OCC EXHIBIT NO. ______

BEFORE
THE PUBLIC UTILITIES COMMISSION OF OHIO

In the Matter of The Review of the Reconciliation Rider of Duke Energy Ohio Inc.	)))	Case No. 20-167-EL-RDR

DIRECT TESTIMONY
OF
MICHAEL P. HAUGH

On Behalf of the
Office of the Ohio Consumers' Counsel
65 East State Street 7th floor
Columbus, Ohio 43215

OCTOBER 26, 2021

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I. OVERVIEW

Q1. PLEASE STATE YOUR NAME, TITLE, AND BUSINESS ADDRESS.

A1. My name is Michael P. Haugh. I am the Director of Analytical Services for Markets and Competitive Services at the Office of the Ohio Consumers' Counsel ("OCC"). My business address at OCC is 65 East State Street, Suite 700, Columbus, Ohio 43215.

Q2. PLEASE BRIEFLY SUMMARIZE YOUR EDUCATION AND PROFESSIONAL EXPERIENCE.

A2. I have a Bachelor of Science in Business Administration from the Ohio State University with a major in Finance. I have also attended the Institute of Public Utilities Advanced Regulatory Studies at Michigan State University. I have over 20 years working in the energy industry with experience in wholesale and retail energy trading, risk management, natural gas purchasing and scheduling, and regulatory affairs. I started with Enron Energy Services in 1995 as an Energy Trader and then moved on to American Electric Power Energy Services in 1998 where I worked in Risk Management and Wholesale Energy Trading. In January 2004 I went to work for MidAmerican Energy Services as a Senior Product Manager. In October of 2004 I began work as a Senior Regulatory Analyst with the OCC. I left the OCC in September 2007 and joined Integrys Energy Services as a Regulatory Affairs Analyst. I joined Just Energy in 2009 and held the position of Manager of Regulatory Affairs before becoming Manager of Market

Relations in 2011. I was re-hired at the OCC in June 2014 as the Assistant Director of Analytical Services where I worked until May 2018. I then worked for Genie Energy as the Director of Energy Affairs until December of 2018. I was an independent consultant from January 2019 until I took my current position in July 2021.

Q3. HAVE YOU PREVIOUSLY SUBMITTED TESTIMONY IN UTILITY CASES BEFORE REGULATORY COMMISSIONS?

A3. Yes, I have testified before the Public Utilities Commission of Ohio ("PUCO") and the Michigan Public Service Commission. The complete list of cases in which I have testified is attached as Attachment MPH-1.

Q4. DO YOU HAVE ANY EXPERIENCE IN ELECTRICITY TRADING?

A4. Yes, while I was employed at AEP, I did both hourly and day-ahead energy trading. I was charged with evaluating the units that were available, the customer load and the market prices. I worked with a dispatcher that would communicate with the specific units as to the availability of the unit. We would take all of the data available to us and determine if it was more economic to run the existing generation or to purchase from the market. I worked with a variety of generating units including coal, natural gas, nuclear, oil fired and hydro-electric plants.

Q5. WHAT IS MEANT BY THE TERM "GENERATION DISPATCH AND UNIT COMMITMENT?"

A5. Generation dispatch and unit commitment is the process of an electric generation owner making the decision of when to run a specific generating unit. This decision is made based upon a variety of factors including the cost to run the unit versus market prices. Decisions are usually made in the day-ahead market and the real-time hourly market.

Q6. HAVE YOU HAD ANY EXPERIENCE WITH GENERATION DISPATCH AND UNIT COMMITMENT FOR REGULATED UTILITIES OR FOR MERCHANT COMPANIES?

A6. At AEP I worked in both regulated and deregulated markets. While working at Integrys and Just Energy, both companies owned merchant generating plants. Deregulated merchant plants do not have any captive customers and earn most of their revenue from the competitive markets. Regulated plants were used to serve a captive customer base. If the regulated plants would have excess generation, I would sell it into the market or through bilateral transactions with counterparties.

Q7. ***THE GENERATING UNITS YOU TRADED WERE LOCATED IN WHAT STATES?***

A7. I traded the output from generation units that were owned by all of the AEP operating companies across the country. At the time the states included Ohio, Michigan, Indiana, Kentucky, West Virginia, Arkansas. Louisiana, Oklahoma and Texas.

Q8. ***TO WHICH REGIONAL TRANSMISSION ORGANIZATIONS DID THESE GENERATING UNITS BELONG?***

A8. At the time AEP's eastern utilities were not in an RTO or ISO; we traded within the East Central Area Coordination Agreement ("ECAR"). But I would buy and sell energy with counterparties located in PJM. Since that time AEP has joined PJM and all of its eastern utilities' generation is in PJM. Other than ECAR/PJM, I also traded off the units in Southwest Power Pool ("SPP") and Electric Reliability Council of Texas ("ERCOT"). I also traded in the California ISO even though AEP did not own any generation in that ISO.

II. PURPOSE OF TESTIMONY

Q9. WHAT IS THE PURPOSE OF YOUR TESTIMONY IN THIS PROCEEDING?

A9. I discuss the reasonableness, prudency and performance of the OVEC power plants and the resulting subsidy costs that are charged to consumers through the Price Stabilization Rider ("PSR") of Duke Energy Ohio ('Duke" or "Utility").

Q10. WOULD YOU PLEASE PROVIDE SOME BACKGROUND REGARDING DUKE'S PRICE STABILIZATION RIDER?

A10. In an April 2, 2015 Opinion and Order in Duke's *ESP III case*,[1] the PUCO approved the PSR as a placeholder rider with a zero balance (meaning there were no charges to customers at the time). On March 31, 2017, Duke filed an application to begin collecting costs through the PSR.[2] On June 1, 2017, Duke filed its *ESP IV* case.[3] The PUCO issued an Opinion and Order on December 19, 2018 that approved a modified ESP and PSR.

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[1] *In re the Application of Duke Energy Ohio for Authority to Establish a Standard Service Offer in the Form of an Electric Security Pl*an, Case No. 14-841-EL-SSO, et al. ("*ESP III Case*"), Opinion and Order (April 2, 2015).

[2] *In the Matter of the Application of Duke Energy Ohio, Inc., for Approval to Modify Rider PSR*, Case No. 17-872-EL-RDR, Application (March 31, 2017).

[3] *In re the Application of Duke Energy Ohio for Authority to Establish a Standard Service. Offer in the Form of an Electric Security Pl*an, Case No. 17-1263-EL-SSO, Application (June 1, 2017).

Under the PSR, Duke sells its share of the Ohio Valley Electric Corporation's ("OVEC") energy and capacity into the PJM Interconnection, LLC ("PJM") market. Based on the price received in the market, Duke either credits or charges customers for the difference between Duke's share of the cost OVEC incurs for running plants versus Duke's share of the revenues from the plants. The revenues from the plants include revenue that OVEC receives from participating in the PJM energy, capacity and ancillary services markets.

In seeking approval of the PSR, Duke claimed that the PSR would benefit customers by acting as a hedge against volatile PJM prices. Duke based this claim on the testimony of Judah Rose, which it filed on July 10, 2018 in Case No. 17-1263-EL-SSO. OCC, the consumer advocate, certainly did not request the so-called hedge, and is skeptical about claims that it benefits consumers. So far, the hedge has benefited Duke plenty, not consumers.

A. OVEC BACKGROUND

Q11. WOULD YOU PLEASE PROVIDE SOME BACKGROUND REGARDING THE OVEC PLANTS?

***A11*.** OVEC owns and operates two coal plants built in 1955/1956 – Kyger Creek in Cheshire, Ohio and Clifty Creek in Madison, Indiana. OVEC is co-owned by twelve electric utilities and cooperatives. Duke owns 9% of OVEC. OVEC and its owners signed an Inter-Company Power Agreement ("OVEC Agreement") in

1953. It was subsequently renewed in 2003 and 2011, extending the agreement through 2040. The OVEC Agreement provides for the owners to pay their proportionate share of OVEC's costs and to receive their proportionate share of the output from OVEC's plants.

It should be noted that Duke does not use any of its share of the OVEC plants to serve standard offer consumers. OVEC sells Duke's allotment into the PJM markets and OVEC charges Duke for the difference between the OVEC costs and the PJM market prices.

Q12. DID FORMER PUCO CHAIR ASIM HAQUE OPINE ON THE OVEC SUBSIDY WHEN THE PUCO ORIGINALLY APPROVED IT?

A12. Yes, when the PUCO originally granted the OVEC bailout, then-PUCO Chair Haque wrote in a concurring opinion, as follows: "This should not be perceived as a blank check, and consumers should not be treated like a trust account"[4] Chair Haque's warning about what should not happen to consumers is just what appears to be happening to consumers, for Duke's benefit.

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

Q13. PLEASE GENERALLY DESCRIBE THE OVEC PLANTS' PERFORMANCE OVER THE TERM OF THE AUDIT.

A13. I obtained data on the plants' performance from OVEC's Annual Report for 2020, which is at Attachment MPH-2.

The plants' performance has decreased significantly over the past decade. The electricity produced has decreased almost 20% from 2019 to 2020.[5] Even taking into consideration the lower customer usage as a result of the pandemic, the OVEC plants have seen a steady decline over the past ten years. From 2010 until 2019 there was a 23% decrease in the OVEC production from 14.6 million MWh to 11.2 MWh.[6]

Under normal operating conditions PJM will call on the least-cost generation for any given hour. Overall, older coal plants have not been called on by PJM to run as much as other sources of generation. Often these older coal plants have higher operating costs than newer more efficient plants. These older coal units have been displaced by newer, lower cost and more efficient natural gas generation along with wind and solar plants.

[5] Ohio Valley Electric Corporation Annual Report – 2020 at page 2.

[6] Seryak, John and Worley, Peter Memorandum to the Ohio Manufacturers' Association "Ohio's Costly – and Worsening – OVEC Situation" November 12, 2020 link: https://www.ohiomfg.com/communities/energy/hb-6s-ovec-subsidies-bailing-out-a-sinking-ship/.

Q14. HOW MUCH MORE DID OVEC'S ELECTRICITY COST IN 2019 COMPARED TO MARKET PRICES IN PJM?

A14. OVEC's cost to produce electricity in 2019 was $57.04/MWh.[7] The PJM market price for energy and capacity in 2019 was $31.39/MWh.[8] Duke collected $24.6 million from consumers in 2019 under the PSR for OVEC's above-market electricity costs (losses).[9] Given that Duke owns a 9% share, OVEC's total electricity output cost roughly $237 million above the PJM market prices in 2019.

Q15. DID THE OVEC PLANTS CAUSE ANY POLLUTION IN 2019?

A15. Yes. Unfortunately, the OVEC plants caused the following amounts of pollution in 2019:[10]

Pollutant	**Kyger Creek**	**Clifty Creek**
Arsenic (lbs. in water)	45	0.6
Arsenic (lbs. in air)	123	78
Arsenic (lbs. on land)	24,527	36,181
Lead (lbs. in water)	NA	62
Lead (lbs. in air)	129	94
Lead (lbs. on land)	30,417	30,710

[7] OVEC Annual Report (2020) at 44.

[8] LEI Audit Report at 29.

[9] LEI Audit Report at 26, Figure 8, Column I.

[10] U.S. EPA Toxic Release Inventory and Air Markets Program.

Mercury (lbs. in water)	0	4
Mercury (lbs. in air)	37	27
Mercury (lbs. on land)	251	167
Sulfur Dioxide (tons in air)	3,746	4,191
Nitrous Oxide (tons in air)	5,374	5,375
Carbon Dioxide (tons in air)	6,225,0600	6,375,020

Q16. DO YOU HAVE AN OPINION AS TO WHETHER RUNNING THE OVEC PLANTS IN 2019 WAS REASONABLE AND PRUDENT?

A16. I do. The way OVEC operated the plants in 2019 was not reasonable or prudent for Duke's consumers. The electricity produced by the OVEC plants cost $237 million above the market price for electricity. Duke's consumers paid $24.6 million in above-market electricity costs (losses) in 2019 under Duke's rider (the PSR).

It is imprudent for an electric power plant to run and consistently pass those losses on to its owners. As an owner, Duke lacks adequate incentives to avoid the above-market costs (losses) it is charged by OVEC because Duke is allowed to just pass those costs on to its customers (courtesy of the PUCO). In this sense, Duke has no skin in the game. Adequate incentives are lacking to keep costs down or to operate these OVEC plants efficiently.

Q17. DID OVEC'S ABOVE-MARKET COSTS IN 2019 RESULT FROM UNUSUAL CONDITIONS OR SHOULD THIS HAVE BEEN FORESEEABLE TO OVEC?

A17. OVEC's above-market costs in 2019 did not result from any unusual conditions – and the situation was foreseeable by OVEC and Duke. Indeed, the PUCO's hedge reflects that the utilities' losses from the competitive market were foreseeable. In reality, the hedge seems to be a government-sanctioned device for subsidizing Ohio utilities like Duke. From 2010 to 2019, 546 coal-fired power plants nationwide closed.[11] This was primarily due to the stagnant demand and increasing competition from lower-priced natural gas-fired power plants.

As I mentioned earlier, the OVEC plants have higher costs than other newer plants in the PJM footprint. OVEC competes against gas plants that are newer and more efficient. OVEC's costs have been high for the past several years -- $54.29/MWh in 2018, $54.27/MWh in 2017 and $58.65/MWh in 2016.[12]

Accordingly, the OVEC plants did not reasonably serve as an economic hedge on the Standard Service Offer price in 2019, because it was foreseeable that the cost for OVEC's electricity would be far greater than the market price. So the OVEC plants provided little to no economic value as a hedge. Again, OCC (the consumer

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[11] Johnson, Slade; Chau, Kien "More U.S. coal-fired power plants are decommissioning as retirements continue" Energy Information Association July 26, 2019 link: https://www.eia.gov/todayinenergy/detail.php?id=40212.

[12] OVEC Annual Report (2020) at 44.

advocate) did not ask for the so-called hedge. It was Duke that sought the hedge. Justifying the hedge as a benefit for consumers is a cynical characterization for a regulation that instead is bailing out the utilities.

Q18. DID DUKE PERFORM ANY COMPETITIVE BIDDING PROCESS BEFORE SELECTING THE OVEC PLANTS AS AN ECONOMIC HEDGE FOR THE STANDARD OFFER PRICE?

A18. No. Duke has produced no evidence to show that they performed any type of competitive bidding process before selecting the OVEC plants as an economic hedge. A competitive bidding process allows for the best value to consumers, who are paying for the hedge.

Without a competitive bidding process, Duke cannot establish that the OVEC costs are just, reasonable and prudent. By collecting these costs from consumers under the PSR without using any competitive bidding process, Duke is trying to do indirectly what FERC prohibited AEP Ohio from doing directly.

AEP Ohio tried to use OVEC power to supply consumers, without using a competitive bidding process. Several parties complained to FERC (because this was a wholesale transaction). The parties complained that the OVEC contract "would impose 'hundreds of millions or even billions of dollars in above-market costs' on Ohio customers…."[13] FERC ruled that it would not approve the transaction unless AEP Ohio demonstrated that it had selected the OVEC contract to supply consumers through a competitive bidding process.[14] In the present case, using OVEC's output as a "hedge" deftly avoids FERC's jurisdiction. But the PUCO must still rule on whether the costs are just and reasonable.[15] The same complaint made at FERC applies here: the OVEC contract "would impose 'hundreds of millions or even billions of dollars in above-market costs' on Ohio customers…."[16]

Just as FERC rejected AEP Ohio's proposal to collect above-market OVEC costs when it was packaged as a wholesale transaction, the PUCO should also reject it as now packaged under the guise of a retail hedge. Without competitive bidding to establish that the OVEC costs would serve as the least-cost resource for a hedge, the $24.6 million in above-market costs are unjust and unreasonable. The testimony of OCC witness Devi Glick establishes that there are many other lower cost resources that could have served as a hedge on the SSO price if Duke had only looked for them by conducting a competitive bidding process.

[13] *Electric Power Supply Ass'n v. AEP Generation Resources, Inc. and Ohio Power Company,* 155 FERC ¶ 61,102 at ¶ 8 (Order granting complaint) (April 27, 2016).

[14] *Id.* at ¶ 64.

[15] R.C. 4909.15(A). *In re Application of Suburban Natural Gas Co.,* Slip Opinion No. 2021-Ohio-3224 ¶ 15. *see also* R.C. 4905.22

[16] *Electric Power Supply Ass'n v. AEP Generation Resources, Inc. and Ohio Power Company,* 155 FERC ¶ 61,102 at ¶ 8 (Order granting complaint) (April 27, 2016).

Q19. ***WAS RUNNING THE OVEC PLANTS IN 2019 IN THE CONSUMERS' BEST INTEREST?***

A19. No.

Q20. ***DID THE AUDITOR PROVIDE AN OPINION AS TO WHETHER RUNNING THE OVEC PLANTS IN 2019 WAS IN THE CONSUMERS' BEST INTEREST?***

A20. Yes. She initially wrote in her draft report (in the AEP case) that "keeping the plants running does not seem to be in the best interests of the ratepayers" and "LEI's analysis shows that the OVEC contract overall is not in the best interest of AEP Ohio ratepayers." But she deleted these statements from her final report at the suggestion of the PUCO Staff.

As background, the PUCO selected London Economics International LLC ("LEI") as the auditor for Duke's and AEP's OVEC costs. Marie Fagan of LEI served as the principal supervisor of both audits and was the principal author of both audit reports. LEI's audit reports in the Duke and AEP cases are virtually identical.

The Request for Proposals that the PUCO used to hire LEI stated that the auditor should determine whether "the Company's actions were in the best interest of retail ratepayers."[17] OCC obtained emails between the Staff and auditor through a public records request. The emails show that the auditor originally addressed this point from the RFP by writing in her draft report that "running the plants was not in the best interests of ratepayers." A copy of the emails, as obtained from the PUCO, is at Attachment MPH-3 to my testimony.

The above-described email exchange occurred between Ms. Mahalia Christopher of the PUCO Staff and Ms. Marie Fagan of London Economics. Based on the email exchange, the PUCO Staff received a draft of LEI's AEP/OVEC audit report. Ms. Christopher (PUCO Staff) emailed a reply suggesting that Ms. Fagan (LEI) should dial back the "tone and intensity" and delete certain language. Ms. Christopher's email for the Staff states:

> Please find attached Staff's initial comments on LEI's latest draft of the AEP Ohio, 2018-2019 PPA rider audit final report. This may help you get a head start on Staff's editorial suggestions. The comments can be discussed further at tomorrow's meeting.
>
> **If you could please note that Staff still needs final acquiescence from PUCO Admin. regarding the overall tone of the draft report! Staff's main observation regarding the tone of the draft is the following:
>
> • *Milder tone and intensity of language would be recommended such as the language on page 10, para 3: "Therefore, keeping the plants running does not seem to be in the best interests of the ratepayers*."

[17] *In re AEP OVEC Reconciliation Rider*, Case No. 18-1004-EL-RDR, Entry, Attachment RFP at 4 (January 15, 2020).

> * * *
>
> I am attaching a redlined Word version of the draft for your perusal/review. *If you could, please take a look and incorporate Staff's comments as far as possible?* Please let me know of any questions, comments, and concerns (Emphasis added).

Marie Fagan of LEI responded by saying:

> *I just realized there was an edit I wanted to make to page 10, where we said 'However, LEI's analysis shows that the OVEC contract overall is not in the best interest of AEP Ohio ratepayers.' that I missed in the last version of the report. I'll edit it when we get the version back from AEP Ohio next week-- I'll delete that sentence and tinker with the rest of the paragraph so it reads smoothly.* (Emphasis added).

Ms. Fagan's email also has a reference to AEP (but no other party) having the draft audit report for comment. That is unfair. OCC certainly did not receive the draft audit report from the PUCO Staff for comment.

In any event, following the above exchange between the PUCO Staff and London Economics, the final version of the AEP/OVEC and Duke/OVEC audit reports notably both lack London Economics' draft consumer protection sentence of "keeping the plants running does not seem to be in the best interests of the ratepayers." What an unfair result for Ohio consumers that this key consumer protection sentence disappeared from the draft audit report just days before its public filing.

Again, the PUCO's RFP required an auditor opinion on whether "the Company's actions were in the best interest of retail ratepayers." But when London Economics made that determination in favor of consumers and against the interest of AEP, its opinion was unwelcome at the PUCO. London Economics found in its draft audit report that "keeping the plants running does not seem to be in the best interests of the ratepayers." And then London Economics' consumer protection statement was gone, not to see the light of day in the filed audit report. What an unfair result for Ohio consumers.

Q21. DO YOU FIND IT APPROPRIATE FOR PUCO STAFF TO ASK THE AUDITOR TO REMOVE THE AUDITOR'S OPINION IN HER DRAFT REPORT THAT "KEEPING THE PLANTS RUNNING DOES NOT SEEM TO BE IN THE BEST INTERESTS OF THE RATEPAYERS?"

***A21*.** No. In my opinion, the auditor should have independence in its auditing, including from such influence by the PUCO. What is known is that the PUCO hired London Economics to offer an <u>independent</u> expert opinion on whether running the plants was in the consumers' best interests. The PUCO Staff should have left the auditor's opinion alone.

It is provided for in the RFP that the PUCO can review the draft audit report of London Economics.[18] The purpose for this review should be to allow the PUCO

[18] *In re AEP OVEC Reconciliation Rider*, Case No. 18-1004-EL-RDR, Entry, Attachment RFP at 9 (January 15, 2020).

Staff to check whether the draft report contains any confidential information and to check for any factual inaccuracies.

The PUCO hired the auditor to perform an <u>independent</u> audit: "This RFP encompasses an independent audit of the PPR rider…in compliance with the Commission's orders".[19] By writing to the auditor about changing her key consumer protection opinion, the PUCO Staff compromised the audit and the auditor's independence by interfering with the independent nature of the audit.

I recommend that the PUCO restore to the London Economics audit report the key sentences that were deleted. I also recommend that the PUCO replace the PUCO Staff in this case and in future OVEC audit cases going forward (including for tainted House Bill 6 coal bailout charges) with an audit oversight committee. The audit oversight committee should be from outside the PUCO, independent from utilities and politics, and sensitive to consumers, transparency and fairness (due process).

[19] *In re AEP OVEC Reconciliation Rider*, Case No. 18-1004-EL-RDR, Entry, Attachment RFP at 4 (January 15, 2020).

Q22. SHOULD THE PUCO DISALLOW ANY OF THE COSTS DUKE COLLECTED UNDER THE PRICE STABILIZATION RIDER?

A22. Yes. The PUCO should disallow the entire $24.6 million in above-market electricity costs that Duke collected under the PSR in 2019 because running the plants was not reasonable, not prudent, and not in the ratepayers' best interests.

B. IT WAS IMPRUDENT TO COMMIT THE OVEC PLANTS AS MUST RUN THROUGHOUT 2019.

Q23. HOW DOES THE PJM DAY-AHEAD ENERGY MARKET WORK?

A23. In the PJM Day-Ahead Energy Market, PJM matches generating units to the projected load. Generators will send in the prices they will offer for each hour the next day. The generating units are chosen from the lowest to the highest offers.

Q24. HOW DO GENERATING PLANTS OFFER INTO PJM ON A DAILY BASIS?

A24. Plants will offer in available load on an hourly basis. This is done based upon availability of the unit by hour and a corresponding price for each hour. For example, a merchant natural gas-fired plant will only run if it is economic for it to do so. It will offer into the market at the price needed to cover the variable operating costs. Conversely a large nuclear plant would more than likely offer in its full capacity at a very low price or even at $0.00/MWh; this is due to the nature of how a nuclear plant operates because it is too costly to shut-down and start-up.

This is called a "must run" offer because the owner wants the unit to clear the market for all hours of the day.

Q25. WHEN CHOOSING BETWEEN A "MUST RUN" AND AN "ECONOMIC" COMMITMENT, WHAT TYPE OF ANALYSIS SHOULD A REASONABLE PLANT OPERATOR PERFORM?

A25. The plant operator should do a daily analysis of the costs and expected revenues from participating in the Day-Ahead Energy Market. The analysis should cover not only that day, but the next several days ahead for units that are not easily turned on and off. If the analysis shows that the expected revenue will cover the plant's variable operating cost, then the operator can commit the plant to the Day-Ahead Energy Market. If the plant's variable operating costs, plus shut-down and start-up costs, are projected to exceed expected revenues for a few days or longer, then the operator should either designate the plant as economic or shut down the plant until prices recover.

Q26. DOES DUKE FOLLOW THIS PRACTICE IN OPERATING ITS OWN PLANTS OTHER THAN OVEC?

A26. Yes. I reviewed the testimony of Mr. John Swez in an Indiana Fuel Adjustment Clause case and this is the practice that Duke follows for its non-OVEC Indiana plants.

Q27. HOW WOULD YOU EXPECT A MERCHANT GENERATOR TO USE MUST-RUN VERSUS ECONOMIC COMMITMENT?

A27. Under normal operating conditions a merchant plant should use economic commitment when evaluating offers into the PJM Day-Ahead Energy Market. The focus of a merchant plant is to make money for its investors, so it needs to make the decision if it is better to run the plant or let it sit idle until it is economic to run. If the plant is not profitable over the long-term, then the operator must decide whether the plant should even remain in operation. OCC witness Devi Glick provides additional information on this topic.

Q28. DID OVEC FOLLOW THIS PRACTICE?

A28. No. OVEC operated all but one of its eleven units at the two plants (Kyger and Clifty) as must run at all times except when the plants were off-line due to an unplanned outage or for scheduled maintenance.

Q29. DOES THE AUDIT REPORT STATE WHETHER OVEC OPERATED THE PLANTS AS MUST RUN DURING ANY EXTENDED PERIODS OF TIME WHEN OVEC'S VARIABLE OPERATING COSTS EXCEEDED THE PJM MARKET PRICE?

A29. Yes, the auditor states "there were times during which the PJM DA [day-ahead] prices did not cover the variable cost of running the plants."[20] The auditor goes on

[20] LEI Audit Report at 53.

to say that the PJM prices were lower that the OVEC energy charges in five months during the audit period.[21]

Q30. WAS IT REASONABLE FOR OVEC TO OPERATE THE PLANTS WITH MUST RUN STATUS AT ALL TIMES?

A30. No, this led to consumers paying higher costs than they otherwise would have paid if OVEC had not used the must run commitment designation on those dates. But there were no repercussions for Duke to allow the units to be operated in this fashion because all losses were passed on to consumers. Ohio utilities having the PSR as a backstop to cover losses disincents a stringent evaluation of running plants versus shutting them down to control costs.

Q31. IS YOUR OPINION BASED ON 20/20 HINDSIGHT?

A31. No. OVEC failed to have an adequate process in place for doing a daily financial analysis of operating costs, plus shut-down and start-up costs, versus expected revenues. Without such a process, OVEC was flying blind. Under these conditions, it was predictable that there would be some days when OVEC designated the plants as must run and, on those days, the variable operating costs exceeded PJM market prices (meaning the plants would lose additional money that Ohioans would end up paying).

[21] *Id.*

This type of decision-making process would not occur for a merchant generating plant (in competition); if market prices are lower than operating costs for extended periods of time, the plant would not be operated. But Duke does not have to worry about the consequences of low market prices because it can pass on all its above-market energy costs to its consumers through the PSR. Interestingly, the OVEC Agreement that Duke, AEP and AES signed, appears to be an agreement that will enable the OVEC coal plants to continue operating even if Ohio stopped subsidizing Duke, AEP and AES. In other words, the Ohio utilities obligated themselves to OVEC regardless of subsidies and bailouts from Ohio consumers.

Q32. WHAT ACTION BY PUCO DO YOU RECOMMEND?

A32. As former Chairman Haque stated in his opinion approving the first OVEC bailout rider, the PSR should not be a blank check nor a trust account for utilities. But it appears as though Duke and the PUCO are not heeding Chair Haque's words – at the expense of Duke's consumers. The PUCO should disallow the entire $24.6 million in above-market PSR charges that were paid for by consumers.

For consumer protection, the PUCO must determine the justness, reasonableness and prudence of a utility's rates.[22] As I discussed earlier in my testimony, Duke failed to conduct a competitive bidding process before selecting the OVEC plants as a hedge on the SSO price. Duke's failure to use a competitive bidding process was unjust and unreasonable and imprudent, at consumers' expense. As a result, the PUCO should protect consumers by disallowing the entire $24.6 million in above-market costs collected by Duke.

III. CONCLUSION

Q33. DOES THIS CONCLUDE YOUR TESTIMONY?

A33. Yes, however I reserve the right to incorporate new information that may subsequently become available.

[22] R.C. 4909.15(A). *In re Application of Suburban Natural Gas Co.,* Slip Opinion No. 2021-Ohio-3224 ¶ 15; *see also* R.C. 4905.22.

CERTIFICATE OF SERVICE

I hereby certify that a true copy of the foregoing *Direct Testimony of Michael P. Haugh, on Behalf of the Office of the Ohio Consumers' Counsel* was served via electronic transmission upon the parties below this 26th day of October 2021.

/s/ John Finnigan
John Finnigan
Assistant Consumers' Counsel

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

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Public Utilities Commission of Ohio

Monongahela Power Company, Case No. 04-1047-EL-ATA

American Electric Power Company, Case No. 05-376-EL-UNC

Dayton Power and Light Company, Case No. 05-276-EL-AIR

Dominion East Ohio Company, Case No. 05-474-EL-ATA

Dominion East Ohio Company, Case No. 05-219-GA-GCR

Columbia Gas of Ohio, Case No. 05-221-GA-GCR

Duke Energy Ohio, Case No. 03-93-EL-ATA

American Electric Power, Case No. 07-63-EL-UNC

Eramet Marietta, Inc., Case No. 09-516-EL-AEC

TimkenSteel Corporation, Case No. 15-1857-EL-AEC

American Electric Power Company, Case No. 14-1693-EL-RDR

Columbia Gas of Ohio, Case No. 16-1309-GA-UNC

American Electric Power, Case No. 10-2929-EL-UNC

Dayton Power and Light, Case No. 16-395-EL-SSO

American Electric Power, Case No. 16-1852-EL-SSO

Duke Energy Ohio, Case No. 18-0218-GA-GCR

Michigan Public Service Commission

Michigan Consolidated Gas Company, Case No. U-17131

ANNUAL REPORT — 2020

OHIO VALLEY ELECTRIC CORPORATION

and subsidiary

INDIANA-KENTUCKY ELECTRIC CORPORATION

Ohio Valley Electric Corporation

GENERAL OFFICES, 3932 U.S. Route 23, Piketon, Ohio 45661

Ohio Valley Electric Corporation (OVEC) and its wholly owned subsidiary, Indiana-Kentucky Electric Corporation (IKEC), collectively, the Companies, were organized on October 1, 1952. The Companies were formed by investor-owned utilities furnishing electric service in the Ohio River Valley area and their parent holding companies for the purpose of providing the large electric power requirements projected for the uranium enrichment facilities then under construction by the Atomic Energy Commission (AEC) near Portsmouth, Ohio.

OVEC, AEC and OVEC's owners or their utility-company affiliates (called Sponsoring Companies) entered into power agreements to ensure the availability of the AEC's substantial power requirements. On October 15, 1952, OVEC and AEC executed a 25-year agreement, which was later extended through December 31, 2005 under a Department of Energy (DOE) Power Agreement. On September 29, 2000, the DOE gave OVEC notice of cancellation of the DOE Power Agreement. On April 30, 2003, the DOE Power Agreement terminated in accordance with the notice of cancellation.

OVEC and the Sponsoring Companies signed an Inter-Company Power Agreement (ICPA) on July 10, 1953, to support the DOE Power Agreement and provide for excess energy sales to the Sponsoring Companies of power not utilized by the DOE or its predecessors. Since the termination of the DOE Power Agreement on April 30, 2003, OVEC's entire generating capacity has been available to the Sponsoring Companies under the terms of the ICPA. The Sponsoring Companies and OVEC entered into an Amended and Restated ICPA, effective as of August 11, 2011, which extends its term to June 30, 2040.

OVEC's Kyger Creek Plant at Cheshire, Ohio, and IKEC's Clifty Creek Plant at Madison, Indiana, have nameplate generating capacities of 1,086,300 and 1,303,560 kilowatts, respectively. These two generating stations, both of which began operation in 1955, are connected by a network of 705 circuit miles of 345,000-volt transmission lines. These lines also interconnect with the major power transmission networks of several of the utilities serving the area.

The current Shareholders and their respective percentages of equity in OVEC are:

Allegheny Energy, Inc.[1]	3.50
American Electric Power Company, Inc.*	39.17
Buckeye Power Generating, LLC[2]	18.00
The Dayton Power and Light Company[3]	4.90
Duke Energy Ohio, Inc.[4]	9.00
Kentucky Utilities Company[5]	2.50
Louisville Gas and Electric Company[5]	5.63
Ohio Edison Company[1]	0.85
Ohio Power Company**[6]	4.30
Peninsula Generation Cooperative[7]	6.65
Southern Indiana Gas and Electric Company[8]	1.50
The Toledo Edison Company[1]	4.00
	100.00

The Sponsoring Companies are each either a shareholder in the Company or an affiliate of a shareholder in the Company, with the exception of Energy Harbor Corp. The Sponsoring Companies currently share the OVEC power participation benefits and requirements in the following percentages:

Allegheny Energy Supply Company LLC[1]	3.01
Appalachian Power Company[6]	15.69
Buckeye Power Generating, LLC[2]	18.00
The Dayton Power and Light Company[3]	4.90
Duke Energy Ohio, Inc.[4]	9.00
Energy Harbor Corp	4.85
Indiana Michigan Power Company[6]	7.85
Kentucky Utilities Company[5]	2.50
Louisville Gas and Electric Company[5]	5.63
Monongahela Power Company[1]	0.49
Ohio Power Company[6]	19.93
Peninsula Generation Cooperative[7]	6.65
Southern Indiana Gas and Electric Company[8]	1.50
	100.00

Some of the Common Stock issued in the name of:

*American Gas & Electric Company
**Columbus and Southern Ohio Electric Company

Subsidiary or affiliate of:
[1]FirstEnergy Corp.
[2]Buckeye Power, Inc.
[3]The AES Corporation
[4]Duke Energy Corporation
[5]PPL Corporation
[6]American Electric Power Company, Inc.
[7]Wolverine Power Supply Cooperative, Inc.
[8]CenterPoint Energy, Inc.

**OHIO VALLEY ELECTRIC CORPORATION
AND SUBSIDIARY COMPANY**

A Message from the President

Ohio Valley Electric Corporation (OVEC) and its subsidiary, Indiana-Kentucky Electric Corporation (IKEC), faced the 2020 challenge of COVID-19 and its impact on our business, our industry and our way of life. The OVEC-IKEC team stepped up to this challenge. Our employees have shown amazing perseverance while working in this new environment and continue to remain focused on achieving our goals of being a safe, reliable and environmentally compliant provider of choice.

For 2021, we look to achieve another year of improved unit availability, safety results and strong operating performance. Our success will be solely due to the great work of our employees and their efforts in creating a zero-harm culture, focusing on environmental stewardship, and using continuous improvement and LEAN tools to improve operating metrics and create cost optimization. OVEC-IKEC's employees continue to focus on our efforts for "better" and improving every day.

SAFETY

Our commitment to providing a safe and healthy place to work for all employees is our first priority. Clifty Creek employees completed two years with no recordable injuries in 2020. System Office employees have worked over 17 years without a lost-time injury. Electrical Operations have completed six years with no recordable injuries in 2020 as well. The company recordable and DART incident rates trended up in 2020 from the previous year, with year-end rates being 0.97 and 0.77, respectively. The goal is unchanged, zero-harm is the target.

In 2021, our safety focus is on effective and quality coaching in the field with our ongoing Supervisor Field Observation program. In alignment with Strategic Plan initiatives, a new Human Performance Improvement (HPI) Refocus program has been started at all facilities. In 2021, we will continue to strive to create and sustain a zero-harm culture for all working at OVEC-IKEC.

CULTURE

OVEC-IKEC remains on its continuous journey of culture improvement. Beginning in 2016, the company has seen significant improvement from the initial survey and continues to make improvements every year. OVEC-IKEC believes investing in culture improvement to engage our people will be the key to our long-term success. For 2021, we will continue with another survey to allow our teams to continue to focus on opportunities and update their culture action plans to enable improvement.

RELIABILITY

In 2020, the combined equivalent availability of the five generating units at Kyger Creek and the six units at Clifty Creek was 78.8 percent compared with 78.2 percent in 2019. The combined equivalent forced outage rate (EFOR) at both plants was 4.4 percent in 2020 compared with 5.8 percent in 2019.

Through May 2021, the combined EFOR of the eleven generating units was 5.5 percent.

ENERGY SALES

OVEC's use factor — the ratio of power scheduled by the Sponsoring Companies to power available — for the combined on- and off-peak periods averaged 60.8 percent in 2020 compared with 76.2 percent in 2019. The on-peak use factor averaged 68.6 percent in 2020 compared with 87.4 percent in 2019. The off-peak use factor averaged 50.9 percent in 2020 and 61.8 percent in 2019.

In 2020, OVEC delivered 9.0 million megawatt hours (MWh) to the Sponsoring Companies under the terms of the Inter-Company Power Agreement compared with 11.2 million MWh delivered in 2019. The reduction to both generation and utilization was due to impacts of COVID-19 on energy demand.

POWER COSTS

In 2020, OVEC's average power cost to the Sponsoring Companies was $67.00 per MWh compared with $57.04 per MWh in 2019. The total Sponsoring Company power costs were $605 million in 2020 compared with $641 million in 2019. Increased average power costs were directly related to reduced generation by the impact of COVID-19 on the energy demand.

2021 ENERGY SALES OUTLOOK

Through May, this year has provided an improved energy market, rebounding from COVID-19's historic negative impact in 2020. OVEC's total generation through June was approximately 5.2 million MWh compared to approximately 3.9 million MWh through June 2020. OVEC's updated projection for 2021, which assumes some continued improvement in the energy demand by the end of the year, is projected at approximately 10.5 million MWh of generation.

COST CONTROL INITIATIVES

The OVEC and IKEC employees continue to strive to control costs and improve operating performance through application of its continuous improvement process (CIP). Since 2013, CIP has obtained over $26.5 million in sustainable savings through implementation of over 6,000 process improvements. Employee-driven process improvements and a continued effort in hands-on skill development with CIP and LEAN tools throughout the Company are driving the sustainability of the continuous improvement efforts.

In 2020, OVEC-IKEC continued utilizing the LEAN tool of Open Book Leadership (OBL) as a cost-control initiative to further improve our culture and overall business success. OBL is a management philosophy that focuses on empowering employees by providing them the information, education and communication necessary to understand how the Company performs and how they can impact that performance. The OBL process creates transparency of Company performance and engages employees in their ability to impact and improve key performance areas.

For 2021, OVEC is working to optimize operating cost and available generation, during this unprecedented time.

ENVIRONMENTAL COMPLIANCE

OVEC-IKEC continues to maintain a strong commitment to meeting all applicable federal, state and local environmental rules and regulations. During 2020, OVEC operated in substantial compliance with the Mercury Air Toxics Standards (MATS), the Cross-State Air Pollution Rule (CSAPR) and other applicable state and federal air, water and solid waste regulations. In addition, for the fourth consecutive year, OVEC successfully met the challenge of operating in compliance with the more stringent ozone season NO_x constraints that went into effect with the 2017 ozone season with the adoption of EPA's CSAPR Update Rule. The Company is well positioned to continue to operate all SCR controlled units during 2021 and all future ozone seasons within the constraints of the current CSAPR Update Rule.

Clifty Creek and Kyger Creek both continue to sell nearly all of the gypsum produced at each plant into the wallboard market. Clifty Creek has also been successful in marketing fly ash, and OVEC anticipates that market to continue to grow longer term. Kyger Creek will also pursue a marketing agreement for its dry fly ash in 2023 and beyond following the completion of the dry fly ash conversion project at that Station

2020 was also a year of transition relative to key regulatory and legal actions that impact Company operations with respect to environmental compliance. The regulatory actions taken in 2020 included USEPA issuing a final Coal Combustion Residuals (CCR), Part A Rule that requires the closure of all clay lined and unlined surface impoundments receiving CCR material, and USEPA issuing final revised steam electric effluent limitation guideline (ELG) regulations applicable to certain wastewater discharges from Clifty Creek and Kyger Creek operations. OVEC-IKEC prepared for these regulatory actions and has already initiated the multi-year environmental compliance projects needed to meet requirements in the new ELG and CCR rule requirements.

A Legal decision issued by the D.C. Circuit Court in 2020 also resulted in the vacature of the federal Affordable Clean Energy (ACE) Rule. OVEC will continue to monitor and evaluate the impacts of the D.C. Circuit Court decision on the ACE Rule, additional litigation challenging that decision, and the next steps the current administration may take to issue a replacement regulation relative to utility sector carbon emissions. OVEC will also continue monitoring other regulatory initiatives that may impact the utility sector.

In the interim, the Company continues to work toward executing our compliance strategies for complying with obligations associated with the current CCR rule, the current ELG rule and the Clean Water Act Section 316(b) regulations applicable to both facilities.

BOARD OF DIRECTORS AND OFFICERS CHANGES

On July 31, 2020, Mr. Justin J. Cooper was elected Vice President, Chief Operating Officer and Chief Financial Officer of the Companies following the retirement of Mr. Robert A. Osborne. Mr. Osborne had served as OVEC-IKEC's Vice President since 2015.

On July 31, 2020, Ms. Kassandra K. Martin was elected Secretary and Treasurer of OVEC and IKEC, replacing Mr. Justin J. Cooper who transitioned to the Vice President position.

On October 1, 2020, Ms. Julie Sloat, Executive Vice President and Chief Financial Officer of AEP, was elected a director of OVEC following the resignation of Ms. Lana L. Hillebrand. Ms. Hillebrand had served as an OVEC director since 2013. Ms. Sloat was appointed Chairperson of the Human Resource Committee, replacing Ms. Hillebrand.

On December 15, 2020, Mr. Gustavo Garavaglia, Vice President and Chief Financial Officer of Dayton Power & Light, was elected a director of OVEC following the resignation of Mr. Mark E. Miller. Mr. Miller had served as an OVEC director since 2015.

Paul Chodak III
OVEC-IKEC President

July 22, 2021

OHIO VALLEY ELECTRIC CORPORATION AND SUBSIDIARY COMPANY

CONSOLIDATED BALANCE SHEETS
AS OF DECEMBER 31, 2020 AND 2019

	2020	2019
ASSETS		
ELECTRIC PLANT:		
At original cost	$ 2,869,460,850	$ 2,793,490,793
Less—accumulated provisions for depreciation	1,648,697,601	1,563,780,062
	1,220,763,249	1,229,710,731
Construction in progress	18,727,452	13,208,832
Total electric plant	1,239,490,701	1,242,919,563
CURRENT ASSETS:		
Cash and cash equivalents	50,835,059	32,241,171
Accounts receivable	44,900,548	74,486,689
Fuel in storage	79,328,652	61,351,858
Emission allowances	143,905	291,681
Materials and supplies	40,428,263	40,931,063
Income taxes receivable	-	2,307,853
Property taxes applicable to future years	3,255,000	3,150,000
Prepaid expenses and other	4,031,567	2,817,715
Total current assets	222,922,994	217,578,030
REGULATORY ASSETS:		
Unrecognized postemployment benefits	6,833,166	5,201,536
Unrecognized pension benefits	34,784,688	32,170,308
Income taxes billable to customers	10,751,917	-
Total regulatory assets	52,369,771	37,371,844
DEFERRED CHARGES AND OTHER:		
Unamortized debt expense	382,580	688,643
Long-term investments	273,951,093	240,739,279
Income taxes receivable	-	2,307,341
Other	1,488,586	2,510,636
Total deferred charges and other	275,822,259	246,245,899
TOTAL	$ 1,790,605,725	$ 1,744,115,336

(Continued)

OHIO VALLEY ELECTRIC CORPORATION AND SUBSIDIARY COMPANY

CONSOLIDATED BALANCE SHEETS
AS OF DECEMBER 31, 2020 AND 2019

	2020	2019
CAPITALIZATION AND LIABILITIES		
CAPITALIZATION:		
Common stock, $100 par value—authorized, 300,000 shares; outstanding, 100,000 shares in 2020 and 2019	$ 10,000,000	$ 10,000,000
Long-term debt	1,009,833,026	1,119,568,409
Line of credit borrowings	60,000,000	80,000,000
Retained earnings	20,104,306	17,294,023
Total capitalization	1,099,937,332	1,226,862,432
CURRENT LIABILITIES:		
Current portion of long-term debt	194,982,570	141,387,803
Accounts payable	37,908,306	34,871,926
Accrued other taxes	11,247,988	10,527,047
Regulatory liabilities	20,718,951	7,677,404
Accrued interest and other	26,547,150	27,532,934
Total current liabilities	291,404,965	221,997,114
COMMITMENTS AND CONTINGENCIES (Notes 3, 9, 11, and 12)		
REGULATORY LIABILITIES:		
Postretirement benefits	64,415,536	76,162,798
Income taxes refundable to customers	-	8,658,897
Advance billing of debt reserve	120,000,000	90,000,000
Decommissioning, demolition and other	-	14,718,161
Total regulatory liabilities	184,415,536	189,539,856
OTHER LIABILITIES:		
Pension liability	34,784,688	32,170,308
Deferred income tax liability	19,410,815	-
Asset retirement obligations	138,933,456	63,487,038
Postretirement benefits obligation	11,995,106	4,242,848
Postemployment benefits obligation	6,833,166	5,201,536
Other non-current liabilities	2,890,661	614,204
Total other liabilities	214,847,892	105,715,934
TOTAL	$ 1,790,605,725	$ 1,744,115,336

See notes to consolidated financial statements. (Concluded)

OHIO VALLEY ELECTRIC CORPORATION AND SUBSIDIARY COMPANY

CONSOLIDATED STATEMENTS OF INCOME AND RETAINED EARNINGS
FOR THE YEARS ENDED DECEMBER 31, 2020 AND 2019

	2020	2019
REVENUES FROM CONTRACTS WITH		
CUSTOMERS—Sales of electric energy to:		
Department of Energy	$ 3,265,537	$ 4,641,167
Sponsoring Companies	547,668,086	606,993,408
Other	784,078	3,033,066
Total revenues from contracts with customers	551,717,701	614,667,641
OPERATING EXPENSES:		
Fuel and emission allowances consumed in operation	231,316,036	274,843,402
Purchased power	2,545,280	3,735,333
Other operation	73,452,698	91,611,162
Maintenance	78,628,228	87,208,116
Depreciation	82,237,657	88,825,066
Taxes—other than income taxes	12,203,087	11,330,963
Income taxes	-	(2,912,531)
Total operating expenses	480,382,986	554,641,511
OPERATING INCOME (LOSS)	71,334,715	60,026,130
OTHER INCOME (EXPENSE)	86,805	24,280,007
INCOME BEFORE INTEREST CHARGES	71,421,520	84,306,137
INTEREST CHARGES:		
Amortization of debt expense	4,288,807	4,204,163
Interest expense	64,322,430	77,046,683
Total interest charges	68,611,237	81,250,846
NET INCOME	2,810,283	3,055,291
RETAINED EARNINGS—Beginning of year	17,294,023	14,238,732
RETAINED EARNINGS—End of year	$ 20,104,306	$ 17,294,023

See notes to consolidated financial statements.

OHIO VALLEY ELECTRIC CORPORATION AND SUBSIDIARY COMPANY

CONSOLIDATED STATEMENTS OF CASH FLOWS
FOR THE YEARS ENDED DECEMBER 31, 2020 AND 2019

	2020	2019
OPERATING ACTIVITIES:		
Net income	$ 2,810,283	$ 3,055,291
Adjustments to reconcile net income to net cash provided by (used in) operating activities:		
Depreciation	82,237,657	88,825,066
Amortization of debt expense	4,288,807	4,204,163
Loss (gain) on marketable securities	-	(16,672,791)
Changes in assets and liabilities:		
Accounts receivable	29,586,141	(10,207,793)
Fuel in storage	(17,976,794)	(27,877,672)
Materials and supplies	502,800	(296,420)
Property taxes applicable to future years	(105,000)	(87,500)
Emissions allowances	147,776	6,674
Income tax receivable	2,307,853	2,382,211
Prepaid expenses and other	(1,213,852)	(641,810)
Other regulatory assets	(4,246,010)	9,392,126
Other noncurrent assets	3,329,391	1,042,342
Accounts payable	1,215,500	(5,360,967)
Accrued taxes	720,941	(198,718)
Accrued interest and other	(950,127)	6,869,743
Decommissioning, demolition and other	12,914,757	11,899,339
Other liabilities	15,277,153	(3,242,134)
Other regulatory liabilities	17,373,170	15,662,796
Net cash provided by operating activities	148,220,446	78,753,946
INVESTING ACTIVITIES:		
Electric plant additions	(12,899,927)	(12,474,714)
Proceeds from sale of long-term investments	198,124,748	55,360,283
Purchases of long-term investments	(234,468,776)	(98,155,238)
Net cash (used in) provided by investing activities	(49,243,955)	(55,269,669)
FINANCING ACTIVITIES:		
Debt issuance and maintenance costs	(2,068,564)	(3,849,380)
Repayment of Senior 2006 Notes	(23,333,029)	(22,029,278)
Repayment of Senior 2007 Notes	(16,591,089)	(15,648,462)
Repayment of Senior 2008 Notes	(18,130,679)	(16,992,682)
Reissuance 2009A Bonds	-	25,000,000
Redemption of 2009E Bonds	-	(100,000,000)
Issuance of 2019A Bonds	-	100,000,000
Proceeds from line of credit	25,000,000	10,000,000
Payments on line of credit	(45,000,000)	(15,000,000)
Principal payments under capital leases	(259,242)	(246,860)
Net cash (used in) provided by financing activities	(80,382,603)	(38,766,662)
NET INCREASE (DECREASE) IN CASH AND CASH EQUIVALENTS	$ 18,593,888	$ (15,282,385)
CASH AND CASH EQUIVALENTS—Beginning of year	32,241,171	47,523,556
CASH AND CASH EQUIVALENTS—End of year	$ 50,835,059	$ 32,241,171
SUPPLEMENTAL DISCLOSURES OF CASH FLOW INFORMATION:		
Interest paid	$ 64,526,922	$ 75,703,531
Income taxes (received) paid—net	$ (4,615,202)	$ (4,690,064)
Non-cash electric plant additions included in accounts payable at December 31	$ 2,102,982	$ 58,516

See notes to consolidated financial statements.

OHIO VALLEY ELECTRIC CORPORATION AND SUBSIDIARY COMPANY

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
AS OF AND FOR THE YEARS ENDED DECEMBER 31, 2020 AND 2019

1. ORGANIZATION AND SIGNIFICANT ACCOUNTING POLICIES

Consolidated Financial Statements—The consolidated financial statements include the accounts of Ohio Valley Electric Corporation (OVEC) and its wholly owned subsidiary, Indiana-Kentucky Electric Corporation (IKEC), collectively, the Companies. All intercompany transactions have been eliminated in consolidation.

Organization—The Companies own two generating stations located in Ohio and Indiana with a combined electric production capability of approximately 2,256 megawatts. OVEC is owned by several investor-owned utilities or utility holding companies and two affiliates of generation and transmission rural electric cooperatives. These entities or their affiliates comprise the Sponsoring Companies. The Sponsoring Companies purchase power from OVEC according to the terms of the Inter-Company Power Agreement (ICPA), which has a current termination date of June 30, 2040. Approximately 24% of the Companies' employees are covered by a collective bargaining agreement that expires on August 31, 2021.

Prior to 2004, OVEC's primary commercial customer was the U.S. Department of Energy (DOE). The contract to provide OVEC-generated power to the DOE was terminated in 2003 and all obligations were settled at that time. Currently, OVEC has an agreement to arrange for the purchase of power (Arranged Power), under the direction of the DOE, for resale directly to the DOE. The current agreement with the DOE was executed on July 11, 2018, for one year, with the option for the DOE to extend the agreement at the anniversary date.The agreement was extended on July 11, 2020, for one year. OVEC anticipates that this agreement could continue to 2027. All purchase costs are billable by OVEC to the DOE.

Rate Regulation—The proceeds from the sale of power to the Sponsoring Companies are designed to be sufficient for OVEC to meet its operating expenses and fixed costs, as well as earn a return on equity before federal income taxes. In addition, the proceeds from power sales are designed to cover debt amortization and interest expense associated with financings. The Companies have continued and expect to continue to operate pursuant to the cost-plus rate of return recovery provisions at least to June 30, 2040, the date of termination of the ICPA.

The accounting guidance for Regulated Operations provides that rate-regulated utilities account for and report assets and liabilities consistent with the economic effect of the way in which rates are established, if the rates established are designed to recover the costs of providing the regulated service and it is probable that such rates can be charged and collected. The Companies follow the accounting and reporting requirements in accordance with the guidance for Regulated Operations. Certain expenses and credits subject to utility regulation or rate determination normally reflected in income are deferred in the accompanying consolidated balance sheets and are recognized as income as the related amounts are included in service rates and recovered from or refunded to customers.

The Companies' regulatory assets, liabilities, and amounts authorized for recovery through Sponsor billings at December 31, 2020 and 2019, were as follows:

	2020	2019
Regulatory assets:		
Noncurrent regulatory assets:		
Unrecognized postemployment benefits	$ 6,833,166	$ 5,201,536
Unrecognized pension benefits	34,784,688	32,170,308
Income taxes billable to customers	10,751,917	-
Total	52,369,771	37,371,844
Total regulatory assets	$ 52,369,771	$ 37,371,844
Regulatory liabilities:		
Current regulatory liabilities:		
Deferred revenue—advances for construction	$ 19,371,880	$ 6,182,811
Deferred credit—advance collection of interest	1,347,071	1,494,593
Total	20,718,951	7,677,404
Noncurrent regulatory liabilities:		
Postretirement benefits	64,415,536	76,162,798
Income taxes refundable to customers	-	8,658,897
Advance billing of debt reserve	120,000,000	90,000,000
Decommissioning, demolition and other	-	14,718,161
Total	184,415,536	189,539,856
Total regulatory liabilities	$ 205,134,487	$ 197,217,260

Regulatory Assets—Regulatory assets consist primarily of pension benefit costs, postemployment benefit costs, income taxes, and accrued decommissioning and demolition costs to be billed to the Sponsoring Companies in future years. The Companies' current billing policy for pension and postemployment benefit costs is to bill its actual plan funding.

Regulatory Liabilities—The regulatory liabilities classified as current in the accompanying consolidated balance sheet as of December 31, 2020, consist primarily of interest expense collected from customers in advance of expense recognition and customer billings for construction in progress. These amounts will be credited to customer bills during 2021. Other regulatory liabilities consist primarily of postretirement benefit costs and advanced billings collected from the Sponsoring Companies for debt service.

The regulatory liability for postretirement benefits recorded at December 31, 2020 and 2019, represents amounts collected in historical billings in excess of the accounting principles generally accepted in the United States of America (GAAP) net periodic benefit costs, including a termination payment from the DOE in 2003 for unbilled postretirement benefit costs, and incremental unfunded plan obligations recognized in the balance sheets but not yet recognizable in GAAP net periodic benefit costs.

In January 2017, the Companies started advance billing the Sponsoring Companies for debt service as allowed under the ICPA. As of December 31, 2020 and 2019, $120 million and $90 million, respectively, had been advance billed to the Sponsoring Companies. As the Companies have not yet incurred the related costs, a regulatory liability was recorded which will be credited to customer bills on a long-term basis.

Cash and Cash Equivalents—Cash and cash equivalents primarily consist of cash and money market funds and their carrying value approximates fair value. For purposes of these statements, the Companies consider temporary cash investments to be cash equivalents since they are readily convertible into cash and have original maturities of less than three months.

Electric Plant—Property additions and replacements are charged to utility plant accounts. Depreciation expense is recorded at the time property additions and replacements are billed to customers or at the date the property is placed in service if the in-service date occurs subsequent to the customer billing. Customer billings for construction in progress are recorded as deferred revenue—advances for construction. These amounts are closed to revenue at the time the related property is placed in service. Depreciation expense and accumulated depreciation are recorded when financed property additions and replacements are recovered over a period of years through customer debt retirement billing. All depreciable property will be fully billed and depreciated prior to the expiration of the ICPA. Repairs of property are charged to maintenance expense.

Fuel in Storage, Emission Allowances, and Materials and Supplies—The Companies maintain coal, reagent, and oil inventories, as well as emission allowances, for use in the generation of electricity for regulatory compliance purposes due to the generation of electricity. These inventories are valued at average cost. Materials and supplies consist primarily of replacement parts necessary to maintain the generating facilities and are valued at average cost.

Long-Term Investments—Long-term investments consist of marketable securities that are held for the purpose of funding decommissioning and demolition costs, debt service, potential postretirement funding, and other costs. These debt securities have been classified as trading securities in accordance with the provisions of the accounting guidance for Investments—Debt and Equity Securities. Debt and equity securities reflected in long- term investments are carried at fair value. Beginning in 2020, the unrealized gain or loss is reported in Regulatory Liability (Asset). The cost of securities sold is based on the specific identification cost method. The fair value of most investment securities is determined by reference to currently available market prices. Where quoted market prices are not available, the Companies use the market price of similar types of securities that are traded in the market to estimate fair value. See Fair Value Measurements in Note 10. Long-term investments primarily consist of municipal bonds, money market mutual fund investments, and mutual funds. Net unrealized gains (losses) recognized during 2020 and 2019 on securities still held at the balance sheet date were $3,840,821 and $16,445,716, respectively.

Fair Value Measurements of Assets and Liabilities—The accounting guidance for Fair Value Measurements and Disclosures establishes a fair value hierarchy that prioritizes the inputs used to measure fair value. The hierarchy gives the highest priority to unadjusted quoted prices in active markets for identical assets or liabilities (Level 1 measurements) and the lowest priority to unobservable inputs (Level 3 measurements). Where observable inputs are available, pricing may be completed using comparable securities, dealer values, and general market conditions to determine fair value. Valuation models utilize various inputs that include quoted prices for similar assets or liabilities in active markets, quoted prices for identical or similar assets or liabilities in inactive markets, and other observable inputs for the asset or liability.

Unamortized Debt Expense—Unamortized debt expense relates to costs incurred in connection with obtaining revolving credit agreements. These costs are being amortized over the term of the related revolving credit agreement and are recorded as an asset in the consolidated balance sheets. Costs incurred to issue debt are recorded as a reduction to long-term debt as presented in Note 6.

Asset Retirement Obligations and Asset Retirement Costs—The Companies recognize the fair value of legal obligations associated with the retirement or removal of long-lived assets at the time the obligations are incurred and can be reasonably estimated. The initial recognition of this liability is accompanied by a corresponding increase in depreciable electric plant. Subsequent to the initial recognition, the liability is adjusted for any revisions to the expected value of the retirement obligation (with corresponding adjustments to electric plant) and for accretion of the liability due to the passage of time.

These asset retirement obligations are primarily related to obligations associated with future asbestos abatement at certain generating stations and certain plant closure costs, including the impacts of the coal combustion residuals rule.

Balance—January 1, 2019	$ 60,246,682
Accretion	3,275,262
Liabilities settled	(34,906)
Revisions to cash flows	-
Balance—December 31, 2019	63,487,038
Accretion	3,476,310
Liabilities settled	-
Revisions to cash flows	71,970,108
Balance—December 31, 2020	$ 138,933,456

In 2020, the U.S. EPA finalized several changes to the regulations for coal combustion residuals. These changes included a final rule that all unlined surface impoundments are required to retrofit or close, not just those that have detected groundwater contamination above regulatory levels. The rule also changes the classification of certain surface impoundments from "lined" to "unlined." Finally, the rule establishes a revised date, April 11, 2021, by which unlined surface impoundments and units that failed the aquifer location restriction must cease receiving waste and initiate closure or retrofit, unless a company files for an extension of that date, which the Companies have done and is further discussed in

Note 9. As a result of these rule changes and the potential for new, more restrictive rules under a new presidential administration, the Companies decided to accelerate the timing of remediation activities related to their coal ash ponds and landfills. This resulted in an upward revision to projected cash flows and an increase in the resulting asset retirement obligations in 2020, as disclosed in the table above. Changes in the regulations, or in the remediation technologies could potentially result in material increases in the asset retirement obligation. The Companies will revisit the studies as appropriate throughout the process of executing remediation related to the coal ash ponds and landfills to maintain an accurate estimated cost of remediation.

The Companies do not recognize liabilities for asset retirement obligations for which the fair value cannot be reasonably estimated. The Companies have asset retirement obligations associated with transmission assets. However, the retirement date for these assets cannot be determined; therefore, the fair value of the associated liability currently cannot be estimated and no amounts are recognized in the consolidated financial statements herein.

Income Taxes—The Companies use the liability method of accounting for income taxes. Under the liability method, the Companies provide deferred income taxes for all temporary differences between the book and tax basis of assets and liabilities, which will result in a future tax consequence. The Companies account for uncertain tax positions in accordance with the accounting guidance for income taxes.

Use of Estimates—The preparation of consolidated financial statements in conformity with GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the consolidated financial statements and the reported amounts of revenues and expenses during the reporting period. Actual results could differ from those estimates.

Revenue Recognition—Revenue is recognized when the Companies transfer promised goods or services to customers in an amount that reflects the consideration to which the Companies expect to be entitled in exchange for those goods or services. Performance obligations related to the sale of electric energy are satisfied over time as system resources are made available to customers and as energy is delivered to customers and the Companies recognize revenue upon billing the customer.

The Companies have three contracts with customers resulting in three types of revenue. These three contracted revenue types are:

1) Sales of Electric Energy to Department of Energy
2) Sales of Electric Energy to Sponsoring Companies
3) Sales of Electric Energy to Pennsylvania, Jersey, Maryland Power Pool (PJM)

The performance obligations and recognition of revenue are similar and both individually and, in the aggregate, were not materially impacted by the implementation of Topic 606. The Companies have no contract assets or liabilities as of December 31, 2020. The following table provides information about the Companies' receivables from contracts with customers:

	Accounts Receivable
Beginning balance as of January 1, 2019	$ 64,278,896
Ending balance as of December 31, 2019	74,486,689
Increase/(decrease)	$ 10,207,793
Beginning balance as of January 1, 2020	$ 74,486,689
Ending balance as of December 31, 2020	$ 44,900,548
	$ (29,586,141)

Recently Issued Accounting Standards—In June 2016, the FASB issued ASU 2016-13, *Financial Instruments—Credit Losses (Topic 326): Measurement of Credit Losses on Financial Instruments*. The pronouncement changes the impairment model for most financial assets, replacing the current "incurred loss" model. ASU 2016-13 will require the use of an "expected loss" model for instruments measured at amortized cost and will also require entities to record allowances for available-for-sale debt securities rather than reduce the carrying amount. The Companies adopted ASC 326 effective January 1, 2020, using a modified retrospective method of adoption. Results for the reporting periods beginning after January 1, 2020, are presented under ASC 326, while prior periods are not adjusted.

Subsequent Events—In preparing the accompanying financial statements and disclosures, the Companies reviewed subsequent events through April 27, 2021, which is the date the consolidated financial statements were issued.

2. RELATED-PARTY TRANSACTIONS

Transactions with the Sponsoring Companies during 2020 and 2019 included the sale of all generated power to them, the purchase of arranged power from them, and other utility systems in order to meet the DOE's power requirements, contract barging services, railcar services, and minor transactions for services and materials. The Companies have Power Agreements with Louisville Gas and Electric Company, Duke Energy Ohio, Inc., The Dayton Power and Light Company, Kentucky Utilities Company, Ohio Edison Company, and American Electric Power Service Corporation as agent for the American Electric Power System Companies; and Transmission Service Agreements with Louisville Gas and Electric Company, Duke Energy Ohio, Inc., The Dayton Power and Light Company, The Toledo Edison Company, Ohio Edison Company, Kentucky Utilities Company, and American Electric Power Service Corporation as agent for the American Electric Power System Companies.

At December 31, 2020 and 2019, balances due from the Sponsoring Companies are as follows:

	2020	**2019**
Accounts receivable	$37,633,208	$66,926,922

During 2020 and 2019, American Electric Power accounted for approximately 44% of operating revenues from Sponsoring Companies and Buckeye Power accounted for 18%. No other Sponsoring Company accounted for more than 10%.

American Electric Power Company, Inc. and subsidiary companies owned 43.47% of the common stock of OVEC as of December 31, 2020. The following is a summary of the principal services received from the American Electric Power Service Corporation as authorized by the Companies' Boards of Directors:

	2020	**2019**
General services	$ 2,761,173	$ 4,830,104
Specific projects	257,787	119,157
Total	$ 3,018,960	$ 4,949,261

General services consist of regular recurring operation and maintenance services. Specific projects primarily represent nonrecurring plant construction projects and engineering studies, which are approved by the Companies' Boards of Directors. The services are provided in accordance with the service agreement dated December 15, 1956, between the Companies and the American Electric Power Service Corporation.

3. COAL SUPPLY

The Companies have coal supply agreements with certain nonaffiliated companies that expire at various dates from the year 2020 through 2023. Pricing for coal under these contracts is subject to contract provisions and adjustments. The Companies currently have 100% of their 2020 coal requirements under contract. These contracts are based on rates in effect at the time of contract execution. The Companies' total obligations under these agreements as of December 31, 2020, are included in the table below:

2021	$181,692,000
2022	112,722,000
2023	41,100,000

4. ELECTRIC PLANT

Electric plant at December 31, 2020 and 2019, consists of the following:

	2020	2019
Steam production plant	$ 2,774,455,039	$2,698,568,508
Transmission plant	81,986,558	81,986,558
General plant	12,992,689	12,909,163
Intangible	26,564	26,564
	2,869,460,850	2,793,490,793
Less accumulated depreciation	1,648,697,601	1,563,780,062
	1,220,763,249	1,229,710,731
Construction in progress	18,727,452	13,208,832
Total electric plant	$ 1,239,490,701	$1,242,919,563

All property additions and replacements are fully depreciated on the date the property is placed in service, unless the addition or replacement relates to a financed project. As the Companies' policy is to bill in accordance with the debt service schedule under the debt agreements, all financed projects are being depreciated in amounts equal to the principal payments on outstanding debt.

5. BORROWING ARRANGEMENTS AND NOTES

OVEC has a revolving credit facility of $185 million set to expire on April 25, 2022. At December 31, 2020 and 2019, OVEC had borrowed $60 million and $80 million, respectively, under lines of credit. Interest expense related to lines of credit borrowings was $1,860,768 in 2020 and $3,757,148 in 2019. During 2020 and 2019, OVEC incurred annual commitment fees of $308,303 and $268,285, respectively, based on the borrowing limits of the line of credit.

6. LONG-TERM DEBT

The following amounts were outstanding at December 31, 2020 and 2019:

	Interest Rate Type	Interest Rate	2020	2019
Senior 2006 Notes:				
2006A due February 15, 2026	Fixed	5.80 %	$ 146,533,289	$ 168,569,904
2006B due June 15, 2040	Fixed	6.40	52,846,460	54,142,874
Senior 2007 Notes:				
2007A-A due February 15, 2026	Fixed	5.90	64,250,051	74,610,818
2007A-B due February 15, 2026	Fixed	5.90	16,180,745	18,790,003
2007A-C due February 15, 2026	Fixed	5.90	16,309,586	18,939,620
2007B-A due June 15, 2040	Fixed	6.50	26,354,033	27,012,831
2007B-B due June 15, 2040	Fixed	6.50	6,637,764	6,802,916
2007B-C due June 15, 2040	Fixed	6.50	6,690,005	6,857,084
Senior 2008 Notes:				
2008A due February 15, 2026	Fixed	5.92	20,059,786	23,292,665
2008B due February 15, 2026	Fixed	6.71	40,716,172	47,301,931
2008C due February 15, 2026	Fixed	6.71	42,874,648	49,367,759
2008D due June 15, 2040	Fixed	6.91	38,486,303	39,387,935
2008E due June 15, 2040	Fixed	6.91	39,155,024	40,072,323
Series 2009 Bonds:				
2009A due February 1, 2026	Fixed	2.88	25,000,000	25,000,000
2009B due February 1, 2026	Floating	2.01	25,000,000	25,000,000
2009C due February 1, 2026	Floating	2.01	25,000,000	25,000,000
2009D due February 1, 2026	Fixed	2.88	25,000,000	25,000,000
Series 2010 Bonds:				
2010A due November 1, 2030	Fixed	3.00	50,000,000	50,000,000
2010B due February 1, 2040	Floating	2.01	50,000,000	50,000,000
Series 2012 Bonds:				
2012A due June 1, 2032	Fixed	5.00	76,800,000	76,800,000
2012A due June 1, 2039	Fixed	5.00	123,200,000	123,200,000
2012B due November 1, 2030	Fixed	3.00	50,000,000	50,000,000
2012C due November 1, 2030	Fixed	3.00	50,000,000	50,000,000
Series 2017 Notes:				
2017A due September 6, 2022	Floating	4.37	100,000,000	100,000,000
Series 2019 Bonds:				
2019A due September 1, 2029	Fixed	3.25	100,000,000	100,000,000
Total debt			1,217,093,866	1,275,148,663
Total premiums and discounts (net)			(415,266)	(437,865)
Less unamortized debt expense			(11,863,004)	(13,754,586)
Total debt net of premiums, discounts, and unamortized debt expense			1,204,815,596	1,260,956,212
Current portion of long-term debt			194,982,570	141,387,803
Total long-term debt			$ 1,009,833,026	$ 1,119,568,409

All of the OVEC amortizing unsecured senior notes have maturities scheduled for February 15, 2026, or June 15, 2040, as noted in the previous table.

In 2009, the Ohio Air Quality Development Authority (the "OAQDA") issued the variable-rate, non-amortizing, tax-exempt State of Ohio Air Quality Revenue Bonds (Ohio Valley Electric Corporation Project) in four series (the "Series 2009A", the "Series 2009B", the "Series 2009C", and the "Series 2009D") of $25 million each and $100 million fixed-rate non-amortizing tax-exempt State of Ohio Air Quality Revenue Bonds (Ohio Valley Electric Corporation Project) (the "Series 2009E Bonds"), the proceeds of which were used to finance a portion of OVEC's costs of acquiring, constructing and installing certain solid waste disposal facilities comprising "air quality facilities," as defined in Chapter 3706, Ohio Revised Code, as amended, for Units 1–5 of the Kyger Creek Plant. OVEC is obligated to make payments under loan agreements between OVEC and OAQDA equal to the principal and interest payments due on such bonds, among other payments.

The Series 2009B and Series 2009C Bonds were remarketed in August 2016, for a five- year interest period that extends to August 25, 2021. On August 14, 2019, the Series 2009A Bonds and Series 2009D Bonds were each reoffered with a fixed interest rate of 2.875% per annum for the period beginning on August 28, 2019 and ending on February 1, 2026. In addition, in August 2019, the OAQDA issued the State of Ohio Air Quality Revenue Refunding Bonds (Ohio Valley Electric Corporation Project), Series 2019A in an aggregate principal amount of $100 million (the "Series 2019A Bonds"), with a fixed interest rate of 3.25% per annum for the period beginning August 28, 2019 to September 1, 2029, the proceeds of which were used to refund the Series 2009E, which were scheduled to mature on October 1, 2019. The Series 2019A bonds begin amortizing in 2026. The Series 2009B and the Series 2009C Bonds are to be remarketed in 2021.

In December 2010, OVEC established a borrowing facility under which OVEC borrowed, in 2011, $100 million variable-rate bonds due on February 1, 2040. In June 2011, the $100 million variable-rate bonds were reissued by the Indiana Finance Authority (the "IFA") as two series of $50 million variable-rate, non-amortizing, tax-exempt bonds: the Series 2010A Bonds, with an interest period of three years and the Series 2010B Bonds, with an interest period of five years. The Series 2010B Bonds were remarketed in August 2016 for another five-year interest period ending on August 25, 2021. The Series 2010A Bonds were remarketed in June 2014 for a three-year period and in September 2017 for another three-year period that extended to August 4, 2020. The Series 2010A Bonds were remarketed in July 2020 with a fixed interest rate of 3.0% per annum for the period beginning July 9, 2020 to November 1, 2030. The Series 2010A Bonds begin amortizing in 2026. The Series 2010B Bonds are to be remarketed in 2021.

During 2012, the IFA issued $200 million fixed-rate, tax-exempt Midwestern Disaster Relief Revenue Bonds (Ohio Valley Electric Corporation Project) (the "Series 2012A Bonds") and two series of $50 million each, variable-rate, tax-exempt bonds: the Series 2012B Bonds and the Series 2012C Bonds. The Series 2012A Bonds will begin amortizing on June 1, 2027, up to its maturity date. OVEC is obligated to make payments under loan agreements between OVEC and the IFA equal to the principal and interest payments due on such bonds, among other payments.

In 2017, the Series 2012B Bonds and the Series 2012C Bonds, which had been secured by irrevocable transferable direct-pay letters of credit, were remarketed with four-year and five-year interest periods expiring August 4, 2021 and August 4, 2022, respectively. In July 2020, the Series 2012B and Series 2012C Bonds were refinanced with a fixed interest rate of 3.0%

per annum for the period beginning July 9, 2020 to November 1, 2030. The Series 2012B Bonds and the Series 2012C bonds begin amortizing in 2026.

During 2017, OVEC issued $100 million 2017A variable-rate non-amortizing unsecured senior notes ("2017A Notes") to refinance and retire a 2013 series of notes ("2013A Notes"). The 2013A Notes had an original maturity date of February 15, 2018. The 2017A Notes have an annual repayment of $33,333,333 on September 6, 2020, September 6, 2021, and at the maturity date of September 6, 2022. In 2020, pursuant to the 2017A Notes agreement, the lenders executed their consent to decline the first installment payment and defer payment of such amount until maturity.

The annual maturities of long-term debt as of December 31, 2020, are as follows:

2021	$ 194,982,570
2022	132,134,224
2023	69,523,395
2024	73,831,592
2025	78,243,501
2026–2041	668,378,584
Total	$1,217,093,866

Note that the 2021 maturities include $100 million variable-rate bonds subject to remarketing in August 2021.

7. INCOME TAXES

OVEC and IKEC file a consolidated federal income tax return. The effective tax rate varied from the statutory federal income tax rate due to differences between the book and tax treatment of various transactions as follows:

	2020	2019
Income tax expense at statutory rate (21%)	$ 590,159	$ 29,980
Temporary differences flowed through to customer bills	(591,673)	(2,948,492)
Permanent differences and other	1,514	5,981
Income tax provision	$ -	$ (2,912,531)

Components of the income tax provision were as follows:

	2020	2019
Current income tax expense—federal	$ -	$ (2,912,531)
Current income tax (benefit)/expense—state	-	-
Deferred income tax expense/(benefit)—federal	-	-
Total income tax provision	$ -	$ (2,912,531)

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OVEC and IKEC record deferred tax assets and liabilities based on differences between book and tax basis of assets and liabilities measured using the enacted tax rates and laws that will be in effect when the differences are expected to reverse. Deferred tax assets and liabilities are adjusted for changes in tax rates.

To the extent that the Companies have not reflected charges or credits in customer billings for deferred tax assets and liabilities, they have recorded a regulatory asset or liability representing income taxes billable or refundable to customers under the applicable agreements among the parties. These temporary differences will be billed or credited to the Sponsoring Companies through future billings. The regulatory asset was $10,751,917 and regulatory liability was $8,658,898 at December 31, 2020 and 2019, respectively.

Deferred income tax assets (liabilities) at December 31, 2020 and 2019, consisted of the following:

	2020	2019
Deferred tax assets:		
Deferred revenue—advances for construction	$ 4,072,606	$ 1,299,537
Federal net operating loss carryforwards	26,854,145	39,691,784
Postretirement benefit obligation	2,521,765	891,785
Pension liability	7,418,001	7,034,974
Postemployment benefit obligation	1,436,556	1,093,288
Asset retirement obligations	29,208,377	13,344,057
Advanced collection of interest and debt service	25,511,141	19,230,828
Miscellaneous accruals	1,146,349	1,154,630
Regulatory liability—postretirement benefits	13,542,262	16,008,318
Regulatory liability—asset retirement costs	-	3,093,544
Regulatory liability—income taxes refundable to customers	-	4,549,301
Total deferred tax assets	111,711,201	107,392,046
Deferred tax liabilities:		
Prepaid expenses	(501,970)	(384,597)
Electric plant	(90,448,307)	(81,887,070)
Unrealized gain/loss on marketable securities	(4,184,852)	(4,348,230)
Regulatory asset—pension benefits	(7,312,884)	(6,719,696)
Regulatory asset—asset retirement costs	-	-
Regulatory asset—unrecognized postemployment benefits	(1,436,556)	(1,093,288)
Regulatory asset—income taxes billable to customers	(2,257,902)	-
Total deferred tax liabilities	(106,142,472)	(94,432,881)
Valuation allowance	(24,979,544)	(12,959,165)
Deferred income tax liability	$ (19,410,815)	$ -

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Because future taxable income may prove to be insufficient to recover the Companies' gross deferred tax assets, the Companies have recorded a valuation allowance for their deferred tax assets as of December 31, 2020 and 2019. The valuation allowance required against the gross deferred tax assets results in the Companies recording an overall deferred tax liability in 2020.

The accounting guidance for Income Taxes addresses the determination of whether the tax benefits claimed or expected to be claimed on a tax return should be recorded in the financial statements. Under this guidance, the Companies may recognize the tax benefit from an uncertain tax position only if it is more likely than not that the tax position will be sustained on examination by the taxing authorities, based on the technical merits of the position. The tax benefits recognized in the financial statements from such a position are measured based on the largest benefit that has a greater than 50% likelihood of being realized upon ultimate settlement. The Companies have not identified any uncertain tax positions as of December 31, 2020 and 2019, and accordingly, no liabilities for uncertain tax positions have been recognized.

The Companies file income tax returns with the Internal Revenue Service and the states of Ohio, Indiana, and the Commonwealth of Kentucky. The Companies are no longer subject to federal tax examinations for tax years 2016 and earlier. The Companies are no longer subject to State of Indiana tax examinations for tax years 2016 and earlier. The Companies are no longer subject to Ohio and the Commonwealth of Kentucky examinations for tax years 2015 and earlier. The Companies have $127,876,880 of Federal Net Operating Loss carryovers that begin to expire in 2034.

8. PENSION PLAN AND OTHER POSTRETIREMENT AND POSTEMPLOYMENT BENEFITS

The Companies have a noncontributory qualified defined benefit pension plan (the Pension Plan) covering substantially all of their employees hired prior to January 1, 2015. The benefits are based on years of service and each employee's highest consecutive 36-month compensation period. Employees are vested in the Pension Plan after five years of service with the Companies.

Funding for the Pension Plan is based on actuarially determined contributions, the maximum of which is generally the amount deductible for income tax purposes and the minimum being that required by the Employee Retirement Income Security Act of 1974, as amended.

In addition to the Pension Plan, the Companies provide certain health care and life insurance benefits (Other Postretirement Benefits) for retired employees. Substantially, all of the Companies' employees hired prior to January 1, 2015, become eligible for these benefits if they reach retirement age while working for the Companies. These and similar benefits for active employees are provided through employer funding and insurance policies. In December 2004, the Companies established VEBA trusts. In January 2011, the Companies established an Internal Revenue Code Section 401(h) account under the Pension Plan.

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The full cost of the pension benefits and other postretirement benefits has been allocated to OVEC and IKEC in the accompanying consolidated financial statements. The allocated amounts represent approximately a 53% and 47% split between OVEC and IKEC, respectively, as of December 31, 2020, and approximately a 56% and 44% split between OVEC and IKEC, respectively, as of December 31, 2019.

The Pension Plan's assets as of December 31, 2020, consist of investments in equity and debt securities. All of the trust funds' investments for the pension and postemployment benefit plans are diversified and managed in compliance with all laws and regulations. Management regularly reviews the actual asset allocation and periodically rebalances the investments to targeted allocation when appropriate. The investments are reported at fair value under the Fair Value Measurements and Disclosures accounting guidance.

All benefit plan assets are invested in accordance with each plan's investment policy. The investment policy outlines the investment objectives, strategies, and target asset allocations by plan. Benefit plan assets are reviewed on a formal basis each quarter by the OVEC-IKEC Qualified Plan Trust Committee.

The investment philosophies for the benefit plans support the allocation of assets to minimize risks and optimize net returns.

Investment strategies include:

- Maintaining a long-term investment horizon.
- Diversifying assets to help control volatility of returns at acceptable levels.
- Managing fees, transaction costs, and tax liabilities to maximize investment earnings.
- Using active management of investments where appropriate risk/return opportunities exist.
- Keeping portfolio structure style neutral to limit volatility compared to applicable benchmarks.

The target asset allocation for each portfolio is as follows:

Pension Plan Assets	**Target**
Domestic equity	15 %
International and global equity	15
Fixed income	68
Cash	2

VEBA Plan Assets	**Target**
Domestic equity	20 %
International and global equity	20
Fixed income	60

Each benefit plan contains various investment limitations. These limitations are described in the investment policy statement and detailed in customized investment guidelines. These investment guidelines require appropriate portfolio diversification and define security concentration limits. Each investment manager's portfolio is compared to an appropriate diversified benchmark index.

Equity investment limitations:

- No security in excess of 5% of all equities.
- Cash equivalents must be less than 10% of each investment manager's equity portfolio.
- Individual securities must be less than 15% of each manager's equity portfolio.
- No investment in excess of 5% of an outstanding class of any company.
- No securities may be bought or sold on margin or other use of leverage.

Fixed-Income Limitations—As of December 31, 2020, the Pension Plan fixed-income allocation consists of managed accounts composed of U.S. Government, corporate, and municipal obligations. The VEBA benefit plans' fixed-income allocation is composed of a variety of fixed-income securities and mutual funds. Investment limitations for these fixed-income funds are defined by manager prospectus.

Cash Limitations— Cash and cash equivalents are held in each trust to provide liquidity and meet short-term cash needs. Cash equivalent funds are used to provide diversification and preserve principal. The underlying holdings in the cash funds are investment grade money market instruments, including money market mutual funds, certificates of deposit, treasury bills, and other types of investment-grade short-term debt securities. The cash funds are valued each business day and provide daily liquidity.

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NOTES TO CONSOLIDATED FINANCIAL STATEMENTS AS OF AND FOR THE YEARS ENDED DECEMBER 31, 2020 AND 2019

Projected Pension Plan and Other Postretirement Benefits obligations and funded status as of December 31, 2020 and 2019, are as follows:

	Pension Plan		Other Postretirement Benefits	
	2020	2019	2020	2019
Change in projected benefit obligation:				
Projected benefit obligation—beginning of year	$ 244,541,899	$ 234,099,137	$ 159,833,696	$ 151,305,246
Service cost	6,919,404	6,078,450	3,867,790	3,428,368
Interest cost	8,652,849	10,082,144	5,595,528	6,571,166
Plan participants' contributions	-	-	1,339,527	1,312,941
Benefits paid	(13,391,815)	(8,079,496)	(6,912,071)	(6,795,047)
Net actuarial loss (gain)	29,783,513	30,255,836	14,510,766	21,462
Plan amendments (1)	-	-	-	3,989,560
Settlement (2)	-	(27,857,703)	-	-
Expenses paid from assets	(71,538)	(36,469)	-	-
Projected benefit obligation—end of year	276,434,312	244,541,899	178,235,236	159,833,696
Change in fair value of plan assets:				
Fair value of plan assets—beginning of year	212,371,591	200,204,812	155,590,848	141,118,649
Actual return on plan assets	32,441,386	42,540,447	16,186,032	19,940,452
Expenses paid from assets	(71,538)	(36,469)	-	-
Employer contributions	10,300,000	5,600,000	35,794	13,853
Plan participants' contributions	-	-	1,339,527	1,312,941
Benefits paid	(13,391,815)	(8,079,496)	(6,912,071)	(6,795,047)
Settlement	-	(27,857,703)	-	-
Fair value of plan assets—end of year	241,649,624	212,371,591	166,240,130	155,590,848
Underfunded status—end of year	$ (34,784,688)	$ (32,170,308)	$ (11,995,106)	$ (4,242,848)

(1) The $3.9M plan amendment is the result of the change of the long-term retiree cost sharing through retiree contributions for pre-65 retirees from 20% to 12%.

(2) The $27.9M settlement is the result of an annuity purchase of about $22.7M for 162 retirees and beneficiaries which was paid on November 25, 2019 and the lump sums payments totaling about $5.2M during 2019.

See Note 1 for information regarding regulatory assets related to the Pension Plan and Other Postretirement Benefits plan.

OHIO VALLEY ELECTRIC CORPORATION AND SUBSIDIARY COMPANY

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS AS OF AND FOR THE YEARS ENDED DECEMBER 31, 2020 AND 2019

The accumulated benefit obligation for the Pension Plan was $246,035,532 and $218,590,886 at December 31, 2020 and 2019, respectively.

Components of Net Periodic Benefit Cost—The Companies record the expected cost of Other Postretirement Benefits over the service period during which such benefits are earned.

Pension expense is recognized as amounts are contributed to the Pension Plan and billed to customers. The accumulated difference between recorded pension expense and the yearly net periodic pension expense, as calculated under generally accepted accounting principles, is billable as a cost of operations under the ICPA when contributed to the pension fund. This accumulated difference has been recorded as a regulatory asset in the accompanying consolidated balance sheets.

	Pension Plan		Other Postretirement Benefits	
	2020	2019	2020	2019
Service cost	$ 6,919,404	$ 6,078,450	$ 3,867,790	$ 3,428,368
Interest cost	8,652,849	10,082,144	5,595,528	6,571,166
Expected return on plan assets	(12,231,210)	(11,867,776)	(7,948,184)	(7,515,431)
Amortization of prior service cost	(416,565)	(416,565)	(2,781,539)	(3,145,420)
Recognized actuarial loss (gain)	815,085	1,234,195	(766,517)	-
Cost of settlements	-	3,570,924	-	-
Total benefit cost	$ 3,739,563	$ 8,681,372	$ (2,032,922)	$ (661,317)
Pension and other postretirement benefits expense recognized in the consolidated statements of income and retained earnings and billed to Sponsoring Companies under the ICPA	$ 5,800,000	$ 5,600,000	$ -	$ -

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The following table presents the classification of Pension Plan assets within the fair value hierarchy at December 31, 2020 and 2019:

	Fair Value Measurements at Reporting Date Using			
2020	**Quoted Prices in Active Market for Identical Assets (Level 1)**	**Significant Other Observable Inputs (Level 2)**	**Significant Unobservable Inputs (Level 3)**	**Total**
Common stock	$ 11,191,580	$ -	$ -	$ 11,191,580
Equity mutual funds	53,315,439	-	-	533,158,439
Index futures	-	232	-	232
Fixed-income securities	-	157,072,275	-	157,072,275
Commodities	-	43	-	43
Cash equivalents	5,718,922	-	-	5,718,922
Subtotal benefit plan assets	$ 70,225,941	$ 157,072,550	$ -	227,298,491
Investments measured at net asset value (NAV)				14,351,133
Total benefit plan assets				$241,649,624
2019	**(Level 1)**	**(Level 2)**	**(Level 3)**	**Total**
Common stock	$ 8,792,346	$ -	$ -	$ 8,792,346
Equity mutual funds	42,776,633	-	-	42,776,633
Index futures	-	230	-	230
Fixed-income securities	-	140,413,999	-	140,413,999
Commodities	-	43	-	43
Cash equivalents	7,154,484	-	-	7,154,484
Subtotal benefit plan assets	$ 58,723,463	$ 140,414,272	$ -	199,137,735
Investments measured at net asset value (NAV)				13,233,857
Total benefit plan assets				$212,371,592

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The following table presents the classification of VEBA and 401(h) account assets within the fair value hierarchy at December 31, 2020 and 2019:

	Fair Value Measurements at Reporting Date Using			
2020	**Quoted Prices in Active Market for Identical Assets (Level 1)**	**Significant Other Observable Inputs (Level 2)**	**Significant Unobservable Inputs (Level 3)**	**Total**
Equity mutual funds	$ 61,519,280	$ -	$ -	$ 61,519,280
Fixed-income mutual funds	79,992,711	-	-	79,992,711
Fixed-income securities	-	19,910,040	-	19,910,040
Cash equivalents	1,403,900	-	-	1,403,900
Benefit plan assets	$142,915,891	$ 19,910,040	$ -	162,825,931
Uncleared cash disbursements from benefits paid				(5,536,750)
Investments measured at net asset value (NAV)				8,950,949
Total benefit plan assets				$ 166,240,130
2019	**(Level 1)**	**(Level 2)**	**(Level 3)**	**Total**
Equity mutual funds	$ 54,952,087	$ -	$ -	$ 54,952,087
Fixed-income mutual funds	75,428,176	-	-	75,428,176
Fixed-income securities	-	21,122,393	-	21,122,393
Cash equivalents	1,175,475	-	-	1,175,475
Benefit plan assets	$131,555,738	$ 21,122,393	$ -	152,678,131
Uncleared cash disbursements from benefits paid				(5,468,253)
Investments measured at net asset value (NAV)				8,380,969
Total benefit plan assets				$ 155,590,847

Investments that were measured at net asset value (NAV) per share (or its equivalent) as a practical expedient have not been classified in the fair value hierarchy. These investments represent holdings in a single private investment fund that are redeemable at the election of the holder upon no more than 30 days' notice. The values reported above are based on information provided by the fund manager.

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Pension Plan and Other Postretirement Benefit Assumptions—Actuarial assumptions used to determine benefit obligations at December 31, 2020 and 2019, were as follows:

	Pension Plan		Other Postretirement Benefits			
	2020	2019	2020		2019	
			Medical	Life	Medical	Life
Discount rate	2.85 %	3.58 %	2.82 %	2.82 %	3.55 %	3.55 %
Rate of compensation increase	3.00	3.00	N/A	3.00	N/A	3.00

Actuarial assumptions used to determine net periodic benefit cost for the years ended December 31, 2020 and 2019, were as follows:

	2020	2019	2020		2019	
			Medical	Life	Medical	Life
Discount rate	3.58 %	4.40 %	3.55 %	3.55 %	4.40 %	4.40 %
Expected long-term return on plan assets	5.75	6.00	5.11	5.75	5.33	6.00
Rate of compensation increase	3.00	3.00	N/A	3.00	N/A	3.00

In selecting the expected long-term rate of return on assets, the Companies considered the average rate of earnings expected on the funds invested to provide for plan benefits. This included considering the Pension Plan and VEBA trusts' asset allocation, and the expected returns likely to be earned over the life of the Pension Plan and the VEBAs.

Assumed health care cost trend rates at December 31, 2020 and 2019, were as follows:

	2020	2019
Health care trend rate assumed for next year—participants under 65		
Health care trend rate assumed for next year—participants over 65	6.50 %	7.00 %
Rate to which the cost trend rate is assumed to decline (the ultimate trend rate)—participants under 65	6.80	7.30
Rate to which the cost trend rate is assumed to decline (the ultimate trend rate)—participants over 65	5.00	5.00
Year that the rate reaches the ultimate trend rate	5.00	5.00
	2024	2024

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Assumed health care cost trend rates have a significant effect on the amounts reported for the health care plans. A one-percentage-point change in assumed health care cost trend rates would have the following effects:

	One-Percentage-Point Increase	One-Percentage-Point Decrease
Effect on total service and interest cost	$ 1,167,960	$ (957,902)
Effect on postretirement benefit obligation	21,697,182	(17,801,770)

Pension Plan and Other Postretirement Benefit Assets—The asset allocation for the Pension Plan and VEBA trusts at December 31, 2020 and 2019, by asset category was as follows:

	Pension Plan		VEBA Trusts	
	2020	2019	2020	2019
Asset category:				
Equity securities	33 %	31 %	41 %	39 %
Debt securities	67	69	59	61

Pension Plan and Other Postretirement Benefit Contributions—The Companies expect to contribute $6,000,000 to their Pension Plan and $25,400 to their Other Postretirement Benefits plan in 2021.

Estimated Future Benefit Payments—The following benefit payments, which reflect expected future service, as appropriate, are expected to be paid:

Years Ending December 31	Pension Plan	Other Postretirement Benefits
2021	$ 10,340,070	$ 7,163,164
2022	11,128,901	7,606,599
2023	11,750,475	8,114,635
2024	12,727,758	8,667,211
2025	12,723,903	9,162,833
Five years thereafter	69,056,395	50,538,385

Postemployment Benefits—The Companies follow the accounting guidance in FASB ASC 712, *Compensation—Non-Retirement Postemployment Benefits*, and accrue the estimated cost of benefits provided to former or inactive employees after employment but before retirement. Such benefits include, but are not limited to, salary continuations, supplemental unemployment, severance, disability (including workers' compensation), job training, counseling, and continuation of benefits, such as health care and life insurance coverage. The cost of such benefits and related obligations has been allocated to OVEC and IKEC in the accompanying consolidated financial statements. The allocated amounts represent approximately a 37% and 63% split between OVEC and IKEC, respectively, as of December 31, 2020, and approximately a 42% and 58% split between OVEC and IKEC, respectively, as of December 31, 2019. The liability is offset with a corresponding regulatory asset and represents unrecognized postemployment benefits billable in the future to customers. The accrued cost of such benefits was $6,833,166 and $5,201,536 at December 31, 2020 and 2019, respectively.

Defined Contribution Plan—The Companies have a trustee-defined contribution supplemental pension and savings plan that includes 401(k) features and is available to employees who have met eligibility requirements. The Companies' contributions to the savings plan equal 100% of the first 1% and 50% of the next 5% of employee- participants' pay contributed. In addition, the Companies provide contributions to eligible employees, hired on or after January 1, 2015, of 3% to 5% of pay based on age and service. Benefits to participating employees are based solely upon amounts contributed to the participants' accounts and investment earnings. By its nature, the plan is fully funded at all times. The employer contributions for 2020 and 2019 were $1,920,461 and $1,966,847, respectively.

9. ENVIRONMENTAL MATTERS

Air Regulations

On March 10, 2005, the United States Environmental Protection Agency (the U.S. EPA) issued the Clean Air Interstate Rule (CAIR) that required significant reductions of SO2 and NOx emissions from coal-burning power plants. On March 15, 2005, the U.S. EPA also issued the Clean Air Mercury Rule (CAMR) that required significant mercury emission reductions for coal-burning power plants. These emission reductions were required in two phases: 2009 and 2015 for NOx, 2010 and 2015 for SO2 and 2010 and 2018 for mercury. Ohio and Indiana subsequently finalized their respective versions of CAIR and CAMR. In response, the Companies determined that it would be necessary to install flue gas desulfurization (FGD) systems at both plants to comply with these rules. Following completion of the necessary engineering and permitting, construction was started on the FGD systems, and the two Kyger Creek FGD systems were placed into service in 2011 and 2012, while the two Clifty Creek FGD systems were placed into service in 2013.

After the promulgation of CAIR and CAMR, a series of legal challenges to those rules resulted in their replacement with additional rules. CAMR was replaced with a rule referred to as the Mercury and Air Toxics Standards (MATS) rule. The rule became final on April 16, 2012, and the Companies had to demonstrate compliance with MATS emission limits on April 16, 2015. The MATS rule has also undergone legal challenges since it went into effect, and there are a few remaining legal issues pending. The controls the Companies have installed have proven to be adequate to meet the stringent emissions requirements outlined in the MATS rule.

After CAIR was promulgated, legal challenges resulted in that rule being remanded back to the U.S. EPA. The U.S. EPA subsequently promulgated a replacement rule to CAIR called the Cross-State Air Pollution Rule (CSAPR). CSAPR was issued on July 6, 2011, and it was scheduled to go into effect on January 1, 2012. However, a legal challenge of that rule resulted in a stay. The stay was lifted by the D.C. Circuit Court in 2014 and CSAPR, which requires significant NOx and SO2 emissions reductions, became effective on January 1, 2015. Further legal challenges of CSAPR resulted in the U.S. Supreme Court remanding portions of the CSAPR rule back to the D.C. Circuit Court for additional review and subsequent action by the U.S. EPA. This resulted in U.S. EPA issuing the CSAPR Update rule which became final on September 7, 2016, and went into effect beginning with the May 1, 2017 to September 30, 2017 ozone season. The CSAPR Update did not replace CSAPR, it only required additional reductions in NOx emissions from utilities in 22 states (including Ohio and Indiana) during the ozone season. The Companies prepared for and implemented a successful compliance strategy for the CSAPR Update rule requirements in the 2017 ozone season. That strategy was standardized to meet future ozone season compliance obligations, and its execution provided for another successful ozone season in 2019. The CSAPR Update Rule has also been subject to extensive litigation, and the D.C. Circuit Court of Appeals issued a decision on September 13, 2019, on one of those legal challenges that remanded portions of this rule back to U.S. EPA to address. On October 15, 2020, the EPA issued a proposed revision to the CSAPR Update in response to the court remand; and on March 15, 2021, U.S. EPA Administer Regan signed a final rule revising the CSAPR Update. This rule will go into effect in the summer of 2021, 60-days after it is formally published in the *Federal Register*. The Companies are not currently anticipating that this new rule will impact our near term compliance strategy or materially change future operations.

As a result of the installation and effective operation of the FGD systems and the SCR systems at each plant, management did not need to purchase additional annual SO2 allowances, annual NOx allowances or ozone season NOx allowances in 2020 to cover actual emissions. The Companies also maintain a bank of allowances for all three programs as a hedge to cover future emissions in the event of any short-term operating events or other external factors. Depending on a variety of operational and economic factors, management may elect to consume a portion of these banked allowances and/or strategically purchase additional CSAPR annual and ozone season allowances in 2021 and beyond for compliance with the CSAPR and the recently revised CSAPR Update rules.

With all FGD systems fully operational, the Companies continue to expect to have adequate SO2 allowances available every year without having to rely on market purchases to comply with the CSAPR rules in their current form. Given the success of the Companies' NOx ozone season compliance strategy, the purchase of additional NOx allowances is less likely in the short term as well; however, the Companies did implement changes in unit dispatch criteria for Clifty Creek Unit 6 during the 2017 and subsequent ozone seasons and are continuing to evaluate the need for additional NOx controls for this unit to provide additional flexibility in operating this unit in light of recent changes to the CSAPR Update rules that are expected to go into effect during the 2021 NOx ozone season.

CCR Rule

In 2010, the U.S. EPA published a proposed rule to regulate the disposal and beneficial reuse of coal combustion residuals (CCRs), including fly ash and boiler slag generated at coal-fired electric generating units as well as FGD gypsum generated at some coal-fired plants. The proposed rule contained two alternative proposals. One proposal would impose federal

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hazardous waste disposal and management standards on these materials and another would allow states to retain primary authority to regulate the beneficial reuse and disposal of these materials under state solid waste management standards, including minimum federal standards for disposal and management. Both proposals would impose stringent requirements for the construction of new coal ash landfills and existing unlined surface impoundments.

Various environmental organizations and industry groups filed a petition seeking to establish deadlines for a final rule. To comply with a court-ordered deadline, the U.S. EPA issued a prepublication copy of its final rule in December 2014. The rule was published in the Federal Register in April 2015 and became effective in October 2015.

In the final rule, the U.S. EPA elected to regulate CCR as a nonhazardous solid waste and issued new minimum federal solid waste management standards. The rule applies to new and existing active CCR landfills and CCR surface impoundments at operating electric utility or independent power production facilities. The rule imposes new and additional construction and operating obligations, including location restrictions, liner criteria, structural integrity requirements for impoundments, operating criteria, and additional groundwater monitoring requirements. The rule is self-implementing and currently does not require state action for the states of Indiana or Ohio. As a result of this self-implementing feature, the rule contains extensive recordkeeping, notice, and Internet posting requirements.

The Companies have been systematically implementing the applicable provisions of the CCR rule. The Companies have completed all compliance obligations associated with the rule to date and are continuing to evaluate what, if any, impacts groundwater quality will have on the South Fly Ash Pond and landfill at Kyger Creek and the West Boiler Slag Pond and landfill at Clifty Creek. To date, these four CCR units continue to meet the groundwater monitoring standards of the CCR rule. The Companies have been evaluating potential impacts to groundwater quality near the boiler slag pond at Kyger Creek and the landfill runoff collection pond at Clifty Creek as required by the CCR rule. The Companies have determined that statistically significant increases (SSIs) in certain groundwater parameters are present at the two identified locations, and additional steps as defined by the CCR rule were taken. The evaluation of whether an SSI exists is a required component of the groundwater monitoring conditions of the CCR rule. A determination that an SSI appears to be present requires additional evaluation to be undertaken by the facility to determine if there are alternative sources that are influencing groundwater quality and to evaluate the extent of the groundwater quality impact. Concurrently, a facility must continue to evaluate groundwater quality as required by the CCR rule, and determine what potential corrective actions are feasible to address the SSIs. The Companies conducted Alternative Source Demonstrations (ASD) to determine if groundwater was being influenced from sources other than the CCR unit. The ASDs were unable to definitively prove that alternative sources were directly influencing groundwater quality. As a result, the Companies worked with their Qualified Professional Engineer (QPE) to determine what corrective actions were feasible for each CCR unit, and then held a public meeting to discuss these options with the public prior to selecting a remedy. The Companies continue to work through the compliance requirements of the CCR Rule and remain in compliance.

Since the initial publication of the CCR rules in 2015, several legal, legislative and regulatory events impacting the scope, applicability and future CCR compliance obligations and timelines

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have also taken place. Final actions include: 1.) federal legislation (i.e., the WIIN Act) that provides a pathway for states to seek approval for administering and enforcing the federal CCR program; 2.) U.S. EPA's issuance of a Phase I, Part I revision to the CCR rules on March 1, 2018; 3.) the D.C. Circuit Court's August 21, 2018, ruling vacating and remanding portions of the CCR rule; 4.) U.S. EPA's issuance of a final CCR Rule, Part A, which was published in the *Federal Register* on August 28, 2020. This final rule introduced a significant revision to the 2015 CCR rule requiring all impoundments that do not meet the liner requirements outlined in the rule to cease receiving CCR material and initiate closure by April 11, 2021, regardless of their overall compliance status. If that date is not technically feasible, an alternate date to cease receiving CCR material and initiate closure can be secured from U.S. EPA through a proposed extension request process, which was required by U.S. EPA no later than November 30, 2020. The surface impoundments at Kyger Creek and Clifty Creek were not constructed in a manner that meets the definition of a liner under the 2015 CCR rule. As a result, the Companies completed an engineering evaluation to develop preliminary closure designs for the impoundments and to determine a technically feasible timeline for discontinuing placement of CCR and non-CCR wastestreams in these impoundments and to initiate closure of the CCR impoundments consistent with the requirements of the rule. The Companies submitted technical justification documents to U.S. EPA in compliance with the November 30, 2020, deadline that demonstrated why additional time is needed to cease placement of CCR and non-CCR wastestreams in the surface impoundments and initiate closure. The Companies anticipate U.S. EPA will approve the alternative schedule at this time. However, U.S. EPA is still reviewing the Companies' justifications at the time of the development of this footnote. The Companies anticipate that U.S. EPA will provide feedback in the first half of 2021. Separately, the proposed Part B revisions to the 2015 CCR rule outline the development of a federal permitting program to regulate and enforce the CCR rule at all applicable facilities consistent with the Congressional mandate outlined in the WIIN Act. This federal permit program would replace the current enforcement mechanism of a self-implementing rule enforced through citizen suits and place it back with U.S. EPA or any state regulatory that receives primacy to implement the CCR permitting within their respective state. The Companies are actively monitoring these developments and adapting their CCR compliance program to ensure compliance obligations and timelines are adjusted accordingly. Changes in regulations or in the Companies' strategies for mitigating the impact of coal combustion residuals could potentially result in material increases to the asset retirement obligations. The Companies will revisit the demolition and decommissioning studies as appropriate throughout the process of executing closure of the CCR surface impoundments to maintain an accurate estimated cost of ultimate facility closure and decommissioning.

In February 2014, the U.S. EPA completed a risk evaluation of the beneficial uses of coal fly ash in concrete and FGD gypsum in wallboard and concluded that the U.S. EPA supports these beneficial uses. Currently, approximately 65 percent of the coal ash and other residual products from the Companies' generating facilities are reused in the production of cement and wallboard, as soil amendments, as abrasives or road treatment materials, and for other beneficial uses.

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NAAQS Compliance for SO_2

On June 22, 2010, the U.S. EPA revised the Clean Air Act by developing and publishing a new one-hour SO_2 NAAQS of 75 parts per billion, which replaced the previously existing 24-hour and annual standards, and became effective on August 23, 2010. States with areas failing to meet the standard were required to develop state implemented plans to expeditiously attain and maintain the standard.

On August 15, 2013, the U.S. EPA published its initial non-attainment area designations for the new one-hour SO_2, which did not include the areas around Kyger Creek or Clifty Creek. However, the amended rule does establish that at a minimum, sources that emit 2,000 tons SO_2 or more per year be characterized by their respective states using either modeling of actual source emissions or through appropriately sited ambient air quality monitors.

In addition, U.S. EPA entered into a settle agreement with Sierra Club/NRDC in the U.S. District Court for the Northern District of California requiring U.S. EPA to take certain actions, including completing area designation by July 2, 2016, for areas with either monitored violations based on 2013-15 air quality monitoring or sources not announced for retirement that emitted more than 16,000 tons SO_2 or more than 2,600 tons with a 0.45 SO_2/mmBtu emission rate in 2012.

Both Kyger Creek and Clifty Creek directly or indirectly triggered one of the criteria and have been evaluated by the respective state regulatory agencies through modeling. The modeling results showed Clifty Creek could meet the new one-hour SO_2 limit using their current scrubber systems without any additional investment or modifications. Kyger Creek's modeling data was rejected by U.S. EPA as inconclusive in 2016. As a result, U.S. EPA required Kyger Creek install an SO_2 monitoring network around the plant and monitor ambient air quality beginning on January 1, 2017. Based on the first three years of data from that network, Ohio EPA prepared an updated petition to U.S. EPA in early 2020 requesting that the area in the county surrounding the plant be re-designated to attainment/unclassifiable with the one-hour SO_2 standard. U.S. EPA subsequently acted on this request and published a notice in the *Federal Register* proposing to make this re-designation. A final rulemaking approving the re-designation is expected in 2021. Finally, on February 26, 2019, the U.S. EPA issued a final decision that it is retaining the existing primary SO_2 NAAQS at 75 parts per billion for the next five-year NAAQS review cycle. Given this decision, combined with current scrubber performance, the Companies expect to avoid more restrictive permit limits relative to its SO_2 emissions or the need for additional capital investment in major scrubber upgrades or modifications.

Steam Electric ELGs

On September 30, 2015, the U.S. EPA signed a new final rule governing Effluent Limitations Guidelines (ELGs) for the wastewater discharges from steam electric power generating plants. The rule, which was formally published in the Federal Register on November 3, 2015, impacted future wastewater discharges from both the Kyger Creek and Clifty Creek stations.

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The rule was intended to require the Companies to modify the way they handle a number of wastewater processes at both power plants. Specifically, the new ELG standards were going to affect the following wastewater processes in three ways listed below; however, in April 2017, the U.S. EPA issued an administrative stay on the ELG rule; and then in June 2017, the U.S. EPA issued a separate rulemaking staying the compliance deadlines for portions of the ELG rule applicable to bottom ash sluice water and to FGD wastewater discharges. The U.S. EPA revised the rule redefining what constitutes "best available technology" for these two wastewater discharges and issued an updated final rule in the Federal Register on October 13, 2020. Based on the original rule and revisions captured in the 2020 update, the following impacts to each wastewater discharge are expected:

1. Kyger Creek will need to convert to dry fly ash handling by no later than December 31, 2023. The U.S. EPA stay on portions of the ELG rule does not impact the need to convert Kyger Creek station to dry fly ash handling or the associated timeline. The Clifty Creek station already has a dry fly ash handling system in place, so this provision of the rule will not impact Clifty Creek's operations.

2. The new ELG rules originally prohibited the discharge of bottom ash sluice water from boiler slag/bottom ash waste water treatment systems. For Clifty Creek and Kyger Creek, this will result in the conversion of each plant's boiler slag pond to a closed- loop sluicing system for boiler slag, with up to a ten percent purge based on the volume of each facilities' total wetted volume. The Companies conducted a Phase I engineering study in 2016 to determine options and costs associated with retrofitting the plants' boiler slag treatment systems, but postponed the study until more information was available from U.S. EPA on the technologies being considered in the revised rule. After reviewing the new rule in draft, the Companies resumed the engineering study needed to formulate an overall compliance strategy based on this updated information. This study includes a further evaluation of technologies or retrofits capable of complying with the requirements of the revised rule, which included preliminary engineering, design, and schedule development that were initiated late in 2019. The Companies have completed the required evaluation associated with each facilities' boiler slag/bottom ash transport waste water treatment in 2020. This feed information was used to develop design and to initiate the bid process to conduct the work. Both Kyger Creek and Clifty Creek Stations are securing various environmental permits necessary to commence construction on the boiler slag/bottom ash handling systems, with work at both locations expected to initiate sometime in 2021.

3. The new ELG rules originally established new internal limitations for the FGD system wastewater discharges. Specifically, there were to be new internal limits for arsenic, mercury, selenium, and nitrate/nitrite nitrogen from the FGD chlorides purge stream wastewater treatment plant at each plant. After reviewing the requirements of the 2015 edition of the rule, the Companies expected both Clifty Creek and Kyger Creek stations to be able to meet the mercury and arsenic limitations with the current wastewater treatment technology; however, the Companies anticipated the potential to add some form of biological (or equivalent nonbiological) treatment system downstream of each station's existing FGD waste water treatment plant to meet the new nitrate/nitrite nitrogen and selenium limitations. Installation of new controls to meet the final effluent limitations contained in the revised rule were placed on hold while the U.S. EPA reconsidered the 2015

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ELG rule to ensure that the compliance strategy ultimately selected would be able to meet any revised requirements in the updated ELG rule. With the finalization of the October 13, 2020 ELG Revision, the Companies resumed evaluation of the appropriate technology, design, and schedule to achieve compliance with the new requirements, which included a change in the final effluent limitations for arsenic, nitrate/nitrite, mercury and selenium. The most significant change to the rule is associated with the final effluent limitation for mercury, which was ultimately lower than the final limit in the 2015 version of the rule, resulting in the Companies needing to re-evaluate and pilot technologies to determine what technology is capable of achieving this reduced mercury limit on the FGD discharges from each station. The Companies have been working with outside engineering resources to develop preliminary design reports and to schedule pilots since late 2020. Further, the Companies have been working with state agencies to request the revised ELG applicability date for FGD waste water of no later than December 31, 2025.

Any new ELG limits will be implemented through each station's waste water discharge permit, which is typically renewed on a five-year basis. The final compliance dates are expected to be facility-specific and negotiated with the Companies' state permit agencies based on the time needed to plan, secure funding, design, procure, and install necessary control technologies once the new rulemaking has been completed. The Companies will continue to monitor EPA regulatory actions on this rule and will respond as necessary.

316(b) Compliance

The 316(b) rule was published as a final rule in the Federal Register on August 15, 2014, and impacts facilities that use cooling water intake structures designed to withdraw at least 2 million gallons per day from waters of the U.S., and those facilities who also have an NPDES permit. The rule requires such facilities to choose one of seven options specified by the rule to reduce impingement to fish and other aquatic organisms. Additionally, facilities that withdraw 125 million gallons or more per day must conduct entrainment studies to assist state permitting authorities in determining what site-specific controls are required to reduce the number of aquatic organisms entrained by each respective cooling water system.

The Companies have completed the required two-year fish entrainment studies and filed the reports with the respective state regulatory agencies consistent with regulatory requirements under 40 CFR Section 122.21(r).

The timeline for determining if retrofits may be required to the cooling water systems at either Clifty Creek or Kyger Creek, as well as the type of retrofit required, will be negotiated with each state regulatory agency during future NPDES Permit renewals consistent with state regulatory obligations under 40 CFR Section 125.98(f).

The environmental rules and regulations discussed throughout the Environmental Matters footnote could require additional capital expenditures or maintenance expenses in future periods.

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10. FAIR VALUE MEASUREMENTS

The accounting guidance for financial instruments requires disclosure of the fair value of certain financial instruments. The estimates of fair value under this guidance require the application of broad assumptions and estimates. Accordingly, any actual exchange of such financial instruments could occur at values significantly different from the amounts disclosed.

OVEC utilizes its trustee's external pricing service in its estimate of the fair value of the underlying investments held in the benefit plan trusts and investment portfolios. The Companies' management reviews and validates the prices utilized by the trustee to determine fair value. Equities and fixed-income securities are classified as Level 1 holdings if they are actively traded on exchanges. In addition, mutual funds are classified as Level 1 holdings because they are actively traded at quoted market prices. Certain fixed-income securities do not trade on an exchange and do not have an official closing price. Pricing vendors calculate bond valuations using financial models and matrices. Fixed-income securities are typically classified as Level 2 holdings because their valuation inputs are based on observable market data. Observable inputs used for valuing fixed-income securities are benchmark yields, reported trades, broker/dealer quotes, issuer spreads, bids, offers, and economic events. Other securities with model-derived valuation inputs that are observable are also classified as Level 2 investments. Investments with unobservable valuation inputs are classified as Level 3 investments.

As of December 31, 2020 and 2019, the Companies held certain assets that are required to be measured at fair value on a recurring basis. These consist of investments recorded within long-term investments. The investments consist of money market mutual funds, equity mutual funds, and fixed-income municipal securities. Changes in the observed trading prices and liquidity of money market funds are monitored as additional support for determining fair value, and unrealized gains and losses are recorded in earnings.

The methods described above may produce a fair value calculation that may not be indicative of net realizable value or reflective of future fair values. Furthermore, while the Companies believe their valuation methods are appropriate and consistent with other market participants, the use of different methodologies or assumptions to determine the fair value of certain financial instruments could result in a different fair value measurement at the reporting date.

As cash and cash equivalents, current receivables, current payables, and line of credit borrowings are all short-term in nature, their carrying amounts approximate fair value.

OHIO VALLEY ELECTRIC CORPORATION AND SUBSIDIARY COMPANY

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS AS OF AND FOR THE YEARS ENDED DECEMBER 31, 2020 AND 2019

Long-Term Investments—Assets measured at fair value on a recurring basis at December 31, 2020 and 2019, were as follows:

	Fair Value Measurements at Reporting Date Using		
2020	**Quoted Prices in Active Market for Identical Assets (Level 1)**	**Significant Other Observable Inputs (Level 2)**	**Significant Jnobservable Inputs (Level 3)**
Equity mutual funds	$ 55,782,673	$ -	$ -
Fixed-income mutual funds	-	-	-
Fixed-income municipal securities	-	96,555,122	-
Cash equivalents	121,616,295	-	-
Total fair value	$ 177,398,968	$ 96,555,122	$ -
2019	**(Level 1)**	**(Level 2)**	**(Level 3)**
Equity mutual funds	$ 99,982,734	$ -	$ -
Fixed-income mutual funds	37,002,850	-	-
Fixed-income municipal securities	-	101,374,099	-
Cash equivalents	2,379,596	-	-
Total fair value	$ 139,365,180	$ 101,374,099	$ -

Long-Term Debt—The fair values of the senior notes and fixed-rate bonds were estimated using discounted cash flow analyses based on current incremental borrowing rates for similar types of borrowing arrangements. These fair values are not reflected in the balance sheets. The fair values and recorded values of the senior notes and fixed- and variable-rate bonds as of December 31, 2020 and 2019, are as follows:

	2020		2019	
	Fair Value	Recorded Value	Fair Value	Recorded Value
Total	$ 1,364,602,177	$ 1,217,093,866	$ 1,390,779,759	$ 1,275,148,664

11. LEASES

OVEC has various operating leases for the use of other property and equipment.

On January 1, 2019, the Companies adopted ASC 842, "Leases" which, among other changes, requires the Companies to record liabilities classified as operating leases on the balance sheet along with a corresponding right-of-use asset. The Companies elected the package of practical

OHIO VALLEY ELECTRIC CORPORATION AND SUBSIDIARY COMPANY

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS AS OF AND FOR THE YEARS ENDED DECEMBER 31, 2020 AND 2019

expedients available for expired or existing contracts, which allowed them to carryforward their historical assessments of whether contracts are or contain leases, lease classification tests and treatment of initial direct costs. Further, the Companies elected to not separate lease components from non-lease components for all fixed payments, and excluded variable lease payments in the measurement of right-of-use assets and lease obligations.

Upon adoption of ASC 842, the impact was a $22,000 increase in ROU assets and operating lease obligations. These adjustments are the result of assigning a right-of-use asset and related lease liability to the Companies operating leases. There were no cumulative effect adjustments to opening retained earnings, and adoption of the lease standard had no impact to cash from or used in operating, financing, or investing activities on the cash flow statement.

The Companies determine whether an arrangement is, or includes, a lease at contract inception. Leases with an initial term of 12 months or less are not recognized on the balance sheet. The Companies recognize lease expense for these leases on a straight-line basis over the lease term.

Operating lease right-of-use assets and liabilities are recognized at commencement date and initially measured based on the present value of lease payments over the defined lease term.

The leases typically do not provide an implicit rate; therefore, the Companies use the estimated incremental borrowing rate at the time of lease commencement to discount the present value of lease payments. In order to apply the incremental borrowing rate, a portfolio approach with a collateralized rate is utilized. Assets were grouped based on similar lease terms and economic environments in a manner whereby the Companies reasonably expect that the application is not expected to differ materially from a lease-by-lease approach.

The Companies have operating and finance leases for the use of vehicles, property, and equipment. The leases have remaining terms of 0 year to 6 years. The components of lease expense were as follows:

December 31	**2020**
Operating lease cost	$ 7,512
Finance lease cost:	
Amortization of leased assets	$ 386,089
Interest on lease liabilities	62,702
Total finance lease cost	$ 448,791

OHIO VALLEY ELECTRIC CORPORATION AND SUBSIDIARY COMPANY

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS AS OF AND FOR THE YEARS ENDED DECEMBER 31, 2020 AND 2019

Supplemental cash flow information related to leases was as follows:

Operating cash flows from operating leases	$ 7,512
Operating cash flows from finance leases	65,300
Financing cash flows from finance leases	259,242
Weighted average remaining lease term:	
Operating leases	< 1 year
Finance leases	5 years
Weighted average discount rate:	
Operating leases	2.5 %
Finance leases	5.4 %

The amount of operating lease ROU assets and liabilities is $0 and $7,431 as of December 31, 2020 and 2019, respectively.

The amount in property under finance leases is $4,081,933 and $1,545,051 with accumulated depreciation of $610,556 and $669,164 as of December 31, 2020 and 2019, respectively.

Future cash flows of operating leases, and maturities of finance lease liabilities are as follows:

Years Ending December 31	**Operating**	**Finance**
2021	$ -	$ 803,802
2022	-	732,870
2023	-	667,913
2024	-	620,873
2025	-	520,679
Thereafter	-	50,528
Total future minimum lease payments	$ -	3,396,665
Less estimated interest element		355,432
Estimated present value of future minimum lease payments		3,041,233

OHIO VALLEY ELECTRIC CORPORATION AND SUBSIDIARY COMPANY

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS AS OF AND FOR THE YEARS ENDED DECEMBER 31, 2020 AND 2019

12. COMMITMENTS AND CONTINGENCIES

The Companies are party to or may be affected by various matters under litigation. Management believes that the ultimate outcome of these matters will not have a significant adverse effect on either the Companies' future results of operation or financial position.

On March 31, 2018, FirstEnergy Solutions Corp. (FES), one of the Sponsoring Companies under the ICPA, filed for Chapter 11 bankruptcy protection under the United States Bankruptcy Code

in the United States Bankruptcy Court for the Northern District of Ohio (the "Bankruptcy Court"). OVEC made a preemptive filing on March 26, 2018, at the Federal Energy Regulatory Commission (FERC) requesting either (i) an order finding that FES's anticipated rejection of the ICPA would constitute a violation of that agreement's terms and would not satisfy the Federal Power Act's "public interest" standard, or, (ii) an order declaring that FERC has exclusive jurisdiction over the proposed rejection of the ICPA (the "FERC Action"). On April 1, 2018, FES filed in the Bankruptcy Court a motion to reject the ICPA and separately obtained an order temporarily enjoining the FERC Action. On May 11, 2018, the Bankruptcy Court granted a preliminary injunction enjoining FERC from reviewing FES's requested rejection of the ICPA under the public interest standard. FERC subsequently filed an appeal of this decision with the United States Court of Appeals for the Sixth Circuit (the "Injunction Appeal"), which OVEC joined as an intervenor. On July 31, 2018, the Bankruptcy Court granted FES's motion to reject the ICPA using the "business judgement" standard used to evaluate contract rejection under the Bankruptcy Code (the "Rejection Order"). Per the ICPA, upon rejection, OVEC made available to all other Sponsoring Companies FES's entitlement to available energy under the ICPA. OVEC appealed the Rejection Order to the Sixth Circuit (the "Rejection Appeal"). The Rejection Appeal was ultimately consolidated with the Injunction Appeal (together as consolidated, the "Sixth Circuit Rejection Appeal"). On October 14, 2018, OVEC filed with the Bankruptcy Court its rejection damages claim of approximately $540 million against FES.

On July 31, 2019, OVEC and FES entered into a stipulation with respect to OVEC's objection to confirmation of the FES plan of reorganization, stipulating that FES (a) would not seek to dismiss OVEC's Sixth Circuit appeal, or, if applicable, OVEC's appeal of an order with respect to an objection by OVEC to confirmation of the plan arising under section 1129(a)(6) of the Bankruptcy Code or oppose further review by the United States Supreme Court, on the grounds of mootness. OVEC objected to confirmation of the FES plan under section 1129(a)(6) of the Bankruptcy Code, which requires any governmental regulatory commission with jurisdiction, after confirmation of the plan, over the rates of a debtor to approve any rate change provided for in the plan, or that such rate change is expressly conditioned on such regulatory approval. OVEC's objection was overruled at the confirmation hearing on August 21, 2019. The FES plan of reorganization was confirmed on October 16, 2019. On October 29, 2019, OVEC moved to certify a direct appeal of the Bankruptcy Court's confirmation order to the Sixth Circuit. On November 27, 2019, the Bankruptcy Court granted OVEC's motion to certify the confirmation order for direct appeal to the Sixth Circuit which was granted on March 24, 2020. The Sixth Circuit granted OVEC's petition for direct appeal of the confirmation order.

OHIO VALLEY ELECTRIC CORPORATION AND SUBSIDIARY COMPANY

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS AS OF AND FOR THE YEARS ENDED DECEMBER 31, 2020 AND 2019

On December 12, 2019, the U.S. Court of Appeals for Sixth Circuit ruled on the Sixth Circuit Rejection Appeal by (1) affirming the Bankruptcy Court's jurisdiction over the rejection of the ICPA and (2) finding that the Bankruptcy Court should have considered the public interest in the standard for rejection and remanding to the Bankruptcy Court for further consideration under a heightened standard, after giving FERC a reasonable opportunity to weigh in. OVEC filed a petition for rehearing "en banc," and on March 13, 2020, the Sixth Circuit denied the petition.

On May 18, 2020, Energy Harbor LLC (EH), successor to FES, filed a motion to approve a stipulation between itself and OVEC with respect to the parties' outstanding disputes (the "Stipulation"). The material terms of the Stipulation provided, among other things, that (a) EH shall assume the ICPA, (b) shall continue to perform its obligations under the ICPA arising on or after June 1, 2020, pursuant to the terms of the ICPA, (c) EH shall pay OVEC $32,500,000 in cash as full and final settlement of any cure amounts required to be paid in connection with the assumption of the ICPA, and (d) OVEC's claims in the bankruptcy cases shall be deemed withdrawn with prejudice and expunged, OVEC shall withdraw and dismiss, with prejudice, its appeal of the confirmation order and shall withdraw any of its actions, pleadings, or positions, with prejudice, taken before FERC with respect to FERC's proceedings arising from the Sixth Circuit's decision in connection with the Rejection Order. On June 15, 2020, the Bankruptcy Court entered an order approving the Stipulation, and the Stipulation became effective shortly thereafter.

* * * * * *

Deloitte.

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INDEPENDENT AUDITORS' REPORT

To the Board of Directors of Ohio Valley Electric Corporation

We have audited the accompanying consolidated financial statements of Ohio Valley Electric Corporation and its subsidiary company, Indiana-Kentucky Electric Corporation (the "Companies"), which comprise the consolidated balance sheets as of December 31, 2020 and 2019, and the related consolidated statements of income, retained earnings, and cash flows for the years then ended, and the related notes to the consolidated financial statements.

Management's Responsibility for the Consolidated Financial Statements

Management is responsible for the preparation and fair presentation of these consolidated financial statements in accordance with accounting principles generally accepted in the United States of America; this includes the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of consolidated financial statements that are free from material misstatement, whether due to fraud or error.

Auditors' Responsibility

Our responsibility is to express an opinion on these consolidated financial statements based on our audits. We conducted our audits in accordance with auditing standards generally accepted in the United States of America. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the consolidated financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the consolidated financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the consolidated financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the Companies' preparation and fair presentation of the consolidated financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Companies' internal control. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Opinion

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of the Companies as of December 31, 2020 and 2019, and the results of their operations and their cash flows for the years then ended in accordance with accounting principles generally accepted in the United States of America.

/s/Deloitte & Touche LLP

April 27, 2021

OHIO VALLEY ELECTRIC CORPORATION
AND SUBSIDIARY COMPANY

OVEC PERFORMANCE – A 5-YEAR COMPARISON (UNAUDITED)

	2020	2019	2018	2017	2016
Net Generation (MWh)	**9,025,018**	11,238,298	12,146,856	11,940,259	9,946,877
Energy Delivered (MWh) to Sponsors	**9,033,056**	11,234,353	11,863,505	11,724,662	9,745,956
Maximum Scheduled (MW) by Sponsors	**2,215**	2,209	2,173	2,186	2,167
Power Costs to Sponsors	**$605,270,000**	$640,801,000	$644,114,000	$636,287,000	$571,687,000
Average Price (MWh) Sponsors	**$67.006**	$57.040	$54.294	$54.270	$58.657
Operating Revenues	**$551,718,000**	$614,667,000	$615,839,000	$624,058,000	$585,896,000
Operating Expenses	**$480,383,000**	$554,642,000	$523,196,000	$560,170,000	$515,702,000
Cost of Fuel Consumed	**$231,316,000**	$274,843,000	$277,369,000	$288,503,000	$261,833,000
Taxes (federal, state, and local)	**$12,203,000**	$8,418,000	$12,165,000	$11,975,000	$12,329,000
Payroll	**$53,461,000**	$55,491,000	$57,569,000	$58,847,000	$60,051,000
Fuel Burned (tons)	**4,148,459**	5,111,144	5,428,783	5,338,318	4,603,575
Heat Rate (Btu per kWh, net generation)	**11,036**	10,714	10,540	10,622	10,904
Unit Cost of Fuel Burned (per mmBtu)	**$2.04**	$2.28	$2.17	$2.27	$2.41
Equivalent Availability (percent)	**78.9**	78.2	76.6	75.6	72.9
Power Use Factor (percent)	**60.80**	76.23	84.19	83.90	72.67
Employees (year-end)	**563**	591	640	666	708

OHIO VALLEY ELECTRIC CORPORATION AND SUBSIDIARY COMPANY

DIRECTORS

Ohio Valley Electric Corporation

[1] **THOMAS ALBAN**, Columbus, Ohio
Vice President, Power Generation
Buckeye Power, Inc.

DAN ARBOUGH, Louisville, Kentucky
Treasurer
LG&E and KU Energy LLC

ERIC D. BAKER, Cadillac, Michigan
President and Chief Executive Officer
Wolverine Power Supply Cooperative, Inc.

[1] **CHRISTIAN T. BEAM**, Charleston, West Virginia
President and Chief Operating Officer
Appalachian Power

[1,2] **LONNIE E. BELLAR,** Louisville, Kentucky
Chief Operating Officer
LG&E and KU Energy LLC

[2] **PAUL CHODAK III**, Columbus, Ohio
Executive Vice President - Generation
American Electric Power Company, Inc.

WAYNE D. GAMES, Evansville, Indiana
Vice President – Power Supply
Vectren Corporation

GUSTAVO GARAVAGLIA, Indianapolis, Indiana
Vice President and Chief Financial Officer
Dayton Power & Light Company

STEVEN K. NELSON, Coshocton, Ohio
Chairman, Buckeye Power Board of Trustees
The Frontier Power Company

[2] **PATRICK W. O'LOUGHLIN**, Columbus, Ohio
President and Chief Executive Officer
Buckeye Power, Inc.

[2] **DAVID W. PINTER**, Akron, Ohio
Executive Director, Business Development
FirstEnergy Corp.

[1] **JULIE SLOAT**, Columbus, Ohio
Executive Vice President and Chief Financial Officer
American Electric Power Company, Inc.

[2] **RAJA SUNDARARAJAN**, Gahanna, Ohio
President and Chief Operating Officer, AEP Ohio
American Electric Power Company, Inc.

[2] **JOHN A. VERDERAME**, Charlotte, North Carolina
Director, Power Trading & Dispatch
Duke Energy Corporation

Indiana-Kentucky Electric Corporation

[2] **PAUL CHODAK III**, Columbus, Ohio
Executive Vice President - Generation
American Electric Power Company, Inc.

WAYNE D. GAMES, Evansville, Indiana
Vice President – Power Supply
Vectren Corporation

MARC E. LEWIS, Fort Wayne, Indiana
Vice President, External Relations
Indiana Michigan Power

DAVID A. LUCAS, Fort Wayne, Indiana
Vice President – Finance
Indiana Michigan Power

[2] **PATRICK W. O'LOUGHLIN**, Columbus, Ohio
President and Chief Executive Officer
Buckeye Power, Inc.

[2] **DAVID W. PINTER**, Akron, Ohio
Executive Director, Business Development
FirstEnergy Corp.

TOBY L. THOMAS, Fort Wayne, Indiana
President and Chief Operating Officer
Indiana Michigan Power

OFFICERS—OVEC AND IKEC

PAUL CHODAK III
President

JUSTIN J. COOPER
Vice President,
Chief Operating Officer and
Chief Financial Officer

KASSANDRA K. MARTIN
Secretary and Treasurer

JULIE SLOAT
Assistant Secretary and
Assistant Treasurer

[1]Member of Human Resources Committee.
[2]Member of Executive Committee.

From: Marie Fagan
To: Christopher, Mahila
Cc: Windle, Rodney
Subject: RE: Draft AEP Ohio OVEC Audit
Date: Tuesday, September 8, 2020 3:42:14 PM
Attachments: image001.png
image002.png
image003.png
image004.png
image005.png
image007.png

Okay, thanks v much for the head start

From: mahila.christopher@puco.ohio.gov <mahila.christopher@puco.ohio.gov>
Sent: Tuesday, September 8, 2020 2:59 PM
To: Marie Fagan <marie@londoneconomics.com>
Cc: rodney.windle@puco.ohio.gov
Subject: RE: Draft AEP Ohio OVEC Audit

Hi Marie,
Please find attached Staff's initial comments on LEI's latest draft of the AEP Ohio, 2018-2019 PPA rider audit final report. This may help you get a head start on Staff's editorial suggestions. The comments can be discussed further at tomorrow's meeting.

**If you could please note that Staff still needs final acquiescence from PUCO Admin. regarding the overall tone of the draft report!

Staff's main observation regarding the tone of the draft is the following:
•Milder tone and intensity of language would be recommended such as the language on page 10, para 3: "Therefore, keeping the plants running does not seem to be in the best interests of the ratepayers."
•Reduced subjectivity and level of detail/specifics would be required such as the language on page 26, para 2: "HB 6 also provides subsidies for two large nuclear power plants in Ohio, and for that reason is the center of a federal bribery investigation. First Energy Corporation and the company's political action committee, and Generation Now, a 501 (c) (4) non-profit group are charged with paying $60 million to advocate for the passage of HB 6. The case has led to federal charges against Ohio House Speaker Larry Householder and four associates."

I am attaching a redlined Word version of the draft for your perusal/review. If you could, please take a look and incorporate Staff's comments as far as possible? Please let me know of any questions, comments, and concerns.

Thank you

Mahila Christopher
Public Utilities Commission of Ohio
Office of the Federal Energy Advocate
Utility Specialist
(614) 728-6954
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From: Christopher, Mahila
Sent: Tuesday, September 8, 2020 1:09 PM
To: Marie Fagan <marie@londoneconomics.com>
Cc: Windle, Rodney <rodney.windle@puco.ohio.gov>
Subject: RE: Draft AEP Ohio OVEC Audit

Hi Marie-
As per the RFP, the Final Report is due to be filed on the 16th of September:

1. Audit Proposals Due February 28, 2020
2. Award Audit March 11, 2020
3. Audit Conducted March 11, 2020 through September 1,
4. 2020 Draft Audit Report Presented to Staff September 1, 2020
5. Final Audit Report Filed with Commission September 16, 2020

Should Staff reach our edits to LEI by 2:00pm today, would it be possible for LEI to send an updated draft to the Company tomorrow?

Thank you

Mahila Christopher
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From: Marie Fagan <marie@londoneconomics.com>
Sent: Tuesday, September 8, 2020 12:29 PM
To: Christopher, Mahila <mahila.christopher@puco.ohio.gov>
Cc: Windle, Rodney <rodney.windle@puco.ohio.gov>
Subject: RE: Draft AEP Ohio OVEC Audit

Okay, will do. Once we have your comments I'll have a good idea of how long it will take to address them, but I would guess we can complete it by the end of the week in any case, and likely sooner than that. So that means we can get the draft to Ed by this Friday 11th or maybe a day or so sooner, at least in electronic format. I think that the week that Ed wants for AEP Ohio review is reasonable, which means that they would get their review back to us by about Sept 18.th We would then address their comments (again, that should take a day or so, unless comments are extensive). Then we would provide you with the final report including workpapers the week of Sept. 21.
Best,
Marie

From: mahila.christopher@puco.ohio.gov <mahila.christopher@puco.ohio.gov>
Sent: Tuesday, September 8, 2020 9:32 AM

To: Marie Fagan <marie@londoneconomics.com>
Cc: rodney.windle@puco.ohio.gov
Subject: FW: Draft AEP Ohio OVEC Audit
Importance: High

Hi Marie,
Staff should be able to communicate our comments on the draft by tomorrow's meeting.
If you could, please assess Edward's question based on this and let me know if you have any concerns with his request for a week to review the draft for confidentiality and factual inaccuracies?

Thank you

Mahila Christopher
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From: Edward J Locigno <ejlocigno@aep.com>
Sent: Tuesday, September 8, 2020 9:19 AM
To: Marie Fagan <marie@londoneconomics.com>
Cc: Andrea E Moore <aemoore@aep.com>; Christopher, Mahila <mahila.christopher@puco.ohio.gov>; Shelli A Sloan <sasloan@aep.com>; Steven T Nourse <stnourse@aep.com>
Subject: RE: Draft AEP Ohio OVEC Audit
Importance: High

Mahila/Marie

When can we expect the report to review for confidentiality and factual inaccuracies? We need a solid week really at least to review it. Please let me know. Thank you!

EDWARD J LOCIGNO | REGULATORY ANALYSIS & CASE MGR
EJLOCIGNO@AEP.COM | D:614.716.3495 | C:614.619.9460
1 RIVERSIDE PLAZA, COLUMBUS, OH 43215

From: Marie Fagan <marie@londoneconomics.com>
Sent: Wednesday, September 2, 2020 3:09 PM
To: Edward J Locigno <ejlocigno@aep.com>
Cc: Andrea E Moore <aemoore@aep.com>
Subject: [EXTERNAL] Draft AEP Ohio OVEC Audit

Dear Ed,
This is to confirm that LEI provided the draft OVEC audit report to the Commission Staff. The process now, as I understand it, is that Staff will review, and after that we will provide it to AEP Ohio for redacting. At that time, we can talk about a secure way to provide it to you, perhaps uploading to the data room.
Thank you for all your help with the audit.
Best,
Marie

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From:	Christopher, Mahila
To:	Marie Fagan
Cc:	Windle, Rodney
Subject:	RE: an edit needed for AEP Ohio OVEC final audit report
Date:	Friday, September 11, 2020 1:58:00 PM
Attachments:	image003.png image002.png image004.png image005.png image006.png

Hi Marie,
Thank you for the heads up. Staff would recommend that you share this proposed edit with the Company as well.

Let me know if you have any questions.

Mahila Christopher
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From: Marie Fagan <marie@londoneconomics.com>
Sent: Friday, September 11, 2020 12:17 PM
To: Christopher, Mahila <mahila.christopher@puco.ohio.gov>
Cc: Windle, Rodney <rodney.windle@puco.ohio.gov>
Subject: an edit needed for AEP Ohio OVEC final audit report

Hi Mahila,
I just realized there was an edit I wanted to make to page 10, where we said "However, LEI's analysis shows that the OVEC contract overall is not in the best interest of AEP Ohio ratepayers." that I missed in the last version of the report. I'll edit it when we get the version back from AEP Ohio next week-- I'll delete that sentence and tinker with the rest of the paragraph so it reads smoothly.
Best,
Marie

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