club and Natural Resource Defense Council. August 16, 2021.

North Carolina Utilities Commission (Docket No. E-7, Sub 1250): Direct Testimony of Devi Glick in the Mater of Application Duke Energy Carolinas, LLC Pursuant to §N.C.G.S 62-133.2 and Commission Rule R8-5 Relating to Fuel and Fuel-Related Charge Adjustments for Electric Utilities. On behalf of Sierra Club. May 17, 2021.

Public Utility Commission of Texas (PUC Docket No. 51415): Direct Testimony of Devi Glick in the application of Southwestern Electric Power Company for authority to change rates. On behalf of Sierra Club. March 31, 2021.

Michigan Public Service Commission (Docket No. U-20804): Direct Testimony of Devi Glick in the application of Indiana Michigan Power Company for approval of a Power Supply Cost Recovery Plan and factors (2021). On behalf of Sierra Club. March 12, 2021.

Public Utility Commission of Texas (PUC Docket No. 50997): Direct Testimony of Devi Glick in the application of Southwestern Electric Power Company for authority to reconcile fuel costs for the period May 1, 2017- December 31, 2019. On behalf of Sierra Club. January 7, 2021.

Public Service Commission of Wisconsin (Docket No. 3270-UR-123): Surrebuttal Testimony of Devi Glick in the application of Madison Gas and Electric Company for authority to change electric and natural gas rates. On behalf of Sierra Club. September 29, 2020.

Public Service Commission of Wisconsin (Docket No. 6680-UR-122): Surrebuttal Testimony of Devi Glick in the application of Wisconsin Power and Light Company for approval to extend electric and natural gas rates into 2021 and for approval of its 2021 fuel cost plan. On behalf of Sierra Club. September 21, 2020.

Public Service Commission of Wisconsin (Docket No. 3270-UR-123): Direct Testimony and Exhibits of Devi Glick in the application of Madison Gas and Electric Company for authority to change electric and natural gas rates. On behalf of Sierra Club. September 18, 2020.

Public Service Commission of Wisconsin (Docket No. 6680-UR-122): Direct Testimony and Exhibits of Devi Glick in the application of Wisconsin Power and Light Company for approval to extend electric and natural gas rates into 2021 and for approval of its 2021 fuel cost plan. On behalf of Sierra Club. September 8, 2020.

Indiana Utility Regulatory Commission (Cause No. 38707-FAC125): Direct Testimony and Exhibits of Devi Glick in the application of Duke Energy Indiana, LLC for approval of a change in its fuel cost adjustment for electric service. On behalf of Sierra Club. September 4, 2020.

Indiana Utility Regulatory Commission (Cause No. 38707-FAC123 S1): Direct Testimony and Exhibits of Devi Glick in the Subdocket for review of Duke Energy Indian, LLC's Generation Unit Commitment Decisions. On behalf of Sierra Club. July 31, 2020.

Indiana Utility Regulatory Commission (Cause No. 38707-FAC124): Direct Testimony and Exhibits of Devi Glick in the application of Duke Energy Indiana, LLC for approval of a change in its fuel cost adjustment for electric service. On behalf of Sierra Club. June 4, 2020.

Arizona Corporation Commission (Docket No. E-01933A-19-0028): Rely to Late-filed ACC Staff Testimony of Devi Glick in the application of Tucson Electric Power Company for the establishment of just and reasonable rates. On behalf of Sierra Club. May 8, 2020.

Indiana Utility Regulatory Commission (Cause No. 38707-FAC123): Direct Testimony and Exhibits of Devi Glick in the application of Duke Energy Indiana, LLC for approval of a change in its fuel cost adjustment for electric service. On behalf of Sierra Club. March 6, 2020.

Texas Public Utility Commission (PUC Docket No. 49831): Direct Testimony of Devi Glick in the application of Southwestern Public Service Company for authority to change rates. On behalf of Sierra Club. February 10, 2020.

New Mexico Public Regulation Commission (Case No. 19-00170-UT): Testimony of Devi Glick in Support of Uncontested Comprehensive Stipulation. On behalf of Sierra Club. January 21, 2020.

Michigan Public Service Commission (Docket No. U-20224): Direct Testimony of Devi Glick in the application of Indiana Michigan Power Company for Reconciliation of its Power Supply Cost Recovery Plan. On behalf of the Sierra Club. December 31, 2019.

Nova Scotia Utility and Review Board (Matter M09420): Expert Evidence of Fagan, B, D. Glick reviewing Nova Scotia Power's Application for Extra Large Industrial Active Demand Control Tariff for Port Hawkesbury Paper. Prepared for Nova Scotia Utility and Review Board Counsel. December 3, 2019.

New Mexico Public Regulation Commission (Case No. 19-00170-UT): Direct Testimony of Devi Glick regarding Southwestern Public Service Company's application for revision of its retail rates and authorization and approval to shorten the service life and abandon its Tolk generation station units. On behalf of Sierra Club. November 22, 2019.

North Carolina Utilities Commission (Docket No. E-100, Sub 158): Responsive testimony of Devi Glick regarding battery storage and PURPA avoided cost rates. On behalf of Southern Alliance for Clean Energy. July 3, 2019.

State Corporation Commission of Virginia (Case No. PUR-2018-00195): Direct testimony of Devi Glick regarding the economic performance of four of Virginia Electric and Power Company's coal-fired units and the Company's petition to recover costs incurred to company with state and federal environmental regulations. On behalf of Sierra Club. April 23, 2019.

Connecticut Siting Council (Docket No. 470B): Joint testimony of Robert Fagan and Devi Glick regarding NTE Connecticut's application for a Certificate of Environmental Compatibility and Public Need for the Killingly generating facility. On behalf of Not Another Power Plant and Sierra Club. April 11, 2019.

Public Service Commission of South Carolina (Docket No. 2018-3-E): Surrebuttal testimony of Devi Glick regarding annual review of base rates of fuel costs for Duke Energy Carolinas. On behalf of South Carolina Coastal Conservation League and Southern Alliance for Clean Energy. August 31, 2018.

Public Service Commission of South Carolina (Docket No. 2018-3-E): Direct testimony of Devi Glick regarding the annual review of base rates of fuel costs for Duke Energy Carolinas. On behalf of South Carolina Coastal Conservation League and Southern Alliance for Clean Energy. August 17, 2018.

Public Service Commission of South Carolina (Docket No. 2018-1-E): Surrebuttal testimony of Devi Glick regarding Duke Energy Progress' net energy metering methodology for valuing distributed energy resources system within South Carolina. On behalf of South Carolina Coastal Conservation League and Southern Alliance for Clean Energy. June 4, 2018.

Public Service Commission of South Carolina (Docket No. 2018-1-E): Direct testimony of Devi Glick regarding Duke Energy Progress' net energy metering methodology for valuing distributed energy resources system within South Carolina. On behalf of South Carolina Coastal Conservation League and Southern Alliance for Clean Energy. May 22, 2018.

Public Service Commission of South Carolina (Docket No. 2018-2-E): Direct testimony of Devi Glick on avoided cost calculations and the costs and benefits of solar net energy metering for South Carolina Electric and Gas Company. On behalf of South Carolina Coastal Conservation League and Southern Alliance for Clean Energy. April 12, 2018.

Public Service Commission of South Carolina (Docket No. 2018-2-E): Surrebuttal testimony of Devi Glick on avoided cost calculations and the costs and benefits of solar net energy metering for South Carolina Electric and Gas Company. On behalf of South Carolina Coastal Conservation League and Southern Alliance for Clean Energy. April 4, 2018.

Resume updated December 2021

**IN THE UNITED STATES BANKRUPTCY COURT
FOR THE NORTHERN DISTRICT OF OHIO
AKRON DIVISION**

)	
In re:	)	Chapter 11
)	
FIRSTENERGY SOLUTIONS CORP., <i>et al.</i> , ¹	)	Case No. 18-50757
	)	(Request for Joint Administration
Debtors.	)	Pending)
)	
	)	Hon. Judge Alan M. Koschik
)	

EXPERT DECLARATION OF JUDAH L. ROSE IN SUPPORT OF: (1) THE MOTION OF FIRSTENERGY SOLUTIONS CORP. AND FIRSTENERGY GENERATION, LLC FOR PRELIMINARY AND PERMANENT INJUNCTION AND *EX PARTE* TEMPORARY RESTRAINING ORDER AGAINST THE FEDERAL ENERGY REGULATORY COMMISSION; (2) THE MOTION FOR ENTRY OF AN ORDER AUTHORIZING FIRSTENERGY SOLUTIONS CORP. AND FIRSTENERGY GENERATION, LLC TO REJECT CERTAIN ENERGY CONTRACTS; AND (3) THE MOTION FOR ENTRY OF AN ORDER AUTHORIZING FIRSTENERGY SOLUTIONS CORP. AND FIRSTENERGY GENERATION, LLC TO REJECT A CERTAIN MULTI-PARTY INTERCOMPANY POWER PURCHASE AGREEMENT WITH THE OHIO VALLEY ELECTRIC CORPORATION

I, Judah L. Rose, hereby declare under penalty of perjury:

1. My name is Judah L. Rose. I am an Executive Director of ICF International (“ICF”). My business address is 9300 Lee Highway, Fairfax, Virginia 22031.
2. I respectfully submit this expert Declaration in support of (i) *the Motion of FirstEnergy Solutions Corp. (“FES”) and FirstEnergy Generation, LLC (“FG”) for Permanent and Preliminary Injunction and Ex Parte Temporary Restraining Order Against the Federal Energy Regulatory Commission (“FERC”)* in the above captioned adversary proceeding; (ii) *the Motion of FES and FG for Entry of an Order Authorizing FES and FG to Reject Certain Energy*

¹ The Debtors in these chapter 11 cases, along with the last four digits of each Debtor’s federal tax identification number, are: FE Aircraft Leasing Corp. (9245), case no. 18-50759; FirstEnergy Generation, LLC (0561), case no. 18-50762; FirstEnergy Generation Mansfield Unit 1 Corp. (5914), case no. 18-50763; FirstEnergy Nuclear Generation, LLC (6394), case no. 18-50760; FirstEnergy Nuclear Operating Company (1483), case no. 18-50761; FirstEnergy Solutions Corp. (0186); and Norton Energy Storage L.L.C. (6928), case no. 18-50764. The Debtors’ address is: 341 White Pond Dr., Akron, OH 44320.

Contracts; and (iii) the Motion of FES and FG for Entry of an Order Authorizing FES and FG to Reject a Certain Multi-Party Intercompany Power Purchase Agreement with the Ohio Valley Electric Corporation.

3. I received a degree in economics from the Massachusetts Institute of Technology and a Master's Degree in Public Policy from the John F. Kennedy School of Government at Harvard University. I have worked at ICF for over 35 years. I am an Executive Director and Chair of ICF's Energy Advisory and Solutions practice. I have also served as a member of the Board of Directors of ICF International and am one of three people among ICF's roster of approximately 5,000 professionals to have received ICF's honorary title of Distinguished Consultant.

4. ICF works with a variety of clients across the private and public energy sectors including governmental entities (such as the Federal Energy Regulatory Commission, the U.S. Department of Energy, state regulators and energy agencies), and private companies such as American Electric Power, Allegheny, Arizona Power Service, Dominion Power, Delmarva Power & Light, Dominion, Duke Energy, FirstEnergy, Entergy, Exelon, Florida Power & Light, Long Island Power Authority, National Grid, Northeast Utilities, Southern California Edison, Sempra, PacifiCorp, Pacific Gas and Electric, Public Service Electric and Gas, PEPCO, Public Service of New Mexico, Nevada Power, and Tucson Electric. ICF also works with Regional Transmission Organizations and similar organizations. I have personally consulted with or testified as an energy industry expert on behalf of most of the listed clients.

5. I have extensive experience in assessing wholesale electric power market design and regulation. I also have extensive experience forecasting wholesale electricity prices, power plant operations and revenues, transmission flows, and fuel prices (e.g., coal, natural gas,

renewable energy). I also have extensive experience in valuing individual power plants in the context of projected market conditions.

6. ICF was retained by counsel to the Debtors in April of 2017 to calculate the losses to the Debtors associated with: (a) eight burdensome executory power purchase agreements (the “PPAs”) under which FES buys energy, capacity, and renewable energy credits (“RECs”); and (b) a certain multi-party intercompany power purchase agreement with the Ohio Valley Electric Corporation (as amended and restated, the “OVEC ICPA” and together with the PPAs, the “Executory PPAs”). Specifically, ICF was retained to determine the short and long-term costs of continued performance. ICF performed an initial analysis of the Executory PPAs in mid-2017, and then updated its work commencing in January 2018.

7. The background of the Executory PPAs, which expire between 2024 and 2040, is described in greater detail in the Declaration of Kevin T. Warvell. At the time ICF was retained, the Debtors had already identified these contracts as burdensome and unnecessary to their business, and had performed preliminary calculations. I, along with my colleague David Gerhardt, have reviewed documents made available to me by counsel, including the Executory PPAs, and numerous operational and financial reports from the Debtors, and performed other investigations to determine the facts and circumstances in this declaration. This declaration is based on my personal knowledge and a review of relevant documents and various calculations and data. I have used principles generally accepted in the energy markets for estimating the costs to the Debtors of the Executory PPAs and forecasting the future value of energy and renewable energy credits. If called as a witness, I could and would testify competently thereto.

8. Market circumstances have resulted in an extended period of commodity prices and REC prices much below those prices found in the Executory PPAs. The main drivers to the collapse in prices include:

- Lower natural gas prices due to continued improvements in natural gas fracking;
- Excess generating capacity due in part to lower than expected load growth;
- Lower cost of construction for renewable technologies, and/or improved performance (*e.g.*, higher capacity factors); and
- Surplus of RECs.

Taken together, these market forces have decreased wholesale electricity prices, and prices of RECs, to levels not envisioned at the time the Executory PPAs were signed. Such market forces have prevailed for the last three to four years and are now expected to continue for the next few years, at a minimum.

9. ICF has individually assessed the Executory PPAs to determine the estimated losses to FES and FG of performing such contracts over their lifetime. These calculations took into account the length of the contracts, the contract price, the expected volume using historical data, and the expected revenue streams. With respect to the OVEC ICPA, ICF took into account both fixed and variable costs such as fuel, coal, variable and fixed operations and management costs, capital expenditures, financing costs and emissions costs associated with that agreement. ICF's calculations used an internal production cost model which simulated the specific power markets in which the Ohio Valley Electric Corporation ("OVEC") and the other contract counterparties operate.

10. To determine the future losses, ICF compared the cost of the contracts over their lifetime with the forecasted future power prices in the market. In forecasting these rates, ICF looked separately at energy price, capacity price, and REC price. For the years 2018-2020, ICF was able to use the actual PJM auction price for capacity prices.² For energy prices and for capacity prices in later years, ICF used both a long-term 30-year pricing model and an annual model maintained in the ordinary course of business by ICF specific to the PJM marketplace which takes into account the individual players in that marketplace.

11. The assumptions underlying all calculations in the model are the results of external inputs such as OVEC production cost projections and NYMEX futures, as well as internal inputs which reflect the views of ICF's nationally recognized power practice group, which includes decorated experts in natural gas, coal, renewable energy, power modeling and energy markets. The inputs drawn from ICF's data and model are used by ICF generally (as then currently maintained) in all of its advisory, consulting and expert testimony work related to the future performance of the PJM market.

12. Based on the above-described analysis, I concluded that the estimated cost of maintaining the Executory PPAs to the estate would be \$765 million on an undiscounted basis from April 1, 2018 to December 31, 2040. On a net present value ("NPV") basis over this same time period, and using a 7% discount rate, the estimated cost to the estate would be \$475 million.

² "PJM" is PJM Interconnection, LLC. FES and FG conduct all of their business operations within the regional transmission organizations overseen by PJM, which is a regional transmission organization that covers all or parts of Delaware, Illinois, Indiana, Kentucky, Maryland, Michigan, New Jersey, North Carolina, Ohio, Pennsylvania, Tennessee, Virginia, West Virginia and the District of Columbia. PJM coordinates, controls, and monitors multi-state electricity grids, and controls generation and transmission operations 24 hours a day, providing instructions to producers to ensure that the electric grid performs as desired.

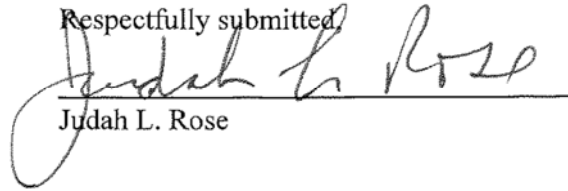
In the near term (i.e., 2019-2023), the cost to the estate would be approximately \$58 million per year.

13. Based on my review of the Warvell Declaration and diligence respecting FES generally, the capacity, power and RECs purchased under the Executory PPAs are unnecessary to FES's business, and the rejection of such agreements will not adversely impact FES's compliance with any other capacity, generation or retail obligations or the price or availability of power within PJM.

14. The estimated costs reflect an expected or base case. This case is based on available information about market and regulatory conditions. I have also examined sensitivity cases and all cases show high estimated damages. In the event of new information becoming available, I may update or refine these estimates.

Pursuant to 28 U.S.C. § 1746, I declare under penalty of perjury that the foregoing is true and correct.

DATED:

Respectfully submitted,


Judah L. Rose

UNITED STATES BANKRUPTCY COURT
NORTHERN DISTRICT OF OHIO
EASTERN DIVISION

	)	Chapter 11
In re:)	
	)	Case No. 18-50757
FIRSTENERGY SOLUTIONS CORP., <i>et al.</i> , ¹	)	(Request for Joint Administration
	)	Pending)
Debtors.)	
	)	Hon. Judge Alan M. Koschik
)	

DECLARATION OF KEVIN T. WARVELL IN SUPPORT OF: (1) THE MOTION OF FIRSTENERGY SOLUTIONS CORP. AND FIRSTENERGY GENERATION, LLC FOR PRELIMINARY AND PERMANENT INJUNCTION AND *EX PARTE* TEMPORARY RESTRAINING ORDER AGAINST THE FEDERAL ENERGY REGULATORY COMMISSION; AND (2) THE MOTION FOR ENTRY OF AN ORDER AUTHORIZING FIRSTENERGY SOLUTIONS CORP. AND FIRSTENERGY GENERATION, LLC TO REJECT CERTAIN ENERGY CONTRACTS; AND (3) THE MOTION FOR ENTRY OF AN ORDER AUTHORIZING FIRSTENERGY SOLUTIONS CORP. AND FIRSTENERGY GENERATION, LLC TO REJECT A CERTAIN MULTI-PARTY INTERCOMPANY POWER PURCHASE AGREEMENT WITH THE OHIO VALLEY ELECTRIC CORPORATION

I, Kevin T. Warvell, hereby declare under penalty of perjury:

1. I am the Vice President, Chief Financial Officer, Treasurer and Corporate Secretary for FirstEnergy Solutions Corp. (“FES”). I have been employed by the Debtors since 2001, initially as a Manager of Business Services, and I subsequently served as Director of Planning Analysis, Director of Wholesale Power/Transmission Utilization, and Director of Rate Strategy. I was promoted to my current position in January 2011. I am familiar with the Debtors’ day-to-day operations and business affairs, and I am specifically familiar with the

¹ The Debtors in these chapter 11 cases, along with the last four digits of each Debtor’s federal tax identification number, are: FE Aircraft Leasing Corp. (9245), case no. 18-50759; FirstEnergy Generation, LLC (0561), case no. 18-50762; FirstEnergy Generation Mansfield Unit 1 Corp. (5914), case no. 18-50763; FirstEnergy Nuclear Generation, LLC (6394), case no. 18-50760; FirstEnergy Nuclear Operating Company (1483), case no. 18-50761; FirstEnergy Solutions Corp. (0186); and Norton Energy Storage L.L.C. (6928), case no. 18-50764. The Debtors’ address is: 341 White Pond Dr., Akron, OH 44320.

Debtors' negotiation, execution and performance of its wholesale energy contracts, including the Executory PPAs, defined below.

2. I submit this declaration in Support of (i) the *Motion of FES and FirstEnergy Generation, LLC (“FG”) for Permanent and Preliminary Injunction and Ex Parte Temporary Restraining Order Against the Federal Energy Regulatory Commission (“FERC”)* in the above captioned adversary proceeding; and (ii) the *Motion of FES and FG for Entry of an Order Authorizing FES and FG to Reject Certain Energy Contracts* (the “Rejection Motion”); and (iii) the *Motion of FES and FG for Entry of an Order Authorizing FES and FG to Reject a Certain Multi-Party Intercompany Power Purchase Agreement with the Ohio Valley Electric Corporation* (the “OVEC ICPA Rejection Motion”, collectively, with the Rejection Motion, the “Rejection Motions”).

3. By the Rejection Motions, the Debtors are seeking to reject certain long-term power purchase agreements (the “Executory PPAs”). As explained below, the Executory PPAs are executory contracts, running many years into the future, and are wholly unnecessary to the Debtors' business. The Executory PPAs constitute a very small and insignificant part of the Debtors' overall business, but impose a very significant financial burden that threatens the Debtors' ability to restructure. The Executory PPAs comprise the PPAs (defined in Paragraph 6) and the OVEC ICPA (defined in Paragraph 17).

The Renewable Power Purchase Agreements

4. Renewable portfolio standards (“RPS”) obligate *retail* sellers of electricity to obtain a certain percentage or amount of their power supply from renewable energy sources. States develop their RPS programs individually, and each RPS mandate has its own parameters, rules, and requirements, especially with respect to qualifying generation sources, renewable

resource goals (usually expressed as a percentage of total load), and target dates for compliance. RPS requirements may be met by obtaining renewable energy credits (“RECs”) that provide evidence that power has been generated by a qualifying renewable resource.

5. RECs provide evidence of the generation of electricity from a qualifying renewable facility. Typically, one REC is created for every megawatt-hour (MWh) of energy produced from a qualifying facility. The RECs may be sold with the power or separately. The ability to realize income from the sale of RECs is a contributor to the economics of a renewable facility.

6. FES presently sells power to retail customers in Illinois, Maryland, Michigan, New Jersey, Ohio, and Pennsylvania. Historically, FES obtained the necessary RECs through eight power purchase agreements that Plaintiffs entered with various counterparties between 2003 and 2011 (collectively, the “PPAs”),² each of which obligates FES to purchase renewable energy and the accompanying RECs at specified prices during the term of the agreement. These PPAs have remaining terms running to various end dates between 2024 and 2033. The counterparties supply their power directly to the grid; under the terms of the PPAs it is deemed as a financial matter to have been bought by Plaintiffs (at the contract price) and re-wholesaled back into the local Regional Transmission Organization at current market prices.

7. The contract price in each of the PPAs is a “bundled” price that includes the cost of power, RECs, capacity and ancillary services. The PPAs together represent a very small portion of the aggregate energy (less than 3%) the Debtors generate and/or acquire from others.

8. The PPAs and a summary of their material terms is below:

² Also included in the definition of “PPAs” as used herein is a certain power purchase agreement with Forked River Power, LLC, a dual-fuel fired cycle combustion turbine power producer.

- a. Wind Power Purchase Agreements between FES and Allegheny Ridge Wind Farm, LLC (Phase 1 and Phase 2)
Contract Date: March 21, 2006
Termination Date: December 31, 2030
Contract Price: \$65.00/MWh
- b. Power Purchase Agreement between FES and Blue Creek Wind Farm LLC³
Contract Date: February 8, 2011
Termination Date: December 31, 2032
Contract Price: \$61.91-88.08/MWh⁴
- c. Wholesale Purchase and Sale Agreement for Wind Energy between FES and Casselman Windpower LLC
Contract Date: November 30, 2006
Termination Date: 23rd Anniversary of Delivery Commencement Date
Contract Price: \$72.49-94.72/MWh⁵
- d. Renewable Resource Power Purchase Agreement between FES and High Trail Wind Farm, LLC

³ Blue Creek Wind Farm is presently in default on this agreement. FES reserves all rights under this agreement, including the right to terminate the contract per its terms, rendering rejection unnecessary.

⁴ Contract Price escalates during each year of the term as follows: January 1, 2018 through December 31, 2018: \$61.91/MWh; January 1, 2019 through December 31, 2019: \$63.49/MWh; January 1, 2020 through December 31, 2020: \$65.11/MWh; January 1, 2021 through December 31, 2021: \$66.77/MWh; January 1, 2022 through December 31, 2022: \$68.48/MWh; January 1, 2023 through December 31, 2023: \$70.22/MWh; January 1, 2024 through December 31, 2024: \$72.01/MWh; January 1, 2025 through December 31, 2025: \$73.85/MWh; January 1, 2026 through December 31, 2026: \$75.73/MWh; January 1, 2027 through December 31, 2027: \$77.67/MWh; January 1, 2028 through December 31, 2028: \$79.64/MWh; January 1, 2029 through December 31, 2029: \$81.67/MWh; January 1, 2030 through December 31, 2030: \$83.76/MWh; January 1, 2031 through December 31, 2031: \$85.89/MWh; January 1, 2032 through December 31, 2032: \$88.08/MWh.

⁵ Contract Price escalates during each year of the term as follows: December 1, 2017 through November 30, 2018: \$72.49/MWh; December 1, 2018 through November 30, 2019: \$74.00/MWh; December 1, 2019 through November 30, 2020: \$75.53/MWh; December 1, 2020 through November 30, 2021: \$77.10/MWh; December 1, 2021 through November 30, 2022: \$78.71/MWh; December 1, 2022 through November 30, 2023: \$80.35/MWh; December 1, 2023 through November 30, 2024: \$82.00/MWh; December 1, 2024 through November 30, 2025: \$83.70/MWh; December 1, 2025 through November 30, 2026: \$85.50/MWh; December 1, 2026 through November 30, 2027: \$87.30/MWh; December 1, 2027 through November 30, 2028: \$89.10/MWh; December 1, 2028 through November 30, 2029: \$91.0/MWh; December 1, 2029 through November 30, 2030: \$92.90/MWh; December 1, 2030 through end of Term: \$94.72/MWh.

Contract Date: September 14, 2007
Termination Date: 18th Anniversary of Facilities Completion
Date/Facilities Completion Termination Deadline
Contract Price: varies by year, month and hour; average annual price is
approximately \$70.8/MWh

- e. Power Purchase Agreement between FES and Krayn Wind LLC
Contract Date: August 20, 2008
Termination Date: December 31, 2030
Contract Price: \$91.02-105.13/MWh⁶
- f. Power Purchase Agreement between FES and Maryland Solar LLC
Contract Date: October 14, 2011
Termination Date: 20th Anniversary of Commercial Operation Date
Contract Price: \$230.00/MWh
- g. Master Power Purchase and Sale Agreement between FES and Meyersdale
Windpower LLC
Contract Date: April 21, 2003
Termination Date: 20 year anniversary of Commercial Operation Date
Contract Price: \$39.60/MWh
- h. Wind Power Purchase Agreements between FES and North Allegheny
Wind LLC (Phase 3 and Phase 4)
Contract Date: September 18, 2006
Termination Date: 23rd Anniversary of Commercial Operation Date
Contract Price: \$74.00/MWh for years 1-12, \$68.00/MWh thereafter
- i. Master Power Purchase & Sale Agreement between FES and Forked River
Power, LLC⁷
Contract Date: April 17, 2008
Termination Date: April 17, 2018
Contract Price: Variable based upon specified ratio

9. At the time the PPAs were entered between 2003-2011, they were necessary and appropriate for FES's business because: (a) FES's actual and projected retail sales were greater

⁶ Contract Price escalates during each year of the term as follow: 2018: \$91.90/MWh; 2019: \$92.08/MWh; 2020: \$93.74/MWh; 2021: \$94.71/MWh; 2022: \$95.72/MWh; 2023: \$96.76/MWh; 2024: \$97.83/MWh; 2025: \$98.95/MWh; 2026: \$100.10/MWh; 2027: \$101.29/MWh; 2028: \$102.53/MWh; 2029: \$103.81/MWh; 2030: \$105.13/MWh.

⁷ The damages calculations discussed in this declaration do not include those associated with the Master Power Purchase & Sale Agreement between FES and Forked River Power, LLC. This contract will terminate by its own terms on April 17, 2018.

than they are today; (b) market prices and outlook for power and RECs were materially greater than the current environment; (c) RPS mandates were more demanding than today; and (d) the supply of RECs was more limited. At that time, a bundled PPA was typically the only way to contract for RECs in the long-term at a fixed price. Additionally, many states had requirements that a certain percentage of the RECs had to be generated in-state.

10. However, many state-specific RPS mandates have since been relaxed and there are now an abundance of RECs available for purchase. While the PPAs made sense to FES at the time they were entered into, a dramatic downturn in the energy market and prices of RECs now renders these contracts extremely burdensome and uneconomic to FES.

11. For example, pursuant to its PPA with Krayn Wind LLC for 2018, FES is obligated to pay a fixed amount of \$91.02 per MWh (and associated REC), escalating to \$105.13 per MWh (and associated REC) by 2030. This is nearly three times today's market value of \$36.00 for such power and REC. Based on current expectations, FES will lose approximately \$103 million over the remaining term of this one PPA alone.

12. The PPAs are all the more burdensome to the Debtors because FES does not have any business or regulatory need for the power, the RECs or the standby capacity that the Debtors receive under the PPAs. FES previously made the determination to phase out its retail business, and currently sells substantially less power in the retail market than it did just four years ago. In 2013, FES sold more than 110 terawatt hours (“TWh”) of power. This year, FES expects to sell less than half of that amount. Crucially, FES's need for RECs is tied directly to its retail business, and such need will be eliminated entirely once FES has fully exited that business (at the conclusion of a successful bankruptcy process.)⁸

⁸ FES is in the process of marketing its retail business for sale (the “Retail Book Sale”).

13. Today, FES has enough of a surplus of RECs in inventory to engage in its retail business for three years. In fact, FES has such an excess of RECs in its inventory that it is currently selling those excess RECs in the open market. However, as FES expects to sell its entire retail business in the near term, it does not need to purchase additional RECs. Nor does FES have any other need for the power or capacity provided by the PPAs.

14. In 2016, FES determined that the PPAs were burdensome and began to attempt to quantify the losses to FES associated with these agreements over the near term. We estimated that such losses would be approximately \$40 million to \$50 million per year. In April 2017, Debtors' counsel retained ICF to perform more exacting calculations and to conduct such analysis through the end date of the PPAs, *i.e.* 2024-2033. I am familiar with ICF and believe they are well qualified to perform these calculations.

15. The power bought and sold under the PPAs constituted approximately less than 3% of FES's total wholesale business in 2017, yet the PPAs impose enormous losses. ICF has projected that FES will lose approximately \$500 million on an undiscounted basis if FES is required to perform under the PPAs through the end of the contract terms. Those calculations are summarized in the accompanying Declaration of Judah Rose. I have reviewed that declaration and the attached calculations and I concur with ICF's assumptions, methodology and conclusions.

16. Because losses of this magnitude would impose an unsustainable financial burden on the Debtors, and because FES no longer has a need for the RECs which justified its entry into the PPAs in the first place, I concluded that the PPAs should be rejected.

The OVEC Intercompany Power Purchase Agreement

17. FG is a party to a multi-party intercompany power purchase agreement (the “OVEC ICPA”) pursuant to which it and several other power companies “sponsor” and purchase power generated by fossil fuel from the Ohio Valley Electric Corporation (“OVEC”).⁹ The OVEC ICPA obligates FG to purchase 4.85% of the power that OVEC’s fossil-fuel plants generate at an uneconomic rate until either the year 2040 or until OVEC ceases to operate. Last year, this resulted in FG purchasing approximately 0.6 TWh.

18. In 2017, the OVEC ICPA accounted for roughly 1.1% of the power FES sold at wholesale, yet the losses associated with this contract are enormous. ICF has calculated that FG would lose \$268 million on an undiscounted basis if FG was required to perform under the OVEC ICPA through the end of the contract term.

19. As with the PPAs, losses of this magnitude would impose an unsustainable financial burden on the Debtors. Accordingly, I concluded the OVEC ICPA should be rejected.

No Effect on Power Supply

20. FES and FG conduct all of their business operations within the regional transmission organizations (“RTOs”) overseen by PJM Interconnection LLC (“PJM”), which is a regional transmission organization that covers all or parts of Ohio, Pennsylvania, Delaware, Illinois, Indiana, Kentucky, Maryland, Michigan, New Jersey, North Carolina, Tennessee, Virginia, West Virginia, and the District of Columbia. PJM coordinates, controls, and monitors

⁹ OVEC is owned jointly by: American Electric Power; Buckeye Power Generating; Dayton Power and Light Company; Duke Energy Ohio; LG&E and KU Energy; FirstEnergy; Vectren South; and Peninsula Generating Cooperative.

multi-state electricity grids, and controls generation and transmission operations 24 hours a day, providing instructions to producers to ensure that the electric grid performs as desired.

21. The total amount of energy bid/sold into PJM during 2017 was approximately 767 TWh. The power that FES and FG purchased under the Executory PPAs during 2017 was just 1.9 TWh, or 0.2% of the available energy in PJM. Further, the energy, capacity and RECs previously purchased by FES or FG will remain available for sale by the producers to PJM or to other wholesale suppliers because all such counterparties are connected directly to the PJM grid.

22. Given the foregoing, I cannot conceive how the rejection of the Executory PPAs will cause any disruption to the continued supply of wholesale electricity within our areas of operation, or impact the reliability of the transmission grid.

Pursuant to 28 U.S.C. § 1746, I declare under penalty of perjury that the foregoing is true and correct.

Dated:

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Kevin T. Warvell", is written over a horizontal line.

Kevin T. Warvell
Vice President, Chief Financial Officer,
Treasurer and Corporate Secretary,
FirstEnergy Solutions Corp.

**OHIO POWER COMPANY'S RESPONSE TO
THE OFFICE OF THE OHIO CONSUMERS' COUNSEL'S
NOTICE TO TAKE DEPOSITION OF AEP
AND REQUEST FOR PRODUCTION OF DOCUMENTS
PUCO CASE NOS. 18-1004-EL-RDR AND 18-1759-EL-RDR**

REQUEST FOR PRODUCTION OF DOCUMENTS

OCC-DEP-003 Any analysis showing the actual costs or revenues from the OVEC contract that AEP has collected from or credited to consumers under the PPA Rider for 2018 and 2019.

RESPONSE

The Company objects to the form of the question as this request is vague, overbroad and/or unduly burdensome. The Company further objects that this information is publicly available and can be more easily obtained through third parties or other sources. Without waiving the foregoing objections or any general objection the Company may have, the Company states please see the Company's response to LEI 1.6.2.

Prepared by:
Counsel
Jason M. Stegall

**OHIO POWER COMPANY'S RESPONSE TO
THE OFFICE OF THE OHIO CONSUMERS' COUNSEL'S
NOTICE TO TAKE DEPOSITION OF AEP
AND REQUEST FOR PRODUCTION OF DOCUMENTS
PUCO CASE NOS. 18-1004-EL-RDR AND 18-1759-EL-RDR**

REQUEST FOR PRODUCTION OF DOCUMENTS

OCC-DEP-004 Any analysis showing any comparison between: (a) the actual costs or revenues from the OVEC contract that AEP has collected from or credited to consumers under the PPA Rider; and (b) actual PJM market prices for 2018 and 2019.

RESPONSE

The Company objects to the form of the question as this request is vague, overbroad and/or unduly burdensome. The Company further objects that this information is publicly available and can be more easily obtained through third parties or other sources. The Company further objects to the extent this request seeks analysis or calculation(s) that do not exist in the form requested. Without waiving the foregoing objections or any general objection the Company may have, the Company states please see the Company's response to LEI 4.1.1, LEI 4.1.3, OCC-INT-6-04, and OCC-DEP-003.

Prepared by:
Counsel
Jason M. Stegall

**OHIO POWER COMPANY'S RESPONSE TO
THE OFFICE OF THE OHIO CONSUMERS' COUNSEL'S
NOTICE TO TAKE DEPOSITION OF AEP
AND REQUEST FOR PRODUCTION OF DOCUMENTS
PUCO CASE NOS. 18-1004-EL-RDR AND 18-1759-EL-RDR**

REQUEST FOR PRODUCTION OF DOCUMENTS

OCC-DEP-005 All documents relating to any competitive bidding process that AEP used before selecting the OVEC contact to be provided for consumers under the PPA Rider.

RESPONSE

The Company objects to the form of the question as this request is vague, overbroad and/or unduly burdensome. The Company objects to the extent the request seeks information which is outside the scope of the audit report and is neither relevant nor reasonably calculated to lead to the discovery of admissible evidence. The Company further objects to this request to the extent it is seeking information that is confidential and privileged in connection with trial preparation, settlement discussions and/or the common interest privilege protected by Ohio Civ. R. 26(B)(4). The Company further objects that this information is publicly available and can be more easily obtained through third parties or other sources. Without waiving the foregoing objections or any general objection the Company may have please see the Company's response to OCC-DEP-006.

Prepared by:

Counsel
Jason M. Stegall

**OHIO POWER COMPANY'S RESPONSE TO
THE OFFICE OF THE OHIO CONSUMERS' COUNSEL'S
NOTICE TO TAKE DEPOSITION OF AEP
AND REQUEST FOR PRODUCTION OF DOCUMENTS
PUCO CASE NOS. 18-1004-EL-RDR AND 18-1759-EL-RDR**

REQUEST FOR PRODUCTION OF DOCUMENTS

OCC-DEP-006 All documents relating to any analysis performed by AEP to show that the OVEC contract would be the least-cost resource available to serve consumers before selecting the OVEC contract to be provided for consumers under the PPA Rider.

RESPONSE

The Company objects to the form of the question as this request is vague, overbroad and/or unduly burdensome. The Company objects to the extent the request seeks information which is outside the scope of the audit report and is neither relevant nor reasonably calculated to lead to the discovery of admissible evidence. The Company further objects to this request to the extent it is seeking information that is confidential and privileged in connection with trial preparation, settlement discussions and/or the common interest privilege protected by Ohio Civ. R. 26(B)(4). The Company further objects that this information is publicly available and can be more easily obtained through third parties or other sources. Without waiving the foregoing objections or any general objection the Company may have please see the Company's response to LEI 1.6.2. Also, please see LEI 1.6.1 Attachment 3, which is the April 27, 2011 Re-Filing of Amended and Restated Inter-Company Power Agreement and Amended and Restated OVEC-IKEC Power Agreement, including the benchmark study that was filed with FERC in Docket No. ER11-3181-000. The Company further states please see the hearing transcript and Opinion and Orders issued in Case Nos. 13-2385-EL-SSO and 14-1693-EL-RDR.

Prepared by:

Counsel
Jason M. Stegall

**OHIO POWER COMPANY'S RESPONSE TO
THE OFFICE OF THE OHIO CONSUMERS' COUNSEL'S
NOTICE TO TAKE DEPOSITION OF AEP
AND REQUEST FOR PRODUCTION OF DOCUMENTS
PUCO CASE NOS. 18-1004-EL-RDR AND 18-1759-EL-RDR**

REQUEST FOR PRODUCTION OF DOCUMENTS

OCC-DEP-022 Copies of the policy or procedure relating to committing plants into the PJM or MISO Day-Ahead Energy Market that Ohio Power Company or any of its affiliates follows for any plants it owns in PJM or MISO.

RESPONSE

The Company objects to the form of the question as this request is vague, overbroad and/or unduly burdensome. The Company further objects to the extent the request seeks information which is outside the scope of the audit report and is neither relevant nor reasonably calculated to lead to the discovery of admissible evidence. The Company further objects that this request seeks information about AEP Ohio affiliated plants and MISO Day-Ahead Energy Market. Without waiving the foregoing objections or any general objection the Company may have to the extent the request seeks information related to operating OVEC operating procedures, see LEI 13.1.1 Confidential Attachment 1.

Prepared by:
Counsel
Jason M. Stegall

**OHIO POWER COMPANY'S RESPONSE TO
THE OFFICE OF THE OHIO CONSUMERS' COUNSEL'S
NOTICE TO TAKE DEPOSITION OF AEP
AND REQUEST FOR PRODUCTION OF DOCUMENTS
PUCO CASE NOS. 18-1004-EL-RDR AND 18-1759-EL-RDR**

REQUEST FOR PRODUCTION OF DOCUMENTS

OCC-DEP-023 Copies of any financial analysis of projected PJM Energy Market revenues vs. OVEC variable operating cost plus shut-down and start-up costs that OVEC used to decide how to commit the OVEC plants into the PJM Day-Ahead Energy Market from January 1, 2018 through December 31, 2019.

RESPONSE

The Company objects to the form of the question as this request is vague, overbroad and/or unduly burdensome. The Company further objects because this request seeks information about information that OVEC used and not AEP Ohio. Without waiving the foregoing objections or any general objection the Company may have the Company state that it does not have any documents responsive to this request.

Prepared by:
Counsel

**OHIO POWER COMPANY'S RESPONSE TO
THE OFFICE OF THE OHIO CONSUMERS' COUNSEL'S
NOTICE TO TAKE DEPOSITION OF AEP
AND REQUEST FOR PRODUCTION OF DOCUMENTS
PUCO CASE NOS. 18-1004-EL-RDR AND 18-1759-EL-RDR**

REQUEST FOR PRODUCTION OF DOCUMENTS

-OCC-DEP-025 A sample copy of any financial analysis of projected PJM or MISO Energy Market revenues vs. variable operating cost plus shut-down and start-up costs that Ohio Power Company or any of its affiliates currently use to decide how to commit plants into the PJM or MISO Day-Ahead Energy Market.

RESPONSE

The Company objects to the form of the question as this request is vague, overbroad and/or unduly burdensome. The Company further objects to the extent the request seeks information which is outside the scope of the audit report and is neither relevant nor reasonably calculated to lead to the discovery of admissible evidence. The Company further objects that this request seeks information about AEP Ohio affiliated plants and MISO Day-Ahead Energy Market. Without waiving the foregoing objections or any general objection the Company may have the Company states please see the documents provided in response to OCC-DEP-022.

Prepared by:

Counsel
Jason M. Stegall

**OHIO POWER COMPANY'S RESPONSE TO
THE OFFICE OF THE OHIO CONSUMERS' COUNSEL'S
NOTICE TO TAKE DEPOSITION OF AEP
AND REQUEST FOR PRODUCTION OF DOCUMENTS
PUCO CASE NOS. 18-1004-EL-RDR AND 18-1759-EL-RDR**

REQUEST FOR PRODUCTION OF DOCUMENTS

OCC-DEP-026 All documents reflecting how much of the amounts collected by AEP from consumers under the PPA Rider in 2018 and 2019 relate to a return on equity and debt service.

RESPONSE

The Company objects to the form of the question as this request is vague, overbroad and/or unduly burdensome. Without waiving the foregoing objections or any general objection the Company may have the Company states please see the Company's response to LEI 1.2.21.

Prepared by:
Counsel
Jason M. Stegall

**OHIO POWER COMPANY'S RESPONSE TO
THE OFFICE OF THE OHIO CONSUMERS' COUNSEL'S
NOTICE TO TAKE DEPOSITION OF AEP
AND REQUEST FOR PRODUCTION OF DOCUMENTS
PUCO CASE NOS. 18-1004-EL-RDR AND 18-1759-EL-RDR**

REQUEST FOR PRODUCTION OF DOCUMENTS

OCC-DEP-027 All documents and communications from January 1, 2-19 through the present date relating to how the OVEC plants or Inter-Company Power Agreement should be reflected in the AEP Sustainability Report.

RESPONSE

The Company objects to the form of the question as this request is vague, overbroad and/or unduly burdensome. The Company further objects to the extent the request seeks information which is outside the scope of the audit report and is neither relevant nor reasonably calculated to lead to the discovery of admissible evidence. The Company further objects because this request seeks documents related to a Sustainability Report of AEP Ohio's unregulated parent company, American Electric Power Corporation, and it also encompasses other AEP affiliate activities.

Prepared by:
Counsel

IGS CONFIDENTIAL EX. 1 – ATTACHMENT DG-5

IS CONFIDENTIAL

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212-455-3075

E-MAIL ADDRESS
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VIA ELECTRONIC FILING

April 27, 2011

Re: Re-Filing of Amended and Restated Inter-Company Power
Agreement and Amended and Restated OVEC-IKEC Power
Agreement
Docket No. ER11-_____

Honorable Kimberly D. Bose, Secretary
Federal Energy Regulatory Commission
888 First Street, N.E.
Washington, D.C. 20426

Dear Secretary Bose:

Pursuant to Section 205 of the Federal Power Act and Section 35.13 of the Commission's regulations, Ohio Valley Electric Corporation, together with its wholly owned subsidiary, Indiana-Kentucky Electric Corporation ("IKEC", and Ohio Valley Electric Corporation, together with IKEC, herein referred to as "OVEC") hereby re-submits its March 23, 2011 filing made in Docket No. ER11-3181 due to inadvertent use of an incorrect Filing Type. This re-submission, as before, includes:

- (1) An Amended and Restated Inter-Company Power Agreement, dated as of September 10, 2010 ("Amended ICPA") among OVEC and other parties thereto (referred to as the "Sponsoring Companies"),¹ which amends and

¹ The "Sponsoring Companies" are: Allegheny Energy Supply Company, LLC, Appalachian Power Company ("Appalachian"), Buckeye Power Generating, LLC ("Buckeye"), Columbus Southern Power Company ("CSP"), The Dayton Power and Light Company ("Dayton Power"), Duke Energy Ohio, Inc. ("Duke Ohio"), FirstEnergy Generation Corp. ("FirstEnergy Generation"), Indiana Michigan Power Company ("I&M"), Kentucky Utilities Company ("KU"), Louisville Gas and Electric Company ("LG&E"), Monongahela Power Company ("Mon Power"), Ohio Power Company ("OPCo"), Peninsula Generation Cooperative ("Peninsula") and Southern Indiana Gas and Electric Company ("SIGECO").

restates in its entirety the current Amended and Restated Inter-Company Power Agreement, dated as of March 13, 2006, as amended by Modification No. 1, dated as of March 13, 2006 (the “Current ICPA”).

- (2) An Amended and Restated Power Agreement, dated as of September 10, 2010 (“Amended OVEC-IKEC Agreement”) between OVEC and IKEC, which amends and restates in its entirety the current Amended and Restated Power Agreement, dated as of March 13, 2006 (the “Current OVEC-IKEC Agreement”).

In accordance with the Commission’s Order No. 714, OVEC hereby submits the above agreements in eTariff format and, as discussed below, respectfully requests a shortened notice period of fourteen (14) days and waiver of the Commission’s 60-day notice requirements pursuant to Section 35.11 of its regulations to the extent necessary to grant an effective date as soon as possible, but in any event on or before May 23, 2011, which is sixty (60) days after the date of OVEC’s original March 23, 2011 filing.

I. Resubmittal

OVEC previously filed the Amended ICPA and the Amended OVEC-IKEC Agreement in Docket No. ER11-3181 on March 23, 2011. In that filing, OVEC erroneously used Filing Type 370 (Refile Tariff (Baseline Filing)) instead of Filing Type 390 (New Company’s Tariff (Initial Tariff Baseline)). In accordance with direction from the Commission’s Staff, OVEC filed a cancellation request for the March 23, 2011 filing in Docket No. ER11-3181 and is hereby re-submitting the Amended ICPA and Amended OVEC-IKEC Agreement to correct the Filing Type. In addition, OVEC corrects an error in two of the attachments to the March 23rd filing (Amended ICPA Clean Tariff and Marked

Tariff) and the XML file.² However, the substance of the March 23, 2011 filing, contained in the attached Transmittal Letter, remains accurate and is hereby incorporated by reference.

II. Effective Date

As further explained in the attached March 23, 2011 filing letter, OVEC requested an effective date of May 23, 2011. OVEC originally filed and served the Amended ICPA and Amended OVEC-IKEC Agreement on March 23, 2011 in Docket No. ER11-3181. The Commission published a notice of filing in the Federal Register on March 31, 2011, establishing a comment period ending at 5 p.m. Eastern Time on April 13, 2011.³ No comments, protests, or interventions were filed. Because the cancellation request for the March 23, 2011 filing and this re-submission of the Amended ICPA and Amended OVEC-IKEC Agreement merely correct ministerial mistakes, OVEC respectfully requests a shortened notice period of fourteen (14) days and that the Commission waive its 60-day notice requirements pursuant to Section 35.11 of its regulations to the extent necessary to grant an effective date as soon as possible, but in any event on or before May 23, 2011, which is sixty (60) days after the date of OVEC's original March 23, 2011 filing. Such waiver will permit OVEC to timely refinance its current long-term debt and take other actions to ensure its continued operations consistent with the Amended ICPA and will not prejudice any interested parties, who have been on notice of the Amended ICPA and Amended OVEC-IKEC Agreement since March 23, 2011 and to date have filed no comments, protests, or interventions.

² In the March 23rd filing, OVEC erroneously included clean and marked tariff attachments and XML text that omitted a final change to the underlying contract. In particular, the previously filed attachments and XML text did not include Peninsula as a Sponsoring Company (Peninsula acquired a 6.65% interest in the Current ICPA from FirstEnergy Generation and became a signatory to the Amended ICPA prior to the submission of OVEC's initial application). The attachments filed herewith correct this error. The other attachments included in the previous filing, including the executed version of the Amended ICPA appended to the Transmittal Letter and all versions of the Amended OVEC-IKEC Agreement, were correct and complete.

³ Combined Notice of Filings, 76 Fed. Reg. 17,850 (Mar. 31, 2011).

III. Documents submitted

Submitted with this resubmittal letter are:

- (a) The March 23, 2011 transmittal letter, including execution copies of the Amended ICPA, Amended OVEC-IKEC Agreement, and Certificates of Concurrence of each of the Sponsoring Companies as to the Amended ICPA;⁴
- (b) Copies of the Amended ICPA and Amended OVEC-IKEC Agreement (in eTariff format);
- (c) A blacklined copy of the Amended ICPA, showing changes from the composite copy of the Current ICPA (including Mod. No. 1) (in eTariff format); and
- (d) A blacklined copy of the Amended OVEC-IKEC Agreement, showing changes from the Current OVEC-IKEC Agreement (in eTariff format).

⁴ OVEC filed Certificates of Concurrence from each of the Sponsoring Companies with respect to the Amended ICPA out of an abundance of caution since the Current ICPA contained certain ECAR emergency energy provisions permitting the Sponsoring Companies to sell emergency energy to OVEC. Since these ECAR requirements are no longer applicable, they have been removed in the Amended ICPA and thus the Amended ICPA as filed is not a "joint tariff filing" within the meaning of Order No. 714.

IV. Addresses for Correspondence

Correspondence relating to this filing should be addressed to:

Brian Chisling
Simpson Thacher & Bartlett LLP
425 Lexington Ave.
New York, New York 10017-3954
(212) 455-3075
(212) 455-2502 (fax)
bchisling@stblaw.com

and

Scott N. Smith
Ohio Valley Electric Corporation
1 Riverside Plaza
Columbus, Ohio 43215
(614) 716-2860
(614) 716-1094 (Fax)
snsmith@aep.com

Respectfully submitted,

OHIO VALLEY ELECTRIC CORPORATION
INDIANA-KENTUCKY ELECTRIC
CORPORATION

By /s/ Brian E. Chisling
Brian E. Chisling
Simpson Thacher & Bartlett LLP
Counsel for Ohio Valley Electric
Corporation and Indiana-Kentucky Electric
Corporation

Attachments: (1) March 23, 2011 Transmittal Letter, including execution copies of the Amended ICPA, Amended OVEC-IKEC Agreement, and Certificates of Concurrence of each of the Sponsoring Companies as to the Amended ICPA.

Enclosures: (1) Clean Copies of the Amended ICPA and Amended OVEC-IKEC Agreement;

(2) Blacklined Copies of the Amended ICPA, showing changes from the composite copy of the Current ICPA (including Mod. No. 1) and the Amended OVEC-IKEC Agreement, showing changes from the Current OVEC-IKEC Agreement.

cc: Allegheny Energy Supply Company, LLC
Appalachian Power Company
Buckeye Power Generating, LLC
Columbus Southern Power Company
The Dayton Power and Light Company
Duke Energy Ohio, Inc.
FirstEnergy Generation Corp.
Indiana Michigan Power Company
Kentucky Utilities Company
Louisville Gas and Electric Company
Monongahela Power Company
Ohio Power Company
Peninsula Generation Cooperative
Southern Indiana Gas and Electric Company
The Utility Regulatory Commission of Indiana
The Public Service Commission of Kentucky
The Public Service Commission of Michigan
The Public Utilities Commission of Ohio
Tennessee Regulatory Authority
The State Corporation Commission of Virginia
The Public Service Commission of West Virginia

CERTIFICATE OF SERVICE

I hereby certify that I have this day served the foregoing application of Ohio Valley Electric Corporation upon each person designated on the official service list compiled by the Secretary in Docket Nos. ER04-1026 and ER11-3181 and each person listed in the cc list above.

/s/ Brian E. Chisling
Brian E. Chisling

Dated this 27th day of April, 2011.

SIMPSON THACHER & BARTLETT LLP

425 LEXINGTON AVENUE
NEW YORK, N.Y. 10017-3954
(212) 455-2000

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DIRECT DIAL NUMBER
212-455-3075

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BCHISLING@STBLAW.COM

VIA ELECTRONIC FILING

March 23, 2011

Re: Amended and Restated Inter-Company Power Agreement and
Amended and Restated OVEC-IKEC Power Agreement
Docket No. ER11-

Honorable Kimberly D. Bose, Secretary
Federal Energy Regulatory Commission
888 First Street, N.E.
Washington, D.C. 20426

Dear Secretary Bose:

Pursuant to Section 205 of the Federal Power Act and Section 35.13 of the Commission's regulations, Ohio Valley Electric Corporation, together with its wholly owned subsidiary, Indiana-Kentucky Electric Corporation ("IKEC", and Ohio Valley Electric Corporation, together with IKEC, herein referred to as "OVEC") submits for filing:

- (1) An Amended and Restated Inter-Company Power Agreement, dated as of September 10, 2010 ("Amended ICPA") among OVEC and other parties thereto (referred to as the "Sponsoring Companies"),¹ which amends and restates in its entirety the current Amended and Restated Inter-Company Power Agreement, dated as of March 13,

¹ The "Sponsoring Companies" are: Allegheny Energy Supply Company, LLC, Appalachian Power Company ("Appalachian"), Buckeye Power Generating, LLC ("Buckeye"), Columbus Southern Power Company ("CSP"), The Dayton Power and Light Company ("Dayton Power"), Duke Energy Ohio, Inc. ("Duke Ohio"), FirstEnergy Generation Corp. ("FirstEnergy Generation"), Indiana Michigan Power Company ("I&M"), Kentucky Utilities Company ("KU"), Louisville Gas and Electric Company ("LG&E"), Monongahela Power Company ("Mon Power"), Ohio Power Company ("OPCo"), Peninsula Generation Cooperative ("Peninsula") and Southern Indiana Gas and Electric Company ("SIGECO").

2006, as amended by Modification No. 1, dated as of March 13, 2006 (the “Current ICPA”).

- (2) An Amended and Restated Power Agreement, dated as of September 10, 2010 (“Amended OVEC-IKEC Agreement”) between OVEC and IKEC, which amends and restates in its entirety the current Amended and Restated Power Agreement, dated as of March 13, 2006 (the “Current OVEC-IKEC Agreement”).

In accordance with the Commission’s Order No. 714, OVEC hereby submits the above agreements in eTariff format.²

I. Introduction

OVEC hereby requests that the Commission accept for filing and grant any other relief necessary to permit the Amended ICPA to become effective as soon as possible after the date hereof, but in any event by the sixtieth (60th) day after the date hereof. The Amended ICPA is the result of a unanimous agreement among OVEC and the Sponsoring Companies to extend the term of the Current ICPA. In addition, the Amended ICPA contains non-substantive administrative changes, including as necessary to reflect the current parties based on assignments since 2004 and the transfer of responsibilities from East Central Area Reliability Group (“ECAR”) to ReliabilityFirst Corporation (“RFC”). In connection with the filing of the Amended ICPA, OVEC also requests that the Commission accept the filing of the Amended OVEC-IKEC Agreement, which extends the term of that agreement to coincide with the term of the Amended ICPA. The Commission’s acceptance for filing of the agreements in this application will permit the Sponsoring Companies to continue to receive the relatively low-cost electricity generated by OVEC (and its

² Please note, that while both the Amended ICPA and Amended OVEC-IKEC Agreement were dated as of September 10, 2010, they were not fully executed until sometime in February 2011 and their effectiveness is subject to the receipt of all necessary regulatory approvals, including from the Commission in the instant proceeding.

subsidiary, IKEC) under the basic cost-based formula rates charged by OVEC for over 50 years.

II. Background of the Current ICPA and Related Agreements

Each of the Sponsoring Companies is a public utility or a subsidiary of an electric cooperative operating in the Ohio Valley region and either owns, or is an affiliate of a company that owns, capital stock issued by OVEC.³ During the early 1950s, these stockholders (or their predecessors) formed OVEC in response to the request of the United States Atomic Energy Commission (“AEC”) to supply the electric power and energy necessary to meet the needs of a uranium enrichment plant being built by the AEC in Pike County, Ohio. To provide that electric service, OVEC built two coal-fired generating stations: (1) the Kyger Creek Plant in Cheshire, Ohio, which has a generating capacity of 1,075 megawatts, and (2) the Clifty Creek Plant in Madison, Indiana, which has a generating capacity of 1,290 megawatts and is owned by OVEC’s wholly-owned subsidiary, IKEC.

These two generating stations, both of which began operation in 1955, are connected by a network of 776 circuit miles of 345,000-volt transmission lines in Ohio, Indiana and northern Kentucky. These lines were designed and built to provide for the delivery of power and energy from OVEC’s generating facilities to the United States of America, currently acting by and through the AEC’s successor, the Secretary of Energy, the statutory head of the United States Department of Energy (the “DOE”), as well as to permit DOE to obtain supplementary power and energy from the Sponsoring Companies to the extent that OVEC’s generation output was either unavailable or insufficient to meet the

³ In particular, OVEC’s stock is owned by the following companies: Allegheny Energy, Inc. (“Allegheny”) (3.5%); American Electric Power Company, Inc. (“AEP”) (39.17%); Buckeye (18%); CSP (4.3%); Dayton Power (4.9%); Duke Ohio (9.0%); KU (2.5%); LG&E (5.63%); Ohio Edison Company (0.85%); Peninsula (6.65%), SIGECO (1.5%); and The Toledo Edison Company (4.0%).

DOE's needs. To permit these deliveries of power and energy between OVEC, the Sponsoring Companies and DOE, OVEC's transmission facilities interconnect with the facilities of certain neighboring Sponsoring Companies.

Upon its formation, OVEC entered into two principal power sales agreements:

(i) the DOE Power Agreement, which was between OVEC and the DOE, and (ii) the predecessor to the Current ICPA. At the same time, OVEC also entered into the predecessor to the Current OVEC-IKEC Agreement, which permits OVEC to purchase the entire output of IKEC's generating station at cost.

As a result of the DOE's termination of the DOE Power Agreement as of April 30, 2003, each of the Sponsoring Companies currently is entitled to its specified share of all net power and energy produced by OVEC's two generating stations.⁴ In return, the Current ICPA (as amended in 2004) requires the Sponsoring Companies to pay their share of all of OVEC's costs resulting from the ownership, operation and maintenance of its generation and transmission facilities, except those costs that were paid by the DOE.

The term of each of the Current ICPA and the Current OVEC-IKEC Agreement is set to expire on March 13, 2026. OVEC wants the flexibility to refinance all or part of its long-term debt with maturities expiring after the current March 13, 2026 term. Without the Commission's acceptance for filing of the Amended ICPA and the related agreements in sufficient time to permit such refinancing during 2011, OVEC may not be able to take advantage of favorable interest rates that would allow OVEC to provide lower-cost power and energy to the Sponsoring Companies.

⁴ By letter dated September 29, 2000, the DOE notified OVEC of the DOE's election to terminate the DOE Power Agreement as of April 30, 2003. OVEC currently provides retail service to DOE through an "arranged power" agreement under which OVEC procures power and energy for DOE at cost from third parties (based on bids directed by DOE and spot purchases required to manage changes in load).

II. Description of Amended ICPA

The Amended ICPA is the result of a unanimous agreement among OVEC and the Sponsoring Companies. The only substantive change to the Current ICPA is the extension of its term from the current expiration date of March 13, 2026 to June 30, 2040. (See Amended ICPA § 9.07.) The other changes contained in the Amended ICPA are “clean up” changes necessary to reflect the current parties to the Amended ICPA (based on assignments since 2004) and to eliminate references to ECAR and insert (where applicable) references to current RFC obligations. OVEC’s rates will not be affected by these changes.

III. Description of Amended OVEC-IKEC Agreement

The Amended OVEC-IKEC Agreement extends the term of the Current OVEC-IKEC Agreement to permit IKEC to continue to sell OVEC its entire electric output at cost during the term of the Amended ICPA. As with the Amended ICPA, IKEC’s overall rates will not be affected by these changes.

IV. Mountainview Analysis

In OVEC’s July 16, 2004 filing of the Current ICPA and the Current OVEC-IKEC Agreement and its November 18, 2004 filing of Modification No. 1 to the Current ICPA, OVEC submitted information and commitments in support of the participation in the Amended ICPA of the Sponsoring Companies that might be deemed to be “affiliates” of OVEC.⁵ On December 13, 2004, the Commission accepted the Current ICPA (including Modification No. 1) and the Current OVEC-IKEC Agreement for filing.⁶

⁵ Amended and Restated Inter-Company Power Agreement, Amended and Restated OVEC-IKEC Power Agreement, and Termination of First Supplementary Transmission Agreement, Docket No. ER04-1026-000, filed July 16, 2004; Modification No. 1 to the Amended and Restated Inter-Company Power Agreement and Supplemental Filing, Docket No. ER04-1026-001, filed Nov. 18, 2004.

⁶ Ohio Valley Electric Corporation, Amended and Restated Inter-Company Power Agreement and

As explained below (and in OVEC's July 16, 2004 and November 18, 2004 filings), OVEC submits that the Amended ICPA and the Amended OVEC-IKEC Agreement should not be subject to the scrutiny applicable to affiliate agreements entered into at market-based rates, as set forth in *Southern California Edison Co.*, 106 FERC ¶ 61,183 (2004) ("*Mountainview*") because OVEC is not controlled in the same manner as those affiliate relationships described in *Mountainview* and related cases, and because the Amended ICPA represents the continuation of a 50-plus year arrangement that does not raise affiliate abuse or competitive concerns. Nevertheless, as it provided the Commission in its November 18, 2004 filing, OVEC also provides an analysis and underlying study to demonstrate that the Amended ICPA satisfies any applicable requirements under *Mountainview*. OVEC hereby requests that the Commission accept the Amended ICPA and Amended OVEC-IKEC Agreement for filing on the same basis as it did in its 2004 order based on the arguments below and updated analysis.

A. Applicability of *Mountainview*

OVEC notes that the Amended ICPA and the Amended OVEC-IKEC Agreement are substantively nearly identical to the Current ICPA and the Current OVEC-IKEC Agreement, and other relevant facts such as ownership interests also are nearly identical to those in 2004. OVEC is owned (directly or indirectly) by nine independent holding company systems, none of which owns 50% or more of OVEC's stock (indeed, ownership is even more dispersed than at the time of OVEC's July 16, 2004 filing due to Allegheny's sale of 9% of the OVEC equity to Buckeye and Ohio Edison Company's sale of

Modification No. 1 dated as of March 13, 2006; an Amended and Restated Power Agreement and a Termination Agreement both dated March 13, 2006, Docket Nos. ER04-1026-000 and ER04-1026-001, issued Dec. 13, 2004.

6.65% to Peninsula).⁷ Because of the dispersion of voting power, none of OVEC's owners can direct the management or operations of OVEC. OVEC continues to have its own employees and is solely responsible for the operation and management of its generation facilities. Furthermore, unlike in the cases of transactions between wholly owned subsidiaries with a common parent, none of OVEC's owners has the incentive to grant "undue influence" or otherwise cross-subsidize OVEC's operations through the Amended ICPA because between 55.8% and 98.5% (depending on the holding company system) of the benefits of such activities would flow to the other holding company systems, each of which is a competitor in the wholesale market. As a result, OVEC does not believe that any of its owners exercise the type of control necessary to make it an "affiliate" of any of the owners for these purposes.⁸

⁷ Ownership of OVEC's stock is held (directly or indirectly) by the following holding companies: Allegheny (3.5%); AEP (43.47%); Buckeye Power, Inc. (18%); DPL Inc. (4.9%); Duke Energy Corporation (9%); E.ON plc (8.13%); FirstEnergy Corp. ("FirstEnergy") (4.85%); Vectren Corporation (1.5%); and Wolverine Power Supply Cooperative, Inc. (6.65%).

⁸ In *Morgan Stanley Capital Group Inc.*, 72 FERC ¶ 61,082, the Commission stated that the test for affiliation under Part II of the Federal Power Act would be the same as the test under Section 161.2 of the Commission's regulation regarding interstate pipelines. Under that regulation, an "affiliate" is defined as "another which controls, is controlled by or is under common control with such person," and "control" is defined as including "the possession, directly or indirectly and whether acting alone or with others, of the authority to direct or cause the direction of the management or policies of a company." Although "control" is presumed if a person owns a 10% or greater voting interest in another person, such presumption can be rebutted by specific facts and circumstances. *See e.g., Iroquois Gas Transmission System, L.P.*, 78 FERC ¶ 61,108 (1997) (finding that 19.4% owner lacked the ability to determine operational decisions); *Western Gas Marketing, Inc.*, 63 FERC ¶ 61,172 (1993) (finding that 11% owner lacked operating or management control due to the dispersion of ownership among non-affiliates). As stated above, none of OVEC's owners has a majority interest and, based on the dispersion of ownership interests among nine holding company systems, none of the owners can direct the operation or management of OVEC.

Please note, however, that although OVEC believes that it should not be considered to be an "affiliate" of its owners for these purposes, OVEC has not and does not hereby request exemption from the obligations under the Commission's orders relating to other inter-affiliate relationships, including the standards of conduct between electric utilities and their affiliates under Order Nos. 888, 889, 2004 and related orders. OVEC believes that it is in full compliance with those orders with respect to its relationship to AEP and their affiliates, each of which directly or indirectly controls or is controlled by a company that owns 10% or more of OVEC's stock. Buckeye Power Inc. is an electric cooperative not subject to regulation as a public utility by the Commission.

Second, even assuming OVEC's affiliation with certain owners based solely on stock ownership, the purchases under the Amended ICPA by the Sponsoring Companies that are affiliates of such owners do not raise the potential for the affiliate abuses underlying the Commission's policies in *Mountainview* and related cases. The Amended ICPA does not represent a build-or-buy situation because OVEC's plants are over 50 years old. Neither does it represent a market-based affiliate agreement. Indeed, purchases under the Amended ICPA are more analogous to a vertically integrated utility's entitlement to power from its own generating plants. Under the Current ICPA (and its predecessors), since OVEC's inception the Sponsoring Companies have been responsible to pay for all charges not recovered through retail sales to DOE and to pay demand and energy charges associated with surplus energy released by the DOE under the DOE Power Agreement, which now accounts for all of OVEC's net output. In other words, OVEC's owners and their affiliated Sponsoring Companies have shared the risks and rewards of financing and operating OVEC's facilities for over 50 years. Thus, purchases under the Amended ICPA are more akin to purchases from a jointly-owned plant than from an unregulated, affiliated marketer.

Finally, the continued purchase of power by the Sponsoring Companies does not raise any competitive concerns implicated in *Mountainview*. The continuation of purchases from OVEC under the Amended ICPA will not increase the market share of any Sponsoring Company. In addition, the Sponsoring Companies consist of companies from nine different holding company systems, each of which has multiple interconnections throughout the region. Also, under the scheduling provisions of the Amended ICPA, which are unchanged, available energy from OVEC's generating facilities that is not scheduled by one Sponsoring Company automatically is made available to the other Sponsoring

Companies, which promotes the economic use or competitive marketing of all of OVEC's energy to the customers of any one of the Sponsoring Companies.

B. Analysis under *Mountainview*

The Amended ICPA is a cost-based power agreement requiring OVEC to continue to sell to the Sponsoring Companies all of the power and energy capable of being produced by its generation facilities for an additional 14 years through June 30, 2040. In general, the Amended ICPA requires the Sponsoring Companies to pay their share of all of OVEC's costs resulting from the ownership, operation, financing and maintenance of its generation and transmission facilities. The total charges under the Amended ICPA are based on the same basic formula rates that have been charged to the Sponsoring Companies for over 50 years. The Amended ICPA does not change the rates charged under the Current ICPA.

At OVEC's request, American Electric Power Service Corporation (which is affiliated with certain of the Sponsoring Companies) performed a benchmark study to show that the Amended ICPA represents a low-cost, long-term power supply option for the Sponsoring Companies compared to the available alternatives. A copy of the benchmark study along with supporting data (the "Benchmark Study") is attached hereto as Exhibit A. The Benchmark Study compares OVEC's costs under the Amended ICPA to publicly available market data with respect to the construction of base-load power plants. The Benchmark Study demonstrates that the Amended ICPA satisfies the requirements under *Mountainview* and related precedent to show that the agreement represents a just and reasonable, low-cost supply option for the Sponsoring Companies. This benchmark study and supporting materials are similar to those presented to the Commission in November

2004 in connection with the Commission's acceptance for filing of the Current ICPA and Current OVEC-IKEC Agreement.⁹

VI. Effective Date Request

In order to permit OVEC sufficient time to refinance its current long-term debt and to take other actions to ensure the continued operations consistent with the Amended ICPA, OVEC respectfully requests that the Commission grant an effective date in an order issued as soon as possible, but in any event on or before sixty (60) days after the date of this filing.

OVEC's operations are financed on a project-type basis and thus the advance acceptance of the Amended ICPA by the Commission, as well as other required regulatory approvals and filings, are essential for OVEC to be able to negotiate and put in place acceptable refinancing of its existing long-term debt on reasonable terms. In addition to this filing, the Amended ICPA is subject to filing with, or the approval or non-opposition of, various regulatory authorities, including the Indiana Utility Regulatory Commission, the Kentucky Public Service Commission, the Virginia State Corporation Commission and the West Virginia Public Service Commission.

For the foregoing reasons, OVEC requests a waiver of any applicable requirements to permit the Commission, by order, letter or other issuance on or before sixty (60) days after the date of this filing, to grant the requested effective date.

VII. Filing Requirements

Pursuant to Section 35.13(a)(2) of the Commission's regulations, OVEC provides the following information:

⁹ See Exhibit A to Modification No. 1 to the Amended and Restated Inter-Company Power Agreement and Supplemental Filing, Docket No. ER04-1026-001, filed Nov. 18, 2004.

A. **General Information**

(1) **List of documents submitted**

Submitted with this letter are:

- (a) Amended ICPA (executed);
- (b) Amended OVEC-IKEC Agreement (executed);
- (c) Certificates of Concurrence of each of the Sponsoring Companies as to the Amended ICPA;
- (d) Copies of the Amended ICPA and Amended OVEC-IKEC Agreement (in eTariff format);
- (e) A blacklined copy of the Amended ICPA, showing changes from the composite copy of the Current ICPA (including Mod. No. 1) (in eTariff format); and
- (f) A blacklined copy of the Amended OVEC-IKEC Agreement, showing changes from the Current OVEC-IKEC Agreement (in eTariff format).

(2) **The proposed effective date**

OVEC proposes that the Amended ICPA and the Amended OVEC-IKEC Agreement become effective as soon as possible, but in any event within sixty (60) days after the date hereof.

(3) **Names and addresses of persons to whom a copy of this filing has been mailed**

A copy of this filing has been mailed this date to:

- (a) Allegheny Energy Supply Company, LLC
4350 Northern Pike – 4 North
Monroeville, Pennsylvania 15146-2841
- (b) Appalachian Power Company
1 Riverside Plaza
Columbus, Ohio 43215

- (c) Buckeye Power Generating, LLC
6677 Busch Blvd., P.O. Box 26036
Columbus, Ohio 43226
- (d) Columbus Southern Power Company
1 Riverside Plaza
Columbus, Ohio 43215
- (e) The Dayton Power and Light Company
1065 Woodman Drive
Dayton, Ohio 45432
- (f) Duke Energy Ohio, Inc.
139 East Fourth Street
Cincinnati, Ohio 45202
- (g) FirstEnergy Generation Corp.
76 South Main Street
Akron, Ohio 44308
- (h) Indiana Michigan Power Company
P. O. Box 60
Ft. Wayne, Indiana 46801
- (i) Kentucky Utilities Company
P. O. Box 32010
Louisville, Kentucky 40232
- (j) Louisville Gas and Electric Company
P. O. Box 32010
Louisville, Kentucky 40232
- (k) Monongahela Power Company
P.O. Box 1392
Fairmont, West Virginia 26555
- (l) Ohio Power Company
1 Riverside Plaza
Columbus, Ohio 43215
- (m) Peninsula Generation Cooperative
10125 W. Watergate Road
Cadillac, MI 49601
- (n) Southern Indiana Gas and Electric Company
20-24 N.W. Fourth Street

Evansville, Indiana 47741

- (o) The Utility Regulatory Commission of Indiana
302 West Washington Street
Suite E-306
Indianapolis, Indiana 46204
- (p) The Public Service Commission of Kentucky
211 Sower Boulevard
P. O. Box 615
Frankfort, Kentucky 40602-0615
- (q) The Public Service Commission of Michigan
6545 Mercantile Way
P. O. Box 30221
Lansing, Michigan 48909
- (r) The Public Utilities Commission of Ohio
180 East Broad Street
Columbus, Ohio 43215
- (s) Tennessee Regulatory Authority
460 James Robertson Parkway
Nashville, Tennessee 37243-0505
- (t) The State Corporation Commission of Virginia
Tyler Building
P. O. Box 1197
Richmond, Virginia 23209

and

- (u) The Public Service Commission of West Virginia
201 Brooks Street
P. O. Box 812
Charleston, West Virginia 25323

(4) **Brief description of agreements**

The Amended ICPA is the result of a unanimous agreement among OVEC and the Sponsoring Companies to extend the term of the Current ICPA and to make certain administrative changes. In addition, in connection with the extended term of the Amended ICPA, OVEC and IKEC have executed the Amended OVEC-IKEC Agreement, which extends the term of that agreement to coincide with the term of the Amended ICPA. The Commission's acceptance of this filing will

permit OVEC to refinance its long-term debt at favorable rates and allow the Sponsoring Companies to continue to receive lower-cost electricity generated by OVEC (and its subsidiary, IKEC) under the Amended ICPA.

(5) **Statement of the reasons for the filed agreements**

The Amended ICPA and the Amended OVEC-IKEC Agreement represent the result of a unanimous compromise among OVEC and the Sponsoring Companies concerning the terms and conditions of those agreements, including the extension of the term of the Current ICPA and the Current OVEC-IKEC Agreement, both of which would otherwise expire on March 13, 2026.

(6) **Showing that all requisite agreements to the filed agreements have been obtained**

All requisite agreements to the Amended ICPA and the Amended OVEC-IKEC Agreement, including permission to make this filing, have been obtained. As evidenced by the enclosed copies of each agreement, OVEC and all of the Sponsoring Companies have executed the Amended ICPA and the Amended OVEC-IKEC Agreement. In addition, attached for filing are Certificates of Concurrence of each of the Sponsoring Companies as to those agreements.

(7) **Statement concerning whether any expenses or costs have been alleged or adjudged in any administrative or judicial proceeding to be illegal, duplicative or unnecessary costs that are demonstrably the product of discriminatory employment practices**

The rates under the Amended ICPA and the Amended OVEC-IKEC Agreement include no expense or cost that has been alleged or adjudged in any administrative or judicial proceeding to be an illegal, duplicative or unnecessary cost that is demonstrably the product of discriminatory employment practices.

B. **Information relating to the effect of the rate schedule change**

(1) **Table or statement comparing (i) existing sales and services and revenue from existing sales and services to (ii) sales and services and revenue from sales and services if the Commission permits the Amended ICPA and the Amended OVEC-IKEC Agreement to become effective**

There will be no change to OVEC's overall rates or services as a result of the Amended ICPA or the Amended OVEC-IKEC.

(2) **Comparison to similar existing service and rate**

OVEC does not offer other services similar to the proposed service. Consequently, a comparison of the proposed service and rate to a similar existing service and rate cannot be provided.

(3) **Statement concerning new or modified facilities**

No facilities have been or will be installed because of the Amended ICPA or the Amended OVEC-IKEC Agreement.

C. Waiver of Filing Requirements Request

OVEC believes that the information supplied with this filing will permit the Commission to conclude that the Amended ICPA and the Amended OVEC-IKEC Agreement are just and reasonable under the Federal Power Act and that such agreements, along with the attached Certificates of Concurrence, should be accepted for filing. Consequently, OVEC requests this Commission to waive, to the extent necessary, any of the Commission's requirements with which this filing does not comply.

D. Addresses for Correspondence

Correspondence relating to this filing should be addressed to:

Brian Chisling
Simpson Thacher & Bartlett LLP
425 Lexington Ave.
New York, New York 10017-3954
(212) 455-3075
(212) 455-2502 (fax)
bchisling@stblaw.com

and

Scott N. Smith
Ohio Valley Electric Corporation
1 Riverside Plaza
Columbus, Ohio 43215
(614) 716-2860
(614) 716-1094 (Fax)
snsmith@aep.com

Respectfully submitted,

OHIO VALLEY ELECTRIC CORPORATION
INDIANA-KENTUCKY ELECTRIC
CORPORATION

By /s/ Brian E. Chisling
Brian E. Chisling
Simpson Thacher & Bartlett LLP
Counsel for Ohio Valley Electric
Corporation and Indiana-Kentucky Electric
Corporation

- Attachments: (1) Exhibit A: Benchmark Study Demonstrating that the Inter-Company Power Agreement Offers Low-Cost Power;
- (2) Amended ICPA (executed);
- (3) Amended OVEC-IKEC Agreement (executed);
- (4) Certificates of Concurrence of each of the Sponsoring Companies as to the Amended ICPA.

- Enclosures: (1) Clean Copies of the Amended ICPA and Amended OVEC-IKEC Agreement;
- (2) Blacklined Copies of the Amended ICPA, showing changes from the composite copy of the Current ICPA (including Mod. No. 1) and the Amended OVEC-IKEC Agreement, showing changes from the Current OVEC-IKEC Agreement.

cc: Allegheny Energy Supply Company, LLC
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Southern Indiana Gas and Electric Company
The Utility Regulatory Commission of Indiana
The Public Service Commission of Kentucky
The Public Service Commission of Michigan
The Public Utilities Commission of Ohio
Tennessee Regulatory Authority
The State Corporation Commission of Virginia
The Public Service Commission of West Virginia

CERTIFICATE OF SERVICE

I hereby certify that I have this day served the foregoing Amended ICPA and Amended OVEC-IKEC Agreement of Ohio Valley Electric Corporation upon each person designated on the official service list compiled by the Secretary in Docket No. ER04-1026 and each person listed in section 7(A)(3) above.

/s/ Brian E. Chisling
Brian E. Chisling

Dated this 23rd day of March, 2011.

Exhibit A

Benchmark Study Demonstrating that the Inter-Company Power Agreement Offers Low-Cost Power

At the request of the Ohio Valley Electric Corporation (“OVEC”), American Electric Power Service Corporation (“AEPSC”) performed a benchmark study in support of the proposed 14-year extension of the term of the Inter-Company Power Agreement (“ICPA”), originally dated July 10, 1953 and as amended from time to time, among OVEC and the public utilities named therein as “Sponsoring Companies,” which include several affiliates of AEPSC. As discussed below, it is clear the ICPA offers low-cost power to the Sponsoring Companies, taking into account both price and non-price factors.

A. Definition of the Relevant Market, Time Period and Products.

1. Relevant Geographic Market

Under Commission precedent, the relevant geographic market is the market where sellers can supply the relevant product to the purchasers under the subject contract.¹ This benchmark study defines the relevant geographic market broadly to include any supplier that is in the reliability regions governed by or under the following: (a) ReliabilityFirst Corporation (“RFC”), which is a consolidation of the three previous regions East Central Area Reliability Coordination Agreement (“ECAR”), the Mid-Atlantic Area Council (“MAAC”) and the Mid-America Interconnected Network (“MAIN”), and (b) Midwest Reliability Organization (“MRO”), which regions collectively include the majority of the service territories of the regional transmission organizations of the PJM Interconnection, LLC (“PJM”) and the Midwest Independent Transmission System Operator, Inc. (“MISO”).

¹ *Ocean State Power II*, 59 FERC ¶ 61,360 at p. 62,333 (1992) (“*Ocean State*”).

2. Contemporaneousness

The Commission defines the relevant period for these purposes as the period during which purchasers made their decisions to contract with the supplier.² Consequently, this benchmark study is based on a current forecast of generation alternatives through 2040, consistent with the extension period.

3. Comparable Products

The Commission generally requires that the evidence presented in benchmark studies compares transactions involving goods and services similar to those provided within the proposed transaction.³ Accordingly, this benchmark study defines the relevant comparison to be the ICPA to the construction of base-load power plants over the same long-term time period, since the construction of a power plant is the most comparable alternative to entering into this long-term power supply agreement.

Other products such as power plant acquisitions and long-term power contracts were not considered comparable products since the proposed extension is for the time period March 14, 2026 through June 30, 2040. Such transactions would be near-term agreements that would not be comparable to an extension period that does not begin until 2026, in part since generally no market exists for offers that would provide beginning or closing dates in this timeframe. Construction start dates for new generation, on the other hand, are generally at the discretion of the purchaser, subject to permitting limitations and vendor availability.

² See *Electric Generation LLC*, 99 FERC ¶ 61,307, at p. 22 (2002).

³ See *Boston Edison Co. Re: Edgar Electric Energy Co.*, 55 FERC ¶ 61,382 at p. 62,169 (1991); *Ocean State*, 59 FERC at p. 62,333.

B. Summary of Benchmark Study

The benchmark study consists of a comparison of the IPCA for the extension period to construction of new base-load generation.

1. Costs to Construct New Power Plants

Based on information from the U.S. Energy Information Administration (“EIA”) document, “*Table 1. Updated Estimates of Power Plant Capital and Operating Costs*”. Release Date: November 2010, supplemented by operational assumptions and cost estimates from AEPSC internal sources, the estimated levelized cost of six different types of newly built central station base-load generation are shown on Schedule 1, page 1. The types of power plants reviewed include a new coal plant with flue gas desulphurization (i.e., “scrubbed”), integrated coal-gasification combined cycle (IGCC), with and without carbon capture and sequestration, advanced nuclear generation, and natural gas combined cycle (CC), with and without carbon sequestration. Other potential generation sources were excluded because they were not considered comparable, for example wind and solar, since they are intermittent, non-dispatchable resources.

As shown in Schedule 1, the installed cost of the comparable new units ranges from \$1,003/kW for CC without carbon sequestration to \$5,348/kW for IGCC with carbon sequestration. For comparison purposes, a typical annual carrying charge was applied to the estimated installed cost to reflect a reasonable amount for depreciation, taxes, administrative and general costs, and other expenses. Estimated fuel costs were also added, along with assumptions regarding the future average costs of carbon dioxide (CO₂) emissions and the ability of sequestration systems to capture the CO₂. These calculations resulted in average levelized total

unit costs, including CO₂ costs, ranging from \$106 per MWh for a CC plant without carbon sequestration up to \$159.20/MWh for an IGCC plant with carbon sequestration. If CO₂ costs are ignored or assumed to be zero, the alternatives range from \$96.53/MWh for a new advance gas combined cycle plant to \$122.51 per MWh for an advanced nuclear plant.

As shown on Schedule 1, page 2, the average forecasted cost of the ICPA contract for the period 2011 through 2040 is \$84.23/MWh including CO₂ cost and \$60.90/MWh excluding CO₂ cost. These forecasts already include all of the carrying and operating costs associated with the planned environmental upgrades, including completion of Flue Gas Desulfurization for all Clifty Creek and Kyger Creek units and Selective Catalytic Reduction for Clifty Creek units 1-5 and Kyger Creek units 1-5.

For the cases including CO₂ costs, the cost of the ICPA is expected to be approximately 21% less than the least expensive alternative, the CC plant without carbon sequestration. For the cases excluding CO₂ costs, the ICPA is expected to be approximately 37% less than the least expensive alternative of the new CC plant.

It is recognized that the above values include the period from 2011 through 2040 for the ICPA even though the current request is for the period March 14, 2026 through June 30, 2040. No adjustments were made to attempt to project a near-term completion date and then “remove” the financial impacts of the new build options and the OVEC extension for the period prior to 2026. In practical terms, any such adjustment would require the implicit assumption that a counter-party could be identified that would be willing to purchase the output of the new plant at the fully-loaded cost in the interim period from the plant completion date until a termination date in 2026.

Likewise, forecasting a completion date for a new build option that did not begin commercial operation until 2026 would require the assumption of an unusual near-term commitment from the purchaser (and the vendor) in the near-term. In addition, this option would include a plant life period for the new-build generation that would extend well beyond the extension period termination of 2040. Presenting the proposed extension and the new build options on a levelized cost of electricity basis makes them comparable and mitigates the need for attempts at such adjustments. In addition, the ICPA analysis includes assumptions for the entire period that would potentially impact the cost in the current ICPA contract period.

One significant benefit of the ICPA is that it is expected to be the least cost alternative whether CO₂ costs are included or not. In comparing the CC without carbon sequestration alternative to the ICPA, the benefit of the ICPA, besides the expected discount indicated, is that the ICPA is not expected to carry the same price uncertainty for the fuel input, coal, as that of the CC plant, based on historic volatility associated with natural gas. Since neither of these options have carbon sequestration capability, the CC plant still carries approximately half the CO₂ emission risks as that associated with the ICPA. Furthermore, if forecasted CO₂ emissions cost are less than that included in this forecast, this result would tend to favor the ICPA even more than indicated above.

In a comparison with an advanced nuclear plant, the OVEC ICPA remains the least expensive option even when CO₂ costs are included. As CO₂ costs become less of a factor, or goes to zero, the ICPA discount becomes more comparable to either the natural gas CC or the advanced nuclear plant. In this case, the ICPA is less costly than the least expensive options identified, a new pulverized coal plant, which would have a similar CO₂ emission risk or the CC

plant. Consequently, the ICPA clearly provides the most flexible choice with the highest degree of optionality in that it is the least cost option regardless of future CO₂ costs.

It should be noted further that the valuations contained herein that include CO₂ cost do not include any carbon cost offsets. Many types of proposed carbon programs include allocations of offsets, allowances or other phase-in programs that will reduce the carbon costs, at least in the initial years of such a program. No such assumptions are included in the above comparisons, and if they were, the OVEC extension would appear even more favorable compared with other, less carbon-intensive options.

2. Analysis of Non-Price Terms

The Commission also requires an assessment of non-price terms and conditions.⁴ AEPSC performed a comparative analysis of specific non-price terms and conditions where such data was available. Specifically, for power plant sales and new-build power plants, the relevant non-price terms and conditions include: (1) availability, (2) dispatchability, (3) fuel price risk, and (4) project development risk. In general, the ICPA contains favorable non-price terms.

a. Availability

The availability of a power plant is a key measure of the reliability of any generating facility.⁵ It is an indicator of the potential of a generating resource to meet load requirements and support system reliability. Availability also is a key contract indicator for measuring performance. The OVEC generating facilities have an excellent record of

⁴ *Ocean State*, 59 FERC at p. 62,337.

⁵ *See Electric Generation, LLC*, 101 FERC ¶ 63,005 (2002).

performance based on availability factors. The availability factor for OVEC's Clifty Creek Plant was 85.0% in 2008, 87.1% in 2009 and 83.8% in 2010, while the availability factor for its Kyger Creek Plant was 85.4% in 2008, 84.3% in 2009 and 84.0% in 2010.

b. Dispatchability

Under the ICPA, the Sponsoring Companies have the right to schedule their proportionate share of the full available capacity and energy output of OVEC's generating facilities, subject to scheduling procedures developed by OVEC's Operating Committee.

c. Fuel Price Risk

Fuel costs associated with OVEC's coal-fired generating facilities may increase over the proposed extension of the term of the ICPA, thereby increasing costs to the Sponsoring Companies. However, with respect to construction of comparable units, the purchasers would be subject to the similar cost increases due to fluctuations in fuel prices.

d. Project Development Risk

The Sponsoring Companies are insulated against development risk under the ICPA, as compared to the new construction option, because the OVEC units have already been built and operating for many years.

C. Conclusion

Based on the benchmark study, the charges under the ICPA compare favorably to data concerning prices obtained through review of comparable information for other new generation base load options. The ICPA offers low-cost power to the Sponsoring Companies, taking into account both price and non-price factors.

Schedule 1
Page 1 of 2

**Cost and Performance Characteristics of
New Central Station Electricity Generating Technologies**

Technology (1)	Online Year (2)	Size (MW) (3)	Lead time (years) (4)	Overnight Cost (2010 \$/kW) (5)	Variable O&M (2010 \$/MWh) (6)	Fixed O&M (2010 \$/kW) (7)	Heat Rate (Btu/kWhr) (8)	Levelized Cost of Electricity (COE)	
								Including CO ₂ (2011 \$/MWh) (9)	Excluding CO ₂ (2011 \$/MWh) (10)
<u>Coal</u>									
Scrubbed Coal New	2013	650	4	\$3,167	\$4.25	\$35.97	8,800	\$122.78	\$98.45
IGCC	2013	600	4	\$3,565	\$6.87	\$59.23	8,700	\$137.24	\$113.17
IGCC with carbon sequestration	2016	520	4	\$5,348	\$8.04	\$69.30	10,700	\$159.20	---
<u>Nuclear</u>									
Advanced Nuclear	2016	2,236	6	\$5,335	\$2.04	\$88.75	N/A	\$122.51	\$122.51
<u>Natural Gas</u>									
Advanced Gas/Oil Combined Cycle (CC)	2012	400	3	\$1,003	\$3.11	\$14.62	6,430	\$106.04	\$96.53
Advanced CC with carbon sequestration	2016	340	3	\$2,060	\$6.45	\$30.25	7,525	\$144.73	---

IGCC = Integrated Coal-Gasification Combined Cycle

Note: Information in columns (1) through (8) is based on U.S. Energy Information Administration (EIA), *Table 1. Updated Estimates of Power Plants and Operating Costs*, Release Date: November 2010. Results in columns (9) and (10) are based on this EIA information and AEP internal estimates.

Schedule 1
Page 2 of 2

Ohio Valley Electric Corporation
Forecasted Inter-Company Power Agreement (ICPA) Billable Cost Summary
Calendar Years 2011 - 2040
(All dollars in 2011 \$000 except where indicated)

	Year														
	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Power Production Cost															
Excluding CO ₂	\$631,114	\$605,983	\$617,141	\$608,778	\$597,395	\$603,810	\$589,464	\$589,611	\$576,098	\$577,863	\$568,206	\$554,703	\$555,728	\$544,120	\$541,864
Including CO ₂	\$631,114	\$605,983	\$617,141	\$608,778	\$597,395	\$603,810	\$589,464	\$826,552	\$794,534	\$775,611	\$758,160	\$737,171	\$731,004	\$745,364	\$766,670
Generation (GWh)	14,737	14,645	14,536	14,752	14,753	14,950	15,108	15,158	15,290	15,185	15,185	15,185	15,185	15,185	15,185

	Year														Total	
	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2011-2040
Power Production Cost																
Excluding CO ₂	\$530,713	\$528,452	\$516,170	\$509,683	\$505,302	\$498,631	\$496,214	\$487,268	\$476,432	\$470,607	\$464,209	\$460,502	\$457,885	\$452,132	\$440,887	\$16,056,965
Including CO ₂	\$784,600	\$801,473	\$806,423	\$815,385	\$831,189	\$821,065	\$815,232	\$802,906	\$788,726	\$779,592	\$769,920	\$762,974	\$757,153	\$748,229	\$733,847	\$22,207,468
Generation (GWh)	15,185	15,185	15,185	15,185	15,185	15,185	15,185	15,185	15,185	15,185	15,185	15,185	15,185	15,185	15,185	452,815

Total Levelized Power Production Cost (\$/MWh)
 Excluding CO₂: **\$ 60.90 /MWh**
 Including CO₂: **\$ 84.23 /MWh**

Execution Copy

AMENDED AND RESTATED
INTER-COMPANY POWER AGREEMENT
DATED AS OF SEPTEMBER 10, 2010

AMONG

OHIO VALLEY ELECTRIC CORPORATION,
ALLEGHENY ENERGY SUPPLY COMPANY, L.L.C.
APPALACHIAN POWER COMPANY,
BUCKEYE POWER GENERATING, LLC,
COLUMBUS SOUTHERN POWER COMPANY,
THE DAYTON POWER AND LIGHT COMPANY,
DUKE ENERGY OHIO, INC.,
FIRSTENERGY GENERATION CORP.,
INDIANA MICHIGAN POWER COMPANY,
KENTUCKY UTILITIES COMPANY,
LOUISVILLE GAS AND ELECTRIC COMPANY,
MONONGAHELA POWER COMPANY,
OHIO POWER COMPANY,
PENINSULA GENERATION COOPERATIVE, and
SOUTHERN INDIANA GAS AND ELECTRIC COMPANY

**AMENDED AND RESTATED
INTER-COMPANY POWER AGREEMENT**

THIS AGREEMENT, dated as of September 10, 2010 (the "Agreement"), by and among OHIO VALLEY ELECTRIC CORPORATION (herein called OVEC), ALLEGHENY ENERGY SUPPLY COMPANY, L.L.C. (herein called Allegheny), APPALACHIAN POWER COMPANY (herein called Appalachian), BUCKEYE POWER GENERATING, LLC (herein called Buckeye), COLUMBUS SOUTHERN POWER COMPANY (herein called Columbus), THE DAYTON POWER AND LIGHT COMPANY (herein called Dayton), DUKE ENERGY OHIO, INC. (formerly known as The Cincinnati Gas & Electric Company and herein called Duke Ohio), FIRSTENERGY GENERATION CORP. (herein called FirstEnergy), INDIANA MICHIGAN POWER COMPANY (herein called Indiana), KENTUCKY UTILITIES COMPANY (herein called Kentucky), LOUISVILLE GAS AND ELECTRIC COMPANY (herein called Louisville), MONONGAHELA POWER COMPANY (herein called Monongahela), OHIO POWER COMPANY (herein called Ohio Power), PENINSULA GENERATION COOPERATIVE (herein called Peninsula), and SOUTHERN INDIANA GAS AND ELECTRIC COMPANY (herein called Southern Indiana, and all of the foregoing, other than OVEC, being herein sometimes collectively referred to as the Sponsoring Companies and individually as a Sponsoring Company) hereby amends and restates in its entirety, the Inter-Company Power Agreement dated as of March 13, 2006, as amended by Modification No. 1, dated as of March 13, 2006 (herein called the Current Agreement), by and among OVEC and the Sponsoring Companies.

WITNESSETH THAT:

WHEREAS, the Current Agreement amended and restated the original Inter-Company Power Agreement, dated as of July 10, 1953, as amended by Modification No. 1, dated as of June 3, 1966; Modification No. 2, dated as of January 7, 1967; Modification No. 3, dated as of November 15, 1967; Modification No. 4, dated as of November 5, 1975; Modification No. 5, dated as of September 1, 1979; Modification No. 6, dated as of August 1, 1981; Modification No. 7, dated as of January 15, 1992; Modification No. 8, dated as of January 19, 1994; Modification No. 9, dated as of August 17, 1995; Modification No. 10, dated as of January 1, 1998; Modification No. 11, dated as of April 1, 1999; Modification No. 12, dated as of November 1, 1999; Modification No. 13, dated as of May 24, 2000; Modification No. 14, dated as of April 1, 2001; and Modification No. 15, dated as of April 30, 2004 (together, herein called the Original Agreement); and

WHEREAS, OVEC designed, purchased, and constructed, and continues to operate and maintain two steam-electric generating stations, one station (herein called Ohio Station) consisting of five turbo-generators and all other necessary equipment, at a location on the Ohio River near Cheshire, Ohio, and the other station (herein called Indiana Station) consisting of six turbogenerators and all other necessary equipment, at a location on the Ohio River near Madison,

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Indiana, (the Ohio Station and the Indiana Station being herein called the Project Generating Stations); and

WHEREAS, OVEC also designed, purchased, and constructed, and continues to operate and maintain necessary transmission and general plant facilities (herein called the Project Transmission Facilities) and OVEC established or cause to be established interconnections between the Project Generating Stations and the systems of certain of the Sponsoring Companies; and

WHEREAS, OVEC entered into an agreement, attached hereto as Exhibit A, with Indiana-Kentucky Electric Corporation (herein called IKEC), a corporation organized under the laws of the State of Indiana as a wholly owned subsidiary corporation of OVEC, which has been amended and restated as of the date of this Agreement and embodies the terms and conditions for the ownership and operation by IKEC of the Indiana Station and such portion of the Project Transmission Facilities which are to be owned and operated by it; and

WHEREAS, transmission facilities were constructed by certain of the Sponsoring Companies to interconnect the systems of such Sponsoring Companies, directly or indirectly, with the Project Generating Stations and/or the Project Transmission Facilities, and the Sponsoring Companies have agreed to pay for Available Power, as hereinafter defined, as may be available at the Project Generating Stations; and

WHEREAS, the parties hereto desire to amend and restate in their entirety, the Current Agreement to define the terms and conditions governing the rights of the Sponsoring Companies to receive Available Power from the Project Generating Stations and the obligations of the Sponsoring Companies to pay therefor.

NOW, THEREFORE, the parties hereto agree with each other as follows:

ARTICLE 1

DEFINITIONS

1.01. For the purposes of this Agreement, the following terms, wherever used herein, shall have the following meanings:

1.011 "Affiliate" means, with respect to a specified person, any other person that directly or indirectly through one or more intermediaries controls, is controlled by, or is under common control with, such specified person; provided that "control" for these purposes means the possession, directly or indirectly, of the power to direct or cause the direction of the management and policies of a person, whether through the ownership of voting securities, by contract or otherwise.

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1.012 "Arbitration Board" has the meaning set forth in Section 9.10.

1.013 "Available Energy" of the Project Generating Stations means the energy associated with Available Power.

1.014 "Available Power" of the Project Generating Stations at any particular time means the total net kilowatts at the 345-kV buses of the Project Generating Stations which Corporation in its sole discretion will determine that the Project Generating Stations will be capable of safely delivering under conditions then prevailing, including all conditions affecting capability.

1.015 "Corporation" means OVEC, IKEC, and all other subsidiary corporations of OVEC.

1.016 "Decommissioning and Demolition Obligation" has the meaning set forth in Section 5.03(f) hereof.

1.017 "Effective Date" means September 10, 2010, or to the extent necessary, such later date on which Corporation notifies the Sponsoring Companies that all conditions to effectiveness, including all required waiting periods and all required regulatory acceptances or approvals, of this Agreement have been satisfied in form and substance satisfactory to the Corporation.

1.018 "Election Period" has the meaning set forth in Section 9.183(a) hereof.

1.019 "Minimum Generating Unit Output" means 80 MW (net) for each of the Corporation's generation units; provided that such "Minimum Generating Unit Output" shall be confirmed from time to time by operating tests on the Corporation's generation units and shall be adjusted by the Operating Committee as appropriate following such tests.

1.0110 "Minimum Loading Event" means a period of time during which one or more of the Corporation's generation units are operating at below the Minimum Generating Output as a result of the Sponsoring Companies' failure to schedule and take delivery of sufficient Available Energy.

1.0111 "Minimum Loading Event Costs" means the sum of the following costs caused by one or more Minimum Loading Events: (i) the actual costs of any of the Corporation's generating units burning fuel oil; and (ii) the estimated actual additional costs to the Corporation resulting from Minimum Loading Events, including without limitation the incremental costs of additional emissions allowances, reflected in the schedule of charges prepared by the Operating Committee and in effect as of the commencement of any Minimum Loading Event, which schedule may be adjusted from time to time as necessary by the Operating Committee.

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1.0112 “Month” means a calendar month.

1.0113 “Nominal Power Available” means an individual Sponsoring Company’s Power Participation Ratio share of the Corporation’s current estimate of the maximum amount of Available Power available for delivery at any given time.

1.0114 “Offer Notice” means the notice required to be given to the other Sponsoring Companies by a Transferring Sponsor offering to sell all or a portion of such Transferring Sponsor’s rights, title and interests in, and obligations under this Agreement. At a minimum, the Offer Notice shall be in writing and shall contain (i) the rights, title and interests in, and obligations under this Agreement that the Transferring Sponsor proposes to Transfer; and (ii) the cash purchase price and any other material terms and conditions of such proposed transfer. An Offer Notice may not contain terms or conditions requiring the purchase of any non-OVEC interests.

1.0115 “Permitted Assignee” means a person that is (a) a Sponsoring Company or its Affiliate whose long-term unsecured non-credit enhanced indebtedness, as of the date of such assignment, has a Standard & Poor’s credit rating of at least BBB- and a Moody’s Investors Service, Inc. credit rating of at least Baa3 (provided that, if the proposed assignee’s long-term unsecured non-credit enhanced indebtedness is not currently rated by one of Standard & Poor’s or Moody, such assignee’s long-term unsecured non-credit enhanced indebtedness, as of the date of such assignment, must have either a Standard & Poor’s credit rating of at least BBB- or a Moody’s Investors Service, Inc. credit rating of at least Baa3); or (b) a Sponsoring Company or its Affiliate that does not meet the criteria in subsection (a) above, if the Sponsoring Company or its Affiliate that is assigning its rights, title and interests in, and obligations under, this Agreement agrees in writing (in form and substance satisfactory to Corporation) to remain obligated to satisfy all of the obligations related to the assigned rights, title and interests to the extent such obligations are not satisfied by the assignee of such rights, title and interests; provided that, in no event shall a person be deemed a “Permitted Assignee” if counsel for the Corporation reasonably determines that the assignment of the rights, title or interests in, or obligations under, this Agreement to such person could cause a termination, default, loss or payment obligation under any security issued, or agreement entered into, by the Corporation prior to such transfer.

1.0116 “Postretirement Benefit Obligation” has the meaning set forth in Section 5.03(e) hereof.

1.0117 “Power Participation Ratio” as applied to each of the Sponsoring Companies refers to the percentage set forth opposite its respective name in the tabulation below:

Company	Power Participation Ratio—Percent
---------	--------------------------------------

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Allegheny	3.01
Appalachian.....	15.69
Buckeye.....	18.00
Columbus	4.44
Dayton.....	4.90
Duke Ohio.....	9.00
FirstEnergy.....	4.85
Indiana.....	7.85
Kentucky	2.50
Louisville	5.63
Monongahela.....	0.49
Ohio Power	15.49
Peninsula	6.65
Southern Indiana	<u>1.50</u>
Total	100.0

1.0118 “Tariff” means the open access transmission tariff of the Corporation, as amended from time to time, or any successor tariff, as accepted by the Federal Energy Regulatory Commission or any successor agency.

1.0119 “Third Party” means any person other than a Sponsoring Company or its Affiliate.

1.0120 “Total Minimum Generating Output” means the product of the Minimum Generating Unit Output times the number of the Corporation’s generation units available for service at that time.

1.0121 “Transferring Sponsor” has the meaning set forth in Section 9.183(a) hereof.

1.0122 “Uniform System of Accounts” means the Uniform System of Accounts prescribed by the Federal Energy Regulatory Commission as in effect on January 1, 2004.

ARTICLE 2

TRANSMISSION AGREEMENT AND FACILITIES

2.01. *Transmission Agreement.* The Corporation shall enter into a transmission service agreement under the Tariff, and the Corporation shall reserve and schedule transmission service, ancillary services and other transmission-related services in accordance with the Tariff to provide for the delivery of Available Power and Available Energy to the applicable delivery point under this Agreement.

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2.02. *Limited Burdening of Corporation's Transmission Facilities.*

Transmission facilities owned by the Corporation, including the Project Transmission Facilities, shall not be burdened by power and energy flows of any Sponsoring Company to an extent which would impair or prevent the transmission of Available Power.

ARTICLE 3

[RESERVED]

ARTICLE 4

AVAILABLE POWER SUPPLY

4.01. *Operation of Project Generating Stations.* Corporation shall operate and maintain the Project Generating Stations in a manner consistent with safe, prudent, and efficient operating practice so that the Available Power available from said stations shall be at the highest practicable level attainable consistent with OVEC's obligations under Reliability *First* Reliability Standard BAL-002-RFC throughout the term of this Agreement.

4.02. *Available Power Entitlement.* The Sponsoring Companies collectively shall be entitled to take from Corporation and Corporation shall be obligated to supply to the Sponsoring Companies any and all Available Power and Available Energy pursuant to the provisions of this Agreement. Each Sponsoring Company's Available Power Entitlement hereunder shall be its Power Participation Ratio, as defined in *subsection 1.0117*, of Available Power.

4.03. *Available Energy.* Corporation shall make Available Energy available to each Sponsoring Company in proportion to said Sponsoring Company's Power Participation Ratio. No Sponsoring Company, however, shall be obligated to avail itself of any Available Energy. Available Energy shall be scheduled and taken by the Sponsoring Companies in accordance with the following procedures:

4.031 Each Sponsoring Company shall schedule the delivery of all or any portion (in whole MW increments) of its entitlement to Available Energy in accordance with scheduling procedures established by the Operating Committee from time to time.

4.032 In the event that any Sponsoring Company does not schedule the delivery of all of its Power Participation Ratio share of Available Energy, then each such other Sponsoring Company may schedule the delivery of all or any portion (in whole MW increments) of any such unscheduled share of Available Energy (through successive allotments if necessary) in proportion to their Power Participation Ratios.

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4.033 Notwithstanding any Available Energy schedules made in accordance with this Section 4.03 and the applicable scheduling procedures, (i) the Corporation shall adjust all schedules to the extent that the Corporation's actual generation output is less than or more than the expected Nominal Power Available to all Sponsoring Companies, or to the extent that the Corporation is unable to obtain sufficient transmission service under the Tariff for the delivery of all scheduled Available Energy; and (ii) immediately following a Minimum Loading Event, any Sponsoring Company causing (in whole or part) such Minimum Loading Event shall have its Available Energy schedules increased after the schedules of the Sponsoring Companies not causing such Minimum Load Event, in accordance with the estimated ramp rates associated with the shutdown and start-up of the Corporation's generation units as reflected in the schedules prepared by the Operating Committee and in effect as of the commencement of any Minimum Loading Event, which schedules may be adjusted from time to time as necessary by the Operating Committee.

4.034 Each Sponsoring Company availing itself of Available Energy shall be entitled to an amount of energy (herein called billing kilowatt-hours of Available Energy) equal to its portion, determined as provided in this Section 4.03, of the total Available Energy after deducting therefrom such Sponsoring Company's proportionate share, as defined in this Section 4.03, of all losses as determined in accordance with the Tariff incurred in transmitting the total of such Available Energy from the 345-kV busses of the Project Generating Stations to the applicable delivery points, as scheduled pursuant to Section 9.01, of all Sponsoring Companies availing themselves of Available Energy. The proportionate share of all such losses that shall be so deducted from such Sponsoring Company's portion of Available Energy shall be equal to all such losses multiplied by the ratio of such portion of Available Energy to the total of such Available Energy. Each Sponsoring Company shall have the right, pursuant to this Section 4.03, to avail itself of Available Energy for the purpose of meeting the loads of its own system and/or of supplying energy to other systems in accordance with agreements, other than this Agreement, to which such Sponsoring Company is a party.

4.035 To the extent that, as a result of the failure by one or more Sponsoring Companies to take its respective Power Participation Ratio share of the applicable Total Minimum Generating Output during any hour, a Minimum Loading Event shall occur, then such one or more Sponsoring Companies shall be assessed charges for any Minimum Loading Event Costs in accordance with Section 5.05.

ARTICLE 5

CHARGES FOR AVAILABLE POWER AND MINIMUM LOADING EVENT COSTS

5.01. *Total Monthly Charge.* The amount to be paid to Corporation each month by the Sponsoring Companies for Available Power and Available Energy supplied under this

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Agreement shall consist of the sum of an energy charge, a demand charge, and a transmission charge, all determined as set forth in this *Article 5*.

5.02. *Energy Charge*. The energy charge to be paid each month by the Sponsoring Companies for Available Energy shall be determined by Corporation as follows:

5.021 Determine the aggregate of all expenses for fuel incurred in the operation of the Project Generating Stations, in accordance with Account 501 (Fuel), Account 506.5 (Variable Reagent Costs Associated With Pollution Control Facilities) and 509 (Allowances) of the Uniform System of Accounts.

5.022 Determine for such month the difference between the total cost of fuel as described in subsection 5.021 above and the total cost of fuel included in any Minimum Loading Event Costs payable to the Corporation for such month pursuant to Section 8.03. For the purposes hereof the difference so determined shall be the fuel cost allocable for such month to the total kilowatt-hours of energy generated at the Project Generating Stations for the supply of Available Energy. For Available Energy availed of by the Sponsoring Companies, each Sponsoring Company shall pay Corporation for each such month an amount obtained by multiplying the ratio of the billing kilowatt-hours of such Available Energy availed of by such Sponsoring Company during such month to the aggregate of the billing kilowatt-hours of all Available Energy availed of by all Sponsoring Companies during such month times the total cost of fuel as described in this subsection 5.022 for such month.

5.03. *Demand Charge*. During the period commencing with the Effective Date and for the remainder of the term of this Agreement, demand charges payable by the Sponsoring Companies to Corporation shall be determined by the Corporation as provided below in this Section 5.03. Each Sponsoring Company's share of the aggregate demand charges shall be the percentage of such charges represented by its Power Participation Ratio.

The aggregate demand charge payable each month by the Sponsoring Companies to Corporation shall be equal to the total costs incurred for such month by Corporation resulting from its ownership, operation, and maintenance of the Project Generating Stations and Project Transmission Facilities determined as follows:

As soon as practicable after the close of each calendar month the following components of costs of Corporation (eliminating any duplication of costs which might otherwise be reflected among the corporate entities comprising Corporation) applicable for such month to the ownership, operation and maintenance of the Project Generating Stations and the Project Transmission Facilities, including additional facilities and/or spare parts (such as fuel processing plants, flue gas or waste product processing facilities, and facilities reasonably required to enable the Corporation to limit the emission of pollutants or the discharge of wastes in compliance with governmental requirements) and

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replacements necessary or desirable to keep the Project Generating Stations and the Project Transmission Facilities in a dependable and efficient operating condition, and any provision for any taxes that may be applicable to such charges, to be determined and recorded in the following manner:

(a) Component (A) shall consist of fixed charges made up of (i) the amounts of interest properly chargeable to Accounts 427, 430 and 431, less the amount thereof credited to Account 432, of the Uniform System of Accounts, including the interest component of any purchase price, interest, rental or other payment under an installment sale, loan, lease or similar agreement relating to the purchase, lease or acquisition by Corporation of additional facilities and replacements (whether or not such interest or other amounts have come due or are actually payable during such Month), (ii) the amounts of amortization of debt discount or premium and expenses properly chargeable to Accounts 428 and 429, and (iii) an amount equal to the sum of (I) the applicable amount of the debt amortization component for such month required to retire the total amount of indebtedness of Corporation issued and outstanding, (II) the amortization requirement for such month in respect of indebtedness of Corporation incurred in respect of additional facilities and replacements, and (III) to the extent not provided for pursuant to clause (II) of this clause (iii), an appropriate allowance for depreciation of additional facilities and replacements.

(b) Component (B) shall consist of the total operating expenses for labor, maintenance, materials, supplies, services, insurance, administrative and general expense, etc., properly chargeable to the Operation and Maintenance Expense Accounts of the Uniform System of Accounts (exclusive of Accounts 501, 509, 555, 911, 912, 913, 916, and 917 of the Uniform System of Accounts), minus the total of all non-fuel costs included in any Minimum Loading Event Costs payable to the Corporation for such month pursuant to Section 8.03, minus the total of all transmission charges payable to the Corporation for such month pursuant to Section 5.04, and plus any additional amounts which, after provision for all income taxes on such amounts (which shall be included in Component (C) below), shall equal any amounts paid or payable by Corporation as fines or penalties with respect to occasions where it is asserted that Corporation failed to comply with a law or regulation relating to the emission of pollutants or the discharge of wastes.

(c) Component (C) shall consist of the total expenses for taxes, including all taxes on income but excluding any federal income taxes arising from payments to Corporation under Component (D) below, and all operating or other costs or expenses, net of income, not included or

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specifically excluded in Components (A) or (B) above, including tax adjustments, regulatory adjustments, net losses for the disposition of property and other net costs or expenses associated with the operation of a utility.

(d) Component (D) shall consist of an amount equal to the product of \$2.089 multiplied by the total number of shares of capital stock of the par value of \$100 per share of Ohio Valley Electric Corporation which shall have been issued and which are outstanding on the last day of such month.

(e) Component (E) shall consist of an amount to be sufficient to pay the costs and other expenses relating to the establishment, maintenance and administration of life insurance, medical insurance and other postretirement benefits other than pensions attributable to the employment and employee service of active employees, retirees, or other employees, including without limitation any premiums due or expected to become due, as well as administrative fees and costs, such amounts being sufficient to provide payment with respect to all periods for which Corporation has committed or is otherwise obligated to make such payments, including amounts attributable to current employee service and any unamortized prior service cost, gain or loss attributable to prior service years ("Postretirement Benefit Obligation"); provided that, the amount payable for Postretirement Benefit Obligations during any month shall be determined by the Corporation based on, among other factors, the Statement of Financial Accounting Standards No. 106 (Employers' Accounting For Postretirement Benefits Other Than Pensions) and any applicable accounting standards, policies or practices as adopted from time to time relating to accruals with respect to all or any portion of such Postretirement Benefit Obligation.

(f) Component (F) shall consist of an amount that may be incurred in connection with the decommissioning, shutdown, demolition and closing of the Project Generating Stations when production of electric power and energy is discontinued at such Project Generating Stations, which amount shall include, without limitation the following costs (net of any salvage credits): the costs of demolishing the plants' building structures, disposal of non-salvageable materials, removal and disposal of insulating materials, removal and disposal of storage tanks and associated piping, disposal or removal of materials and supplies (including fuel oil and coal), grading, covering and reclaiming storage and disposal areas, disposing of ash in ash ponds to the extent required by regulatory authorities, undertaking corrective or remedial action required by regulatory authorities, and any other costs incurred in putting the facilities

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in a condition necessary to protect health or the environment or which are required by regulatory authorities, or which are incurred to fund continuing obligations to monitor or to correct environmental problems which result, or are later discovered to result, from the facilities' operation, closure or post-closure activities ("Decommissioning and Demolition Obligation") provided that, the amount payable for Decommissioning and Demolition Obligations during any month shall be calculated by Corporation based on, among other factors, the then-estimated useful life of the Project Generating Stations and any applicable accounting standards, policies or practices as adopted from time to time relating to accruals with respect to all or any portion of such Decommissioning and Demolition Obligation, and provided further that, the Corporation shall recalculate the amount payable under this Component (F) for future months from time to time, but in no event later than five (5) years after the most recent calculation.

5.04. *Transmission Charge.* The transmission charges to be paid each month by the Sponsoring Companies shall be equal to the total costs incurred for such month by Corporation for the purchase of transmission service, ancillary services and other transmission-related services under the Tariff as reserved and scheduled by the Corporation to provide for the delivery of Available Power and Available Energy to the applicable delivery point under this Agreement. Each Sponsoring Company's share of the aggregate transmission charges shall be the percentage of such charges represented by its Power Participation Ratio.

5.05. *Minimum Loading Event Costs.* To the extent that, as a result of the failure by one or more Sponsoring Companies to take its respective Power Participation Ratio share of the applicable Total Minimum Generating Output during any hour, a Minimum Loading Event shall occur, then the sum of all Minimum Loading Event Costs relating to such Minimum Loading Event shall be charged to such Sponsoring Company or group of Sponsoring Companies that failed take its respective Power Participation Ratio share of the applicable Total Minimum Generating Output during such period, with such Minimum Loading Event Costs allocated among such Sponsoring Companies on a pro-rata basis in accordance with such Sponsoring Company's MWh share of the MWh reduction in the delivery of Available Energy causing any Minimum Loading Event. The applicable charges for Minimum Loading Event Costs as determined by the corporation in accordance with Section 5.05 shall be paid each month by the applicable Sponsoring Companies.

ARTICLE 6

Metering of Energy Supplied

6.01. *Measuring Instruments.* The parties hereto shall own and maintain such metering equipment as may be necessary to provide complete information regarding the delivery of power and energy to or for the account of any of the parties hereto; and the ownership and

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expense of such metering shall be in accordance with agreements among them. Each party will at its own expense make such periodic tests and inspections of its meters as may be necessary to maintain them at the highest practical commercial standard of accuracy and will advise all other interested parties hereto promptly of the results of any such test showing an inaccuracy of more than 1%. Each party will make additional tests of its meters at the request of any other interested party. Other interested parties shall be given notice of, and may have representatives present at, any test and inspection made by another party.

ARTICLE 7

COSTS OF REPLACEMENTS AND ADDITIONAL FACILITIES; PAYMENTS FOR EMPLOYEE BENEFITS; DECOMMISSIONING, SHUTDOWN, DEMOLITION AND CLOSING CHARGES

7.01. *Replacement Costs.* The Sponsoring Companies shall reimburse Corporation for the difference between (a) the total cost of replacements chargeable to property and plant made by Corporation during any month prior thereto (and not previously reimbursed) and (b) the amounts received by Corporation as proceeds of fire or other applicable insurance protection, or amounts recovered from third parties responsible for damages requiring replacement, plus provision for all taxes on income on such difference; provided that, to the extent that the Corporation arranges for the financing of any replacements, the payments due under this Section 7.01 shall equal the amount of all principal, interest, taxes and other costs and expenses related to such financing during any month. Each Sponsoring Company's share of such payment shall be the percentage of such costs represented by its Power Participation Ratio. The term cost of replacements, as used herein, shall include all components of cost, plus removal expense, less salvage.

7.02. *Additional Facility Costs.* The Sponsoring Companies shall reimburse Corporation for the total cost of additional facilities and/or spare parts purchased and/or installed by Corporation during any month prior thereto (and not previously reimbursed), plus provision for all taxes on income on such costs; provided that, to the extent that the Corporation arranges for the financing of any additional facilities and/or spare parts, the payments due under this Section 7.02 shall equal the amount of all principal, interest, taxes and other costs and expenses related to such financing during any month. Each Sponsoring Company's share of such payment shall be the percentage of such costs represented by its Power Participation Ratio.

7.03. *Payments for Employee Benefits.* Not later than the effective date of termination of this Agreement, each Sponsoring Company will pay to Corporation its Power Participation Ratio share of additional amounts, after provision for any taxes that may be applicable thereto, sufficient to cover any shortfall if the amount of the Postretirement Benefit Obligation collected by the Corporation prior to the effective date of termination of the Agreement is insufficient to permit Corporation to fulfill its commitments or obligations with respect to both postemployment benefit obligations under the Statement of Financial Accounting Standards No. 112 and postretirement benefits other than pensions, as determined by Corporation

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with the aid of an actuary or actuaries selected by the Corporation based on the terms of the Corporation's then-applicable plans.

7.04. *Decommissioning, Shutdown, Demolition and Closing.* The Sponsoring Companies recognize that a part of the cost of supplying power to it under this Agreement is the amount that may be incurred in connection with the decommissioning, shutdown, demolition and closing of the Project Generating Stations when production of electric power and energy is discontinued at such Project Generating Stations. Not later than the effective date of termination of this Agreement, each Sponsoring Company will pay to Corporation its Power Participation Ratio share of additional amounts, after provision for any taxes that may be applicable thereto, sufficient to cover any shortfall if the amount of the Decommissioning and Demolition Obligation collected by the Corporation prior to the effective date of termination of the Agreement is insufficient to permit Corporation to complete the decommissioning, shutdown, demolition and closing of the Project Generating Stations, based on the Corporation's recalculation of the Decommissioning and Demolition Obligation in accordance with Section 5.03(f) of this Agreement no earlier than twelve (12) months before the effective date of termination of this Agreement.

ARTICLE 8

BILLING AND PAYMENT

8.01. *Available Power, and Replacement and Additional Facility Costs.* As soon as practicable after the end of each month Corporation shall render to each Sponsoring Company a statement of all Available Power and Available Energy supplied to or for the account of such Sponsoring Company during such month, specifying the amount due to the Corporation therefor, including any amounts for reimbursement for the cost of replacements and additional facilities and/or spare parts incurred during such month, pursuant to *Articles 5 and 7* above. Such Sponsoring Company shall make payment therefor promptly upon the receipt of such statement, but in no event later than fifteen (15) days after the date of receipt of such statement. In case any factor entering into the computation of the amount due for Available Power and Available Energy cannot be determined at the time, it shall be estimated subject to adjustment when the actual determination can be made.

8.02. *Provisional Payments for Available Power.* The Sponsoring Companies shall, from time to time, at the request of the Corporation, make provisional semi-monthly payments for Available Power in amounts approximately equal to the estimated amounts payable for Available Power delivered by Corporation to the Sponsoring Companies during each semi-monthly period. As soon as practicable after the end of each semi-monthly period with respect to which Corporation has requested the Sponsoring Companies to make provisional semi-monthly payments for Available Power, Corporation shall render to each Sponsoring Company a separate statement indicating the amount payable by such Sponsoring Company for such semi-monthly period. Such Sponsoring Company shall make payment therefor promptly upon receipt of such statement, but in no event later than fifteen (15) days after the date of receipt of such

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statement and the amounts so paid by such Sponsoring Company shall be credited to the account of such Sponsoring Company with respect to future payments to be made pursuant to *Articles 5 and 7* above by such Sponsoring Company to Corporation for Available Power.

8.03. *Minimum Loading Event Costs.* As soon as practicable after the end of each month, Corporation shall render to each Sponsoring Company a statement indicating any applicable charges for Minimum Loading Event Costs pursuant to Section 5.05 during such month, specifying the amount due to the Corporation therefor pursuant to *Article 5* above. Such Sponsoring Company shall make payment therefor promptly upon the receipt of such statement, but in no event later than fifteen (15) days after the date of receipt of such statement. In case the computation of the amount due for Minimum Loading Event Costs cannot be determined at the time, it shall be estimated subject to adjustment when the actual determination can be made, and all payments shall be subject to subsequent adjustment.

8.04. *Unconditional Obligation to Pay Demand and Other Charges.* The obligation of each Sponsoring Company to pay its specified portion of the Demand Charge under Section 5.03, the Transmission Charge under Section 5.04, and all charges under *Article 7* for any Month shall not be reduced irrespective of:

(a) whether or not any Available Power or Available Energy are supplied by the Corporation during such calendar month and whether or not any Available Power or Available Energy are accepted by any Sponsoring Company during such calendar month;

(b) the existence of any claim, set-off, defense, reduction, abatement or other right (other than irrevocable payment, performance, satisfaction or discharge in full) that such Sponsoring Company may have, or which may at any time be available to or be asserted by such Sponsoring Company, against the Corporation, any other Sponsoring Company, any creditor of the Corporation or any other Person (including, without limitation, arising as a result of any breach or alleged breach by either the Corporation, any other Sponsoring Company, any creditor of the Corporation or any other Person under this Agreement or any other agreement (whether or not related to the transactions contemplated by this Agreement or any other agreement) to which such party is a party); or

(c) the validity or enforceability against any other Sponsoring Company of this Agreement or any right or obligation hereunder (or any release or discharge thereof) at any time.

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ARTICLE 9

GENERAL PROVISIONS

9.01. *Characteristics of Supply and Points of Delivery.* All power and energy delivered hereunder shall be 3-phase, 60-cycle, alternating current, at a nominal unregulated voltage designated for the point of delivery as described in this *Article 9*. Available Power and Available Energy to be delivered between Corporation and the Sponsoring Companies pursuant to this Agreement shall be delivered under the terms and conditions of the Tariff at the points, as scheduled by the Sponsoring Company in accordance with procedures established by the Operating Committee and in accordance with Section 9.02, where the transmission facilities of Corporation interconnect with the transmission facilities of any Sponsoring Company (or its successor or predecessor); provided that, to the extent that a joint and common market is established for the sale of power and energy by Sponsoring Companies within one or more of the regional transmission organizations or independent system operators approved by the Federal Energy Regulatory Commission in which the Sponsoring Companies are members or otherwise participate, then Corporation and the Sponsoring Companies shall take such action as reasonably necessary to permit the Sponsoring Companies to bid their entitlement to power and energy from Corporation into such market(s) in accordance with the procedures established for such market(s).

9.02. *Modification of Delivery Schedules Based on Available Transmission Capability.* To the extent that transmission capability available for the delivery of Available Power and Available Energy at any delivery point is less than the total amount of Available Power and Available Energy scheduled for delivery by the Sponsoring Companies at such delivery point in accordance with Section 9.01, then the following procedures shall apply and the Corporation and the applicable Sponsoring Companies shall modify their delivery schedules accordingly until the total amount of Available Power and Available Energy scheduled for delivery at such delivery point is equal to or less than the transmission capability available for the delivery of Available Power and Available Energy: (a) the transmission capability available for the delivery of Available Power and Available Energy at the following delivery points shall be allocated first on a pro rata basis (in whole MW increments) to the following Sponsoring Companies up to their Power Participation Ratio share of the total amount of Available Energy available to all Sponsoring Companies (and as applicable, further allocated among Sponsoring Companies entitled to allocation under this Section 9.02(a) in accordance with their Power Participation Ratios): (i) to Allegheny, Appalachian, Buckeye, Columbus, FirstEnergy, Indiana, Monongahela, Ohio Power and Peninsula (or their successors) for deliveries at the points of interconnection between the Corporation and Appalachian, Columbus, Indiana or Ohio Power, or their successors; (ii) to Duke Ohio (or its successor) for deliveries at the points of interconnection between the Corporation and Duke Ohio or its successor; (iii) to Dayton (or its successor) for deliveries at the points of interconnection between the Corporation and Dayton or its successor; and (iv) to Kentucky, Louisville and Southern Indiana (or their successors) for deliveries at the points of interconnection between the Corporation and Louisville or Kentucky, or their successors; and (b) any remaining transmission capability available for the delivery of

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Available Power and Available Energy shall be allocated on a pro rata basis (in whole MW increments) to the Sponsoring Companies in accordance with their Power Participation Ratios.

9.03. *Operation and Maintenance of Systems Involved.* Corporation and the Sponsoring Companies shall operate their systems in parallel, directly or indirectly, except during emergencies that temporarily preclude parallel operation. The parties hereto agree to coordinate their operations to assure maximum continuity of service from the Project Generating Stations, and with relation thereto shall cooperate with one another in the establishment of schedules for maintenance and operation of equipment and shall cooperate in the coordination of relay protection, frequency control, and communication and telemetering systems. The parties shall build, maintain and operate their respective systems in such a manner as to minimize so far as practicable rapid fluctuations in energy flow among the systems. The parties shall cooperate with one another in the operation of reactive capacity so as to assure mutually satisfactory power factor conditions among themselves.

The parties hereto shall exercise due diligence and foresight in carrying out all matters related to the providing and operating of their respective power resources so as to minimize to the extent practicable deviations between actual and scheduled deliveries of power and energy among their systems. The parties hereto shall provide and/or install on their respective systems such communication, telemetering, frequency and/or tie-line control facilities essential to so minimizing such deviations; and shall fully cooperate with one another and with third parties (such third parties whose systems are either directly or indirectly interconnected with the systems of the Sponsoring Companies and who of necessity together with the parties hereto must unify their efforts cooperatively to achieve effective and efficient interconnected systems operation) in developing and executing operating procedures that will enable the parties hereto to avoid to the extent practicable deviations from scheduled deliveries.

In order to foster coordination of the operation and maintenance of Corporation's transmission facilities with those facilities of Sponsoring Companies that are owned or functionally controlled by a regional transmission organization or independent system operator, Corporation shall use commercially reasonable efforts to enter into a coordination agreement with any regional transmission organization or independent system operator approved by the Federal Energy Regulatory Commission that operates transmission facilities that interconnect with Corporation's transmission facilities, and to enter into a mutually agreeable services agreement with a regional transmission organization or independent system operator to provide the Corporation with reliability and security coordination services and other related services.

9.04. *Power Deliveries as Affected by Physical Characteristics of Systems.* It is recognized that the physical and electrical characteristics of the transmission facilities of the interconnected network of which the transmission systems of the Sponsoring Companies, Corporation, and other systems of third parties not parties hereto are a part, may at times preclude the direct delivery at the points of interconnection between the transmission systems of one or more of the Sponsoring Companies and Corporation, of some portion of the energy supplied under this Agreement, and that in each such case, because of said characteristics, some

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of the energy will be delivered at points which interconnect the system of one or more of the Sponsoring Companies with systems of companies not parties to this Agreement. The parties hereto shall cooperate in the development of mutually satisfactory arrangements among themselves and with such companies not parties hereto whereby the supply of power and energy contemplated hereunder can be fulfilled.

9.05. *Operating Committee.* There shall be an "Operating Committee" consisting of one member appointed by the Corporation and one member appointed by each of the Sponsoring Companies electing so to do; provided that, if any two or more Sponsoring Companies are Affiliates, then such Affiliates shall together be entitled to appoint only one member to the Operating Committee. The "Operating Committee" shall establish (and modify as necessary) scheduling, operating, testing and maintenance procedures of the Corporation in support of this Agreement, including establishing: (i) procedures for scheduling delivery of Available Energy under Section 4.03, (ii) procedures for power and energy accounting, (iii) procedures for the reservation and scheduling of firm and non-firm transmission service under the Tariff for the delivery of Available Power and Available Energy, (iv) the Minimum Generating Unit Output, and (v) the form of notifications relating to power and energy and the price thereof. In addition, the Operating Committee shall consider and make recommendations to Corporation's Board of Directors with respect to such other problems as may arise affecting the transactions under this Agreement. The decisions of the Operating Committee, including the adoption or modification of any procedure by the Operating Committee pursuant to this Section 9.04, must receive the affirmative vote of at least two-thirds of the members of the Operating Committee, regardless of the number of members of the Operating Committee present at any meeting.

9.06. *Acknowledgment of Certain Rights.* For the avoidance of doubt, all of the parties to this Agreement acknowledge and agree that (i) as of the effective date of the Current Agreement, certain rights and obligations of the Sponsoring Companies or their predecessors under the Original Agreement were changed, modified or otherwise removed, (ii) to the extent that the rights of any Sponsoring Company or their predecessors were thereby changed, modified or otherwise removed as of the effective date of the Current Agreement, such Sponsoring Company may be entitled to rights under applicable law, regulation, rules or orders under the Federal Power Act or otherwise adopted by the Federal Energy Regulatory Commission ("FERC"), (iii) as a result of the elimination as of the effective date of the Current Agreement of the firm transmission service previously provided during the term of the Original Agreement to Sponsoring Companies or their predecessors whose transmission systems were only indirectly connected to the Corporation's facilities through intervening transmission systems by certain Sponsoring Companies or their predecessors whose transmission systems were directly connected to the Corporation's facilities, such Sponsoring Companies or their predecessors whose transmission systems were only indirectly connected to the Corporation's facilities through intervening transmission systems shall have been entitled to such "roll over" firm transmission service for delivery of their entitlement to their Power Participation Ratio share of Surplus Power and Surplus Energy under this Agreement, to the border of such Sponsoring Company system and intervening Sponsoring Company system, as would be accorded a long-

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term firm point-to-point transmission service reservation under the then otherwise applicable FERC Open Access Transmission Tariff ("OATT"), (iv) the obligation of any Sponsoring Company to maintain or expand transmission capacity to accommodate another Sponsoring Company's "roll over" rights to transmission service for delivery of their entitlement to their Power Participation Ratio share of Surplus Power and Surplus Energy under this Agreement shall be consistent with the obligations it would have for long-term firm point-to-point transmission service provided pursuant to the then otherwise applicable OATT, and (v) the parties shall cooperate with any Sponsoring Company that seeks to obtain and/or exercise any such rights available under applicable law, regulation, rules or orders under the Federal Power Act or otherwise adopted by the FERC.

9.07. *Term of Agreement.* This Agreement shall become effective upon the Effective Date and shall terminate upon the earlier of: (1) June 30, 2040 or (2) the sale or other disposition of all of the facilities of the Project Generating Stations or the permanent cessation of operation of such facilities; provided that, the provisions of *Articles 5, 7 and 8*, this Section 9.07 and Sections 9.08, 9.09, 9.10, 9.11, 9.12, 9.14, 9.15, 9.16, 9.17 and 9.18 shall survive the termination of this Agreement, and no termination of this Agreement, for whatever reason, shall release any Sponsoring Company of any obligations or liabilities incurred prior to such termination.

9.08. *Access to Records.* Corporation shall, at all reasonable times, upon the request of any Sponsoring Company, grant to its representatives reasonable access to the books, records and accounts of the Corporation, and furnish such Sponsoring Company such information as it may reasonably request, to enable it to determine the accuracy and reasonableness of payments made for energy supplied under this Agreement.

9.09. *Modification of Agreement.* Absent the agreement of all parties to this Agreement, the standard for changes to provisions of this Agreement related to rates proposed by a party, a non-party or the Federal Energy Regulatory Commission (or a successor agency) acting sua sponte shall be the "public interest" standard of review set forth in *United Gas Pipeline Co. v. Mobile Gas Serv. Corp.*, 350 U.S. 332 (1956) and *Federal Power Comm'n v. Sierra Pacific Power Co.*, 350 U.S. 348 (1956).

9.10. *Arbitration.* Any controversy, dispute or claim arising out of this Agreement or the refusal by any party hereto to perform the whole or any part thereof, shall be determined by arbitration, in the City of Columbus, Franklin County, Ohio, in accordance with the Commercial Arbitration Rules of the American Arbitration Association or any successor organization, except as otherwise set forth in this Section 9.10.

The party demanding arbitration shall serve notice in writing upon all other parties hereto, setting forth in detail the controversy, dispute or claim with respect to which arbitration is demanded, and the parties shall thereupon endeavor to agree upon an arbitration board, which shall consist of three members ("Arbitration Board"). If all the parties hereto fail so to agree within a period of thirty (30) days from the original notice, the party demanding

arbitration may, by written notice to all other parties hereto, direct that any members of the Arbitration Board that have not been agreed to by the parties shall be selected by the American Arbitration Association, or any successor organization. No person shall be eligible for appointment to the Arbitration Board who is an officer, employee, shareholder of or otherwise interested in any of the parties hereto or in the matter sought to be arbitrated.

The Arbitration Board shall afford adequate opportunity to all parties hereto to present information with respect to the controversy, dispute or claim submitted to arbitration and may request further information from any party hereto; provided, however, that the parties hereto may, by mutual agreement, specify the rules which are to govern any proceeding before the Arbitration Board and limit the matters to be considered by the Arbitration Board, in which event the Arbitration Board shall be governed by the terms and conditions of such agreement.

The determination or award of the Arbitration Board shall be made upon a determination of a majority of the members thereof. The findings and award of the Arbitration Board shall be final and conclusive with respect to the controversy, dispute or claim submitted for arbitration and shall be binding upon the parties hereto, except as otherwise provided by law. The award of the Arbitration Board shall specify the manner and extent of the division of the costs of the arbitration proceeding among the parties hereto.

9.11. *Liability.* The rights and obligations of all the parties hereto shall be several and not joint or joint and several.

9.12. *Force Majeure.* No party hereto shall be held responsible or liable for any loss or damage on account of non-delivery of energy hereunder at any time caused by an event of Force Majeure. "Force Majeure" shall mean the occurrence or non-occurrence of any act or event that could not reasonably have been expected and avoided by exercise of due diligence and foresight and such act or event is beyond the reasonable control of such party, including to the extent caused by act of God, fire, flood, explosion, strike, civil or military authority, insurrection or riot, act of the elements, or failure of equipment. For the avoidance of doubt, "Force Majeure" shall in no event be based on any Sponsoring Company's financial or economic conditions, including without limitation (i) the loss of the Sponsoring Company's markets; or (ii) the Sponsoring Company's inability economically to use or resell the Available Power or Available Energy purchased hereunder.

9.13. *Governing Law.* This Agreement shall be governed by, and construed in accordance with, the laws of the State of Ohio.

9.14. *Regulatory Approvals.* This Agreement is made subject to the jurisdiction of any governmental authority or authorities having jurisdiction in the premises and the performance thereof shall be subject to the following:

- (a) The receipt of all regulatory approvals, in form and substance satisfactory to Corporation, necessary to permit Corporation to perform all the duties and obligations to be performed by Corporation hereunder.

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(b) The receipt of all regulatory approvals, in form and substance satisfactory to the Sponsoring Companies, necessary to permit the Sponsoring Companies to carry out all transactions contemplated herein.

9.15. *Notices.* All notices, requests or other communications under this Agreement shall be in writing and shall be sufficient in all respects: (i) if delivered in person or by courier, upon receipt by the intended recipient or an employee that routinely accepts packages or letters from couriers or other persons for delivery to personnel at the address identified above (as confirmed by, if delivered by courier, the records of such courier), (ii) if sent by facsimile transmission, when the sender receives confirmation from the sending facsimile machine that such facsimile transmission was transmitted to the facsimile number of the addressee, or (iii) if mailed, upon the date of delivery as shown by the return receipt therefor.

9.16. *Waiver.* Performance by any party to this Agreement of any responsibility or obligation to be performed by such party or compliance by such party with any condition contained in this Agreement may by a written instrument signed by all other parties to this Agreement be waived in any one or more instances, but the failure of any party to insist in any one or more instances upon strict performance of any of the provisions of this Agreement or to take advantage of any of its rights hereunder shall not be construed as a waiver of any such provisions or the relinquishment of any such rights, but the same shall continue and remain in full force and effect.

9.17. *Titles of Articles and Sections.* The titles of the Articles and Sections in this Agreement have been inserted as a matter of convenience of reference and are not a part of this Agreement.

9.18. *Successors and Assigns.* This Agreement may be executed in any number of counterparts, all of which shall constitute but one and the same document.

9.181 This Agreement shall inure to the benefit of and be binding upon the parties hereto and their respective successors and assigns, but a party to this Agreement may not assign this Agreement or any of its rights, title or interests in or obligations (including without limitation the assumption of debt obligations) under this Agreement, except to a successor to all or substantially all the properties and assets of such party or as provided in Section 9.182 or 9.183, without the written consent of all the other parties hereto.

9.182 Notwithstanding the provisions of Section 9.181, any Sponsoring Company shall be permitted to, upon thirty (30) days notice to the Corporation and each other Sponsoring Company, without any further action by the Corporation or the other Sponsoring Companies, assign all or part of its rights, title and interests in, and obligations under this Agreement to a Permitted Assignee, provided that, the assignee and assignor of the rights, title and interests in, and obligations under, this Agreement have executed an assignment agreement in form and substance acceptable to the Corporation

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in its reasonable discretion (including, without limitation; the agreement by the Sponsoring Company assigning such rights, title and interests in, and obligations under, this Agreement to reimburse the Corporation and the other Sponsoring Companies for any fees or expenses required under any security issued, or agreement entered into, by the Corporation as a result of such assignment, including without limitation any consent fee or additional financing costs to the Corporation under the Corporation's then-existing securities or agreements resulting from such assignment).

9.183 Notwithstanding the provisions of Section 9.181, any Sponsoring Company shall be permitted to, subject to compliance with all of the requirements of this Section 9.183, assign all or part of its rights, title and interests in, and obligations under this Agreement to a Third Party without any further action by the Corporation or the other Sponsoring Companies.

(a) A Sponsoring Company (the "Transferring Sponsor") that desires to assign all or part of its rights, title and interests in, and obligations under this Agreement to a Third Party shall deliver an Offer Notice to the Corporation and each other Sponsoring Company. The Offer Notice shall be deemed to be an irrevocable offer of the subject rights, title and interests in, and obligations under this Agreement to each of the other Sponsoring Companies that is not an Affiliate of the Transferring Sponsor, which offer must be held open for no less than thirty (30) days from the date of the Offer Notice (the "Election Period").

(b) The Sponsoring Companies (other than the Transferring Sponsor and its Affiliates) shall first have the right, but not the obligation, to purchase all of the rights, title and interests in, and obligations under this Agreement described in the Offer Notice at the price and on the terms specified therein by delivering written notice of such election to the Transferring Sponsor and the Corporation within the Election Period; provided that, irrespective of the terms and conditions of the Offer Notice, a Sponsoring Company may condition its election to purchase the interest described in the Offer Notice on the receipt of approval or consent from such Sponsoring Company's Board of Directors; provided further that, written notice of such conditional election must be delivered to the Transferring Sponsor and the Corporation within the Election Period and such conditional election shall be deemed withdrawn (as if it had never been provided) unless the Sponsoring Company that delivered such conditional election subsequently delivers written notice to the Transferring Sponsor and the Corporation on or before the tenth (10th) day after the expiration of the Election Period that all necessary approval or consent of such Sponsoring Company's Board of Directors have been obtained. To the extent that more than one Sponsoring Company exercises its right to purchase all of the rights, title and interests in, and

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obligations under this Agreement described in the Offer Notice in accordance with the previous sentence, such rights, title and interests in, and obligations under this Agreement shall be allotted (successively if necessary) among the Sponsoring Companies exercising such right in proportion to their respective Power Participation Ratios.

(c) Each Sponsoring Company exercising its right to purchase any rights, title and interests in, and obligations under this Agreement pursuant to this Section 9.183 may choose to have an Affiliate purchase such rights, title and interests in, and obligations under this Agreement; provided that, notwithstanding anything in this Section 9.183 to the contrary, any assignment to a Sponsoring Company or its Affiliate hereunder must comply with the requirements of Section 9.182.

(d) If one or more Sponsoring Companies have elected to purchase all of the rights, title and interests in, and obligations under this Agreement of the Transferring Sponsor pursuant to the Offer Notice, the assignment of such rights, title and interests in, and obligations under this Agreement shall be consummated as soon as practical after the delivery of the election notices, but in any event no later than fifteen (15) days after the filing and receipt, as applicable, of all necessary governmental filings, consents or other approvals and the expiration of all applicable waiting periods. At the closing of the purchase of such rights, title and interests in, and obligations under this Agreement from the Transferring Sponsor, the Transferring Sponsor shall provide representations and warranties customary for transactions of this type, including those as to its title to such securities and that there are no liens or other encumbrances on such securities (other than pursuant to this Agreement) and shall sign such documents as may reasonably be requested by the Corporation and the other Sponsoring Companies. The Sponsoring Companies or their Affiliates shall only be required to pay cash for the rights, title and interests in, and obligations under this Agreement being assigned by the Transferring Sponsor.

(e) To the extent that the Sponsoring Companies have not elected to purchase all of the rights, title and interests in, and obligations under this Agreement described in the Offer Notice, the Transferring Sponsor may, within one-hundred and eighty (180) days after the later of the expiration of the Election Period or the deemed withdrawal of a conditional election by a Sponsoring Company under Section 9.183(b) hereof (if applicable), enter into a definitive agreement to, assign such rights, title and interests in, and obligations under this Agreement to a Third Party at a price no less than 92.5% of the purchase price specified in the Offer Notice and on other material terms and conditions no more

23

favorable to the such Third Party than those specified in the Offer Notice; provided that such purchases shall be conditioned upon: (i) such Third Party having long-term unsecured non-credit enhanced indebtedness, as of the date of such assignment, with a Standard & Poor's credit rating of at least BBB- and a Moody's Investors Service, Inc. credit rating of at least Baa3 (provided that, if such Third Party's long-term unsecured non-credit enhanced indebtedness is not currently rated by one of Standard & Poor's or Moody, such Third Party's long-term unsecured non-credit enhanced indebtedness, as of the date of such assignment, must have either a Standard & Poor's credit rating of at least BBB- or a Moody's Investors Service, Inc. credit rating of at least Baa3); (ii) the filing or receipt, as applicable, of any necessary governmental filings, consents or other approvals; (iii) the determination by counsel for the Corporation that the assignment of the rights, title or interests in, or obligations under, this Agreement to such Third Party would not cause a termination, default, loss or payment obligation under any security issued, or agreement entered into, by the Corporation prior to such transfer; and (iv) such Third Party executing a counterpart of this Agreement, and both such Third Party and the Sponsoring Company which is assigning its rights, title and interests in, and obligations under, this Agreement executing such other documents as may be reasonably requested by the Corporation (including, without limitation, an assignment agreement in form and substance acceptable to the Corporation in its reasonable discretion and containing the agreement by such Sponsoring Company to reimburse the Corporation and the other Sponsoring Companies for any fees or expenses required under any security issued, or agreement entered into, by the Corporation as a result of such assignment, including without limitation any consent fee or additional financing costs to the Corporation under the Corporation's then-existing securities or agreements resulting from such assignment). In the event that the Sponsoring Company and a Third Party have not entered into a definitive agreement to assign the interests specified in the Offer Notice to such Third Party within the later of one-hundred and eighty (180) days after the expiration of the Election Period or the deemed withdrawal of a conditional election by a Sponsoring Company under Section 9.183(b) hereof (if applicable) for any reason or if either the price to be paid by such Third Party would be less than 92.5% of the purchase price specified in the Offer Notice or the other material terms of such assignment would be more favorable to such Third Party than the terms specified in the Offer Notice, then the restrictions provided for herein shall again be effective, and no assignment of any rights, title and interests in, and obligations under this Agreement may be made thereafter without again offering the same to Sponsoring Companies in accordance with this Section 9.183.

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ARTICLE 10

REPRESENTATIONS AND WARRANTIES

10.01. *Representations and Warranties.* Each Sponsoring Company hereby represents and warrants for itself, on and as of the date of this Agreement, as follows:

(a) it is duly organized, validly existing and in good standing under the laws of its state of organization, with full corporate power, authority and legal right to execute and deliver this Agreement and to perform its obligations hereunder;

(b) it has duly authorized, executed and delivered this Agreement, and upon the execution and delivery by all of the parties hereto, this Agreement will be in full force and effect, and will constitute a legal, valid and binding obligation of such Sponsoring Company, enforceable in accordance with the terms hereof, except as enforceability may be limited by applicable bankruptcy, insolvency, fraudulent conveyance, reorganization, moratorium or other similar laws affecting the enforcement of creditors' rights generally;

(c) Except as set forth in Schedule 10.01(c) hereto, no consents or approvals of, or filings or registrations with, any governmental authority or public regulatory authority or agency, federal state or local, or any other entity or person are required in connection with the execution, delivery and performance by it of this Agreement, except for those which have been duly obtained or made and are in full force and effect, have not been revoked, and are not the subject of a pending appeal; and

(d) the execution, delivery and performance by it of this Agreement will not conflict with or result in any breach of any of the terms, conditions or provisions of, or constitute a default under its charter or by-laws or any indenture or other material agreement or instrument to which it is a party or by which it may be bound or result in the imposition of any liens, claims or encumbrances on any of its property.

ARTICLE 11

EVENTS OF DEFAULT AND REMEDIES

11.01. *Payment Default.* If any Sponsoring Company fails to make full payment to Corporation under this Agreement when due and such failure is not remedied within ten (10) days after receipt of notice of such failure from the Corporation, then such failure shall constitute a "Payment Default" on the part of such Sponsoring Company. Upon a Payment Default, the

25

Corporation may suspend service to the Sponsoring Company that has caused such Payment Default for all or part of the period of continuing default (and such Sponsoring Company shall be deemed to have notified the Corporation and the other Sponsoring Companies that any Available Energy shall be available for scheduling by such other Sponsoring Companies in accordance with Section 4.032). The Corporation's right to suspend service shall not be exclusive, but shall be in addition to all remedies available to the Corporation at law or in equity. No suspension of service or termination of this Agreement shall relieve any Sponsoring Company of its obligations under this Agreement, which are absolute and unconditional.

11.02. *Performance Default.* If the Corporation or any Sponsoring Company fails to comply in any material respect with any of the material terms, conditions and covenants of this Agreement (and such failure does not constitute a Payment Default under Section 11.01), the Corporation (in the case of a default by any Sponsoring Company) and any Sponsoring Company (in the case of a default by the Corporation) shall give the defaulting party written notice of the default ("Performance Default"). To the extent that a Performance Default is not cured within thirty (30) days after receipt of notice thereof (or within such longer period of time, not to exceed sixty (60) additional days, as necessary for the defaulting party with the exercise of reasonable diligence to cure such default), then the Corporation (in the case of a default by any Sponsoring Company) and any Sponsoring Company (in the case of a default by the Corporation) shall have all of the rights and remedies provided at law and in equity, other than termination of this Agreement or any release of the obligation of the Sponsoring Companies to make payments pursuant to this Agreement, which obligation shall remain absolute and unconditional.

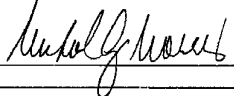
11.03. *Waiver.* No waiver by the Corporation or any Sponsoring Company of any one or more defaults in the performance of any provision of this Agreement shall be construed as a waiver of any other default or defaults, whether of a like kind or different nature.

11.04. *Limitation of Liability and Damages.* TO THE FULLEST EXTENT PERMITTED BY LAW, NEITHER THE CORPORATION, NOR ANY SPONSORING COMPANY SHALL BE LIABLE UNDER THIS AGREEMENT FOR ANY CONSEQUENTIAL, INCIDENTAL, PUNITIVE, EXEMPLARY OR INDIRECT DAMAGES, LOST REVENUES, LOST PROFITS OR OTHER BUSINESS INTERRUPTION DAMAGES, BY STATUTE, IN TORT OR CONTRACT, OR OTHERWISE.

[Signature pages follow]

IN WITNESS WHEREOF, the parties hereto have caused this Amended and Restated Inter-Company Power Agreement to be duly executed and delivered by their proper and duly authorized officers as of September 10, 2010.

OHIO VALLEY ELECTRIC CORPORATION

By 
Its _____

ALLEGHENY ENERGY SUPPLY COMPANY, L.L.C.

By _____
Its _____

APPALACHIAN POWER COMPANY

By _____
Its _____

BUCKEYE POWER GENERATING, LLC

By _____
Its _____

COLUMBUS SOUTHERN POWER COMPANY

By _____
Its _____

THE DAYTON POWER AND LIGHT COMPANY

By _____
Its _____

DUKE ENERGY OHIO, INC.

By _____
Its _____

FIRSTENERGY GENERATION CORP.

By _____
Its _____

INDIANA MICHIGAN POWER COMPANY

By _____
Its _____

KENTUCKY UTILITIES COMPANY

By _____
Its _____

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Its _____

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By _____
Its _____

APPALACHIAN POWER COMPANY

By 
Its _____

BUCKEYE POWER GENERATING, LLC

By _____
Its _____

COLUMBUS SOUTHERN POWER COMPANY

By _____
Its _____

THE DAYTON POWER AND LIGHT COMPANY

By _____
Its _____

DUKE ENERGY OHIO, INC.

By _____
Its _____

FIRSTENERGY GENERATION CORP.

By _____
Its _____

INDIANA MICHIGAN POWER COMPANY

By _____
Its _____

KENTUCKY UTILITIES COMPANY

By _____
Its _____

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Its _____

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By _____
Its _____


APPALACHIAN POWER COMPANY

By _____
Its _____

BUCKEYE POWER GENERATING, LLC

By _____
Its _____

COLUMBUS SOUTHERN POWER COMPANY

By 
Its _____

THE DAYTON POWER AND LIGHT COMPANY

By _____
Its _____

DUKE ENERGY OHIO, INC.

By _____
Its _____

FIRSTENERGY GENERATION CORP.

By _____
Its _____

INDIANA MICHIGAN POWER COMPANY

By _____
Its _____

KENTUCKY UTILITIES COMPANY

By _____
Its _____

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**OHIO VALLEY ELECTRIC
CORPORATION**

By _____
Its _____

**ALLEGHENY ENERGY SUPPLY
COMPANY, L.L.C.**

By _____
Its _____

APPALACHIAN POWER COMPANY

By _____
Its _____

**BUCKEYE POWER GENERATING,
LLC**

By _____
Its _____

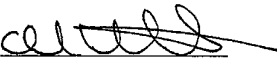
**COLUMBUS SOUTHERN POWER
COMPANY**

By _____
Its _____

**THE DAYTON POWER AND
LIGHT COMPANY**

By _____
Its _____

DUKE ENERGY OHIO, INC.

By 
Its VACE PRESIDENT

**FIRSTENERGY GENERATION
CORP.**

By _____
Its _____

**INDIANA MICHIGAN POWER
COMPANY**

By _____
Its _____

**KENTUCKY UTILITIES
COMPANY**

By _____
Its _____

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OHIO VALLEY ELECTRIC CORPORATION

By _____
Its _____

ALLEGHENY ENERGY SUPPLY COMPANY, L.L.C.

By _____
Its _____

APPALACHIAN POWER COMPANY

By _____
Its _____

BUCKEYE POWER GENERATING, LLC

By _____
Its _____

COLUMBUS SOUTHERN POWER COMPANY

By _____
Its _____

THE DAYTON POWER AND LIGHT COMPANY

By _____
Its _____

DUKE ENERGY OHIO, INC.

By _____
Its _____

FIRSTENERGY GENERATION CORP.

By _____
Its _____

INDIANA MICHIGAN POWER COMPANY

By *[Signature]*
Its *[Signature]*

KENTUCKY UTILITIES COMPANY

By _____
Its _____

Amended and Restated Inter-Company Power Agreement

S-1

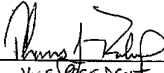
030860-0015-02023-Active.120261164

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OHIO VALLEY ELECTRIC CORPORATION

By _____
Its _____

ALLEGHENY ENERGY SUPPLY COMPANY, L.L.C.

By 
Its VICE PRESIDENT

APPALACHIAN POWER COMPANY

By _____
Its _____

BUCKEYE POWER GENERATING, LLC

By _____
Its _____

COLUMBUS SOUTHERN POWER COMPANY

By _____
Its _____

THE DAYTON POWER AND LIGHT COMPANY

By _____
Its _____

DUKE ENERGY OHIO, INC.

By _____
Its _____

FIRSTENERGY GENERATION CORP.

By _____
Its _____

INDIANA MICHIGAN POWER COMPANY

By _____
Its _____

KENTUCKY UTILITIES COMPANY

By _____
Its _____

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OHIO VALLEY ELECTRIC CORPORATION

By _____
Its _____

ALLEGHENY ENERGY SUPPLY COMPANY, L.L.C.

By _____
Its _____

APPALACHIAN POWER COMPANY

By _____
Its _____

BUCKEYE POWER GENERATING, LLC

By 
Its President & CEO

COLUMBUS SOUTHERN POWER COMPANY

By _____
Its _____

THE DAYTON POWER AND LIGHT COMPANY

By _____
Its _____

DUKE ENERGY OHIO, INC.

By _____
Its _____

FIRSTENERGY GENERATION CORP.

By _____
Its _____

INDIANA MICHIGAN POWER COMPANY

By _____
Its _____

KENTUCKY UTILITIES COMPANY

By _____
Its _____

IN WITNESS WHEREOF, the parties hereto have caused this Amended and Restated Inter-Company Power Agreement to be duly executed and delivered by their proper and duly authorized officers as of September 10, 2010.

OHIO VALLEY ELECTRIC CORPORATION

By _____
Its _____

APPALACHIAN POWER COMPANY

By _____
Its _____

COLUMBUS SOUTHERN POWER COMPANY

By _____
Its _____

DUKE ENERGY OHIO, INC.

By _____
Its _____

INDIANA MICHIGAN POWER COMPANY

By _____
Its _____

ALLEGHENY ENERGY SUPPLY COMPANY, L.L.C.

By _____
Its _____

BUCKEYE POWER GENERATING, LLC

By _____
Its _____

THE DAYTON POWER AND LIGHT COMPANY

By *Gary Stephenson*
Its EXECUTIVE VICE PRESIDENT
Gary Stephenson

FIRSTENERGY GENERATION CORP.

By _____
Its _____

KENTUCKY UTILITIES COMPANY

By _____
Its _____

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OHIO VALLEY ELECTRIC CORPORATION

By _____
Its _____

ALLEGHENY ENERGY SUPPLY COMPANY, L.L.C.

By _____
Its _____

APPALACHIAN POWER COMPANY.

By _____
Its _____

BUCKEYE POWER GENERATING, LLC

By _____
Its _____

COLUMBUS SOUTHERN POWER COMPANY

By _____
Its _____

THE DAYTON POWER AND LIGHT COMPANY

By _____
Its _____

DUKE ENERGY OHIO, INC.

By _____
Its _____

FIRSTENERGY GENERATION CORP.

By Mary R. Lenz
Its President

INDIANA MICHIGAN POWER COMPANY

By _____
Its _____

KENTUCKY UTILITIES COMPANY

By _____
Its _____

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OHIO VALLEY ELECTRIC CORPORATION

By _____
Its _____

ALLEGHENY ENERGY SUPPLY COMPANY, L.L.C.

By _____
Its _____

APPALACHIAN POWER COMPANY

By _____
Its _____

BUCKEYE POWER GENERATING, LLC

By _____
Its _____

COLUMBUS SOUTHERN POWER COMPANY

By _____
Its _____

THE DAYTON POWER AND LIGHT COMPANY

By _____
Its _____

DUKE ENERGY OHIO, INC.

By _____
Its _____


FIRSTENERGY GENERATION CORP.

By _____
Its _____

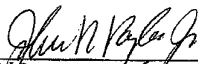
INDIANA MICHIGAN POWER COMPANY

By _____
Its _____

KENTUCKY UTILITIES COMPANY

By 
Its *Sr Vice President*

LOUISVILLE GAS AND ELECTRIC
COMPANY

By 
Its VP Trans. & Generation Services

OHIO POWER COMPANY

By _____
Its _____

MONONGAHELA POWER
COMPANY

By _____
Its _____

SOUTHERN INDIANA GAS AND
ELECTRIC COMPANY

By _____
Its _____


**LOUISVILLE GAS AND ELECTRIC
COMPANY**

By _____
Its _____

**MONONGAHELA POWER
COMPANY**

By _____
Its _____

OHIO POWER COMPANY

By  _____
Its _____

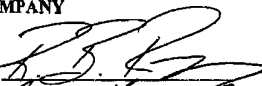
**SOUTHERN INDIANA GAS AND
ELECTRIC COMPANY**

By _____
Its _____

**LOUISVILLE GAS AND ELECTRIC
COMPANY**

By _____
Its _____

**MONONGAHELA POWER
COMPANY**

By 
Its GENERAL MANAGER, ELECTRIC SUPPLY

OHIO POWER COMPANY

By _____
Its _____

**SOUTHERN INDIANA GAS AND
ELECTRIC COMPANY**

By _____
Its _____

**LOUISVILLE GAS AND ELECTRIC
COMPANY**

By _____
Its _____

OHIO POWER COMPANY

By _____
Its _____

**MONONGAHELA POWER
COMPANY**

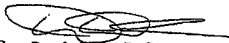
By _____
Its _____

**SOUTHERN INDIANA GAS AND
ELECTRIC COMPANY**

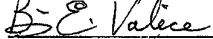
By Ronald E. Christen
Its President

3

PENINSULA GENERATION COOPERATIVE


By Daniel B. DeCoeur
Its President

APPROVED AS TO FORM:


BRIAN E. VALICE
ATTORNEY FOR PENINSULA
GENERATION COOPERATIVE

SCHEDULE 10.01(c)

Allegheny Energy Supply Company, L.L.C.

and

Monongahela Power Company

Filing with, or consent or approval of, the Federal Energy Regulatory Commission

SCHEDULE 10.01(c)

Appalachian Power Company

Filing with, or consent or approval of, the Federal Energy Regulatory Commission

Approval of the Virginia State Corporation Commission

Filing with the Public Service Commission of West Virginia

SCHEDULE 10.01(e)

Buckeye Power Generating, LLC

None

SCHEDULE 10.01(c)

Columbus Southern Power Company

Filing with, or consent or approval of, the Federal Energy Regulatory Commission

SCHEDULE 10.01(c)

The Dayton Power and Light Company

Filing with, or consent or approval of, the Federal Energy Regulatory Commission

SCHEDULE 10.01(c)

Duke Energy Ohio, Inc.

Filing with, or consent or approval of, the Federal Energy Regulatory Commission

SCHEDULE 10.01(c)

FirstEnergy Generation Corp.

Filing with, or consent or approval of, the Federal Energy Regulatory Commission

SCHEDULE 10.01(c)

Indiana Michigan Power Company

Filing with, or consent or approval of, the Federal Energy Regulatory Commission

Filing with the Indiana Utility Regulatory Commission

SCHEDULE 10.01(c)

Kentucky Utilities Company

Filing with, or consent or approval of, the Federal Energy Regulatory Commission

Consent or approval of, or filings or registrations with, the Kentucky Public Service Commission
may be required

SCHEDULE 10.01(c)

Louisville Gas and Electric Company

Filing with, or consent or approval of, the Federal Energy Regulatory Commission

Consent or approval of, or filings or registrations with, the Kentucky Public Service Commission
may be required

SCHEDULE 10.01(c)

Ohio Power Company

Filing with, or consent or approval of, the Federal Energy Regulatory Commission

SCHEDULE 10.01(c)

Peninsula Generation Cooperative

None

SCHEDULE 10.01(c)

Southern Indiana Gas and Electric Company

Filing with, or consent or approval of, the Federal Energy Regulatory Commission

Exhibit A

AMENDED AND RESTATED
POWER AGREEMENT

BETWEEN

OHIO VALLEY ELECTRIC CORPORATION

AND

INDIANA-KENTUCKY ELECTRIC CORPORATION

Dated as of September 10, 2010

THIS AGREEMENT, dated as of September 10, 2010 by and between OHIO VALLEY ELECTRIC CORPORATION (herein called OVEC) and INDIANA-KENTUCKY ELECTRIC CORPORATION (herein called IKEC), hereby amends and restates in its entirety, the Power Agreement (herein called the Current Agreement), dated March 13, 2006, between OVEC and IKEC.

WITNESSETH THAT:

WHEREAS, IKEC, a wholly owned subsidiary of OVEC, designed, purchased, and constructed, and continues to own, operate and maintain a steam-electric generating station (herein called Indiana Station) consisting of six turbogenerators and all other necessary equipment, at a location on the Ohio River near Madison, Indiana; and

WHEREAS, OVEC designed, purchased, and constructed, and continues to own, operate and maintain a steam-electric generating stations (herein called Ohio Station) consisting of five turbo-generators and all other necessary equipment, at a location on the Ohio River near Cheshire, Ohio (the Ohio Station and the Indiana Station being herein called the Project Generating Stations); and

WHEREAS, OVEC also designed, purchased, and constructed, and continues to operate and maintain necessary transmission and general plant facilities (herein called the Project Transmission Facilities) and OVEC established or cause to be established interconnections between the Project Generating Stations and/or the Project Transmission Facilities, and the systems of certain of the Sponsoring Companies; and

WHEREAS, IKEC owns and operates the portion of the Project Transmission Facilities located in the State of Indiana; and

WHEREAS, IKEC entered into the Current Agreement with OVEC which embodies the terms and conditions for the ownership and operation by IKEC of the Indiana Station and such portion of the Project Transmission Facilities which are to be owned and operated by it; and

WHEREAS, the owners of OVEC or their affiliates that are parties to an Inter-Company Power Agreement, have amended and restated such Inter-Company Power Agreement as of the date hereof, which defines the terms and conditions governing the rights of the "Sponsoring Companies" (as defined thereunder) to receive "Available Power" (as defined thereunder) from the Project Generating Stations and the obligations of the Sponsoring Companies to pay therefor; and

WHEREAS, concurrent with the amendment and restatement of the Inter-Company Power Agreement, IKEC and OVEC hereto desire to amend and restate in their entirety, the Current Agreement in order for IKEC to continue to sell to OVEC any and all power available at the Indiana Station, and energy associated therewith, and to transmit power and energy as provided herein.

NOW, THEREFORE, the parties hereto agree with each other as follows:

ARTICLE 1

POWER AND ENERGY TRANSACTIONS

1.01 IKEC shall transmit any and all power generated at the Indiana Station by any of the generating units thereof in commercial operation and deliver such power, together with the energy associated therewith, but less the transmission losses in the facilities of IKEC applicable thereto from the 330 kV busses of the Indiana Station, at the points of delivery hereinafter designated in *Section 1.03* hereof, and sell such power and energy at said points of delivery to OVEC. OVEC shall purchase from IKEC all such power so delivered by IKEC to OVEC at said points of delivery, together with the energy associated therewith, and shall from time to time pay IKEC therefor, amounts which, when added to revenues received by IKEC from other sources, will be sufficient to enable IKEC to pay all of its operating and other expenses, including all income and other taxes and any interest and regular amortization requirements applicable to any indebtedness for borrowed funds incurred by IKEC. For the purposes of this *Section 1.01* the term "operating and other expenses" shall also include, without limitation, all amounts payable to suppliers of fuel requirements (including the handling and shipment thereof) in connection with the cancellation of commitments and the extension of delivery schedules, as well as all expenses accrued to pay for postemployment and postretirement benefits and the costs of the decommissioning, shutdown, demolition and closing of the Project Generating Stations.

1.02 IKEC shall transmit and deliver to OVEC at the points of delivery hereinafter designated in *Section 1.03* hereof, all power and the energy associated therewith supplied to IKEC by Sponsoring Companies at the points of delivery hereinafter designated in *Section 1.03* hereof, less the transmission losses in the facilities of IKEC applicable thereto. IKEC shall transmit and deliver to Sponsoring Companies designated by OVEC at the points of delivery hereinafter designated in *Section 1.03* hereof, all power, and the energy associated therewith, supplied to IKEC by OVEC at the points of delivery hereinafter designated in *Section 1.03* hereof, less the transmission losses in the facilities of IKEC applicable thereto.

1.03 All power and energy sold, purchased, transmitted or delivered hereunder shall be 3-phase, 60-cycle, alternating current, at nominal unregulated voltage, designated for the points of delivery hereinbelow described. Power and energy transmitted, delivered and sold by IKEC to OVEC pursuant to the provisions of *Section 1.01* hereof shall be delivered at the points where the transmission facilities of OVEC and the transmission facilities of IKEC interconnect and title to such power and energy shall pass from IKEC to OVEC at said points. Power and energy supplied to IKEC by a Sponsoring Company for transmission to OVEC pursuant to the provisions of *Section 1.02* hereof, shall be delivered by said Sponsoring Company to IKEC at the points where the transmission facilities of said Sponsoring Company and the transmission facilities of IKEC interconnect and shall be delivered by IKEC to OVEC and title thereto shall pass from said Sponsoring Company to OVEC at the points where the transmission facilities of OVEC and the transmission facilities of IKEC interconnect. Power and energy supplied to IKEC

by OVEC for transmission to a Sponsoring Company pursuant to the provisions of *Section 1.02* hereof shall be delivered by OVEC to IKEC at the points where the transmission facilities of OVEC and the transmission facilities of IKEC interconnect and title to such power and energy shall pass from OVEC to said Sponsoring Company at said points. Such power and energy shall be delivered by IKEC to said Sponsoring Company at the points where the transmission facilities of IKEC and the transmission facilities of said Sponsoring Company interconnect.

1.04 The parties hereto shall exercise due diligence and foresight in carrying out all matters related to the providing and operating of their respective power resources so as to minimize to the extent practicable deviations between actual and scheduled deliveries of power and energy among their systems. The parties hereto shall provide and/or install on their respective systems such communication, telemetering, frequency and/or tie-line control facilities essential to so minimizing such deviations; and shall fully cooperate with one another and with third parties (such third parties whose systems are either directly or indirectly interconnected with the systems of the Sponsoring Companies and who of necessity together with the Sponsoring Companies and the parties hereto must unify their efforts cooperatively to achieve effective and efficient interconnected system operation) in developing and executing operating procedures that will enable the parties hereto to avoid to the extent practicable deviations from scheduled deliveries.

1.05 OVEC shall reimburse IKEC for the difference between (a) the total cost of replacements chargeable to property and plant made by IKEC, and the total cost of additional facilities and/or spare parts purchased or installed by Corporation, during any month or prior thereto (and not previously reimbursed) and (b) the amounts paid for by IKEC out of proceeds of fire or other applicable insurance protection, or out of amounts recovered from third parties responsible for damages requiring replacement. OVEC shall pay to IKEC such amount in lieu of the amounts to be paid as above provided, which, after provision for all taxes on income, shall equal the costs of the replacements reimbursable by OVEC to IKEC as above provided. The term cost of replacements, as used herein, shall include all components of costs, plus removal expense, less salvage. The amounts reimbursed by OVEC to IKEC for such replacements shall be accounted for on the books of IKEC in a special balance sheet account provided for such purposes.

ARTICLE 2

MISCELLANEOUS

2.01 This Agreement shall become effective on September 10, 2010, or to the extent necessary, such later date on which all conditions to effectiveness, including all required waiting periods and all required regulatory acceptances or approvals, of this Agreement have been satisfied in form and substance satisfactory to OVEC, and shall terminate upon the earlier of: (1) June 30, 2040 or (2) the sale or other disposition of all of the facilities of the Project Generating Stations or the permanent cessation of operation of such facilities.

2.02 No party hereto shall be held responsible or liable for any loss or damage on account of non-delivery of energy hereunder at any time caused by act of God, fire, flood, explosion, strike, civil or military authority, insurrection or riot, act of the elements, failure of equipment, or for any other cause beyond its control.

2.03 This Agreement is made subject to the jurisdiction of any governmental authority or authorities having jurisdiction in the premises and the performance thereof shall be subject to the receipt of all regulatory approvals, in form and substance satisfactory to the parties hereto, necessary to permit the parties hereto to perform all the duties and obligations to be performed by such parties hereunder.

2.04 This Agreement shall inure to the benefit of and be binding upon the parties hereto and their respective successors and assigns, but this Agreement shall not be assigned by either party hereto without the written consent of the other, except (a) to a successor to all or substantially all the properties and assets of such party, or (b) to a trustee under an indenture securing any indebtedness of such party.

2.05 All notices and requests under this Agreement shall be in writing and shall be sufficient in all respects if delivered in person or sent by registered mail addressed to the party to be served at such party's general office or at such other address as such party may from time to time in writing designate.

IN WITNESS WHEREOF the parties hereto have caused this Agreement to be duly executed as of the day and year first above written.

OHIO VALLEY ELECTRIC CORPORATION

By _____
Its

INDIANA-KENTUCKY ELECTRIC CORPORATION

By _____
Its

Execution Copy

AMENDED AND RESTATED
POWER AGREEMENT

BETWEEN

OHIO VALLEY ELECTRIC CORPORATION

AND

INDIANA-KENTUCKY ELECTRIC CORPORATION

Dated as of September 10, 2010

THIS AGREEMENT, dated as of September 10, 2010 by and between OHIO VALLEY ELECTRIC CORPORATION (herein called OVEC) and INDIANA-KENTUCKY ELECTRIC CORPORATION (herein called IKEC), hereby amends and restates in its entirety, the Power Agreement (herein called the Current Agreement), dated March 13, 2006, between OVEC and IKEC.

WITNESSETH THAT:

WHEREAS, IKEC, a wholly owned subsidiary of OVEC, designed, purchased, and constructed, and continues to own, operate and maintain a steam-electric generating station (herein called Indiana Station) consisting of six turbogenerators and all other necessary equipment, at a location on the Ohio River near Madison, Indiana; and

WHEREAS, OVEC designed, purchased, and constructed, and continues to own, operate and maintain a steam-electric generating stations (herein called Ohio Station) consisting of five turbo-generators and all other necessary equipment, at a location on the Ohio River near Cheshire, Ohio (the Ohio Station and the Indiana Station being herein called the Project Generating Stations); and

WHEREAS, OVEC also designed, purchased, and constructed, and continues to operate and maintain necessary transmission and general plant facilities (herein called the Project Transmission Facilities) and OVEC established or cause to be established interconnections between the Project Generating Stations and/or the Project Transmission Facilities, and the systems of certain of the Sponsoring Companies; and

WHEREAS, IKEC owns and operates the portion of the Project Transmission Facilities located in the State of Indiana; and

WHEREAS, IKEC entered into the Current Agreement with OVEC which embodies the terms and conditions for the ownership and operation by IKEC of the Indiana Station and such portion of the Project Transmission Facilities which are to be owned and operated by it; and

WHEREAS, the owners of OVEC or their affiliates that are parties to an Inter-Company Power Agreement, have amended and restated such Inter-Company Power Agreement as of the date hereof, which defines the terms and conditions governing the rights of the "Sponsoring Companies" (as defined thereunder) to receive "Available Power" (as defined thereunder) from the Project Generating Stations and the obligations of the Sponsoring Companies to pay therefor; and

WHEREAS, concurrent with the amendment and restatement of the Inter-Company Power Agreement, IKEC and OVEC hereto desire to amend and restate in their entirety, the Current Agreement in order for IKEC to continue to sell to OVEC any and all power available at the Indiana Station, and energy associated therewith, and to transmit power and energy as provided herein.

NOW, THEREFORE, the parties hereto agree with each other as follows:

ARTICLE 1

POWER AND ENERGY TRANSACTIONS

1.01 IKEC shall transmit any and all power generated at the Indiana Station by any of the generating units thereof in commercial operation and deliver such power, together with the energy associated therewith, but less the transmission losses in the facilities of IKEC applicable thereto from the 330 kV busses of the Indiana Station, at the points of delivery hereinafter designated in *Section 1.03* hereof, and sell such power and energy at said points of delivery to OVEC. OVEC shall purchase from IKEC all such power so delivered by IKEC to OVEC at said points of delivery, together with the energy associated therewith, and shall from time to time pay IKEC therefor, amounts which, when added to revenues received by IKEC from other sources, will be sufficient to enable IKEC to pay all of its operating and other expenses, including all income and other taxes and any interest and regular amortization requirements applicable to any indebtedness for borrowed funds incurred by IKEC. For the purposes of this *Section 1.01* the term "operating and other expenses" shall also include, without limitation, all amounts payable to suppliers of fuel requirements (including the handling and shipment thereof) in connection with the cancellation of commitments and the extension of delivery schedules, as well as all expenses accrued to pay for postemployment and postretirement benefits and the costs of the decommissioning, shutdown, demolition and closing of the Project Generating Stations.

1.02 IKEC shall transmit and deliver to OVEC at the points of delivery hereinafter designated in *Section 1.03* hereof, all power and the energy associated therewith supplied to IKEC by Sponsoring Companies at the points of delivery hereinafter designated in *Section 1.03* hereof, less the transmission losses in the facilities of IKEC applicable thereto. IKEC shall transmit and deliver to Sponsoring Companies designated by OVEC at the points of delivery hereinafter designated in *Section 1.03* hereof, all power, and the energy associated therewith, supplied to IKEC by OVEC at the points of delivery hereinafter designated in *Section 1.03* hereof, less the transmission losses in the facilities of IKEC applicable thereto.

1.03 All power and energy sold, purchased, transmitted or delivered hereunder shall be 3-phase, 60-cycle, alternating current, at nominal unregulated voltage, designated for the points of delivery hereinbelow described. Power and energy transmitted, delivered and sold by IKEC to OVEC pursuant to the provisions of *Section 1.01* hereof shall be delivered at the points where the transmission facilities of OVEC and the transmission facilities of IKEC interconnect and title to such power and energy shall pass from IKEC to OVEC at said points. Power and energy supplied to IKEC by a Sponsoring Company for transmission to OVEC pursuant to the provisions of *Section 1.02* hereof, shall be delivered by said Sponsoring Company to IKEC at the points where the transmission facilities of said Sponsoring Company and the transmission facilities of IKEC interconnect and shall be delivered by IKEC to OVEC and title thereto shall pass from said Sponsoring Company to OVEC at the points where the transmission facilities of OVEC and the transmission facilities of IKEC interconnect. Power and energy supplied to IKEC

by OVEC for transmission to a Sponsoring Company pursuant to the provisions of *Section 1.02* hereof shall be delivered by OVEC to IKEC at the points where the transmission facilities of OVEC and the transmission facilities of IKEC interconnect and title to such power and energy shall pass from OVEC to said Sponsoring Company at said points. Such power and energy shall be delivered by IKEC to said Sponsoring Company at the points where the transmission facilities of IKEC and the transmission facilities of said Sponsoring Company interconnect.

1.04 The parties hereto shall exercise due diligence and foresight in carrying out all matters related to the providing and operating of their respective power resources so as to minimize to the extent practicable deviations between actual and scheduled deliveries of power and energy among their systems. The parties hereto shall provide and/or install on their respective systems such communication, telemetering, frequency and/or tie-line control facilities essential to so minimizing such deviations; and shall fully cooperate with one another and with third parties (such third parties whose systems are either directly or indirectly interconnected with the systems of the Sponsoring Companies and who of necessity together with the Sponsoring Companies and the parties hereto must unify their efforts cooperatively to achieve effective and efficient interconnected system operation) in developing and executing operating procedures that will enable the parties hereto to avoid to the extent practicable deviations from scheduled deliveries.

1.05 OVEC shall reimburse IKEC for the difference between (a) the total cost of replacements chargeable to property and plant made by IKEC, and the total cost of additional facilities and/or spare parts purchased or installed by Corporation, during any month or prior thereto (and not previously reimbursed) and (b) the amounts paid for by IKEC out of proceeds of fire or other applicable insurance protection, or out of amounts recovered from third parties responsible for damages requiring replacement. OVEC shall pay to IKEC such amount in lieu of the amounts to be paid as above provided, which, after provision for all taxes on income, shall equal the costs of the replacements reimbursable by OVEC to IKEC as above provided. The term cost of replacements, as used herein, shall include all components of costs, plus removal expense, less salvage. The amounts reimbursed by OVEC to IKEC for such replacements shall be accounted for on the books of IKEC in a special balance sheet account provided for such purposes.

ARTICLE 2

MISCELLANEOUS

2.01 This Agreement shall become effective on September 10, 2010, or to the extent necessary, such later date on which all conditions to effectiveness, including all required waiting periods and all required regulatory acceptances or approvals, of this Agreement have been satisfied in form and substance satisfactory to OVEC, and shall terminate upon the earlier of: (1) June 30, 2040 or (2) the sale or other disposition of all of the facilities of the Project Generating Stations or the permanent cessation of operation of such facilities.

2.02 No party hereto shall be held responsible or liable for any loss or damage on account of non-delivery of energy hereunder at any time caused by act of God, fire, flood, explosion, strike, civil or military authority, insurrection or riot, act of the elements, failure of equipment, or for any other cause beyond its control.


2.03 This Agreement is made subject to the jurisdiction of any governmental authority or authorities having jurisdiction in the premises and the performance thereof shall be subject to the receipt of all regulatory approvals, in form and substance satisfactory to the parties hereto, necessary to permit the parties hereto to perform all the duties and obligations to be performed by such parties hereunder.

2.04 This Agreement shall inure to the benefit of and be binding upon the parties hereto and their respective successors and assigns, but this Agreement shall not be assigned by either party hereto without the written consent of the other, except (a) to a successor to all or substantially all the properties and assets of such party, or (b) to a trustee under an indenture securing any indebtedness of such party.

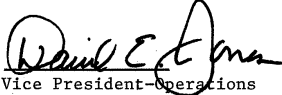
2.05 All notices and requests under this Agreement shall be in writing and shall be sufficient in all respects if delivered in person or sent by registered mail addressed to the party to be served at such party's general office or at such other address as such party may from time to time in writing designate.

IN WITNESS WHEREOF the parties hereto have caused this Agreement to be duly executed as of the day and year first above written.

OHIO VALLEY ELECTRIC CORPORATION

By 
Its Vice President and
Assistant to the President

INDIANA-KENTUCKY ELECTRIC CORPORATION


By 
Its Vice President-Operations

CERTIFICATE OF CONCURRENCE

This is to certify that Allegheny Energy Supply Company, LLC assents to and concurs with the rate schedule supplement described below, which Ohio Valley Electric Corporation has filed, and hereby files this Certificate of Concurrence in lieu of the filing of the rate schedule supplement specified.

Amended and Restated Inter-Company Power Agreement, dated as of September 10, 2010, among Ohio Valley Electric Corporation, Allegheny Energy Supply Company, LLC, Appalachian Power Company, Buckeye Power Generating, LLC, Columbus Southern Power Company, The Dayton Power and Light Company, Duke Energy Ohio, Inc., FirstEnergy Generation Corp., Indiana Michigan Power Company, Kentucky Utilities Company, Louisville Gas and Electric Company, Monongahela Power Company, Ohio Power Company, Peninsula Generation Cooperative and Southern Indiana Gas and Electric Company.

ALLEGHENY ENERGY SUPPLY
COMPANY, LLC

By: 
Name: Harvey L. WAGNER
Title: VP & Controller

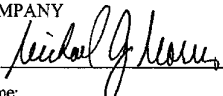
Dated: March 22, 2011

CERTIFICATE OF CONCURRENCE

This is to certify that Appalachian Power Company assents to and concurs with the rate schedule supplement described below, which Ohio Valley Electric Corporation has filed, and hereby files this Certificate of Concurrence in lieu of the filing of the rate schedule supplement specified.

Amended and Restated Inter-Company Power Agreement, dated as of September 10, 2010, among Ohio Valley Electric Corporation, Allegheny Energy Supply Company, LLC, Appalachian Power Company, Buckeye Power Generating, LLC, Columbus Southern Power Company, The Dayton Power and Light Company, Duke Energy Ohio, Inc., FirstEnergy Generation Corp., Indiana Michigan Power Company, Kentucky Utilities Company, Louisville Gas and Electric Company, Monongahela Power Company, Ohio Power Company, Peninsula Generation Cooperative and Southern Indiana Gas and Electric Company.

APPALACHIAN POWER
COMPANY

By: 

Name: _____

Title: _____

Dated: _____, 2011

CERTIFICATE OF CONCURRENCE

This is to certify that Buckeye Power Generating, LLC assents to and concurs with the rate schedule supplement described below, which Ohio Valley Electric Corporation has filed, and hereby files this Certificate of Concurrence in lieu of the filing of the rate schedule supplement specified.

Amended and Restated Inter-Company Power Agreement, dated as of September 10, 2010, among Ohio Valley Electric Corporation, Allegheny Energy Supply Company, LLC, Appalachian Power Company, Buckeye Power Generating, LLC, Columbus Southern Power Company, The Dayton Power and Light Company, Duke Energy Ohio, Inc., FirstEnergy Generation Corp., Indiana Michigan Power Company, Kentucky Utilities Company, Louisville Gas and Electric Company, Monongahela Power Company, Ohio Power Company, Peninsula Generation Cooperative and Southern Indiana Gas and Electric Company.

BUCKEYE POWER
GENERATING, LLC

By: 

Name: Anthony J. Ahern

Title: President & CEO

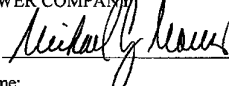
Dated: March 15, 2011

CERTIFICATE OF CONCURRENCE

This is to certify that Columbus Southern Power Company assents to and concurs with the rate schedule supplement described below, which Ohio Valley Electric Corporation has filed, and hereby files this Certificate of Concurrence in lieu of the filing of the rate schedule supplement specified.

Amended and Restated Inter-Company Power Agreement, dated as of September 10, 2010, among Ohio Valley Electric Corporation, Allegheny Energy Supply Company, LLC, Appalachian Power Company, Buckeye Power Generating, LLC, Columbus Southern Power Company, The Dayton Power and Light Company, Duke Energy Ohio, Inc., FirstEnergy Generation Corp., Indiana Michigan Power Company, Kentucky Utilities Company, Louisville Gas and Electric Company, Monongahela Power Company, Ohio Power Company, Peninsula Generation Cooperative and Southern Indiana Gas and Electric Company.

COLUMBUS SOUTHERN
POWER COMPANY

By: 
Name: _____
Title: _____

Dated: _____, 2011

CERTIFICATE OF CONCURRENCE

This is to certify that The Dayton Power and Light Company assents to and concurs with the rate schedule supplement described below, which Ohio Valley Electric Corporation has filed, and hereby files this Certificate of Concurrence in lieu of the filing of the rate schedule supplement specified.

Amended and Restated Inter-Company Power Agreement, dated as of September 10, 2010, among Ohio Valley Electric Corporation, Allegheny Energy Supply Company, LLC, Appalachian Power Company, Buckeye Power Generating, LLC, Columbus Southern Power Company, The Dayton Power and Light Company, Duke Energy Ohio, Inc., FirstEnergy Generation Corp., Indiana Michigan Power Company, Kentucky Utilities Company, Louisville Gas and Electric Company, Monongahela Power Company, Ohio Power Company, Peninsula Generation Cooperative and Southern Indiana Gas and Electric Company.

THE DAYTON POWER AND
LIGHT COMPANY

By: *Gary Stephenson*
Name: *Gary Stephenson*
Title: *Exec. V.P.*

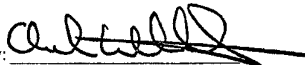
Dated: *March 17*, 2011

CERTIFICATE OF CONCURRENCE

This is to certify that Duke Energy Ohio, Inc. assents to and concurs with the rate schedule supplement described below, which Ohio Valley Electric Corporation has filed, and hereby files this Certificate of Concurrence in lieu of the filing of the rate schedule supplement specified.

Amended and Restated Inter-Company Power Agreement, dated as of September 10, 2010, among Ohio Valley Electric Corporation, Allegheny Energy Supply Company, LLC, Appalachian Power Company, Buckeye Power Generating, LLC, Columbus Southern Power Company, The Dayton Power and Light Company, Duke Energy Ohio, Inc., FirstEnergy Generation Corp., Indiana Michigan Power Company, Kentucky Utilities Company, Louisville Gas and Electric Company, Monongahela Power Company, Ohio Power Company, Peninsula Generation Cooperative and Southern Indiana Gas and Electric Company.

DUKE ENERGY OHIO, INC.

By: 

Name: Charles R. Whitlock, Jr.

Title: President, Commercial Asset Management and Operations

Dated: March 18, 2011

CERTIFICATE OF CONCURRENCE

This is to certify that FirstEnergy Generation Corp. assents to and concurs with the rate schedule supplement described below, which Ohio Valley Electric Corporation has filed, and hereby files this Certificate of Concurrence in lieu of the filing of the rate schedule supplement specified.

Amended and Restated Inter-Company Power Agreement, dated as of September 10, 2010, among Ohio Valley Electric Corporation, Allegheny Energy Supply Company, LLC, Appalachian Power Company, Buckeye Power Generating, LLC, Columbus Southern Power Company, The Dayton Power and Light Company, Duke Energy Ohio, Inc., FirstEnergy Generation Corp., Indiana Michigan Power Company, Kentucky Utilities Company, Louisville Gas and Electric Company, Monongahela Power Company, Ohio Power Company, Peninsula Generation Cooperative and Southern Indiana Gas and Electric Company.

FIRSTENERGY GENERATION
CORP.

By: Harvey L. Wilson
Name: Harvey L. Wilson
Title: VP & Controller

Dated: March 22, 2011

CERTIFICATE OF CONCURRENCE

This is to certify that Indiana Michigan Power Company assents to and concurs with the rate schedule supplement described below, which Ohio Valley Electric Corporation has filed, and hereby files this Certificate of Concurrence in lieu of the filing of the rate schedule supplement specified.

Amended and Restated Inter-Company Power Agreement, dated as of September 10, 2010, among Ohio Valley Electric Corporation, Allegheny Energy Supply Company, LLC, Appalachian Power Company, Buckeye Power Generating, LLC, Columbus Southern Power Company, The Dayton Power and Light Company, Duke Energy Ohio, Inc., FirstEnergy Generation Corp., Indiana Michigan Power Company, Kentucky Utilities Company, Louisville Gas and Electric Company, Monongahela Power Company, Ohio Power Company, Peninsula Generation Cooperative and Southern Indiana Gas and Electric Company.

INDIANA MICHIGAN POWER
COMPANY

By: 

Name: _____

Title: _____

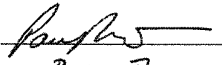
Dated: _____, 2011

CERTIFICATE OF CONCURRENCE

This is to certify that Kentucky Utilities Company assents to and concurs with the rate schedule supplement described below, which Ohio Valley Electric Corporation has filed, and hereby files this Certificate of Concurrence in lieu of the filing of the rate schedule supplement specified.

Amended and Restated Inter-Company Power Agreement, dated as of September 10, 2010, among Ohio Valley Electric Corporation, Allegheny Energy Supply Company, LLC, Appalachian Power Company, Buckeye Power Generating, LLC, Columbus Southern Power Company, The Dayton Power and Light Company, Duke Energy Ohio, Inc., FirstEnergy Generation Corp., Indiana Michigan Power Company, Kentucky Utilities Company, Louisville Gas and Electric Company, Monongahela Power Company, Ohio Power Company, Peninsula Generation Cooperative and Southern Indiana Gas and Electric Company.

KENTUCKY UTILITIES
COMPANY

By: 
Name: Paul W. Thompson
Title: SVP Energy Services

Dated: 3/17/2011, 2011

CERTIFICATE OF CONCURRENCE

This is to certify that Louisville Gas and Electric Company assents to and concurs with the rate schedule supplement described below, which Ohio Valley Electric Corporation has filed, and hereby files this Certificate of Concurrence in lieu of the filing of the rate schedule supplement specified.

Amended and Restated Inter-Company Power Agreement, dated as of September 10, 2010, among Ohio Valley Electric Corporation, Allegheny Energy Supply Company, LLC, Appalachian Power Company, Buckeye Power Generating, LLC, Columbus Southern Power Company, The Dayton Power and Light Company, Duke Energy Ohio, Inc., FirstEnergy Generation Corp., Indiana Michigan Power Company, Kentucky Utilities Company, Louisville Gas and Electric Company, Monongahela Power Company, Ohio Power Company, Peninsula Generation Cooperative and Southern Indiana Gas and Electric Company.

LOUISVILLE GAS AND
ELECTRIC COMPANY

By: 

Name: JOHN N. VOYLES, JR.

Title: VICE PRESIDENT -
TRANSMISSION + GENERATION SERVICES

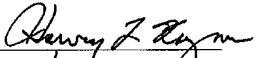
Dated: 3/17, 2011

CERTIFICATE OF CONCURRENCE

This is to certify that Monongahela Power Company assents to and concurs with the rate schedule supplement described below, which Ohio Valley Electric Corporation has filed, and hereby files this Certificate of Concurrence in lieu of the filing of the rate schedule supplement specified.

Amended and Restated Inter-Company Power Agreement, dated as of September 10, 2010, among Ohio Valley Electric Corporation, Allegheny Energy Supply Company, LLC, Appalachian Power Company, Buckeye Power Generating, LLC, Columbus Southern Power Company, The Dayton Power and Light Company, Duke Energy Ohio, Inc., FirstEnergy Generation Corp., Indiana Michigan Power Company, Kentucky Utilities Company, Louisville Gas and Electric Company, Monongahela Power Company, Ohio Power Company, Peninsula Generation Cooperative and Southern Indiana Gas and Electric Company.

MONONGAHELA POWER
COMPANY

By: 
Name: Harvey L. Berger
Title: VP + Controller

Dated: March 22, 2011

CERTIFICATE OF CONCURRENCE

This is to certify that Ohio Power Company assents to and concurs with the rate schedule supplement described below, which Ohio Valley Electric Corporation has filed, and hereby files this Certificate of Concurrence in lieu of the filing of the rate schedule supplement specified.

Amended and Restated Inter-Company Power Agreement, dated as of September 10, 2010, among Ohio Valley Electric Corporation, Allegheny Energy Supply Company, LLC, Appalachian Power Company, Buckeye Power Generating, LLC, Columbus Southern Power Company, The Dayton Power and Light Company, Duke Energy Ohio, Inc., FirstEnergy Generation Corp., Indiana Michigan Power Company, Kentucky Utilities Company, Louisville Gas and Electric Company, Monongahela Power Company, Ohio Power Company, Peninsula Generation Cooperative and Southern Indiana Gas and Electric Company.

OHIO POWER COMPANY

By: 

Name: _____

Title: _____

Dated: _____, 2011

CERTIFICATE OF CONCURRENCE

This is to certify that Peninsula Generation Cooperative assents to and concurs with the rate schedule supplement described below, which Ohio Valley Electric Corporation has filed, and hereby files this Certificate of Concurrence in lieu of the filing of the rate schedule supplement specified.

Amended and Restated Inter-Company Power Agreement, dated as of September 10, 2010, among Ohio Valley Electric Corporation, Allegheny Energy Supply Company, LLC, Appalachian Power Company, Buckeye Power Generating, LLC, Columbus Southern Power Company, The Dayton Power and Light Company, Duke Energy Ohio, Inc., FirstEnergy Generation Corp., Indiana Michigan Power Company, Kentucky Utilities Company, Louisville Gas and Electric Company, Monongahela Power Company, Ohio Power Company, Peninsula Generation Cooperative and Southern Indiana Gas and Electric Company.

PENINSULA GENERATION
COOPERATIVE

By: 

Name: Daniel H. DeCoeur

Title: President

Dated: March 9, 2011

CERTIFICATE OF CONCURRENCE

This is to certify that Southern Indiana Gas and Electric Company assents to and concurs with the rate schedule supplement described below, which Ohio Valley Electric Corporation has filed, and hereby files this Certificate of Concurrence in lieu of the filing of the rate schedule supplement specified.

Amended and Restated Inter-Company Power Agreement, dated as of September 10, 2010, among Ohio Valley Electric Corporation, Allegheny Energy Supply Company, LLC, Appalachian Power Company, Buckeye Power Generating, LLC, Columbus Southern Power Company, The Dayton Power and Light Company, Duke Energy Ohio, Inc., FirstEnergy Generation Corp., Indiana Michigan Power Company, Kentucky Utilities Company, Louisville Gas and Electric Company, Monongahela Power Company, Ohio Power Company, Peninsula Generation Cooperative and Southern Indiana Gas and Electric Company.

SOUTHERN INDIANA GAS AND
ELECTRIC COMPANY

By: 

Name: William S. Doty

Title: EXEC. V.P.

Dated: Apr 17, 2011

**Duke Energy Ohio
Case No. 20-0167-EL-RDR
OCC Third Set of Request for Admissions
Date Received: January 6, 2021**

OCC-RFA-03-006

REQUEST:

Admit or deny that it was only after the Covid-19 pandemic caused a sharp drop in PJM energy prices in the spring of 2020 that the OVEC operating committee adopted Duke's recommendation to implement a new process for including the plants' expected profit and loss as a factor in evaluating, on a daily basis, whether the OVEC plants should be committed into the PJM day-ahead energy market as "must-run" or "economic."

RESPONSE: Deny – The units were in the money prior to the spring of 2020 and thus no change to the daily commitment status process was needed. In the spring of 2020, with falling energy prices in the day-ahead market as a result of the pandemic and state actions to limit exposure, including significant business closures and constraints, OVEC began offering some units with a commitment status of "Economic" at the suggestion of Duke Energy Ohio, and upon approval of the Operating Committee.

PERSON RESPONSIBLE: John Swez

**Duke Energy Ohio
Case No. 20-0167-EL-RDR
OCC Third Set of Request for Admissions
Date Received: January 6, 2021**

OCC-RFA-03-002

REQUEST:

Admit or deny that, throughout 2019, the OVEC plants were committed into the PJM day-ahead energy market as “must-run” (except for Clifty Creek Unit 6 during the summer ozone non-attainment period).

RESPONSE: Duke Energy Ohio admits that the available OVEC plants (except for Clifty Creek Unit 6 during the summer ozone non-attainment period) were committed into the PJM day-ahead energy market as “Must Run”. However, note that a commitment status offer of Must Run applies only to available units and not to unavailable units. Further, for Clifty Creek 6 during ozone season, when available, and depending upon the day, this unit was offered with a commitment status of either Economic or Must Run.

PERSON RESPONSIBLE: John Swez