



February 2, 2024

Ms. Tanowa Troupe,
Secretary Public Utilities Commission of Ohio
180 East Broad Street,
11th Floor
Columbus, Ohio 43215

RE: Late-Filed CUB/UCS Exhibit 1 *In the Matter of the OVEC Generation Purchase Rider Audits Required by ORC Section 4928.148 for Duke Energy Ohio, Inc., The Dayton Power & Light Company D/B/A AES Ohio, Ohio Power Company D/B/A AEP Ohio, Case No. 21-0477EL-RDR.*

Dear Ms. Troupe:

In accordance with the Attorney Examiner's Entry on January 24, 2024, Citizens Utility Board of Ohio ("CUB") and Union of Concerned Scientists ("UCS") are hereby filing a late-filed exhibit removing certain redactions from CUB/UCS Exhibit 1. The exhibit contains the narrative portion of Devi Glick's Testimony with the following references contained in witness Glick's confidential testimony: page 10 (line 6), page 11 (lines 5 and 10), page 27 (lines 16-23), pages 29-30 (all redactions including table 6), page 31, page 33 (lines 5-6), and page 34 (lines 14 and 9-13) unredacted.

Please let me know if you have any questions.

A handwritten signature in black ink that reads "Trent A. Dougherty". The signature is written in a cursive, slightly slanted style.

Trent Dougherty

Hubay|Dougherty
1391 Grandview Ave. #12460
Columbus, Ohio 43212
(614) 330-6752 - Telephone
trent@hubaydougherty.com

Counsel for Citizens' Utility Board of Ohio & Union of Concerned Scientists

EXHIBIT NO. ____1____

**BEFORE THE
PUBLIC UTILITIES COMMISSION OF OHIO**

**In the Matter of the OVEC Generation)
Purchase Rider Audits Required by ORC)
Section 4928.148 for DP&L, Duke Ohio)
and AEP Ohio)**

Case No. 21-0477-EL-RDR

**DIRECT TESTIMONY
OF
DEVI GLICK
PUBLIC VERSION**

**On Behalf of
Citizens Utility Board of Ohio and the Union of Concerned Scientists**

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Attachment DG-6: Public Discovery Responses – Environmental regulations and capital expenditures

Attachment DG-6C: Confidential Discovery Response – Environmental regulations and capital expenditures

Attachment DG-7: Public Discovery Responses – Economic plant analysis

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

2 **Q Please state your name and occupation.**

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

6 **Q Please describe Synapse Energy Economics.**

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

12 Synapse's clients include state consumer advocates, public utilities commission
13 staff, attorneys general, environmental organizations, federal government
14 agencies, and utilities.

15 **Q Please summarize your work experience and educational background.**

16 **A** At Synapse, I conduct economic analysis and write testimony and publications
17 that focus on a variety of issues related to electric utilities. These issues include
18 power plant economics, power plant operations in organized electricity markets,
19 utility resource planning practices, valuation of distributed energy resources, and
20 utility handling of coal combustion residuals waste. I have submitted expert
21 testimony on unit commitment practices, plant economics, utility resource needs,
22 and solar valuation before state utility regulators in more than a dozen states.

1 In the course of my work, I develop in-house electricity system models and
2 perform analysis using industry-standard electricity system models. I am
3 proficient in the use of spreadsheet analysis tools, as well as optimization and
4 electricity dispatch models. I have directly run EnCompass and PLEXOS energy
5 modeling software's and have reviewed inputs and outputs for several other
6 models.

7 Before joining Synapse, I worked at Rocky Mountain Institute, focusing on a
8 wide range of energy and electricity issues. I have a master's degree in public
9 policy and a master's degree in environmental science from the University of
10 Michigan, as well as a bachelor's degree in environmental studies from
11 Middlebury College. I have more than 10 years of professional experience as a
12 consultant, researcher, and analyst. A copy of my current resume is attached as
13 DG-1.

14 **Q Do you have any experience with the PJM and Midcontinent Independent**
15 **System Operator (MISO) electricity markets?**

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

21 **Q Who are you testifying on behalf of in this case?**

22 **A** I am testifying on behalf of Citizens Utility Board of Ohio (CUB) and the Union
23 of Concerned Scientists (UCS).

1 **Q** **Have you testified before the Public Utilities Commission of Ohio (“PUCO”**
2 **or “the Commission”)?**

3 **A** Yes. I provided testimony to the PUCO on September 12, 2023, in Case No. 20-
4 165-EL-RDR. I also provided testimony to the PUCO on December 29, 2021, in
5 Case Nos. 18-1004-EL-RDR et al. and on October 26, 2021, in Case No. 20-167-
6 EL-RDR.

7 **Q** **What is the purpose of your testimony in this proceeding?**

8 **A** In my testimony for this proceeding, I review the costs charged from January 1,
9 2020, through December 31, 2020 (“the audit period”) to the Ohio Power
10 Company (AEP Ohio), Duke Energy Ohio, and AES Ohio (collectively “the
11 Companies”) by the Ohio Valley Electric Corporation (OVEC) under the
12 Amended and Restated Inter-Company Power Agreement (ICPA). I review the
13 revenue each of the three Companies received for selling the power provided by
14 the generation assets under OVEC’s management into the PJM market, and the
15 resulting costs and revenues passed on to their consumers through the Legacy
16 Generation Rider (the Rider). Next, I summarize each Company’s projections of
17 how much it would charge consumers under the Rider during the audit period and
18 compare those projections to other contemporary analysis assessing the long-term
19 cost of remaining in the OVEC Agreement, and to the costs the Companies
20 actually paid. I review the prudence of OVEC’s unit commitment practices, and
21 the Companies’ oversight of operational decisions made at the OVEC units during
22 the audit period. Finally, I discuss the planning and capital investment decisions
23 the Companies recently made in environmental upgrades at the plants and explain
24 how those costs are passed on to ratepayers during the audit period through the
25 demand charge of the rider.

1 **Q How is your testimony structured?**

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

3 In Section 3, I provide background on the OVEC plants and the contract that
4 governs the plants' operations.

5 In Section 4, I briefly explain the background of the Legacy Generation Rider,
6 and the associated Ohio House Bill 6 (H.B. 6) that enabled it. I provide a
7 summary of the prior riders that each Company used to collect the OVEC costs
8 before the enactment of H.B. 6, all of which were approved as a financial hedge,
9 and the analysis that each company performed at the time it requested the prior
10 riders. I summarize other projections completed by OVEC owners that cover the
11 performance of the OVEC plants during the audit period.

12 In Section 5, I evaluate the costs paid by each of the Company's ratepayers under
13 the Legacy Generation Rider during the audit period. I discuss how the
14 Companies have paid unreasonable charges significantly above the market value
15 of energy and capacity in PJM to OVEC, and now seek to pass on these excess
16 costs to their consumers through the Legacy Generation Rider.

17 In Section 6, I summarize OVEC's unit commitment practices. I discuss my
18 concerns with OVEC's general practice of uneconomically committing the OVEC
19 plants into the market and outline best practices for reviewing the operational
20 practices of power plants to access the prudence of variable costs incurred. I
21 present evidence of OVEC's uneconomic operational practices that are driving the
22 substantial economic losses at the units.

1 In Section 7, I discuss OVEC’s recent capital investments in environmental
2 compliance measures at its power plants and explain how those costs are passed
3 on to ratepayers through the demand charge of the Legacy Generation Rider.

4 **Q What documents did you use for your analysis, findings, and observations?**

5 **A** My analysis relies primarily upon the following information: (1) the three audit
6 reports ("Audit Reports") performed in this proceeding by London Economic
7 International (LEI) for AEP Ohio,¹ Duke Energy Ohio,² and AES Ohio;³ (2) the
8 audit reports performed by LEI for Duke Energy Ohio in Case No. 20-0167-EL-
9 RDR and for AEP Ohio in Case No. 18-1004-EL-RDR, and the audit report
10 performed by Vantage Energy Consulting, LLC (“Vantage”) for AES Ohio in
11 Case No. 20-165-EL-RDR; (3) OVEC’s 2020 annual report; (4) discovery
12 responses of AEP Ohio, Duke Energy Ohio, and AES Ohio associated with the
13 audit as shown in Table 1 below; (5) information filed with the U.S. Bankruptcy
14 Court for the Northern District of Ohio when FirstEnergy Solutions attempted to
15 cancel its obligations under the OVEC Agreement; (6) the Public Versions of my
16 Direct Testimony in Case No. 20-0167-EL-RDR relating to Duke Energy Ohio’s
17 Price Stabilization Rider, in Case No. 18-1004-EL-RDR relating to AEP Ohio’s
18 Power Purchase Agreement Rider, and in 20-165-EL-RDR relating to AES
19 Ohio’s Reconciliation Rider; and (7) Public Discovery Responses from Case No.

¹ Audit of the Legacy Generation Resource Rider of AEP Ohio Final Report, Prepared for the Public Utilities Commission of Ohio. London Economics International. December 15, 2021 (*here forth known as* “AEP 2020 Audit”).

² Audit of the Legacy Generation Resource Rider of Duke Energy Ohio Final Report, Prepared for the Public Utilities Commission of Ohio. London Economics International. December 15, 2021 (*here forth known as* “Duke 2020 Audit”).

³ Audit of the Legacy Generation Resource Rider of AES Ohio Final Report, Prepared for the Public Utilities Commission of Ohio. London Economics International. December 15, 2021 (*here forth known as* “AES 2020 Audit”).

20-0167-EL-RDR, Case No. 18-1004-EL-RDR, and Case No, 20-165-EL-RDR. In addition, I rely on some public information associated with prior proceedings relating to the OVEC plants and, to a limited extent, I rely on certain external, publicly available documents such as State of the Market reports for PJM and MISO. I also rely on my prior knowledge of the OVEC plants from other cases in which I testified or submitted comments regarding OVEC.⁴

Table 1: Discovery responses cited in testimony

Attach.	Category	Duke	AEP	AES
DG-2C	OVEC Bills – Confidential	LEI-DR-01-022 Confidential Attachment 1	LEI-DR-02-009 Confidential Attachment 1	LEI-DR-06-005 Attachment 1 Confidential
DG-3	PJM Market Revenue - Public		CUB-INT-02-008 Attachment 1	
DG-3C	PJM Market Revenue – Confidential	CUB-INT-02-008 Confidential, CUB-INT-02-008 Confidential Attachment 1		C&U-02-008 Attachment 1 – Confidential, CUB 3rd Set-INT 01 (d) Attachment 1
DG-4C	OVEC and IKEC Board and Operating Committee Minutes – Confidential	CUB-POD-02-022 Confidential Attachment 1, CUB-POD-02-023 Confidential Attachment 1 LEI-DR-02-003 CONF Attachment	CUB-INT-02-023 Confidential Attachment 1, LEI-DR-01-017- Confidential Attachment 1	C&U-02-022 Attachment 1- Confidential, C&U-02-023 Attachment 1- Confidential
DG-5	Unit Commitment and dispatch decision-making - Public	CUB-INT-02-018	CUB-INT-02-015, CUB-INT-02-016, CUB-INT-02-017, CUB-INT-02-019, LEI-DR-01-003	CUB-INT-02-015, CUB-INT-02-016, CUB-INT-02-017, CUB-INT-02-019

⁴ PUCO Case No, 20-165-EL-RDR, PUCO Case No. 20-167-EL-RDR, PUCO Cases Nos. 18-1004-EL-RDR, et al., and Michigan Cases U-20224, U-20530, U-20804, U-20805, U-21052, U-21261.

DG-5C	Unit Commitment and dispatch decision-making – Confidential	CUB-INT-02-015 Confidential, CUB-INT-02-016 Confidential, LEI-DR-01-003 Confidential	CUB-INT-02-018 Confidential Attachment 1*	C&U-02-018 Attachment 1 – Confidential*, LEI-DR-01-003 Attachment 1 Confidential
DG-6	Environmental regulations and capex – Public	CUB-INT-02-014	LEI-DR-04-008, CUB-INT-02-014	LEI-DR-04-008, CUB-INT-02-014
DG-6C	Environmental regulations and capex – Confidential	CUB-INT-02-014	LEI-DR-03-002 Confidential Attachment 1	LEI-DR-03-002 Confidential Attachment 1
DG-7	Economic analysis - Public	CUB-INT-02-013	CUB-INT-02-013	CUB-INT-02-013

**Attachment is voluminous and will be provided upon request*

2. FINDINGS AND RECOMMENDATIONS

Q Please summarize your findings.

A My primary findings are:

1. From January 1, 2020, through December 31, 2020, AEP Ohio, Duke Energy Ohio, and AES Ohio together incurred \$117.9 million in above-market costs for power from the OVEC plants and passed those costs on to Ohio ratepayers through the Legacy Generation Rider.
2. All prior analyses produced by the Company and other OVEC owners, both during this docket and in prior dockets, have projected substantial losses from the OVEC plants both during the audit period and beyond.
3. OVEC uneconomically operated its two power plants, Kyger Creek and Clifty Creek, during the audit period which led to lower market revenues and therefore higher net costs to operate the plants than it would have incurred if it had limited operations to periods when the plant's production

1 costs equaled or were below energy market prices. These additional costs,
2 which it seeks to pass on to consumers, could have been mitigated with
3 more prudent unit commitment practices.

4 4. OVEC incurred variable energy losses at the Clifty Creek and Kyger
5 Creek during ten out of the twelve months of the audit period. This means
6 that ratepayers would have been better off if the plants had been offline
7 during the majority of 2020.

8 **Q Please summarize your recommendations.**

9 **A** Based on my findings, I offer the following chief recommendations:

- 10 1. The PUCO should disallow the entire \$117 million in above-market
11 energy and capacity charges collected from consumers in 2020 under the
12 Legacy Generation Rider. These costs should be disallowed on the basis
13 that OVEC and the Companies acted imprudently by not taking action to
14 minimize the above-market costs incurred at the OVEC plants.
- 15 2. The PUCO should find that the OVEC plants were uneconomically
16 committed, and thus incurred excess variable costs under the Legacy
17 Generation Rider during the audit period.
- 18 3. The PUCO should require OVEC and the Companies to provide
19 documentation of the daily unit commitment decisions used for the OVEC
20 plants whenever they are committed with a must-run status, before cost
21 recovery is allowed.
- 22 4. The PUCO should put the Companies on notice that it will also disallow
23 collection in future cases for OVEC costs incurred as a result of imprudent

1 unit commitment decisions that are not in the best interest of retail
2 ratepayers.

3 5. The PUCO should put the Companies on notice that it will disallow in
4 future Riders dockets any environmental capital costs incurred without
5 robust forward-going analysis to justify the investment over retirement
6 and replacement with alternatives.

7 **3. AEP OHIO, DUKE ENERGY OHIO, AND AES OHIO PURCHASE POWER FROM OVEC**
8 **UNDER THE ICPA**

9 **Q What is OVEC and how is it related to the ratepayers of AEP Ohio, Duke**
10 **Energy Ohio, and AES Ohio?**

11 **A** OVEC is jointly owned by twelve utilities in Ohio, Indiana, Michigan, Kentucky,
12 West Virginia, and Virginia. OVEC operates two 1950s-era coal-fired power
13 plants— (1) Kyger Creek, a five-unit, 1,086 MW plant in Gallia County, Ohio,
14 and (2) Clifty Creek, a six-unit, 1,303 MW plant, in Jefferson County, Indiana.
15 The OVEC plants were originally built to provide power for the Piketon uranium
16 enrichment facility, but the facility ceased doing uranium enrichment and OVEC
17 ceased selling power to the U.S. Department of Energy for the Piketon plant
18 effective September 30, 2003.⁵

19 Today, the plants provide their output to the twelve owners under the ICPA. AEP
20 Ohio has a 19.93 percent ownership share,⁶ Duke Energy Ohio has a 9.00 percent

⁵ Ohio Valley Electric Corporation, Annual Report – 2021 (p. 1).

⁶ AEP Response to LEI-DR-02-009_Confidential_Attachment 1 (*here forth known as* “AEP OVEC Bills”).

1 ownership share,⁷ and AES Ohio has a 4.90 percent ownership share of OVEC
2 (through the Dayton Power and Light Company).⁸ The ICPA was originally
3 signed on July 10, 1953, and then amended on August 11, 2011, to extend the
4 operation of the plants and the owner's commitment to take the power produced
5 by the plants.⁹ It governs each company's rights and duties as to the power
6 produced by the OVEC plants. OVEC bills the sponsoring companies for their
7 shares of energy, capacity, and ancillary services under the OVEC Agreement.
8 Each sponsoring company's power is sold into the PJM market, and each
9 company receives the resulting revenues. In Ohio, for the current audit period, the
10 legislature approved a rider through H.B. 6 called the Legacy Generation Rider.¹⁰
11 Through this rider, each of the Companies flow to their ratepayers the net impact
12 of their contractual entitlements associated with OVEC (i.e., the positive or
13 negative difference between the OVEC costs billed to each Company under the
14 ICPA and OVEC revenues received from the PJM market). In 2020, ratepayers
15 for these three utilities received only charges under the rider, no credits.¹¹

16 **Q Do you have any prior experience with the OVEC plants?**

17 **A** Yes. I filed testimony before the PUCO on the prudence of OVEC's costs paid by
18 AEP Ohio, Duke Energy Ohio, and AES Ohio's consumers and the long-term

⁷ Duke Response to LEI-DR-01-022 Confidential Attachment 1 (*here forth known as* "Duke OVEC Bills").

⁸ AES Response to LEI-DR-06-005 Attachment 1 Confidential (*here forth known as* "AES OVEC Bills").

⁹ Ohio Valley Electric Corporation, Annual Report – 2021 (p. 1).

¹⁰ House Bill 6, Sec. 4928.148. (A), effective October 22, 2019. Available at https://search-prod.lis.state.oh.us/solarapi/v1/general_assembly_133/bills/hb6/EN/06/hb6_06_EN?format=pdf.

¹¹ I will discuss full analysis supporting this statement in Section 5.

1 cost-effectiveness of the OVEC Plants in Case Nos. 18-1004-EL-RDR et al., Case
2 No. 20-167-EL-RDR, and Case No. 20-165-EL-RDR.^{12, 13, 14}

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

¹² Direct Testimony of Devi Glick, PUCO Case Nos. 18-1004-EL-RDR, et al.

¹³ Direct Testimony of Devi Glick, PUCO Case No. 20-167-EL-RDR.

¹⁴ Direct Testimony of Devi Glick, PUCO Case No. 20-165 -EL-RDR.

Table 2. Prior and current OVEC dockets with testimony filed/ to be filed by Devi Glick

Case #	Date of Testimony	On Behalf of
Ohio		
21-477-EL-RDR (current docket)	October 10, 2023	Citizens Utility Board of Ohio, Union of Concerned Scientists
20-165-EL-RDR	September 12, 2023	Ohio Consumers' Counsel
18-1004-EL-RDR, et al.	December 29, 2021	Ohio Consumers' Counsel
20-167-EL-RDR	October 26, 2021	Ohio Consumers' Counsel
Michigan		
U-20805	April 27, 2023	Attorney General of Michigan
U-21261	March 23, 2023	Sierra Club
U-21052	March 9, 2022	Sierra Club
U-20530	August 21, 2021	Attorney General of Michigan
U-20804	March 12, 2021	Sierra Club
U-20224	October 23, 2020	Sierra Club

Q Based on your experience with OVEC in the current case and these other dockets, are these plants providing value to the customers?

A No. These plants are old, inefficient, and costly to maintain and operate. They are also increasingly uncompetitive in the market, due in large part to the entry and abundance of new renewable generation and gas facilities that are coming online. As a result, OVEC's costs for energy and capacity are significantly higher than market prices for energy and capacity. These high costs are all passed on to the ratepayers of the twelve entities (including utilities) that have an ownership share in OVEC.

The Michigan Public Service Commission agreed with my assessment that ratepayers are being charged above market prices for power from OVEC. In Case No. U-20804 and Case No. U-21052, dockets in which AEP subsidiary Indiana Michigan Power Company (I&M) filed its power supply cost recovery plans, the

1 Commission issued a warning that it would disallow OVEC costs above market
2 prices in the Company's subsequent power cost reconciliation dockets. The
3 Michigan PUC followed through on this warning in Case No. U-20530 and
4 disallowed \$1.347 million in above-market power costs for OVEC for the
5 calendar year 2020. I&M is responsible for 7.85 percent of OVEC's power costs.
6 That power is shared between Indiana and Michigan, and Michigan's share
7 represents only 1.09 percent of OVEC. That means that if the Michigan
8 disallowance was scaled to all of OVEC, that would amount of a disallowance of
9 \$123.6 million.

10 **Q For what portion of OVEC is each of the three Companies responsible?**

11 **A** Each of the three Company's ownership shares of OVEC are equivalent to the
12 share of the power and energy to which it is entitled. The share, called a Power
13 Participation Ratio ("PPR"), is 19.93 percent for AEP Ohio, 9.00 for Duke Energy
14 Ohio, and 4.90 percent for AES Ohio. This means that AEP Ohio, Duke Energy
15 Ohio, and AES Ohio are responsible for 19.93 percent, 9.00 percent, and 4.90
16 percent respectively of OVEC's fixed and variable costs while also being entitled
17 to the same percent share of OVEC's revenues from the PJM markets.¹⁵

18 While AEP Ohio, Duke Energy Ohio, and AES Ohio are all obligated to pay
19 OVEC for the costs billed under the ICPA, ratepayers and customers are not
20 obligated to cover these costs.

¹⁵ Ohio Valley Electric Corporation, Annual Report – 2021 (p. 1).

1 **Q Did the bankruptcy of FirstEnergy Solutions (FES) impact the Companies’**
2 **entitlements during the audit period?**

3 **A** Yes. Starting in September 2018, OVEC allocated to each other sponsoring
4 company a portion of FES’ 4.85 percent share of energy and capacity based on
5 each Company’s proportional ownership of the OVEC plants. Each Company
6 paid the variable energy costs associated with this additional entitlement, and
7 earned the associated energy and capacity market revenues, but was not
8 responsible for any FES fixed costs or demand charges.^{16,17} This ended May 31,
9 2020, when FES’s bankruptcy was settled.¹⁸

10 **Q How long is each Company under contract with OVEC under the ICPA?**

11 **A** The Companies are under contract with the OVEC plants under the ICPA through
12 2040.¹⁹ The Clifty Creek and Kyger Creek Plants will each be 85 years old by
13 then.

14 **Q Is this timeline consistent with industry-wide coal generation trends?**

15 **A** No. As shown in Figure 1, Clifty Creek and Kyger Creek are the oldest utility-
16 owned coal-fired power plants in the United States (over 20 MW in size) without
17 a scheduled retirement date.

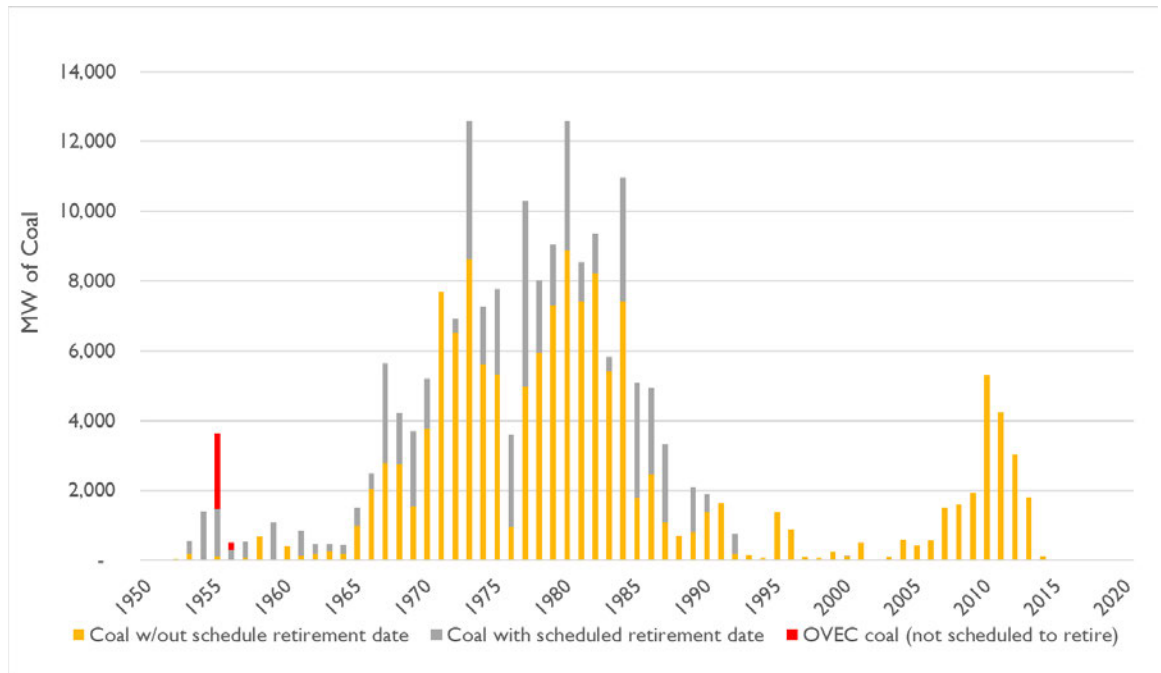
¹⁶ AEP 2020 Audit, Pg. 15; AES 2020 Audit, Pg. 15; Duke 2020 Audit, Pg. 15.

¹⁷ The AEP 2020 Audit, Pg. 15 states that “AEP Ohio did not take on any of FES’s entitlements during the audit period.” But in AEP response to CUB-INT-02-031, AEP states that FES shares of capacity and revenues were credited to the Company.

¹⁸ AEP 2020 Audit, Pg. 15; AES 2020 Audit, Pg. 15; Duke 2020 Audit, Pg. 15.

¹⁹ Ohio Valley Electric Corporation, Annual Report – 2021 (p. 9).

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



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

The lack of a retirement plan for the OVEC plants is inconsistent with the actions and announcements of all three utilities regarding retirement of their other coal assets. Specifically, AEP Ohio, Duke Energy Ohio, and AES Ohio have all recently announced accelerated retirement dates for many of their coal plants based on the declining economics of operating aging coal plants.²⁰ All of these

²⁰ 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 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 Sweeney, 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

1 plants were built after the Eisenhower-era OVEC units, which have no firm
2 retirement dates.

3 Duke Energy committed to reduce energy generated from coal to represent less
4 than 5 percent of total generation by 2030 and to totally exit coal by 2035 as part
5 of what the Company claimed was the largest planned coal fleet retirement in the
6 industry.²¹ The Company went on to tout its 2050 net-zero goals and its efforts to
7 reduce its carbon emissions.

8 AEP CEO Nicholas Akins echoed these sentiments in AEP’s “Powering Forward
9 to Net Zero” report, where he touted AEP’s efforts to retire or sell nearly 13,500
10 megawatts of coal-fueled generation during the past decade, and went on to state
11 that as AEP “continue[s] to balance the remaining operating life and economic
12 viability of each of our remaining coal-fueled generating units with other options
13 for delivering power to customers, the sources of our generation will become
14 cleaner.”²²

<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>; AES Corporation News, CISION PR Newswire. *AES announces intent to exit coal by 2025; reaffirms 7% to 9% annualized growth target through 2025; delivers on all 2021 financial and strategic objectives*. February 24, 2022. Available at <https://www.prnewswire.com/news-releases/aes-announces-intent-to-exit-coal-by-2025-reaffirms-7-to-9-annualized-growth-target-through-2025-delivers-on-all-2021-financial-and-strategic-objectives-301490172.html>.

²¹ Duke Energy News Center. *Duke Energy expands clean energy action plan*. February 9, 2022. Available at <https://news.duke-energy.com/releases/duke-energy-expands-clean-energy-action-plan>.

²² 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 Additionally, in a February 2022 news report, AES CEO Andrés Gluski touted
2 AES’s position as the “fastest growing US renewables developer and the largest
3 supplier of corporate renewables contracts in the world.” He went on to say that
4 “To continue to accelerate the future of energy today, we are announcing our
5 intent to exit coal generation by the end of 2025.”²³

6 Despite these assertions from leadership and commitments to transition off of coal
7 from all three Companies and the presence of lower cost alternatives, AEP Ohio,
8 Duke Energy Ohio, and AES Ohio all plan to continue charging consumers high-
9 cost power from OVEC’s aging power plants.

10 **4. THE LEGACY GENERATION RIDER, AND THE OVEC RIDERS THAT PRECEDED IT,**
11 **PASS THE NET COSTS ASSOCIATED WITH THE OVEC PLANTS ON TO THE**
12 **COMPANY’S RATEPAYERS**

13 **Q How does each Company collect OVEC costs from its ratepayers?**

14 **A**In 2019, the Ohio legislature approved H.B. 6. This bill replaced the prior riders
15 each utility was using to collect OVEC costs with the Legacy Generation Rider.
16 The rider was effective January 1, 2020, and extended the collection of OVEC
17 costs by the sponsoring companies through 2030.²⁴ Under the Legacy Generation
18 Rider, each of the three Companies provides its ratepayers with the net costs or

²³ AES Corporation News, CISION PR Newswire. *AES announces intent to exit coal by 2025; reaffirms 7% to 9% annualized growth target through 2025; delivers on all 2021 financial and strategic objectives*. February 24, 2022. Available at <https://www.prnewswire.com/news-releases/aes-announces-intent-to-exit-coal-by-2025-reaffirms-7-to-9-annualized-growth-target-through-2025-delivers-on-all-2021-financial-and-strategic-objectives-301490172.html>.

²⁴ House Bill 6, Sec. 4928.148. (A), effective October 22, 2019. Available at https://search-prod.lis.state.oh.us/solarapi/v1/general_assembly_133/bills/hb6/EN/06/hb6_06_EN?format=pdf.

1 net revenues associated with its respective ownership share of the OVEC plants.
2 This means that if OVEC's costs exceed market revenues in a given year, the
3 ratepayers for each of these three Companies pay the difference.

4 **Q How did the Companies collect the OVEC costs prior to the passage of H.B.6**
5 **and the enactment of the Legacy Generation Rider?**

6 **A** Prior to 2020, each of the three Companies received approval from the PUCO to
7 collect the net costs associated with the OVEC plants through separate riders, as
8 shown in Table 3 below. For AEP Ohio the rider was called the Power Purchase
9 Agreement Rider, for Duke Energy Ohio it was called the Price Stabilization
10 Rider, and for AES Ohio it was called the Reconciliation Rider. The Legacy
11 Generation Rider replaced each of these riders. In each of the prior dockets, the
12 Companies justified their requests for the rider as a financial hedge.²⁵

13 Between 2018 and 2019, the Companies passed along \$112 million in net losses
14 to their Ohio ratepayers. Ratepayers received zero benefits or value in exchange
15 for those expenses.

²⁵ Opinion and Order Filed March 31, 2016. Case No. 14-1693-EL-RDR. Pg. 23; Opinion and Order Filed October 20, 2017. Case No. 16-0395-EL-SSO. Pg. 21; Opinion and Order Filed December 19, 2018. Case No. 17-1263-El-SSO.

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Table 3. Prior OVEC riders approved for the Companies

Company	AEP Ohio	Duke Energy Ohio	AES Ohio
Name of prior rider	Power Purchase Agreement Rider	Price Stabilization Rider	Reconciliation Rider
Docket prior rider was approved	13-2385-EL-SSO / 14-1693-EL-RDR (amended in 16-1852-EL-SSO)	17-1263-EL-SSO	16-0395-EL-SSO
Rider length before H.B. 6 passage	2018–2024	2018–2025	2017–2022
Projected rider performance (per company analysis)	110 million in credits 2015-2024 ¹	\$77 million in losses 2018-2025 ³	\$49 million in losses 2017-2022 ⁵
Timeframe for prior audit	2018–2019	2019	November 2018-2019
Actual rider performance during audit period	\$74.5 million in net losses ²	\$24.6 million in net losses ⁴	\$12.9 million in net losses ^{6,7}
MWh	4,750,122 ⁸	1,062,624 ⁴	691,559 ⁶
Net losses /MWh⁹	\$15.68/MWh	\$23.15/MWh	\$21.55/MWh
PPR	19.93%	9.00%	4.90%

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Sources: 1 Application for Rehearing of Ohio Power Company, Filed May 2, 2016. Case No. 14-1693-EL-RDR; 2 Direct Testimony of Devi Glick, Case Nos. 18-1004-EL-RDR et al., Pg. 6; 3 Direct Testimony of Judah Rose, Case No. 17-1263-EL-SSO (ESP IV) (July 10, 2018); 4 Direct Testimony of Devi Glick, Case No. 20-167-EL-RDR, Pg. 6; 5 Direct Testimony of Jeffrey Malinak, Case No. 16-0395-EL-SSO; 6 Direct Testimony of Devi Glick, Case No. 20-165-EL-RDR, Pg. 6; 7 Actual rider performance value stated in 20-165-EL-RDR is \$14.9 million in \$2023. Value here of \$12.9 million is stated in nominal dollars; 8 Estimated based on OVEC 2020 Annual Report MWh and PPR; 9 Calculated based on Actual rider performance and MWh.

10

Q Did the Companies conduct analysis as part of their applications for each prior rider?

11

12

A Yes, as shown in Table 3 above, each Company conducted analysis on the projected forward-going economics of the OVEC plants. Duke and AES both

13

1 projected substantial losses from the OVEC riders—only AEP projected net
2 gains.

3 In Case No. 16-1693-EL-RDR, AEP substantially over-projected the net benefits
4 that the Power Purchase Agreement would deliver to customers. After
5 normalizing for weather, the Company projected the Rider would provide \$110
6 million in credits to consumers over the period 2015 – 2024.²⁶ As shown above,
7 instead of earning credits, since its adoption the PPA Rider actually incurred
8 substantial charges in each year. In 2018 and 2019 alone, the Company incurred
9 \$74.5 million in net losses under the Power Purchase Agreement Rider.²⁷

10 In Case No. 17-1263-EL-SSO, Duke filed testimony from Judah Rose with
11 analysis on the projected forward-looking performance of the OVEC plants.
12 Specifically, Mr. Rose projected that OVEC’s projected energy and demand
13 charges will exceed forecasted market revenues by \$77 million on a net present
14 value basis over the analysis period (2018–2025).²⁸ Nonetheless, he justified the
15 rider stating that the units have “operating leverage” and that the contract has
16 hedge value because it has lower volatility than relying on the market.²⁹ Duke
17 incurred \$24.6 million in net losses in 2019 alone.³⁰

²⁶ Application for Rehearing of Ohio Power Company, Filed May 2, 2016. Case No. 14-1693-EL-RDR.

²⁷ Direct Testimony of Devi Glick, Case Nos. 18-1004-EL-RDR et al.

²⁸ Direct Testimony of Judah Rose, Case No. 17-1263-EL-SSO (ESP IV) (July 10, 2018).

²⁹ *Id.*

³⁰ Direct Testimony of Devi Glick, Case No. 20-167-EL-RDR.

1 In Case No. 16-0395-EL-SSO AES Company Witness Jeffrey Malinak^{31,32}
2 conducted analysis on the projected costs of the Reconciliation Rider over the
3 next five years (2017–2021). Mr. Malinak projected the Reconciliation Rider
4 charges would be around \$7 to \$9 million per year to recover DP&L’s investment
5 in the OVEC facilities.³³ The Company claimed that without the Reconciliation
6 Rider, as well as several other non-bypassable charges, the Company’s credit
7 rating would drop to a “junk” category.³⁴ Mr. Malinack went on to say that
8 reduction of rider charges or elimination of the riders “could jeopardize DP&L’s
9 ability to provide safe and reliable service to its customer and modernize its
10 distribution grid.”³⁵ The rider was projected to total approximately \$49 million
11 over six years.³⁶ Actual losses under the Reconciliation Rider between November
12 2018 and the end of December 2019 were \$14.9 million.³⁷

13 **Q Did the prior riders act as hedges to mitigate spikes in market prices during**
14 **the audit period?**

15 **A** No. But this is not surprising because, as discussed above, two of the three
16 Companies projected that the riders would incur net costs at the time they

³¹ Direct Testimony of AES Company Witness Malinak in Case No.16-395-EL-SSO.

³² In Case No. 20-165-EL-RDR, the Confidential version of the Direct Testimony of AES Company Witness Malinak from Case No. 16-395-EL-SSO was provided by AES as a Confidential Attachment in Response to OCC RDP-04-23. During the hearing for 20-165-EL-RDR, AES Company Lawyers designated as public all values from Mr. Malinack’s testimony that I cited in my direct testimony relating to the projected cost/value of the Reconciliation Rider.

³³ Direct Testimony of AES Company Witness Malinak in Case No.16-395-EL-SSO, Pg. 6.

³⁴ *Id.* at 5.

³⁵ *Id.* at 8.

³⁶ *Id.*, Exhibit RJM-1.

³⁷ Direct Testimony of Devi Glick, Case No. 20-165-EL-RDR.

submitted their applications. The losses the Companies incurred continued a pattern of exceptionally high prices paid under the OVEC Agreement (relative to the market value) since at least 2015. As shown in Table 4, OVEC's average cost per MWh across all owners has regularly been substantially above the market value of its energy and capacity combined. As a result, the Reconciliation Rider did not act as a hedge against market price spikes during the audit period.

Table 4. OVEC power costs and revenues under the OVEC 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	\$559.10	\$64.40	\$44.61	(\$171.85)
2016	9,946,877	\$571.70	\$58.66	\$38.50	(\$200.55)
2017	11,940,259	\$636.30	\$54.27	\$37.85	(\$196.00)
2018	12,146,856	\$644.10	\$54.29	\$44.28	(\$121.56)
2019	11,238,298	\$640.80	\$57.04	\$35.91	(\$237.45)
2020	9,033,056	\$605.30	\$67.00	\$31.76	(\$318.41)
Total	62,987,175	\$3,657.30	\$58.06	\$38.90	(\$1,245.82)

Note: 2015-2020 based on AEP costs from PUCO Case Nos. 18-104-EL-RDR et al.

Source: Billed costs from OVEC annual reports; PJM locational marginal pricing from PJM data miner 2 available at https://dataminer2.pjm.com/feed/da_hrl_lmpps; hourly load data downloaded from U.S. Clean Air Markets Database; and capacity prices from PJM State of the Market Reports.

Q Did other owners conduct any additional analyses at the same time to project the forward-going cost of the OVEC plants?

A Yes. Table 5 below shows two additional sources of analysis. The first is analysis conducted as part of the FES bankruptcy proceeding. The second is analysis from a Moody's analytics report. The findings of these analyses all align with the findings of my review of the audit period. Specifically, they all find that the costs

of the OVEC plants are projected to far exceed the value the plants provide to ratepayers going forward.

Table 5. Summary of prior OVEC and OVEC Agreement studies

Date Completed	Completed by / for	Finding
April, 2019	FirstEnergy Solutions ^{1,2}	Forward-looking analysis of OVEC Agreement through 2040; found \$268 million in losses relative to market for FES & Allegheny Power's share. That is \$3.4 billion for all of OVEC (2018–2040).
December, 2018	Moody's Analytics ³	Assessment of the OVEC Agreement; found annual losses of \$10–\$13 million for FES's share. That is \$206–\$268 million annually for all of OVEC.

Source: 1 Expert declaration of Judah Rose (Doc. 46, filed Apr. 1, 2018), In re FirstEnergy Solutions Corp., No. 18-50757 (AMK) (Bankr. N.D. Ohio); 2 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 as of the petition date. (Doc 44. filed Apr. 1, 2018), In reFirstEnergy Solutions Corp., No. 18-50757 (AMK) (Bankr. ND. Ohio); 3Moody's Investors Service. December 2018. Credit Opinion: Ohio Valley Electric Cooperative.

5. DURING THE AUDIT PERIOD, AEP OHIO, DUKE ENERGY OHIO, AND AES OHIO PASSED ON TO THEIR RATEPAYERS UNREASONABLE CHARGES FOR OVEC POWER UNDER THE LEGACY GENERATION RIDER

Q How do the Companies serve customer load, and which associated costs are at issue in this case?

A AEP Ohio, Duke Energy Ohio, and AES Ohio serve consumers who choose to buy their power from them as the provider of last resort. Each Company buys power for these ratepayers through a competitively bid descending clock auction to obtain the lowest reasonable prices. This is known as the Standard Service Offer (“SSO”) price.

1 Under the Legacy Generation Rider, OVEC sells its output into the PJM market,
2 and the difference between OVEC's costs and the market price flows through to
3 consumers as either a credit or charge. The Companies' share of the OVEC output
4 is not directly used to supply any of their customers.

5 **Q What does it mean that AEP Ohio, Duke Energy Ohio, and AES Ohio are**
6 **paying above-market costs for OVEC's power and passing those costs on to**
7 **ratepayers under the Legacy Generation Rider?**

8 **A** It means that OVEC's costs are substantially higher than PJM market prices for
9 the same energy, capacity, and ancillary services during the audit period. When
10 OVEC sells its output into the PJM market, the difference between OVEC's costs
11 and the PJM market prices are charged or credited to each of the Company's
12 consumers under the Legacy Generation Rider.

13 **Q What costs related to the OVEC plants did the Companies collect from**
14 **Consumers under the Legacy Generation Rider during the audit period?**

15 **A** During the audit period, each Company's share of the above-market costs
16 incurred by the OVEC plants (in \$2020) was \$69.0 million for AEP Ohio, \$31.9
17 million for Duke Energy Ohio, and \$17.0 million for AES Ohio. Combined, the
18 Legacy Generation Rider above market cost to Ohio ratepayers for 2020 was
19 \$117.9 million (\$2020). Through this filing, the Companies are asking the
20 Commission to force its consumers to subsidize each of the Company's costs for
21 owning the OVEC plants. AEP Ohio, Duke Energy Ohio, and AES Ohio's parent
22 companies (and the parent companies' shareholders) otherwise would have paid
23 the \$117.9 million in above-market costs.

1 **Q** **How did you calculate the above-market costs that each Company collected**
2 **from consumers under the Legacy Generation Rider during the audit**
3 **period?**

4 **A** To evaluate how much in above-market costs each Company incurred under the
5 Rider, I compared the total cost billed to the each of the OVEC-sponsoring
6 Companies to the value of the energy, capacity, and ancillary services provided by
7 OVEC as sold into the PJM market.

8 More specifically, each Company provided the monthly billing from OVEC for
9 2020 which includes MWh sold, energy, demand, and transmission charges, along
10 with PJM expenses and fees.³⁸ Each Company also provided energy market
11 revenue, capacity market revenue, and ancillary services revenue for the power
12 that OVEC sold into the PJM market.³⁹ I assumed the cost of the OVEC contract
13 was equivalent to the monthly billing from OVEC. I assumed the value of the
14 OVEC Agreement would be equal to the sum of the energy, ancillary services,
15 and capacity value. The difference represents the costs passed onto Ohio
16 ratepayers under the Legacy Generation Rider.

³⁸AEP OVEC Bills; Duke OVEC Bills; AES OVEC Bills.

³⁹ AES Response to C&U-02-008 Attachment 1-Confidential; AES Response to CUB 3rd Set – INT 01(d) Attachment 1; Duke Response to CUB-INT-02-008 CONF; Duke Response to CUB-INT-02-008 CONF Attachment; Duke Response to LEI-DR-01-022 Confidential Attachment 1; Confidential Duke 2020 Audit, Figure 8, Column C; AEP Response to CUB-INT-02-008 Attachment 1.

1 **Q How much in excess costs were Ohio ratepayers charged under the Legacy**
2 **Generation Rider during the audit period?**

3 **Q Table 6 below summarizes the billed charges, total revenues, and net**
4 **costs/revenues for the OVEC units for each of the three Companies.**

5 For AEP, OVEC charged AEP \$122.0 million for 1,831,721 MWh⁴⁰ during the
6 audit period, for an average cost of \$66.59 per MWh.⁴¹ In contrast, the value of
7 the market revenue that OVEC obtained for the energy, capacity, and ancillary
8 services it sold into the PJM market was only \$53.0 million, or around
9 \$28.94/MWh.⁴² This amounts to a loss of \$69.0 million for AEP ratepayers, or
10 \$37.65/MWh.

11 For Duke Energy Ohio, OVEC charged the Company \$54.8 million for 827,167
12 MWh during the audit period, for an average cost of \$66.30/MWh.⁴³ In contrast,
13 the value of the market revenue that OVEC obtained for the energy, capacity, and
14 ancillary services it sold into the PJM market was only \$22.9 million, or around
15 \$27.71/MWh.⁴⁴ This amounts to a loss of \$31.9 million for Duke Energy Ohio
16 ratepayers, or \$38.58/MWh.

17 For AES Ohio, OVEC charged the Company \$30.0 million for 450,349 MWh
18 during the audit period, for an average cost of \$66.60/MWh.⁴⁵ In contrast, the

⁴⁰ This MWh value includes each Company's entitlement to FES's share of energy through May 31, 2020.

⁴¹ AEP OVEC Bills.

⁴² AEP Response to CUB-INT-02-008 Attachment 1.

⁴³ Duke OVEC Bills.

⁴⁴ Duke Response to CUB-INT-02-008 CONF; Duke Response to CUB-INT-02-008 CONF Attachment; Duke Response to LEI-DR-01-022 Confidential Attachment 1; Confidential Duke 2020 Audit, Figure 8, Column C.

⁴⁵ AES OVEC Bills.

value of the market revenue that OVEC obtained for the energy, capacity, and ancillary services it sold into the PJM market was only \$13.0 million, or around \$28.83/MWh.⁴⁶ This amounts to a loss of \$17.0 million for AES Ohio ratepayers, or \$37.76/MWh.

Table 6: Confidential summary of costs and revenues for the OVEC plants

	MWh	Billed Charges		Revenues		Net Costs	
		\$ Million	\$/MWh	\$Million	\$/MWh	\$ Million	\$/MWh
AEP	1,831,721	\$122.0	\$66.59	\$53.0	\$28.94	\$(69.0)	\$(37.65)
Duke	827,167	\$54.8	\$66.30	\$22.9	\$27.71	\$(31.9)	\$(38.58)
AES	450,349	\$30.0	\$66.60	\$13.0	\$28.83	\$(17.0)	\$(37.76)
Total	3,109,237	\$206.8	\$66.52	\$88.9	\$28.60	\$(117.9)	\$(37.92)

In total, that means that during the audit period, the Companies collected \$117.9 million in above-market costs while providing consumers no additional value. In figure 2 below, I show the all-in monthly charges and monthly market revenues for OVEC being passed through to the Companies customers, and the net difference between the two that the Companies customers are paying each month under the Legacy Generation Rider. This shows that in nearly every month during the audit period, the Companies customers were paying substantial additional costs under the Legacy Generation Rider.

⁴⁶ AES Response to C&U-02-008 Attachment 1-Confidential; AES Response to CUB 3rd Set – INT 01(d) Attachment 1.

1 **Q How do the costs you calculated compare to the costs the auditor calculated**
2 **in the three audits?**

3 **A The \$/MWh losses I calculated are very close to the ones LEI calculated for all**
4 three utilities when I corrected a minor error LEI made in double counting
5 capacity market revenues in the AES Ohio and Duke Energy Ohio audits.⁴⁷
6 Specifically, the auditor found net losses for AEP were \$38.36/MWh and were
7 \$33.90/MWh and \$31.68/MWh for Duke Energy Ohio and AES Ohio
8 respectively. When AES Ohio and Duke Energy Ohio's values are adjusted to
9 remove the double counted revenues, AES's losses are \$38.42/MWh and Duke
10 Energy Ohio's are \$37.46/MWh which is very close to my finding of around
11 \$38/MWh in losses for each Company during the audit period.

12 The small differences between my calculations and LEI's result stem from
13 differences in our mandate. LEI was conducting an accounting audit, and as such
14 relied on accounting month data for some of its calculations. My analysis focused
15 on net costs incurred and revenues earned each month, regardless of when they
16 are recorded on the Company's books. Therefore, I relied entirely on actual or
17 risk month data for all my calculations.

⁴⁷ The auditor appears to have double counted capacity market revenues for Duke Energy Ohio and AES Ohio in Figure 13 of the Duke Energy Ohio and AES Ohio Audits. Specifically, in Figure 13, the auditor nets out capacity market revenue from OVEC charges, and then nets out PJM settlements from the remainder. But PJM settlements also include capacity market revenues. This is why the auditor found net losses were only \$33.90/MWh and \$31.68/MWh for Duke Energy Ohio and AES Ohio respectively but were \$38.36/MWh for AEP, where capacity market revenues were not double counted.

1 **Q** **Will the current legacy generation rider likely provide value to the**
2 **Companies ratepayers going forward?**

3 **A** No. My analysis, outlined above, demonstrates that to date the prior OVEC Riders
4 have passed on substantial costs to the Companies ratepayers. I do not see any
5 scenario where the economic trends that have rendered the OVEC plants
6 uneconomic rapidly reverse for the next few years.

7 Additionally, in each of the three audits in this docket, the auditor found the
8 following:

- 9 1. Based on the OVEC costs billed and the revenues earned in the market,
10 the OVEC plants cost more than they earn.⁴⁸
- 11 2. LEI's analysis indicates that a new combined cycle gas turbine ("CCGT")
12 has an estimated levelized cost of energy ("LCOE") of \$35.9/MWh for
13 PJM West and \$42.2/MWh for PJM. The reported cost of the OVEC
14 plants, at \$67.00/MWh, is higher than the levelized cost of building a new
15 CCGT in PJM. The LCOE analysis implies that the OVEC plants are not
16 competitive with a new CCGT based on full cycle costs.⁴⁹
- 17 3. The ICPA does not expire until June 30, 2040. Customers could be locked
18 into paying a premium for energy and capacity from the OVEC plants in
19 future years.⁵⁰

20 [REDACTED]

21 [REDACTED]

22 [REDACTED]

⁴⁸ Duke 2020 Audit, Pg. 29; AEP 2020 Audit, Pg. 31; AES 2020 Audit, Pg. 27.

⁴⁹ Duke 2020 Audit, Pg. 21; AEP 2020 Audit, Pg. 22-23; AES 2020 Audit, Pg. 21.

⁵⁰ Duke 2020 Audit, Pg. 30; AEP Audit, Pg. 32; AES Audit, Pg. 29.

1 [REDACTED]
2 [REDACTED] .⁵¹

3 **Q What do you conclude with respect to the Legacy Generation Rider?**

4 **A** Based on the Companies own data, I find that under the Legacy Generation Rider,
5 during the audit period alone, the total billed charges cost Ohio ratepayers \$117.9
6 million more than the market price for the same amount of energy, capacity, and
7 ancillary services.

8 The PUCO should disallow this entire amount because the OVEC plants were not
9 operated prudently or in the best interest of retail ratepayers.

10 **6. OVEC UNECONOMICALLY OPERATED THE CLIFTY CREEK AND KYGER CREEK**
11 **POWER PLANTS DURING THE AUDIT PERIOD AND THE COMPANIES NOW SEEK TO**
12 **PASS THE RESULTING EXCESS COSTS ON TO THEIR CUSTOMERS**

13 ***i. OVEC operates its two power plants, Clifty Creek and Kyger Creek,***
14 ***uneconomically and incurs additional losses relative to market energy prices***

15 **Q How often did OVEC operate its plants during the audit period?**

16 **A** OVEC operated the Clifty Creek and Kyger Creek plants at respective capacity
17 factors of 39 percent and 51 percent in 2020,⁵² despite both units incurring
18 substantial revenue losses relative to the market. In fact, during the audit period,

⁵¹ Duke Response to CUB-POD-02-022 Confidential Attachment 1; AES Response to C&U – 02-022 Attachment 1 – Confidential; AEP Response to CUB-INT-02-023 Confidential Attachment 1; Duke Response to CUB-POD-02-023 Confidential Attachment; AES Response to C&U – 02-023 Attachment 1 – Confidential.

⁵² EIA CAMPD database; EIA form 923; PJM data miner.

1 at least one unit was online at the Clifty Creek and Kyger Creek plants during 98
2 percent of the time.⁵³ This shows that OVEC is not taking action to limit incurring
3 negative energy margins at its plants, and instead is operating its plants even when
4 it projects that doing so will incur negative margins. This is imprudent and not in
5 the best interest of retail ratepayers.

6 **Is there evidence that OVEC operated its plants uneconomically during**
7 **many hours of the year during the audit period?**

8 **A** Yes. During the audit period, OVEC's variable costs exceeded market locational
9 marginal prices 83 percent⁵⁴ of the time the units were online. Additionally, for
10 ten months during the audit period, the variable costs incurred by the OVEC
11 plants exceeded the revenues the plants earned in the energy market.⁵⁵ This means
12 that overall, consumers would have been better off if the plants had not operated
13 at all during ten of the twelve months in 2020. This contributed \$10.5 million to
14 the total of \$117.9 million in above-market costs across the two plants for AEP
15 Ohio, Duke Energy Ohio, and AES Ohio's consumers during the Audit period.

16 Coal plants such as Clifty Creek and Kyger Creek require high capital costs to
17 stay online, and therefore they need large positive energy margins (or sufficient
18 capacity payments) to cover these fixed costs. When a plant loses money on a

⁵³ EIA CAMPD database; EIA form 923; PJM data miner.

⁵⁴ EIA CAMPD database; EIA form 923; PJM data miner; OVEC Monthly Bills, provided in AEP response to LEI-DR-02-009_CONFIDENTIAL_Attachment_1.

⁵⁵ AEP OVEC Bills; Duke OVEC Bills; AES OVEC Bills; AES Response to C&U-02-008 Attachment 1-Confidential; AES Response to CUB 3rd Set – INT 01(d) Attachment 1; Duke Response to CUB-INT-02-008 CONF; Duke Response to CUB-INT-02-008 CONF Attachment; Duke Response to LEI-DR-01-022 Confidential Attachment 1; Confidential Duke 2020 Audit, Figure 8, Column C; AEP Response to CUB-INT-02-008 Attachment 1.

1 variable operating basis, that means that not only is it not covering its fuel and
2 variable operations and maintenance (O&M) costs, but it is also carrying no net
3 revenues to offset significant fixed O&M and capital costs.

4 **Q How did the OVEC units incur significant losses if they were operating**
5 **within the PJM market?**

6 **A** Generators operating within the PJM market generally commit their available
7 units as either economic or must-run. For units committed economically, the
8 market operator, PJM, has the responsibility for unit commitment and dispatch
9 decisions. Those decisions prioritize reliability for the system as a whole, but then
10 select plants to commit and dispatch based on short-term economics to ensure
11 consumers are served by the lowest-cost resources available to the system. A
12 plant committed as “economic” will operate only if it is the least-cost option
13 available to the market (i.e., has a lower average commitment period cost than
14 other resources available at the time). Because units operated by the market (i.e.,
15 using economic commitment) follow short-term economic signals, they tend to
16 cycle off when market prices are low and therefore do not generally incur
17 significant operational losses.

18 While economic commitment and dispatch tends to be the norm for dispatchable
19 power plants, for units such as OVEC’s coal-fired power plants with long start-up
20 and shut-down times, utilities sometimes instead elect to maintain control of unit
21 commitment decisions and utilize a must-run commitment status. For these units,
22 the utility determines independently when to commit a unit.

1 A unit designated as must-run will operate with a power output no less than its
2 minimum operating level.⁵⁶ The unit receives market revenue (and incurs variable
3 operational costs) but does not set the market price of energy. If the market price
4 of energy falls below its operational cost, a must-run unit will not turn off and can
5 incur losses. Absent oversight from a Commission, these losses can be passed on
6 to consumers.

7 In the case of the OVEC units, they stayed online for nearly all the audit period,
8 despite incurring significant net revenue losses. This is because OVEC's
9 operating procedures dictate that as a default, the plants must be self-committed
10 into the market with a must-run status whenever they are available. OVEC
11 requires unanimous consent of the operating board to switch from the must-run
12 commitment status.⁵⁷ That means the OVEC units are bid into the market without
13 regard for economics, and whether they are earning or losing money. OVEC used
14 no daily analysis to drive its unit commitment decisions during the audit period,
15 as discussed below. The Operating Committee did approve a switch to economic
16 commitment between April 14, 2020 and June 30, 2020 based on the impact of

⁵⁶ 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.

⁵⁷ AEP Response to CUB-INT-02-015; AEP Response to CUB-INT-02-016; AEP Response to CUB-INT-02-017; AES Response to CUB-INT-02-015; AES Response to CUB-INT-02-016; AES Response to CUB-INT-02-017; Duke Response to CUB-INT-02-015 Confidential; Duke Response to CUB-INT-02-016 Confidential; Duke Response to LEI-DR-01-003 Confidential.

1 the COVID-19 pandemic on energy prices, but the units were switched back to
2 their default “Must Run” operating status in July, 2020.⁵⁸

3 **Q Did OVEC economically commit the units in 2020?**

4 **A** Only to a limited extent. During the exception period between April 14, 2020 and
5 June 30, 2020, OVEC applied an economic commitment status to only three of
6 the eleven OVEC units, and only for a total of 631 hours.⁵⁹ This mean that even
7 during a two-and-half-month period of time when energy prices reached record
8 lows, OVEC still only opted to economically commit less than one third of its
9 units just over one third of the time. OVEC did not economically commit Kyger
10 Creek at all, and Clifty Creek was economically committed for only [REDACTED] percent
11 of the hours in 2020.⁶⁰ During the months of April, May and June alone, the Ohio
12 Companies incurred variable losses of more than [REDACTED] at the OVEC plants.
13 These losses could have been minimized had OVEC actually economically
14 committed more of its units.

15 **Q Did the impacts from COVID-19 drive the substantial variable losses that**
16 **OVEC incurred at the Kyger Creek and Clifty Creek plants in 2020?**

17 **A** No. As I show in Figure 2 on page 38, locational marginal prices (LMP) in PJM
18 were at record lows in 2020 due to the impacts from the COVID-19 pandemic.

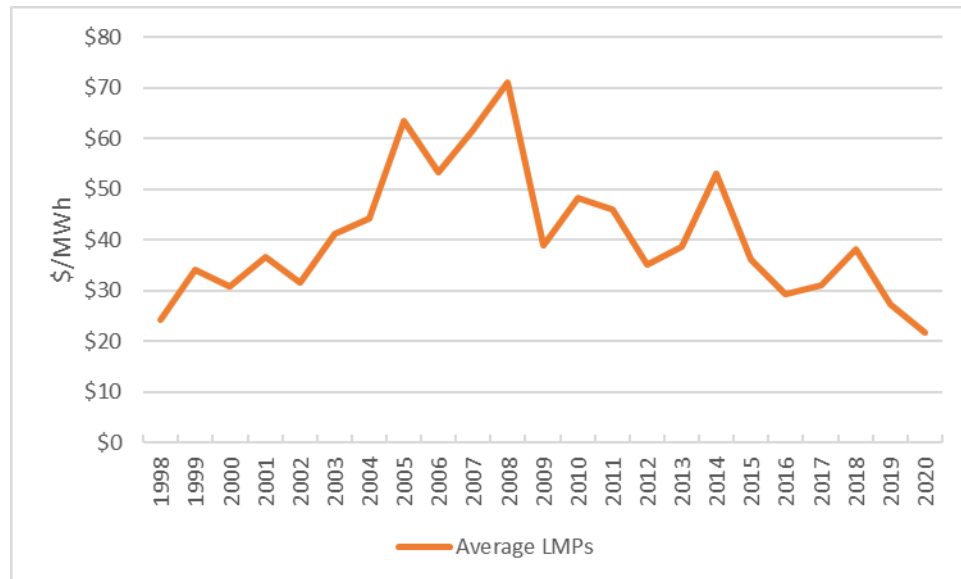
⁵⁸ AEP Response to CUB-INT-02-017; AEP Response to CUB-INT-02-018 Confidential Attachment 1; AES Response to CUB-INT-02-017; AES Response to CUB-INT-02-018 Confidential Attachment 1; Duke Response to LEI-DR-01-003 Confidential; Duke Response to CUB-INT-02-018; AEP Response to CUB-INT-02-019; AES Response to CUB-INT-02-019; AEP Response to LEI-DR-01-017-Confidential Attachment 1.

⁵⁹ AEP Response to CUB-INT-02-017; AES Response to CUB-INT-02-017.

⁶⁰ AEP Response to CUB-INT-02-018 Confidential Attachment 1; AES Response to C&U-02-018 Attachment 1; AEP Response to LEI-DR-05-005 Confidential Attachment 2.

1 Low LMPs explain low total revenues but they do not explain net losses. A plant
2 that operates at a zero-percent capacity factor will earn zero dollars in the market,
3 but it will also incur zero dollars in costs so on net should incur no losses. When
4 energy market prices are low, plants should be committed and dispatched less.
5 This means they will incur lower costs to match the lower revenues. For a plant to
6 incur significant variable losses, it has to be uneconomically committed into the
7 market regardless of economics.

8 **Figure 2. Real-time, load-weighted, average LMP**



9
10 *Source: PJM 2020 State of the Market Report prepared by Monitoring Analytics, LLC.*

11 **Q What could drive a power plant operator such as OVEC to uneconomically**
12 **self-commit its units?**

13 **A** There are many factors that could drive a power plant operator to uneconomically
14 self-commit its units, but four main ones are: (1) a failure to evaluate the
15 economics of daily unit commitment decisions; (2) a failure to follow the results
16 of daily unit commitment analysis; (3) an incomplete accounting of variable unit

1 costs in unit dispatch bids; and (4) existence of minimum take provisions in fuel
2 contracts that “lock in” costs that would otherwise be variable. In the case of
3 OVEC in 2020, the plants’ unit commitment decisions by and large were not
4 driven by any forward-looking economic analysis. OVEC economically
5 committed only a small portion of its units, and otherwise OVEC committed the
6 units with a must-run status. The Company ran the plants at higher levels that was
7 economic during a period of record low market prices as a way to manage its coal
8 inventory and avoid incurring damages or penalties. But this oversupply of coal
9 was avoidable if OVEC had planned its coal procurement around lower plant
10 utilization assumptions that were consistent with the plant’s poor economics.

11 **Q Does OVEC have an economic incentive to avoid running its plants in**
12 **uneconomic conditions?**

13 **A** No. The OVEC Agreement assigns plant operating costs and PJM revenues to
14 OVEC’s sponsoring organizations, effectively holding OVEC’s revenues
15 harmless during uneconomic generation. This dynamic allowed OVEC to
16 maintain a net income in 2020 even while the OVEC plants’ variable costs
17 exceeded locational marginal prices during many hours. And while the OVEC
18 sponsoring companies such as AEP Ohio, AES Ohio, and Duke Energy Ohio are
19 obligated to pay the OVEC bills, their ratepayers should not be obligated to pay
20 the net revenues losses. In the absence of action by utility commissions to
21 disallow recovery of the full Rider, OVEC owners have no incentive to demand
22 that the OVEC units change their practices and operate more economically. And
23 the resulting costs will continue to be passed on to Ohio ratepayers.

24

1 OVEC is not unique in the practice of operating its plants uneconomically and
2 ultimately passing those costs on to ratepayers. The MISO Independent Market
3 Monitor (IMM) has been conducting a review of coal-fired resource operations
4 and profitability in its annual State of the Market Report for several years now.⁶¹
5 In the most recent 2022 report, the report found that among regulated utilities, 13
6 percent of their annual starts between 2017–2020 were unprofitable, 9 percent
7 were unprofitable in 2021, and 7 percent were unprofitable in 2022. This means
8 that it was uneconomic to start up and operate the unit. In contrast, among
9 merchant generators (which are private companies who do not have ratepayers as
10 a safety net) between 2017 and 2020 only 3 percent of annual starts were
11 unprofitable, and in 2021 and 2022 zero percent of annual starts were
12 unprofitable.⁶² This data shows that when generators do not have ratepayers to
13 cover their losses, the operators tend to make fundamentally different, and more
14 profitable, operational decisions.

15 **Q Did the Companies and OVEC operate the OVEC plants using least-cost**
16 **supply principles?**

17 **A** No. OVEC’s and the Companies’ continuous use of must-run commitment status
18 at the OVEC plants, except to a very limited extent during the two-and-a-half
19 months in 2020, and their failure to perform a daily financial review to determine
20 whether to use economic commitment status was not consistent with a least-cost

⁶¹ 2022 State of the Market Report for the MISO Electricity Markets, Prepared by Potomac Economics. June 15, 2023. Pg. 52. Available at https://www.potomaceconomics.com/wp-content/uploads/2023/06/2022-MISO-SOM_Report_Body-Final.pdf.

⁶² *Id.*

1 approach and this directly resulted in their Ohio consumers paying above-market
2 charges.

3 ***ii. Each individual Company has limited control over the operations and***
4 ***management of the OVEC plants, despite their position on the operating***
5 ***committee and on the board of directors***

6 **Q How are the OVEC units operated and managed?**

7 **A** According to the Amended and Restated OVEC Agreement in effect in 2020,⁶³
8 management of the OVEC units is governed by the 15-person Board of Directors,
9 which delegates operational decisions to a separate Operating Committee.

10 **Q What role do the Companies have in operating the OVEC units?**

11 **A** Each of the three Companies is a Sponsoring Company of OVEC, and as such has
12 one member on the Board of Directors and is allowed to appoint one member to
13 OVEC's Operating Committee. Each of the Companies can make requests and
14 recommendations to the Operating Committee to change unit operations but
15 "unanimous approval of the Operating Committee" is required to change the
16 commitment status of the OVEC units.⁶⁴

17 This arrangement is concerning both for how little power each of the individual
18 Companies *claims* to have, and for how much influence each Company actually
19 has but generally fails to exercise. First, if each Company really has so little

⁶³ The OVEC Agreement was subsequently updated on October 7, 2019, and effective November 15, 2019.

⁶⁴ AEP Response to CUB-INT-02-015; AES Response to CUB-INT-02-015; Duke Response to CUB-INT-02-015 Confidential.

1 power and influence, then it means they are all asking to pass the significant costs
2 associated with the OVEC plants onto their ratepayers but have only limited
3 authority to control operational and planning decisions that drive those costs.
4 Second, while it is true that each Company cannot act unilaterally, together, these
5 three Ohio utilities control over one-third of the ownership shares in OVEC. Each
6 Company has a seat on the OVEC and Indiana-Kentucky Electric Cooperative
7 (IKEC)⁶⁵ Board of Directors and OVEC Operating Committee. Each Company
8 should have an obligation to exercise its power to prevent imprudent operational
9 and planning decisions that cause unnecessary costs to be passed on to ratepayers.

10 **iii. The PUCO should request that OVEC conduct a daily unit commitment**
11 **analysis, consistent with industry best practices; the auditor should review**
12 **this analysis in all future OVEC Rider dockets**

13 **Q What type of analysis should be used to evaluate the charges passed on to**
14 **customers through the Legacy Generation Rider docket?**

15 **A** As part of the Legacy Generation Rider review, the PUCO should require that the
16 Companies demonstrate that the OVEC power plants were operated prudently and
17 economically and in the best interest of retail ratepayers. This would require that
18 OVEC either economically commit the units into the market on a daily basis or, at
19 a minimum, conduct daily unit commitment economic analysis.

⁶⁵ IKEC is a wholly-owned subsidiary of OVEC that operates the power plants.

1 **Q Based on your review, did OVEC use any daily economic analysis to inform**
2 **its unit commitment process and operations of its plants in 2020?**

3 **A Only to a limited extent. Between April 14 and June 30, 2020, the Operating**
4 Committee switched the units to economic commitment on account of low energy
5 market prices brought on by the COVID-19 pandemic and allowed the market to
6 economically commit the units. But in general OVEC self-schedules its units in
7 accordance with the OVEC Operating Agreement, as approved by an Operating
8 Committee.⁶⁶ The OVEC units (except Clifty Creek Unit 6 during summer ozone
9 non-attainment periods) were self-scheduled into the PJM market with a must-run
10 status at all times outside of the two-and-half-month window in the spring, and
11 except when impacted by a planned, forced, or maintenance outage.⁶⁷ The term
12 “self-schedule” has the same meaning as “must-run.”

13 AEP⁶⁸ and AES⁶⁹ specifically conduct no such analysis for their shares of the
14 OVEC units. Duke conducts a daily unit commitment analysis called a Daily
15 Profit and Loss Report and includes its share of the OVEC units in this report.
16 Duke stated that it does at times share its *findings* from these reports with OVEC
17 management. But critically, the reports and analysis itself are not shared with
18 OVEC management.⁷⁰ For example, in April 2020, Duke’s analysis showed that

⁶⁶ AEP Response to CUB-INT-02-017; Duke Response to LEI-DR-01-003 Confidential; AES Response to CUB-INT-02-017.

⁶⁷ AEP Response to CUB-INT-02-017; AEP Response to CUB-INT-02-018 Confidential Attachment 1; AEP Response to LEI-DR-01-003; AES Response to CUB-INT-02-017; AES Response to CUB-INT-02-018 Confidential Attachment 1; AES Response to LEI-DR-01-003 Attachment 1 Confidential; Duke Response to CUB-INT-02-018; Duke Response to LEI-DR-01-003 Confidential.

⁶⁸ AEP Response to CUB-INT-02-015.

⁶⁹ AES Response to CUB-INT-02-015.

⁷⁰ Duke Response to CUB-INT-02-018.

1 with low market prices, the units would be out of the money and could potentially
2 be decommitted. Duke brought these findings before the Operating Committee,
3 which voted on and authorized a temporary change to the must-run commitment
4 status as discussed above. But as a normal course of business, OVEC does not
5 produce or rely on forward-going economic analysis to inform its unit
6 commitment decisions.

7 **Q Does OVEC have the information it needs to evaluate the economics of its**
8 **daily unit commitment decisions?**

9 **A** Yes. Duke already conducts this type of daily analysis for the OVEC plants,
10 demonstrating that it is possible.⁷¹ Additionally, operators know day-ahead
11 market prices with certainty for the next day and can project them with a
12 sufficient level of accuracy for the purposes of unit commitment. Fuel and
13 variable O&M costs are also known with relative certainty a few days out, and
14 start-up costs are known and should not fluctuate significantly over the course of
15 the week. This means that at the time the utility makes a decision to self-commit a
16 unit in the day-ahead market (i.e., to either bring the unit online, keep it online,
17 take it offline, or keep it offline) it has the information needed to make a prudent
18 decision. That decision should maximize projected net revenues/minimize
19 projected net losses to ratepayers over a several-day period.

20 **Q What standard industry practices do regulated utilities undertake to ensure**
21 **their power plants are economically committed into the market?**

22 **A** If a utility is going to self-commit a power plant outside of the market, it should
23 rely on a robust, price-based forward-looking analysis process to replace the

⁷¹ Duke Response to CUB-INT-02-018 Confidential.

1 market's economic process.⁷² AEP⁷³ and Duke⁷⁴ use such a daily unit
2 commitment analysis to decide whether and how to commit their other power
3 plants they own into the market.⁷⁵

4 As part of this process, AEP and Duke review the forecasted energy market prices
5 and projected variable operation costs for the next week (or another similar,
6 multi-day time period) to project net operational revenues (or losses) for each unit
7 for each individual day over the forecast period. If a unit is projected to be
8 profitable, then ratepayers expect to see savings from operating the unit related to
9 the acquisition of market-supplied power. If the unit is projected to lose money,
10 then consumers would expect to see savings by the acquisition of market-supplied
11 power.

12 The data presented in these forecasts represents the market price information and
13 the unit cost data available to the plant owners at the time they are making unit
14 commitment decisions. This market price data is readily available through PJM
15 and widely used by plant operators. While it is true that market prices and other
16 market inputs are constantly changing, there is a knowable set of information on
17 unit costs and market prices at the time commitment decisions are made and
18 submitted to PJM. Regardless of whether prices may continue to change, OVEC

⁷² The best practice for a utility is to economically commit its power plants into the market and allow the market to decide when to operate the plant based on economics.

⁷³ See, for example, the Rebuttal Testimony of Jason Stegall in Case No. U-20530.

⁷⁴ See, for example, the Direct Testimony of John Swez in IURC Case No. 38707 FAC123 S1.

⁷⁵ Even with robust daily unit commitment analysis, I have found utilities can ignore the result of their own analysis and “uneconomically self-commit” their power plants. A robust process with Commission oversight will dramatically decrease how much this occurs.

1 and the Companies can and should save the full set of information it has at the
2 time of its decisions to allow the PUCO to assess the prudence of its decisions.

3 **Q How exactly should OVEC be using the results of price-based analysis to**
4 **inform its unit commitment decisions?**

5 **A** OVEC should either (a) commit its units as economic and let the market decide
6 when to operate the units, or (b) make unit commitment decisions based on the
7 results of its price-based analysis and document any deviations from its
8 quantitative analysis. Specifically, OVEC should elect to self-commit its units as
9 must-run on a forward-looking basis only if it expects to make positive energy
10 market margins over a reasonable near-term period (incorporating consideration
11 of start-up and shut-down costs). OVEC should commit its units as “economic”
12 when the units are expected not to run, or to operate at a loss if they do run. This
13 is the standard practice followed by AEP and Duke, as described in the testimony
14 of Mr. Stegall and Mr. Swez in prior dockets which I discussed earlier.⁷⁶ The
15 Companies’ and OVEC’s failure to follow this standard industry practice resulted
16 in imprudent plant operations. As a result, the Companies incurred above-market
17 variable costs which they are now asking to collect through the Legacy
18 Generation Rider.

19 **Q How did Company witness’s Swez, Stegall, and Crusey defend OVEC’s unit**
20 **commitment practices during the audit period?**

21 **A** In their direct testimony in this docket, Duke Energy Ohio Witness Swez spent
22 the most time discussing unit commitment practices, but AEP Ohio Witness

⁷⁶ Rebuttal Testimony of Jason Stegall in Case No. U-20530; Direct Testimony of John Swez in IURC Case No. 38707 FAC123 S1.

1 Stegall and AES Ohio Witness Crusey also discussed OVEC's practices in their
2 direct testimonies. Specifically, all three Witness's defended the extensive use of
3 the Must-Run commitment status at the OVEC plants, claiming that the units
4 cannot quickly ramp on and off, and that cycling them comes with unnecessary
5 costs and risks or equipment failures.⁷⁷ I don't disagree with their characterization
6 of the units, but if the units have operational characteristics that make them
7 inherently challenging to operate economically within the current market, then
8 perhaps they are not a good asset to continue operating and funding through
9 ratepayers.

10 Further, there is a large gap between the things Swez says OVEC can't or
11 shouldn't do when operating its units, and prudent unit commitment practices. I
12 am not recommending that OVEC commit the units with an Economic status and
13 cycle them extensively. But it is also not reasonable for OVEC to claim that the
14 only alternative is to continue committing the units with a Must Run status with
15 zero analysis and documentation to support its decisions.

16 **Should a utility be considered to have made an imprudent decision every**
17 **time it doesn't maximize actual revenues to ratepayers?**

18 **A** Not necessarily. Utilities are expected to use accurate cost and pricing information
19 and to make prudent decisions based on that information, but they are not
20 expected to always be right. If market prices deviate significantly from what the
21 utility reasonably projected, the utility's self-commitment decisions may not
22 actually maximize net revenues. To be prudent, the utility's decision to self-

⁷⁷ Direct Testimony of David Crusey, Pg. 10; Direct Testimony of Jason Stegall, Pgs. 11-12; Direct Testimony of John. D. Swez, Pgs. 12-15.

1 commit its units must have been projected to maximize net revenues at the time
2 the utility made the must-run commitment decision.

3 On the other hand, utilities should also monitor the accuracy of their projections.
4 If the utility finds it is consistently wrong in its projections, that information itself
5 should provide feedback to improve the utility's approach and be used to drive
6 changes to the utility's commitment process.

7 **Q How do Commissions review the prudence of utility operational practices in**
8 **other jurisdictions?**

9 **A In Michigan, the commission uses a two-step process: at the beginning of the**
10 yearly cycle, the utility files a Power Supply Cost Recovery (PSCR) Plan; at the
11 end of the yearly cycle, there is a reconciliation docket to reconcile the differences
12 between projected power and fuel costs and actual power and fuel costs.

13 In Indiana, the commission uses a Fuel Adjustment Clause (FAC) process that
14 trues-up the difference between fuel costs the utility projected and costs that
15 actually materialized every three months.

16 Both Michigan's PSCR and Indiana's FAC dockets constitute a prudency review
17 of a utility's fuel and power supply practices where the commission determines
18 whether a utility acted reasonably to procure energy for consumers at the lowest
19 cost. Such a prudence review should include an evaluation of a utility's
20 operational practices at its power plants and the associated fuel costs incurred. To
21 allow such a review, utilities must conduct and retain daily unit commitment
22 decision-making analysis, submit that analysis for review, and document any
23 deviations between the economic commitment status recommended by analysis
24 and the utility's actual commitment decision. When the utility ignores the results
25 of its own unit commitment analysis, uneconomically self-commits a plant, and

1 then incurs (predictable) losses relative to the market without justification, the
2 commission can issue a disallowance for imprudently incurred fuel costs. This
3 level of oversight more carefully aligns operational practices with economics.

4 **Q Did the Companies and OVEC operate the plants using least-cost supply**
5 **principles?**

6 **A** No. As discussed above, OVEC's and the Companies' use of must-run
7 commitment status at the OVEC plants for the majority of the audit period, and
8 their failure to perform a daily financial review to determine whether to use
9 economic commitment status was not consistent with a least-cost approach and
10 resulted in above-market charges.

11 Therefore, the PUCO should disallow any monthly energy charges in excess of
12 energy market revenues from the OVEC plants during the audit period. The
13 imprudence and failure to act in the retail ratepayers' best interest is evident from
14 the [REDACTED] during 2020 where the OVEC plants incurred variable net losses
15 relative to the market, which were avoidable by following prudent market
16 commitment practices.

17 **7. ENVIRONMENTAL UPGRADE COSTS INCURRED**

18 **Q Did the OVEC plants incur any environmental upgrade costs that the**
19 **Companies are asking to pass on to ratepayers through the Legacy**
20 **Generation Rider?**

21 **A** Yes, [REDACTED]
22 [REDACTED]
23 [REDACTED]

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[REDACTED]

[REDACTED].⁷⁸

Additionally, on November 22, 2019, the U.S. Environmental Protection Agency published a draft effluent limitation guidelines (ELG) rule in the Federal Register. Based on requirements in the final rule, OVEC expects to have until no later than December 31, 2025, to modify how it manages both bottom ash transport wastewater and FDG wastewater at the Clifty Creek and Kyger Creek plants. AEP expected construction to begin in 2021 and continue over the next few years.⁷⁹ [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED].⁸⁰

15 This means that the costs associated with compliance with the revised CCR and
16 ELG rules will not be included in the 2020 audit period but will be included in the
17 Rider during subsequent audit periods as part of the demand charge.

⁷⁸ AEP Response to LEI-DR-03-002 Confidential Attachment 1; AES Response to LEI-DR-03-002 Confidential Attachment 1.

⁷⁹ AEP Response to LEI-DR-04-008; AES Response to LEI-DR-04-008.

⁸⁰ AEP Response to LEI-DR-01-017 Confidential Attachment 1; AEP Response to CUB-POD-02-022 Confidential Attachment 1; Duke Response to LEI-DR-02-003 CONF Attachment; Duke Response to CUB-POD-02-022 Confidential Attachment 1; AES Response to C&U-02-022 Attachment 1-Confidential.

1 **Q** **What role do the Companies play in making decisions regarding capital**
2 **expenditures such as those required to comply with environmental**
3 **regulations?**

4 **A** Each of the Companies has a seat on OVEC's Board of Directors. OVEC's
5 management makes decisions on capital expenditures with oversight and approval
6 of annual capital expenditure budgets by OVEC's Board of Directors.⁸¹ Capital
7 expenditures, including environmental capital expenditures, are passed on to
8 ratepayers through the OVEC demand charges.

9 **Q** **Do you have any concerns with these environmental control costs being**
10 **passed on to Ohio ratepayers through the Rider?**

11 **A** Yes, I do. First, neither OVEC nor the Companies completed any analysis to
12 demonstrate that investing in additional environmental upgrades at these plants is
13 economic relative to retiring the plants.⁸²

14 Second, as my analysis in Section 5 shows, the charges billed by OVEC to AEP
15 Ohio, Duke Energy Ohio, and AES Ohio substantially exceed the revenues
16 received in the PJM market for both plant's energy and capacity. The demand
17 charges billed by OVEC include all fixed and capital costs, including the costs for
18 environmental upgrades. OVEC's demand charges have historically exceeded the
19 capacity market revenues that the Companies earn for their shares of the OVEC
20 plants. This means that each time the Companies incurs costs at the OVEC plants,

⁸¹ AEP Response to CUB-INT-02-014; AES Response to CUB-02-014; Duke Response to CUB-02-014.

⁸² AEP Response to CUB-INT-02-013; AES Response to CUB-02-013; Duke Response to CUB-02-013.

1 those costs are passed on to ratepayers through demand charges that exceed the
2 revenue the Companies can recover in the market.

3 **Q What do you recommend regarding the future ELG and CCR project costs?**

4 **A**I recommend that the Commission disallow the inclusion of these costs from the
5 Rider on the basis that the Companies have not conducted robust analysis to
6 demonstrate that investing in additional capital upgrades at the plants is the most
7 economic option relative to retirement and replacement of the plants with
8 alternatives.

9 **Q Does this conclude your testimony?**

10 **A**Yes.

CERTIFICATE OF SERVICE

I certify that a copy of the foregoing **Direct Testimony of Devi Glick (Public Version)**, will be electronically served via the Public Utilities Commission's e-filing system and via electronic mail on all parties referenced in the service list of the docket.

/s/ Trent Dougherty
Trent Dougherty

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Testimony of Devi Glick electronically filed by Mr. Trent A. Dougherty on behalf of
Citizens Utility Board of Ohio and Union of Concerned Scientists.