

**BEFORE
THE PUBLIC UTILITIES COMMISSION OF OHIO**

In the Matter of the OVEC Generation)
Purchase Rider Audits Required by R.C.) Case No. 21-477-EL-RDR
4928.148 for Duke Energy Ohio, Inc., the)
Dayton Power and Light Company, and)
AEP Ohio.)

**DIRECT TESTIMONY
OF
ELIZABETH A. STANTON**

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

October 10, 2023

TABLE OF CONTENTS

	PAGE
I. INTRODUCTION AND PURPOSE OF TESTIMONY	1
II. FINDINGS AND RECOMMENDATIONS.....	4
III. OHIO UTILITIES PURCHASE POWER FROM OVEC UNDER THE OVEC AGREEMENT.	6
IV. CONSUMER PROTECTION RECOMMENDATIONS.....	13
A. The PUCO should disallow the Companies’ request to collect OVEC costs above a reasonable level from customers because OVEC’s commitment of the plants into PJM as must-run units was not prudent and added needless costs to consumers.	13
B. To protect consumers, PUCO should disallow unreasonable and imprudently incurred costs.....	21
C. To protect consumers, OVEC should shut down the Clifty Creek plant following the U.S. EPA proposed decision to deny any extensions for coal ash permits.	23
D. Consumers should only pay for current OVEC costs.	26
V. CONCLUSION.....	30

LIST OF ATTACHMENTS:

Attachment EAS-1 Curriculum Vitae

Attachment EAS-2 March 1, 2023 Report by Fitch Ratings

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

2

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

4 ***A1.*** My name is Elizabeth A. Stanton, and I am the Director and Senior Economist at
5 the Applied Economics Clinic located at 1012 Massachusetts Avenue, Arlington,
6 MA, 02476.

7

8 ***Q2. PLEASE DESCRIBE THE APPLIED ECONOMICS CLINIC.***

9 ***A2.*** The Applied Economics Clinic is a non-profit economic and energy consulting
10 group providing expert testimony, analysis, modeling, policy briefs, and reports to
11 public interest groups on the topics of energy, environment, consumer protection,
12 and equity. AEC also serves to train the next generation of expert technical
13 witnesses and analysts by providing applied, on-the-job training to graduate
14 students in related fields and working proactively to support diversity among both
15 student workers and professional staff.

16

17 ***Q3. PLEASE SUMMARIZE YOUR PROFESSIONAL AND EDUCATIONAL***
18 ***BACKGROUND.***

19 ***A3.*** I earned my Ph.D. in economics at the University of Massachusetts-Amherst, and
20 have taught economics at Tufts University, the University of Massachusetts-
21 Amherst, and the College of New Rochelle, among others. I am the founder and
22 director of the Applied Economics Clinic. I have an extensive publication record,
23 including more than 170 reports, journal articles, books and book chapters as well

*Direct Testimony of Elizabeth A. Stanton
On Behalf of the Office of the Ohio Consumers' Counsel
PUCO Case No. 21-477-EL-RDR*

1 as more than 50 expert comments and oral and written testimony in public
2 proceedings on topics related to energy, the economy, the environment, and
3 equity. I have submitted expert testimony and comments in Connecticut, Indiana,
4 Illinois, Louisiana, Massachusetts, Minnesota, New Hampshire, Pennsylvania,
5 Puerto Rico, Vermont, and several federal dockets. My work includes testimony
6 and comments on climate plans, efficiency plans, alternatives to fossil fuel
7 infrastructure, proposed pipelines, energy storage, and the equitable
8 implementation of a new green economy. In my previous position as a principal
9 economist at Synapse Energy Economics, I led studies examining environmental
10 regulation, cost-benefit analyses, and the economics of energy efficiency and
11 renewable energy. Prior to joining Synapse, I was a senior economist with the
12 Stockholm Environment Institute's (SEI's) Climate Economics Group, where I
13 was responsible for leading the organization's work on the Consumption-Based
14 Emissions Inventory (CBEI) model and on water issues and climate change in the
15 western United States.

16
17 My articles have been published in *Ecological Economics*, *Renewable Climate*
18 *Change*, *Environmental and Resource Economics*, *Environmental Science &*
19 *Technology*, and other journals. I have published books, including *Climate*
20 *Change and Global Equity* (Anthem Press, 2014) and *Climate Economics: The*
21 *State of the Art* (Routledge, 2013), which I co-wrote with her colleague at
22 Synapse, Dr. Frank Ackerman. I also co-authored *Environment for the People*
23 (Political Economy Research Institute, 2005, with James K. Boyce) and co-editor

*Direct Testimony of Elizabeth A. Stanton
On Behalf of the Office of the Ohio Consumers' Counsel
PUCO Case No. 21-477-EL-RDR*

1 of Reclaiming Nature: Worldwide Strategies for Building Natural Assets (Anthem
2 Press, 2007, with Boyce and Sunita Narain). My curriculum vitae is attached as
3 EAS-1.

4

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

7

8 **A4.** Yes. I've testified in several electric utility cases in Illinois and Louisiana, and co-
9 authored analysis of social equity issues related to the PJM capacity market.

10

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

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

13

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

16

17 **A6.** No.

18

19 **Q7. WHAT IS THE PURPOSE OF YOUR TESTIMONY IN THIS**
20 **PROCEEDING?**

21

22 **A7.** My testimony addresses concerns regarding the prudence of costs related to the
23 operation of the OVEC plants charged to Ohio consumers and the self-scheduled
24 operations of those plants at times when their operations were uneconomic. I will
25 also address whether such actions were in the best interest of retail consumers if
26 the output from the units was not bid in a manner that is consistent with
27 participation in a broader competitive marketplace comprised of sellers attempting

1 to maximize revenues. These are the standards the PUCO has held that must be
2 applied, as part of a prudence review, to the coal plant subsidies consumers are
3 paying to the Ohio utilities who own the OVEC plants. In addition, R.C.
4 4928.148(A)(1) states that the PUCO, as part of its prudency review, “shall
5 determine...the prudence and reasonableness of ...decisions related to offering
6 the contractual commitment into the wholesale markets.”¹

7

8 **II. FINDINGS AND RECOMMENDATIONS**

9

10 ***Q8. PLEASE SUMMARIZE YOUR FINDINGS.***

11 ***A8.*** My findings are as follows:

12 1. The PUCO should disallow the Companies’ (Duke Energy Ohio, the
13 Dayton Power and Light Company d/b/a AES Ohio, and AEP Ohio) 2020
14 coal plant subsidies because the commitment of the plants into PJM as
15 must-run units was not prudent and added needless costs to consumers.

16

17 2. To protect consumers, the PUCO should disallow unreasonable and
18 imprudently incurred costs.

19

20 3. To protect consumers, the Clifty Creek plant should be shut down if the
21 U.S. EPA denies any extensions for coal ash permits.

¹ R.C. 4928.148(A)(1).

*Direct Testimony of Elizabeth A. Stanton
On Behalf of the Office of the Ohio Consumers' Counsel
PUCO Case No. 21-477-EL-RDR*

1 Consumers should only pay for current OVEC costs that were prudently incurred.
2 Prudence should be measured according to the PUCO's announced standards:
3 were the subsidies in the best interest of retail consumers and was the output from
4 the units bid in a manner that is consistent with participation in a broader
5 competitive marketplace comprise of sellers attempting to maximize revenues. In
6 addition, R.C. 4928.148(A)(1) states that the PUCO, as part of its prudence
7 review, "shall determine...the prudence and reasonableness of ...decisions related
8 to offering the contractual commitment into the wholesale markets."²
9

10 ***Q9. PLEASE SUMMARIZE YOUR RECOMMENDATIONS.***

11 ***A9.*** Based on my findings, my recommendations are as follows:

- 12 1. The PUCO should disallow all above market energy and capacity charges
13 collected from Ohio consumers related to the coal plants. These costs were
14 not in the best interest of retail consumers.
15
- 16 2. The PUCO should find that the Companies acted imprudently in incurring
17 these above-market costs and not taking appropriate actions to minimize
18 or eliminate these costs through their operations of the OVEC plants.

² R.C. 4928.148(A)(1).

1 3. The PUCO should find that the OVEC plants were committed
2 uneconomically—and, therefore, imprudently—during the audit period.

3
4 4. The PUCO should require the Companies to document their daily unit
5 commitment decisions going forward for the OVEC plants.

6
7 5. The PUCO should put the Companies on notice that it will disallow the
8 collection of uneconomic and imprudent costs in future OVEC cases.

9

10 **III. OHIO UTILITIES PURCHASE POWER FROM OVEC UNDER THE**
11 **OVEC AGREEMENT.**

12

13 ***Q10. WHAT IS OVEC AND HOW IS IT RELATED TO OHIO'S ELECTRIC***
14 ***CONSUMERS?***

15

16 ***A10.*** Jointly owned by twelve utilities across the states of Ohio, Indiana, Michigan,
17 Kentucky, West Virginia, and Virginia, the Ohio Valley Electric Corporation
18 (OVEC) operates two 1950s-era, coal-fired power plants: (1) Kyger Creek, a five-
19 unit, 1,086 MW plant in Gallia County, Ohio, and (2) Clifty Creek, a six-unit,
20 1,303 MW plant, in Jefferson County, Indiana.³ The Inter-Company Power
21 Agreement (OVEC Agreement) dictates the terms by which owners of OVEC,
22 which include the Companies, receive the output from the OVEC plants: Each
23 participant receives a share of the output, where AEP Ohio has the largest
24 ownership share (19.93%) of the Companies' followed by Duke Energy Ohio

³ OCC's Initial Brief, Case No. 18-1004-EL-RDR, et al. (March 18, 2022), p. 4.

*Direct Testimony of Elizabeth A. Stanton
On Behalf of the Office of the Ohio Consumers' Counsel
PUCO Case No. 21-477-EL-RDR*

1 (9%) and AES (4.9%).⁴ The Companies sell a portion of the OVEC output on the
2 PJM market and collect the resulting revenues.⁵ The difference between the
3 Companies' costs of operating the OVEC plants and their revenues from selling
4 the resulting generation are passed along to consumers, whether positive or
5 negative.

6
7 Originally built to provide power for the Piketon uranium enrichment facility, the
8 OVEC plants ceased doing uranium enrichment and OVEC ceased selling power
9 to the Department of Energy for the Piketon plant effective September 30, 2003.⁶

10

11 The OVEC agreement was originally signed on July 10, 1953 and then amended
12 on August 11, 2011, extending the operation of the plants and the owner's
13 commitment to take the power produced by the plants.⁷ It governs each
14 company's rights and duties as to the power produced by the OVEC plants.
15 OVEC bills the sponsoring companies for their shares of energy, capacity, and
16 ancillary services under the OVEC Agreement. Each sponsoring company's
17 power is sold into the PJM market, and each company receives the resulting
18 revenues.

⁴ OVEC "Benefits and Requirements" (2022) <http://www.ovec.com/BenefitsandRequirements.html>.

⁵ OCC's Initial Brief, Case No. 18-1004-EL-RDR, et al. (March 18, 2022), p. 4.

⁶ Ohio Valley Electric Corporation, Annual Report – 2019 (p. 1).

⁷ OCC's Initial Brief, Case No. 18-1004-EL-RDR, et al. (March 18, 2022), p. 4.

1 ***Q11. PLEASE EXPLAIN THE OVEC RIDER.***

2 ***A11.*** In 2013, as part of the proceeding to consider its third electric security plan, AEP
3 Ohio initially sought approval for the purchase power agreement (PPA) Rider
4 (“Coal Plant Charge”) and received a placeholder rider at an initial rate of zero,
5 with the requirement that the utility demonstrate a justification for including the
6 actual costs from the PPA in a future filing, subject to requirements for future
7 Coal Plant Charge filings established by the PUCO.⁸

8
9 In 2016, the PUCO allowed AEP Ohio to collect the costs incurred from operating
10 the OVEC plant from consumers.⁹ When the PUCO initially approved the Coal
11 Plant Charge, then-Chairman Asim Haque stated in a concurring opinion, “This
12 should not be perceived as a blank check, and consumers should not be treated
13 like a trust account.”¹⁰ The authorization of the Coal Plant Charge extends
14 through 2024. In 2019, the Ohio legislature approved H.B. 6, which replaced the
15 Coal Plant Charge with the Legacy Generation Rider. H.B. 6 went into effect on
16 January 1, 2020, and extended the collection of OVEC costs through 2030.

17
18 H.B. 6 creates a “nonbypassable rate mechanism” to be collected from all electric
19 utility customers, which “shall be established through a process that the
20 commission shall determine is not for an increase in any rate, joint rate, toll,

⁸ OCC’s Initial Brief, Case No. 18-1004-EL-RDR, et al. (March 18, 2022), p. 5.

⁹ OCC’s Initial Brief, Case No. 18-1004-EL-RDR, et al. (March 18, 2022), p. 5.

¹⁰ OCC’s Initial Brief, Case No. 18-1004-EL-RDR, et al. (March 18, 2022), pp. 1-2.

*Direct Testimony of Elizabeth A. Stanton
On Behalf of the Office of the Ohio Consumers' Counsel
PUCO Case No. 21-477-EL-RDR*

1 classification, charge, or rental, notwithstanding anything to the contrary to Title
2 XLIX of the Revised Code.”¹¹ The monthly charge or credit for “prudently
3 incurred costs” incurred by “legacy generation resources” including OVEC “shall
4 not exceed one dollar and fifty cents per customer per month for residential
5 customers,” and shall not exceed \$1,500 for customer for non-residential
6 customers.¹² H.B. 6 also stipulates that electric utilities “shall bid all output from a
7 legacy generation resource into the wholesale market and shall not use the output
8 in supplying [their] standard service offer.”¹³ R.C. 4928.148(A)(1) states that the
9 PUCO, as part of its prudence review, “shall determine...the prudence and
10 reasonableness of ...decisions related to offering the contractual commitment into
11 the wholesale markets.”¹⁴

12
13 The Coal Plant Charge effectively shifts the cost burden for operating the OVEC
14 plants from the Companies’ shareholders to their consumers. When seeking
15 authority to collect the Coal Plant Charge, AEP Ohio told the PUCO that
16 consumers would likely receive a \$110 million net credit over eight years.
17 Contrary to this expectation, OVEC plants’ output has not provided any net
18 reduction in customer electric bills. Instead of the \$110 million net credit that

¹¹ 133rd General Assembly of Ohio. 2020. *An Act to facilitate and continue the development, production, and use of electricity from nuclear, coal, and renewable energy resources in this state*. Available at: https://search-prod.lis.state.oh.us/solarapi/v1/general_assembly_133/bills/hb6/EN/06/hb6_06_EN?format=pdf. p. 15.

¹² *Id.* p. 15.

¹³ *Id.* p. 15.

¹⁴ R.C. 4928.148(A)(1).

*Direct Testimony of Elizabeth A. Stanton
On Behalf of the Office of the Ohio Consumers' Counsel
PUCO Case No. 21-477-EL-RDR*

1 AEP Ohio had projected, consumers were burdened with a \$135 million net
2 additional charge over four years (including the \$74.5 million AEP charged
3 consumers during 2018-2019).¹⁵

4

5 **Q12. WHAT IS REQUIRED OF THE PUCO UNDER STATUTE REGARDING**
6 **THE OVEC RIDER?**

7

8 **A12.** The PUCO is required by R.C. 4928.148, which became effective on October 22,
9 2019, to: (1) establish a replacement nonbypassable rate mechanism for the retail
10 recovery of prudently incurred costs related to a legacy generation resource
11 (LGR) for the period between January 1, 2020 and December 31, 2030; and (2)
12 determine the prudence and reasonableness of the actions of the electric
13 distribution utilities (EDUs) with ownership interests on the LGR.

14

15 The PUCO's requirement under R.C. 4928.148(A)(1) to determine the prudence
16 and reasonableness of the actions of EDUs with LGR ownership interest must be
17 conducted during the years of 2021, 2024, 2027, and 2030. The EDUs with LGR
18 ownership interest that are subject to the jurisdiction of PUCO include: Duke
19 Energy Ohio, the Dayton Power and Light Company d/b/a AES Ohio, and AEP
20 Ohio (collectively, the Companies).

¹⁵ OCC's Initial Brief, Case No. 18-1004-EL-RDR, et al. (March 18, 2022), pp. 5-6.

*Direct Testimony of Elizabeth A. Stanton
On Behalf of the Office of the Ohio Consumers' Counsel
PUCO Case No. 21-477-EL-RDR*

1 **Q13. HAVE THE OVEC PLANTS PROVIDED VALUE TO OHIO CUSTOMERS?**

2 **A13.** No. The OVEC plants are old, inefficient, costly to maintain, and costly
3 to operate. These plants are also increasingly uncompetitive in the market. An
4 abundance of new renewable generation and gas facilities have come online with
5 comparatively low capital and operations costs. As a result, OVEC's costs for
6 energy and capacity are significantly higher than PJM market prices for energy
7 and capacity. OVEC's high costs are passed on to the utility consumers of Duke
8 Energy Ohio, AES Ohio, and AEP Ohio.

9
10 **Q14. WHAT PORTION OF OVEC ARE THE COMPANIES RESPONSIBLE FOR?**

11 **A14.** AEP Ohio has the largest ownership share (19.93%) of the Companies' followed
12 by Duke Energy Ohio (9%) and AES (4.9%).¹⁶

13
14 **Q15. WHAT IS THE BURDEN OF PROOF ON THE COMPANIES REGARDING
15 THE DETERMINATION OF COSTS, REVENUES, AND PRUDENCY?**

16
17 **A15.** When the PUCO approved the Settlement that established Duke's OVEC rider,
18 it ordered that the rider would be subject to an annual prudency review.¹⁷ The
19 Settlement does not describe the prudency review process in detail. Instead, the
20 Settlement notes that two other utilities have a similar OVEC rider and that the

¹⁶ OVEC "Benefits and Requirements" (2022) <http://www.ovec.com/BenefitsandRequirements.html>.

¹⁷ Stipulation and Recommendation, Case No. 17-1263-EL-SSO (April 13, 2018).

*Direct Testimony of Elizabeth A. Stanton
On Behalf of the Office of the Ohio Consumers' Counsel
PUCO Case No. 21-477-EL-RDR*

1 PUCO should approach the prudency determination for all three utilities in a
2 similar manner. The Settlement states:

3 The Stipulating Parties acknowledge that two other Ohio
4 electric distribution utilities are Sponsoring Parties pursuant
5 to the ICPA and, as such, the Signatory Parties recommend
6 that the Commission approach the determination of
7 prudently incurred costs and the reasonableness of the
8 generation revenue for all three jurisdictional electric
9 distribution utilities in a uniform manner, pursuant to
10 controlling law, which affords parties of interest with due
11 process.¹⁸

12
13 The first utility OVEC rider (also referred to as “Power Purchase Agreement
14 Rider” or “PPA Rider”) approved by PUCO was AEP’s. The PUCO’s order in
15 AEP’s Electric Security Plan case ruled that the utility has the burden of proof in
16 the annual prudence reviews. The PUCO declared that: “AEP Ohio will bear the
17 burden of proof in demonstrating the prudency of all costs and sales during the
18 review, as well as that such actions were in the best interest of retail ratepayers.”¹⁹
19 Likewise, the PUCO ruled that “[r]etail cost recovery may be disallowed as a
20 result of the annual prudency review if the output from the units was not bid in a
21 manner that is consistent with participation in a broader competitive marketplace
22 comprised of sellers attempting to maximize revenues.”²⁰

¹⁸ Stipulation and Recommendation, Case No. 17-1263-EL-SSO (April 13, 2018), p. 19.

¹⁹ *In re Ohio Power PPA Rider*, Case No. 14-1693-EL-RDR (Opinion & Order at 89) (March 31, 2016) (the “OVEC Order”) (also stating, “AEP Ohio will bear the burden of proof in demonstrating that bidding behavior is prudent and in the best interest of retail ratepayers.”). This March 31, 2016 Order related to AEP’s PPA Rider, which, at the time, included more than just OVEC. The rider was subsequently modified to be for OVEC only. *See* Case No. 14-1693-EL-RDR (Second Entry on Rehearing) (November 3, 2016). This modification does not impact the burden of proof in this audit proceeding.

²⁰ *Id.*

1 Accordingly, consistent with the PUCO ruling that the standards for the prudence
2 review shall be the same for all three utilities, AEP Ohio, Duke Energy Ohio, and
3 AES Ohio each have the burden of proof to show that all actions related to the
4 OVEC plants were prudent and in consumers' best interests.

5

6 **IV. CONSUMER PROTECTION RECOMMENDATIONS**

7

8 **A. The PUCO should disallow the Companies' request to collect OVEC**
9 **costs above a reasonable level from customers because OVEC's**
10 **commitment of the plants into PJM as must-run units was not**
11 **prudent and added needless costs to consumers.**

12

13 ***Q16. PLEASE DEFINE PRUDENCY.***

14 ***A16.*** A prudent decision is defined as:

15 One which reflects what a reasonable person would have
16 done in light of conditions and circumstances which were
17 known or reasonably should have been known at the time
18 the decision was made. The standard contemplates a
19 retrospective, factual inquiry, without the use of hindsight
20 judgment, into the decision making process of the utility's
21 management.²¹

22

23 ***Q17. HAS THE PUCO OFFERED ANY OTHER REQUIREMENTS REGARDING***
24 ***PRUDENCY IN OVEC COST APPROVAL?***

25

26 ***A17.*** Yes. The PUCO adopted an even higher standard for the prudence review in the

27 OVEC rider cases—the utility has the burden of proof to establish that the plants

²¹ *Cincinnati v. Pub. Util. Comm.*, 67 Ohio St.3d 523, 530, 620 N.E.2d 826, 830 (1993).

*Direct Testimony of Elizabeth A. Stanton
On Behalf of the Office of the Ohio Consumers' Counsel
PUCO Case No. 21-477-EL-RDR*

1 were operated “in the best interest of retail ratepayers.”²² In addition, the utility
2 has the burden of proof to establish that the “output from the units was not bid in
3 a manner that is consistent with participation in a broader competitive
4 marketplace comprised of sellers attempting to maximize revenues.”²³

5

6 ***Q18. HAS PUCO INDICATED A REQUIREMENT FOR A STANDARD OF***
7 ***PRUDENCY IN THIS DOCKET?***

8

9 ***A18.*** Yes. The PUCO’s RFP to retain an Audit Expert for the OVEC General Purchase

10 Rider calls for an assessment of prudence:

11 Specifically, the Independent Contractor shall review the
12 three audit reports submitted by the LEI and assess the
13 prudence of all the costs and sales flowing through the
14 LGR Rider, and to investigate whether AEP Ohio’s actions
15 were in the best interests of ratepayers.²⁴

16

17 ***Q19. PLEASE DEFINE THE TERMS “SELF-SCHEDULED” AND “MUST-RUN”***
18 ***AS USED IN PJM SYSTEM DISPATCH.***

19

20 ***A19.*** “Self-schedule” and the synonymous term “must-run” are used in contrast to the
21 typical PJM unit operations called “economic commitment.” The practice of
22 “economic commitment” calls for units to run strictly on the basis of minimizing
23 system costs: calling the least expensive units to run and be available for further
24 dispatch if needed while letting more expensive units sit idle if not needed. Self-
25 scheduled operations are instead committed by unit owners or operators.

²² *In re Ohio Power PPA Rider*, Case No. 14-1693-EL-RDR (Opinion & Order at 89) (March 31, 2016) (the “OVEC Order”) (also stating, “AEP Ohio will bear the burden of proof in demonstrating that bidding behavior is prudent and in the best interest of retail ratepayers.”)

²³ *Id.*

²⁴ Entry, Request for Proposals at 7 (May 5, 2021).

1 PJM receives bids from generators for their energy costs to run at different levels
2 of capacity at each hour of the day. PJM then commits and dispatches the units
3 based on these bids in an optimal manner: “generation is economically dispatched
4 to meet the demand across the entire RTO at the lowest cost.”²⁵ Self-scheduled
5 units, however, indicate to PJM when they are going to operate and are forced
6 into dispatch by circumventing the optimization process.²⁶

7

8 ***Q20. HOW ARE OVEC UNITS COMMITTED TO THE MARKET?***

9 ***A20.*** In 2020 the OVEC units were mostly self-scheduled rather than committed
10 economically by PJM. This means that the units’ operations were dictated by
11 OVEC, regardless of whether it made economic sense to operate at the time. The
12 more the OVEC units operate, the more the Companies’ consumers are charged
13 for energy costs. While consumers are also credited with the PJM energy revenue
14 from these units, this only results in a net energy benefit to consumers if those
15 energy revenues exceed the energy costs.

16

17 ***Q21. WHAT IMPACTS DOES SELF-SCHEDULING HAVE ON CONSUMERS?***

18 ***A21.*** OVEC’s self-scheduling of its units—bypassing PJM economic commitment
19 process—has been detrimental to the Companies’ consumers. As a practice, self-
20 scheduling is highly problematic for consumers for two key reasons:

²⁵ PJM, *Unit Commitment and Dispatch*, December 6, 2016, slide 12. Available at: <https://www.pjm.com/-/media/training/nerc-certifications/markets-exam-materials/mkt-optimization-wkshp/unit-commitment-and-dispatch.ashx>.

²⁶ LEI Audit Report on AEP Ohio, p. 41.

*Direct Testimony of Elizabeth A. Stanton
On Behalf of the Office of the Ohio Consumers' Counsel
PUCO Case No. 21-477-EL-RDR*

1 (1) if the units are operating when the energy price (or locational marginal
2 price (LMP)) is lower than the units' energy costs then consumers are
3 paying a premium; and

4
5 (2) by opting out of economic commitment from PJM, the units forgo the
6 collection of "make whole" payments that would compensate them if they
7 were market-committed by PJM and did not recover their energy costs for
8 that day.²⁷

9

10 ***Q22. HAVE OVEC UNITS OPERATED WHEN THE MARKET ENERGY PRICE***
11 ***WAS LOWER THAN THE UNITS' ENERGY COSTS?***

12

13 ***A22.*** Yes. The OVEC units exemplify the problems with self-scheduling because in
14 most hours that they operate, they are uneconomic.

15

16 In OCC's review of hourly operations and each of the Companies' LMPs, on a
17 plant-wide basis, I found that the Clifty Creek and Kyger Creek were operating
18 for 98 and 97 percent of the all hours in 2020, respectively.²⁸ During 84 to 88
19 percent of those operating hours, the units' energy costs were higher than each of
20 the Companies' zonal energy prices.²⁹ Despite this, the units were still self-

²⁷ PJM, *LMP Calculation and Uplift*, January 29, 2018. Available at: <https://www.pjm.com/-/media/committees-groups/task-forces/epfstf/20180129/20180129-item-07b-lmp-calculation-and-uplift.ashx>.

²⁸ EPA Clean Air Markets Program Data (CAMPD) for hourly generation for OVEC units in 2020 (<https://campd.epa.gov/>).

²⁹ *Id.*; 2020 hourly Duke Ohio, AEP Ohio, and AES Ohio LMPs from PJM Data miner (<https://dataminer2.pjm.com/>). The OVEC zonal LMPs were very similar to the Companies' zonal prices.

*Direct Testimony of Elizabeth A. Stanton
On Behalf of the Office of the Ohio Consumers' Counsel
PUCO Case No. 21-477-EL-RDR*

1 scheduled most of the time, the exception being only a brief period because of the
2 low energy prices—as reported by LEI.³⁰ Ultimately, LEI recommends that
3 “ideally” the units should be “committed based on economics all or most of the
4 time.”³¹

5

6 **Q23. WHAT PREMIUM HAVE OHIO CONSUMERS PAID OVER THE MARKET**
7 **ENERGY PRICE?**

8

9 **A23.** As stated in the LEI Audit Report for Duke Ohio, the energy cost of the OVEC
10 units was \$25.61 per MWh in 2020, whereas the PJM energy price for the Duke
11 Ohio PJM hub was \$21.35 per MWh on average—thus the OVEC units were 20
12 percent more costly than the market energy price (i.e. the marginal cost of
13 generating energy).³² LEI also found that the OVEC energy charge was higher
14 than the Duke hub LMP “for most months in 2020.”³³

15

16 Similarly, the PJM energy price for the AEP Ohio PJM zone was \$20.92 per
17 MWh on average—thus the OVEC units were 22 percent more costly than that
18 zone’s energy.³⁴ LEI also found that the OVEC energy charge was higher than the
19 AEP Ohio LMP “for all months in 2020.”³⁵ The PJM energy price for the AES
20 Ohio PJM zone was \$19.55 per MWh on average which was 31 percent higher

³⁰ LEI 2020 Audit, p. 41.

³¹ *Id.* p. 10.

³² LEI 2020 Audit on Duke Ohio, p. 17.

³³ *Id.* p. 49.

³⁴ LEI 2020 Audit on AEP Ohio, p. 18, 31.

³⁵ *Id.* p. 47.

*Direct Testimony of Elizabeth A. Stanton
On Behalf of the Office of the Ohio Consumers' Counsel
PUCO Case No. 21-477-EL-RDR*

1 than that zone's energy.³⁶ Thus, the Companies would have been better off
2 without having to buy and sell their share of the OVEC units' output.

3

4 ***Q24. DOES THE AUDITOR'S REPORT SUGGEST ANY OTHER CONCERNS***
5 ***WITH SELF-SCHEDULING?***

6

7 ***A24.*** Yes. LEI states that "coal plants are not designed" for economic commitment by
8 discussing the potential risks of turning on and off frequently.³⁷ But coal unit
9 owners can include such costs into their bids and allow PJM to consider those
10 costs when making the commitment decision. If for some reason the units must
11 run for safety issues, then they can do so for a brief period; but the default for
12 OVEC has been to force its units to operate regardless of their economics—which
13 has a direct and unjustified impact on consumer bills. If OVEC is to conduct any
14 self-scheduling going forward, it must document the reasoning for such decisions
15 to the Companies, and parties in this case, so that stakeholders can review the
16 merits of those decisions. For purposes of this case, the Companies' consumers
17 should not pay for any excess costs associated with the self-scheduling of these
18 units.

19

20 ***Q25. HAVE EXCESSIVE OVEC COSTS BEEN DENIED IN ANY OTHER***
21 ***JURISDICTIONS?***

22

23 ***A25.*** Yes. The Michigan Public Service Commission (MPSC) recently disallowed
24 \$1.347 million in 2020 power supply costs associated with the OVEC units that

³⁶ LEI 2020 Audit on AES Ohio, p. 17.

³⁷ LEI 2020 Audit on AES Ohio, p. 17.

*Direct Testimony of Elizabeth A. Stanton
On Behalf of the Office of the Ohio Consumers' Counsel
PUCO Case No. 21-477-EL-RDR*

1 Indiana Michigan Power (I&M), a subsidiary of AEP, was requesting.³⁸ This
2 disallowance level was developed from the Attorney General comparing the costs
3 of the OVEC contract (\$65.46 per MWh) that were incurred with two other long-
4 term power transactions in Michigan that were lower-cost.³⁹ The MPSC
5 ultimately agreed with this comparison, admonishing I&M because it “stubbornly
6 refused to provide any other meaningful basis for comparison” to support the
7 recovery of the OVEC units’ costs.⁴⁰ I&M also “does not challenge” the accuracy
8 of the Attorney General’s cost comparison.⁴¹ The MPSC had previously stated its
9 position that long-term contracts need to be re-evaluated after signing because the
10 existence of the contract does not “absolve a utility from monitoring and
11 responding to market conditions.”⁴²

12

13 ***Q26. HOW DO OVEC’S COSTS COMPARE TO THE COST OF BUILDING AND***
14 ***OPERATING NEW GAS UNITS?***

15

16 ***A26.*** OVEC's operation costs are nearly twice as high as the cost of building and
17 operating a new gas unit. LEI estimates that the all-in cost of the OVEC plants is
18 substantially higher than the costs of building and operating a new combined
19 cycle gas turbine (CCGT) in PJM. The costs reported by OVEC are \$67 per

³⁸ MI PSC Order, Case No. U-20530, p. 12. Available at: <https://mi-psc.force.com/sfc/servlet.shepherd/version/download/0688y000006ctmIAAQ>.

³⁹ *Id.* p. 8.

⁴⁰ *Id.* p. 12.

⁴¹ *Id.*

⁴² MI PSC Order, Case No. U-20203, p. 26. Available at: <https://mi-psc.force.com/sfc/servlet.shepherd/version/download/068t000000HUDq3AAH>.

1 MWh, compared to a range of between \$35.90 and \$42.20 per MWh for building
2 and operating a new CCGT.⁴³ LEI's own estimate of OVEC units' costs is \$65.19
3 per MWh for the audit period (\$39.59 per MWh in demand charges and \$25.61
4 per MWh in energy charges).⁴⁴ It would be cheaper to build nearly twice as much
5 new gas capacity than to continue paying for the OVEC units.

6

7 **Q27. HOW COMMON IS IT FOR COAL-FIRED POWER PLANTS TO RUN**
8 **WHEN UNECONOMIC?**

9

10 **A27.** OVEC Evidence from the MISO market monitor suggests that it is extremely
11 uncommon for coal-fired power plants to operate when uneconomic. In most
12 instances, plants that are self-scheduled only run when their revenues are expected
13 to surpass their costs. In the 2017 to 2020 period, coal-fired power plants owned
14 by MISO's regulated utilities ran unprofitably in 13 percent of starts; for merchant
15 plants this share was only 3 percent (*see* Figure 1). The MISO and PJM wholesale
16 markets are very similar, as discussed in Joseph Perez's testimony in this docket:

17 Both markets cover a widespread, multi-state area. Both
18 MISO and PJM have a wide variety of power plants of all
19 types. Both MISO and PJM have a capacity, energy and
20 ancillary services markets. Both of these markets operate in
21 a similar fashion and each have an independent market
22 monitor.⁴⁵

23

⁴³ LEI Audit Report, pp. 21-22.

⁴⁴ *Id.* p. 29.

⁴⁵ Perez testimony, pp. 11-12.

*Direct Testimony of Elizabeth A. Stanton
On Behalf of the Office of the Ohio Consumers' Counsel
PUCO Case No. 21-477-EL-RDR*

Figure 1. MISO coal-fired resource operation and profitability

	2017-2020			2021			2022		
	Annual Starts	% of Starts	Net Rev. (\$/MWh)	Starts	% of Starts	Net Rev. (\$/MWh)	Starts	% of Starts	Net Rev. (\$/MWh)
Regulated Utilities	1839		\$3.54	1718		\$14.04	1765		\$22.41
Profitable Starts	1570	87%		1564	91%		1635	93%	
<i>Offered Economically</i>	727	39%		885	52%		754	43%	
<i>Must-Run and profitable</i>	843	48%		679	40%		881	50%	
Unprofitable (Must Run)	269	13%		154	9%		130	7%	
Merchants	187		\$5.05	124		\$14.96	84		\$30.42
Profitable Starts	184	97%		124	100%		84	100%	
<i>Offered Economically</i>	143	70%		124	100%		84	100%	
<i>Must-Run and profitable</i>	41	27%		0	0%		0	0%	
Unprofitable (Must Run)	4	3%		0	0%		0	0%	

Source: Reproduced from Potomac Economics, Independent Market Monitor for the Midcontinent ISO. June 15, 2023. 2022 State of the Market Report for the MISO Electric Markets.

1 **B. To protect consumers, PUCO should disallow unreasonable and**
2 **imprudently incurred costs.**

3
4 **Q28. DOES THE AUDITOR'S REPORT SUGGEST THAT OVEC HAS**
5 **IMPRUDENTLY INCURRED ANY COSTS?**

6
7 **A28.** Yes. LEI's 2021 Audit Reports noted that Clifty Creek was paying above market
8 prices for coal.⁴⁶ OVEC paid substantially higher prices for coal purchased for the
9 Clifty Creek unit that was supplied from Resource Fuels compared to other coal
10 suppliers. The evidence in this case suggests that OVEC's above-market charges
11 to consumers through the Coal Plant Charge in 2020 were imprudently incurred

⁴⁶ (1) London Economics International LLC (LEI), December 15, 2021, *Audit of the Legacy Generation Resource Rider of Duke Energy Ohio Final Report*. Prepared for PUCO, Docket No. 21-477-EL-RDR, p. 66; (2) LEI, December 15, 2021, *Audit of the Legacy Generation Resource Rider of AEP Ohio Final Report*. Prepared for PUCO, Docket No. 21-477-EL-RDR, p. 57; (3) LEI, December 15, 2021, *Audit of the Legacy Generation Resource Rider of AES Ohio Final Report*. Prepared for PUCO, Docket No. 21-477-EL-RDR, p. 54.

*Direct Testimony of Elizabeth A. Stanton
On Behalf of the Office of the Ohio Consumers' Counsel
PUCO Case No. 21-477-EL-RDR*

1 and should be disallowed. Further examination of contract terms would be
2 necessary to determine the prudence of the coal costs.

3
4 According to 2020 EIA-Form 923, OVEC purchased coal sourced from River
5 View Mine in Kentucky for the Clifty Creek unit through two separate suppliers:
6 Resource Fuels and Alliance Coal. The coal purchased through Resource Fuels
7 was at a higher price than the coal purchased through Alliance Coal, despite
8 having the same average heat content. Specifically, Resource Fuels supplied
9 1,016,071 short tons of coal to the Clifty Creek Unit for \$60.1 million (\$2.57 per
10 MMBtu) and, in contrast, Alliance Fuels supplied 1,249,160 short tons of coal for
11 \$59 million (\$2.03 per MMBtu). On a per MMBtu basis, OVEC paid \$0.54 more
12 per MMBtu for coal purchased from Resource Fuels than coal from the same
13 mine with the same heat content purchased from Alliance Coal (*see* Table 1).

*Direct Testimony of Elizabeth A. Stanton
On Behalf of the Office of the Ohio Consumers' Counsel
PUCO Case No. 21-477-EL-RDR*

Table 1. 2020 Clifty Creek coal purchases

Coal Mine	Supplier	Coal Purchases (short tons)	Avg. Heat Content (MMBtu per short ton)	Energy (MMBtu)	Annual Fuel Costs (\$)	Fuel Costs (\$ per MMBtu)
River View	Resource Fuels	1,016,071	23.0	23,411,580	\$60,130,470	\$2.57
River View	Alliance Coal	1,249,160	23.1	28,872,233	\$58,576,197	\$2.03
Poplar Grove	Hartshorne Mining	29,564	24.0	710,862	\$1,396,776	\$1.96
Eagle River #1	White Stallion Coal	57,389	25.3	1,450,001	\$3,180,629	\$2.19

Data Source: U.S. EIA. 2020. EIA Form-923 [Page 5. Fuel Receipts and Costs].

1 If OVEC had paid the same per MMBtu price for coal from Resource Fuels as
2 they had for Alliance Coal in 2020, the total cost for coal supplied from Resource
3 Fuels would have been \$47.5 million compared to \$60.1 million (a difference of
4 \$12.6 million).

5 Ohio consumers paid a high premium for coal procured by OVEC that was
6 unwarranted and imprudent. PUCO should disallow these unnecessary added
7 costs.

8

9 **C. To protect consumers, OVEC should shut down the Clifty Creek**
10 **plant following the U.S. EPA proposed decision to deny any**
11 **extensions for coal ash permits.**

12

13 ***Q29. IS THE CLIFTY CREEK PLANT REQUIRED TO RETIRE?***

14 ***A29.*** Yes. The Clifty Creek plant is required to retire due to its coal ash handling
15 practices. On August 2020, the U.S. EPA published the Coal Combustion
16 Residuals (CCR) Part A Final Rule that establishes a closure date of April 11,
17 2021 for unlined surface impoundments receiving coal ash. CCR Part A allows

*Direct Testimony of Elizabeth A. Stanton
On Behalf of the Office of the Ohio Consumers' Counsel
PUCO Case No. 21-477-EL-RDR*

1 facilities to request an extension for unlined CCR surface impoundments to stop
2 receiving coal waste, but only if that request is submitted by November 30,
3 2020.⁴⁷ As part of this request, facilities must demonstrate that there is no
4 alternative capacity for their coal disposal at this time.

5
6 EPA reviewed demonstrations from 57 facilities, including Clifty Creek Power
7 Station, which submitted a demonstration to continue receipt of coal ash at two
8 CCR surface impoundments, the West Boiler Slag Pond (WBSP) and the Landfill
9 Runoff Collection Pond (LRCP), past the April 11, 2021 closure deadline set forth
10 in CCR Part A Final Rule.⁴⁸

11
12 On January 25, 2022, the U.S. EPA issued a proposed denial of alternative closure
13 deadlines for the Clifty Creek CCR surface impoundments due to a lack of
14 evidence demonstrating that there is no off-site capacity available, and failure to
15 meet groundwater monitoring requirements at the facility, failure to meet
16 corrective action requirements, failure of the plans to construct a concrete settling
17 tank to obtain alternative capacity to meet the design requirements in the CCR
18 regulations, and failure to prepare closure plans for the WBSP and LRCP that will

⁴⁷ U.S. EPA 85 FR 53516. August 2020. Hazardous and Solid Waste Management System: Disposal of Coal Combustion Residuals from Electric Utilities; A Holistic Approach to Closure Part A: Deadline To Initiate Closure. EPA-HQ-OLEM-2019-0172 and EPA-HQ-OLEM-2018-052, FRL-10013-20-OLEM. Available at: <https://www.federalregister.gov/documents/2020/08/28/2020-16872/hazardous-and-solid-waste-management-system-disposal-of-coal-combustion-residuals-from-electric>.

⁴⁸ U.S. EPA, 2023, “Coal Combustion Residuals (CCR) Part A Implementation.” Available at: <https://www.epa.gov/coalash/coal-combustion-residuals-ccr-part-implementation#review>.

*Direct Testimony of Elizabeth A. Stanton
On Behalf of the Office of the Ohio Consumers' Counsel
PUCO Case No. 21-477-EL-RDR*

1 ensure closure activities will meet the closure performance standards in the CCR
2 regulations.⁴⁹

3
4 According to Indiana-Kentucky Electric Corporation (IKEC), an owned
5 subsidiary of OVEC, the closure of the Clifty Creek surface impoundments would
6 require the facility to shut down. IKEC states that in order to continue to operate,
7 generate electricity, and ultimately comply with the CCR rule, the ELGs, and the
8 facility's NPDES permit conditions, the Clifty Creek Power Station must continue
9 to use both the WBSP and the LRCP impoundments.⁵⁰

10

11 ***Q30. HAS OVEC MADE PLANS FOR THE CLIFTY CREEK RETIRE***
12 ***AVAILABLE TO PUCO AND TO OHIO CONSUMERS?***

13

14 ***A30.*** Not to my knowledge. I recommend that OVEC act immediately to make
15 available its plans to shut down the Clifty Creek in anticipation of U.S. EPA's
16 final decision to deny any extensions for coal ash permits. I note that OVEC
17 submitted a closure plan for the Clifty Creek West Boiler Slag Pond to the Indiana
18 Department of Environmental Management on September 2023, stating that the
19 closure plan would be completed by 2028.

⁴⁹ EPA-HQ-OLEM-2021-0587, p. 11.

⁵⁰ EPA-HQ-OLEM-2021-0587, p. 19.

1 **D. Consumers should only pay for current OVEC costs.**

2

3 ***Q31. SHOULD OHIO CONSUMERS FUND DECOMMISSIONING COSTS IN***
4 ***ADVANCE OF THE RESULTS OF A DEPRECIATION STUDY OF THE***
5 ***OVEC PLANTS?***

6

7 ***A31.*** No. Duke Energy, AES Ohio and AEP Ohio consumers should only pay for
8 current OVEC costs; funding a reserve for eventual plant decommissioning is
9 premature. Costs related to depreciation should be included only after a
10 depreciation study is conducted and its methodology and findings made available
11 to stakeholders and the PUCO.

12

13 In addition, R.C. 4928.01(A)(42) states that the costs to be collected under the
14 Legacy Generation Rider “shall exclude any return on investment in common
15 equity and, in the event of a premature retirement of a legacy generation resource,
16 shall exclude any recovery of remaining debt.”⁵¹

17

18 The costs to consumers are an on-going issue that should be addressed continually
19 as long as the Companies’ consumers are tied to the OVEC units. It is indeed
20 troubling that the utilities’ contract with OVEC expires in 2040 and, while the
21 units have no set retirement date, they are unlikely to last another 17 years.

⁵¹ R.C. 4928.01(A)(42).

*Direct Testimony of Elizabeth A. Stanton
On Behalf of the Office of the Ohio Consumers' Counsel
PUCO Case No. 21-477-EL-RDR*

1 The plants began operation in 1955, during the Eisenhower Administration,
2 making them currently the oldest coal units in PJM and among the oldest in the
3 United States.⁵² Table 2 lists the 30 oldest operating coal units in the nation—
4 those shaded in grey have no retirement date.⁵³ All of these units apart from
5 Shawnee Unit 3 (in Kentucky), Clifty Creek and Kyger Creek have a planned
6 retirement date prior to 2034.

⁵² EIA 860M, Preliminary Monthly Electric Generator Inventory (based on Form EIA-860M as a supplement to Form EIA-860), Available at: <https://www.eia.gov/electricity/data/eia860m/>.

⁵³ *Id.*

*Direct Testimony of Elizabeth A. Stanton
On Behalf of the Office of the Ohio Consumers' Counsel
PUCO Case No. 21-477-EL-RDR*

Table 2. Thirty oldest coal units operating in the United States

Plant Name	State	Balancing Authority Code	Unit #	Nameplate Capacity (MW)	Operating Year	Planned Retirement Year
Shawnee	KY	TVA	1	175	1953	2033
Shawnee	KY	TVA	2	175	1953	2033
Shawnee	KY	TVA	3	175	1953	-
Shawnee	KY	TVA	4	175	1954	2033
Shawnee	KY	TVA	5	175	1954	2033
Shawnee	KY	TVA	6	175	1954	2033
Shawnee	KY	TVA	7	175	1954	2033
Kingston	TN	TVA	1	175	1954	2027
Kingston	TN	TVA	2	175	1954	2027
Kingston	TN	TVA	3	175	1954	2027
Kingston	TN	TVA	4	175	1954	2027
Clify Creek	IN	PJM	1	217	1955	-
Clify Creek	IN	PJM	2	217	1955	-
Clify Creek	IN	PJM	3	217	1955	-
Clify Creek	IN	PJM	4	217	1955	-
Clify Creek	IN	PJM	5	217	1955	-
Shawnee	KY	TVA	8	175	1955	2033
Shawnee	KY	TVA	9	175	1955	2033
Kyger Creek	OH	PJM	1	217	1955	-
Kyger Creek	OH	PJM	2	217	1955	-
Kyger Creek	OH	PJM	3	217	1955	-
Kyger Creek	OH	PJM	4	217	1955	-
Kyger Creek	OH	PJM	5	217	1955	-
Kingston	TN	TVA	5	200	1955	2027
Kingston	TN	TVA	6	200	1955	2027
Kingston	TN	TVA	7	200	1955	2026
Kingston	TN	TVA	8	200	1955	2026
Kingston	TN	TVA	9	200	1955	2026
Clify Creek	IN	PJM	6	217	1956	-
Gallatin (TN)	TN	TVA	1	300	1956	2031

Data source: The list includes coal units in the electric sector over 100 MW in nameplate capacity. EIA 860M, Preliminary Monthly Electric Generator Inventory (based on Form EIA-860M as a supplement to Form EIA-860), Available at: <https://www.eia.gov/electricity/data/eia860m/>

*Direct Testimony of Elizabeth A. Stanton
On Behalf of the Office of the Ohio Consumers' Counsel
PUCO Case No. 21-477-EL-RDR*

1 A March 1, 2023 Report by Fitch Ratings is attached as EAS-2. Fitch Ratings is a
2 widely respected firm that performs credit ratings analyses for the investment
3 community. This report states that OVEC collected a debt reserve fund of \$30
4 million per year from 2017 to 2020, for a total of \$120 million. The stated
5 purpose of the debt reserve is: “OVEC anticipates maintaining the collected
6 reserve at the current level, representing approximately one year's worth of debt
7 service, to enhance OVEC's credit and to provide future financial flexibility.”

8

9 Consumers should not be charged for this debt reserve to improve OVEC’s credit
10 profile. **If consumers have been charged for this debt reserve**, the PUCO
11 should require the Utilities to refund all amounts charged.

12

13 In addition, the Fitch Report states that OVEC began to retain a \$2.5 million
14 annual equity return in 2018, which it expects to continue for the foreseeable
15 future. The Utilities are not permitted to collect costs for a return on equity to
16 OVEC,⁵⁴ so the PUCO should require the Utilities to refund their share of the \$2.5
17 million return on equity for OVEC. The Auditor made the same observation in the
18 audit report.⁵⁵

⁵⁴ R.C. 4928.01(A)(42).

⁵⁵ See, e.g., London Economics International LLC (LEI), December 15, 2021, *Audit of the Legacy Generation Resource Rider of Duke Energy Ohio Final Report*. Prepared for PUCO, Docket No. 21-477-EL-RDR, pp. 9-10.

1 **V. CONCLUSION**

2

3 **Q32. PLEASE SUMMARIZE YOUR CONCLUSIONS.**

4 **A32.** OVEC power plants losses are subsidized by Ohio consumers. For this reason,
5 PUCO should closely scrutinize all subsidy charges to Ohio consumers for the
6 plants. The Companies' must prove that subsidies paid by consumers were
7 prudent, that their actions were in the best interests of customers, and that all
8 charges comply with the various limitations set forth in the PUCO Orders
9 approving the OVEC subsidy charges. The Companies have not met their burden
10 of proof in several respects. I recommend that the PUCO disallow the collection
11 of imprudently incurred OVEC costs from the Company's customers.

12

13 **Q33. DOES THIS CONCLUDE YOUR TESTIMONY?**

14 **A33.** Yes.

CERTIFICATE OF SERVICE

I hereby certify that a copy of this Direct Testimony of Elizabeth A. Stanton on behalf of the Office of the Ohio Consumers' Counsel was served on the persons stated below via electronic transmission this 10th day of October 2023.

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

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CV dated May 2023



RATING ACTION COMMENTARY

Fitch Affirms Ohio Valley Electric Corp. Ratings at 'BBB-'; Outlook Stable

Wed 01 Mar, 2023 - 4:03 PM ET

Fitch Ratings - New York - 01 Mar 2023: Fitch Ratings has affirmed Ohio Valley Electric Corporation's (OVEC) 'BBB-' Long-Term Issuer Default Rating (IDR) and senior unsecured rating. The Rating Outlook is Stable.

The rating affirmation reflects the strong average credit profile of the sponsors, strength of OVEC's intercompany power agreement (ICPA), and the sponsor's recovery mechanisms. Fitch does not expect a direct impact on OVEC in the unlikely event the repeal of Ohio House Bill 6 (H.B. 6) is successful. H.B. 6 codified the recovery by the Ohio-regulated utilities of OVEC costs, but does not alter the power participants obligation to pay OVEC as per the terms of the legally enforceable intercompany power agreement (ICPA).

KEY RATING DRIVERS

ICPA Enforceability Is Key: OVEC's credit profile is derived from the legal enforceability of the ICPA among OVEC and its sponsors. Sponsors are severally responsible to reimburse all of OVEC's expenditures, including debt service obligations, regardless of total electricity generated and supplied by OVEC. Due to the diversity of the sponsor base, Fitch considers the average credit profile of the sponsors rather than tying OVEC's ratings to that of the lowest-rated sponsor.

Fitch considers the average rating of the non-merchant sponsors, which account for 92% of the revenues, to be in the 'A-' to 'BBB+' range. Additionally, Fitch views the favorable 2020 outcome achieved in sponsor First Energy Solutions' bankruptcy as evidence of the

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generation capacity can recover their OVEC-related costs through a regulatory construct or through the sponsors' membership charter provisions. The 2019 passage of H.B. 6 further codified the ability of utilities regulated by the Public Utilities Commission of Ohio (PUCO) to recover OVEC costs. The three PUCO-regulated utilities, which are responsible for approximately a 34% share under the ICPA, recover OVEC costs through the legislatively mandated non-by passable rate mechanism (legacy generation rider, LGR) through 2030.

In March, 2021, House Bill 128 eliminated provisions of H.B. 6 that were favorable to FirstEnergy Corporation or its former merchant generation subsidiary, FirstEnergy Solutions Corp. (FES). Attempts to repeal the remaining provisions of H.B. 6 that includes recovery of OVEC costs, have been unsuccessful. Currently, Fitch is not aware of any active legislation calling for repeal. However, Fitch notes that legislation will not alter the power participants' contractual obligation to pay OVEC per the terms of the legally enforceable ICPA.

In the unlikely event that the OVEC-related provision of H.B.6 were removed, Fitch expects that the three PUCO-regulated utilities would seek recovery through PUCO power purchase agreement (PPA) riders. Due to the significant increase in natural gas prices in 2022, Ohio customers received credit to their bill under the LGR, which Fitch believes bolsters political support for the plants.

Capital Market Access: OVEC is in the process of extending its current revolving credit facility. The new agreement is expected to be a three-year facility in the amount of \$150 million, with substantially the same terms as the agreement that was to expire February 2024. However, the \$150 million capacity will be a reduction from \$185 million in the previous facility. Fitch does not consider the reduction in the amount of the facility to be a credit issue.

The company continues to reduce debt balances and is in a strong liquidity position as a result of ongoing policies put in place at the time of the FES bankruptcy. Fitch considers the extension to 2026 a positive. The company continues to opportunistically reduce financing costs via refinancing and scheduled debt amortizations, and its goal to reduce \$1 billion in long-term debt by 2030.

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representing approximately one year's worth of debt service, to enhance OVEC's credit and to provide future financial flexibility.

Additionally, the company began to retain a \$2.5 million annual equity return in 2018, which it expects to continue for the foreseeable future. OVEC's working capital needs are materially reduced by semi-monthly settlement of accounts receivable from sponsors/off-takers. As of Sept. 30, 2022, OVEC had \$428 million liquidity in the form of cash balances.

Improved Utilization Factor: OVEC's generation profile compares favorably with similar coal-fired merchant generators, and operating performance measures have historically been solid, with heat rate averaging 10,700Btu/kWh and utilization factor exceeding 70% in every year but one during 2017-2022. The company's utilization rate for 2022 was 91%. The capacity factor has increased significantly after the integration into the PJM Interconnection in May 2016, averaging approximately 60% until the 2020 coronavirus downturn.

Fitch expects improved capacity factors as the Midwest's economy continues to rebound, and increased natural gas prices has made coal generation more economical. Nonetheless, Fitch expects OVEC's all-in costs will exceed prevailing merchant power prices the majority of the time and the plants to remain uneconomical for the foreseeable future.

Parent and Subsidiary Linkage: Parent-subsidiary linkage is not applicable. Additionally, Fitch does not directly tie OVEC's ratings to that of the lowest-rated sponsor due to the diversity of the sponsor base. OVEC has strong legal, operational and strategic ties to its owners. This is especially true of American Electric Power Company, Inc. (AEP; BBB/Stable), an indirect owner of a roughly 43% stake in OVEC and a provider of key managerial and operational support.

The three AEP subsidiaries that are off-takers under the ICPA and their participation amounts are as follows: Ohio Power Company (A-/Stable) with 19.9%; Appalachian Power Company (BBB+/Stable) with 15.7%; and Indiana Michigan Power Company (A-/Stable) with 7.9%. The participants in the OVEC ICPA are severally but not jointly responsible for OVEC's obligations and are the off-takers under a PPA that extends to 2040.

DERIVATION SUMMARY

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(BB+/Stable) given the absence of structural subordination to project-level debt, but are weaker than Southern Power Company (BBB+/Negative), which has a superior diversified portfolio of assets and conservative forecast leverage.

KEY ASSUMPTIONS

Fitch's Key Assumptions Within the Rating Case for the Issuer Include:

- Capacity factor averaging 60% in 2023-2025;
- Stable credit profiles of off-takers;
- Debt repayments limited to amortization schedule;
- Continuation of the terms of the ICPA.

RATING SENSITIVITIES

Factors that could, individually or collectively, lead to a positive rating action/upgrade:

- A positive rating action is not likely given OVEC's structure as a jointly-owned, debt financed entity, and reliance on regulatory and political support.

Factors that could, individually or collectively, lead to a negative rating action/downgrade:

- Detrimental changes to the ICPA, or its legal enforceability;
- Significant reduction in direct liquidity;
- Financial restructuring of a sponsor leading to material financial losses and/or weakened liquidity;
- Change in regulatory constructs or recovery mechanisms of sponsors;
- Decline in average sponsor credit quality below 'BBB'

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International scale credit ratings of Non-Financial Corporate issuers have a best-case rating upgrade scenario (defined as the 99th percentile of rating transitions, measured in a positive direction) of three notches over a three-year rating horizon; and a worst-case rating downgrade scenario (defined as the 99th percentile of rating transitions, measured in a negative direction) of four notches over three years. The complete span of best- and worst-case scenario credit ratings for all rating categories ranges from 'AAA' to 'D'. Best- and worst-case scenario credit ratings are based on historical performance. For more information about the methodology used to determine sector-specific best- and worst-case scenario credit ratings, visit <https://www.fitchratings.com/site/re/10111579>.

LIQUIDITY AND DEBT STRUCTURE

Adequate Liquidity: As of Sept. 30, 2022, OVEC had \$428 million of available liquidity, including \$50 million in unrestricted cash and cash equivalents; \$95 million available under its \$185 million revolving credit facility, expiring in February 2024; \$122 million debt service reserve; and \$161 million unrestricted long-term financial investments. Semimonthly settlement of accounts receivable from sponsors/off-takers materially reduce OVEC's working capital needs. Fitch considers OVEC's debt maturities in 2023-2025 manageable.

ISSUER PROFILE

OVEC owns and operates two coal-fired generation facilities in Ohio and Indiana, and is jointly owned by a consortium of utilities in the region.

REFERENCES FOR SUBSTANTIALLY MATERIAL SOURCE CITED AS KEY DRIVER OF RATING

The principal sources of information used in the analysis are described in the Applicable Criteria.

ESG CONSIDERATIONS

Unless otherwise disclosed in this section, the highest level of ESG credit relevance is a score of '3'. This means ESG issues are credit-neutral or have only a minimal credit impact on the entity, either due to their nature or the way in which they are being managed by the entity. For more information on Fitch's ESG Relevance Scores, visit

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ENTITY / DEBT ↕	RATING ↕	PRIOR ↕
Ohio Valley Electric Corporation	LT IDR BBB- Rating Outlook Stable Affirmed	BBB- Rating Outlook Stable
senior unsecured	LT BBB- Affirmed	BBB-

[VIEW ADDITIONAL RATING DETAILS](#)

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APPLICABLE CRITERIA

[Corporates Recovery Ratings and Instrument Ratings Criteria \(pub. 09 Apr 2021\)](#)

[\(including rating assumption sensitivity\)](#)

[Parent and Subsidiary Linkage Rating Criteria - Effective from 1 December 2021 to 16 June 2023 \(pub. 01 Dec 2021\)](#)

[Sector Navigators: Addendum to the Corporate Rating Criteria - Effective from 28 October 2022 to 12 May 2023 \(pub. 28 Oct 2022\)](#)

[Corporate Rating Criteria \(pub. 28 Oct 2022\) \(including rating assumption sensitivity\)](#)

APPLICABLE MODELS

Numbers in parentheses accompanying applicable model(s) contain hyperlinks to criteria providing description of model(s).

[Corporate Monitoring & Forecasting Model \(COMFORT Model\), v8.1.0 \(1\)](#)

ADDITIONAL DISCLOSURES

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Ohio Valley Electric Corporation

EU Endorsed, UK Endorsed

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