

COMMONWEALTH OF KENTUCKY
BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

ELECTRONIC 2021 JOINT INTEGRATED)	
RESOURCE PLAN OF LOUISVILLE GAS AND)	
ELECTRIC COMPANY AND KENTUCKY)	CASE NO. 2021-00393
UTILITIES COMPANY)	

RESPONSE OF
LOUISVILLE GAS AND ELECTRIC COMPANY AND
KENTUCKY UTILITIES COMPANY TO
SIERRA CLUB'S INITIAL REQUEST FOR INFORMATION
DATED JANUARY 21, 2022

FILED: FEBRUARY 11, 2022

VERIFICATION

COMMONWEALTH OF KENTUCKY)
)
COUNTY OF JEFFERSON)

The undersigned, **Daniel K. Arbough**, being duly sworn, deposes and says that he is Treasurer for Kentucky Utilities Company and Louisville Gas and Electric Company and an employee of LG&E and KU Services Company, and that he has personal knowledge of the matters set forth in the responses for which he is identified as the witness, and the answers contained therein are true and correct to the best of his information, knowledge, and belief.



Daniel K. Arbough

Subscribed and sworn to before me, a Notary Public in and before said County and State, this 9th day of February 2022.



Notary Public

Notary Public ID No. 603967

My Commission Expires:

July 11, 2022

VERIFICATION

COMMONWEALTH OF KENTUCKY)
)
COUNTY OF JEFFERSON)

The undersigned, **John Bevington**, being duly sworn, deposes and says that he is Director – Business and Economic Development for LG&E and KU Services Company, and that he has personal knowledge of the matters set forth in the responses for which he is identified as the witness, and the answers contained therein are true and correct to the best of his information, knowledge, and belief.

John E. Bevington
John Bevington

Subscribed and sworn to before me, a Notary Public in and before said County and State, this 10th day of February 2022.

Judy Schoole
Notary Public

Notary Public ID No. 603967

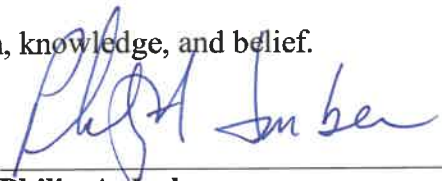
My Commission Expires:

July 11, 2022

VERIFICATION

COMMONWEALTH OF KENTUCKY)
)
COUNTY OF JEFFERSON)

The undersigned, **Philip A. Imber**, being duly sworn, deposes and says that he is Director – Environmental and Federal Regulatory Compliance for LG&E and KU Services Company, and that he has personal knowledge of the matters set forth in the responses for which he is identified as the witness, and the answers contained therein are true and correct to the best of his information, knowledge, and belief.



Philip A. Imber

Subscribed and sworn to before me, a Notary Public in and before said County and State, this 9th day of February 2022.



Notary Public

Notary Public ID No. 603967

My Commission Expires:

July 11, 2022

VERIFICATION

COMMONWEALTH OF KENTUCKY)
)
COUNTY OF JEFFERSON)

The undersigned, **Charles R. Schram**, being duly sworn, deposes and says that he is Director – Power Supply for LG&E and KU Services Company, and that he has personal knowledge of the matters set forth in the responses for which he is identified as the witness, and the answers contained therein are true and correct to the best of his information, knowledge, and belief.



Charles R. Schram

Subscribed and sworn to before me, a Notary Public in and before said County and State this 8th day of February 2022.



Notary Public

Notary Public ID No. 603967

My Commission Expires:

July 14, 2022

VERIFICATION

COMMONWEALTH OF KENTUCKY)
)
COUNTY OF JEFFERSON)

The undersigned, **David S. Sinclair**, being duly sworn, deposes and says that he is Vice President, Energy Supply and Analysis for Kentucky Utilities Company and Louisville Gas and Electric Company and an employee of LG&E and KU Services Company, and that he has personal knowledge of the matters set forth in the responses for which he is identified as the witness, and the answers contained therein are true and correct to the best of his information, knowledge, and belief.



David S. Sinclair

Subscribed and sworn to before me, a Notary Public in and before said County and State, this 10th day of February 2022.



Notary Public

Notary Public ID No. 603967

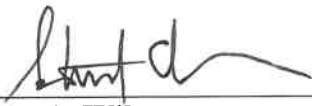
My Commission Expires:

July 11, 2022

VERIFICATION

COMMONWEALTH OF KENTUCKY)
)
COUNTY OF JEFFERSON)

The undersigned, **Stuart A. Wilson**, being duly sworn, deposes and says that he is Director, Energy Planning, Analysis & Forecasting for LG&E and KU Services Company, and that he has personal knowledge of the matters set forth in the responses for which he is identified as the witness, and the answers contained therein are true and correct to the best of his information, knowledge, and belief.



Stuart A. Wilson

Subscribed and sworn to before me, a Notary Public in and before said County and State, this 10th day of February 2022.



Notary Public

Notary Public ID No. 603967

My Commission Expires:

July 11, 2022

**LOUISVILLE GAS AND ELECTRIC COMPANY
KENTUCKY UTILITIES COMPANY**

**Response to Sierra Club's Initial Request for Information
Dated January 21, 2022**

Case No. 2021-00393

Question No. 1

Responding Witness: Counsel

- Q-1. Please provide an unredacted copy of the Companies' 2021 IRP.
- A-1. The Companies have addressed this request with counsel for Sierra Club.

**LOUISVILLE GAS AND ELECTRIC COMPANY
KENTUCKY UTILITIES COMPANY**

**Response to Sierra Club's Initial Request for Information
Dated January 21, 2022**

Case No. 2021-00393

Question No. 2

Responding Witness: Stuart A. Wilson

- Q-2. Please identify and provide the most recently published evaluation(s) of the economics of solar generation and of battery storage, respectively, that the 2021 IRP relies on for its projections and modeling of the same.
- A-2. See the Companies' Resource Screening Analysis and Long-term Resource Planning Analysis in Volume III of the 2021 IRP. The Companies used NREL's 2021 ATB as the source for cost and operating inputs for generation resources evaluated in the analyses.¹

¹ <https://atb.nrel.gov/>

**LOUISVILLE GAS AND ELECTRIC COMPANY
KENTUCKY UTILITIES COMPANY**

**Response to Sierra Club’s Initial Request for Information
Dated January 21, 2022**

Case No. 2021-00393

Question No. 3

Responding Witness: Stuart A. Wilson

- Q-3. Reference the 2021 IRP, Vol. I, at 5-15, 5-41 – 5-43. Whereas the 2021 IRP targets a summer reserve margin range of 17 to 24 percent for resource planning, please explain whether it is the Companies’ position that they require OVEC’s 152 MW for the purpose of staying within that target reserve margin, all else equal. In other words, please indicate whether the Companies would fall below that target range at any point in the planning period if they subtracted that 152 MW from their portfolio; and, if so, specify what year(s) that would occur.
- A-3. The Companies’ share of OVEC’s expected available seasonal capacity (152 MW in summer and 158 MW in winter) is included in the Companies’ resources for reserve margin calculations. The Companies own 8.13% of OVEC and cannot unilaterally make the decision to retire OVEC’s power plants. Without OVEC, generation production costs would increase and the Companies’ reserve margin would fall below the winter reserve margin target of 26 to 35 percent in 2035 and 2036. The table below shows summer and winter reserve margins without OVEC.

Summer and Winter Reserve Margins without OVEC (Base Load Forecast)

	2022	2023	2024	2025	2026	2027	2028	2029
Summer	19.2%	21.0%	21.4%	23.2%	23.9%	24.4%	26.8%	27.1%
Winter	34.6%	35.2%	35.5%	30.1%	30.7%	31.0%	27.6%	28.0%
	2030	2031	2032	2033	2034	2035	2036	
Summer	27.0%	27.5%	27.4%	27.6%	45.3%	42.8%	42.4%	
Winter	28.2%	28.5%	28.4%	28.7%	27.0%	24.0%	23.1%	

**LOUISVILLE GAS AND ELECTRIC COMPANY
KENTUCKY UTILITIES COMPANY**

**Response to Sierra Club's Initial Request for Information
Dated January 21, 2022**

Case No. 2021-00393

Question No. 4

Responding Witness: Stuart A. Wilson

- Q-4. Reference the Companies' 2021 RTO Membership Analysis (Oct. 2021) at 28 ("Both PJM and MISO take the position that they can provide appropriate generation reliability with a lower target annual peak reserve margin as compared to the Companies' target summer reserve margin range of 17 percent to 25 percent."). Please discuss how the Companies' process of determining their target reserve margin would change, and what their target reserve margin would be, if the Companies were to join either PJM or MISO (please provide distinct responses for each of those two RTOs if/as appropriate).
- A-4. The Companies have not performed this analysis. See the response to SREA 1-18(j).

**LOUISVILLE GAS AND ELECTRIC COMPANY
KENTUCKY UTILITIES COMPANY**

**Response to Sierra Club's Initial Request for Information
Dated January 21, 2022**

Case No. 2021-00393

Question No. 5

Responding Witness: Charles R. Schram

- Q-5. Please identify and produce any request(s) the Company has issued, from 2018 through the present, for proposals for new or substitute generation capacity, along with any responses thereto.
- A-5. See attached. The Companies are providing the non-confidential portion of their response (2019 RFP and responses) via a file transfer site, for which the Companies are filing a motion to deviate from 807 KAR 5:001 § 8(3). The non-confidential portion of this response is available at <https://highq.in/h18u2sgzou>.

Certain information requested (2021 RFP and responses) is confidential and proprietary and is being provided under seal pursuant to a petition for confidential information.

The entire attachment is
Confidential and
provided separately
under seal.

**LOUISVILLE GAS AND ELECTRIC COMPANY
KENTUCKY UTILITIES COMPANY**

**Response to Sierra Club's Initial Request for Information
Dated January 21, 2022**

Case No. 2021-00393

Question No. 6

Responding Witness: Philip A. Imber

- Q-6. Reference the 2021 IRP, Vol. I, at 5-17. For each coal-fired power plant in the Companies' fleet, please confirm whether the plant is in compliance with the CCR Rule and with groundwater protection standards, as of the latest monitoring readings, and provide documentation or identify links to websites that reflect that compliance status (whether compliance or violations/exceedances).
- A-6. The Companies are in compliance with the CCR Rule for each facility with a federally-regulated CCR unit. The specific company locations with federally-regulated CCR units are identified on the Companies' publicly-accessible web page at <https://ccr.lge-ku.com/>.

The Companies' semiannual groundwater sample collection and analytical processes required by the Rule have identified parameters in excess of the groundwater protection standards (GPS) at the KU-Ghent, KU-Brown, LG&E-Cane Run, LG&E-Mill Creek, and LG&E-Trimble County Stations.

Specific CCR Rule details relating to the condition of groundwater at each location can be understood by reviewing the most recent "Annual Groundwater Monitoring and Corrective Action Report" (ANGWCA) for each station, also accessible via LG&E and KU's publicly-accessible CCR Rule web page at <https://ccr.lge-ku.com/>. The ANGWCA reports are in the *General Station* subheadings for each facility.

Each year's ANGWCA must be posted to the Companies' CCR Rule public web site in early March. Updated reporting for each of LG&E and KU's stations subject to the CCR Rule for the 2021 calendar year will be posted on or before March 2, 2022.

**LOUISVILLE GAS AND ELECTRIC COMPANY
KENTUCKY UTILITIES COMPANY**

**Response to Sierra Club's Initial Request for Information
Dated January 21, 2022**

Case No. 2021-00393

Question No. 7

Responding Witness: John Bevington

- Q-7. Reference the 2021 IRP at Vol. I, at 5-11.
- a) Please provide a detailed explanation and justification of why “[t]he Companies did not directly evaluate new demand-side management (“DSM”) programs in this IRP.”
 - b) Please indicate when and where the ‘evaluation’ in the following statement will be presented: “Instead, the IRP identifies opportunities for new DSM programs that will be evaluated based on data and DSM pilot programs associated with the implementation of AMI” (emphasis added).
- A-7.
- a) See the response to PSC 1-4a.
 - b) See the responses to PSC 1-4a and 1-5.

**LOUISVILLE GAS AND ELECTRIC COMPANY
KENTUCKY UTILITIES COMPANY**

**Response to Sierra Club's Initial Request for Information
Dated January 21, 2022**

Case No. 2021-00393

Question No. 8

Responding Witness: John Bevington

- Q-8. Reference the 2021 IRP at Vol. I, at 6-8. Please indicate more specifically when in 2022, and in what PSC proceeding, the Companies will file the referenced "updated DSM Filing." Further, please confirm whether that filing will reflect the results of the referenced "recently initiated [] new DSM Planning process to cover the years of 2023 – 2025."
- A-8. See the responses to PSC 1-4a and 1-5.

**LOUISVILLE GAS AND ELECTRIC COMPANY
KENTUCKY UTILITIES COMPANY**

**Response to Sierra Club's Initial Request for Information
Dated January 21, 2022**

Case No. 2021-00393

Question No. 9

Responding Witness: David S. Sinclair

- Q-9. Please confirm or deny that the Companies included the assumption of taking and paying for power from OVEC in every scenario presented in the resource planning analysis in the 2021 IRP. If denied, explain.
- A-9. Confirmed. The Companies are contractually obligated to purchase power from OVEC through the term of the Inter-Company Power Agreement, which expires in June 2040.

**LOUISVILLE GAS AND ELECTRIC COMPANY
KENTUCKY UTILITIES COMPANY**

**Response to Sierra Club's Initial Request for Information
Dated January 21, 2022**

Case No. 2021-00393

Question No. 10

Responding Witness: Daniel K. Arbough

- Q-10. Please confirm or deny whether the Companies, including but not limited to their representatives on the OVEC Board, have reviewed the Michigan Public Service Commission's ("MPSC") November 18, 2021 Order in Case No. U-20804, regarding fellow OVEC Sponsor Indiana Michigan Power Company's application for approval to implement a power supply cost recovery plan for 2021—in particular the MPSC's analysis and conclusions concerning OVEC (in response to Sierra Club arguments), including the following (at 20): "The company is put on notice that the Commission is unlikely to permit the utility to recover these uneconomic costs from its customers in rates, rate schedules, or PSCR factors established in the future without good faith efforts to manage existing contracts such as meaningful attempts to renegotiate contract provisions to ensure continued value for ratepayers. The Commission issues a Section 7 warning that I&M may not be able to recover its full costs under the ICPA as part of the reconciliation of its 2021 PSCR plan."
- a) If denied, please explain whether the Companies plan on reviewing this order.
 - b) If confirmed, please discuss the Companies' view of the order's implications on OVEC, the Companies' obligations under the ICPA, and the Companies' recovery of OVEC-related costs from its retail customers.
- A-10. No, the Companies have not specifically reviewed the cited MPSC order or the supporting record.
- a) The MPSC does not regulate the Companies, and the quoted language cited above in this request does not apply to the Companies. If Indiana Michigan Power Company or OVEC takes any action in response to the order that could affect the Companies' customers, the Companies will consider an appropriate response and take reasonable action as needed to protect their customers' interests.
 - b) N/A

**LOUISVILLE GAS AND ELECTRIC COMPANY
KENTUCKY UTILITIES COMPANY**

**Response to Sierra Club's Initial Request for Information
Dated January 21, 2022**

Case No. 2021-00393

Question No. 11

Responding Witness: Daniel K. Arbough

Q-11. Please produce all minutes, presentations, memoranda, reports, and other documents— either possessed by, or known to and obtainable by, the Companies—from OVEC Board meetings from 2018 through the present. Such documents may include, but are not limited to, documents discussing environmental compliance (including but not limited to CCR and ELG) costs or plans at the OVEC Units, other capital costs or plans at/for the same, the cost of operations at the same, operations practices and modifications including to cycling and/or commitment at the same, PJM market energy prices, and plant performance.

a) Without limitation to the foregoing, broader request, please produce and expressly identify all OVEC Board documents (without limitation, minutes, votes, correspondence, etc.) that specifically authorize OVEC incurring costs to comply with the CCR or ELG requirements, including documents such as presentations, reports, etc., associated with proposals and authorizations that relate to the same and were presented to the Board

A-11. To the extent responsive documents exist and are protected from disclosure by the attorney-client privilege (including common-interest privilege) or the work-product doctrine, the Companies object to the production of such documents. The Companies are filing a privilege log describing the responsive documents the Companies are not producing on the ground of attorney-client, work-product privilege, or both.

With regard to non-privileged responsive documents, see attached. Certain information requested is confidential and proprietary and is being provided under seal pursuant to a petition for confidential information.

OHIO VALLEY ELECTRIC CORPORATION (OVEC)
INDIANA-KENTUCKY ELECTRIC CORPORATION (IKEC)
Agenda
Boards of Directors' Conference Call Meeting
February 21, 2018

- | | |
|---|----------------|
| 1. Call Meeting to Order (9 A.M.) | Nick Akins |
| 2. Roll Call
- Quorum (OVEC and IKEC) | Justin Cooper |
| 3. Summary of Cost-Benefit Analysis – Full Integration into PJM | Brian Chisling |
| 4. Vote on Proposed Resolutions to Authorize OVEC to Fully Integrate into PJM
- Resolutions (OVEC)
- Resolutions (IKEC) | Justin Cooper |

Adjournment

**OHIO VALLEY ELECTRIC CORPORATION (OVEC)
INDIANA-KENTUCKY ELECTRIC CORPORATION (IKEC)
Resolutions of Minutes of Meeting
Boards of Directors' Meeting
February 21, 2018**

OVEC

RESOLVED, that in accordance with the order of the Federal Energy Regulatory Commission (FERC) approving OVEC's application for membership in PJM Interconnection, L.L.C. (PJM), previously provided to the Board (the "FERC PJM Order"), OVEC is hereby authorized and approved to execute and deliver all of the agreements and other documents described therein and otherwise in accordance with the rules and regulations of PJM (together, the "Integration Agreements") in order for OVEC to become a full member of, and fully integrate the OVEC and IKEC generating facilities and transmission system into, PJM; and it is further

RESOLVED, that, in furtherance of the foregoing, any Officer of OVEC (each an "Authorized Officer") is hereby authorized, approved and directed in the name of and on behalf of OVEC, to execute and deliver such Integration Agreements with such changes, deletions and additions thereto as deemed appropriate or proper by any such Authorized Officer, the execution and delivery of such Integration Agreements being conclusive evidence of such determination; and it is further

RESOLVED, that each Officer of OVEC is authorized and directed to prepare, execute and file, or cause to be prepared, executed and filed, all agreements, certificates, statements, reports, documents, instruments and papers required to be filed by OVEC in accordance with the Integration Agreements, the FERC PJM Order and the PJM tariff and in order for OVEC to comply with all applicable requirements and rules and regulations of PJM, FERC and applicable law and any other administrative or governmental agency (domestic or foreign) in connection with the Integration Agreements, the FERC PJM Order or any other matter relating to PJM integration and to prepare, sign, seal, execute, file, record and deliver such other agreements, certificates, statements, termination and other notices, reports, documents, instruments and papers, from time to time necessary, desirable or appropriate, as may be executed by any such Officer pursuant to the Integration Agreements, the FERC PJM Order, the PJM tariff and these resolutions and the transactions contemplated thereby and hereby, and to do any and all other acts and things, in each case to effectuate the purpose and intent of these resolutions.

IKEC

RESOLVED, that in accordance with the order of the Federal Energy Regulatory Commission (FERC) approving OVEC's application for membership in PJM Interconnection, L.L.C. (PJM), previously provided to the Board (the "FERC PJM Order"), IKEC is hereby authorized and approved to execute and deliver all of the agreements and other documents described therein and otherwise in accordance with the rules and regulations of PJM (together, the "Integration Agreements") to which IKEC is required to be a party in order for OVEC to become a full member of, and fully integrate the OVEC and IKEC generating facilities and transmission system into, PJM; and it is further

RESOLVED, that, in furtherance of the foregoing, any Officer of IKEC (each an "Authorized Officer") is hereby authorized, approved and directed in the name of and on behalf of IKEC, to execute and deliver such Integration Agreements with such changes, deletions and additions thereto as deemed appropriate or proper by any such Authorized Officer, the execution and delivery of such Agreements being conclusive evidence of such determination; and it is further

RESOLVED, that each Officer of IKEC is authorized and directed to prepare, execute and file, or cause to be prepared, executed and filed, all agreements, certificates, statements, reports, documents, instruments and papers required to be filed by IKEC in accordance with the Integration Agreements, the FERC PJM Order and the PJM tariff and in order for IKEC and OVEC to comply with all applicable requirements and rules and regulations of PJM, FERC and applicable law and any other administrative or governmental agency (domestic or foreign) in connection with the Integration Agreements, the FERC PJM Order or any other matter relating to PJM integration and to prepare, sign, seal, execute, file, record and deliver such other agreements, certificates, statements, termination and other notices, reports, documents, instruments and papers, from time to time necessary, desirable or appropriate, as may be executed by any such Officer pursuant to the Integration Agreements, the FERC PJM Order, the PJM tariff and these resolutions and the transactions contemplated thereby and hereby, and to do any and all other acts and things, in each case to effectuate the purpose and intent of these resolutions.

162 FERC ¶ 61,098
UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

Before Commissioners: Cheryl A. LaFleur, Neil Chatterjee,
Robert F. Powelson, and Richard Glick.

PJM Interconnection, L.L.C.
Ohio Valley Electric Corporation

Docket Nos. ER18-459-000
ER18-460-000

ORDER ACCEPTING PROPOSED TARIFF REVISIONS

(Issued February 13, 2018)

1. On December 15, 2017, pursuant to section 205 of the Federal Power Act (FPA),¹ PJM Interconnection, L.L.C. (PJM) and the Ohio Valley Electric Corporation (OVEC) (collectively, Filing Parties) submitted two identical filings,² which propose: (1) to transfer OVEC's existing Commission-approved transmission and ancillary service rates and annual revenue requirement from the OVEC Open Access Transmission Tariff (OVEC OATT) to PJM's Open Access Transmission Tariff (PJM Tariff); (2) modifications to PJM's Tariff, the Amended and Restated Operating Agreement, the Reliability Assurance Agreement among Load Serving Entities in the PJM Region, and the Consolidated Transmission Owners Agreement in connection with OVEC's integration into PJM; and (3) to provide grandfathered treatment to four agreements (described below) (collectively, OVEC Integration Proposal). As discussed below, we accept the OVEC Integration Proposal, effective March 1, 2018, as requested.

I. Background

2. OVEC and its wholly-owned subsidiary, Indiana-Kentucky Electric Corporation (IKEC), were formed in 1952 to support the operation of the Department of Energy's uranium enrichment facilities located near Portsmouth, Ohio, by constructing, operating,

¹ 16 U.S.C. § 824d (2012).

² Filing Parties submitted identical filings in Docket Nos. ER18-459-000 and ER18-460-000.

and maintaining generation and transmission facilities pursuant to an agreement with the Department of Energy (DOE-AEC Agreement).³ OVEC's transmission system consists of 705 miles of primarily double-circuit 345 kilovolt lines, which interconnect with the transmission networks of several utilities serving the area, most of which are within the PJM footprint. OVEC does not have a distribution system. OVEC's system also includes two interconnected generating units: the 1,086 megawatt (MW) Kyger Creek unit, located in Cheshire, Ohio, and the IKEC-owned 1,303 MW Clifty Creek unit, located in Madison, Indiana.⁴

3. In 1953, OVEC's Sponsoring Companies⁵ entered into an Inter-Company Power Agreement that governs OVEC, supporting the Portsmouth facility and providing for sales to the Sponsoring Companies of any excess energy that the Atomic Energy Commission, or later, the Department of Energy, did not use. Since the termination of the DOE-AEC Agreement on April 30, 2003, OVEC's entire generating capacity has been available to the Sponsoring Companies under the terms of the Inter-Company Power Agreement. The Inter-Company Power Agreement and its amendments constitute a Commission-filed, cost-based power sales agreement that will terminate on June 30, 2040.⁶

³ Filing Parties' Transmittals at 2. These uranium enrichment facilities were initially operated by the Atomic Energy Commission, the Department of Energy's predecessor.

⁴ *Id.* at 3.

⁵ The Sponsoring Companies are "OVEC's owners or their utility-company affiliates" and consist of: Allegheny Energy, Inc. (a subsidiary of FirstEnergy Corporation); American Electric Power Company, Inc. (AEP); Buckeye Power Generating, LLC (a subsidiary of Buckeye Power, Inc.); the Dayton Power and Light Company (a subsidiary of the AES Corporation); Duke Energy Ohio, Inc. (a subsidiary of Duke Energy Corporation); Kentucky Utilities Company (a subsidiary of PPL Corporation); Louisville Gas and Electric Company (a subsidiary of PPL Corporation); Ohio Edison Company (a subsidiary of FirstEnergy Corporation); Ohio Power Company (a subsidiary of AEP); Peninsula Generation Cooperative (a subsidiary of Wolverine Power Supply Cooperative, Inc.); Southern Indiana Gas and Electric Company (a subsidiary of Vectren Corporation); and the Toledo Edison Company (a subsidiary of FirstEnergy Corporation). *Id.* at 2 & n.5.

⁶ Filing Parties' Transmittals at 2 (citing *Ohio Valley Electric Corporation*, Docket Nos. ER11-3181-000, ER11-3440-000, and ER11-3441-000, at 1 (May 23, 2011) (delegated letter order)).

4. OVEC is currently an affiliate member of PJM.⁷ Both of OVEC's generating facilities are pseudo-tied into PJM, and the Sponsoring Companies participating in PJM's markets hold 90.37 percent of the output of OVEC's generation facilities. The remaining 9.63 percent share of OVEC's generation facilities' output is reserved for the Sponsoring Companies not participating in PJM's markets, i.e., subsidiaries of the PPL and Vectren Corporations.⁸

II. OVEC Integration Proposal

5. The Filing Parties state that various ministerial revisions to the PJM Tariff, Operating Agreement, Reliability Assurance Agreement, and Consolidated Transmission Owners Agreement are necessary to implement the integration of the OVEC system into PJM, thus establishing an OVEC transmission zone (OVEC zone). Specifically, the Filing Parties explain that these revisions add, where needed, the OVEC zone and/or OVEC, as Transmission Owner, to the PJM Tariff, Reliability Assurance Agreement, and the Consolidated Transmission Owners Agreement.⁹

6. The Filing Parties propose to incorporate rates for the following four transmission services under the PJM Tariff: (1) Network Integration and Point-to-Point Transmission Service (PJM Tariff, Attachment H-31); (2) Transmission Owner Scheduling, System Control, and Dispatch Service (PJM Tariff, Schedule 1A); (3) Long-Term and Short-Term Firm Point-to-Point Transmission Service (PJM Tariff, Schedule 7); and (4) Non-Firm Point-to-Point Transmission Service (PJM Tariff, Schedule 8).¹⁰

7. To facilitate OVEC's integration into PJM, the Filing Parties propose PJM Tariff Attachment C-4, which details the process for the conversion of transmission and interconnection service under the OVEC OATT to service under the PJM Tariff. For the conversion of transmission service, the Filing Parties state that existing OVEC

⁷ PJM Affiliate Members are in the same family of companies as a Primary Member and have voting rights at senior task force and lower level standing committee meetings. However, Affiliate Members do not have voting rights at Members Committee Markets and Reliability Committee meetings. Affiliate Members can also participate in the competitive wholesale electricity market. (PJM, *PJM Membership Fact Sheet*, (2017), <https://learn.pjm.com/-/media/about-pjm/newsroom/fact-sheets/pjm-membership-fact-sheet.ashx>).

⁸ Filing Parties' Transmittals at 5.

⁹ *Id.* at 4.

¹⁰ *Id.* at 15.

transmission service reservations will be converted to “the most closely analogous service under the PJM Tariff.”¹¹ Specifically, the Filing Parties note that the transmission services provided under the OVEC OATT may not exactly match those provided under the PJM Tariff; thus, PJM will work with OVEC and its individual transmission service customers to enter into and file replacement transmission service agreements under the PJM Tariff. Regarding existing interconnection service for OVEC’s two generation facilities, the Filing Parties state that, on or before the requested integration date, PJM will execute generator interconnection agreements for OVEC’s generation facilities. Following OVEC’s integration, the Filing Parties explain that pending or new interconnection service agreements will be filed under the PJM Tariff. The Filing Parties note that, as of the date of the instant filing, OVEC did not have any interconnection service requests pending.¹²

8. The Filing Parties state that they will provide grandfathered treatment to four long-standing OVEC agreements: (1) the Inter-Company Power Agreement; (2) the Grandfathered Delivery Commitments Under the Inter-Company Power Agreement;¹³ (3) the OVEC/IKEC Power Agreement;¹⁴ and (4) the Department of Energy Portsmouth Project Interconnection Agreement.¹⁵

9. Prior to submitting the instant filing, the Filing Parties entered into an “Agreement to Implement the Expansion of PJM Region for OVEC” (Integration Agreement). The Filing Parties state that the Integration Agreement provides for the terms, costs, and implementation plans for the transfer of functional control of OVEC’s transmission

¹¹ *Id.* at 4.

¹² *Id.* at 5.

¹³ *Id.* at 13. Under the Inter-Company Power Agreement, PPL Corporation and Vectren Corporation hold rights to 9.63 percent of the output of the Kyger Creek and Clifty Creek facilities and transmit it to the Louisville Gas and Electric Company and Kentucky Utilities Company control area.

¹⁴ *Id.* at 13. This stand-alone agreement governs the terms and conditions under which IKEC provides energy and capacity from the Clifty Creek facility and transmits its power to OVEC.

¹⁵ *Id.* at 14. This Department of Energy Interconnection Agreement maintains the terms and conditions governing the operation, configuration, and equipment comprising the physical interconnection between certain Department of Energy-owned transmission facilities located within the Portsmouth facility and the OVEC transmission system that is the subject of this proceeding.

facilities to PJM, the integration of OVEC's control area into the PJM interchange energy market and other PJM markets, and the addition of OVEC as a PJM Transmission Owner.¹⁶

10. Pursuant to the Integration Agreement, PJM's Operating Agreement and the Consolidated Transmission Owners Agreement, the Filing Parties state they have completed all necessary analyses for integrating OVEC's facilities and have developed the related Tariff revisions to facilitate OVEC's integration into PJM and the creation of an OVEC zone.¹⁷ PJM's Operating Agreement requires entities wishing to integrate into PJM to complete all of, but not limited to, the following: (1) satisfy the definition of a "Member,"¹⁸ (2) notify PJM that the entity wishes to integrate,¹⁹ and (3) execute an Integration Agreement.²⁰ PJM's Consolidated Transmission Owners Agreement requires entities wishing to integrate into PJM to be a party to the Consolidated Transmission

¹⁶ *Id.* at 3.

¹⁷ PJM Interconnection, L.L.C., Operating Agreement, § 11.6; and PJM Interconnection, L.L.C., Consolidated Transmission Owners Agreement, § 3.1 (*see also* PJM Answer at 3).

¹⁸ PJM Operating Agreement, § 11.6(a) defines Member as "a Transmission Owner or Generation Owner, an Other Supplier, an Electric Distributor, or an End-Use Customer."

¹⁹ PJM Operating Agreement, § 11.6(c) states "An entity that wishes to become a party to this Agreement shall apply, in writing, to the President setting forth its request, its qualifications for membership, its agreement to supply data as specified in this Agreement, its agreement to pay all costs and expenses in accordance with Schedule 3, and providing all information specified pursuant to the Schedules to this Agreement for entities that wish to become Market Participants. Any such application that meets all applicable requirements shall be approved by the President within sixty (60) days."

²⁰ PJM Operating Agreement, § 11.6(e) states "An entity whose application is accepted by the President pursuant to § 11.6(c) shall execute a supplement to this Agreement in substantially the form prescribed in Schedule 4, which supplement shall be countersigned by the President. The entity shall become a Member effective on the date the supplement is countersigned by the President."

Owners Agreement.²¹ Through their technical analyses of OVEC's integration into the PJM transmission system, the Filing Parties state that they identified the potential for a single deliverability violation associated with an overly-conservative rating of a single OVEC transmission line.²²

III. Notice of Filing and Responsive Pleadings

11. Notices of the Filing Parties' December 15, 2017 filings in Dockets No. ER18-459-000 and ER18-460-000 were published in the *Federal Register*, 82 Fed. Reg. 61,755 (2017), with interventions and protests due on or before January 5, 2018. Timely motions to intervene were filed in both dockets by: American Municipal Power, Inc. (AMP); Direct Energy Business, LLC and Direct Energy Business Marketing LLC; FirstEnergy Service Company; American Electric Power Service Corporation (AEP); East Kentucky Power Cooperative, Inc.; ITC Interconnection, LLC; PPL Electric Utilities (PPL); Monitoring Analytics, acting in its capacity as the Independent Market Monitor for PJM (PJM IMM); Dayton Power and Light Company; the Office of the Ohio Consumers' Counsel (Ohio Consumers' Counsel); Duke Energy Corporation; Exelon Corporation (Exelon); Louisville Gas and Electric Company and Kentucky Utilities Company; Old Dominion Electric Cooperative (ODEC); NRG Power Marketing, LLC and GenOn Energy Management, LLC; and the United States Department of Energy-Headquarters. Notices of intervention were filed in both dockets by the Public Utilities Commission of Ohio (Ohio Commission), the New Jersey Board of Public Utilities, and the Illinois Commerce Commission. In Docket No. ER18-460-000, Buckeye Power Inc. filed a motion to intervene. Dominion Energy Services, Inc. (Dominion) filed an out-of-time motion to intervene. In Docket No. ER18-460-000, Buckeye Power Inc. filed an out-of-time motion to intervene.

12. Comments and/or protests were filed by: AMP; the Ohio Commission; the PJM IMM; Ohio Consumers' Counsel; ODEC; and AEP and the Dayton Power and Light Company (AEP and Dayton Power).

²¹ PJM Consolidated Transmission Owners Agreement § 3.1 states "It is the intent of the Parties and PJM that this Agreement serve as the sole Transmission Owners Agreement for all Transmission Facilities in PJM. Further, it is the agreement of the Parties and PJM that any entity that: (i) owns, or in the case of leased facilities, has rights equivalent to ownership in, Transmission Facilities; (ii) has in place all equipment and facilities necessary for safe and reliable operation of such Transmission Facilities as part of the PJM Region; and (iii) has committed to transfer functional control of its Transmission Facilities to PJM shall become a Party to this Agreement."

²² Filing Parties' Transmittals at 4.

13. On January 22, 2018, in both proceedings, OVEC filed an answer to comments and protests, and Indicated Transmission Owners (Indicated TOs)²³ filed comments and reply comments. On January 24, 2018, AEP, Dayton Power, and Buckeye Power, Inc. (AEP-Dayton-Buckeye) filed comments in support of OVEC's answer in Docket No. ER18-459-000. On January 26, 2018, PJM filed an answer in both dockets. On February 6, 2018, AMP filed an answer to OVEC's and PJM's answers in both dockets.

A. Protests and Opposing Comments

1. Satisfaction of Integration and Reliability Requirements

14. AMP contests the Filing Parties' proposal to "grandfather" OVEC's Inter-Company Power Agreement and migrate it into the PJM Tariff as a part of PJM's integration process.²⁴ Specifically, AMP asserts that it is not clear that the obligations for the Sponsoring Companies in the Inter-Company Power Agreement, including the assignment of transmission costs, are also grandfathered. Furthermore, AMP states that the OVEC Integration Proposal is not clear as to whether the PJM Tariff will supersede the Inter-Company Power Agreement.²⁵

15. In addition, AMP asserts that "PJM has not conducted studies sufficient to make [a] determination" whether any installations or modifications to OVEC's transmission facilities are necessary to satisfy the requirements for membership set forth in PJM's Operating Agreement.²⁶ According to AMP, PJM's failure to perform - or adequately perform - these analyses should signal to the Commission that more time is needed to review the studies and to determine if any additional infrastructure is necessary to support OVEC's integration.²⁷

²³ Indicated TOs consist of Exelon, PPL, and Dominion.

²⁴ See, e.g., PJM Interconnection, L.L.C., Operating Agreement, § 11.6; and PJM Interconnection, L.L.C., Consolidated Transmission Owners Agreement, § 3.1.

²⁵ AMP Protest at 17.

²⁶ *Id.* at 7.

²⁷ *Id.* at 16.

2. Cost-Benefits Test

16. AMP further argues that PJM fails to demonstrate that the benefits of OVEC's integration outweigh the associated costs to wholesale transmission customers.²⁸ Therefore, AMP requests that the Commission reject the filing and direct the Filing Parties to submit a new proposal. Ohio Consumers' Counsel similarly argues that the Commission should reject the filing because OVEC's integration into PJM offers no known benefits for consumers. Specifically, Ohio Consumers' Counsel asserts that OVEC's integration will not (1) increase access to new, economic power supplies; (2) decrease production or congestion costs; or (3) bring additional customers into PJM that would offset likely short-term increases in transmission upgrade costs.²⁹ Ohio Consumers' Counsel further asserts that OVEC's generating units, which are eligible for subsidies via Ohio Commission-approved retail rate riders, will distort PJM's wholesale capacity and energy markets to the detriment of consumers.³⁰ Thus, Ohio Consumers' Counsel argues that the Filing Parties have failed to demonstrate that their proposal will result in just and reasonable rates for consumers.³¹ Likewise, ODEC argues that, while it is not opposed to new entities integrating into PJM, it is concerned that integrating OVEC will result in unjust and unreasonable subsidization of OVEC's costs by other transmission owners and their customers, without commensurate benefits.³²

3. Transmission Cost Allocation

17. AMP and the Ohio Commission argue that the filing is deficient because PJM has failed to address cost allocation for PJM's Regional Transmission Expansion Plan and supplemental transmission upgrades. According to AMP and the Ohio Commission, this deficiency is particularly significant considering OVEC's low load and older transmission infrastructure.³³ The Ohio Commission further argues that,

²⁸ *Id.* at 4 (citing *NRG Power Marketing, LLC v. FERC*, 862 F.3d 108, 109 (D.C. Cir. 2017)).

²⁹ Ohio Consumers' Counsel Protest at 1-2.

³⁰ *Id.* at 2, 9 (citing *In the Matter of the Application of Ohio Power Company for the Authority to Establish a Standard Service Offer Pursuant to R.C. 4928.143, in the Form of an Electric Security Plan*, 319 P.U.R. 4th 175 (Ohio P.U.C. 2015)).

³¹ *Id.* at 11.

³² ODEC Protest at 1-2.

³³ AMP Protest at 19; Ohio Commission Protest at 1.

if the Commission approves the OVEC integration, the costs of any future transmission projects on the OVEC system should be allocated 100 percent to entities that benefit from them, or, should PJM be unable to identify those beneficiaries, the costs should be allocated across the PJM region so as to minimize rate impacts.³⁴ The Ohio Commission contends that the Commission should clarify, or require the Filing Parties to address, how the costs of regional, local, and supplemental transmission projects will be recovered from the OVEC zone pursuant to the PJM Tariff and Order No. 1000.³⁵

18. ODEC argues that it is critical that the Sponsoring Companies continue to bear all costs related to existing OVEC transmission facilities. Moreover, ODEC contends that, in the event that PJM determines that upgrades are necessary to maintain reliability, the costs of those upgrades must be borne only by customers in the OVEC zone.³⁶ ODEC requests that the Commission, at minimum, direct PJM and OVEC to clarify and confirm that the OVEC integration will not result in cost shifts to non-OVEC zone transmission owners or their customers.³⁷ ODEC argues that such clarification is appropriate because PJM has acknowledged that certain transmission cost allocation methods may not be appropriate in every situation, i.e., 50 percent distribution factor cost allocation and 50 percent load ratio share.³⁸

4. Miscellaneous

19. The PJM IMM argues that there are significant questions that must be answered, in detail, before the Commission accepts OVEC's integration. Specifically, the PJM IMM raises concerns regarding whether eligibility for Reliability Must Run status is appropriate for OVEC's generating units. The PJM IMM also questions the appropriate definition and allocation of related costs.³⁹ Accordingly, the PJM IMM supports either the issuance of a deficiency letter or the establishment of a more formal process through which PJM could respond to the questions that intervenors raise.⁴⁰ Similarly,

³⁴ Ohio Commission Protest at 1.

³⁵ *Id.* at 5.

³⁶ ODEC Protest at 5.

³⁷ *Id.* at 2.

³⁸ *Id.* at 6-7 (citing *PJM Interconnection, L.L.C.*, Docket No. ER17-420-000) (Apr. 13, 2017) (delegated letter order).

³⁹ IMM Comment at 1-2.

⁴⁰ *Id.* at 2.

AMP argues that, if the Commission does not reject PJM's OVEC integration filing outright, the Commission should set for hearing all issues pertaining to the justness and reasonableness of the proposed tariff and related documents, including OVEC's zonal rate. AMP notes that, consistent with prior integrations, the Commission should reevaluate OVEC's revenue requirement as the Commission found in *Duke*.⁴¹

B. Supporting Comments

20. AEP and Dayton Power state that they support OVEC's integration into PJM. AEP and Dayton Power argue that PJM has submitted the tariff modifications necessary both to implement the integration and to maintain the status quo regarding transmission rates and service for transmission customers in the OVEC zone. AEP and Dayton Power argue that OVEC's integration into PJM will promote regional efficiency and transparency and that, by joining PJM, OVEC will reduce its costs and risks associated with cyber security and regulatory compliance.⁴²

C. Answers

1. Satisfaction of Integration and Reliability Requirements

21. In its answer, OVEC argues that its Integration Filing satisfies all PJM requirements for integration.⁴³ OVEC states that the OVEC transmission system is already highly interconnected with PJM's transmission system, its generating units are currently pseudo-tied into PJM, and a majority of OVEC's Sponsoring Companies are already PJM members. Finally, OVEC states that PJM's analyses examining the impacts of OVEC's integration satisfy PJM's integration criteria.⁴⁴

22. OVEC asserts that its proposal to provide grandfathered treatment to existing agreements is consistent with other Regional Transmission Organization integrations. OVEC notes that the most recent PJM integration, East Kentucky Power Cooperative, Inc., involved similar grandfathered treatment of deliveries to non-PJM utilities. With respect to the purported confusion regarding the interaction between OVEC's Inter-Company Power Agreement and the PJM Tariff, OVEC clarifies that grandfathering

⁴¹ AMP Protest at 23-24 (citing *PJM Interconnection, L.L.C.*, 139 FERC ¶ 61,068 (2012) (*Duke*)).

⁴² AEP/Dayton Comments at 1-2.

⁴³ OVEC Answer at 4-5.

⁴⁴ *Id.* at 5-6.

the Inter-Company Power Agreement will only (1) address the treatment of existing transmission service arrangements for the external deliveries to non-PJM Sponsoring Companies, and (2) maintain the PJM Sponsoring Companies' and non-PJM Sponsoring Companies' current entitlements to OVEC's generation capacity.⁴⁵

23. In its answer, PJM argues that protesters' arguments do not provide credible grounds to justify rejection of the Filing Parties' Integration Proposal. Furthermore, PJM asserts that protesters' objections are based on presumed facts that are inaccurate or are speculative and unsupported. PJM notes that the Filing Parties' Integration Proposal does not seek recovery of any legacy or transition costs associated with OVEC's integration and that any and all study or remediation costs are OVEC's responsibility.⁴⁶ PJM states that the replacement arrangements made pursuant to the PJM Tariff following OVEC's integration will maintain the status quo rates and service for transmission customers in OVEC's zone, with the exception of the grandfathered delivery commitments, none of which result in shifted costs to existing PJM customers.⁴⁷

24. OVEC opposes requests by protesters for additional time to review PJM's reliability analyses, arguing that those parties are seeking open-ended evaluations of future hypotheticals that have no relevance to PJM's assumption of operational control over OVEC's system. OVEC reiterates that PJM and OVEC have satisfied their obligations under PJM's Tariff to evaluate and plan for OVEC's integration into PJM's system.⁴⁸

25. Likewise, PJM argues that all integration analyses were performed pursuant to the requirements in PJM's Operating Agreement and Consolidated Transmission Owners Agreement, as well as its approved and documented procedures.⁴⁹ Furthermore, PJM states that protesters do not explain how any hypothetical errors impact the ability of PJM to safely facilitate OVEC's integration.⁵⁰ On the technical reliability analyses, PJM argues that protesters' claims are confused and unsupported, and that protesters fail to identify any system performance issues; rather, protesters seem to be unhappy with the

⁴⁵ *Id.* at 13-14.

⁴⁶ PJM Answer at 2.

⁴⁷ *Id.* at 4-5.

⁴⁸ OVEC Answer at 8-9.

⁴⁹ PJM Answer at 12, 16 (citing PJM Operating Agreement, § 11.6 and PJM Consolidated Transmission Owners Agreement, § 3.1.).

⁵⁰ *Id.* at 13-14.

manner in which PJM performed the studies.⁵¹

2. Cost-Benefit Test

26. OVEC argues that there is no requirement to perform a cost-benefit analysis for a new transmission system integrating into PJM. OVEC further asserts that the Commission has found that there are numerous benefits to Regional Transmission Organization membership including, but not limited to: increased efficiency through regional transmission planning; reduced transaction costs; improved grid reliability; and improved market operations, including improved congestion management.⁵² According to OVEC, protesters' calls for a cost-benefit analysis are an unduly discriminatory attempt to prevent OVEC's integration while retaining the benefits of OVEC's ongoing deliveries of energy into the PJM system.⁵³

27. PJM disagrees with protesters' claims that OVEC's integration fails to provide benefits to the wider PJM region. Specifically, PJM argues that protesters ignore the highly interconnected relationship between OVEC's transmission system and PJM's control area. PJM also notes that 90 percent of the capacity of OVEC's generation facilities is currently pseudo-tied into PJM.⁵⁴ Moreover, PJM asserts that OVEC's integration advances the goals of Order No. 2000 by expanding PJM's congestion management mechanism and internalizing loop flow, and generally providing for better functional control.⁵⁵

3. Transmission Cost Allocation

28. OVEC contends that protesters' claims of the potential for cost-shifting resulting from future, speculative transmission upgrades via PJM's Regional Transmission Expansion Plan are not only beyond the scope of the instant filing, but also constitute a collateral attack on Commission-approved tariff provisions that are not being revised in

⁵¹ *Id.* at 14-15.

⁵² OVEC Answer at 7 (citing *Regional Transmission Organizations*, Order No. 2000, FERC Stats. & Regs. ¶ 31,089, at 31,024 (1999), *order on reh'g*, Order No. 2000-A, FERC Stats. & Regs. ¶ 31,092 (2000), *aff'd sub nom. Pub. Util. Dist. No. 1 v. FERC*, 272 F.3d 607 (D.C. Cir. 2001)).

⁵³ *Id.* at 7-8.

⁵⁴ PJM Answer at 6.

⁵⁵ *Id.* at 7-8 (citing Order No. 2000, FERC Stats. & Regs. ¶ 31,089).

the instant filing.⁵⁶ OVEC and PJM argue that to change these provisions, protesters must challenge them under section 206 of the FPA.⁵⁷ PJM adds that protesters rely on speculation of hypothetical future upgrades in OVEC's zone, noting that protesters have not provided any empirical data to support their claims about cost shifts. PJM affirms that any transmission projects in the OVEC zone will be evaluated pursuant to the PJM Tariff, including PJM's Regional Transmission Expansion Plan and related cost-allocation procedures.⁵⁸

29. Indicated TOs take issue with the Ohio Commission's recommendation that, "to the extent [Filing Parties] are unable to identify who would benefit from a particular [future] transmission project . . . future transmission costs should be socialized across the PJM footprint to minimize the rate impact on all transmission customers."⁵⁹ Indicated TOs argue that the "filed rate governing the allocation of the cost of transmission projects selected in the [Regional Transmission Expansion Plan] for purposes of cost allocation [is] set forth in Schedule 12 of the PJM Tariff."⁶⁰ Accordingly, Indicated TOs assert that until changes to PJM's transmission cost allocation methods are proposed or ordered by the Commission, the cost allocation rules in Schedule 12 of PJM's Tariff apply.⁶¹

4. Miscellaneous

30. OVEC argues that the adoption, on a going-forward basis, of OVEC's current annual transmission revenue requirement is consistent with other Regional Transmission Organization integrations.⁶² OVEC notes that, should the Commission determine that the OVEC rate should be subject to further procedures, it may do so under section 206 of the FPA.⁶³ OVEC challenges protesters' requests for a deficiency letter or a "formal

⁵⁶ OVEC Answer at 11, 16 (citing *Midwest Independent System Operator, Inc.*, 139 FERC ¶ 61,199 (2012); *California Independent System Operator Corp.*, 121 FERC ¶ 61,258 (2007); *Acadia Power Partners, LLC*, 106 FERC ¶ 61,215 (2004)).

⁵⁷ OVEC Answer at 12-13 (citing 16 U.S.C. § 824e (2012)); PJM Answer at 9-10.

⁵⁸ PJM Answer at 9-10.

⁵⁹ Ohio Commission Protest at 7-8; *see* Indicated TOs' Comments at 4.

⁶⁰ Indicated TOs' Comments at 4.

⁶¹ *Id.* at 4-5.

⁶² OVEC Answer at 14-15.

⁶³ *Id.* at 15.

process” to examine issues raised in the protests as attempts to prolong the integration process for OVEC. OVEC asserts these requests are, again, an impermissible collateral attack both on PJM’s established rules and on OVEC itself.⁶⁴

31. Likewise, PJM states the Commission should reject protesters claims’ that OVEC’s integration requires a reevaluation of OVEC’s annual transmission revenue requirement. Specifically, PJM states, that protesters’ reliance on *Duke* is inappropriate, as the case does not present a similar situation to the Filing Parties’ proposal. In *Duke*, Duke was realigning with another Regional Transmission Organization, thus changing the proxy group used to determine its allowed return on equity pursuant to the Commission’s discounted cash flow analysis.⁶⁵ Here, PJM argues, OVEC is simply joining a Regional Transmission Organization; thus, no modified annual transmission revenue requirement is justified.⁶⁶

32. In addition, PJM disputes protesters’ concerns regarding Reliability Must Run eligibility for OVEC’s generation facilities by noting that protesters fail to identify any requirement in the PJM Tariff that mandates, as part of the integration process, examination of eligibility for such agreements.⁶⁷

33. AEP-Dayton-Buckeye state that there is no legal basis for the Commission to apply a different standard of review or impose new steps beyond those required by the PJM Tariff for integrating OVEC.⁶⁸ AEP-Dayton-Buckeye assert that protests calling for expanding the review process stem from speculation regarding the possible future investments for OVEC’s transmission system and that PJM’s analyses do not support such conjecture.

IV. Discussion

A. Procedural Matters

34. Pursuant to Rule 214 of the Commission’s Rules of Practice and Procedure, 18 C.F.R. § 385.214 (2017), the timely, unopposed motions to intervene serve to

⁶⁴ *Id.* at 15-16.

⁶⁵ 139 FERC ¶ 61,068.

⁶⁶ PJM Answer at 12.

⁶⁷ *Id.* at 17-18.

⁶⁸ AEP-Dayton-Buckeye at 1.

make the entities that filed them parties to the above-noted proceedings. Pursuant to Rule 214(d) of the Commission's Rules of Practice and Procedure, 18 C.F.R. § 385.214(d) (2017), we grant the unopposed late-filed motions to intervene submitted by the Buckeye Power, Inc., and Dominion given their interest in the proceeding, the early stage of the proceeding, and the absence of undue prejudice or delay.

35. Rule 213(a)(2) of the Commission's Rules of Practice and Procedure, 18 C.F.R. § 385.213(a)(2) (2017), prohibits an answer to a protest or to an answer unless otherwise ordered by the decisional authority. We will accept the answers filed by OVEC, Indicated TOs, AEP-Dayton-Buckeye, and PJM because they have provided information that assisted us in our decision-making process. We are not persuaded to accept AMP's answer to OVEC's and PJM's answers and will, therefore, reject it.

B. Substantive Matters

36. As discussed below, we accept the OVEC Integration Proposal, effective March 1, 2018, as requested.⁶⁹

37. We find that the Filing Parties have satisfied the criteria set forth in section 11.6 of the Operating Agreement and section 3.1 of the Consolidated Transmission Owners Agreement, which govern the integration of transmission facilities into the PJM Region. In accordance with these provisions, PJM conducted studies to determine that all equipment and facilities are (or will be) in place to support the safe and reliable operation of the OVEC transmission system.⁷⁰ PJM determined that, with the exception of a single deliverability violation, which OVEC has committed to remedy, the existing equipment and facilities are adequate.⁷¹ Further, we note that the Filing Parties have engaged with PJM stakeholders throughout the study process to discuss the study results and to provide supplemental information about the identified issue. Accordingly, because the record before us demonstrates that the Filing Parties have complied with the requirements set forth in the Operating Agreement and the Consolidated Transmission Owners Agreement, we find that the Filing Parties' proposal is just and reasonable and

⁶⁹ See Appendix for a list of approved tariff records.

⁷⁰ PJM Answer at 3 (“These provisions govern integration of transmission facilities into the PJM Region, and mandate the completion of studies to confirm the adequacy of existing facilities and systems and to identify any installations or modifications necessary to effectuate the safe and reliable integration of new transmission assets.”).

⁷¹ OVEC Answer at 8.

not unduly discriminatory. Therefore, we deny requests to issue a deficiency letter, establish a more formal process to review the Filing Parties' proposal, or set this proceeding for hearing. In the following paragraphs, we discuss the additional concerns raised by commenters, many of which go beyond the question of whether or not Filing Parties complied with the criteria for integrating transmission facilities into the PJM region.

38. We disagree with AMP's and Ohio Consumers' Counsel's arguments that the Filing Parties must satisfy a cost-benefit test prior to joining PJM. In previous orders addressing proposed integrations, the Commission has not required a cost-benefit test as a prerequisite for integrating into PJM, except in the very limited circumstance when the applicant proposed to switch the Regional Transmission Organization to which the applicant belonged.⁷² Moreover, in response to the Ohio Consumers Counsel's assertions that the Filing Parties' proposal does not bring about benefits for consumers, we reiterate that the benefits for consumers resulting from Regional Transmission Organization membership outweigh costs associated with integrating into a Regional Transmission Organization. These benefits include, but are not limited to: increased efficiency for transmission planning and generation investment; reduced transaction costs; improved grid reliability; limited discriminatory transmission practices; and improved market operations.⁷³

⁷² See *PJM Interconnection, L.L.C.*, 135 FERC ¶ 61,198, at P 59 (2011) (“We therefore find that ATSI fails to provide sufficient information or support that would enable the Commission to find that it is just and reasonable for ATSI's transmission customers to bear the costs arising from the decision to *switch* Regional Transmission Organizations.”) (emphasis added).

⁷³ *Regional Transmission Organizations*, Order No. 2000, FERC Stats. & Regs. ¶ 31,089 at 31,024, *order on reh'g*, Order No. 2000-A, FERC Stats. & Regs. ¶ 31,092, *aff'd sub nom. Pub. Util. Dist. No. 1 v. FERC*, 272 F.3d 607.

39. With regard to protesters' concerns regarding transmission cost allocation resulting from possible future upgrades necessary to maintain reliability on OVEC's system, we note that PJM's studies did not identify any upgrades as necessary at this time; thus, protesters' concerns are speculative. Following the integration of the OVEC transmission system into PJM, any transmission projects that are deemed necessary in the OVEC zone will be evaluated in accordance with the PJM Tariff and Operating Agreement, and the costs of any such transmission projects will be allocated pursuant to Schedule 12 of the PJM Tariff, which sets forth PJM's Commission-approved cost allocation methods.⁷⁴ If the OVEC zone is assigned costs under Schedule 12 of the PJM Tariff, those costs will, pursuant to the OVEC Inter-Company Power Agreement, continue to be borne by the OVEC Sponsoring Companies based on their percentage ownership share of OVEC. We find that this approach is just, reasonable, and not unduly discriminatory.

40. We find that accepting OVEC's annual transmission revenue requirement for incorporation into PJM's Tariff is consistent with precedent.⁷⁵ In the instant filing, OVEC simply proposes to transfer its existing, Commission-approved annual transmission revenue requirement from the OVEC OATT to the PJM Tariff.

41. We find that the PJM IMM's concerns regarding Reliability Must Run eligibility for OVEC's generation facilities are beyond the scope of this proceeding. Pursuant to PJM's Tariff, Reliability Must Run eligibility is only determined following the submission of a generator deactivation notice.⁷⁶ As OVEC has not submitted a deactivation notice for either of OVEC's generation facilities, concerns regarding Reliability Must Run contracts are speculative at this time. We also find that the application of retail rate riders to OVEC's generating units has no relation to whether the criteria for integrating transmission facilities into the PJM system have been met and we reject the Ohio Consumers Counsel's arguments on this topic as beyond the scope of this proceeding.

42. We also accept the Filing Parties' proposal to provide grandfathered treatment to the (1) Inter-Company Power Agreement, (2) the associated delivery commitments under the Inter-Company Power Agreement, (3) the OVEC/IKEC Power Agreement,

⁷⁴ See, e.g., *PJM Interconnection, L.L.C.*, 142 FERC ¶ 61,214 (2013).

⁷⁵ See, e.g., *Duke*, 139 FERC ¶ 61,068.

⁷⁶ See, e.g., *PJM Interconnection, L.L.C., Tariff, Part V (Generation Deactivation)*. (0.0.0).

and (4) the Department of Energy Portsmouth Project Interconnection Agreement.⁷⁷ For the reasons stated above, we find the OVEC Integration Proposal to be just, reasonable, and not unduly discriminatory and therefore accept the filing, effective March 1, 2018.

The Commission orders:

The Filing Parties' OVEC Integration Proposal is hereby accepted, effective March 1, 2018, as discussed in the body of this order.

By the Commission. Chairman McIntyre is not participating.

(S E A L)

Nathaniel J. Davis, Sr.,
Deputy Secretary.

⁷⁷ The Commission has previously provided grandfathered treatment to pre-existing agreements as part of a Regional Transmission Organization. *See, e.g., PJM Interconnection, L.L.C.*, 109 FERC ¶ 61,299, at P 22 (2004) (“the Commission has found that the integration of a utility into a Regional Transmission Organization does not constitute a sufficient basis for abrogating a pre-existing service agreement, provided that the customer continues to receive service commensurate with the service to which it is entitled under that contract”).

Appendix

**PJM Interconnection, L.L.C.
Rate Schedules**

Tariff Records Accepted Effective March 1, 2018

[ATTACHMENT A, TOA-42 ATTACHMENT A TO THE CONSOLIDATED TRANSMISSION OWNERS, 14.0.0](#)

**PJM Interconnection, L.L.C.
Intra-PJM Tariffs**

Tariff Records Accepted Effective March 1, 2018

[OATT Table of Contents, PJM OATT Table of Contents, 29.0.0](#)

[SCHEDULE 1A, OATT SCHEDULE 1A, 10.0.0](#)

[SCHEDULE 7, OATT SCHEDULE 7, 7.0.0](#)

[SCHEDULE 8, OATT SCHEDULE 8, 7.0.0](#)

[SCHEDULE 10-NERC, OATT SCHEDULE 10-NERC, 5.0.0](#)

[SCHEDULE 10-RFC, OATT SCHEDULE 10-RFC, 4.0.0](#)

[OATT ATTACHMENT C-4, OATT ATTACHMENT C-4 - Conversion of Service in the OVEC Zone, 0.0.0](#)

[OATT ATTACHMENT H-31, OATT Attachment H-31 - OVEC Annual Transmission Revenue Rate, 0.0.0](#)

[ATTACHMENT J, OATT ATTACHMENT J, 5.0.0](#)

[OATT ATT K Appx Sec 3.2, OATT Attachment K Appendix Sec 3.2 - Market Buyers, 38.2.1](#)

[OATT Attch K Appx Sec 7.4, OATT Attachment K Appendix Sec 7.4 Allocation of Auction Re, 12.0.0](#)

[ATTACHMENT L, OATT ATTACHMENT L List of Transmission Owners, 11.0.0](#)

[OATT ATT DD.5.10, OATT ATTACHMENT DD.5.10 Auction Clearing Requirements, 22.0.0](#)

[OA Schedule 1 Sec 3.2, OA Schedule 1 Sec 3.2 - Market Buyers, 37.2.1](#)

[OA Schedule 1 Sec 7.4, OA Schedule 1 Sec 7.4 Allocation of Auction Revenues., 12.0.0](#)

[RAA SCHEDULE 10 Sec 1, RAA SCHEDULE 10 Sec 1 - Locational Deliverability Areas and, 9.0.0](#)

[RAA SCHEDULE 15, RAA SCHEDULE 15, 5.0.0](#)

[RAA SCHEDULE 17, RAA SCHEDULE 17 - PARTIES TO THE RELIABILITY ASSURANCE AGREE, 36.0.0](#)

OHIO VALLEY ELECTRIC CORPORATION
Minutes of Special Meeting of the
Board of Directors' Meeting via Teleconference
February 21, 2018

A Special Meeting of the Board of Directors of **OHIO VALLEY ELECTRIC CORPORATION** (OVEC) via teleconference was called to order by the President on Wednesday, February 21, 2018, at 9:00 a.m., pursuant to notice duly given.

Nicholas K. Akins, President of the Corporation, acted as Chairman of the meeting, and Justin J. Cooper, Chief Financial Officer, Secretary and Treasurer of the Corporation, acted as Secretary of the meeting.

Mr. Cooper reported that the following Directors were present for the meeting:

Nicholas K. Akins	Mark C. McCullough
Thomas Alban	Mark E. Miller
Eric D. Baker	Steven K. Nelson
Lonnie E. Bellar	Patrick W. O'Loughlin
Wayne D. Games	David W. Pinter
James R. Haney	Paul W. Thompson
Lana L. Hillebrand	John A. Verderame

At the request of Mr. Akins, Mr. Brian Chisling, with Simpson Thacher & Bartlett LLP, reviewed the Cost/Benefit Analysis of OVEC integrating into PJM. Mr. Chisling stated that, as specified in such analysis, there would be [REDACTED]

[REDACTED] On a motion duly made, seconded, and unanimously adopted, it was

RESOLVED, that in accordance with the order of the Federal Energy Regulatory Commission (FERC) approving OVEC's application for membership in PJM Interconnection, L.L.C. (PJM), previously provided to the Board (the "FERC PJM Order"), OVEC is hereby authorized and approved to execute and deliver all of the agreements and other documents described therein and otherwise in accordance with the rules and regulations of PJM (together, the "Integration Agreements") in order for OVEC to become a full member of, and fully integrate the OVEC and IKEC generating facilities and transmission system into, PJM; and it is further

RESOLVED, that, in furtherance of the foregoing, any Officer of OVEC (each an "Authorized Officer") is hereby authorized, approved and directed in the name of and on behalf of OVEC, to execute and deliver such Integration Agreements with such changes, deletions and additions thereto as deemed appropriate or proper by any such Authorized Officer, the execution and delivery of such Integration Agreements being conclusive evidence of such determination; and it is further

RESOLVED, that each Officer of OVEC is authorized and directed to prepare, execute and file, or cause to be prepared, executed and filed, all agreements, certificates, statements, reports, documents, instruments and papers required to be filed by OVEC in accordance with the Integration Agreements, the FERC PJM Order and the PJM tariff and in order for OVEC to comply with all applicable requirements and rules and regulations of PJM, FERC and applicable law and any other administrative or governmental agency (domestic or foreign) in connection with the Integration Agreements, the FERC PJM Order or any other matter relating to PJM integration and to prepare, sign, seal, execute, file, record and deliver such other agreements, certificates, statements, termination and other notices, reports, documents, instruments and papers, from time to time necessary, desirable or appropriate, as may be executed by any such Officer pursuant to the Integration Agreements, the FERC PJM Order, the PJM tariff and these resolutions and the transactions contemplated thereby and hereby, and to do any and all other acts and things, in each case to effectuate the purpose and intent of these resolutions.

There being no further business to come before the Board, the meeting was adjourned.



Secretary
OHIO VALLEY ELECTRIC CORPORATION

OHIO VALLEY ELECTRIC CORPORATION (OVEC)
INDIANA-KENTUCKY ELECTRIC CORPORATION (IKEC)
Agenda
Boards of Directors' Conference Call Meeting – PJM Integration
April 27, 2018

1. Call Meeting to Order (8:30 A.M.) Mark McCullough

2. Roll Call Justin Cooper
 - Quorum (OVEC and IKEC)

3. Chairman of the Meeting Mark McCullough
 - Resolutions (OVEC and IKEC)

4. Election of Directors and Officers Justin Cooper
 - In recognition of the resignation of Mr. Nicholas K. Akins as a director, member of the Executive Committee and president of OVEC and IKEC and Mr. Mark C. McCullough resignation from OVEC's Human Resources Committee, OVEC management and IKEC management recommend the following:
 - Mr. Mark C. McCullough, executive vice president-generation of AEP, be elected president of OVEC;
 - Mr. Chris T. Beam, president and chief operating officer of Appalachian Power, be elected to the OVEC Board of Directors and appointed as a member of the OVEC Human Resources Committee;
 - Ms. Julie Sloat be appointed as a member of the Executive Committee of OVEC
 - Ms. Lana L. Hillebrand be appointed as chairwoman of the OVEC Human Resources Committee; and
 - Mr. Mark C. McCullough be elected to the IKEC Board of Directors and as president of IKEC and appointed as a member of the Executive Committee of IKEC
 - Resolutions (OVEC and IKEC)

5. Update of Progress of OVEC's Full Integration into PJM Brian Chisling
Scott Cunningham
 - Review Board Update Memo
 - PJM Treatment of System Losses and Other Update Information

Adjournment

**OHIO VALLEY ELECTRIC CORPORATION (OVEC)
INDIANA-KENTUCKY ELECTRIC CORPORATION (IKEC)
Resolutions of Minutes of Meeting
Boards of Directors' Meeting
April 27, 2018**

WHEREAS, effective as of the election of the persons specified herein, Mr. Nicholas K. Akins will be resigning as a member of the Board of Directors (Board) of each of OVEC and IKEC and as a member of the Executive Committee and as president of OVEC and IKEC;

WHEREAS, effective as of the election of the persons specified herein, Mr. Mark C. McCullough will be resigning as a member and Chairman of the Human Resources Committee of OVEC; and

WHEREAS, OVEC and IKEC management have recommended to the remaining members of their respective Boards those persons named below to be elected and/or appointed as Directors to the Boards, as officers and/or as members of Committees of OVEC and IKEC as described below.

OVEC

RESOLVED, that, subject to any necessary action by the Federal Energy Regulatory Commission (FERC) under Section 305 of the Federal Power Act, Mr. Mark C. McCullough be elected as the president of OVEC; and it is further

RESOLVED, that, subject to any necessary action by FERC under Section 305 of the Federal Power Act, Mr. Chris T. Beam be elected a Director of the Board of OVEC and appointed as a member of the Human Resources Committee of OVEC; and it is further

RESOLVED, that, subject to any necessary action by FERC under Section 305 of the Federal Power Act, Ms. Julie Sloat be appointed as a member of the Executive Committee of OVEC; and it is further

RESOLVED, that, subject to any necessary action by FERC under Section 305 of the Federal Power Act, Ms. Lana L. Hillebrand be appointed as Chairwoman of the Human Resources Committee of OVEC.

IKEC

RESOLVED, that, subject to any necessary action by the Federal Energy Regulatory Commission (FERC) under Section 305 of the Federal Power Act, Mr. Mark C. McCullough be elected a Director of the Board of IKEC and as president of IKEC and appointed as a member of the Executive Committee of IKEC.



Chris T. Beam
President and Chief Operating Officer
Appalachian Power

Chris Beam is president and chief operating officer of Appalachian Power, serving approximately 1 million customers in West Virginia, Virginia and Tennessee. As president, he oversees the company's distribution operations and a wide range of customer and regulatory relationships.

Beam most recently served as vice president - Projects, Controls & Construction, responsible for all aspects of project management, project controls, commissioning and construction activities within AEP's Generation organization.

Previously, he was managing director - Projects & Construction, from November 2010 to January 2013. In this role he was responsible for project management of the Western fleet, all new generating projects, and the commissioning and construction activities within the Generation organization.

Beam joined AEP at the Kammer Plant in 1990, and in 1996 began working in the Regional Service Organization. In 2001, he joined Southwestern Electric Power Company and supported the development of a Western Regional Service Organization. In 2003, he began serving in the Asset and Outage Management group. In 2004, he was named project manager for the Mountaineer Plant scrubber retrofit project. Beam was named manager - Construction Technology in 2007, and was named director - Construction in 2008. He became project director - Retrofit Projects in 2009.

Beam received a bachelor's degree in Technical Management from DeVry University. He has completed the AEP Management Development Program at The Ohio State University, the AEP Leadership Program at Virginia Polytechnic Institute and State University, and is a member of the Leadership Columbus class of 2014. He is a Certified Project Management Professional. Beam is on the board of directors of The Education Alliance, the Clay Center and the W.Va. Chamber of Commerce.

Beam and his wife, Jennifer, have two sons and live in Scott Depot, W.Va.

OHIO VALLEY ELECTRIC CORPORATION
Minutes of Special Meeting of the
Board of Directors' Meeting via Teleconference
April 27, 2018

A Special Meeting of the Board of Directors of **OHIO VALLEY ELECTRIC CORPORATION** (OVEC) via teleconference was called to order by Mark C. McCullough on Friday, April 27, 2018, at 8:30 a.m., pursuant to notice duly given. On a motion duly made, seconded, and unanimously adopted, it was

RESOLVED, that in accordance with Article IV, Section 3 of the Code of Regulations of this Corporation, Mr. Mark C. McCullough be elected Chairman of this Meeting on April 27, 2018 in the absence of the President of this Corporation.

Mr. McCullough acted as Chairman of the meeting, and Justin J. Cooper, Chief Financial Officer, Secretary and Treasurer of the Corporation, acted as Secretary of the meeting.

Mr. Cooper reported that the following Directors were present for the meeting:

Thomas Alban	Mark C. McCullough
Eric D. Baker	Mark E. Miller
Lonnie E. Bellar	Steven K. Nelson
Wayne D. Games	Patrick W. O'Loughlin
James R. Haney	Julie Sloat
Lana L. Hillebrand	Paul W. Thompson

John A. Verderame

WHEREAS, effective as of the election of the persons specified herein, Mr. Nicholas K. Akins will be resigning as a member of the Board of Directors (Board) of each of OVEC and IKEC and as a member of the Executive Committee and as president of OVEC and IKEC;

WHEREAS, effective as of the election of the persons specified herein, Mr. Mark C. McCullough will be resigning as a member and Chairman of the Human Resources Committee of OVEC; and

WHEREAS, OVEC and IKEC management have recommended to the remaining members of their respective Boards those persons named below to be elected and/or appointed as Directors to the Boards, as officers and/or as members of Committees of OVEC and IKEC as described below.

NOW, THEREFORE, BE IT:

RESOLVED, that, subject to any necessary action by the Federal Energy Regulatory Commission (FERC) under Section 305 of the Federal Power Act, Mr. Mark C. McCullough be elected as the president of OVEC; and it is further

RESOLVED, that, subject to any necessary action by FERC, under Section 305 of the Federal Power Act, Mr. Chris T. Beam be elected a Director of the Board of OVEC and appointed as a member of the Human Resources Committee of OVEC; and it is further

RESOLVED, that, subject to any necessary action by FERC under Section 305 of the Federal Power Act, Ms. Julie Sloat be appointed as a member of the Executive Committee of OVEC; and it is further

RESOLVED, that subject to any necessary action by FERC under Section 305 of the Federal Power Act, Ms. Lana L. Hillebrand be appointed as Chairwoman of the Human Resources Committee of OVEC.

At the request of Mr. McCullough, Mr. Brian Chisling, with Simpson Thacher & Bartlett

LLP, [REDACTED]
[REDACTED]
[REDACTED]

There being no further business to come before the Board, the meeting was adjourned.



Secretary

OHIO VALLEY ELECTRIC CORPORATION

**OHIO VALLEY ELECTRIC CORPORATION (OVEC)
INDIANA-KENTUCKY ELECTRIC CORPORATION (IKEC)
Agenda**

**Boards of Directors' Informational Meeting/Conference Call
1-877-253-4307 Passcode: 2002860**

June 7, 2018

1. Welcome and Overview Rob Osborne

2. PJM Full Membership Update Brian Chisling
Scott Cunningham
 - Update on Progress
 - Update of Cost/Benefit Analysis
 - Transmission Discussion Summary memo

3. Discussion / Questions

OHIO VALLEY ELECTRIC CORPORATION
Minutes of Special Meeting of the
Board of Directors' Meeting via Teleconference
June 15, 2018

A Special Meeting of the Board of Directors of **OHIO VALLEY ELECTRIC CORPORATION** (OVEC) via teleconference was called to order by the President on Friday, June 15, 2018, at 3:00 p.m., pursuant to notice duly given.

Mark C. McCullough, President of the Corporation, acted as Chairman of the meeting, and Justin J. Cooper, Chief Financial Officer, Secretary and Treasurer of the Corporation, acted as Secretary of the meeting.

Mr. Cooper reported that the following Directors were present for the meeting:

Thomas Alban
Eric D. Baker
Lonnie E. Bellar
Mark C. McCullough

Mark E. Miller
Patrick W. O'Loughlin
Julie Sloat
John A. Verderame

At the request of Mr. McCullough, Mr. Brian Chisling, with Simpson Thacher & Bartlett LLP, reviewed the progress of OVEC's full integration into PJM and provided a summary of the feedback provided from the Board members and Operating Committee members since the prior meeting relating to OVEC management's PJM integration business case. Also, Mr. Chisling provided a review of the capacity availability from PJM Sponsoring Companies in regards to OVEC's potential integration.

There being no further business to come before the Board, the meeting was adjourned.



Secretary

OHIO VALLEY ELECTRIC CORPORATION

OHIO VALLEY ELECTRIC CORPORATION
Minutes of Special Meeting of the
Board of Directors' Meeting via Teleconference
June 28, 2018

A Special Meeting of the Board of Directors of **OHIO VALLEY ELECTRIC CORPORATION** (OVEC) via teleconference was called to order by the President on Thursday, June 28, 2018, at 3:00 p.m., pursuant to notice duly given.

Mark C. McCullough, President of the Corporation, acted as Chairman of the meeting, and Justin J. Cooper, Chief Financial Officer, Secretary and Treasurer of the Corporation, acted as Secretary of the meeting.

Mr. Cooper reported that the following Directors were present for the meeting:

Thomas Alban	Mark C. McCullough
Eric D. Baker	Mark E. Miller
Christian T. Beam	Steven K. Nelson
Lonnie E. Bellar	Patrick W. O'Loughlin
James R. Haney	Julie Sloat
Lana L. Hillebrand	John A. Verderame
Wayne D. Games	

At the request of Mr. McCullough, Mr. Brian Chisling, with Simpson Thacher & Bartlett LLP, provided an update of the cost-benefit analysis prepared for the Board by OVEC management concerning the expected net benefits of joining PJM. Mr. Chisling also reviewed proposals for allocation of certain PJM administrative charges. After discussion on these topics and related matters by the Board, a motion duly made, seconded, and adopted, it was:

RESOLVED, that OVEC's integration into PJM as a full member should proceed, with a target integration date of December 1, 2018; and that certain PJM administrative charges not otherwise payable absent such integration are to be properly allocated to those Sponsoring Companies under the Inter-Company Power Agreement that participate in the PJM market.

There being no further business to come before the Board, the meeting was adjourned.



Secretary
OHIO VALLEY ELECTRIC CORPORATION

**OHIO VALLEY ELECTRIC CORPORATION (OVEC)
INDIANA-KENTUCKY ELECTRIC CORPORATION (IKEC)
Agenda**

**Boards of Directors' Mid-Year Update
Informational Meeting/Conference Call
1-877-253-4307 Passcode: 2002860**

August 1, 2018

- | | |
|--|----------------|
| 1. Welcome and Overview | Rob Osborne |
| 2. Environmental Update | Mike Brown |
| • NOx / CSAPR | |
| • Compliance Update | |
| • Updated Projected Future Capital Costs | |
| 3. PJM Full Membership Update | Brian Chisling |
| 4. Mid-Year Operational and Financial Performance Update | Justin Cooper |
| • Open Book Leadership (OBL) Performance Metrics | |
| • 2018 Forecast Update | |
| 5. Closing Comments | Rob Osborne |

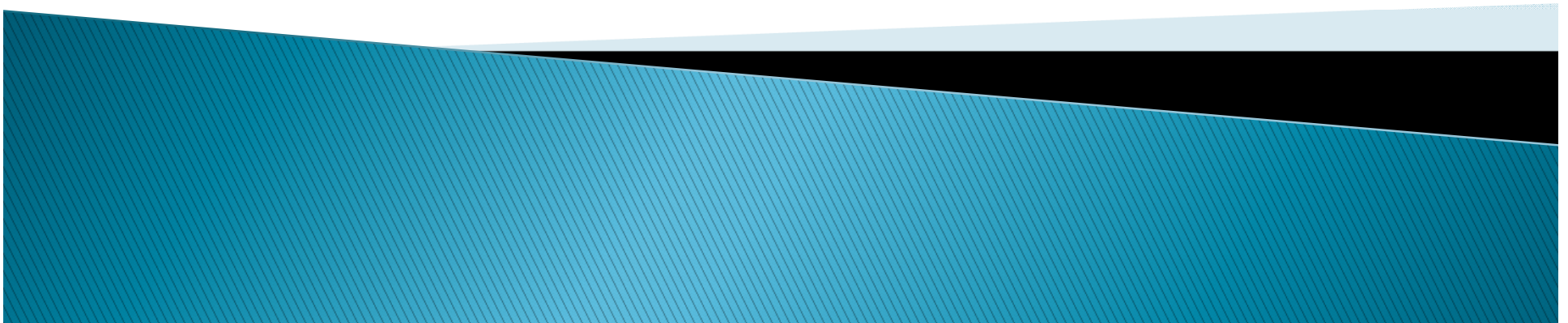
OVEC-IKEC

Boards of Directors' Update

August 1, 2018

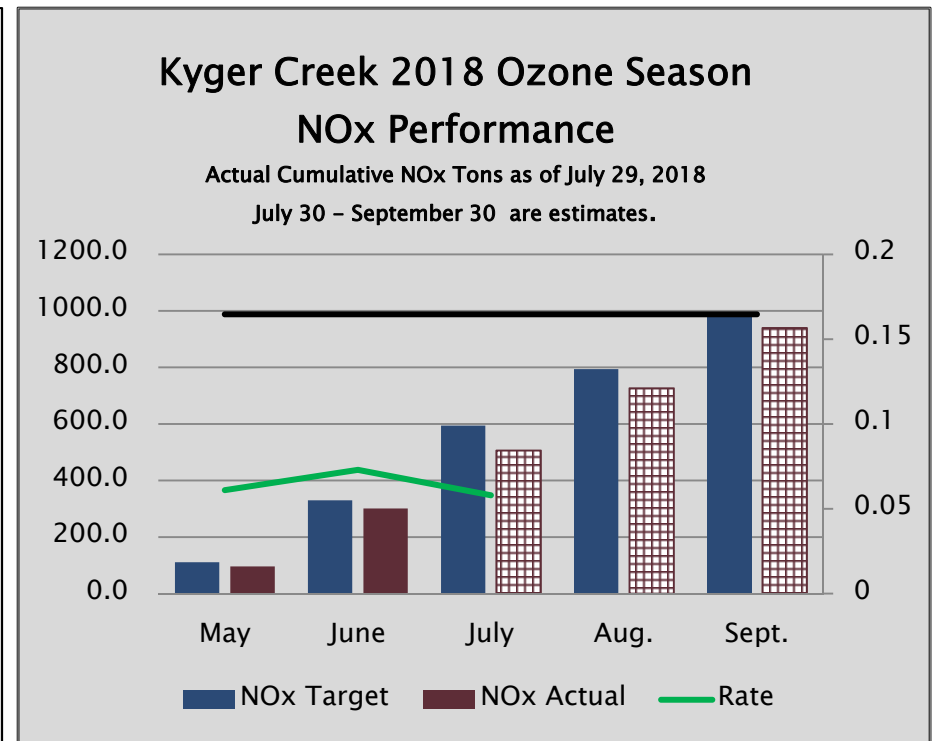
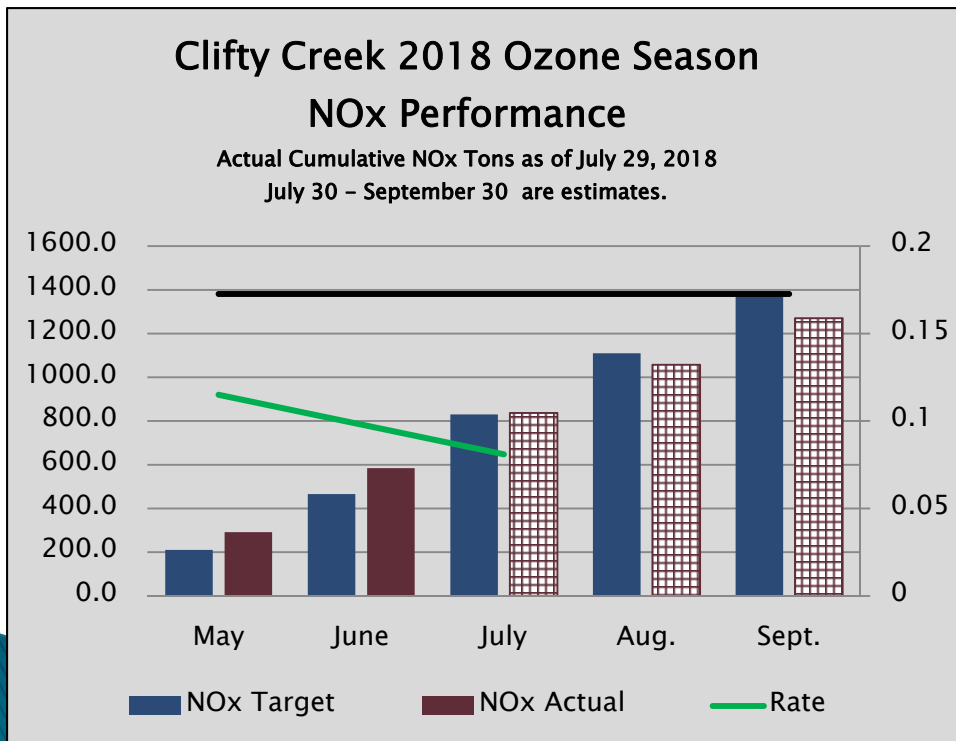


Environmental Update



Review of Ozone NO_x Performance

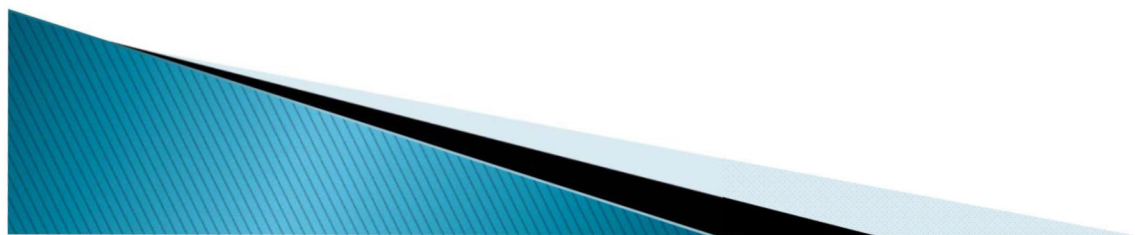
- ▶ To date, OVEC-IKEC ozone season NO_x performance has been excellent. Both plants are operating near historically low NO_x emission rates, and we are on track to be at or below the Company's NO_x ozone season emission targets.



ELG Environmental Regulatory Update

Effluent Limitations Guidelines Update

- EPA issued final ELG Postponement Rule in September 2017 for FGD Wastewater (FGDWW), bottom ash transport water (BATW).
- Postponement rule includes a two year delay in initial compliance window for FGDWW and BATW, keeps the remainder of ELG rule in tact.
- May 2, 2018 Federal Register Notice on Biennial ELG Report – EPA intends to issue a new draft rule on best available technology (BAT) effluent limits for bottom ash transport water and FGD wastewater by December 2018 and a final rule by December 2019.
- EPA engaging industry to obtain additional data as part of that rulemaking effort.
- EPA issuance of draft rule by end of year will give OVEC an opportunity to improve forecast, costs and timing of required investment.




ELG Environmental Regulatory Update

➤ Clifty Creek

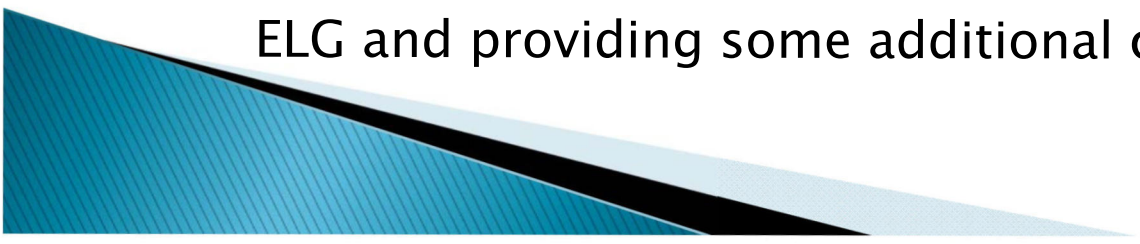
- Permit Modification Request was filed with IDEM to remove the April 1, 2022 ELG compliance dates for FGDWW and BATW.
- IKEC anticipates IDEM will act on request if EPA completes its new rule with new dates and/or new BAT limits.
- Field testing of pilot bioreactor conducted in spring 2018.

➤ Kyger Creek

- NPDES Permit Renewal Application to be filed in October 2018 – new permit expected in April 2019.
 - Continue evaluation of ELG compliance options and provide update to Board in December 2018.
 - Move into next phase of engineering evaluation of dry fly ash conversion options.
- 

CCR Environmental Regulatory Update

OVEC–IKEC has two landfills and four ponds that meet the definition of a CCR Unit


- Groundwater analysis from spring of 2018 shows statistically significant increases (SSIs) at the landfill runoff collection pond complex at Clifty Creek and the boiler slag pond at Kyger Creek.
 - Currently performing alternative source demonstrations (ASDs) – results available around the end of August.
 - Next steps will be driven by ASD results – will work with our Qualified Professional Engineer on compliance activities while waiting on additional EPA action.
 - EPA issued new CCR rule harmonizing compliance timeline with ELG and providing some additional compliance flexibility.
- 

316(b) Environmental Regulatory Update

Kyger Creek

- 316(b) Section 122.21(r) report complete and under peer review.
- Report to be filed with Ohio EPA as part of the NPDES permit renewal application in October 2018.
- Timing of Ohio EPA action expected to be part of permit renewal negotiations.

Clifty Creek

- 316(b) Section 122.21(r) report nearly complete and will undergo peer review in third/fourth quarter 2018.
 - Report to be filed with IDEM by end of January 2019.
 - IDEM to act on cooling system upgrades next permit cycle.
- 

Clean Power Plan (CPP) Environmental Regulatory Update

- EPA repeal of current CPP pending.
- EPA proposed replacement CPP – lawful, durable and simple – rule at OMB.
- Expect both regulatory actions to take place in second half of 2018.
- D.C. Circuit Court of Appeals has not issued ruling on prior legal challenge.
- Supreme Court “stay” remains in place.



Gypsum and Ash Beneficial Reuse

Kyger Creek

- Long-term sales contract signed with wallboard manufacturer. Majority of gypsum is now being sold.
- Boiler slag sales are above forecast (Harsco), evaluating system modifications to comply with possible CCR/ELG requirements.

Clifty Creek

- Modest gypsum sales already taking place.
- Short-term sales agreement in place with another wallboard manufacturer. Negotiating a separate long-term sales agreement for majority of gypsum.
- Fly ash marketing efforts continue.

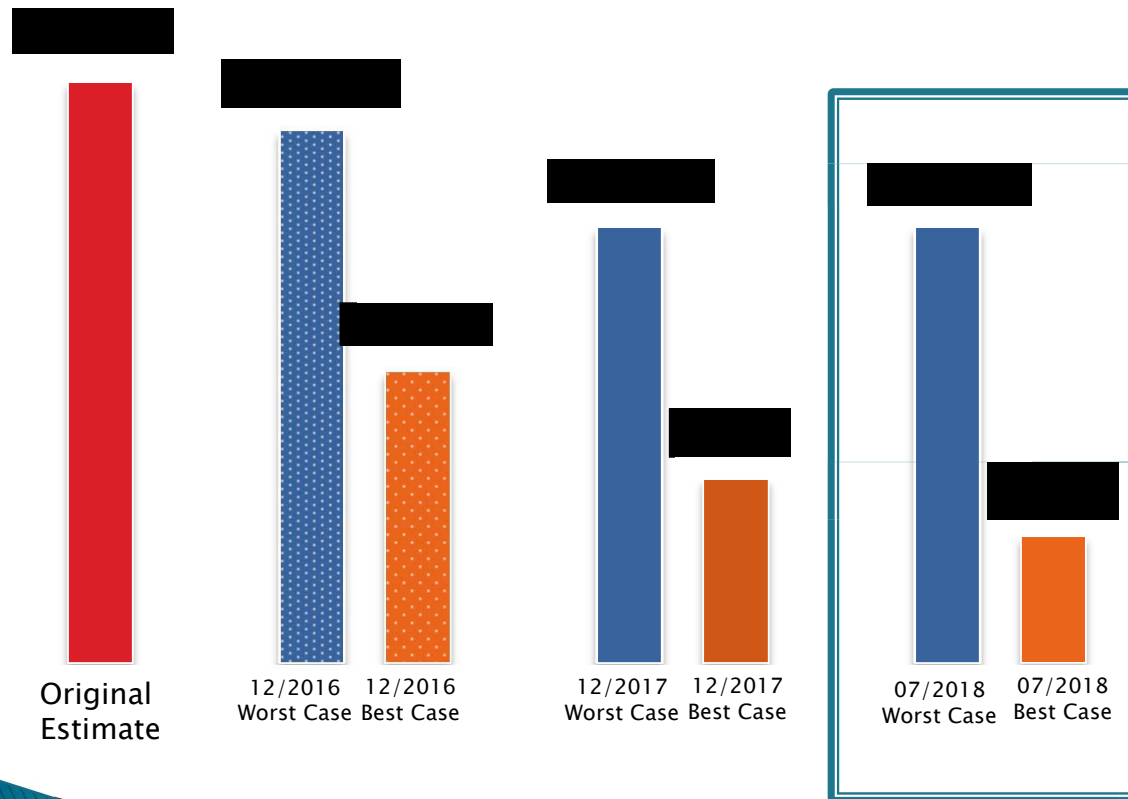
Benefits for both Plants:

- Reduced fuel costs, reduce future landfill expansion costs



Projected Environmental Investment

OVEC continues to challenge and evaluate current Environmental Project Cost Projections



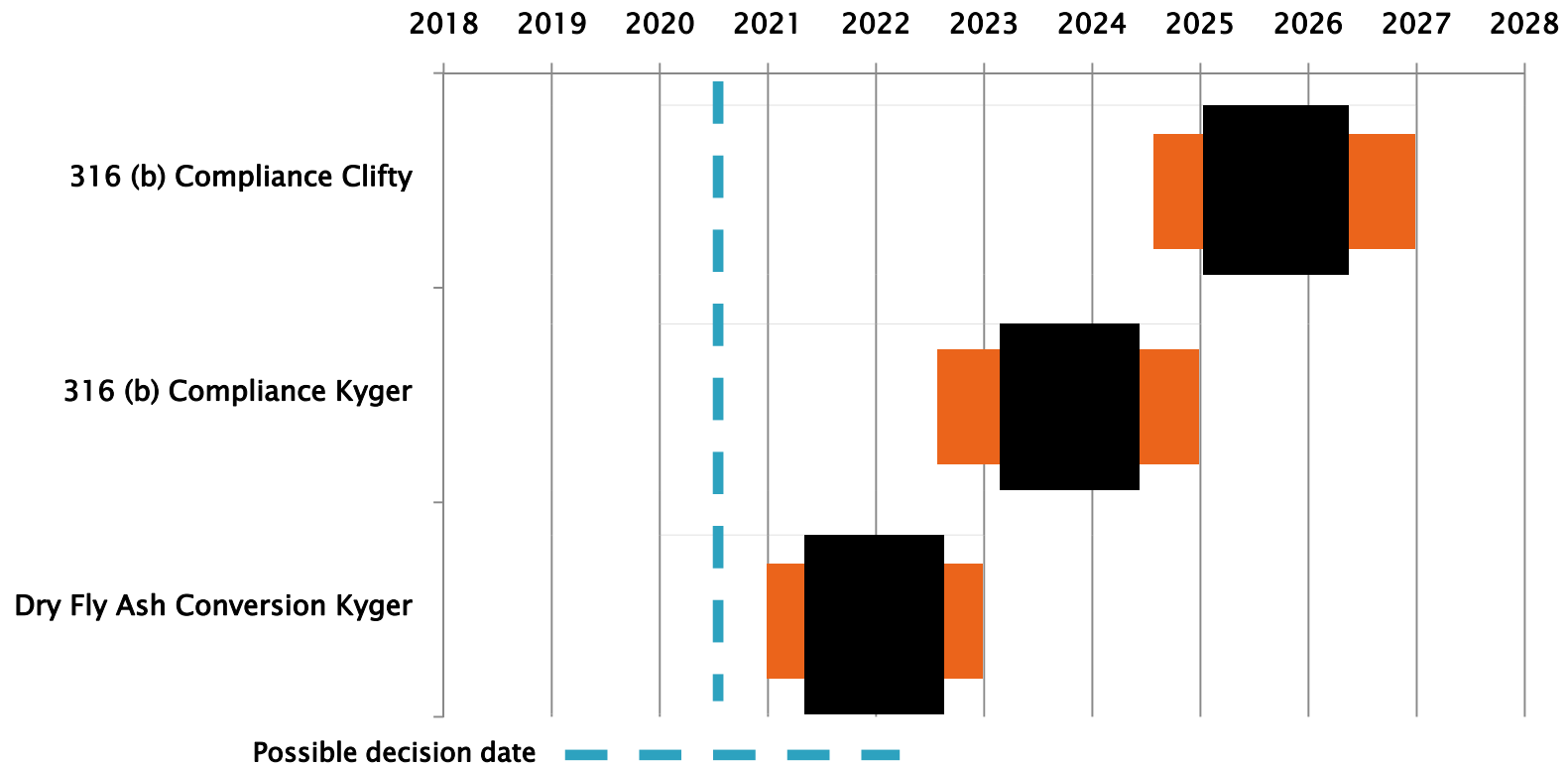
Best Case / Worst Case Projections:

- Best Case:**
 - Based on current administration actions and industry feedback
- Worst Case:**
 - Potential for reduction for Boiler Slag and FGD Wastewater requirements

Projected OVEC BOD Environmental Investment Decision:
Mid-Year 2019 to Mid-Year 2020

Projected Environmental Investment

\$ [REDACTED] Best Case - Timeline



Assumptions:
Current ELG reconsideration results in a revision of the rule:

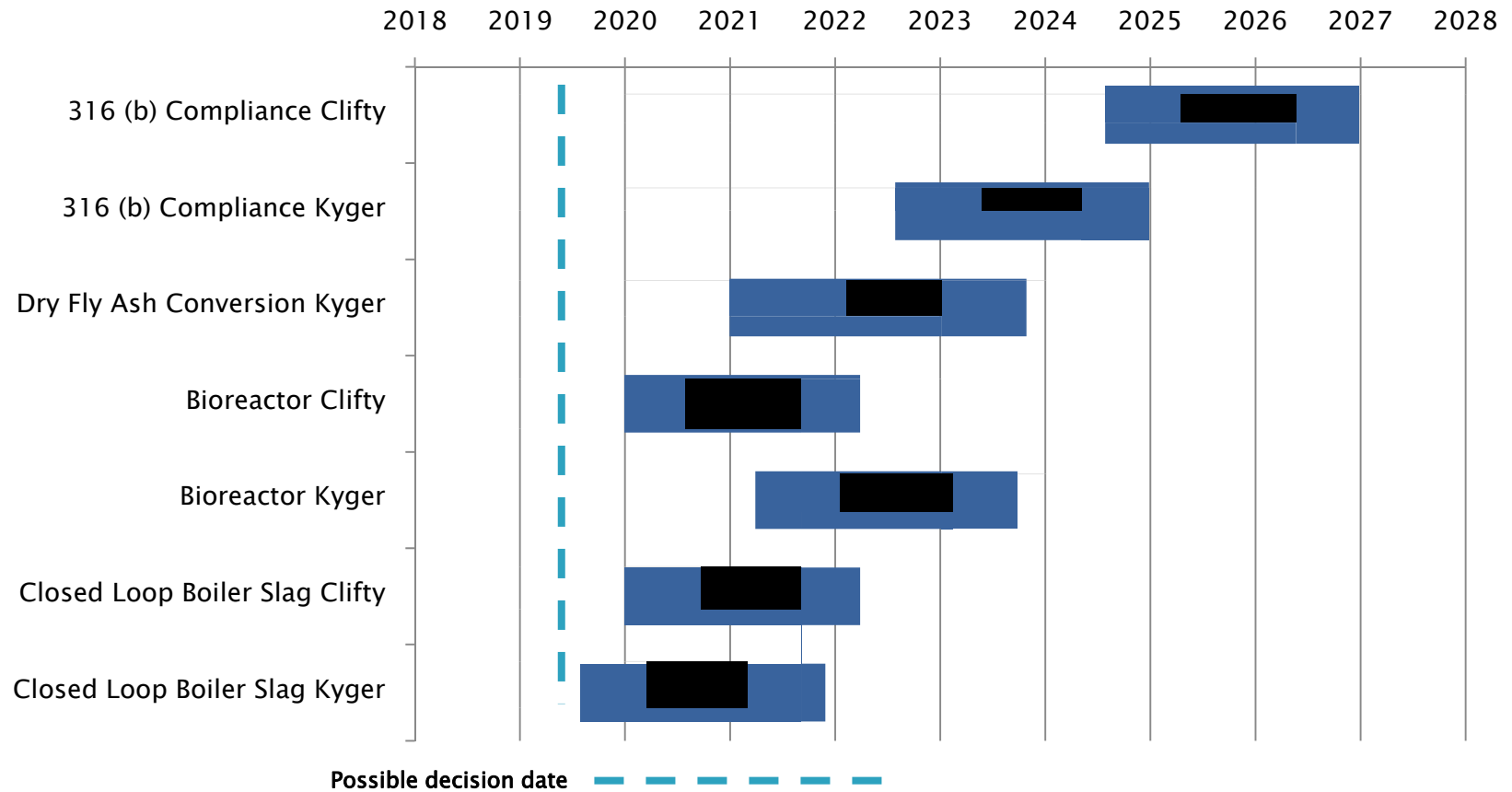
- Current installed FGD Wastewater Treatment considered best technology
- Boiler Slag Dry Conversion (Bottom Ash) not required

Any pond closure requirements will be funded through decommissioning reserves



Projected Environmental Investment

████████ Worst Case - Timeline

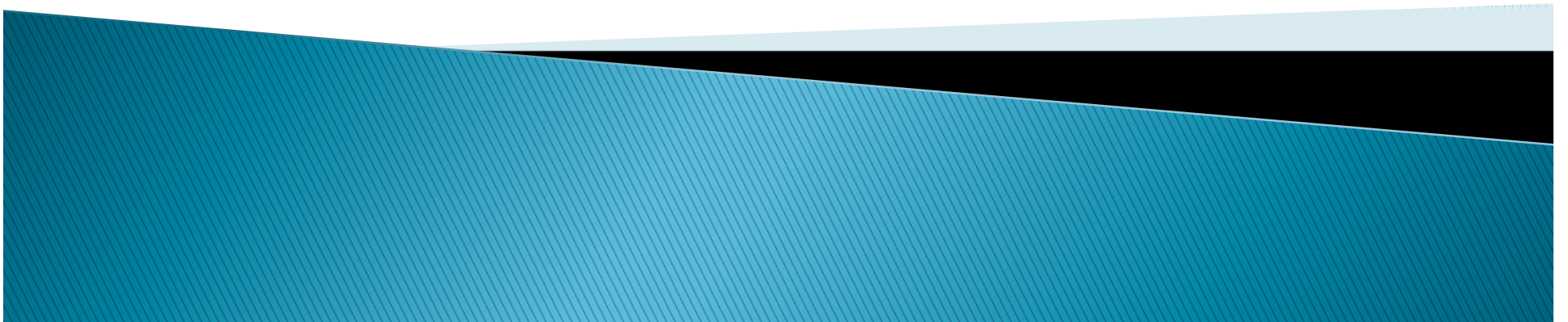


Assumptions:
 Current ELG reconsideration results in reaffirming current rule and requirements
 Any pond closure requirements will be funded through decommissioning reserves

Potential Future Impacts:
 Current ELG reconsideration results in revision of the rule (as shown in Best Case): Up to ██████████ Reduction of Worst Case

- Current installed FGD Wastewater Treatment considered best technology
- Boiler Slag Dry Conversion (Bottom Ash) not required

PJM Full Membership Update

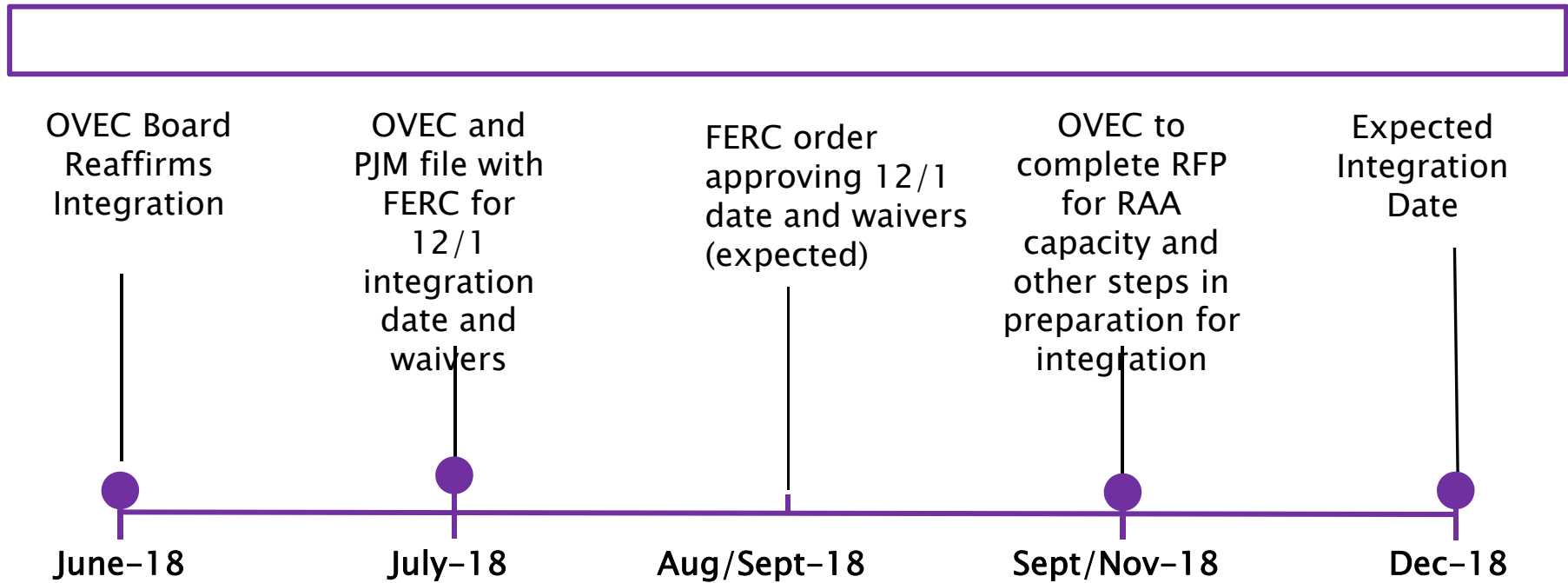


OVEC–PJM Integration Update

- On June 28, 2018, Board reaffirmed approval for integration.
- On July 12, 2018, OVEC and PJM filed with FERC for approval to complete integration on December 1, 2018 and for customary waivers and exemptions relating thereto.
- Pending FERC approval of the integration date and waivers, OVEC has been working with PJM Staff on technical steps to complete integration on December 1, 2018.



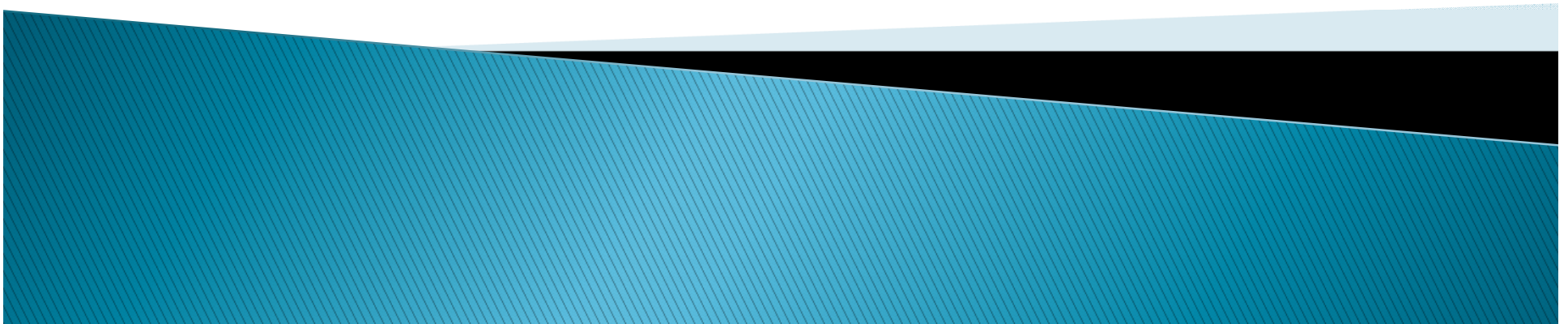
Projected OVEC–PJM Integration Timeline



Assumptions:

- Above is an outline of the basic steps OVEC intends to pursue regarding full integration into PJM.
- The outline is intended as an overview and does not contain all steps or aspects of the integration process.
- Estimates of timing are preliminary and subject to change.

Mid-Year Operational and Financial Performance Update



Open Book Leadership (OBL) Scoreboard Update – Mid-Year Performance

OVEC /IKEC – OBL Plant Scoreboards								
		Kyger Creek Plant			Clifty Creek Plant			
		2017	2018		2017	2018		
		Actual	Target	June YTD Actual	Actual	Target	June YTD Actual	
Safety	Recordable Rate (YTD)	2.70	0.59	1.55	0.00	0.59	0.71	
	DART Rate (YTD)	2.32	0.22	0.77	0.00	0.22	0.71	
Environmental Compliance	MATS (Mercury, Particulate Matter, Acid Gases)	Compliance	Compliance	Compliance	Compliance	Compliance	Compliance	
	NOx Tons (Ozone Season)	843	988	235	1,039	1,381	504	
Drivers of Critical Number Total Production Power Cost \$/MWhr	Reliability	EFOR	5.7%	7.5%	4.1%	7.1%	7.5%	7.4%
		Commercial Availability	85%	90.0%	89%	90%	90.0%	84.2%
	Energy Cost	Heat Rate	10,501	10,400	10,658	10,741	10,600	10,505
		Fuel Cost Total Fuel/ Net Gen			\$21.84			\$23.28
	Demand Cost	O&M						
	Continuous Improvement	Process Improvements ₁	556	480	549	875	550	754

- Reviewed at Plant Huddles (weekly)

- Future Focused (80% / 20%)

- Highlight Opportunities for Improvement

- Metrics are key drivers to Critical Number – \$/MWhr

1) Process Improvements include standard work development

**Ohio Valley Electric Corporation
 Projected Inter-Company Power Agreement (ICPA) Billable Cost Summary
 Calendar Year 2018
 in thousands of dollars**

	Budget 2018	Projected 2018	Dollar Over/(Under)	Percentage Over/(Under)
Generation Sales				
Estimated Delivered Power Sales from OVEC Generation (MWhr)				
Projected Energy Use Factor %				
Projected Net Capacity Factor %				
Generation Costs (Energy and Generation Operating Costs)				
Energy Charge				
Projected Coal Cost (delivered)				
Projected Allowance Cost (based on projected weighted average inventory)				
Projected Other Fuel-Related Costs (reagents, fuel oil & coal handling less byproduct)				
Total Projected Energy Costs				
Projected Energy Costs - \$/MWhr				
Generation Operating Costs (Demand Charge)				
Projected Annual Capital Improvement Costs (ICPA Component A)				
Projected Operation and Maintenance Costs (ICPA Component B)				
Projected Administration and General Costs (ICPA Component B)				
Projected Taxes (ICPA Component C)				
Projected ROE Costs (ICPA Component D)				
Total Projected Generation Operating Costs (ICPA Components A, B, C, & D)				
Projected Generation Operating Costs (Demand Charge) - \$/MWhr				
Projected Total Generation Costs (Energy and Operating Costs) - \$/MWhr				
Transmission Costs				
Transmission Operating Costs (Demand Charge)				
Projected Annual Capital Improvement Costs (ICPA Component A) - Transmission				
Projected Transmission and Dispatch Costs (ICPA Component B)				
Projected Administration and General Costs (ICPA Component B) - Transmission				
Projected Total Transmission Costs				
Projected Transmission Costs - \$/MWhr				
Non-Operating Costs (Debt and Obligations)				
Non-Operating Cost (Demand Charge)				
Projected Debt Expense and Short-Term Debt Costs (ICPA Component A)				
Projected Long-Term Debt Costs (ICPA Component A)				
Projected Advance Billing of Debt Service - Debt Reserve (ICPA Component A)				
Projected Postretirement Benefit Obligation (ICPA Component E)				
Projected Decommissioning and Demolition Obligation (ICPA Component F)				
Total Projected Non-Production Demand Costs (ICPA Components A, E, & F)				
Projected Non-Operating Costs - \$/MWhr				
Total Billable Costs (Energy and Demand Charge)				
Summary of ICPA Billable Power Costs				
Grand Total Projected Energy Costs				
Grand Total Projected Demand Costs				
Grand Total Projected ICPA Billable Costs				
Dividend				
Projected Dividend				
Summary of ICPA Billable Power Production Costs Less Projected Dividend				
Total Projected Power Production Costs Less Projected Dividend				
Projected Billable Costs (Energy and Demand) - \$/MWhr				

OHIO VALLEY ELECTRIC CORPORATION (OVEC)
INDIANA-KENTUCKY ELECTRIC CORPORATION (IKEC)
Agenda
Boards of Directors' Meeting
December 5, 2018

1. Call Meeting to Order (2 P.M.) Mark McCullough
 2. Roll Call Justin Cooper
 - Quorum (OVEC and IKEC)
 3. Election of Directors and Officers Mark McCullough
 - Raja Sundararajan to replace Julie Sloat (OVEC Director and Executive Committee Member)
 - Julie Sloat to replace Lonni Dieck (OVEC and IKEC Assistant Secretary and Assistant Treasurer)
 4. Approve Minutes of Prior Meetings Justin Cooper
 - Resolutions (OVEC and IKEC)
 5. AEP Service Corporation Service Charges Kay Martin
 - 2018 Projection vs. Estimate
 - 2019 Budget
 - 2019 Resolutions (OVEC and IKEC)
 6. 2018 Highlights & Future Cost Profile Justin Cooper
 - Results of Continuous Improvements (LEAN)
 7. OVEC and IKEC Environmental Compliance Update Mike Brown
 8. Construction Budget Review Justin Cooper
 - 2019 Construction Budget
 - 2020-2021 Construction Budget Forecast
 - 2019 Resolutions (OVEC and IKEC)
 9. Report on Operating Activities Rob Osborne
 - 2018 Strategic PlanCliff Carnes
Annette Hope
 10. OVEC Operating Committee Report Scott Cunningham
 - PJM Status
 - DOE SeparationBrian Chisling
 11. Treasurer's Report Justin Cooper
 - Projected 2019 Finance Activities
 12. OVEC Power Cost Projections Justin Cooper
 - 2018 Projection vs. Estimate
 - 2019-2021 Projection
 13. Independent Auditor's Comments and Questions Bob Bitter
 - (Deloitte & Touche)Mike Honan
 14. Open Discussion
- Adjournment
- Executive Session
- Adjournment



**12/5/18 Boards of Directors' Meeting
Presentation**

OHIO VALLEY ELECTRIC CORPORATION (OVEC)
INDIANA-KENTUCKY ELECTRIC CORPORATION (IKEC)
Resolutions of Minutes of Meeting
Board of Director' Meeting
December 5, 2018

WHEREAS, effective as of the election of the persons specified herein, Ms. Julie Sloat will be resigning as a member of the Board of Directors (Board) of OVEC and as a member of the Executive Committee and any other committees of the Board of OVEC;

WHEREAS, effective as of the election of the persons specified herein, Ms. Lonnie Dieck will be resigning as Assistant Secretary and Assistant Treasurer of OVEC and IKEC; and

WHEREAS, OVEC and IKEC management has recommended to the remaining members of their respective Boards those persons named below to be elected and/or appointed as Director to the OVEC Board and as officers of OVEC and IKEC as described below.

NOW, THEREFORE, BE IT:

RESOLVED, that, subject to any necessary action by FERC under Section 305 of the Federal Power Act, Mr. Raja Sundararajan be elected a Director of the Board of OVEC and appointed as a member of the Executive Committee of OVEC; and it is further

RESOLVED, that, subject to any necessary action by FERC under Section 305 of the Federal Power Act, Ms. Julie Sloat be appointed as Assistant Secretary and Assistant Treasurer of OVEC and IKEC, and it is further

RESOLVED, that the foregoing resignations, elections and appointments shall be effective as of January 1, 2019.

Raja Sundararajan Vice President - Regulatory Services, American Electric Power



Raja Sundararajan is vice president, Regulatory Services. In this position, he is responsible for AEP's regulatory activities before 11 state regulatory commissions and the Federal Energy Regulatory Commission (FERC).

Previously, Sundararajan was vice president - Transmission Asset Strategy and Policy for AEP, responsible for the oversight of all Regional Transmission Organization (RTO), Federal Energy Regulatory Commission (FERC), state regulatory and strategic matters related to AEP Transmission.

Sundararajan also served as managing director - Transmission Business Strategy, responsible for executing business plans for AEP Transcos and Joint Venture Development. He also worked to develop, communicate and implement strategies and RTO policies for internal Transmission assets and joint venture projects.

Sundararajan joined AEP in Commercial Operations and held management positions in Treasury and Corporate Finance, primarily responsible for oversight of debt and financing issues related to AEP and its operating companies. He also has served as the managing director of Market Risk, overseeing financial risk and providing independent oversight to AEP Commercial Operations and AEP Energy Partners trading and marketing positions.

He holds a bachelor's degree in mechanical engineering from the Indian Institute of Technology, Madras, India; a master's degree in mechanical engineering from the University of Maryland, and a master's degree in business administration from the University of Michigan.

OHIO VALLEY ELECTRIC CORPORATION (OVEC)
INDIANA-KENTUCKY ELECTRIC CORPORATION (IKEC)
Resolutions of Minutes of Prior Meetings
Boards of Directors' Meeting
December 5, 2018

OVEC

RESOLVED, that the Minutes of the Special Meetings of the Board of Directors of this Corporation, held on December 8, 2017, February 21, 2018, April 27, 2018, June 15, 2018, and June 28, 2018, are approved.

IKEC

RESOLVED, that the Minutes of the Special Meetings of the Board of Directors of this Corporation, held on December 8, 2017, February 21, 2018, April 27, 2018, and June 15, 2018, are approved.

AEPSC Service Charges

OHIO VALLEY ELECTRIC CORPORATION (OVEC)
 INDIANA-KENTUCKY ELECTRIC CORPORATION (IKEC)
 AMERICAN ELECTRIC POWER SERVICE CORPORATION CHARGES
 FOR CALENDAR YEAR 2018 PROJECTED THROUGH DECEMBER 31, 2018

	BUDGET FOR 2018			PROJECTED THROUGH 12/31/18			DIFFERENCE OVER (UNDER)
	<u>OVEC</u>	<u>IKEC</u>	<u>TOTAL</u>	<u>OVEC</u>	<u>IKEC</u>	<u>TOTAL</u>	
<u>GENERAL SERVICES</u>							
OPERATION & MAINTENANCE							
WORK MANAGEMENT SYSTEM - MAXIMO CONVERSION							
ENVIRONMENTAL ACTIVITIES							
TRANSMISSION							
FUEL PROCUREMENT AND TRANSPORTATION							
GENERAL ADMINISTRATIVE SERVICES							
OTHER GENERAL SERVICES							
TOTAL GENERAL SERVICES							

OHIO VALLEY ELECTRIC CORPORATION (OVEC)
INDIANA-KENTUCKY ELECTRIC CORPORATION (IKEC)
AMERICAN ELECTRIC POWER SERVICE CORPORATION CHARGES
BUDGET FOR CALENDAR YEAR 2019

	BUDGET FOR 2019		
	<u>OVEC</u>	<u>IKEC</u>	<u>TOTAL</u>
OPERATION & MAINTENANCE			
WORK MANAGEMENT SYSTEM - MAXIMO CONVERSION			
ENVIRONMENTAL ACTIVITIES			
TRANSMISSION			
FUEL PROCUREMENT & TRANSPORTATION			
GENERAL ADMINISTRATIVE SERVICES			
OTHER GENERAL SERVICES			
TOTAL AEPSC GENERAL SERVICES			

**OHIO VALLEY ELECTRIC CORPORATION (OVEC)
INDIANA-KENTUCKY ELECTRIC CORPORATION (IKEC)
AEP Service Corporation 2019 Service Charges
Boards of Directors' Meeting
December 5, 2018**

OVEC

RESOLVED, that the officers of Ohio Valley Electric Corporation may request and obligate Ohio Valley Electric Corporation to pay for general services, exclusive of services for specific projects previously approved, under the Agreement among American Gas and Electric Service Corporation (now American Electric Power Service Corporation), Ohio Valley Electric Corporation, and Indiana-Kentucky Electric Corporation dated December 15, 1956, in an amount which, when added to amounts paid for general services by Indiana-Kentucky Electric Corporation, exclusive of services for specific projects previously approved, would aggregate a maximum of \$ [REDACTED] million for calendar year 2019.

IKEC

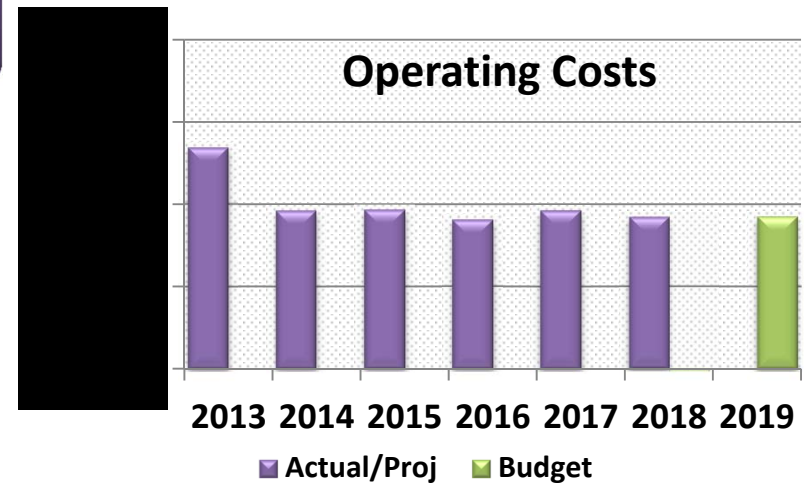
RESOLVED, that the officers of Indiana-Kentucky Electric Corporation may request and obligate Indiana-Kentucky Electric Corporation to pay for general services, exclusive of services for specific projects previously approved, under the Agreement among American Gas and Electric Service Corporation (now American Electric Power Service Corporation), Ohio Valley Electric Corporation, and Indiana-Kentucky Electric Corporation dated December 15, 1956, in an amount which, when added to amounts paid for general services by Ohio Valley Electric Corporation, exclusive of services for specific projects previously approved, would aggregate a maximum of \$ [REDACTED] million for calendar year 2019.

OVEC LEAN Cost Performance

2018 LEAN Cost Structure

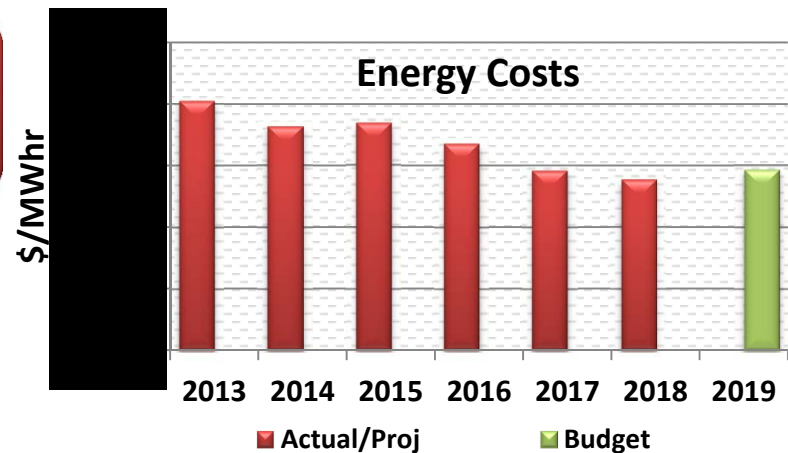
Demand Cost – Operating Costs (CAPEX, O&M, A&G) Approx. \$ [REDACTED] – Reduction from 2013 to 2018

- **Held Demand Flat (within 1%)**
- With efforts in Continuous Improvement and Open Book Leadership improving process, creating efficiencies and savings to offset costs
- Optimizing Operating, Maintenance, and Capital (OMC)
- Absorbing inflation, interest rates, wage increase, and outage scope variation
- Employee Benefit Plan changes
- Staffing Level Adjustments – Approx. + 22% reduction from 2012
- **Improving Reliability 2015 EFOR 19% to projected 2018 EFOR 6.5%**



Energy Cost Approx. \$ [REDACTED] from 2013 to 2018

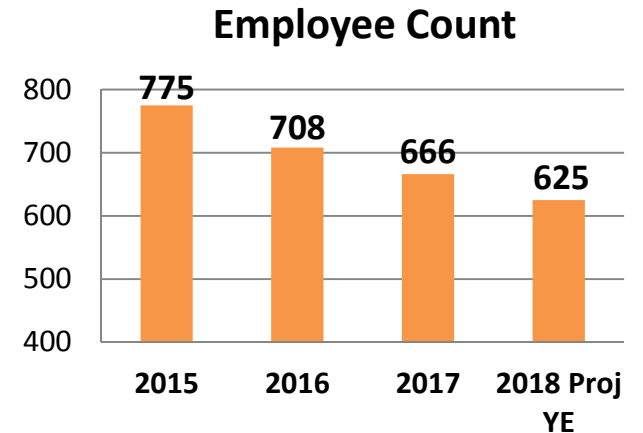
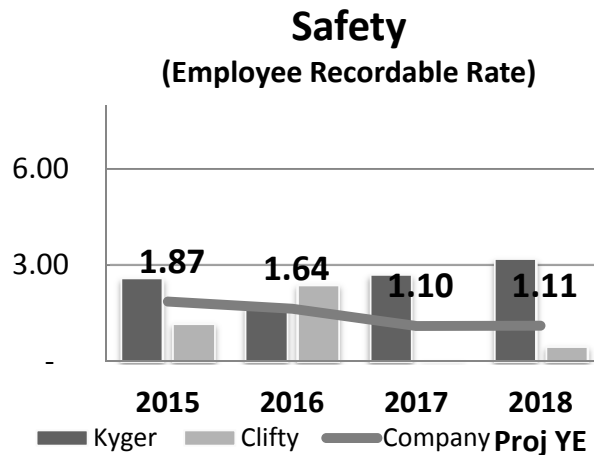
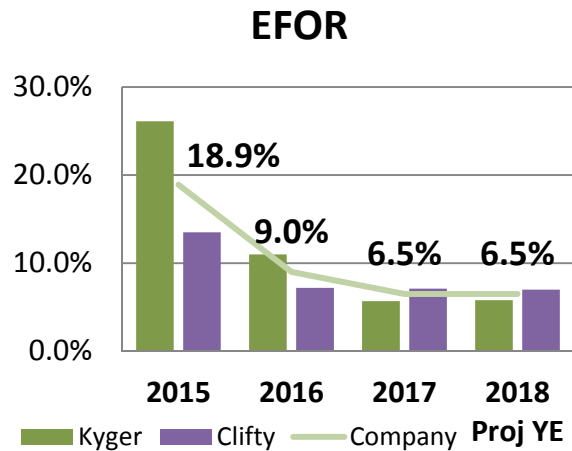
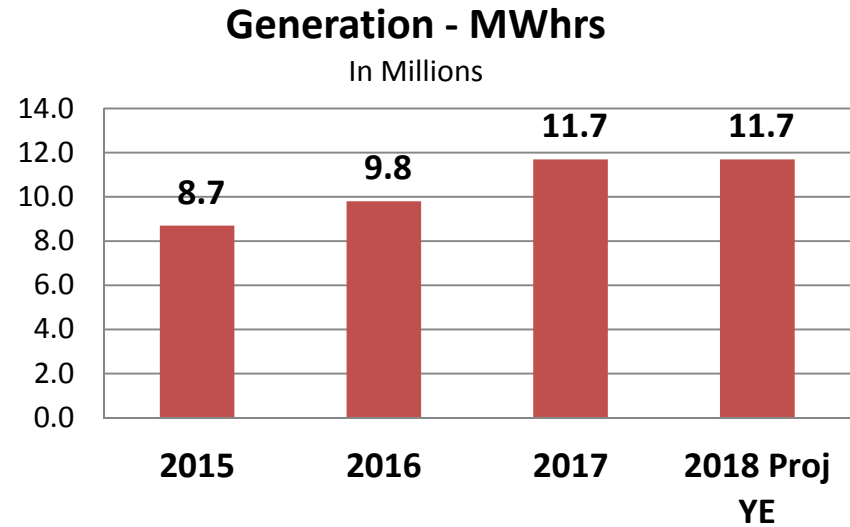
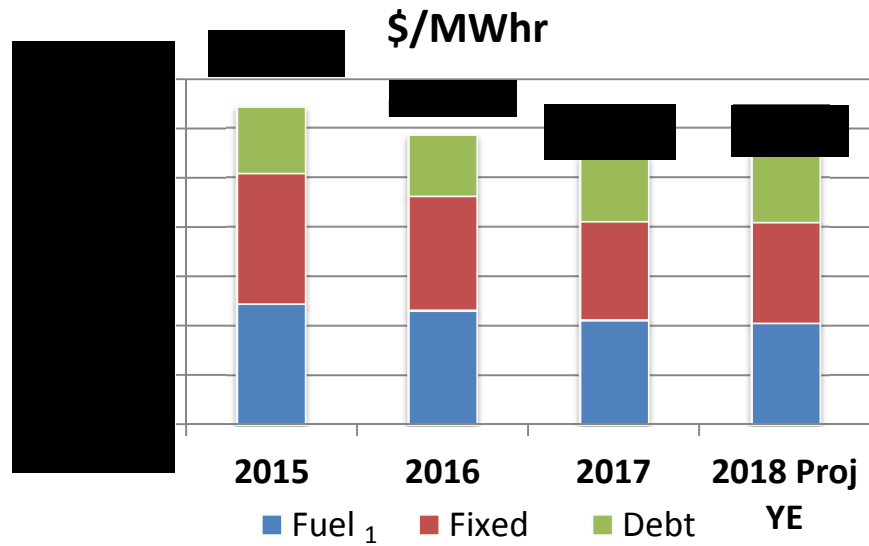
- **Downward Trend in Fuel Costs due to:**
- **Continuous Improvements** - consumable feed rates, improvements around demurrage and reduction of reagents
- **Heat Rate Improvement** - driven by a cross departmental/locational Heat Rate improvement team



In Total OVEC/IKEC's LEAN program has implemented over 3,000 Process Improvements and over [REDACTED] rom employee ideas over the past 6 years.



2015 – 2018 Performance

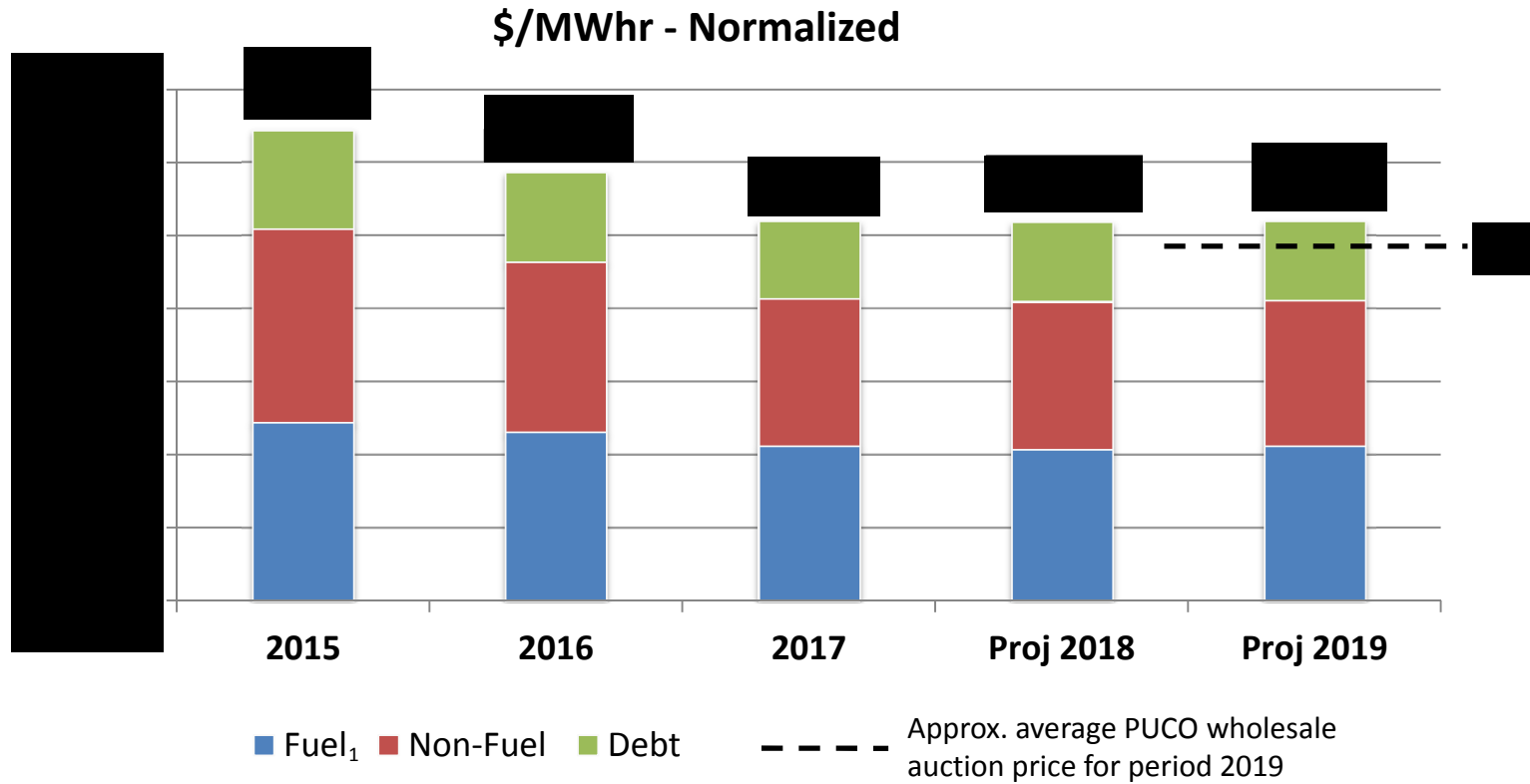


1) Fuel - OVEC's PJM Dispatch Fuel Cost



\$/MWhr – Normalized

(excluding event driven costs)



Excludes non-traditional or event driven costs – debt reserve, increased finance cost, legal and other expenses due to Sponsor event

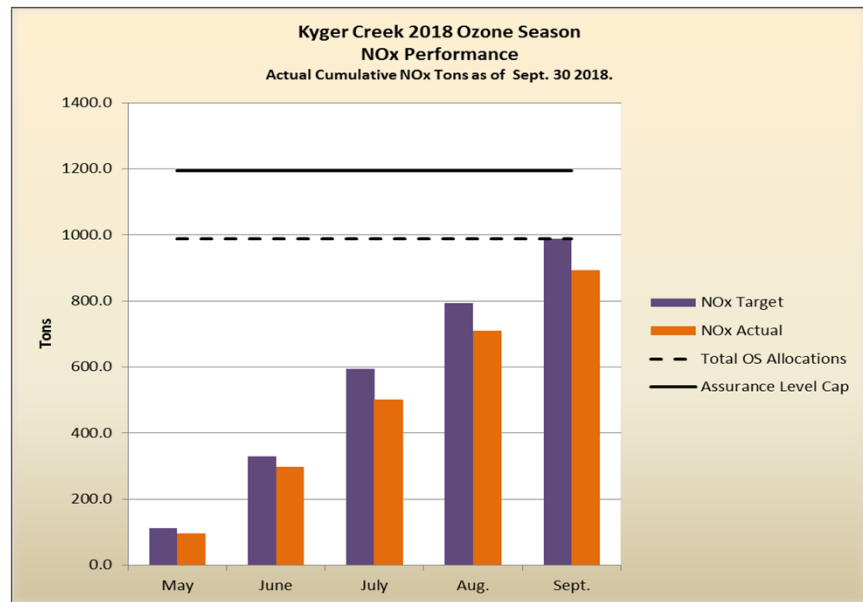
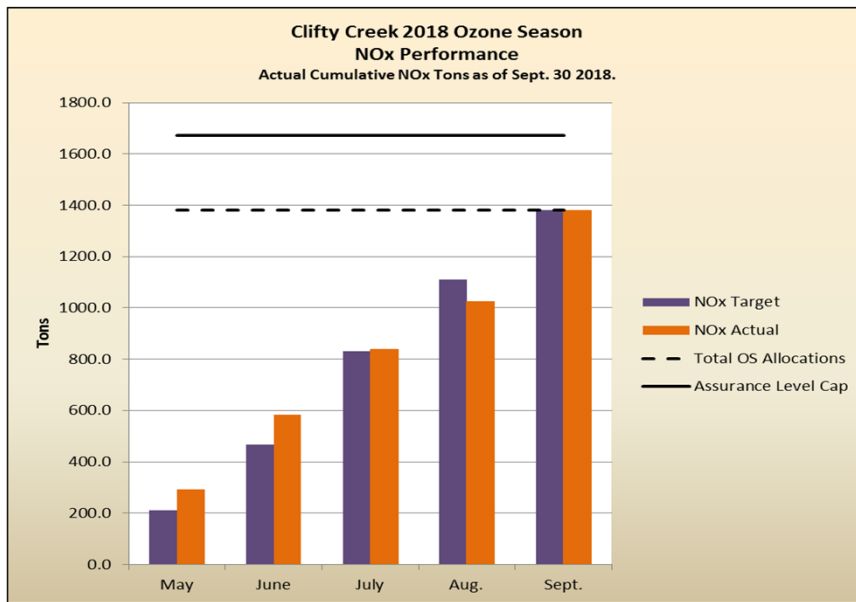
1) Fuel - OVEC's PJM Dispatch Fuel Cost

Environmental Compliance Update

Review of 2018 Ozone NO_x Performance

Both plants successfully operated within their NO_x emission targets again in 2018. In addition, OVEC-IKEC generated more megawatts during the 2018 Ozone Season compared to 2017 (and prior 5-year average) by applying lessons learned from 2017.

- Total 9.2% increase in Ozone Season generation in 2018;
- Unit 6 dispatched 22 more days in 2018 Ozone Season (16 days in 2017 vs 38 days in 2018);
- Ozone Season emission rates at/near historical lows (average emission rate between 0.070 and 0.085 lb/mmBtu for SCR controlled units)



Status of Ozone Season Legal Action: US EPA denied Maryland Ozone NAAQS 126 Petition (and Delaware petitions) in October 2018. Maryland, Delaware and NGO's filed requests for review with the D.C. Circuit Court in November 2018. UARG filed a Motion to Intervene. New York 126 Petition pending, expecting EPA to deny as well.

Environmental Compliance Update

- **MATS Compliance Status**

- **Clifty Creek:** Continued to maintain compliance with all MATS obligations;
- **Kyger Creek:** Continued to maintain substantial compliance with PM and SO₂ limits, but experienced one Hg limit issue;
 - Kyger Creek Station exceeded its 30-day rolling average for mercury on Stack 12 in early September;
 - JBR12 experienced unusually high ORP for a 26-hour period resulting in a mercury (Hg) re-emission event. The resultant high Hg trap pushed the stack's average from approximately 0.8 lb/tBtu to 1.56 lb/tBtu;
 - Once ORP returned to normal range in JBR, actual Hg emissions dropped back to normal ranges;
 - OVEC investigated the event and has taken corrective and preventative measures; and
 - Kyger Stack 12 returned to compliance with the 30-day rolling average Hg limit on October 10, 2018.

Environmental Policy Update

Effluent Limitation Guidelines (ELG) 2018 Update

- EPA is continuing to revise the ELG Rule requirements for FGD wastewater and bottom ash transport water. Revised draft rule may not be available until early 2019, final rule targeted for late 2019 or early 2020.
 - Impact of changes in political, regulatory, or legal climate may impact risk and cost from future EPA requirements;
 - OVEC-IKEC remains optimistic EPA will add some flexibility into the rule for the size of units and/or for flexibility allowing limited discharges from bottom ash pond impoundments – e.g., high rainfall or maintenance activities;
 - OVEC-IKEC anticipates there may be a continued opportunity to secure some relief from the original overly stringent FGD WWTP final effluent limits that would have required biological treatment; and
 - Dry fly ash conversion at Kyger Creek remains a compliance obligation.

Next Steps for ELG compliance

- **Kyger Creek:** Continue with Dry Fly Ash conversion analysis
 - Requested a compliance date of December 31, 2023 in NPDES Permit renewal filed on November 1, 2018.
- **Clifty Creek:** File permit modification request once new ELG Rule is issued.

Environmental Policy Update

316(b) Update

- Section 122.21(r) of the 316(b) rules require submittal of comprehensive studies and recommendations on cooling water intake structure upgrades
 - **Kyger Creek:** Report submitted with the NPDES permit renewal package filed November 1, 2018;
 - **Clifty Creek:** Report being finalized and will be submitted in early 2019.
 - Both reports request consultation with state regulatory agencies and their subsequent site-specific determination of what constitutes BAT consistent with Section 125.98(f) of the 316(b) Rule; and
 - State agency determination will be requested before developing detailed costs and establishing a schedule for cooling water system intake upgrades.

Environmental Policy Update

Coal Combustion Residual (CCR) Update

- Portions of the CCR Rule are being reconsidered and additional rulemaking is expected.
 - Reconsideration may introduce the risk of higher compliance costs.
- On August 21, 2018, the D.C. Circuit Court issued a decision regarding multiple issues contained in the CCR Rule that had been brought by multiple petitioners, including USWAG, environmental groups, and EPA.
 - The Court ruled that EPA’s decisions to exempt legacy impoundments at closed facilities, allow unlined surface impoundments to continue to operate, and to classify surface impoundments with two feet of compacted clay as “lined ponds” were arbitrary and capricious;
 - EPA did not file a request for reconsideration; and
 - The industry is expecting EPA to begin a new rule making addressing the Court’s decision, which we anticipate will contain new requirements for these CCR surface impoundments.

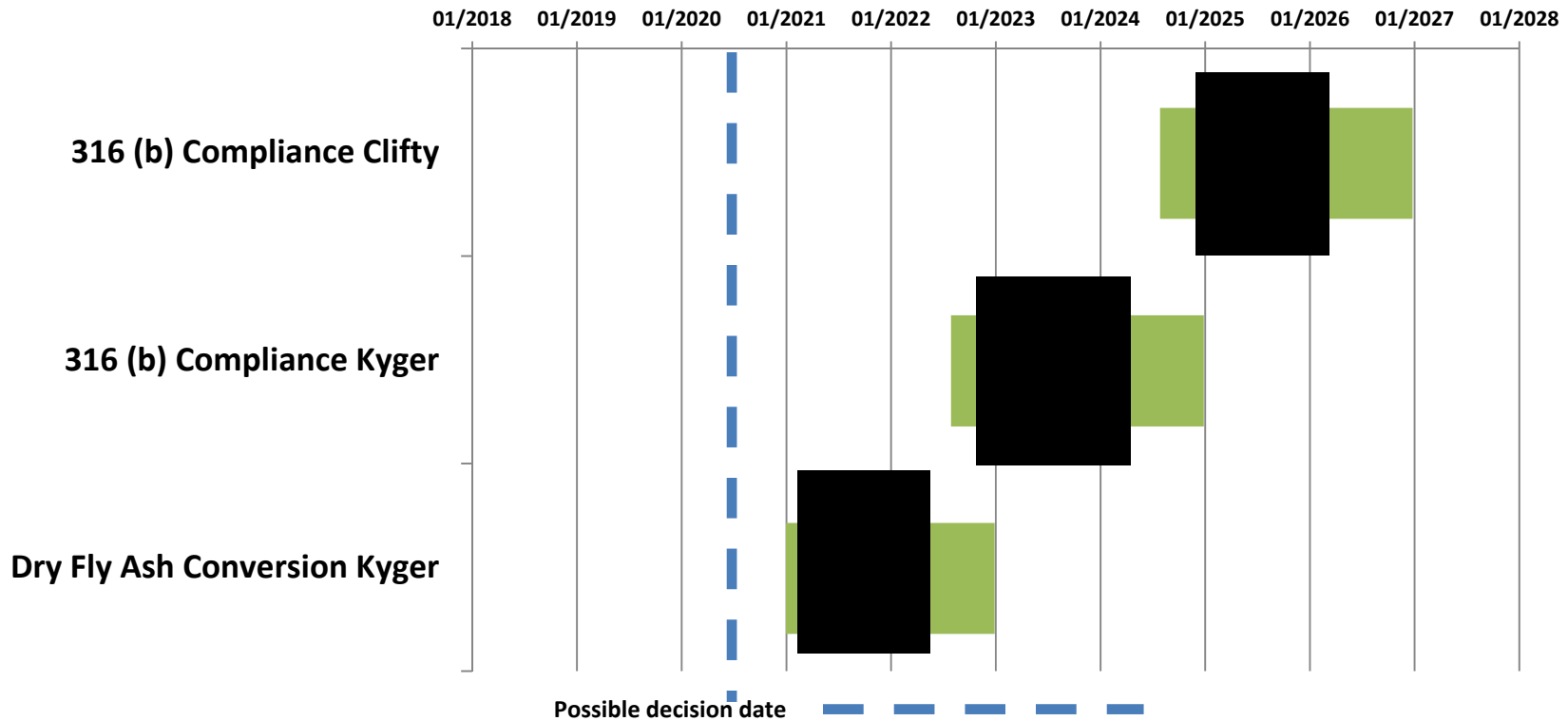
OVEC CCR Compliance Status/Next Steps

- Meeting all CCR recordkeeping, reporting and monitoring requirements YTD;
- Groundwater monitoring system in place, background data collected, and detection monitoring continues;
- Some statistical increases in data have been observed, alternative source demonstrations were conducted;
- Assessment monitoring at two of our CCR surface impoundments has been initiated; and
- OVEC continues to work with our Qualified Professional Engineer, our state regulatory agencies, and our trade associations on regulatory issues while we await further action from EPA on CCR Rule revisions.



Projected Environmental Investment

Best Case – Timeline



Assumptions:

Current ELG reconsideration results in a revision of the rule:

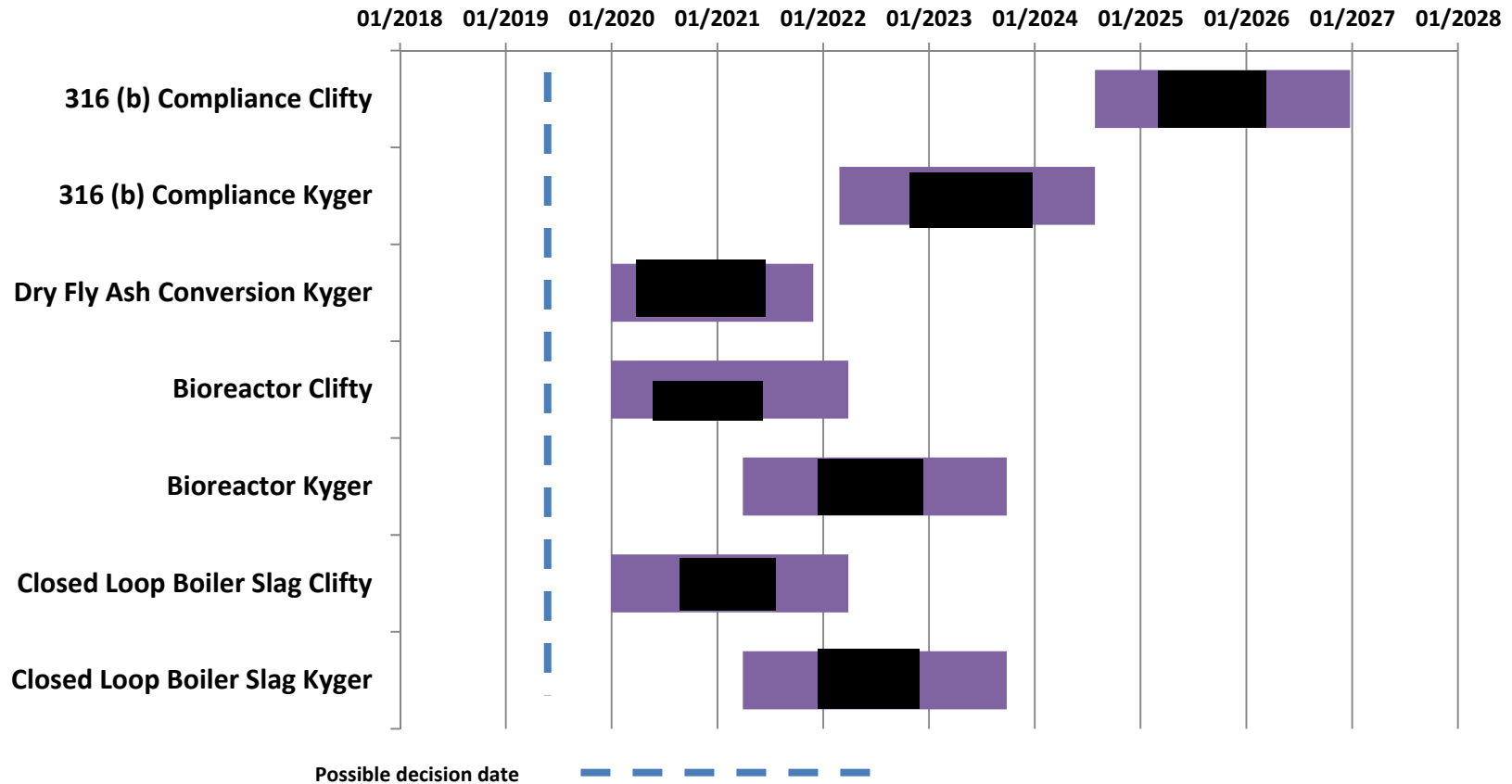
- Current installed FGD Wastewater Treatment considered best technology
- Boiler Slag Dry Conversion (Bottom Ash) not required

If applicable, separate pond closure requirements will be funded through decommissioning reserves



Projected Environmental Investment

████████ Potential Case – Timeline



Assumptions:
 Current ELG reconsideration results in reaffirming current rule and requirements
 Any pond closure requirements will be funded through decommissioning reserves

Potential Future Impacts:
 Current ELG reconsideration results in revision of the rule (as shown in Best Case): Up to ██████████

- Current installed FGD Wastewater Treatment considered best technology
- Boiler Slag Dry Conversion (Bottom Ash) not required

Current Gypsum and CCR Sales

- **Kyger Creek:**
 - Kyger Creek now selling the bulk of Gypsum production (greater than 80%) via off-site trucking.
 - Longer-term barge loading option under negotiation with wallboard manufacturer.
 - Kyger Creek sales of boiler slag continue (HARSCO).
- **Clifty Creek:**
 - Clifty Creek now selling Gypsum via a short-term trucking contract to local wallboard manufacturer.
 - Longer-term barge loading contract being negotiated.
 - Limited fly ash sales are taking place, boiler slag being used for landfill operations but local market is also available for sales.

Gypsum and CCR sales positively impact Energy Costs and improve unit dispatch. Longer-term cost savings possible from avoided landfill expansions.

Longer-Term Opportunities/Compliance Obligations

- **Fly Ash at Kyger**

- Researching partnerships in fly ash marketing and in Capital Investment
Impact: Possible reduction in Dry Fly Ash conversion costs at Kyger Creek and improved opportunities to market dry fly ash

- **Gypsum:**

- Establishment of long-term gypsum transport/loading solutions at both plants

- **Clean Power Plan (CPP)**

- On August 21, 2018, EPA proposed Affordable Clean Energy (ACE) Rule as an alternative to the CPP.
 - Industry generally supports the ACE rule (legal, inside the fence, etc.). Comment deadline was October 31, 2018, final rule possible in mid to late 2019;
 - Anticipate the formal repeal of CPP shortly before or concurrent with issuance of final ACE rule; and
 - Compliance obligations to be determined at State level.

- **Future Environmental Obligations**

- Impact of changes in political, regulatory, or legal climate may impact risk and cost from future EPA requirements

Construction Budget



2019 Construction Budget

(requesting BOD approval)

Year	Loc	Project Name	Amount	IRR%	Paybk
2019	KCP	U#1-5, FGD, & Simulator Ovation Controls Replacement (2 of 2)			
2019	KCP	U#2 1st Baffle Wall Replacement			
2019	CCP	U#1-6 Station 1 Barge Unloader Rebuild			
2019	CCP	U#1-6, FGD, & Simulator Ovation Controls Replacement (1 of 2)			
2019	CCP	U#5 Bus and Middle Air Blast Circuit Breaker Replacement (7/8 of 17)			
2019		Minor Projects (under \$500k)			
2019		Contingency Fund			
2019 Total					

2019 Projects Economic Metrics
Range:

Internal Rate of Return (IRR)
 Target: [REDACTED]
 Avg: [REDACTED]

Payback Period
 Target: [REDACTED]
 Avg: [REDACTED]

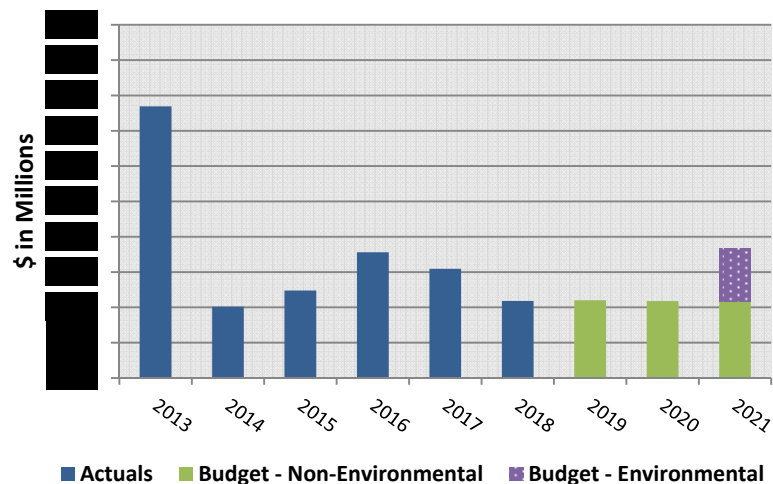
2019 Construction Projects highlight continued replacement of original boiler tubing to address current and future reliability issues with an additional focus on replacement of obsolete unit controls.

- Examples of Projects Delayed due to Prioritization and Risk Evaluation**
- Baffle Wall Replacements
 - Generator Rewinds



2020-2021 Construction Budget Forecast

Historic and Projected Construction Costs



2020-2021 Construction Budget Forecast:

To minimize the requirement for long-term debt financing, 2020-2021 Construction Forecast has been adjusted to provide funding for upcoming Environmental Projects to minimize the impact on total Demand Cost.

Projected Non-Environmental Construction Projects will be reviewed and prioritized based on reliability impact and related economic benefit.

OVEC/IKEC Construction Forecast

Year	Loc	Project Name	Amount
2020	CCP	U#1-6, FGD, & Simulator Ovation Controls Replacement (2 of 2)	
2020	KCP	U#3 1st Baffle Wall Replacement	
2020	CCP	U#5 SSH Inlet Element - Material and Labor	
2020	CCP	Bus and Middle Air Blast Circuit Breaker Replacement (9/10 of 17)	
2020		Minor Projects (under \$500k)	
2020		Contingency Fund	
		2020 Total Non-Environmental	
		Environmental Project Funding	
		2020 Grand Total	
2021	KCP	U#1 1st Baffle Wall	
2021	CCP	U#2 SSH Inlet Element - Material and Labor	
2021	SYS	X530 Switchyard Bypass Project	
2021	CCP	U#1-6 Coal Yard Controls Replacement (1 of 3)	
2021	CCP	Bus and Middle Air Blast Circuit Breaker Replacement (11/12 of 17)	
2021		Minor Projects (under \$500k)	
2021		Contingency Fund	
		2021 Total Non-Environmental	
		Environmental Project Funding	
		2021 Grand Total	

**OHIO VALLEY ELECTRIC CORPORATION (OVEC)
INDIANA-KENTUCKY ELECTRIC CORPORATION (IKEC)
OVEC-IKEC Construction Budget
Boards of Directors' Meeting
December 5, 2018**

OVEC-IKEC

RESOLVED, that the OVEC-IKEC Construction Budget for 2019, indicating estimated total expenditures of [REDACTED] for Replacements of property, and [REDACTED] for Management Reserve, which totals [REDACTED] is approved.

Report on Operating Activities

Open Book Leadership (OBL) Scoreboard Update – YTD Performance

OVEC /IKEC – OBL Plant Scoreboards								
		Kyger Creek Plant			Clifty Creek Plant			
		2017	2018		2017	2018		
		Actual	Target	Oct YTD Actual	Actual	Target	Oct YTD Actual	
Safety	Recordable Rate (YTD)	2.70	0.59	2.86	0	0.59	0.43	
	DART Rate (YTD)	2.32	0.22	1.91	0	0.22	0.43	
	Contractor Recordable Rate (YTD)	1.32	0.59	2.11	1.61	0.59	1.93	
Environmental Compliance	MATS (Mercury, Particulate Matter, Acid Gases)	Compliance	Compliance	Compliance	Compliance	Compliance	Compliance	
	NOx Tons (Ozone Season)	843	1,092	892	1,039	1,526	1,378	
Drivers of Critical Number Total Production Power Cost \$/MWhr	Reliability	EFOR	5.7%	7.5%	5.3%	7.1%	7.5%	7.5%
		Commercial Availability	84.8%	90.0%	87.6%	89.9%	90.0%	85.0%
	Energy Cost	Heat Rate	10,501	10,400	YE Proj. 10,395	10,741	10,600	YE Proj. 10,593
		Fuel Cost Total Fuel/ Net Gen			\$21.77			\$23.75
	Demand Cost	O&M						
	Continuous Improvement	Process Improvements	490	480	720	581	400	1,160

- Reviewed at Plant Huddles (weekly)
- Future Focused (80% / 20%)
- Highlight Opportunities for Improvement
- Metrics are key drivers to Critical Number - \$/MWhr

OVEC 2018 Strategic Plan - Corporate

Mission Objective	Initiative ¹	Tactical Actions ^{2,3}
Zero Harm	Improve Safety Culture	Define, Communicate and Execute the Safety Action Plan
		Contractor Oversight and Safety Standardization
	Improved Clearance Procedure Adherence	
	First Line Supervisor Field Observation and Guidance	
	Improve Use of HPI Tools	Application Based Training
Provider of Choice	Increase Reliability, Reduce EFOR and Optimize Commercial Availability	Focus Around Process Ownership and Process Health
	Improve Heat Rate	Cross Functional Heat Rate Team
	Improve Fiscal Responsibility	Financial Education - Including Specific Events that Have Impacted Our Business
Culture of Engagement	Improve Communication Processes	Determine What the Team Wants
		Communication Conducted in Small Groups in a Face-to-Face Format
	Build Culture of Accountability	Clearly Defined and Communicated Job Expectations Followed by Feedback and Coaching with Balanced Recognition
	Improvement Through Culture Surveys, Assessment and Action Planning	Communicate Survey/Assessment Results, Associated Actions and Outcomes
Operational Excellence	Improved Team Performance	Develop Cross-Functional Workforce, Where Applicable
	Employee Development	Skill and Knowledge Assessment to Enhance Development Plans Among All Departments
		Assignment of Designated Position Backup, Where Applicable
	Successful WAM Implementation	Workforce Teams Embrace WAM Team Training to Facilitate the Transition from Asset Suite to Maximo
Continuous Improvement	Optimize Continuous Improvement Process (CIP) and Open Book Leadership (OBL)	Increase Workforce Engagement
	Root Cause Analysis (RCA) Focus	Implement Standards and Create Use Guidelines
	Standard Work Focus	Promote Standard Work Development, Utilization and Modification

1 - Initiative is a broad reaching generalized need.

2 - Tactical Action is a specific action to achieve a desired goal.

3 - Possible additional Tactical Actions to be determined by Business Unit.

OVEC 2018 Strategic Plan – Clifty Creek

Mission Objective	Initiative ¹	Tactical Actions ^{2, 3}
Zero Harm	Improve Safety Culture	Housekeeping Standard Developed and Communicated
		Use of Close Call Incidents to Improve Hazard Awareness
	Improved Clearance Procedure Adherence	Conduct Clearance Training (Written and Practical Demonstrations) Prior to Annual Outages
	First Line Supervisor Field Observation and Guidance	Utilize Field Observations to Coach and Promote Safety Goals
	Improve Use of HPI Tools	Develop Scenarios From Past Events to Educate HPI Use and Importance
Provider of Choice	Increase Reliability, Reduce EFOR and Optimize Commercial Availability	Participate in OVEC JBR Reliability Group
	Improve Heat Rate	Identify and Use Operational Improvements (CO2 Monitors) to Achieve Heat Rate Goal
	Improve Fiscal Responsibility	Communicate Outage Costs of Specific Events to All Departments
Culture of Engagement	Improve Communication Processes	Communications Conducted in Small Groups in a Face-to-Face Format
	Build Culture of Accountability	Build on Job Expectations Through Coaching and Skill Building of Front-Line Supervisors
	Improvement Through Culture Surveys, Assessment and Action Planning	Communicate Survey Results and Focus on Action Items and Responses
Operational Excellence	Improve Team Performance	Development of Cross-Functional Work: Operations (AEO work scope)
	Employee Development	Utilize Learning Assessments After Face-to-Face Training Sessions to Gauge Understanding
	Successful WAM Implementation	Transition Work Scheduling From Weekly to Daily with Operations/Maintenance Team Approach
Continuous Improvement	Optimize Continuous Improvement Process (CIP) and Open Book Leadership (OBL)	Review CIP Stand-Up Meetings for Improvements and Engagement
	Root Cause Analysis (RCA) Focus	Use RCA for Sustainable Corrections to Process and Equipment Problems
	Standard Work Focus	Improve Existing Standard Work Procedures Using Post-Job Feedback

Clifty Creek Plant's Strategic Plan **aligns directly** with OVEC's Corporate Strategic Plan's Mission Objectives and Initiatives

3 Top Areas of Success

3 Top Areas of Opportunity

OVEC 2018 Strategic Plan – Kyger Creek

Mission Objective	Initiative ¹	Tactical Actions ^{2, 3}
Zero Harm	Improve Safety Culture	Implement Program to Raise Awareness of Work Place Ergonomics and Need for Improvement
	Improved Clearance Procedure Adherence	Conduct Clearance Training Prior to Annual Outages and Infield-Observations Focused on Individuals Role in the Process
	First Line Supervisor Field Observation and Guidance	Verify In-Field Observations and Coaching by Supervisors to Ensure Quality, Consistency and Effectiveness
	Improve Use of HPI Tools	Application Based Training, with Video and Hands-On Examples and Case Studies
Provider of Choice	Increase Reliability, Reduce EFOR and Optimize Commercial Availability	Develop Top 10 List of Unavailability Events For Communication and Focus on Improvement
	Improve Heat Rate	Monthly Review and Recommendations for Improvement by Cross Functional Team
	Improve Fiscal Responsibility	Build Greater Understanding of Cost and Cost Control at the Supervisor Level
Culture of Engagement	Improve Communication Processes	Communication Conducted in Small Groups with Face-to-Face Format
	Build Culture of Accountability	Clearly Defined and Communicated Job Expectations
	Improvement Through Culture Surveys, Assessment and Action Planning	Communicate Survey Results Timely and Work with Team on Developing Actions to Improve as Needed
Operational Excellence	Improve Team Performance	Develop Cross-Functional Workforce: Departments Develop Shared Tasks with Consistent Clearance Requirements
	Employee Development	Skill and Knowledge Assessment to Enhance Development Plans Among Departments
	Successful WAM Implementation	Workforce Teams Embrace WAM Team Training to Facilitate the Transition from Asset Suite to Maximo
Continuous Improvement	Optimize Continuous Improvement Process (CIP) and Open Book Leadership (OBL)	Increase Workforce Engagement with Additional Targeted CIP Training
	Root Cause Analysis (RCA) Focus	Develop Guidelines and Increase Number of Employees Trained
	Standard Work Focus	Promote Standard Work Development, Utilization and Modification

Kyger Creek Plant's Strategic Plan **aligns directly** with OVEC's Corporate Strategic Plan's Mission Objectives and Initiatives

3 Top Areas of Success

3 Top Areas of Opportunity

OHIO VALLEY ELECTRIC CORPORATION (OVEC)
INDIANA-KENTUCKY ELECTRIC CORPORATION (IKEC)
Treasurer's Report
Boards of Directors' Meeting
December 5, 2018

Case No. 2021-00393
Attachment Response to SC-1 Question No. 11
Page 86 of 341
Arbough

	<u>OVEC</u>	<u>IKEC</u>	<u>Consolidated</u>
<u>CASH AND INVESTMENTS</u>			
Cash and Short-Term Investments	\$ 65,544,112	\$ -	\$ 65,544,112
DOE Settlement Reserve Account	70,946,302	-	70,946,302
Debt Reserve Account	49,912,981	-	49,912,981
Total Cash and Investments at October 31, 2018	<u>\$ 186,403,395</u>	<u>\$ -</u>	<u>\$ 186,403,395</u>
<u>PLANT DECOMMISSIONING & DEMOLITION (D&D) FUND</u>			
Total D&D Assets at October 31, 2018	<u>\$ 24,517,225</u>	<u>\$ 32,671,749</u>	<u>\$ 57,188,974</u>
<u>EMPLOYEE BENEFIT PLAN ASSETS</u>			
Pension Plan			
Supplemental Pension & Savings Plan			
Union Retiree Medical VEBA Trust			
Retiree Medical VEBA Trust			
Retiree Life Insurance VEBA Trust			
401(h)			
Total Benefit Plan Assets at October 31, 2018			
<u>EQUITY</u>			
Common Stock, 100,000 shares outstanding	\$ 10,000,000	\$ 3,400,000	\$ 10,000,000
Retained Earnings	13,267,908	-	13,267,908
Total Equity at October 31, 2018	<u>\$ 23,267,908</u>	<u>\$ 3,400,000</u>	<u>\$ 23,267,908</u>
(OVEC's ownership of IKEC's Capital Stock (17,000 shares) is eliminated in consolidation.)			
<u>LONG-TERM DEBT</u>			
2006 Senior Unsecured Notes, Series A, 5.80%, due February 15, 2026	\$ 189,381,919	\$ -	\$ 189,381,919
2006 Senior Unsecured Notes, Series B, 6.40% due June 15, 2040	55,360,136	-	55,360,136
2007 Senior Unsecured Notes, Series AA, AB & AC, 5.90%, due February 15, 2026	134,103,911	-	134,103,911
2007 Senior Unsecured Notes, Series BA, BB & BC, 6.50% due June 15, 2040	42,045,436	-	42,045,436
2008 Senior Unsecured Notes, Series A, 5.92%, due February 15, 2026	27,801,729	-	27,801,729
2008 Senior Unsecured Notes, Series B & C, 6.71%, due February 15, 2026	108,913,236	-	108,913,236
2008 Senior Unsecured Notes, Series D & E, 6.91% due June 15, 2040	81,159,727	-	81,159,727
2017 Senior Unsecured Notes, Series A, Floating Rate, due August 4, 2022	100,000,000	-	100,000,000
2009 Tax Exempt Bonds, \$100M Series A-D, Floating Rate, due February 1, 2026	75,000,000	-	75,000,000
2009 Tax Exempt Bonds, \$100M Series E, 5.625%, due October 1, 2019	100,000,000	-	100,000,000
2010 Tax Exempt Bonds, \$100M Series A & B, Floating Rate, due February 1, 2040	100,000,000	-	100,000,000
2012 Tax Exempt Bonds, \$200M Series A, 5%, due June 1, 2039	200,000,000	-	200,000,000
2012 Tax Exempt Bonds, \$100M Series B & C, Floating Rate, due June 1, 2040	100,000,000	-	100,000,000
Total Long-Term Debt Outstanding at October 31, 2018	<u>\$ 1,313,766,094</u>	<u>\$ -</u>	<u>\$ 1,313,766,094</u>
<u>SHORT-TERM DEBT</u>			
Total Short-Term Debt Outstanding at October 31, 2018	<u>\$ 85,000,000</u>	<u>\$ -</u>	<u>\$ 85,000,000</u>
<u>CORPORATE UNSECURED CREDIT RATINGS</u>			
Fitch (rating affirmed November 9, 2018)		BBB-, Negative Outlook	
Standard & Poor's (rating affirmed December 15, 2017)		BBB-, Negative Outlook	
Moody's (rating affirmed December 20, 2017)		Ba1, Negative Outlook	
<u>FINANCING FOR 2019</u>			
Revolving Line of Credit \$200 M - 1Q 2019			
Refinance 2019 Maturities/Expiring Agreements \$125 M - 3Q 2019			
Potential Economic Refinance of 2017 Financing \$150 M - Q2/3Q 2019			

OVEC Power Cost Projections

Ohio Valley Electric Corporation
 Projected Inter-Company Power Agreement (ICPA) Billable Cost Summary
 Calendar Year 2018
 in thousands of dollars

	Budget 2018	Projected 2018	Dollar Over/(Under)	Percentage Over/(Under)
Generation Sales				
Estimated Delivered Power Sales from OVEC Generation (MWhr)				
Projected Energy Use Factor %				
Projected Net Capacity Factor %				
Generation Costs (Energy and Generation Operating Costs)				
Energy Charge				
Projected Coal Cost (delivered)				
Projected Allowance Cost (based on projected weighted average inventory)				
Projected Other Fuel-Related Costs (reagents, fuel oil & coal handling less byproduct s				
Total Projected Energy Costs				
Projected Energy Costs - \$/MWhr				
Generation Operating Costs (Demand Charge)				
Projected Annual Capital Improvement Costs (ICPA Component A)				
Projected Operation and Maintenance Costs (ICPA Component B)				
Projected Administration and General Costs (ICPA Component B)				
Projected Taxes (ICPA Component C)				
Projected ROE Costs (ICPA Component D)				
Total Projected Generation Operating Costs (ICPA Components A, B, C, & D)				
Projected Generation Operating Costs (Demand Charge) - \$/MWhr				
Projected Total Generation Costs (Energy and Operating Costs) - \$/MWhr				
Transmission Costs				
Transmission Operating Costs (Demand Charge)				
Projected Annual Capital Improvement Costs (ICPA Component A) - Transmission				
Projected Transmission and Dispatch Costs (ICPA Component B)				
Projected Administration and General Costs (ICPA Component B) - Transmission				
Projected Total Transmission Costs				
Projected Transmission Costs - \$/MWhr				
Non-Operating Costs (Debt and Obligations)				
Non-Operating Cost (Demand Charge)				
Projected Debt Expense and Short-Term Debt Costs (ICPA Component A)				
Projected Long-Term Debt Costs (ICPA Component A)				
Projected Advance Billing of Debt Service - Debt Reserve (ICPA Component A)				
Projected Postretirement Benefit Obligation (ICPA Component E)				
Projected Decommissioning and Demolition Obligation (ICPA Component F)				
Total Projected Non-Production Demand Costs (ICPA Components A, E, & F)				
Projected Non-Operating Costs - \$/MWhr				
Total Billable Costs (Energy and Demand Charge)				
Summary of ICPA Billable Power Costs				
Grand Total Projected Energy Costs				
Grand Total Projected Demand Costs				
Grand Total Projected ICPA Billable Costs				
Dividend				
Projected Dividend				
Summary of ICPA Billable Power Production Costs Less Projected Dividend				
Total Projected Power Production Costs Less Projected Dividend				
Projected Billable Costs (Energy and Demand) - \$/MWhr				

Ohio Valley Electric Corporation
Projected Inter-Company Power Agreement (ICPA) Billable Cost Summary
Calendar Years 2019 - 2021
 in thousands of dollars

2019 2020 2021

Generation Sales

Estimated Delivered Power Sales from OVEC Generation (MWhr)
 Projected Energy Use Factor %
 Projected Net Capacity Factor %

Generation Costs (Energy and Generation Operating Costs)

Energy Charge

Projected Coal Cost (delivered)
 Projected Allowance Cost (based on projected weighted average inventory)
 Projected Other Fuel-Related Costs (reagents, fuel oil & coal handling less byproduct sales)
Total Projected Energy Costs

Projected Energy Costs - \$/MWhr

Generation Operating Costs (Demand Charge)

Projected Annual Capital Improvement Costs (ICPA Component A) -Includes
 Projected Operation and Maintenance Costs (ICPA Component B)
 Projected Administration and General Costs (ICPA Component B)
 Projected Taxes (ICPA Component C)
 Projected ROE Costs (ICPA Component D)
Total Projected Generation Operating Costs (ICPA Components A, B, C, & D)

Projected Generation Operating Costs (Demand Charge) - \$/MWhr

Projected Total Generation Costs (Energy and Operating Costs) - \$/MWhr

Transmission Costs

Transmission Operating Costs (Demand Charge)

Projected Annual Capital Improvement Costs (ICPA Component A) -Transmission
 Projected Transmission and Dispatch Costs (ICPA Component B)
 Projected Administration and General Costs (ICPA Component B) -Transmission
Projected Total Transmission Costs

Projected Transmission Costs - \$/MWhr

Non-Operating Costs (Debt and Obligations)

Non-Operating Cost (Demand Charge)

Projected Debt Expense and Short-Term Debt Costs (ICPA Component A)
 Projected Long-Term Debt Costs (ICPA Component A) - Does not include incremental financing
 Projected Advance Billing of Debt Service - Debt Reserve (ICPA Component A)
 Projected Postretirement Benefit Obligation (ICPA Component E)
 Projected Decommissioning and Demolition Obligation (ICPA Component F)
Total Projected Non-Production Demand Costs (ICPA Components A, E, & F)

Projected Non-Operating Costs - \$/MWhr

Total Billable Costs (Energy and Demand Charge)

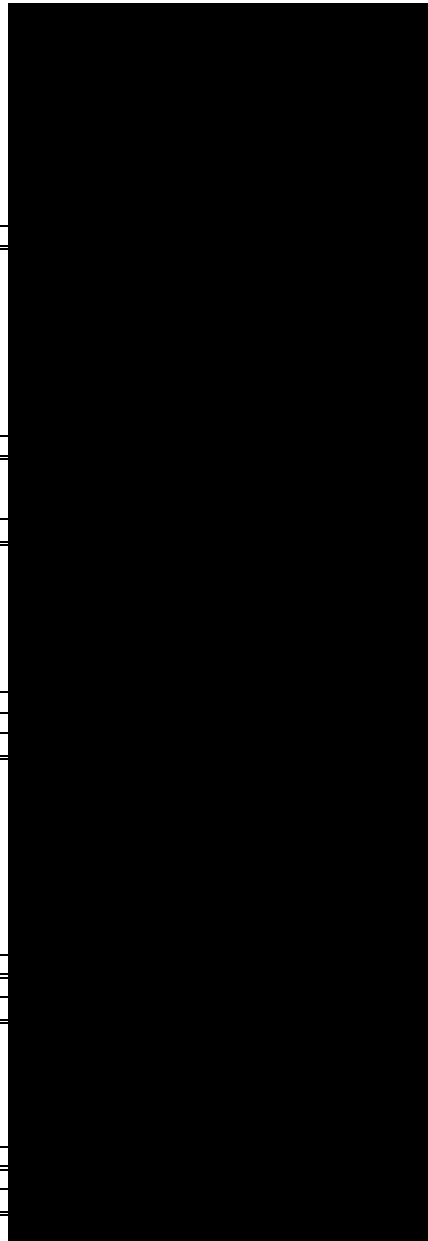
Summary of ICPA Billable Power Costs

Grand Total Projected Energy Costs
 Grand Total Projected Demand Costs
Grand Total Projected ICPA Billable Costs

Projected Billable Costs (Energy and Demand) - \$/MWhr

Critical Assumptions:

Major Environmental Capital Projects (compliance projects approx. [redacted] beg 2021) billed through Annual Capital Improvements, with minimal short term debt expense
 Long-Term Debt costs projection assumes refinancing in 2020 at investment grade rates with Sponsor issue resolved; does not include additional debt for defaulting Sponsor shortfall
 Assumes Funding Holiday of Contributions to Postretirement Benefit Obligation thru 2021
 Generation Sales assumes Clifty Unit 6 minimal operation during Ozone period
 Forecast assumes ICPA termination is 6/30/2040



OHIO VALLEY ELECTRIC CORPORATION
Minutes of Special Meeting of the
Board of Directors held December 5, 2018

A Special Meeting of the Board of Directors of **OHIO VALLEY ELECTRIC CORPORATION** (OVEC) was called to order by the President at 1 Riverside Plaza, Columbus, Ohio, on Wednesday, December 5, 2018, at 2:00 p.m., pursuant to notice duly given.

Mark C. McCullough, President of the Corporation, acted as Chairman of the meeting, and Justin J. Cooper, Chief Financial Officer, Secretary and Treasurer of the Corporation, acted as Secretary of the Meeting.

Mr. Cooper reported that the following Directors were present for the meeting:

Thomas Alban	Mark E. Miller
Eric D. Baker (Phone)	Steven K. Nelson
Lonnie E. Beller (Phone)	Patrick W. O'Loughlin
Wayne D. Games (Phone)	David W. Pinter (Phone)
James R. Haney (Phone)	Julie Sloat (Phone)
Lana L. Hillebrand	Paul W. Thompson (Phone)
Mark C. McCullough	John A. Verderame

Mr. McCullough presented the following resolutions and on a motion duly made, seconded, and unanimously adopted, it was

WHEREAS, effective as of the election of Mr. Paul Chodak III specified herein, Mr. Mark C. McCullough will be resigning as a member of the Board of Directors (Board) of each of OVEC and IKEC and as a member of the Executive Committee and any other committees of the Board of each of OVEC and IKEC and as president of each of OVEC and IKEC; and

WHEREAS, OVEC and IKEC management have recommended to the remaining members of their respective Boards Mr. Paul Chodak III to be elected and/or appointed as a Director to the Boards and as president and as a member of Committees of OVEC and IKEC as described below.

RESOLVED, that, subject to any necessary action by the Federal Energy Regulatory Commission (FERC) under Section 305 of the Federal Power Act, Mr. Paul Chodak III be elected a Director of the Board of OVEC and appointed the president of OVEC and a member of the Executive Committee of OVEC.

RESOLVED, that the foregoing resignations, elections and appointments shall be effective as of January 1, 2019.

AND

WHEREAS, effective as of the election of the persons specified herein, Ms. Julie Sloat will be resigning as a member of the Board of Directors (Board) of OVEC and as a member of the Executive Committee and any other committees of the Board of OVEC;

WHEREAS, effective as of the election of the persons specified herein, Ms. Lonnie Dieck will be resigning as Assistant Secretary and Assistant Treasurer of OVEC and IKEC; and

WHEREAS, OVEC and IKEC management has recommended to the remaining members of their respective Boards those persons named below to be elected and/or appointed as Director to the OVEC Board and as officers of OVEC and IKEC as described below.

NOW, THEREFORE, BE IT:

RESOLVED, that, subject to any necessary action by FERC under Section 305 of the Federal Power Act, Mr. Raja Sundararajan be elected a Director of the Board of OVEC and appointed as a member of the Executive Committee of OVEC; and it is further

RESOLVED, that, subject to any necessary action by FERC under Section 305 of the Federal Power Act, Ms. Julie Sloat be appointed as Assistant Secretary and Assistant Treasurer of OVEC and IKEC, and it is further

RESOLVED, that the foregoing resignations, elections and appointments shall be effective as of January 1, 2019.

Mr. Cooper reported that the Minutes of the Special Meetings of the Board of Directors of this Corporation, held on December 8, 2017, February 21, 2018, April 27, 2018, June 15, 2018, and June 28, 2018, have been sent to each of the Directors. He asked that, if there were no corrections, such minutes be approved in the form in which they were circulated. On a motion duly made, seconded, and unanimously adopted, it was

RESOLVED, that the Minutes of the Special Meeting of the Board of Directors of this Corporation, held on December 8, 2017, February 21, 2018, April 27, 2018, June 15, 2018, and June 28, 2018, are approved.

At the request of Mr. McCullough, Ms. Kay Martin reviewed the 2018 Service Corporation general expenditures, which were expected to be approximately [REDACTED]. Ms. Martin requested authorization for 2019 general expenditures for services from the AEP Service Corporation up to [REDACTED]. The primary general expenditures are expected to be in the areas of operation and maintenance, environmental activities, fuel procurement, and coal

transportation. Ms. Martin stated that the 2019 Budget is similar to the 2018 Budget. On a motion duly made, seconded, and unanimously adopted, it was

RESOLVED, that the officers of Ohio Valley Electric Corporation may request and obligate Ohio Valley Electric Corporation to pay for general services, exclusive of services for specific projects previously approved, under the Agreement among American Gas and Electric Service Corporation (now American Electric Power Service Corporation), Ohio Valley Electric Corporation, and Indiana-Kentucky Electric Corporation dated December 15, 1956, in an amount which, when added to amounts paid for general services by Indiana-Kentucky Electric Corporation, exclusive of services for specific projects previously approved, would aggregate a maximum of [REDACTED] for calendar year 2019.

At the request of Mr. McCullough, Mr. Justin Cooper reported on the 2018 LEAN cost structure. Mr. Cooper reviewed the results of the 2018 continuous improvements (LEAN) reductions and the operating, maintenance, and capital cost benchmarking budgets. Mr. Cooper reported that OVEC's operating, maintenance, and capital cost profile was projected to [REDACTED] in 2018 compared with 2013. The energy cost reduction from 2013 to 2018 was expected to be [REDACTED]. Mr. Cooper also reviewed OVEC's key performance factors from 2015 to 2018.

Mr. McCullough asked Mr. Mike Brown to give an update on the OVEC and IKEC environmental compliance status and to report on the work to develop cost estimates for future environmental capital projects. Mr. Brown reported that the OVEC and IKEC 2018 ozone season NO_x emission rates and overall performance was better than expected. Both plants successfully operated within their NO_x emission targets under the new ozone rules for the second year in a row. In addition OVEC and IKEC generated more megawatts during the 2018 ozone season compared to 2017. Mr. Brown also reported on the MATS compliance status at each plant. Mr. Brown also reported on the status of developing cost estimates to comply with Effluent Limitations Guidelines, which may include the construction of closed loop boiler slag systems and/or FGD wastewater biological treatment systems at each plant; however, the cost estimates are contingent on additional anticipated EPA rulemaking on the effluent guidelines applicable to these wastewater discharges. Mr. Brown also reported on the status and next steps surrounding cost estimates for the conversion to dry fly ash handling at Kyger Creek Station. In addition, Mr. Brown provided an update on cost estimates to comply with Section 316(b) and the Coal Combustion Residual (CCR) rule. OVEC's current environmental capital investment "best-case" cost estimate for these projects is [REDACTED] and the current "worst-

case" cost estimate is [REDACTED]. An investment decision for additional funding for conceptual engineering and design will be required by mid-year 2019 to mid-year 2020.

Mr. McCullough asked Mr. Cooper to review the 2019 Construction Budget and the 2020-2021 Construction Budget Forecast. Mr. Cooper commented that the 2019 Construction projects highlight continued replacement of original boiler tubing to address current and future reliability issues with an additional focus on replacement of obsolete unit controls. Mr. Cooper reported that the Construction Budget for 2019 indicates estimated total expenditures of [REDACTED] representing [REDACTED] for Replacements of property and [REDACTED] for Management Reserve. On a motion duly made, seconded, and unanimously adopted, it was

RESOLVED, that the OVEC-IKEC Construction Budget for 2019, indicating estimated total expenditures of \$ [REDACTED] for Replacements of property and [REDACTED] for Management Reserve, which totals [REDACTED], is approved.

Mr. McCullough asked Mr. Osborne to report on operating activities for the Clifty Creek and Kyger Creek plants. Mr. Osborne asked Clifty Creek Plant Manager Cliff Carnes and Kyger Creek Plant Manager Annette Hope to report on the 2018 Strategic Plan for each respective location highlighting three areas of success and three areas of opportunities.

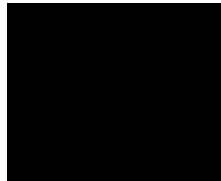
Mr. McCullough asked Mr. Scott Cunningham to report on the OVEC Operating Committee and the status of OVEC's integration into PJM.

Mr. McCullough asked Mr. Brian Chisling to report on the DOE separation and the termination of the OVEC and DOE contract.

At the request of Mr. McCullough, Mr. Cooper reported on the status and timeline of the Corporation's finance activities. Mr. Cooper distributed to all members present a copy of the Treasurer's Report that included the following statistics:

OHIO VALLEY ELECTRIC CORPORATION (OVEC)
 INDIANA-KENTUCKY ELECTRIC CORPORATION (IKEC)
 Treasurer's Report
 Boards of Directors' Meeting
 December 5, 2018

	<u>OVEC</u>	<u>IKEC</u>	<u>Consolidated</u>
<u>CASH AND INVESTMENTS</u>			
Cash and Short-Term Investments	\$ 65,544,112	\$ -	\$ 65,544,112
DOE Settlement Reserve Account	70,946,302	-	70,946,302
Debt Reserve Account	49,912,981	-	49,912,981
Total Cash and Investments at October 31, 2018	<u>\$ 186,403,395</u>	<u>\$ -</u>	<u>\$ 186,403,395</u>
<u>PLANT DECOMMISSIONING & DEMOLITION (D&D) FUND</u>			
Total D&D Assets at October 31, 2018	<u>\$ 24,517,225</u>	<u>\$ 32,671,749</u>	<u>\$ 57,188,974</u>
<u>EMPLOYEE BENEFIT PLAN ASSETS</u>			
Pension Plan			
Supplemental Pension & Savings Plan			
Union Retiree Medical VEBA Trust			
Retiree Medical VEBA Trust			
Retiree Life Insurance VEBA Trust			
401(h)			
Total Benefit Plan Assets at October 31, 2018			
<u>EQUITY</u>			
Common Stock, 100,000 shares outstanding	\$ 10,000,000	\$ 3,400,000	\$ 10,000,000
Retained Earnings	13,267,908	-	13,267,908
Total Equity at October 31, 2018	<u>\$ 23,267,908</u>	<u>\$ 3,400,000</u>	<u>\$ 23,267,908</u>
<small>(OVEC's ownership of IKEC's Capital Stock (17,000 shares) is eliminated in consolidation.)</small>			
<u>LONG-TERM DEBT</u>			
2006 Senior Unsecured Notes, Series A, 5.80%, due February 15, 2026	\$ 189,381,919	\$ -	\$ 189,381,919
2006 Senior Unsecured Notes, Series B, 6.40% due June 15, 2040	55,380,136	-	55,380,136
2007 Senior Unsecured Notes, Series AA, AB & AC, 5.90%, due February 15, 2026	134,103,911	-	134,103,911
2007 Senior Unsecured Notes, Series BA, BB & BC, 6.50% due June 15, 2040	42,045,436	-	42,045,436
2008 Senior Unsecured Notes, Series A, 6.92%, due February 15, 2026	27,801,729	-	27,801,729
2008 Senior Unsecured Notes, Series B & C, 6.71%, due February 15, 2026	108,913,238	-	108,913,238
2008 Senior Unsecured Notes, Series D & E, 6.91% due June 15, 2040	81,159,727	-	81,159,727
2017 Senior Unsecured Notes, Series A, Floating Rate, due August 4, 2022	100,000,000	-	100,000,000
2009 Tax Exempt Bonds, \$100M Series A-D, Floating Rate, due February 1, 2026	75,000,000	-	76,000,000
2009 Tax Exempt Bonds, \$100M Series E, 5.625%, due October 1, 2019	100,000,000	-	100,000,000
2010 Tax Exempt Bonds, \$100M Series A & B, Floating Rate, due February 1, 2040	100,000,000	-	100,000,000
2012 Tax Exempt Bonds, \$200M Series A, 5%, due June 1, 2039	200,000,000	-	200,000,000
2012 Tax Exempt Bonds, \$100M Series B & C, Floating Rate, due June 1, 2040	100,000,000	-	100,000,000
Total Long-Term Debt Outstanding at October 31, 2018	<u>\$ 1,313,766,094</u>	<u>\$ -</u>	<u>\$ 1,313,766,094</u>
<u>SHORT-TERM DEBT</u>			
Total Short-Term Debt Outstanding at October 31, 2018	<u>\$ 85,000,000</u>	<u>\$ -</u>	<u>\$ 85,000,000</u>
<u>CORPORATE UNSECURED CREDIT RATINGS</u>			
Fitch (rating affirmed November 9, 2018)		BBB-, Negative Outlook	
Standard & Poor's (rating affirmed December 15, 2017)		BBB-, Negative Outlook	
Moody's (rating affirmed December 20, 2017)		Ba1, Negative Outlook	
<u>FINANCING FOR 2019</u>			
Revolving Line of Credit \$200 M - 1Q 2019			
Refinance 2019 Maturities/Expiring Agreements \$125 M - 3Q 2019			
Potential Economic Refinance of 2017 Financing \$160 M - Q2/3Q 2019			



At the request of Mr. McCullough, Mr. Cooper provided information and discussed OVEC's year-to-date power costs estimated for 2018 and projections for 2019-2021. Mr. Cooper stated that based on current estimates OVEC expected to end 2018 with an average power cost of [REDACTED] and an available power use factor of [REDACTED]. Mr. Cooper stated that the projected average power cost for OVEC power, delivered under the terms of the Inter-Company Power Agreement, ranges from \$ [REDACTED] in 2019 to [REDACTED] in 2021 using an estimated available power use factor of [REDACTED].

Mr. McCullough introduced Mr. Bob Bitter of Deloitte & Touche. Mr. Bitter reported that Deloitte & Touche just began its audit to certify the 2018 Financial Statements that would be finalized in April 2019.

The Board moved to an Executive Session.

There being no further business to come before the Board, the meeting was adjourned.



Secretary

OHIO VALLEY ELECTRIC CORPORATION

OHIO VALLEY ELECTRIC CORPORATION
Actions Taken by Board of Directors
April 2019

Paul Chodak III, President of OHIO VALLEY ELECTRIC CORPORATION (OVEC), in a letter dated April 2, 2019, stated that OVEC maintains a revolving credit facility for the short-term funding of working capital including inventories (fuel, fuel related, and material and supply) and interim financing of capital expenditures. This facility is OVEC's primary source of short-term liquidity to cover costs incurred other than income from the Inter-Company Power Agreement monthly billings. The current Revolving Credit Agreement (the "Agreement") has been in place since June 18, 2010 with the last extension on November 14, 2014, and the Agreement is scheduled to expire on November 14, 2019.

OVEC has been working with AEP Service Corporation Finance Department representatives along with KeyBank and PNC, the joint leads of the facility, on a three-year extension. The extended Agreement will reduce the current credit limit from \$200 million to \$185 million but will maintain the current interest rate. The reduced capacity impact on OVEC's access to liquidity will be mitigated by refinancing \$25 million of 2009A OVEC tax exempt bonds currently being held under the Agreement. The refinancing, which is projected to be in the second or third quarter of 2019, will reduce OVEC's current drawn balance of \$85 million by \$25 million and provide additional capacity that exists under the current Agreement. As discussed at the December 5, 2018 meeting of the Boards, the extension of the Agreement is critical to maintaining the current OVEC credit ratings and OVEC's future financial stability.

Signed authorizations have been received from all the Directors, and, accordingly, it was unanimously resolved as follows:

WHEREAS, the Corporation has in place an existing revolving credit facility with aggregate loan commitments of \$200 million (the "**Existing Revolving Credit Facility**"), for the purposes of funding the working capital requirements and other general corporate purposes of the Corporation (including capital expenditures);

WHEREAS, the commitments under the Existing Revolving Credit Facility are set to expire, and all outstanding loans under the Existing Revolving Credit Facility are set to mature, on November 14, 2019;

WHEREAS, the Corporation has determined that it should refinance and modify certain of the terms of the Existing Credit Facility, including, but not limited to, extending the commitment period and the final maturity of the loans and reducing the aggregate commitments to not more than \$185 million (the "**Amended Revolving Credit Facility**"); and

WHEREAS, pursuant to an engagement letter dated March 14, 2019 (the "**Engagement Letter**"), the Corporation has engaged KeyBank National Association to serve as the administrative agent under the Amended Revolving Credit Facility (the "**Administrative Agent**") and each of KeyBanc Capital Markets Inc. and PNC Capital Markets LLC to serve as joint lead arrangers (the "**Joint Lead Arrangers**") to obtain commitments for the Amended Revolving Credit Facility from a syndicate of lenders.

NOW, THEREFORE, BE IT:

RESOLVED, that the Corporation's entering into a credit agreement, or an amendment to the credit agreement for the Existing Revolving Credit Facility, and other agreements, documents and instruments in connection therewith in order to effectuate the Amended Revolving Credit Facility as the Corporation shall deem necessary, proper, desirable or appropriate, with aggregate commitments of not more than \$185 million and otherwise on terms substantially consistent with the summary of terms attached to the Engagement Letter and such other terms as the Corporation may deem necessary, proper, desirable or appropriate (the "**Amended Documents**") is hereby approved. Such approval of the Corporation shall be evidenced by the execution of the Amended Documents by any of the President, any Vice President, the Secretary, the Treasurer or any Assistant Secretary or Assistant Treasurer of the Corporation (each, an "**Authorized Officer**"); and further

RESOLVED, that each Authorized Officer is authorized and directed to execute and deliver on behalf of the Corporation the Amended Documents to which the Corporation is to be a party; and further

RESOLVED, that each Authorized Officer of the Corporation is authorized and directed to execute and deliver on behalf of the Corporation such other agreements, instruments, financing statements, documents or certificates and to do and perform such things and acts, as they shall deem necessary or appropriate to carry out the transactions authorized by this resolution or contemplated by the Amended Documents, including but not limited to one or more future agreements entered into by the Corporation or any one or more future instruments, documents or certificates to be signed by the Corporation under any of the Amended Documents or otherwise for such purpose; and further

RESOLVED, that the Authorized Officers of the Corporation are each hereby authorized to negotiate, execute and deliver from time to time one or more agreements with counterparties selected by such Authorized Officer, the purpose of which is to manage the transactions contemplated herein, all upon such terms and conditions as said officer shall approve, said approval to be conclusively presumed by their execution and delivery of the Amended Documents; and further

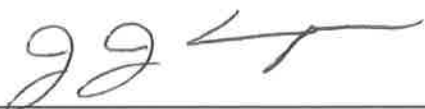
RESOLVED, that the Authorized Officers of the Corporation are each hereby authorized and directed, in the name and on behalf of the Corporation, to do and perform, or cause to be done and performed, any and all such acts, deeds and things, to make, execute and deliver, or cause to be made, executed and delivered, all such consents, agreements, undertakings, documents, instruments or certificates, or to effect any necessary filings, with any and all appropriate regulatory authorities, state and federal, in the name and on behalf of the Corporation, to incur and pay all such fees and expenses and to engage such persons as each such Authorized Officer may, in the judgment of such Authorized Officer, deem necessary, proper, desirable

or appropriate to effectuate or carry out fully the intent and purposes of the foregoing resolutions, including, but not limited to, the performance of the obligations of the Corporation under any agreement or document referred to herein or therein; and the execution by such Authorized Officers of any such consent, agreement, undertakings, document, instrument or certificate or the payment of any such fees and expenses or the engagement of such persons or the doing by them of any act in connection with the foregoing matters shall conclusively establish their authority therefor and the approval and ratification of the agreements, undertakings, documents, instruments or certificates so executed, the expenses so paid, the persons so engaged and the actions so taken; and further

RESOLVED, that the Secretary or an Assistant Secretary of the Corporation be and hereby is authorized and empowered, for and on behalf of the Corporation, to certify and attest to any documents which such Secretary or Assistant Secretary may deem necessary, proper, advisable or appropriate to consummate the transactions contemplated by the documents heretofore authorized and empowered; provided, that such attestation shall not be required for the due authorization, execution and delivery or validity of the particular document; and further

RESOLVED, that all actions previously taken and expenses incurred by any officer or director of the Corporation in connection with the transactions contemplated by the foregoing resolutions, including but not limited to the Corporation's entering into the Engagement Letter and engaging the Administrative Agent, the Joint Lead Arrangers and the other parties to the Engagement Letter to provide the services described in the Engagement Letter, are hereby adopted, ratified, confirmed and approved in all respects; and further;

RESOLVED, that these actions by the Directors of this Corporation be filed in the minute book of this Corporation.



Secretary
OHIO VALLEY ELECTRIC CORPORATION

**OHIO VALLEY ELECTRIC CORPORATION (OVEC)
INDIANA-KENTUCKY ELECTRIC CORPORATION (IKEC)
Agenda**

**Boards of Directors' Mid-Year Update
Informational Meeting/Conference Call
1-877-253-4307 Passcode: 2002860**

August 1, 2019

- | | |
|--|---------------|
| 1. Welcome and Overview | Rob Osborne |
| 2. Environmental Update | Mike Brown |
| • NOx / CSAPR | |
| • Compliance Update | |
| • Updated Projected Future Capital Costs | |
| 3. Mid-Year Operational and Financial Performance Update | Justin Cooper |
| • Open Book Leadership (OBL) Performance Metrics | |
| • 2019 Forecast Update | |
| 4. Closing Comments | Rob Osborne |

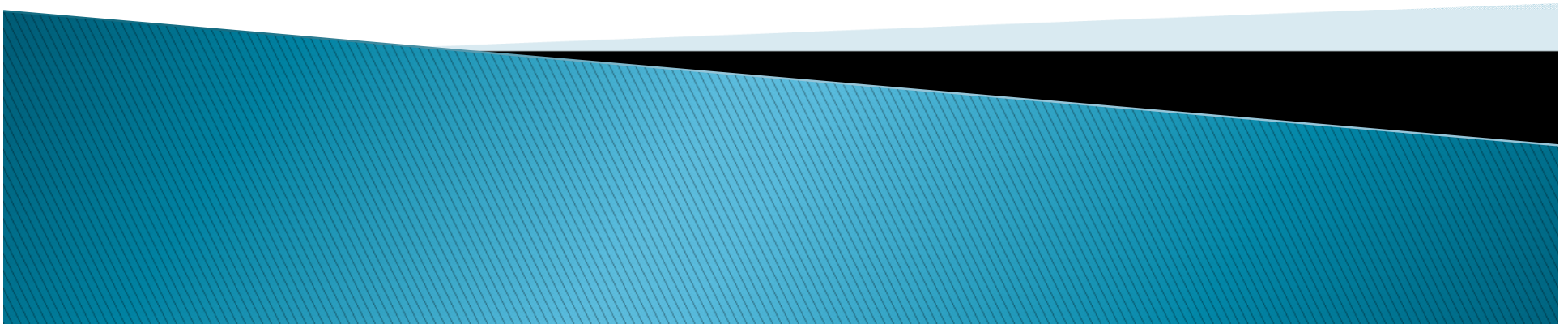
OVEC-IKEC

Boards of Directors' Update

August 1, 2019

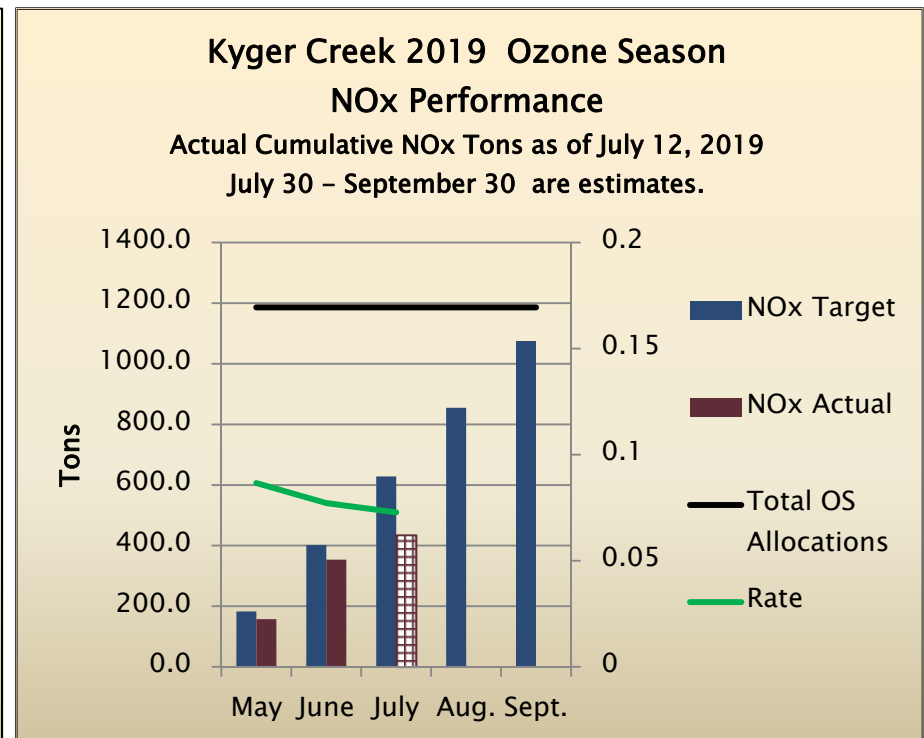
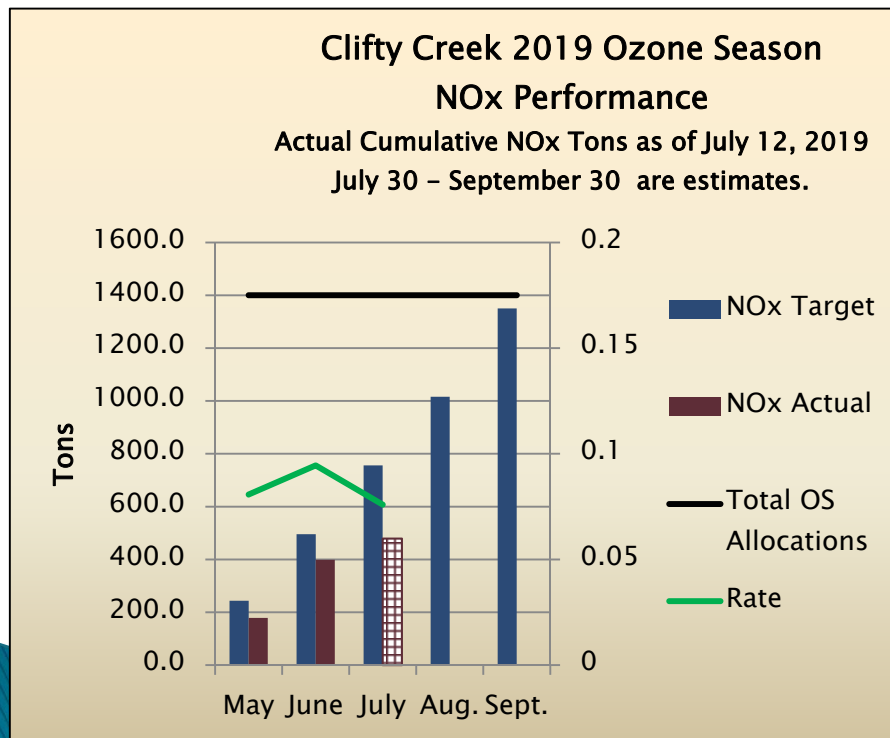


Environmental Update



Review of Ozone NO_x Performance

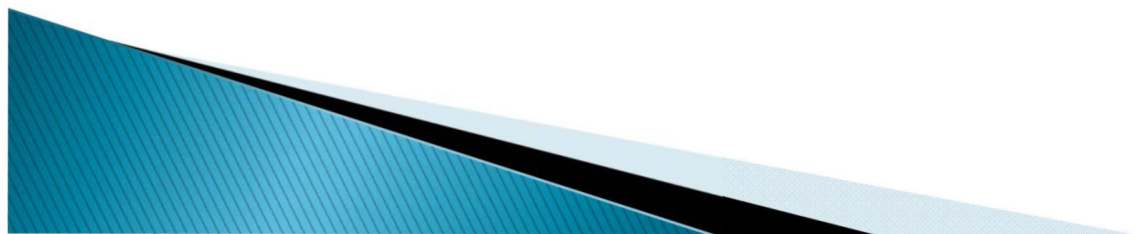
- ▶ To date, OVEC-IKEC ozone season NO_x performance has been excellent. Both plants are operating near historically low NO_x emission rates, and we are on track to be at or below the Company's NO_x ozone season emission targets for 2019.



ELG Environmental Regulatory Update


Effluent Limitations Guidelines Update

- EPA issued final ELG Postponement Rule in September 2017 for FGD Wastewater (FGDWW) and bottom ash transport water (BATW).
- EPA delayed the original compliance window for both wastewaters by two years, leaving the remainder of ELG Rule in tact.
- A new draft rule revising effluent limits was expected by December 2018 and a final rule by December 2019. However, the new rule's issuance has been delayed.
- Timely issuance of the new draft rule by end of 2018 would have given us an opportunity to improve forecast, costs and timing of required investment. The delay in issuing a draft rule will delay refinement in updated compliance cost estimates.
- Indications are that EPA may issue a new rule with some additional flexibility/optionality.



ELG Legal Update

United States Court of Appeals for the 5th Circuit Decision on eNGO legal challenge of portions of ELG Rule

- Unfavorable court decision issued on 4/12/19.
 - The Court determined EPA was “arbitrary and capricious” in its ELG rule determinations relative to legacy wastewater and landfill leachate.
 - The Court vacated and remanded these portions of the rule back to EPA for further consideration.
 - EPA did not file appeal, and will need to update record
 - This may ultimately result in additional treatment and compliance costs for the industry.
 - OVEC–IKEC future risk on leachate may be low due to recycle, reuse plans at Kyger Creek, and CCR compliance activities associated with the landfill runoff collection pond at Clifty Creek.
 - Risk from legacy wastewater vacature/remand is currently unknown.
- 

ELG Environmental Compliance Update

➤ Clifty Creek

- Permit Modification Request was filed with IDEM to remove the April 1, 2022 ELG compliance dates for FGDWW and BATW. IDEM has not taken any formal action.
- IDEM is expected to act on modification request when EPA completes its new rule determining new compliance dates and/or new BAT limits.
- EPA delay in issuing new ELG rules results in some risk at Clifty Creek.


➤ Kyger Creek

- NPDES Permit Renewal Application was filed in October 2018. OEPA is still working to draft a renewal NPDES permit.
- Updated engineering evaluation of dry fly ash conversion has been completed, and cost estimate range has been narrowed to [REDACTED] range. Updated economic analysis and business case determination now under way.



CCR Environmental Compliance Update

OVEC–IKEC has two landfills and four ponds that meet the definition of a CCR Unit

- Groundwater analysis shows statistically significant increases (SSIs) at one pond at each plant.
 - The landfill runoff collection pond complex at Clifty Creek,
 - The boiler slag pond at Kyger Creek, and
 - Any pond closure requirements will be funded through decommissioning reserves.
 - Alternative source demonstrations (ASDs) were conducted in 2018 and early 2019, and no alternative sources were definitively identified.
 - Additional evaluations have shown no off–site migration of SSI parameters from either pond.
 - We continue to work with our Qualified Professional Engineer on compliance activities while waiting on additional EPA rulemaking.
 - Public meetings on the CCR ponds and optionality on next steps will be held in the fall.
 - EPA expected to undergo additional CCR regulatory action within the next year as well.
- 

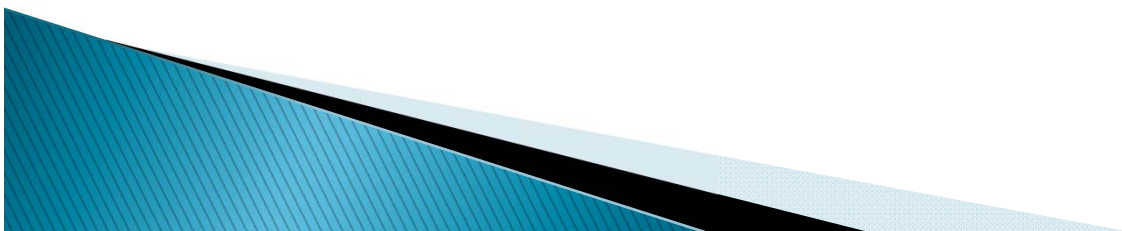
316(b) Environmental Compliance Update

Kyger Creek

- 316(b) Section 122.21(r) reports were completed and submitted to Ohio EPA as part of the NPDES permit renewal application in November 2018.
- OEPA has not taken action on 316(b) report or the NPDES permit renewal. We have been in discussions with OEPA and will have an opportunity to provide feedback prior to permit renewal.

Clifty Creek

- 316(b) Section 122.21(r) report filed with IDEM in January 2019.
- IDEM to act on cooling system upgrades next permit cycle (i.e. during the 2022 NPDES permit renewal).



Clean Power Plan (CPP)/Affordable Clean Energy (ACE) Rule Update

- USEPA repealed CPP and in a separate action issued ACE Rule on July 8, 2019. Both actions will undergo legal challenges.
- ACE rule becomes effective on September 6, 2019.
 - Inside the fence line Heat Rate Improvements at the unit level is defined as the Best System of Emissions Reduction (BSER).
 - States have three years from ACE effective date to submit implementation plans.
 - States have a lot of flexibility in crafting state implementation plans; however, ACE is somewhat inflexible regarding EGU compliance options.
 - No emissions trading and no fleet, facility or common stack averaging.



Gypsum and Ash Beneficial Reuse

Kyger Creek

- Majority of gypsum continues to be sold for wallboard production.
- Pursuing environmental permitting for the installation of on-site barge loading system, gypsum currently being trucked off site.
- Boiler slag sales are above forecast (Harsco).
- Evaluating system modifications to comply with possible CCR/ELG requirements.

Clifty Creek

- Majority of gypsum being sold for wallboard production.
- Negotiating a separate long-term sales agreement for majority of gypsum.
- Pursuing environmental permitting for the installation of on-site barge loading system, gypsum currently being trucked off site.
- Fly ash marketing efforts continue, but no significant sales.

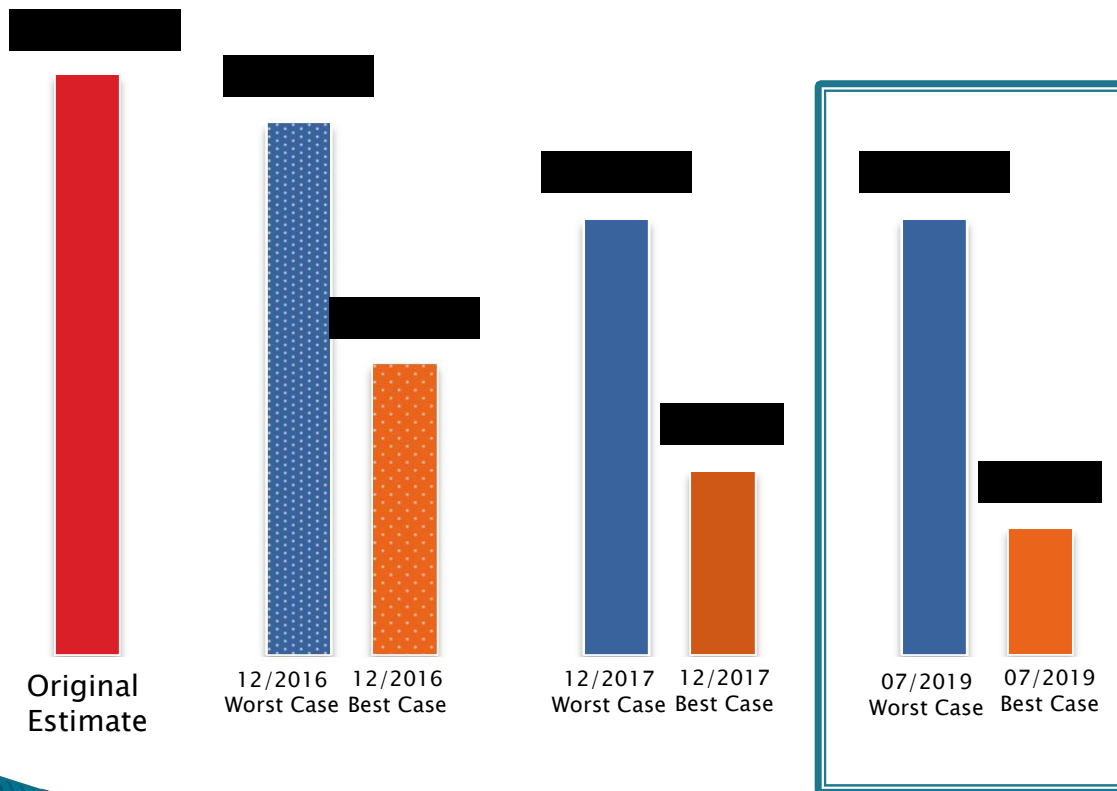
Benefits for both Plants:

- Reduced fuel costs, reduced future landfill expansion costs, reduced future environmental compliance risks.



Projected Environmental Investment

OVEC continues to challenge and evaluate current Environmental Project Cost Projections



Best Case / Worst Case Projections:

Best Case:

- Based on current administration actions and industry feedback

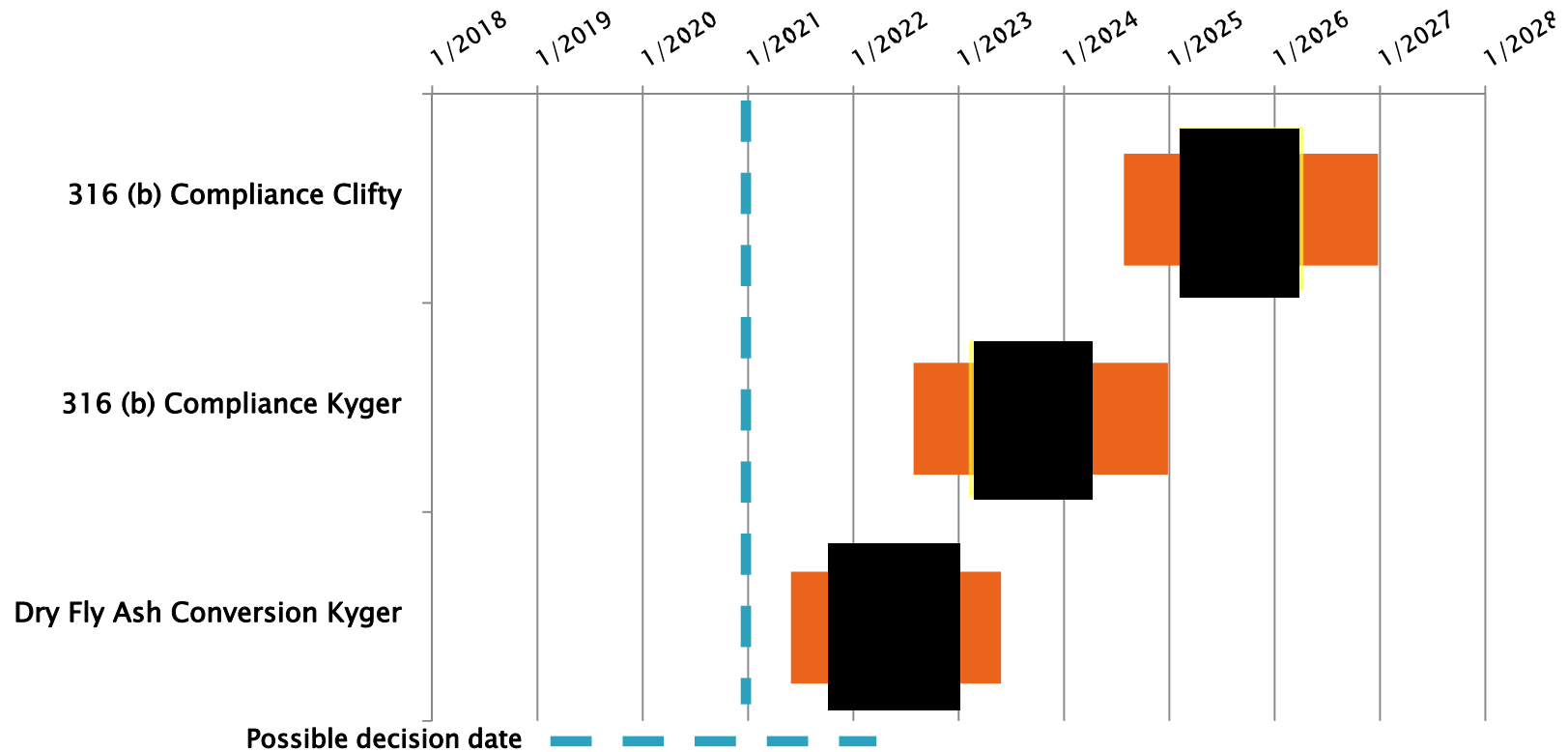
Worst Case:

- Potential for reduction for Boiler Slag and FGD Wastewater requirements

Projected OVEC BOD Environmental Investment Decision:
 Year-End 2019 to Year-End 2020

Projected Environmental Investment

\$██████ Best Case - Timeline



Assumptions:

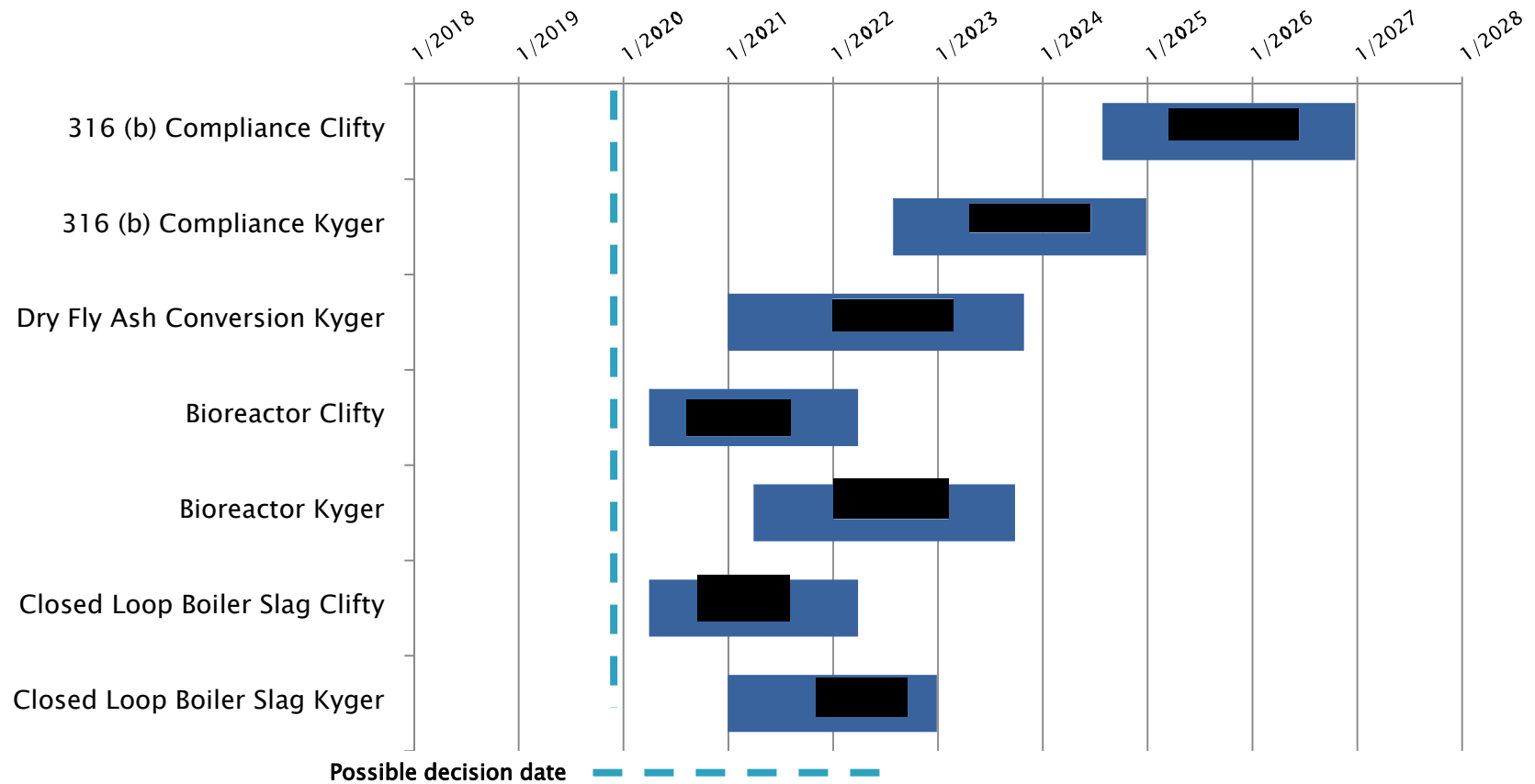
Current ELG reconsideration results in a revision of the rule:

- Current installed FGD Wastewater Treatment considered best technology
- Boiler Slag Dry Conversion (Bottom Ash) not required

Any pond closure requirements will be funded through decommissioning reserves

Projected Environmental Investment

\$████████ Worst Case - Timeline

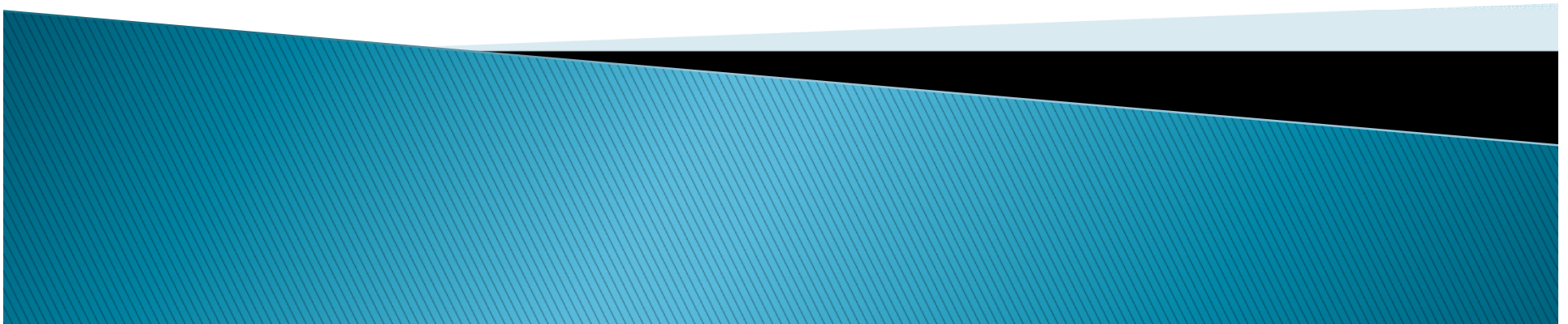


Assumptions:
 Current ELG reconsideration results in rule revisions that require material modifications to current FGDWW treatment and BATW treatment.
 Any pond closure requirements will be funded through decommissioning reserves.

Potential Future Impacts:
 Current ELG reconsideration results in revision of the rule (as shown in Best Case): Up to ██████████ of Worst Case

- Current installed FGDWW Treatment considered best technology and BATW dry conversion not required

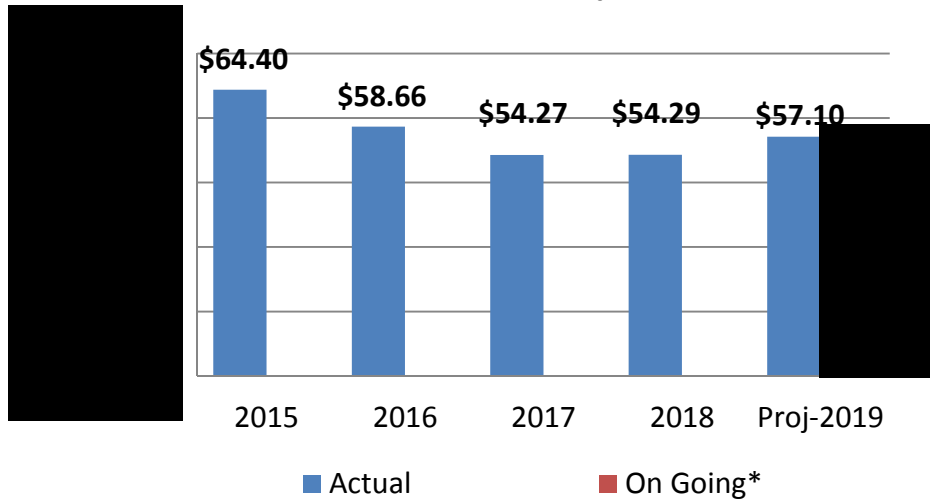
Mid-Year Operational and Financial Performance Update



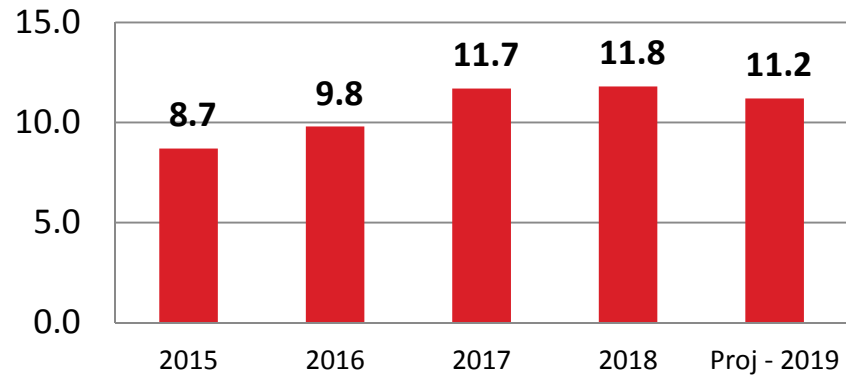


2015 - 2019 Performance

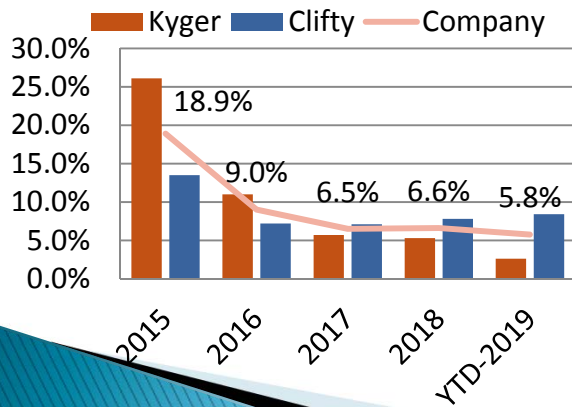
Total Power Cost - \$/MWhr



**Generation - MWhrs
In Millions**

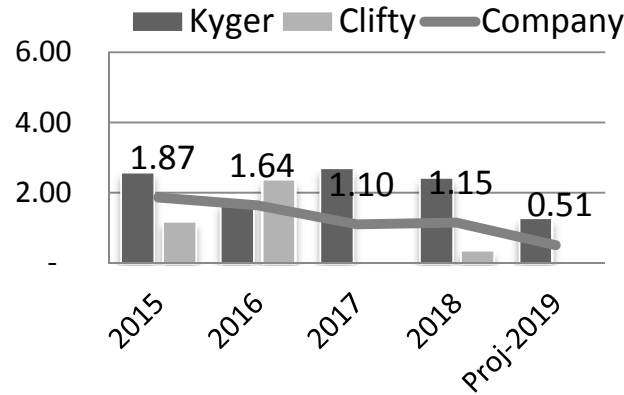


EFOR

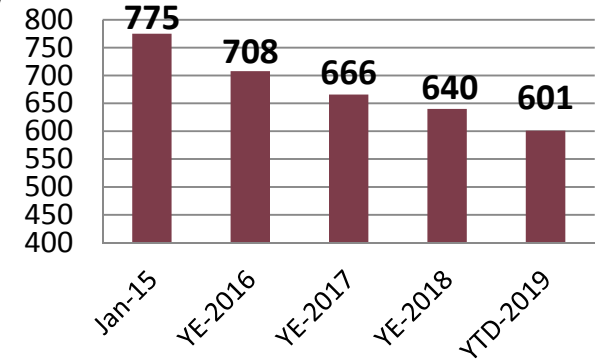


Safety

(Employee Recordable Rate)



Employee Count



*On-Going Costs exclude non-traditional or event driven costs - coal conservation and debt reserve, increased finance costs, legal and other expenses due to Sponsor event.

Open Book Leadership (OBL) Scoreboard Update - Mid-Year Performance

OVEC /IKEC – OBL Plant Scoreboards								
		Kyger Creek Plant			Clifty Creek Plant			
		2018	2019		2018	2019		
		Actual	Target	June YTD Actual	Actual	Target	June YTD Actual	
Safety	Recordable Rate (YTD)	2.44	0.57	2.57 Proj. YE 1.29	0.37	0.57	0.00	
	DART Rate (YTD)	2.70	0.33	1.72 Proj. YE 0.86	1.69	0.33	0.00	
Environmental Compliance	MATS (Mercury, Particulate Matter, Acid Gases)	Compliance	Compliance	Compliance	Compliance	Compliance	Compliance	
	NOx Tons (Ozone Season)	892	1,074	328	1,378	1,378	364	
Drivers of Critical Number Total Production Power Cost \$/MWhr	Reliability	EFOR	5.3%	6.5%	2.2%	7.8%	6.5%	8.4%
		Commercial Availability	89%	90.0%	93%	85%	90.0%	90%
	Energy Cost	Heat Rate	10,412	10,360	10,657	10,657	10,604	10,730
		Fuel Cost Total Fuel/ Net Gen			\$23.62			\$25.50
	Demand Cost	O&M						
	Continuous Improvement	Process Improvements ₁	782	530	332	1,235	700	574

Reviewed at Plant Huddles (weekly)

Future Focused (80% / 20%)

Highlight Opportunities for Improvement

Metrics are key drivers to Critical Number – \$/MWhr

1) Process Improvements include standard work development

OVEC Power Cost 2019

2019 Power Cost \$/MWhr			
	Budget	Projection	Variance
Generation (MWhr)			
Energy			
Operating Cost			
Generation Cost			
Transmission Cost			
Non- Operating Cost			
Total Billable Cost			
Total On-Going Cost*			

*On-Going Costs exclude non-traditional or event driven costs - coal conservation and debt reserve, increased finance costs, legal and other expenses due to Sponsor event.



OHIO VALLEY ELECTRIC CORPORATION (OVEC)
INDIANA-KENTUCKY ELECTRIC CORPORATION (IKEC)
Agenda
Boards of Directors' Meeting
December 12, 2019

- | | |
|---|---|
| 1. Call Meeting to Order (2 p.m.) | Paul Chodak III |
| 2. Roll Call
- Quorum (OVEC and IKEC) | Justin Cooper |
| 3. Approve Minutes of Prior Meeting
- Resolutions (OVEC and IKEC) | Justin Cooper |
| 4. AEP Service Corporation Service Charges
- 2019 Projection vs. Estimate
- 2020 Budget
- 2020 Resolutions (OVEC and IKEC) | Kay Martin |
| 5. 2019 Highlights and Future Cost Profile
- Results of Continuous Improvements (LEAN) | Justin Cooper |
| 6. OVEC and IKEC Environmental Compliance Update | Mike Brown |
| 7. Construction Budget Review
- 2020 Construction Budget
- Construction Budget Forecast
- 2020 Resolutions (OVEC and IKEC) | Justin Cooper |
| 8. Report on Operating Activities
- 2019 Culture Survey Results
- 2019 Strategic Plan | Rob Osborne
Cliff Carnes
Annette Hope |
| 9. OVEC Operating Committee Report | Scott Cunningham |
| 10. Treasurer's Report
- Report on 2019 and 2020 Finance Activities | Justin Cooper |
| 11. OVEC Power Cost Projections
- 2019 Projection vs. Estimate
- 2020-2024 Projection | Justin Cooper |
| 12. Independent Auditor's Comments and Questions
(Deloitte & Touche) | Bob Bitter
Chad Palmer |
| 13. Open Discussion | |
| Adjournment | |
| Executive Session | |
| Adjournment | |



Boards of Directors' Meeting Presentation
December 12, 2019

OHIO VALLEY ELECTRIC CORPORATION (OVEC)
INDIANA-KENTUCKY ELECTRIC CORPORATION (IKEC)
Resolutions of Minutes of Prior Meetings
Boards of Directors' Meeting
December 12, 2019

OVEC

RESOLVED, that the Minutes of the Special Meeting of the Board of Directors of this Corporation, held on December 5, 2018, are approved.

IKEC

RESOLVED, that the Minutes of the Special Meeting of the Board of Directors of this Corporation, held on December 5, 2018, are approved.

AEPSC Service Charges

OHIO VALLEY ELECTRIC CORPORATION (OVEC)
 INDIANA-KENTUCKY ELECTRIC CORPORATION (IKEC)
 AMERICAN ELECTRIC POWER SERVICE CORPORATION CHARGES
 FOR CALENDAR YEAR 2019 PROJECTED THROUGH DECEMBER 31, 2019

	BUDGET FOR 2019			PROJECTED THROUGH 12/31/2019			DIFFERENCE OVER (UNDER)
	<u>OVEC</u>	<u>IKEC</u>	<u>TOTAL</u>	<u>OVEC</u>	<u>IKEC</u>	<u>TOTAL</u>	
<u>GENERAL SERVICES</u>							
OPERATION & MAINTENANCE							
WORK MANAGEMENT SYSTEM - MAXIMO CONVERSION							
ENVIRONMENTAL ACTIVITIES							
TRANSMISSION							
FUEL PROCUREMENT AND TRANSPORTATION							
NERC/CIP AND CYBER SECURITY							
GENERAL ADMINISTRATIVE SERVICES							
OTHER GENERAL SERVICES							
TOTAL GENERAL SERVICES							

OHIO VALLEY ELECTRIC CORPORATION (OVEC)
INDIANA-KENTUCKY ELECTRIC CORPORATION (IKEC)
AMERICAN ELECTRIC POWER SERVICE CORPORATION CHARGES
BUDGET FOR CALENDAR YEAR 2020

	BUDGET FOR 2020		
	<u>OVEC</u>	<u>IKEC</u>	<u>TOTAL</u>
OPERATION & MAINTENANCE			
WORK MANAGEMENT SYSTEM - MAXIMO CONVERSION			
ENVIRONMENTAL ACTIVITIES			
TRANSMISSION			
FUEL PROCUREMENT & TRANSPORTATION			
NERC/CIP AND CYBER SECURITY			
GENERAL ADMINISTRATIVE SERVICES			
OTHER GENERAL SERVICES			
TOTAL AEPSC GENERAL SERVICES			

**OHIO VALLEY ELECTRIC CORPORATION (OVEC)
INDIANA-KENTUCKY ELECTRIC CORPORATION (IKEC)
AEP Service Corporation 2020 Service Charges
Boards of Directors' Meeting
December 12, 2019**

OVEC

RESOLVED, that the officers of Ohio Valley Electric Corporation may request and obligate Ohio Valley Electric Corporation to pay for general services, exclusive of services for specific projects or support services previously approved, under the Agreement among American Gas and Electric Service Corporation (now American Electric Power Service Corporation), Ohio Valley Electric Corporation, and Indiana-Kentucky Electric Corporation dated December 15, 1956, in an amount which, when added to amounts paid for general services by Indiana-Kentucky Electric Corporation, exclusive of services for specific projects or support services previously approved, would aggregate a maximum of [REDACTED] for calendar year 2020.

IKEC

RESOLVED, that the officers of Indiana-Kentucky Electric Corporation may request and obligate Indiana-Kentucky Electric Corporation to pay for general services, exclusive of services for specific projects or support services previously approved, under the Agreement among American Gas and Electric Service Corporation (now American Electric Power Service Corporation), Ohio Valley Electric Corporation, and Indiana-Kentucky Electric Corporation dated December 15, 1956, in an amount which, when added to amounts paid for general services by Ohio Valley Electric Corporation, exclusive of services for specific projects or support services previously approved, would aggregate a maximum of [REDACTED] for calendar year 2020.

OVEC LEAN Cost Performance

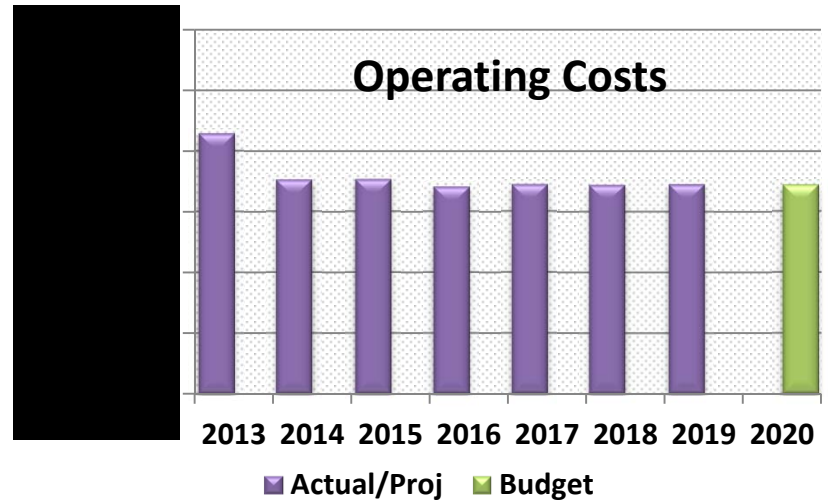
OVEC-IKEC – Sustaining Cost Reductions through LEAN / Continuous Improvement

Demand Cost – Operating Costs

(Non Env - CAPEX, O&M, A&G)
 Approx. [REDACTED] from 2013 to 2020

- **Major Cost Structure Shift due to:**
 - Continuous Improvement & Open Book Leadership Savings
 - Optimizing Operating, Maintenance, and Capital (OMC)
 - Employee Benefit Plan changes
 - Staffing Level Adjustments – Approx. 30% reduction from 2012

- **Held Demand Flat (within 1%)**
 - With efforts in Continuous Improvement and Open Book Leadership improving processes, creating efficiencies and savings to offset costs
 - Absorbing inflation, general wage increases, and outage scope variation
 - Improving Reliability **2015 EFOR 19%** to projected **2019 YTD EFOR 6.2%**



In Total OVEC/IKEC’s LEAN program has implemented over 4,000 Process Improvements and over [REDACTED] from employee ideas over the past 7 years.

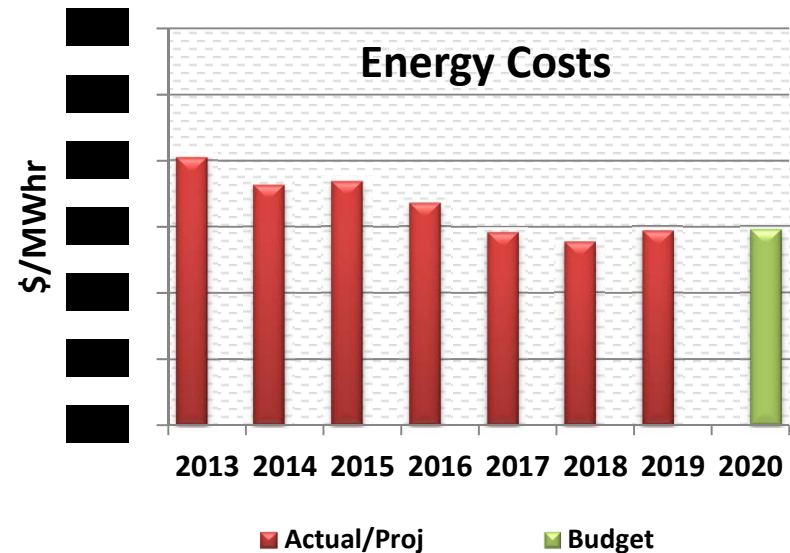
OVEC-IKEC – Sustaining Cost Reductions through LEAN / Continuous Improvement

Energy Cost

Approx. [REDACTED] - Reduction from 2013 to 2020

- **Downward Trend in Fuel Costs due to:**
 - Continuous Improvements - consumable feed rates, improvements around demurrage and reduction of reagents.
 - Beneficial Reuse of by-products (Gypsum, Bottom Ash, etc)
 - Lower Energy Cost continues to drive OVEC’s utilization in a depressed energy market

- **2020 Fuel:**
 - Procurement - 100% Committed for Kyger and Clifty
 - Inventory - 11/30/2019
 - Kyger - 47 Days
 - Clifty – 49 Days
 - Diversification – Multiple suppliers for both Kyger and Clifty

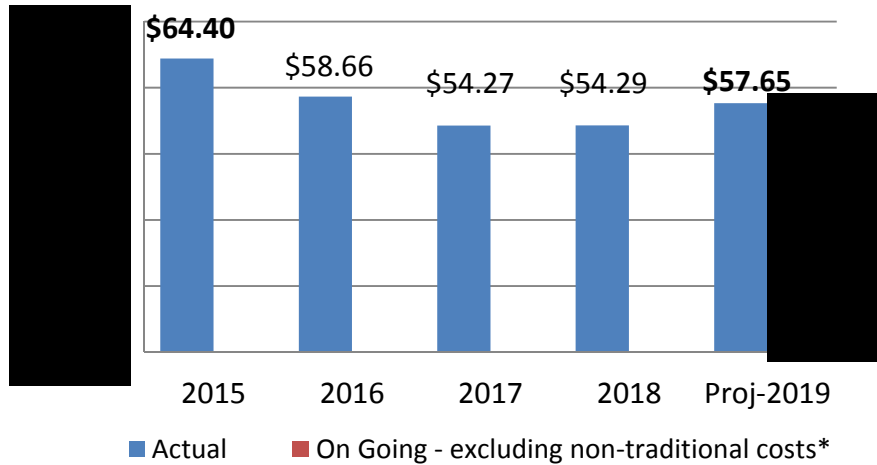


In Total OVEC/IKEC’s LEAN program has implemented over 4,000 Process Improvements and over [REDACTED] from employee ideas over the past 7 years.

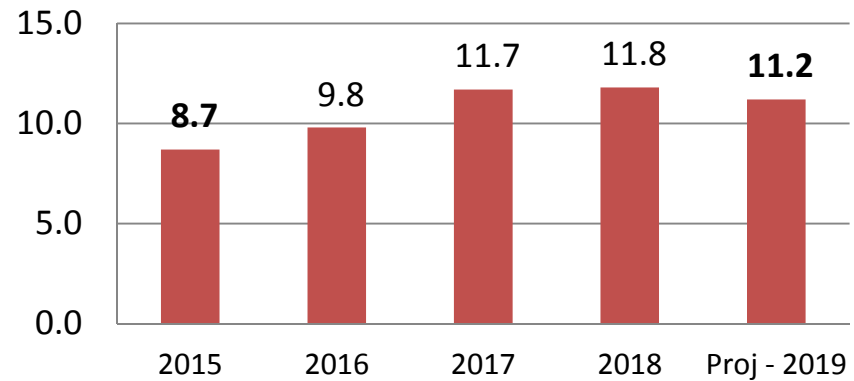


2015 – 2019 Performance

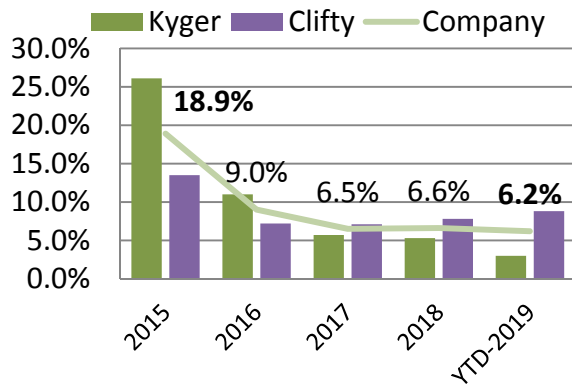
Total Power Cost - \$/MWhr



Generation - MWhrs In Millions

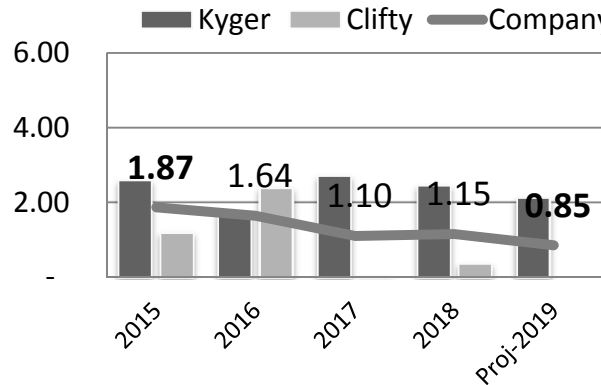


EFOR

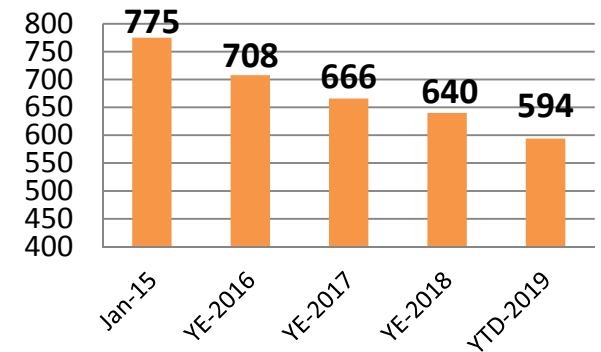


Safety

(Employee Recordable Rate)



Employee Count

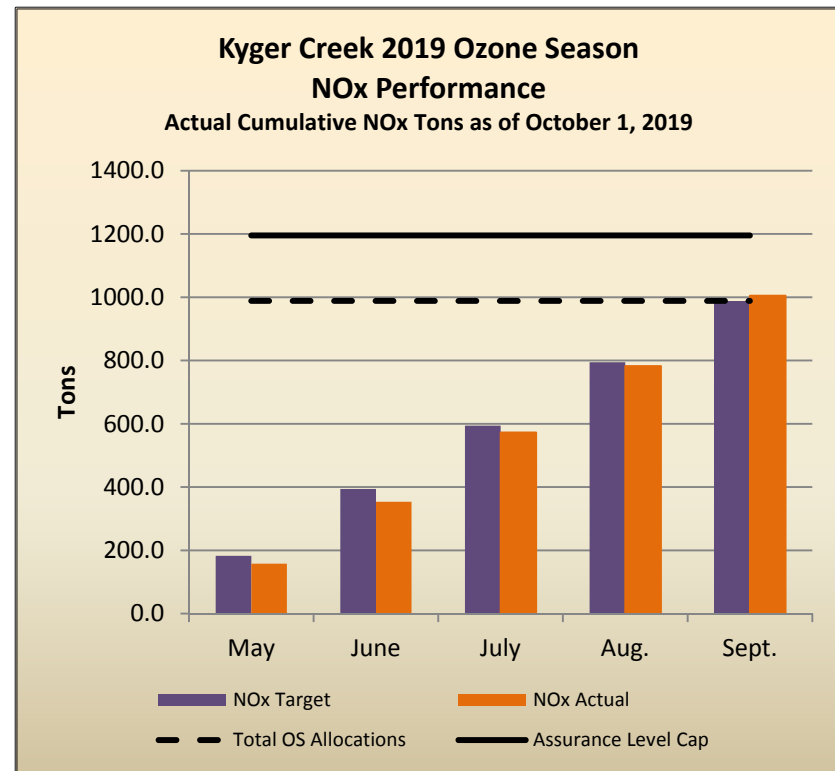
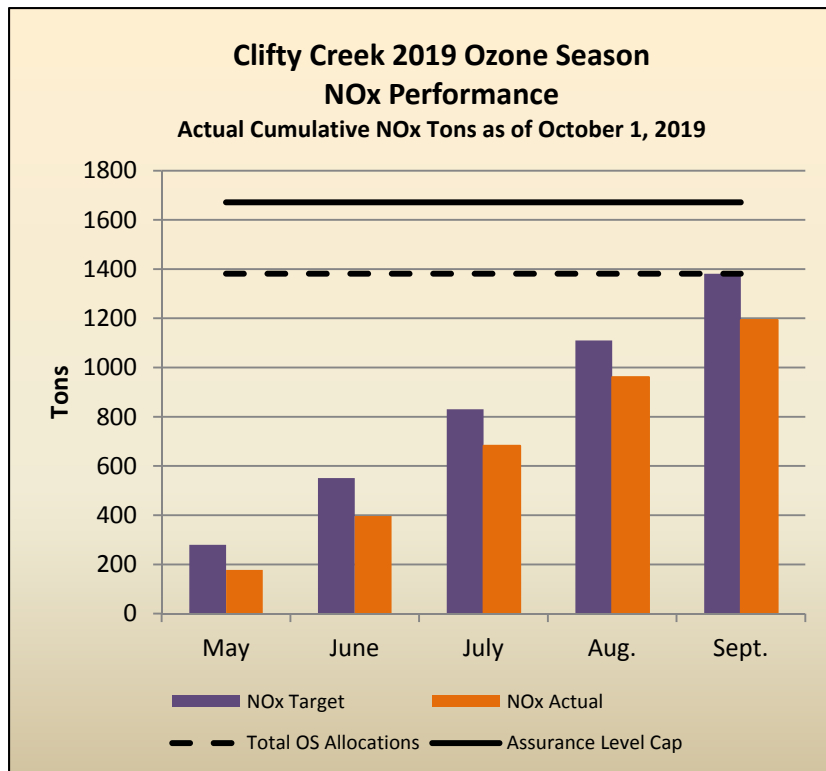


*On-Going Costs exclude non-traditional or event driven costs – coal conservation and debt reserve, increased finance costs, legal and other expenses due to Sponsor event.

Environmental Update

Review of Ozone NO_x Performance and Overall Environmental Compliance

- OVEC-IKEC ozone season NO_x performance in 2019 was excellent. Both plants continue to operate at near historically low NO_x emission rates. D.C. Circuit Court remanded CSAPR Update rule back to EPA – additional reductions on state caps is possible as remediation mechanism.
- Section 126 petition litigation (Maryland and New York) that pose some future legal risk for both CC and KC.



CCR Environmental Compliance Update

- OVEC-IKEC has following sites that meet the definition of a CCR Unit
 - Landfill – Kyger (no issues determined)
 - Landfill – Clifty (no issues determined)
 - Bottom Ash Pond – Clifty (no issues determined)
 - Fly Ash Pond - Kyger (no issues determined)
 - Bottom Ash Pond – Kyger (SSI arsenic)
 - Landfill Run-off Collection Pond - Clifty (SSI molybdenum)
- Additional evaluations have shown no off-site migration of SSI parameters from either pond.
- We continue to work with our Qualified Professional Engineer on compliance activities while evaluating the impact of the proposed new revisions to the CCR rule.
- Public meetings on the CCR ponds and optionality on next steps were held on November 6 (for Kyger) and November 7 (Clifty).
- Any pond closure requirements will be funded through decommissioning and demolition reserves.

CCR PART A Closure Proposal

issued November 4, 2019

- **OVEC-IKEC has four unlined CCR surface impoundment systems**
 - Fly Ash Pond – Kyger
 - Bottom Ash Pond – Kyger
 - Bottom Ash Pond – Clifty
 - Landfill Run-off Collection Pond - Clifty
- **EPA CCR Part A Closure proposal:** All unlined impoundments to cease placement of all wastes (both CCR and non-CCR) as soon as “technically feasible,” which EPA further clarifies as an obligation to do what is possible in the shortest achievable time.
- EPA also proposes a fundamental shift in how the rule will be enforced with limited exceptions, approval for ceasing placement of wastes beyond a default date of August 31, 2020 will be required from EPA (or state agency with CCR implementation approval).

CCR PART A Closure Proposal

issued November 4, 2019 (continued)

Pond Closure Options - Three major closure “options” for surface impoundment systems:

- **Option A** (the default option): All unlined impoundments to cease the receipt of wastes and initiate closure by **August 31, 2020**.
- **Option B** (90-day extension via a self-implementing certification process): This option requires justification (but no formal approval) to have until **November 30, 2020** to cease receipt of wastes and initiate closure.
- **Preferred Option** : Prepare a detailed justification on why additional time is needed and submit request to EPA asking for approval for a longer timeline that is no longer than **October 15, 2023**.
 - Extension request does not relieve the source from ceasing receipt of wastes and initiating closure of the impoundments "as soon as technically feasible."

ELG Environmental Regulatory Update

Effluent Limitations Guidelines Update

- EPA issued final ELG Postponement Rule in September 2017 for FGD Wastewater (FGDWW) and bottom ash transport water (BATW).
- A new draft EPA rule revising effluent limits was published in the Federal Register on November 22, 2019. There will be a 60-day comment period running through January 21, 2020, and the rule is expected to become final in the summer of 2020.
- The proposed rule keeps similar BAT limits for Bottom Ash Transport Water with a compliance date no later than December 31, 2023 (near closed-loop system).
- FGD BAT limits were modified. Physical/chemical treatment followed by biological treatment and ultrafiltration to be implemented by no later than December 31, 2025 (lower Hg and Nitrate-nitrite limits, higher Se limits).
- CCR rule modifications may impact timeline for ELG compliance.

ELG Legal Update

U.S. Court of Appeals for the 5th Circuit Decision 4/12/19 remanding and vacating portions of ELG Rule

- The Court determined EPA was “arbitrary and capricious” in its ELG rule determinations relative to legacy wastewater and landfill leachate.
- The Court vacated and remanded these portions of the rule back to EPA for further consideration.
- EPA did not file appeal, and will need to update record. The proposed November 22, 2019 ELG Rule did not address the legal issues surrounding these two wastewater discharges.
- When EPA does issue a new rule - additional controls may be required.
 - Future Kyger leachate treatment risk low due to recycle, reuse plans.
 - CCR compliance activities at Clifty may also address leachate.
 - Risk from legacy wastewater vacature/remand decision is unknown but may at least require wastewater treatment in lined systems.

ELG Environmental Compliance Update

Clifty Creek

- FGD Wastewater Treatment: With the proposed draft ELG and CCR rule revisions issued in November, a modification request seeking additional time for FGD wastewater treatment (Bioreactor) will be prepared.
- Bottom Ash Pond: Proposed ELG rule and proposed CCR rule will now likely become part of a holistic compliance plan that will involve a near Closed-Loop Ash Handling System, initiation of bottom ash pond closure, and the installation of a new lined treatment system for the miscellaneous non-CCR wastewaters that are currently co-managed in the Clifty Bottom Ash Pond complex.
- IDEM Permitting: Original NPDES Permit Modification Request filed to remove/amend the April 1, 2022, ELG compliance dates for FGDWW and BATW will need updated. In discussions with IDEM on request.

ELG Environmental Compliance Update

Kyger Creek

- South Fly Ash Pond: Engineering evaluation of Dry Fly Ash Conversion has cost estimate confirmed [REDACTED]
- Proposed new CCR rule also requires discontinuing placement of CCR into pond and ultimate pond closure.
 - Miscellaneous non-CCR wastewaters also require different management.
- Bottom Ash Pond: Proposed ELG rule and proposed CCR rule to drive a holistic compliance plan that will involve a near Closed-Loop Ash Handling System and ash pond closure.
- FGD Wastewater Treatment: Additional treatment technology to include biological treatment (Bioreactor).
- The plant NPDES Permit Renewal Application was filed in October 2018. Draft renewal permit is still pending.

316(b) Environmental Compliance Update

Kyger Creek

- 316(b) Section 122.21(r) reports were completed and submitted to Ohio EPA as part of the NPDES permit renewal application in November 2018.
- Ohio EPA has not taken action on, either the 316(b) report or the NPDES permit renewal. We have been in discussions with Ohio EPA and will have an opportunity to provide feedback prior to permit renewal.

Clifty Creek

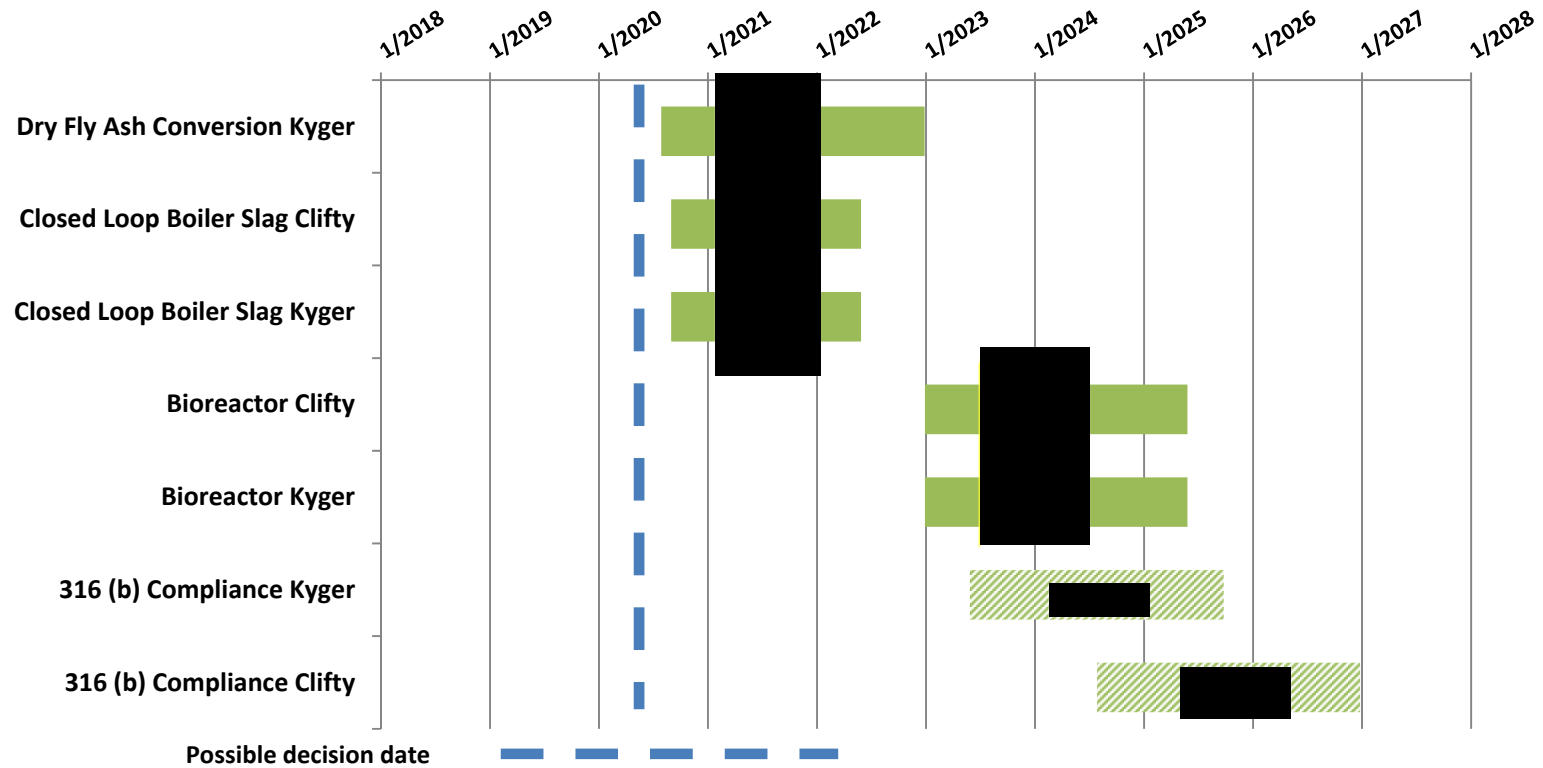
- 316(b) Section 122.21(r) report filed with IDEM in January 2019.
- IDEM to act on cooling system upgrades next permit cycle (i.e. during the 2022 NPDES permit renewal).

Clean Power Plan (CPP)/Affordable Clean Energy (ACE) Rule Update

- U.S. EPA repealed CPP and in a separate action issued ACE Rule on July 8, 2019. Both actions are undergoing legal challenges.
- ACE Rule became effective on September 6, 2019.
 - Inside the fence line Heat Rate Improvements at the unit level is defined as the Best System of Emissions Reduction (BSER).
 - States have three years from ACE effective date to submit implementation plans.
 - States have a lot of flexibility in crafting state implementation plans; however, ACE is somewhat inflexible regarding EGU compliance options.
 - No emissions trading and no fleet, facility or common stack averaging.
- OVEC is working with other state utilities, as well as, Ohio EPA and IDEM on a state implementation program.

Projected Environmental Investment

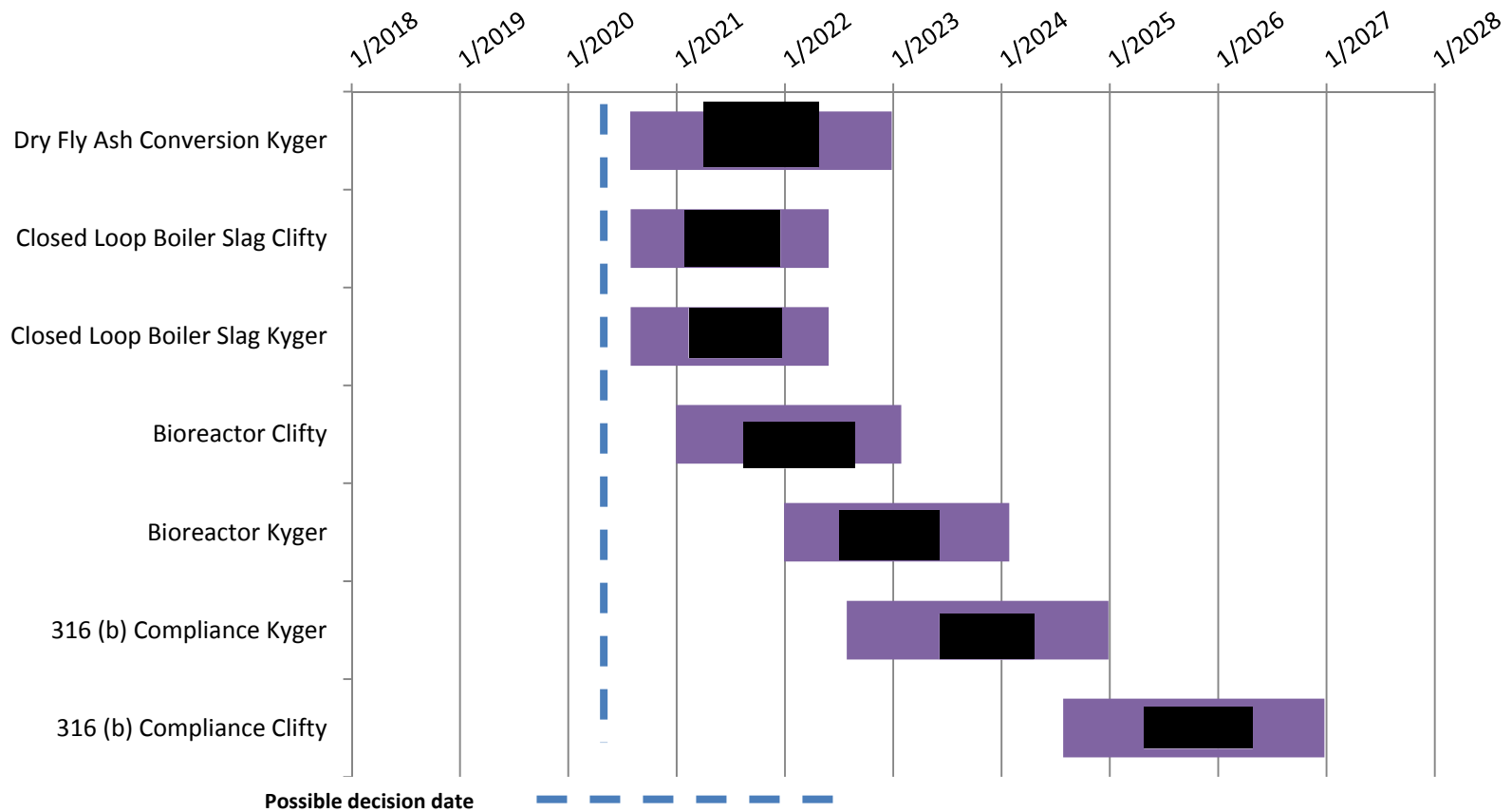
\$ [REDACTED] Best Case – Timeline



- Assumptions:**
- Cost optimized technologies for:**
- Boiler Slag Dry Conversion (Bottom Ash) – reduced footprint/capacity
 - Bioreactor (modular technology) – reduced footprint/capacity
 - 316 (b) compliance utilizes technology with minor equipment modification, potential to be moved to O&M expense
 - Any pond closure requirements or related decommissioning costs will be funded through Decommissioning & Demolition reserves

Projected Environmental Investment

Worst Case – Timeline



Assumptions:

- Any pond closure requirements or related decommissioning costs will be funded through Decommissioning & Demolition reserves
- Potential change in political, regulatory, or legal climate may materially impact cost from future EPA requirements

Gypsum and Ash Beneficial Reuse

Kyger Creek

- Majority of gypsum continues to be sold for wallboard production.
- Pursuing environmental permitting for the installation of on-site barge loading system; gypsum currently being trucked off site.
- Boiler slag sales are above forecast (Harsco).
- Evaluating system modifications to comply with CCR/ELG requirements.

Clifty Creek

- Majority of gypsum being sold for wallboard production.
- Pursuing environmental permitting for the installation of on-site barge loading system; gypsum currently being trucked off site.
- Fly ash marketing efforts continue – with some limited sales.

Benefits for both Plants:

- Reduced fuel costs, reduced future landfill expansion costs, reduced future environmental compliance risks.
- Negotiating separate long-term sales agreements for both facilities.

Construction Budget



2020 Construction Budget

(requesting BOD approval)

Year	Loc	Project Name	Amount	IRR%	Paybk
2020	CCP	CC1-6, FGD, & Simulator Ovation Controls Replacement			
2020	KCP	KC3 1st Baffle Wall Replacement			
2020	CCP/KCP	CEMS and PM Monitor Replacement			
2020	CCP/KCP	Mercury Sorbent Trap Monitoring Replacement			
2020	CCP	Bus and Middle Air Blast Circuit Breaker Replacement (9/10 of 17)			
2020		Minor Projects (under \$500k)			
2020		Contingency Fund			
2020 Total					

**2020 Projects
Economic
Metrics Range:**

Internal Rate of
Return (IRR)

Target: [REDACTED]

Avg: [REDACTED]

Payback Period

Target: [REDACTED]

Avg: [REDACTED]

2020 Construction Projects highlight continued replacement of original boiler tubing to address current and future reliability issues with an additional focus on replacement of obsolete unit controls.

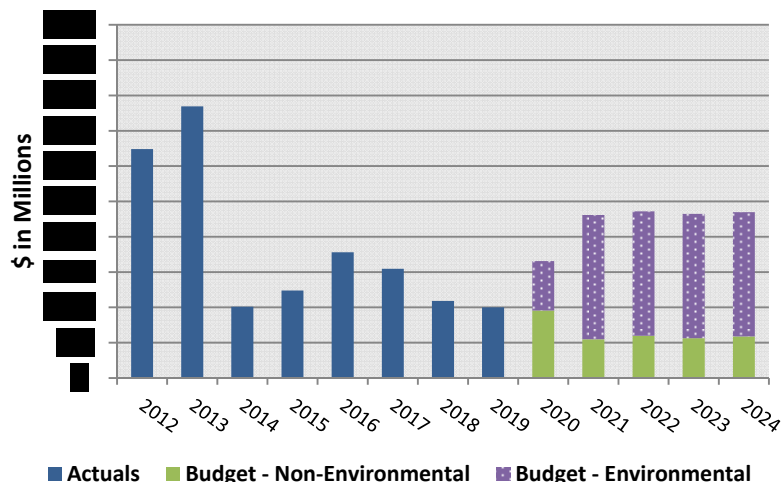
**Examples of Projects Delayed due to
Prioritization and Risk Evaluation**

- Baffle Wall Replacements
- Generator Rewinds



Construction Budget Forecast

Historic and Projected Construction Costs



Construction Budget Forecast:

To minimize the requirement for long-term debt financing, the Construction Forecast has been adjusted to provide funding for upcoming Environmental Projects to minimize the impact on total Demand Cost.

Projected Non-Environmental Construction Projects will continued to be reviewed and prioritized based on reliability impact and related economic benefit.

Environmental Funding assumes best case funding requirements and seeking board approval for funding in early 2020.

OVEC/IKEC Construction Forecast

Year	Loc	Project Name	Amount
2021	KCP	KC1 1st Baffle Wall Replacement	
2021	KCP	Units 1 & 2 FD VFD Replacement	
2021	CCP	Bus and Middle Air Blast Circuit Breaker Replacement (11/12 of 17)	
2021		Minor Projects (under \$500k)	
2021		Contingency Fund	
2021 Total Non-Environmental			
Environmental Project Funding			
2021 Grand Total			
2022	KCP	KC4 1st Baffle Wall Replacement	
2022	CCP	Coal Yard Controls Replacement (1 of 3)	
2022	CCP	Bus and Middle Air Blast Circuit Breaker Replacement (13/14 of 17)	
2022	KCP	KC4 FD VFD Replacement	
2022		Minor Projects (under \$500k)	
2022		Contingency Fund	
2022 Total Non-Environmental			
Environmental Project Funding			
2022 Grand Total			
2023	CCP	CC6 1st Baffle Wall Replacement	
2023	CCP	Coal Yard Controls Replacement (2 of 3)	
2023	CCP	Bus and Middle Air Blast Circuit Breaker Replacement (15/16 of 17)	
2023		Minor Projects (under \$500k)	
2023		Contingency Fund	
2023 Total Non-Environmental			
Environmental Project Funding			
2023 Grand Total			
2024	KCP	Boiler Feedpump Softstart (1 of 2)	
2024	SYS	X530 Switchyard Bypass Project	
2024	CCP	Coal Yard Controls Replacement (3 of 3)	
2024	KCP	Unit 3 & 5 FD VFD Replacement	
2024		Minor Projects (under \$500k)	
2024		Contingency Fund	
2024 Total Non-Environmental			
Environmental Project Funding			
2024 Grand Total			

OHIO VALLEY ELECTRIC CORPORATION (OVEC)
INDIANA-KENTUCKY ELECTRIC CORPORATION (IKEC)
OVEC-IKEC Construction Budget
Boards of Directors' Meeting
December 12, 2019

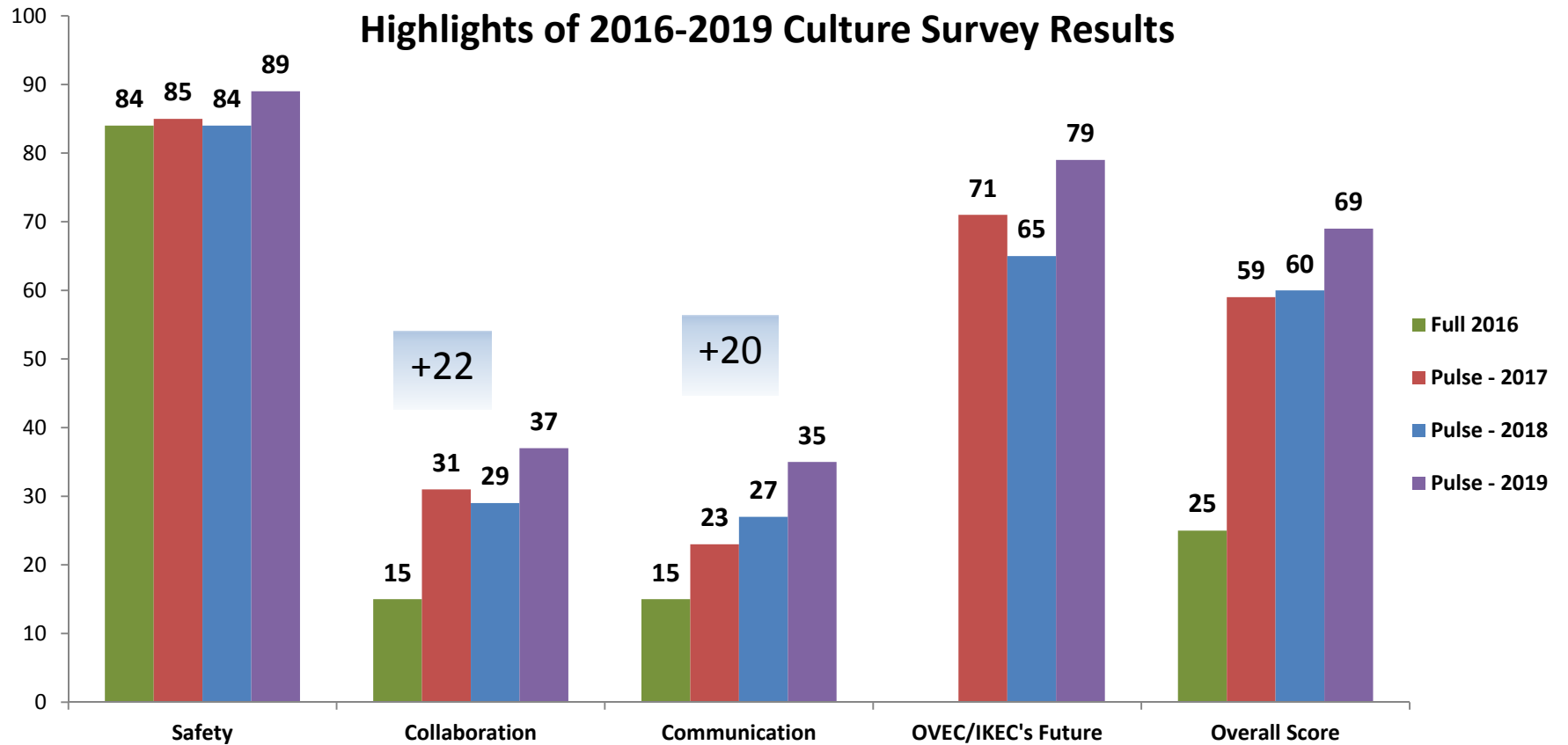
OVEC-IKEC

RESOLVED, that the OVEC-IKEC Construction Budget for 2020, indicating estimated total expenditures of [REDACTED] for Replacements of property, and \$ [REDACTED] for Management Reserve, which totals [REDACTED] is approved.

Report on Operating Activities

Culture Survey Results – May 2019

- Participation remained strong at 83%, with questions focused on Communication and Collaboration
- Utilizing results to update locational culture improvement action plans



Open Book Leadership (OBL) Scoreboard Update –YTD 2019

OVEC /IKEC – OBL Plant Scoreboards								
		Kyger Creek Plant			Clifty Creek Plant			
		2018	2019		2018	2019		
		Actual	Target	Oct YTD Actual	Actual	Target	Oct YTD Actual	
Safety	Recordable Rate: Employee	2.44	0.57	2.31 (Nov) Proj YE 2.12	0.37	0.57	0.00	
	Recordable Rate: Contractor	2.70		1.58 Proj YE 1.4	1.69		1.09 Proj YE 0.95	
	DART Rate: Employee	1.63	0.33	1.02 Proj. YE 0.85	0.37	0.33	0.00	
	DART Rate: Contractor	N/A		0.79 Proj YE 0.70	N/A		1.09 Proj YE 0.95	
Environmental Compliance	MATS (Mercury, Particulate Matter, Acid Gases)	Compliance	Compliance	Compliance	Compliance	Compliance	Compliance	
	NOx Tons (Ozone Season)	892	1,074	1,005	1,378	1,378	1,193	
Drivers of Critical Number Total Production Power Cost \$/MWhr	Reliability	EFOR	5.3%	6.5%	3.0%	7.8%	6.5%	8.8%
		Commercial Availability	89%	90%	92.1%	85%	90%	89.8%
	Energy Cost	Heat Rate ₁	10,412	10,541	10,655	10,657	10,760	10,844
		Fuel Cost Total Fuel/ Net Gen			\$23.48			\$25.66
	Demand Cost	O&M						
	Continuous Improvement	Process Improvements ₂	782	530	537	1,235	700	1,170

- Reviewed at Plant Huddles (weekly)
- Future Focused (80% / 20%)
- Highlight Opportunities for Improvement
- Metrics are key drivers to Critical Number - \$/MWhr

1) Heat Rate targets adjusted for increased low load operations
 2) Process Improvements include standard work development

OVEC 2019 Strategic Plan - Corporate

Mission Objective	Initiative ¹	Tactical Actions ^{2,3}
Zero Harm	Improve Safety Culture	Define, Communicate and Execute the Safety Action Plan; Locations to Develop Specific Safety Actions to Support the Plan
		Make Safety Personal
	Integrate Contractors into OVEC/IKEC Safety Culture	Contractor Oversight and Safety Standardization
	Improve In-Field Observation Process	Revise Field Observation Form and Refresh Organizational Training
	Improve Understanding and Use of HPI Tools	In-Field Training and Building Skill
Provider of Choice	Increase Reliability, Reduce EFOR, MOF and Optimize Commercial Availability	Focus Around Process Ownership and Process Health
	Improve Heat Rate	Cross-Functional Heat Rate Team
		Focused Heat Rate Communication Based on Job Classification
	Identify and Optimize Core Business	
Improve Fiscal Responsibility	Financial Education - Provide Leadership with Materials to Inform Employees of Corporate Finances	
Culture of Engagement	Improve Communication Processes	Determine What the Team Wants, How and From Whom
		Communication Conducted in Small Groups in a Face-to-Face Format
		Communicate Results, Associated Actions and Outcomes
Strengthen Accountability	Clearly Defined and Communicated Job Expectations Followed by Feedback and Coaching with Balanced Recognition	
Operational Excellence	Improved Team Performance	Develop Cross-Functional Workforce, Where Efficiency and Value Are Added
	Employee Development	Skill and Knowledge Assessment to Enhance Development Plans Among All Levels of the Organization
	Successful WAM Implementation	Workforce Teams Embrace WAM Team Training to Facilitate the Transition from Asset Suite to Maximo
Continuous Improvement	Optimize Continuous Improvement Process (CIP) and Open Book Leadership (OBL)	Incorporate a Quality Metric to Measure Engagement
	Root Cause Analysis (RCA) Focus	Validate Standards and Use Guidelines and Create a Measure of Usage and Application
	Standard Work Focus	Promote Standard Work Development, Utilization, Modification and Accessibility; and Track Corporate Performance

1 - Initiative is a broad reaching generalized need.

2 - Tactical Action is a specific action to achieve a desired goal.

3 - Possible additional Tactical Actions to be determined by Business Unit.

OVEC 2019 Strategic Plan – Kyger Creek

Mission Objective	Initiative ¹	Tactical Actions ^{2,3}
Zero Harm	Improve Safety Culture	Minimize the Risk of Musculoskeletal Disorder Injuries (Life Movements) Through Training, JSA Reviews, and In-Field Observations
	Integrate Contractors into OVEC/IKEC Safety Culture	Conducted Weekly Safety and Housekeeping Walk downs with Contractor and Plant Personal During Outages
	Improve In-Field Observation Process	Revise Field Observation Form and Provide Refresh Training
	Improve Understanding and Use of HPI Tools	Conduct Plant Wide OBLD Challenges Focused HPI Tool Use and Awareness
Provider of Choice	Increase Reliability, Reduce EFOR, MOF and Optimize Commercial Availability	Identify and provide Expectations to System Owners, Equipment Owners and Engineering Support for Process Ownership and Process Health
	Improve Heat Rate	Monthly Meetings Conducted with Focus on Review of Previous Monthly Heat Rate and Identification of Opportunities to Improve Performance
	Identify and Optimize Core Business	Create Departmental Teams to Evaluate Core vs. Non-Core Functions
	Improve Fiscal Responsibility	Improve Financial Reporting to Provide Detail Analysis to All Responsibility Areas
Culture of Engagement	Improve Communication Processes	Do Frequent Informational and Feedback Meetings in Each Department in Small Groups
	Strengthen Accountability	Personal Development Plans Reviewed with Every Employee, Including Hourly Employee Personal Development Plans
Operational Excellence	Improve Team Performance	Development of Cross-Functional Workforce with Goal of Developing One Task Per Department
	Employee Development	Develop Updated Training Requirements Based on 2018 Skill and Knowledge Assessment Results
	Successful WAM Implementation	Support WAM Team Training Efforts to Facilitate the Transition to Maximo
Continuous Improvement	Optimize Continuous Improvement Process (CIP) and Open Book Leadership (OBL)	Implementing and Tracking Quality Business Challenges
	Root Cause Analysis (RCA) Focus	Create Repository for RCAs and Schedule Quality Training and Refreshers
	Standard Work Focus	Promote Standard Work Development, Utilization, Modification, and Accessibility with Focus on More Crew Involvement

Kyger Creek Plant's Strategic Plan **aligns directly** with OVEC's Corporate Strategic Plan's Mission Objectives and Initiatives

2 Top Areas of Success

2 Top Areas of Opportunity

OVEC 2019 Strategic Plan – Clifty Creek

Mission Objective	Initiative ¹	Tactical Actions ^{2,3}
Zero Harm	Improve Safety Culture	Make Safety Personal with Banners and Reminders Throughout the Year
	Integrate Contractors into OVEC/IKEC Safety Culture	Contractor Field Observations to Gauge Compliance and Sustaining Actions
	Improve In-Field Observation Process	Refresher Training on Revise Field Observation Form
	Improve Understanding and Use of HPI Tools	Utilize Field Observations to Reinforce the Importance of HPI Tool Use
Provider of Choice	Increase Reliability, Reduce EFOR, MOF and Optimize Commercial Availability	Focus Around Process Ownership and Process Health to Eliminate Rework in Operating, Maintaining and Repairing Equipment
	Improve Heat Rate	Focused Heat Rate Communication "What Can I Do To Improve Heat Rate?"
	Identify and Optimize Core Business	Review Plant Processes to Define Core Functions
	Improve Fiscal Responsibility	Financial Education - Inform Employees on Corporate Finances to Explain the "Why"
Culture of Engagement	Improve Communication Processes	Third Party Consulting (Best Performance Solutions) Assisting to Improve Communication and Ownership in Work Management Process
	Strengthen Accountability	Personal Development Plans Reviewed with Every Exempt Employee
Operational Excellence	Improve Team Performance	Development of Cross-Functional Workforce with Continued Focus on Operations and Maintenance Cross-Functional Tasks
	Employee Development	Identify and Communicated Job Classifications/Positions Desired Skills and Knowledge
	Successful WAM Implementation	Support WAM Team Training Efforts to Facilitate the Transition to Maximo
Continuous Improvement	Optimize Continuous Improvement Process (CIP) and Open Book Leadership (OBL)	Kaizens to Review and Updated Plant OBL Scoreboard to Engage Team on Critical Metrics
	Root Cause Analysis (RCA) Focus	Create RCA Guidance Document and Central Storage Location
	Standard Work Focus	Promote Standard Work Development, Utilization, Modification, and Accessibility with Tracking Performance

Clifty Creek Plant's Strategic Plan **aligns directly** with OVEC's Corporate Strategic Plan's Mission Objectives and Initiatives

2 Top Areas of Success

2 Top Areas of Opportunity

Treasurer's Report

**OHIO VALLEY ELECTRIC CORPORATION (OVEC)
INDIANA-KENTUCKY ELECTRIC CORPORATION (IKEC) Attachment to Response to SC-1 Question No. 11**
Treasurer's Report
Boards of Directors' Meeting
December 12, 2019

Case No. 2021-00393
Page 153 of 341
Arbough

	<u>OVEC</u>	<u>IKEC</u>	<u>Consolidated</u>
<u>CASH AND INVESTMENTS</u>			
Cash and Short-Term Investments	\$ 30,836,391	\$ -	\$ 30,836,391
DOE Settlement Reserve Account	75,355,456	-	75,355,456
Debt Reserve Account	89,198,209	-	89,198,209
Total Cash and Investments at October 31, 2019	\$ 195,390,056	\$ -	\$ 195,390,056
<u>PLANT DECOMMISSIONING & DEMOLITION (D&D) FUND</u>			
Total D&D Assets at October 31, 2019	\$ 29,204,627	\$ 37,933,023	\$ 67,137,650
<u>EMPLOYEE BENEFIT PLAN ASSETS</u>			
Pension Plan			
Supplemental Pension & Savings Plan			
Union Retiree Medical VEBA Trust			
Retiree Medical VEBA Trust			
Retiree Life Insurance VEBA Trust			
401(h)			
Total Benefit Plan Assets at October 31, 2019			
<u>EQUITY</u>			
Common Stock, 100,000 shares outstanding	\$ 10,000,000	\$ 3,400,000	\$ 10,000,000
Retained Earnings	16,841,226	-	16,841,226
Total Equity at October 31, 2019	\$ 26,841,226	\$ 3,400,000	\$ 26,841,226
(OVEC's ownership of IKEC's Capital Stock (17,000 shares) is eliminated in consolidation.)			
<u>LONG-TERM DEBT</u>			
2006 Senior Unsecured Notes, Series A, 5.80%, due February 15, 2026	\$ 168,569,904	\$ -	\$ 168,569,904
2006 Senior Unsecured Notes, Series B, 6.40% due June 15, 2040	54,142,874	-	54,142,874
2007 Senior Unsecured Notes, Series AA, AB & AC, 5.90%, due February 15, 2026	119,806,835	-	119,806,835
2007 Senior Unsecured Notes, Series BA, BB & BC, 6.50% due June 15, 2040	41,145,075	-	41,145,075
2008 Senior Unsecured Notes, Series A, 5.92%, due February 15, 2026	24,839,737	-	24,839,737
2008 Senior Unsecured Notes, Series B & C, 6.71%, due February 15, 2026	96,669,690	-	96,669,690
2008 Senior Unsecured Notes, Series D & E, 6.91% due June 15, 2040	79,460,258	-	79,460,258
2017 Senior Unsecured Notes, Series A, Floating Rate, due August 4, 2022	100,000,000	-	100,000,000
2009 Tax Exempt Bonds, \$100M Series A-D, Floating Rate, due February 1, 2026	100,000,000	-	100,000,000
2010 Tax Exempt Bonds, \$100M Series A & B, Floating Rate, due February 1, 2040	100,000,000	-	100,000,000
2012 Tax Exempt Bonds, \$200M Series A, 5%, due June 1, 2039	200,000,000	-	200,000,000
2012 Tax Exempt Bonds, \$100M Series B & C, Floating Rate, due June 1, 2040	100,000,000	-	100,000,000
2019 Tax Exempt Bonds, \$100M Series A, 3.250%, due September 9, 2029	100,000,000	-	100,000,000
Total Long-Term Debt Outstanding at October 31, 2019	\$ 1,284,634,373	\$ -	\$ 1,284,634,373
<u>SHORT-TERM DEBT</u>			
Total Short-Term Debt Outstanding at October 31, 2019	\$ 80,000,000	\$ -	\$ 80,000,000
<u>CORPORATE UNSECURED CREDIT RATINGS</u>			
Fitch (rating affirmed July 24, 2019)	BBB-, Stable Outlook		
Moody's (rating affirmed December 13, 2018)	Ba1, Stable Outlook		
Standard & Poor's (rating affirmed July 15, 2019)	BB+, Negative Outlook		
<u>FINANCING COMPLETED FOR 2019</u>			
Revolving Line of Credit \$185 M - 1Q 2019			
Refinanced 2019 Maturities/Expiring Agreements \$150 M Tax-Exempt bonds - 3Q 2019, avg interest cost of 3.1%, \$100 M Amortizing 2026-2030			
<u>FINANCING PLAN FOR 2020</u>			
Refinance \$150 M Tax-Exempt bonds - 1Q 2020, potential annual interest cost [REDACTED] (included in power cost projections)			
Economic Refinance or Refunding of remaining 2017 Financing (2017A) \$100 M - 2Q/3Q 2020 (power cost projections assume amortization 2021-2023)			

OVEC Power Cost Projections

Ohio Valley Electric Corporation
Projected Inter-Company Power Agreement (ICPA) Billable Cost Summary
Calendar Year 2019
 in thousands of dollars

	Budget 2019	Projected 2019	Over/(Under)	Percentage Over/(Under)
Generation Sales				
Estimated Delivered Power Sales from OVEC Generation (MWhr)				
Projected Energy Use Factor %				
Projected Net Capacity Factor %				
Generation Costs (Energy and Generation Operating Costs)				
Energy Charge				
Projected Coal Cost (delivered)				
Projected Allowance Cost (based on projected weighted average inventory)				
Projected Other Fuel-Related Costs (reagents, fuel oil & coal handling less byproduct sales)				
Total Projected Energy Costs				
Projected Energy Costs - \$/MWhr				
Generation Operating Costs (Demand Charge)				
Projected Annual Capital Improvement Costs (ICPA Component A)				
Projected Operation and Maintenance Costs (ICPA Component B)				
Projected Administration and General Costs (ICPA Component B)				
Projected Taxes (ICPA Component C)				
Projected ROE Costs (ICPA Component D)				
Total Projected Generation Operating Costs (ICPA Components A, B, C, & D)				
Projected Generation Operating Costs (Demand Charge) - \$/MWhr				
Projected Total Generation Costs (Energy and Operating Costs) - \$/MWhr				
Transmission Costs				
Transmission Operating Costs (Demand Charge)				
Projected Annual Capital Improvement Costs (ICPA Component A) - Transmission				
Projected Transmission and Dispatch Costs (ICPA Component B)				
Projected Administration and General Costs (ICPA Component B) - Transmission				
Projected Total Transmission Costs				
Projected Transmission Costs - \$/MWhr				
Non-Operating Costs (Debt and Obligations)				
Non-Operating Cost (Demand Charge)				
Projected Debt Expense and Short-Term Debt Costs (ICPA Component A)				
Projected Long-Term Debt Costs (ICPA Component A)				
Projected Advance Billing of Debt Service - Debt Reserve (ICPA Component A)				
Projected Postretirement Benefit Obligation (ICPA Component E)				
Projected Decommissioning and Demolition Obligation (ICPA Component F)				
Total Projected Non-Production Demand Costs (ICPA Components A, E, & F)				
Projected Non-Operating Costs - \$/MWhr				
Total Billable Costs (Energy and Demand Charge)				
Summary of ICPA Billable Power Costs				
Grand Total Projected Energy Costs				
Grand Total Projected Demand Costs				
Grand Total Projected ICPA Billable Costs				
Projected Billable Costs (Energy and Demand) - \$/MWhr				
Projected On Going Billable Costs - Excluding Non-Traditional Costs \$/MWhr				

Ohio Valley Electric Corporation
Projected Inter-Company Power Agreement (ICPA) Billable Cost Summary
Calendar Years 2020 - 2024
Costs in thousands of dollars

	2020	2021	2022	2023	2024
Generation Sales					
Estimated Delivered Power Sales from OVEC Generated Power (MWhr)					
Projected Energy Use Factor %					
Projected Net Capacity Factor %					
Generation Costs (Energy and Generation Operating Costs)					
Energy Charge					
Projected Coal Cost (delivered)					
Projected Allowance Cost (based on projected weighted average inventory)					
Projected Other Fuel-Related Costs (reagents, fuel oil & coal handling less byproduct sales)					
Total Projected Energy Costs					
Projected Energy Costs - \$/MWhr					
Generation Operating Costs (Demand Charge)					
Projected Annual Capital Improvement Costs (ICPA Component A) - <i>Includes Best Case \$100 M Env. Improvements</i>					
Projected Operation and Maintenance Costs (ICPA Component B)					
Projected Administration and General Costs (ICPA Component B)					
Projected Taxes (ICPA Component C)					
Projected ROE Costs (ICPA Component D)					
Total Projected Generation Operating Costs (ICPA Components A, B, C, & D)					
Projected Generation Operating Costs (Demand Charge) - \$/MWhr					
Projected Total Generation Costs (Energy and Operating Costs) - \$/MWhr					
Transmission Costs					
Transmission Operating Costs (Demand Charge)					
Projected Annual Capital Improvement Costs (ICPA Component A) - <i>Transmission</i>					
Projected Transmission and Dispatch Costs (ICPA Component B)					
Projected Administration and General Costs (ICPA Component B) - <i>Transmission</i>					
Projected Total Transmission Costs					
Projected Transmission Costs - \$/MWhr					
Non-Operating Costs (Debt and Obligations)					
Non-Operating Cost (Demand Charge)					
Projected Debt Expense and Short-Term Debt Costs (ICPA Component A)					
Projected Long-Term Debt Costs (ICPA Component A) - <i>Does not include incremental financing</i>					
Projected Advance Billing of Debt Service - Debt Reserve (ICPA Component A)					
Projected Postretirement Benefit Obligation (ICPA Component E)					
Projected Decommissioning and Demolition Obligation (ICPA Component F)					
Total Projected Non-Production Demand Costs (ICPA Components A, E, & F)					
Projected Non-Operating Costs - \$/MWhr					
Total Billable Costs (Energy and Demand Charge)					
Summary of ICPA Billable Power Costs					
Grand Total Projected Energy Costs					
Grand Total Projected Demand Costs					
Grand Total Projected ICPA Billable Costs					
Projected Billable Costs (Energy and Demand) - \$/MWhr					
Critical Assumptions:					
Major Environmental Capital Projects (compliance projects approx. [REDACTED] billed through Annual Capital Improvements or O&M as applicable					
Long-Term Debt costs projection assumes repayment of 2017A \$33M annually starting in 2021, does not include additional debt for defaulting Sponsor shortfall.					
Resume Funding Contributions to Postretirement Benefits in 2020.					
Accelerated Decommissioning and Demolition (D&D) Costs due to updated CCR rule for pond closures, updated D&D study projected for Q1-2020.					
Generation Sales assumes Clifty Unit 6 minimal operation during Ozone period.					

OHIO VALLEY ELECTRIC CORPORATION
Minutes of Special Meeting of the
Board of Directors held December 12, 2019

A Special Meeting of the Board of Directors of **OHIO VALLEY ELECTRIC CORPORATION** (OVEC) was called to order by the President at 1 Riverside Plaza, Columbus, Ohio, on Wednesday, December 12, 2019, at 2:00 p.m., pursuant to notice duly given.

Paul Chodak, President of the Corporation, acted as Chairman of the meeting, and Justin J. Cooper, Chief Financial Officer, Secretary and Treasurer of the Corporation, acted as Secretary of the Meeting.

Mr. Cooper reported that the following Directors were present for the meeting:

- | | |
|--------------------------|--------------------------|
| Thomas Alban | Mark E. Miller |
| Eric D. Baker (Phone) | Steven K. Nelson |
| Lonnie E. Beller (Phone) | Patrick W. O’Loughlin |
| Paul Chodak | David W. Pinter (Phone) |
| Wayne D. Games (Phone) | Paul W. Thompson (Phone) |
| Lana L. Hillebrand | John A. Verderame |

Mr. Cooper reported that the Minutes of the Special Meetings of the Board of Directors of this Corporation, held on December 5, 2018, had been sent to each of the Directors. He asked that, if there were no corrections, such minutes be approved in the form in which they were circulated. On a motion duly made, seconded, and unanimously adopted, it was

RESOLVED, that the Minutes of the Special Meeting of the Board of Directors of this Corporation, held on December 5, 2018, are approved.

At the request of Mr. Chodak, Ms. Kay Martin reviewed the 2019 Service Corporation general expenditures, which were expected to be approximately [REDACTED] Ms. Martin requested authorization for 2020 general expenditures for services from the AEP Service Corporation up to [REDACTED] The primary general expenditures are expected to be in the areas of operation and maintenance, environmental activities, fuel procurement, and coal transportation. Ms. Martin stated that the 2020 Budget is a reduction of \$ [REDACTED] compared to the 2019 Budget. On a motion duly made, seconded, and unanimously adopted, it was

RESOLVED, that the officers of Ohio Valley Electric Corporation may request and obligate Ohio Valley Electric Corporation to pay for general services, exclusive of

CONFIDENTIAL INFORMATION REDACTED

services for specific projects or support services previously approved, under the Agreement among American Gas and Electric Service Corporation (now American Electric Power Service Corporation), Ohio Valley Electric Corporation, and Indiana-Kentucky Electric Corporation dated December 15, 1956, in an amount which, when added to amounts paid for general services by Indiana-Kentucky Electric Corporation, exclusive of services for specific projects or support services previously approved, would aggregate a maximum of [REDACTED] for calendar year 2020.

At the request of Mr. Chodak, Mr. Justin Cooper reported on the 2019 LEAN cost structure. Mr. Cooper reviewed the results of the 2019 continuous improvements (LEAN) reductions and the operating, maintenance, and capital cost benchmarking budgets. Mr. Cooper reported that OVEC's operating, maintenance, and capital cost profile was projected to [REDACTED] in 2020 compared with 2013. The energy cost reduction from 2013 to 2020 was expected to be \$ [REDACTED] per megawatt hour. Mr. Cooper also reviewed OVEC's key performance factors from 2015 to 2019.

Mr. Chodak asked Mr. Mike Brown to give an update on the OVEC and IKEC environmental compliance status and to report on the work to develop cost estimates for future environmental capital projects. Mr. Brown reported that the OVEC and IKEC 2019 ozone season NO_x emission rates and overall performance was excellent. Both plants continued to operate at near historically low NO_x emission rates. Mr. Brown provided an update on the Coal Combustion Residual (CCR) Part A Closure options at each plant. Mr. Brown also reported on the status of the Effluent Limitations Guidelines compliance efforts, which may include the construction of closed loop boiler slag systems and/or FGD wastewater biological treatment systems at each plant; however, the cost estimates are contingent on additional anticipated EPA rulemaking on the effluent guidelines applicable to these wastewater discharges. In addition, Mr. Brown provided an update on cost estimates to comply with Section 316(b) and the Coal Combustion Residual (CCR) rule. OVEC's current environmental capital investment "best-case" cost estimate for these projects is \$ [REDACTED] and the current "worst-case" cost estimate is \$ [REDACTED]. An investment decision for additional funding for conceptual engineering and design will be required by mid-year 2020.

Mr. Chodak asked Mr. Cooper to review the 2020 Construction Budget and the 2020-2024 Construction Budget Forecast. Mr. Cooper commented that the 2020 Construction projects highlight continued replacement of original boiler tubing to address current and future reliability issues with an additional focus on replacement of obsolete unit controls. Mr. Cooper reported that the Construction Budget for 2020 indicates estimated total expenditures of \$ [REDACTED]

CONFIDENTIAL INFORMATION REDACTED

representing [REDACTED] or Replacements of property and \$ [REDACTED] for Management Reserve.

On a motion duly made, seconded, and unanimously adopted, it was

RESOLVED, that the OVEC-IKEC Construction Budget for 2020, indicating estimated total expenditures of [REDACTED] for Replacements of property and [REDACTED] for Management Reserve, which totals [REDACTED] is approved.

Mr. Chodak asked Mr. Osborne to report on operating activities for the Clifty Creek and Kyger Creek plants. Mr. Osborne asked Clifty Creek Plant Manager Cliff Carnes and Kyger Creek Plant Manager Annette Hope to report on the 2019 Strategic Plan for each respective location highlighting two areas of success and two areas of opportunities.

Mr. Chodak asked Mr. Scott Cunningham to report on the OVEC Operating Committee and the status of pending Operating Committee actions.

At the request of Mr. Chodak, Mr. Cooper reported on the status and timeline of the Corporation's finance activities. Mr. Cooper distributed to all members present a copy of the Treasurer's Report that included the following statistics:

CONFIDENTIAL INFORMATION REDACTED

**OHIO VALLEY ELECTRIC CORPORATION (OVEC)
INDIANA-KENTUCKY ELECTRIC CORPORATION (IKEC)**

**Treasurer's Report
Boards of Directors' Meeting
December 12, 2019**

	<u>OVEC</u>	<u>IKEC</u>	<u>Consolidated</u>
<u>CASH AND INVESTMENTS</u>			
Cash and Short-Term Investments	\$ 30,836,391	\$ -	\$ 30,836,391
DOE Settlement Reserve Account	75,355,456	-	75,355,456
Debt Reserve Account	89,198,209	-	89,198,209
Total Cash and Investments at October 31, 2019	<u>\$ 195,390,056</u>	<u>\$ -</u>	<u>\$ 195,390,056</u>
<u>PLANT DECOMMISSIONING & DEMOLITION (D&D) FUND</u>			
Total D&D Assets at October 31, 2019	<u>\$ 29,204,627</u>	<u>\$ 37,933,023</u>	<u>\$ 67,137,650</u>
<u>EMPLOYEE BENEFIT PLAN ASSETS</u>			
Pension Plan			
Supplemental Pension & Savings Plan			
Union Retiree Medical VEBA Trust			
Retiree Medical VEBA Trust			
Retiree Life Insurance VEBA Trust			
401(h)			
Total Benefit Plan Assets at October 31, 2019			
<u>EQUITY</u>			
Common Stock, 100,000 shares outstanding	\$ 10,000,000	\$ 3,400,000	\$ 10,000,000
Retained Earnings	16,841,226	-	16,841,226
Total Equity at October 31, 2019	<u>\$ 26,841,226</u>	<u>\$ 3,400,000</u>	<u>\$ 26,841,226</u>
(OVEC's ownership of IKEC's Capital Stock (17,000 shares) is eliminated in consolidation.)			
<u>LONG-TERM DEBT</u>			
2006 Senior Unsecured Notes, Series A, 5.80%, due February 15, 2026	\$ 168,569,904	\$ -	\$ 168,569,904
2006 Senior Unsecured Notes, Series B, 6.40% due June 15, 2040	54,142,874	-	54,142,874
2007 Senior Unsecured Notes, Series AA, AB & AC, 5.90%, due February 15, 2026	119,808,835	-	119,808,835
2007 Senior Unsecured Notes, Series BA, BB & BC, 6.50% due June 15, 2040	41,145,075	-	41,145,075
2008 Senior Unsecured Notes, Series A, 5.92%, due February 15, 2026	24,839,737	-	24,839,737
2008 Senior Unsecured Notes, Series B & C, 6.71%, due February 15, 2026	96,669,690	-	96,669,690
2008 Senior Unsecured Notes, Series D & E, 6.91% due June 15, 2040	79,480,258	-	79,480,258
2017 Senior Unsecured Notes, Series A, Floating Rate, due August 4, 2022	100,000,000	-	100,000,000
2009 Tax Exempt Bonds, \$100M Series A-D, Floating Rate, due February 1, 2026	100,000,000	-	100,000,000
2010 Tax Exempt Bonds, \$100M Series A & B, Floating Rate, due February 1, 2040	100,000,000	-	100,000,000
2012 Tax Exempt Bonds, \$200M Series A, 5%, due June 1, 2039	200,000,000	-	200,000,000
2012 Tax Exempt Bonds, \$100M Series B & C, Floating Rate, due June 1, 2040	100,000,000	-	100,000,000
2019 Tax Exempt Bonds, \$100M Series A, 3.250%, due September 9, 2029	100,000,000	-	100,000,000
Total Long-Term Debt Outstanding at October 31, 2019	<u>\$ 1,284,634,373</u>	<u>\$ -</u>	<u>\$ 1,284,634,373</u>
<u>SHORT-TERM DEBT</u>			
Total Short-Term Debt Outstanding at October 31, 2019	<u>\$ 80,000,000</u>	<u>\$ -</u>	<u>\$ 80,000,000</u>
<u>CORPORATE UNSECURED CREDIT RATINGS</u>			
Fitch (rating affirmed July 24, 2019)		BBB-, Stable Outlook	
Moody's (rating affirmed December 13, 2018)		Ba1, Stable Outlook	
Standard & Poor's (rating affirmed July 15, 2019)		BB+, Negative Outlook	
<u>FINANCING COMPLETED FOR 2019</u>			
Revolving Line of Credit \$185 M - 1Q 2019			
Refinanced 2019 Maturities/Expiring Agreements \$150 M Tax-Exempt bonds - 3Q 2019, avg interest cost of 3.1%, \$100 M Amortizing 2026-2030			
<u>FINANCING PLAN FOR 2020</u>			
Refinance \$150 M Tax-Exempt bonds - 1Q 2020, potential annual interest cost [REDACTED] included in power cost projections)			
Economic Refinance or Refunding of remaining 2017 Financing (2017A) \$100 M - 2Q/3Q 2020 (power cost projections assume amortization 2021-2023)			

CONFIDENTIAL INFORMATION REDACTED

At the request of Mr. Chodak, Mr. Cooper provided information and discussed OVEC's year-to-date power costs estimated for 2019 and projections for 2020-2024. Mr. Cooper stated that based on current estimates OVEC expected to end 2019 with an average power cost of [REDACTED] per MWhr, with [REDACTED] per MWhr of projected on-going billable costs, and an available power use factor of 77 percent. Mr. Cooper stated that the projected average power cost for OVEC power, delivered under the terms of the Inter-Company Power Agreement, ranges from [REDACTED] per MWhr in 2020 to [REDACTED] per MWhr in 2024 using an estimated available power use factor of 78 percent.

Mr. Chodak introduced Mr. Bob Bitter of Deloitte & Touche. Mr. Bitter reported that Deloitte & Touche just began its audit to certify the 2019 Financial Statements that would be finalized in April 2020.

The Board moved to an Executive Session.

There being no further business to come before the Board, the meeting was adjourned.



Secretary
OHIO VALLEY ELECTRIC CORPORATION

OHIO VALLEY ELECTRIC CORPORATION (OVEC)
INDIANA-KENTUCKY ELECTRIC CORPORATION (IKEC)
Agenda
Boards of Directors' Meeting – Conference Call
Environmental Update and Capital Projects (Informational)
April 27, 2020

1. Call Meeting to Order (3 P.M.) Paul Chodak III
 2. Roll Call Justin Cooper
- Quorum (OVEC and IKEC)
 3. Elect Directors Justin Cooper
Dan Arbough (LGE/KU) to replace Paul Thompson as OVEC Director
Lonnie Bellar (LGE/KU) to be appointed to OVEC Human Resource Committee
-Resolutions (OVEC and IKEC)
 4. Environmental Update and Capital Project Recommendations Mike Brown
- Informational Review Justin Cooper
- Adjournment

OHIO VALLEY ELECTRIC CORPORATION (OVEC)
INDIANA-KENTUCKY ELECTRIC CORPORATION (IKEC)
Resolutions of Election
Board of Director' Meeting
April 27, 2020

WHEREAS, effective as of December 24, 2019, Mr. Paul Thompson resigned as a member of the Board of Directors (Board) of OVEC and as a member of the Human Resource Committee and any other committees of the Board of OVEC;

WHEREAS, OVEC and IKEC management has recommended to the remaining members of their respective Boards those persons named below to be elected and/or appointed as Director to the OVEC Board of OVEC and IKEC and appointment to the Human Resource Committee as described below.

NOW, THEREFORE, BE IT:

RESOLVED, that, subject to any necessary action by FERC under Section 305 of the Federal Power Act, Mr. Daniel K. Arbough be elected a Director of the Board of OVEC.

RESOLVED, that, Mr. Lonnie E. Beller be appointed a member of the Human Resource Committee, and it is further

RESOLVED, that the elections and appointments shall be effective as of April 27, 2020.



Dan Arbough
Treasurer

Dan Arbough was named to his current position in 2001, and has been involved in the energy sector for 30 years.

Arbough began his career in the procurement function at Boise Cascade in Denver, Colorado. His career in the energy field began in 1988 when he joined Conoco in the treasury group in Houston. He joined LG&E Energy, predecessor to LG&E and KU Energy in Louisville in 1994, and has held various positions in the finance group. His previous positions included manager, Project Finance; manager, Corporate Finance; and director, Corporate Finance. As Treasurer, his current areas of responsibility include cash management, corporate finance, financial planning and analysis, credit risk management, enterprise risk management, insurance, and pension fund management oversight.

Arbough has a bachelor's degree in business administration and an MBA in finance, both from the University of Denver. He is a member of the National Association of Corporate Treasurers, Financial Executives International, and the Association of Financial Professionals.

OVEC Environmental Update and
Capital Project Recommendations
OVEC-IKEC BOD Meeting
April 27, 2020

CCR Environmental Regulatory Update

CCR Rule Changes – Part A Proposed Rule

- CCR Part A – Must cease placement of CCR material in all unlined or clay lined surface impoundments by August 31, 2020 or, “as soon as technically feasible.”
- Also requires initiation of surface impoundment closure activities, regardless of prior CCR compliance status.
 - Compresses timeline to conduct dry fly ash conversion. ELG rule provided a conversion timeline by no later than December 31, 2023 (as negotiated via NPDES permit renewal).
 - Requires different management of non-CCR wastewater (low volume wastewater flows, coal yard runoff, etc.)
 - Lined surface water treatment impoundments,
 - Water redirects and consolidation at both plants, and
 - Additional scope changes not outlined in prior capital environmental spend forecasts.
- Undergoing holistic evaluations to meet current rules and to also mitigate future risk at end-of-life.

CCR Environmental Regulatory Update

CCR Part A Rule Scope Changes in Capital Environmental Spend

What scope is new:

- Redirecting and consolidating all low volume wastewater flows (coal yard runoff, boiler room sumps, FGD wastewater, landfill leachate, and other miscellaneous low volume wastewater flows) to new lined treatment systems to be constructed in portion of existing boiler slag pond footprint at both locations.
- Repurposing and initiation of closure of four surface impoundments subject to proposed CCR Part A rule.

CCR Environmental Regulatory Update

- CCR – Part A Draft Rule revisions—require closure/retrofit of all CCR surface impoundments

Option A – [REDACTED]

Option B – [REDACTED]

- Kyger Creek - [REDACTED]

- Clifty Creek - [REDACTED]

**

Option C – (Most Viable Option) – Secure alternate date via preparation of a detailed justification filed with USEPA to cease placement of CCR and initiate impoundment closure by investing in closed loop systems at both facilities on a negotiated timeline based on what is “technically feasible”, but no later than October 15, 2023*. (*OVEC-IKEC’s recommended compliance option*)

NOTES

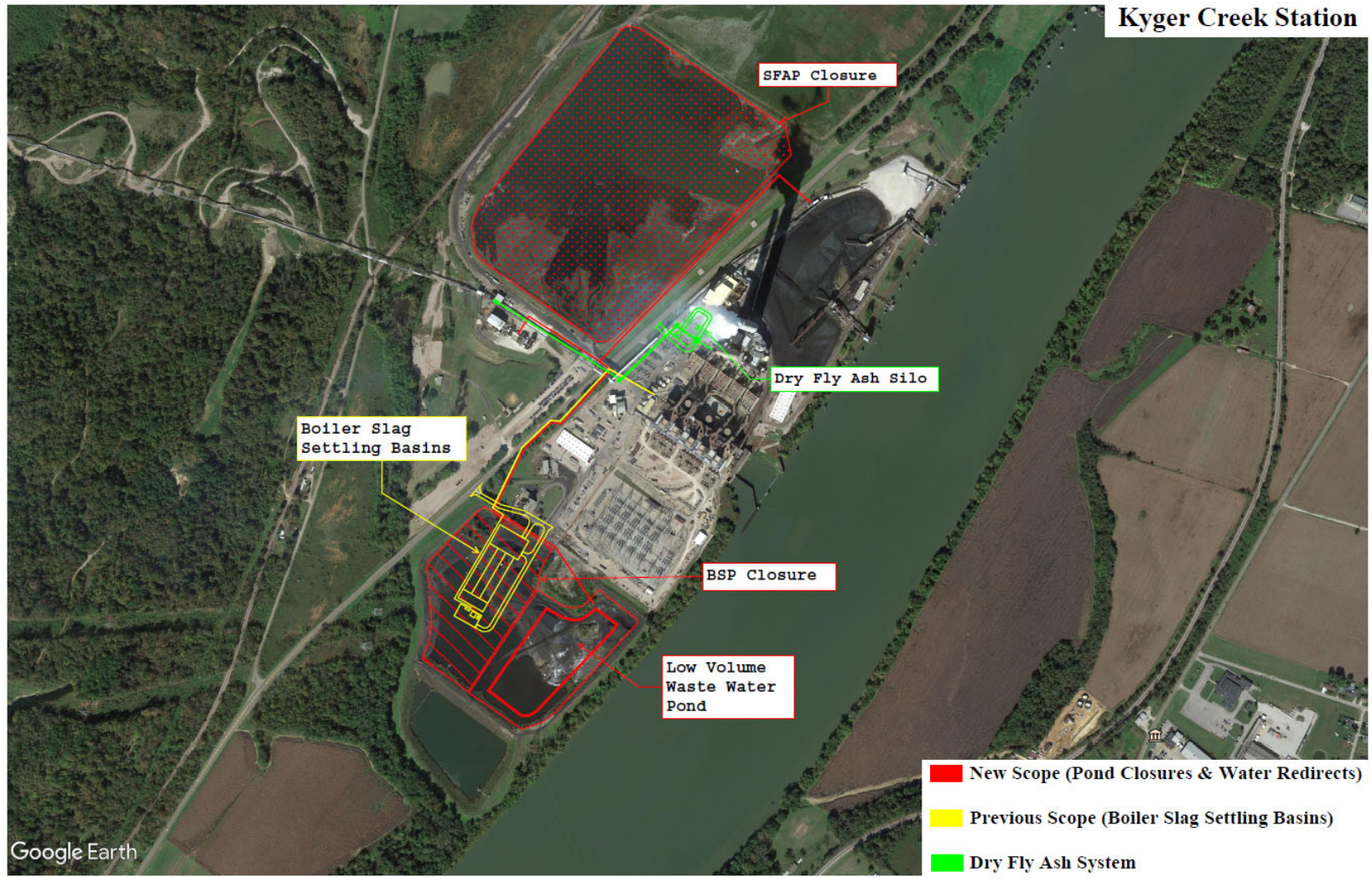
*Dates are those contained in the current draft rule, and may be subject to change.

**Estimate based on impoundment size.

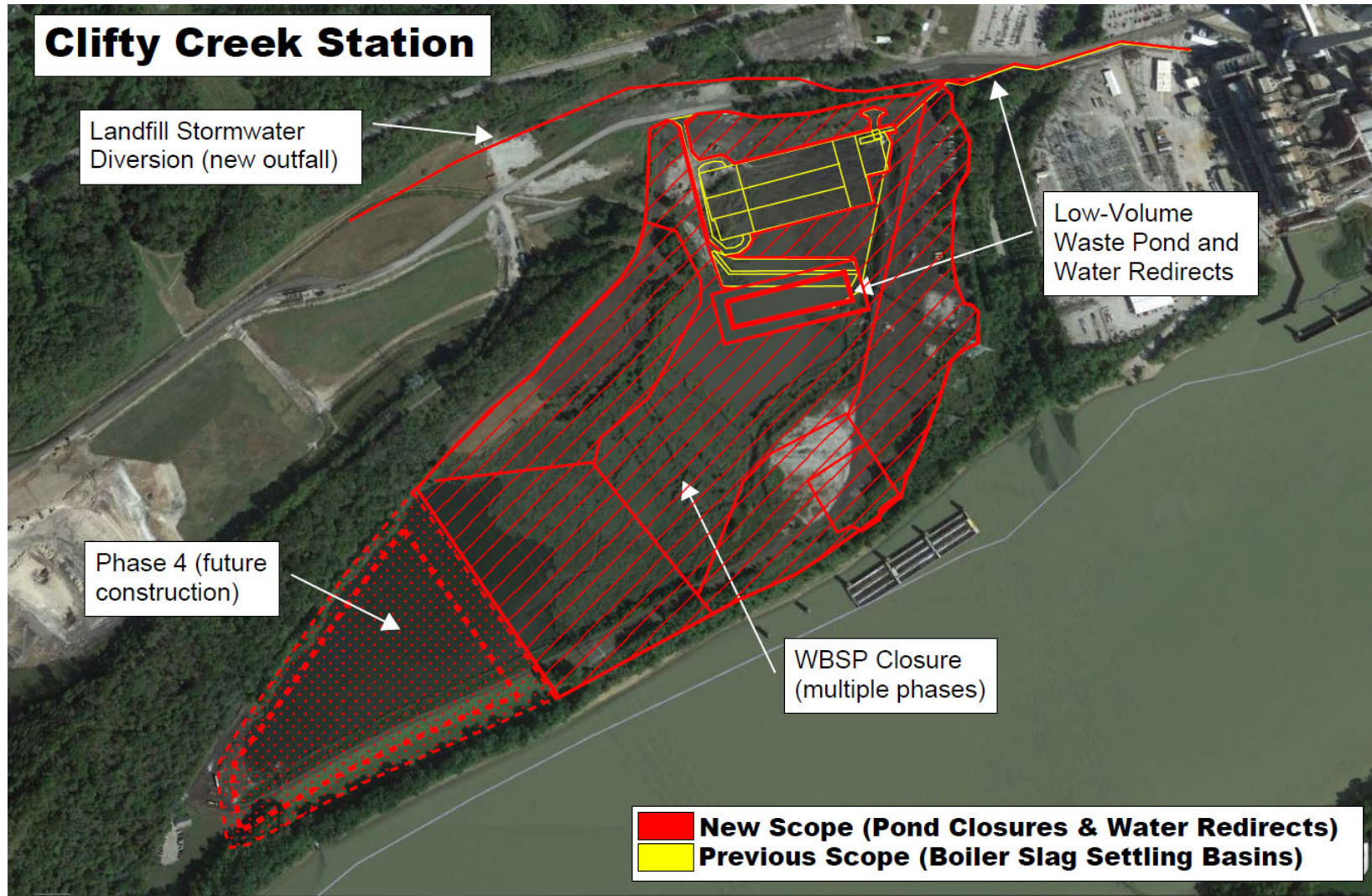
CCR Environmental Regulatory Update

- **OVEC-IKEC has four unlined CCR surface impoundments impacted by proposed CCR Part A rule that need to cease receipt of CCR and close.**
 - Boiler Slag Pond – Kyger
 - Boiler Slag Pond – Clifty
 - Fly Ash Pond – Kyger
 - Landfill Run-off Collection Pond - Clifty
- **Steps to implement Option C:**
 - File request with EPA outlining alternate technically feasible dates beyond August 31, 2020 to cease placement of ash and initiate pond closures (CCR).
 - Proceed with Dry Fly Ash Conversion at Kyger Creek (ELG), redirect remaining wastewater and initiate South Fly Ash Pond (SFAP) Closure (CCR)
 - Discontinue placing boiler slag in boiler slag ponds at both plants as soon as technically feasible (CCR), route boiler slag to new “closed loop” treatment systems (ELG)
 - Construct new lined low volume wastewater treatment ponds in portion of boiler slag pond footprint at each plant as part of pond closure plans (CCR),
 - Redirect non-CCR wastewater discharges to these new lined treatment systems (ELG/CCR)
 - Initiate closure of remaining surface impoundment footprints (CCR), including storm water management modifications.

Kyger CCR Projects



Clifty CCR Projects



OVEC – Strategic Partner - BURNS & McDONNELL (B&M)

- Fully integrated engineering, architecture, construction, environmental and consulting firm
- Annual revenues of \$4 billion
- Large firm resources/small firm responsiveness
- Relationship-focused with 90 percent repeat business
- 50+ Regional and International locations

STABILITY

FOUNDED IN

1898

SERVICE

100%
EMPLOYEE-
OWNED

STRENGTH

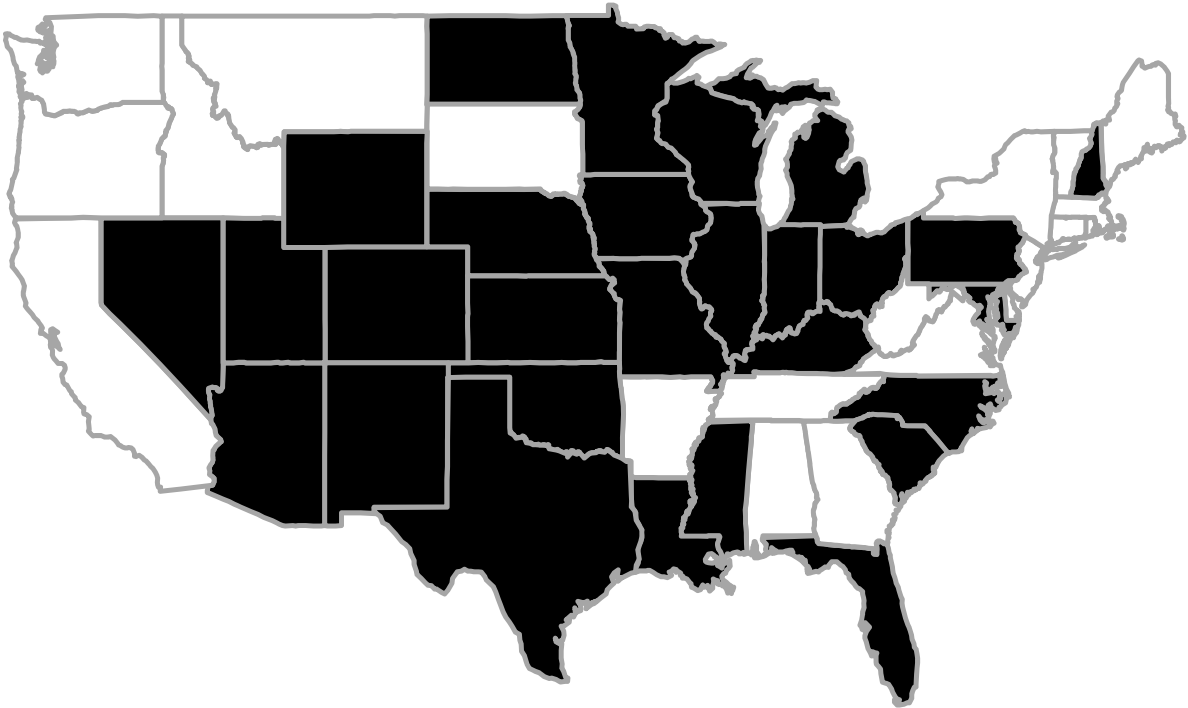
MORE THAN
7,500
PROFESSIONALS

EXCELLENCE

Engineering
News Record
#1
Power

B&M - Ash/Water Compliance Planning Experience Since 2010

- 50+ Electric Utilities
- 200+ Units
- 100,000 + MWs



B&M: OVEC-IKEC Experience

- CCR/ELG Feasibility Study (V&V prior AEP work) – 2017
- D&D Evaluation/update – 2017
- CCR/ELG Technology Evaluation (V&V prior AEP work) – 2018
- Kyger Creek Landfill Leachate Project – 2018
- Ash Marketing Study – 2018
- Kyger Creek Fly Ash Preliminary Design Review - 2019
- Clifty Creek SNCR Study/Pilot Testing – 2019
- CCR/ELG Preliminary Design Review - 2020

B&M - OVEC / IKEC Current and Future Expectations

Current Contractual Options for Planned Environmental Projects

- Engineer, Procure, Construct (EPC)
- Design, Bid, Build (DBB)
- Target Price/Open Book EPC Options

Future Environmental Project Expectations

- Preliminary design review & EPC or DBB options - - FGD WW Treatment upgrades required under ELG rules (bioreactor or equivalent)
- D&D update upon final adoption of CCR Part A & B rules
- Engineering and design review associated with unlined surface impoundment closures

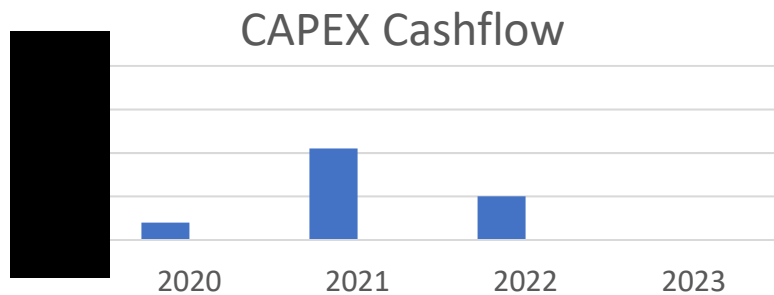
CCR Environmental Compliance Projects – Kyger Creek

Dry Fly Ash Conversion

- Per CCR/ELG requirement Kyger Creek Plant must convert to a Dry Fly Ash system or cease operation by 10/17/2023.
- Scope: Retire the wet slurry system from the precipitator ash gates to the South Fly Ash Pond and the balance of plant equipment. Install a transport system, filter separators, and fly ash storage silo to prepare the ash for transport to the landfill conveyor and provide the option to sell the unconditioned fly ash from the storage silos.

Class 3 Estimate (-20%/+30%) – Capital Costs [REDACTED]

Payback – 7.8 yrs - annual cost reduction of O&M - pond remediation costs



Risk Register:	
Filter Separator – Fly Ash Sales	[REDACTED]

Opportunities for potential future cost reduction:

Partnership 3rd Party for rights to Fly Ash sales - reduce equipment cost or fuel cost reductions

Class 3 estimate (-20/+30%) at 25% engineering design, will provided an estimate update to the Board at 50% and 75% design

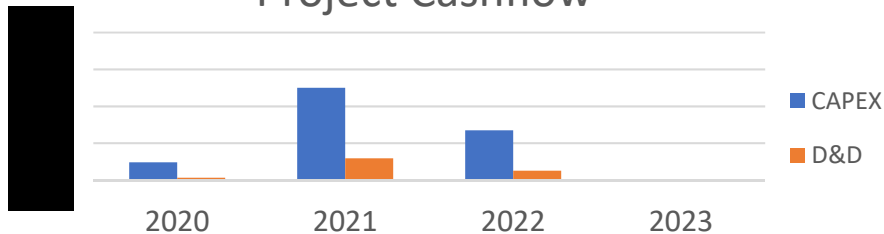
CCR Environmental Compliance Projects – Kyger Creek

Closed Loop Boiler Slag Conversion

- Per CCR requirement Kyger Creek Plant must convert to a Closed Loop Boiler Slag system as soon as technically feasible and before 10/17/2023.
- Cost estimates updated from class 4 level estimate (-30%/+50%) and modified for updated CCR rule requiring initiating closure of CCR ponds.
- Scope: Installation of new piping, pumps and ancillary equipment for boiler slag ash transport and return water system, including installation of new concrete basins and supporting equipment for closed-loop boiler slag management.

Class 3 Estimate (-20%/+30%) – Capital Costs	[REDACTED]
Class 3 Estimate (-20%/+30%) – D&D Funds	[REDACTED]

Project Cashflow



Risk Register:	
Deep Foundation – Geotechnical evaluation required	[REDACTED]
FGD Chemistry treatment for 10% blowdown	[REDACTED]

Utilizing Boiler Slag footprint for the system and Low Volume Wastewater pond, provides complete closure of 28 acre Boiler Slag pond in 2023 and eliminates future D&D liability

Opportunities for potential future cost reduction: Partnership 3rd Party for rights to Bottom Ash sales – reduce equipment cost or fuel cost reductions

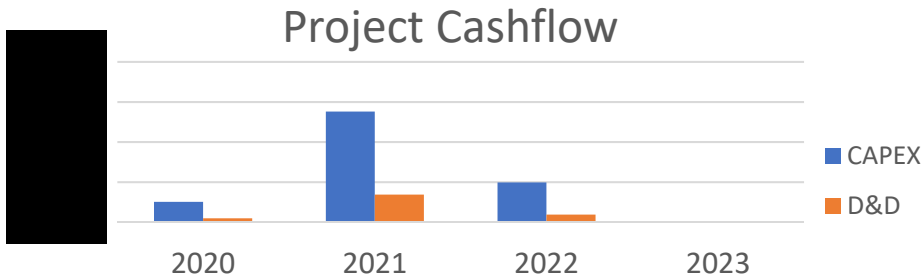
Class 3 estimate (-20/+30%) at 25% engineering design, will provided an estimate update to the Board at 50% and 75% design

CCR Environmental Compliance Projects – Clifty Creek

Closed Loop Boiler Slag Conversion

- Per CCR requirement Clifty Creek Plant must convert to a Closed Loop Boiler Slag system as soon as technically feasible and before 10/17/2023.
- Cost estimates updated from class 4 level estimate (-30%/+50%) and modified for updated CCR rule requiring initiating closure of CCR ponds.
- Scope: Installation of new piping, pumps and ancillary equipment for boiler slag ash transport and return water system, including installation of new concrete basins and supporting equipment for closed-loop boiler slag management.

Class 3 Estimate (-20%/+30%) – Capital Costs	[REDACTED]
Class 3 Estimate (-20%/+30%) – D&D Funds	[REDACTED]



Risk Register:	
Deep Foundation – Geotechnical evaluation required	[REDACTED]
FGD Chemistry treatment for 10% blowdown	[REDACTED]

Utilizing Boiler Slag footprint for the system and low volume waste water pond provides approx. 50% closure of 75 acre Boiler Slag pond in 2023, eliminating future D&D liability

Opportunities for potential future cost reduction: Partnership 3rd Party for rights to Bottom Ash sales – reduce equipment cost or fuel cost reductions

Class 3 estimate (-20/+30%) at 25% engineering design, will provided an estimate update to the Board at 50% and 75% design

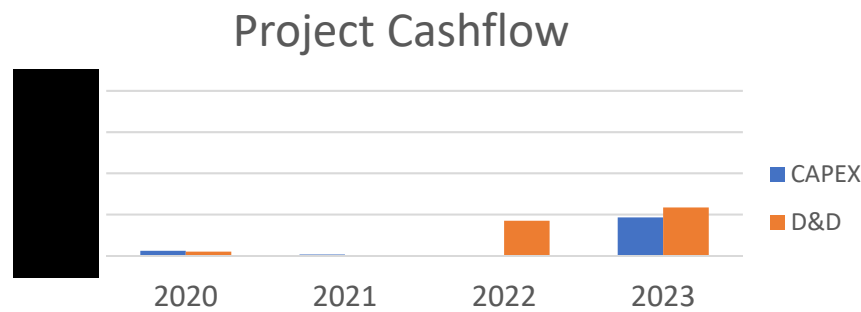
CCR Environmental Compliance Projects – Kyger Creek

New Low Volume Wastewater Pond and Redirect of non-CCR water

*New Scope required based on CCR rule update

- Due to the CCR update in December 2019, all non-CCR water must be redirected to a new Low Volume Wastewater pond
- **Scope :** Construct a new lined low volume wastewater treatment pond in portion of boiler slag pond footprint as part of pond closure plan (CCR) and redirect non-CCR wastewater discharges to new lined treatment systems (ELG/CCR) and complete closure of boiler slag pond footprint.

Class 3 Estimate (-20%/+30%) – Capital Costs	
Class 3 Estimate (-20%/+30%) – D&D Funds	



Risk Register:	
Changes in water quality requiring treatment	

Utilizing Boiler Slag footprint for pond and Closed Loop System, provides complete closure of 28 acre Boiler Slag pond in 2023, eliminating future D&D liability

Class 3 estimate (-20/+30%) at 25% engineering design, will provided an estimate update to the Board at 50% and 75% design

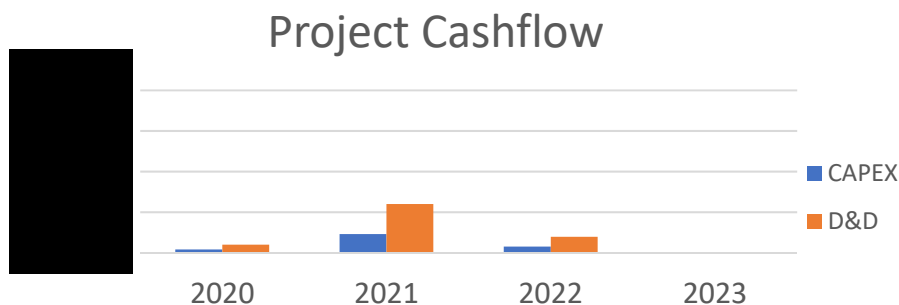
CCR Environmental Compliance Projects – Clifty Creek

New Low Volume Wastewater Pond and Redirect of non-CCR water

*New Scope required based on CCR rule update

- Due to the CCR update in December 2019, all non-CCR water must be redirected to a new Low Volume Wastewater pond.
- **Scope :** Construct a new lined low volume wastewater treatment pond in portion of boiler slag pond footprint as part of pond closure plan (CCR) and redirect non-CCR wastewater discharges to new lined treatment systems (ELG/CCR) and partial closure of boiler slag pond footprint.

Class 3 Estimate (-20%/+30%) – Capital Costs	[REDACTED]
Class 3 Estimate (-20%/+30%) – D&D Funds	[REDACTED]



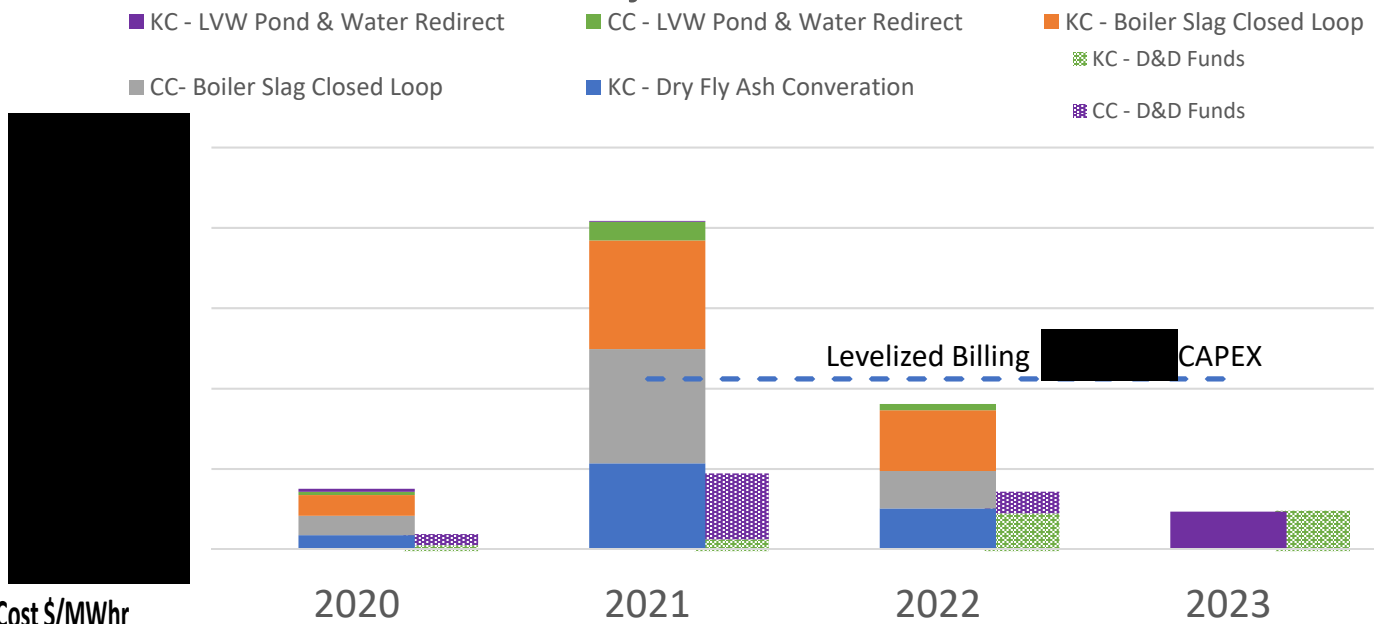
Risk Register:	
Changes in water quality requiring treatment	[REDACTED]

Utilizing Boiler Slag footprint for pond and Closed Loop System, provides approx. 50% closure of 75 acre Boiler Slag pond in 2023, eliminating future D&D liability

Class 3 estimate (-20/+30%) at 25% engineering design, will provided an estimate update to the Board at 50% and 75% design

Total Project Cashflow, Timeline and Billing

Project Cashflow



Power Cost \$/MWhr	2020	2021	2022	2023
Power Cost \$/MWhr 11.5 MWhrs				
Power Cost \$/MWhr 10.5 MWhrs				
Power Cost \$/MWhr 9.5 MWhrs				

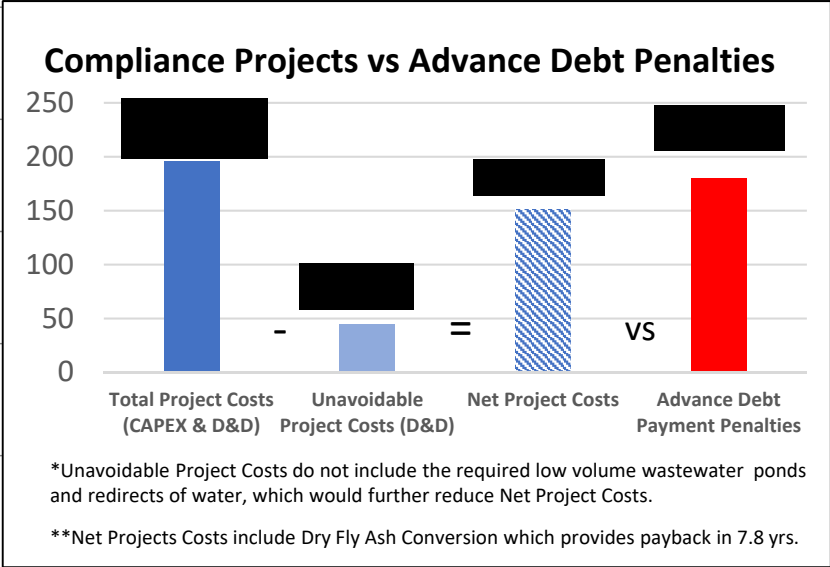
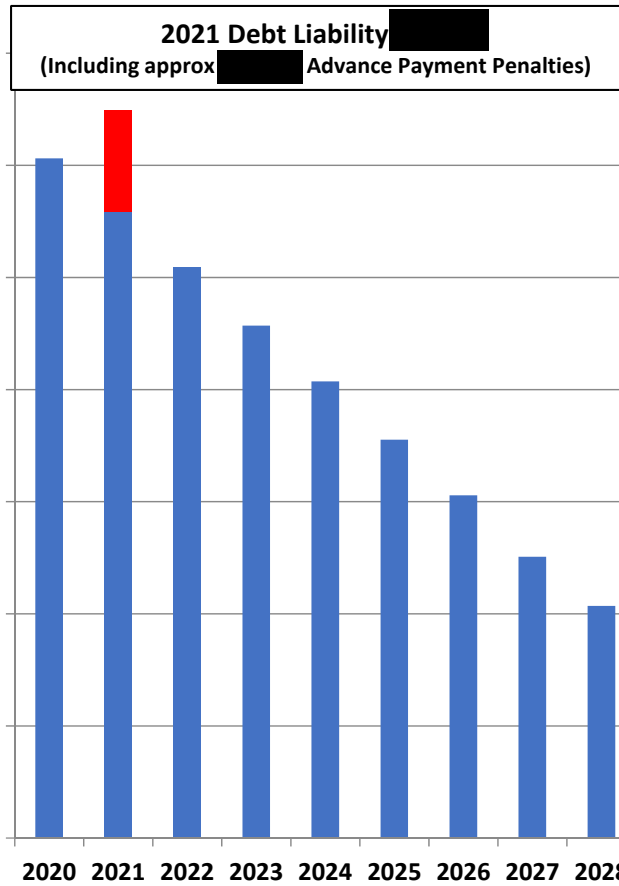
Estimated Average Total Power Cost (2021-2023) at 11.5 MWhr - [REDACTED]

To minimize the requirement for additional long term debt and reduce impact to Power Cost:

- OVEC will utilize revolving line of credit to minimize Power Cost impact and provided levelized billing to Sponsors
- OVEC to reduce CAPEX and O&M cost and scope in 2021-2023
- Projected D&D billings will provide funding for the closure related costs of the projects
- OVEC to work to optimize cost further with it's [REDACTED] team" with cost reduction and generation improvement ideas



OVEC – Long Term Debt Liability and Advance Payment Penalties



Long term debt amounts in 2021 includes additional costs of "make-whole" premiums on advance payment of debt or other costs associated with early retirement of debt. Long term debt excludes debt reserve and any additional debt required for defaulting Sponsor shortfall. The analysis is subject to future Environmental Regulation changes, assumes compliance with current or known pending environmental regulation without additional long term financing, unless explicitly stated.

Board Resolution

RESOLVED, that OVEC and IKEC are authorized to proceed with the necessary and appropriate environmental compliance construction projects, as described to the OVEC and IKEC Boards of Directors. The capital expenditures for these projects and related activities, excluding decommissioning and demolition expenditures related to pond closures activities, are estimated at [REDACTED] and OVEC and IKEC are together hereby authorized to expend up to that amount in the aggregate, plus an additional 30% contingency, based on the current class estimate.

Appendix

General Air Compliance Update

- CSAPR – compliant with annual program
- CSAPR Update – compliant with ozone season program (consistently operating below assurance levels)
- MATS – Hg at Clifty Creek (learning how to manage emissions at more frequent low load operating conditions)
- SO₂ – Status/Update on attainment classification for Gallia County, Ohio (around Kyger Creek Station)
 - Ohio EPA to make recommendation to U.S. EPA, based on three years of ambient air monitoring data from installed SO₂ network, to classify the area in attainment. EPA to make attainment determination by December 2020.

Clean Power Plan (CPP)/Affordable Clean Energy (ACE) Rule Update

- U.S. EPA repealed CPP and in a separate action issued ACE Rule on July 8, 2019. Both actions are undergoing legal challenges.
- ACE Rule became effective on September 6, 2019.
 - Inside the fence line Heat Rate Improvements at the unit level is defined as the Best System of Emissions Reduction (BSER).
 - States have three years from ACE effective date to submit implementation plans.
 - No emissions trading and no fleet, facility or common stack averaging.
- OVEC is working with other state utilities as well as Ohio EPA and IDEM on a state implementation program.
 - Both OEPA and IDEM have requested completion of a unit specific ACE questionnaire; Kyger Creek data filed in February 2020, Clifty Creek filing due in August 2020.
 - On March 25, 2020, Ohio EPA issued draft “Power Plant Efficiency Rules” to comply with the federal ACE rule – comments on draft due April 27, 2020. Proposed compliance timeline for meeting standard of performance – July 8, 2024.

316(b) Environmental Compliance Update

Kyger Creek

- 316(b) Section 122.21(r) reports were completed and submitted to Ohio EPA as part of the NPDES permit renewal application in November 2018.
- Ohio EPA has not taken action on, either the 316(b) report or the NPDES permit renewal timely filed in November of 2018. We have been in discussions with Ohio EPA and will have an opportunity to provide feedback prior to permit renewal.

Clifty Creek

- 316(b) Section 122.21(r) report filed with IDEM in January 2019.
- IDEM decision-making relative to cooling system modifications will take place during the next NPDES permit renewal cycle in 2022.

ELG Environmental Regulatory/Legal Update

Effluent Limitations Guidelines Update

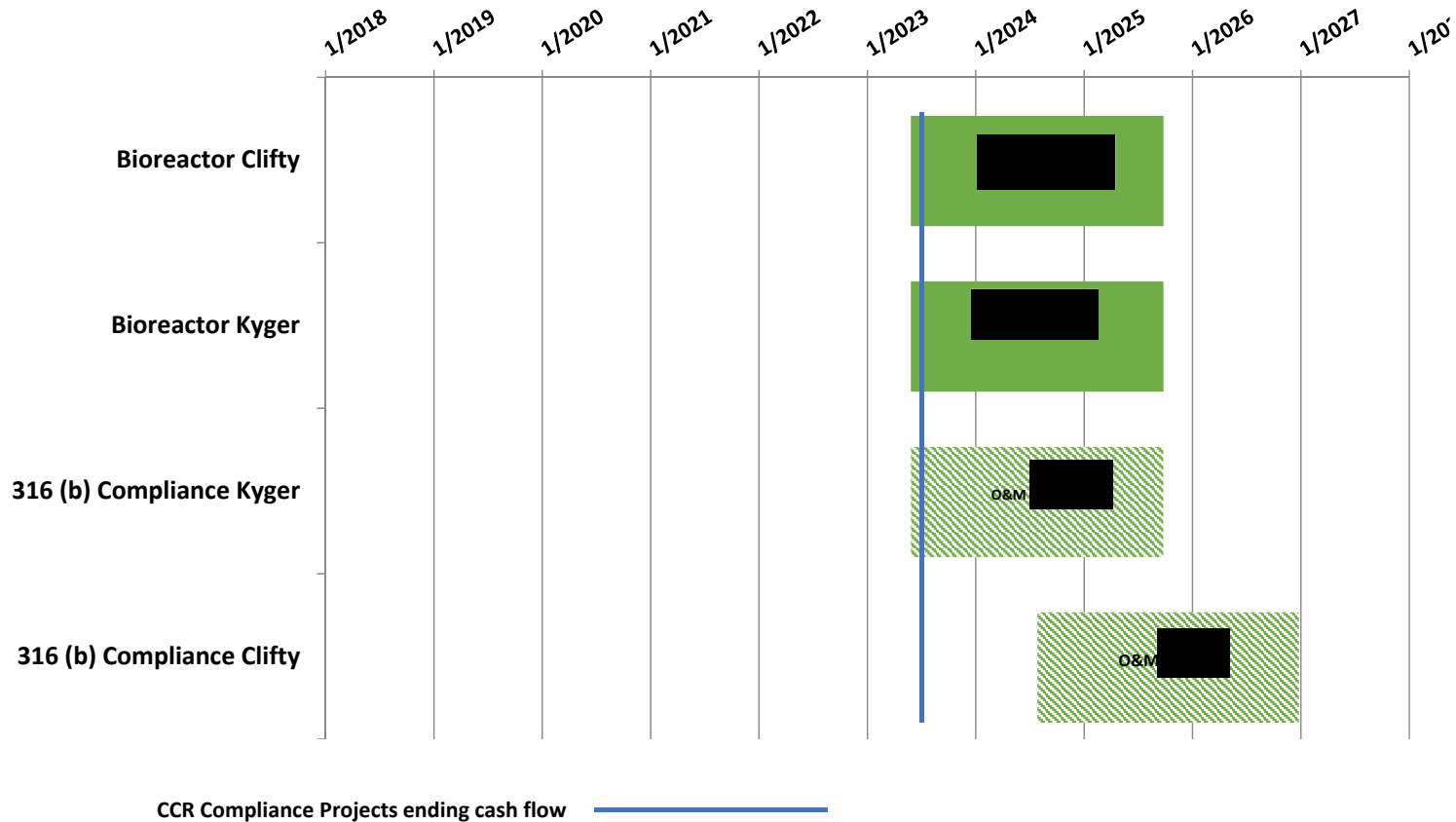
- ELG Postponement Rule issued in September 2017 for FGD Wastewater (FGDWW) and bottom ash transport water (BATW).
- Draft EPA rule revising effluent limits published in late 2019, final rule expected in August/September of 2020. FGD Best Available Technology (BAT) limits to change - Physical/chemical treatment followed by biological treatment and ultrafiltration to be implemented by no later than December 31, 2025.

5th Circuit (4/12/19) remanded/vacated portions of ELG Rule

- The Court determined EPA was “arbitrary and capricious” in its determinations relative to legacy wastewater and landfill leachate.
- EPA expected to undergo further rulemaking. Timing unknown, but future leachate treatment risk lower with recycle/reuse and consolidation plans.
- Risk from legacy wastewater currently unknown.
- Coal Combustion Residual (CCR) rule revisions trump the ELG compliance dates, adds additional scope, and is now critical path.

Additional Projected Environmental Capital

Projected Environmental Capital Investment



Assumptions: *Class 5 estimate (-50%/+100%)

- Assumes Bioreactor (modular technology) – reduced footprint/capacity, leasing options available
- Assumes 316 (b) compliance utilizes technology with minor equipment modification, projected to be classified as O&M expense
 - Assumes state agency approval of technology and multi-year timeline for installation

Any pond closure requirements or related decommissioning costs will be funded through Decommissioning & Demolition reserves

OHIO VALLEY ELECTRIC CORPORATION
Minutes of Special Meeting of the
Board of Directors held April 27, 2020

A Special Meeting of the Board of Directors of **OHIO VALLEY ELECTRIC CORPORATION** (OVEC) via teleconference was called to order by the President on Monday, April 27, 2020, at 3:00 p.m., pursuant to notice duly given.

Paul Chodak, President of the Corporation, acted as Chairman of the meeting, and Justin J. Cooper, Chief Financial Officer, Secretary and Treasurer of the Corporation, acted as Secretary of the Meeting.

Mr. Cooper reported that the following Directors were present for the meeting:

Thomas Alban	Lana L. Hillebrand
Eric D. Baker	Mark E. Miller
Chris T. Beam	Steven K. Nelson
Lonnie E. Beller	Patrick W. O'Loughlin
Paul Chodak	Raja Sundararajan
Wayne D. Games	John A. Verderame

WHEREAS, effective as of December 24, 2019, Mr. Paul Thompson resigned as a member of the Board of Directors (Board) of OVEC and IKEC, and as a member of the Human Resource Committee and any other committees of the Board of OVEC;

WHEREAS, OVEC and IKEC management has recommended to the remaining members of their respective Boards those persons named below to be elected and/or appointed as Director to the Boards of OVEC and IKEC, and appointment to the Human Resource Committee of the OVEC Board as described below.

NOW, THEREFORE, BE IT:

RESOLVED, that, subject to any necessary action by FERC under Section 305 of the Federal Power Act, Mr. Daniel K. Arbough be elected a Director of the Board of OVEC.

RESOLVED, that, Mr. Lonnie E. Beller be appointed a member of the Human Resource Committee of the OVEC Board, and it is further

RESOLVED, that the elections and appointments shall be effective as of April 27, 2020.

Mr. Chodak asked Mr. Mike Brown to review the OVEC and IKEC environmental compliance update and provide the recommendations on capital projects related to the compliance with Coal Combustion Residual (CCR) rule and Effluent Limitations Guidelines, which include the construction of a dry fly ash conversion system at Kyger Creek and construction of

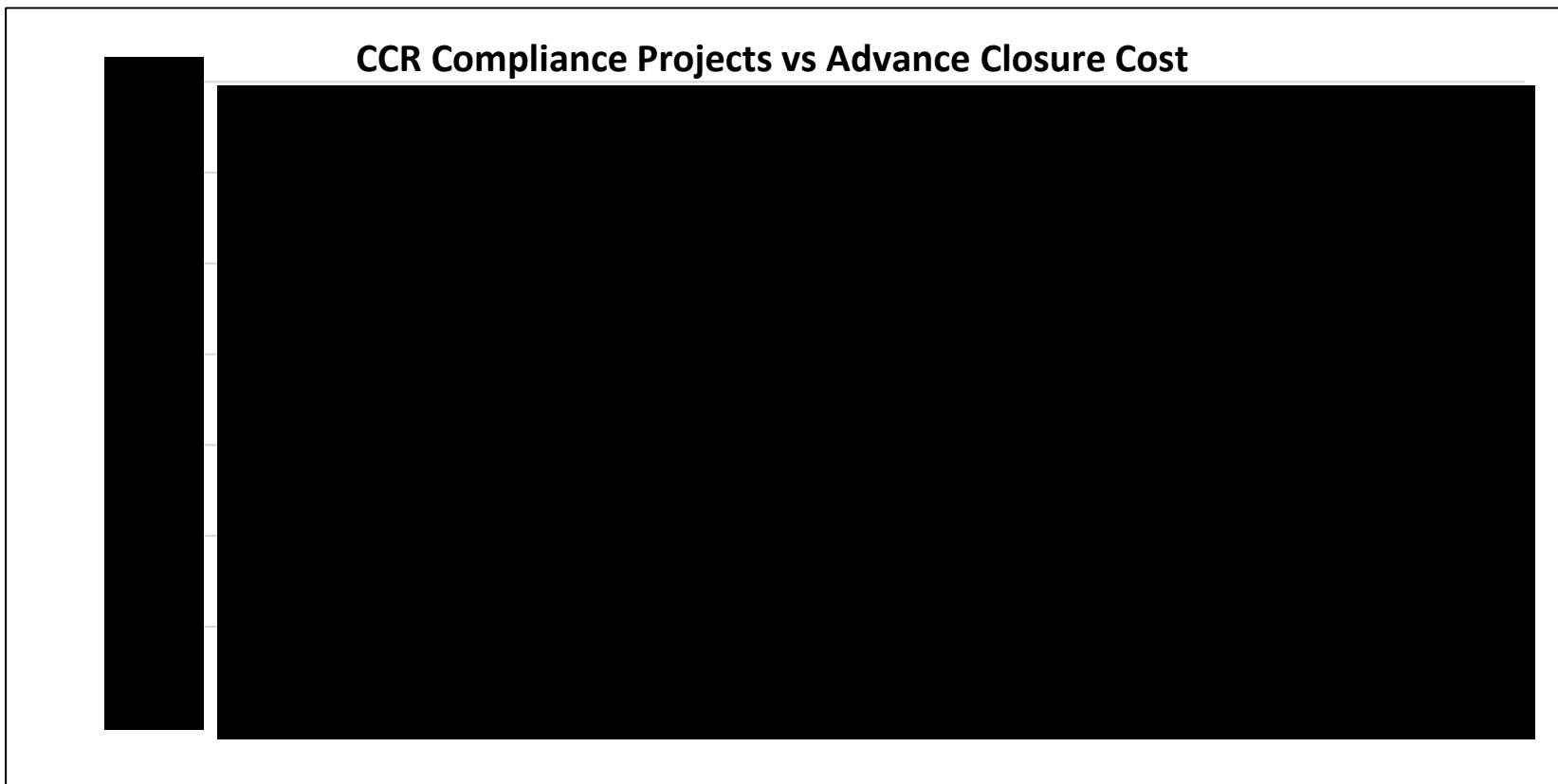
closed loop boiler slag systems, redirection of waste-water, and a new low volume waste-water pond at both Kyger Creek and Clifty Creek facilities.

Mr. Chodak asked Mr. Cooper to review the cost estimates for capital and decommissioning and demolition costs associated with the projects. He provided the analysis of the required cash flow and financial impacts to power costs. He also reviewed the debt liabilities and related potential advance payment penalties that would be triggered if OVEC did not invest in the environmental compliance projects and the plants were required to cease operation. Mr. Cooper presented a proposed resolution for approval of capital expenditures for vote in a future meeting, scheduled for May 5, 2020.

There being no further business to come before the Board, the meeting was adjourned.



Secretary
OHIO VALLEY ELECTRIC CORPORATION



[Redacted Content]

**OHIO VALLEY ELECTRIC CORPORATION (OVEC)
INDIANA-KENTUCKY ELECTRIC CORPORATION (IKEC)**

Agenda

Boards of Directors' Meeting – Conference Call

Environmental Capital Projects (Vote)

May 5, 2020

1. Call Meeting to Order (1 P.M.) Paul Chodak III

2. Roll Call Justin Cooper
 - Quorum (OVEC and IKEC)

3. Environmental Capital Project Recommendations – request vote Justin Cooper
 - Resolution

RESOLVED, that OVEC and IKEC are authorized to proceed with the necessary and appropriate environmental compliance construction projects, as described to the OVEC and IKEC Boards of Directors. The capital expenditures for these projects and related activities, excluding decommissioning and demolition expenditures related to pond closures activities, are estimated at \$ [REDACTED] and OVEC and IKEC are together hereby authorized to expend up to that amount in the aggregate, plus an additional 30% contingency, based on the current class estimate.

Adjournment

OHIO VALLEY ELECTRIC CORPORATION
Minutes of Special Meeting of the
Board of Directors held May 5, 2020

A Special Meeting of the Board of Directors of **OHIO VALLEY ELECTRIC CORPORATION** (OVEC) via teleconference was called to order by the President on Tuesday, May 5, 2020, at 1:30 p.m., pursuant to notice duly given.

Paul Chodak, President of the Corporation, acted as Chairman of the meeting, and Justin J. Cooper, Chief Financial Officer, Secretary and Treasurer of the Corporation, acted as Secretary of the Meeting.

Mr. Cooper reported that the following Directors were present for the meeting:

Thomas Alban	Lana L. Hillebrand
Daniel K. Arbough	Mark E. Miller
Eric D. Baker	Steven K. Nelson
Chris T. Beam	Patrick W. O'Loughlin
Lonnie E. Beller	David W. Pinter
Paul Chodak	Raja Sundararajan
Wayne D. Games	John A. Verderame

Mr. Chodak asked Mr. Cooper to review a proposed resolution for approval of capital expenditures for environmental projects described to the Board on April 27, 2020. On a motion duly made, seconded, and adopted unanimously (with Mr. Arbough and Mr. Beller abstaining), it was:

RESOLVED, that OVEC and IKEC are authorized to proceed with the necessary and appropriate environmental compliance construction projects, as described to the OVEC and IKEC Boards of Directors. The capital expenditures for these projects and related activities, excluding decommissioning and demolition expenditures related to pond closures activities, are estimated at [REDACTED], and OVEC and IKEC are together hereby authorized to expend up to that amount in the aggregate, plus an additional 30% contingency, based on the current class estimate.

There being no further business to come before the Board, the meeting was adjourned.

A handwritten signature in black ink, appearing to be 'J.J. [unclear]', written over a horizontal line.

Secretary
OHIO VALLEY ELECTRIC CORPORATION

OHIO VALLEY ELECTRIC CORPORATION
Minutes of Special Meeting of the
Board of Directors held July 8, 2020

A Special Meeting of the Board of Directors of **OHIO VALLEY ELECTRIC CORPORATION** (OVEC) via teleconference was called to order by the President on Wednesday, July 8, 2020, at 12:00 noon., pursuant to notice duly given.

Paul Chodak, President of the Corporation, acted as Chairman of the meeting, and Robert A. Osborne, Vice President & Chief Operating Officer, acted as Secretary of the Meeting.

Mr. Osborne reported that the following Directors were present for the meeting:

Thomas Alban	Lana L. Hillebrand
Daniel K. Arbough	Mark E. Miller
Chris T. Beam	Steven K. Nelson
Lonnie E. Beller	Patrick W. O'Loughlin
Paul Chodak	David W. Pinter
Wayne D. Games	John A. Verderame

Mr. Chodak asked Mr. Osborne to review the proposed leadership changes for OVEC effective August 1, 2020. On a motion duly made, seconded, and unanimously adopted it was

RESOLVED, that upon Mr. Osborne's retirement and resignation as Vice President and Chief Operation Officer of OVEC and IKEC as of July 31, 2020, Mr. Justin J. Cooper is elected as Vice President and Chief Operation Officer, and Chief Financial Officer, of OVEC and IKEC; and that Ms. Kassandra K. Martin is elected as Secretary and Treasurer of OVEC and IKEC.

The election of Mr. Cooper and Ms. Martin to such positions is subject to the appropriate filings with the Federal Energy Regulatory Commission ("FERC") to hold such interlocking positions with OVEC and IKEC, and continuing FERC authorization of such interlock.

As of August 1, 2020 and thereafter, the Board has vested in Mr. Cooper and Ms. Martin all authority and powers to conduct business on OVEC's behalf of persons holding such executive positions with OVEC as previously authorized by OVEC Board of Directors from time to time.

There being no further business to come before the Board, the meeting was adjourned.



Secretary
OHIO VALLEY ELECTRIC CORPORATION

**OHIO VALLEY ELECTRIC CORPORATION (OVEC)
INDIANA-KENTUCKY ELECTRIC CORPORATION (IKEC)
Agenda**

**Boards of Directors' Mid-Year Update
Informational Meeting/Conference Call
1-719-325-2630 Passcode: 886457**

August 5, 2020

- | | |
|--|---------------|
| 1. Safety and Culture | Justin Cooper |
| • COVID Update | |
| 2. Environmental Update | Mike Brown |
| • Compliance and Project Updates | |
| 3. Mid-Year Operational and Financial Performance Update | Justin Cooper |
| • Open Book Leadership (OBL) Performance Metrics | |
| • 2020 Forecast Update | |
| 4. Closing Comments | Justin Cooper |

OVEC-IKEC Mid-Year Update

August 5, 2020



COVID-19 Update

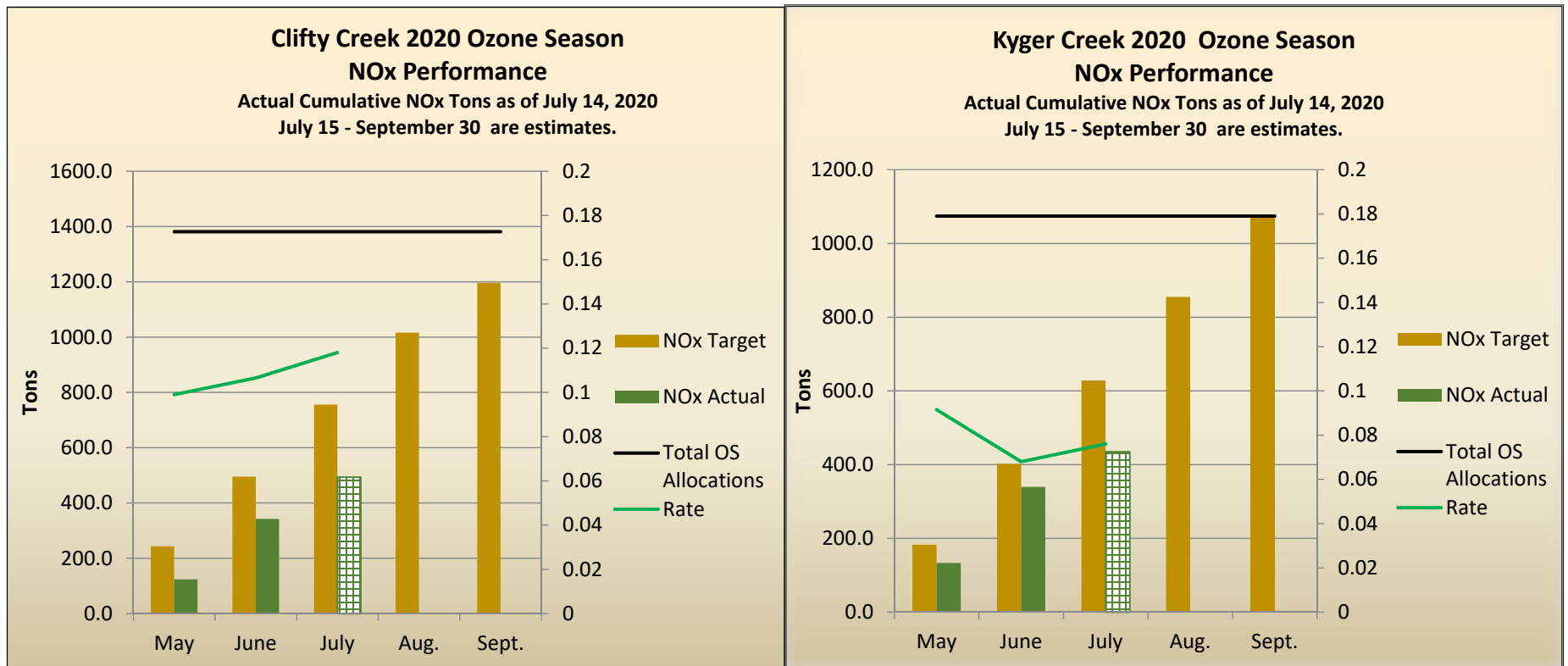
During this COVID-19 pandemic, OVEC-IKEC has been committed to the health and safety of our employees and our families in the communities in which we live and work.

- Clifty Creek: 13 positive employee cases (no additional cases since 4/22)
 - Symptoms varied from none to mild “cold/flu like symptoms”
 - Had ability to test all active personnel at the facility (5 asymptomatic cases)
- Kyger Creek: 1 positive contractor case (no employee cases)
- Corporate Office: 0 cases

- On March 9th created internal task force and took the following measures:
- Self-monitoring and personal assessment - required before coming to work
- Temperature checking protocols - required when entering facilities
- Social distancing protocols – conference rooms, break rooms, work areas and general/common areas.
- Face covering requirement - worn for any activity requiring interaction within 6 feet.
- Continual cleaning of work and general/common areas - foggers, dissecting wipes, etc..
- Prepared sites, supplies and personnel for possible sequester, if needed.

Review of Ozone NO_x Performance

As a result of the standard work established around ozone season, OVEC-IKEC's 2020 ozone season NO_x performance has been excellent. Both plants are on track to be at or below the Company's NO_x ozone season emission targets for 2020.



CCR Regulatory Update

CCR Rule Changes – Part A Final Rule

- **CCR Part A Final Rule signed by EPA on July 29, 2020**
 - Final rule becomes effective 30-days after publication.
 - Deadlines associated with closure of unlined CCR surface impoundments have shifted.
 - The draft Part A Rule required that all unlined CCR surface impoundments cease receipt of CCR and non-CCR waste streams and initiate closure by August 31, 2020, final rule shifts this default date **to April 11, 2021.**
 - Date to file a demonstration with US EPA for an alternate date to cease ash placement and initiate closure is **November 30, 2020.** The alternative date must still be a technically feasible and can be longer than October 17, 2023. Possible 1-year extension for qualifying surface impoundments.
- As approved in the May 5th BOD meeting, OVEC is investing in Dry Fly Ash Conversion (Kyger), Boiler Slag Settling Basins, Low Volume Waste Water Treatment Systems and Water Redirects to meet compliance by Oct 2023.
 - **OVEC has prepared the required Demonstration for a site-specific alternative closure deadline – will complete and submit prior to November 30, 2020, filing date.**
 - Demonstration to outline alternate technically feasible dates beyond April 11, 2021, to cease placement of ash and initiate pond closures.
 - Boiler Slag pond & Fly Ash Pond – Kyger Creek
 - Boiler Slag Pond & Landfill Runoff Collection Pond – Clifty Creek

Effluent Limitation Guidelines Regulatory Update

OVEC continues to monitor the development of proposed ELG Rule revisions applicable to our facilities.

- The final ELG Rule was sent to the Office of Management and Budget (OMB) in late July. Rule now expected to become final early this fall.
- As previously reported, the Rule is expected to include:
 1. Amended Best Available Technology (BAT) determination for FGD waste water treatment discharges
 - Revised final effluent limits for arsenic, mercury, selenium, and nitrate-nitrite;
 - Revised compliance timeframe associated with FGDWW modifications to no later than December 31, 2025;
 2. Minor changes are expected for bottom ash transport water BAT (limited blowdown).
- OVEC will be updating cost estimates and compliance analysis of potential use of Bio Reactors (modular technology) at the facilities once the final rule has been published.

Related Permit Activities:

Clifty Creek

- Permit Modification Request was filed with IDEM to remove the April 1, 2022, ELG limits and associated compliance date for FGDWW (obsolete).
- IDEM is expected to act on modification once the EPA finalizes ELG rule revisions with new compliance dates and new BAT limits.

Kyger Creek

- NPDES Permit Renewal Application was filed in October 2018. OEPA is still working to draft a renewal NPDES permit – no need to revise this permit to address anticipated rule changes.

CCR/ELG - Environmental Projects Update

- ***Project Management process implemented***
 - **OVEC Executive Steering Committee:** VP COO/CFO, ES&H Director, Plant Managers & Supply Chain Director
 - **Project Management** – Corporate Lead and Site Lead at each plant, supported by Project Management Consultant
- ***Boiler Slag Settling Basins, Low Volume Waste Water Treatment System, Water Redirects & Closure***
 - Working with Burns & McDonnell on executing various Front-End Engineering Development (FEED) scope items:
 - Performing Geotechnical exploration of the site to confirm properties of the existing in situ materials, foundation soils, etc. to confirm foundation type and design (target completion date of August 2020 Clifty and October 2020 Kyger)
 - Developing pilot trenching specifications for water re-directs
 - Conducting additional waste water analysis and evaluation to refine design of boiler slag settling basins, low volume waste water treatment system, and water return system
 - Refinement of Phase II project schedule
 - Design, Procurement, Construction, and environmental permitting activities are being built out
- ***Dry Fly Ash Conversion – Kyger Creek***
 - Completed Geotechnical exploration of the site to confirm foundation design (evaluating data)
 - Beginning to issue requests for proposals for project equipment and structure
 - Refinement of Phase II project schedule
 - Target submittal to OEPA by September 30

316(b) Environmental Compliance Update

Kyger Creek

- 316(b) Section 122.21(r) reports were completed and submitted to Ohio EPA as part of the NPDES permit renewal application in November 2018.
- OEPA has not taken action on 316(b) report or the NPDES permit renewal. OVEC has initiated discussions with OEPA and expects to have the opportunity to comment prior to receiving the draft renewal permit.

Clifty Creek

- 316(b) Section 122.21(r) report filed with IDEM in January 2019.
- IDEM to act on cooling system upgrades next permit cycle (i.e. during the 2022 NPDES permit renewal).

General Environmental Compliance Update

- **CSAPR Update** – compliant with ozone season program (consistently operating below assurance levels)
- **MATS** – Both Plants have maintained compliance with MATS related obligations and emissions limits.
- **NAAQS** – Ambient network monitoring system around Kyger Creek Station shows attainment with SO₂ NAAQS – USEPA expected to change status for area around plant to “attainment” by end of year.
- **Landfill** – Both plants are undergoing landfill permit modifications and making modifications to landfill leachate management practices to reduce risk of future regulatory actions.

Clean Power Plan (CPP)/Affordable Clean Energy (ACE) Rule Update

- U.S. EPA repealed CPP and in a separate action issued ACE Rule on July 8, 2019. Both actions are undergoing legal challenges.
- ACE Rule became effective on September 6, 2019.
 - Inside the fence line Heat Rate Improvements at the unit level is defined as the Best System of Emissions Reduction (BSER).
 - States have three years from ACE effective date to submit implementation plans.
 - No emissions trading and no fleet, facility or common stack averaging.
- OVEC is working with other state utilities, as well as Ohio EPA and IDEM on a state implementation program.
 - Both OEPA and IDEM have requested completion of a unit specific ACE questionnaire
 - Kyger Creek data filed in February 2020
 - Clifty Creek filing due in mid-August 2020. IKEC's responses are prepared and undergoing internal review prior to submittal.
 - On March 25, 2020, Ohio EPA issued draft "Power Plant Efficiency Rules" to comply with the federal ACE rule – comments on draft due April 27, 2020. Proposed compliance timeline for meeting standard of performance – July 8, 2024.

Gypsum and Ash Beneficial Reuse

Kyger Creek

- Over 90% of gypsum continues to be sold for wallboard production.
 - A long-term gypsum contract in place.
- Boiler slag sales are above forecast.
- Participating in conversations with potential strategic partners interested in marketing fly ash.

Clifty Creek

- 100% of gypsum being sold for wallboard production.
 - A long-term gypsum contract in place.
- Pursuing environmental permitting for the installation of on-site barge loading system, gypsum currently being trucked off site.
- Fly ash marketing
 - To date in 2020, IKEC has sold nearly 18% of its fly ash production.
 - Potential partnership with 3rd party to increase sales near full production.

Benefits for both Plants:

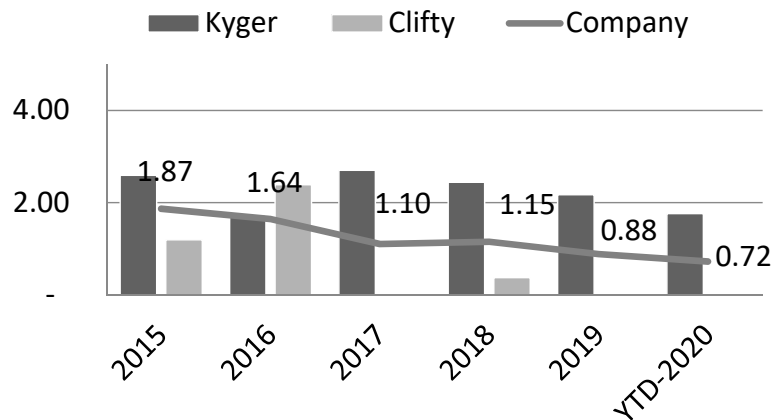
- Reduced fuel costs, reduced future landfill expansion costs, reduced future environmental compliance risks.

Mid-Year Operational and Financial Performance Update

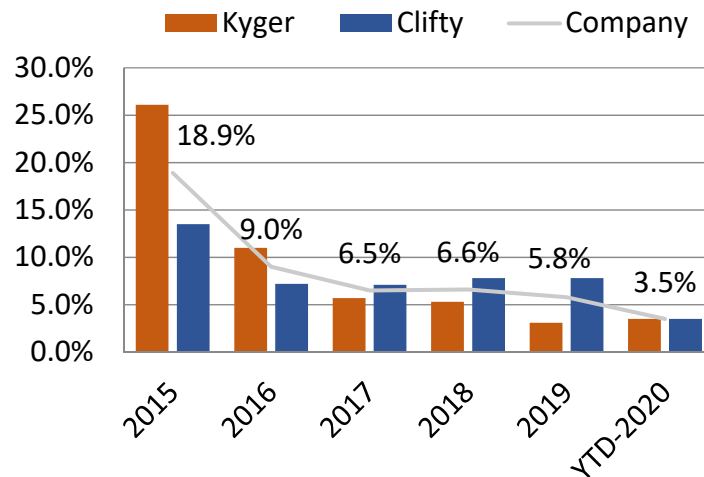


2015 – YTD 2020 Performance

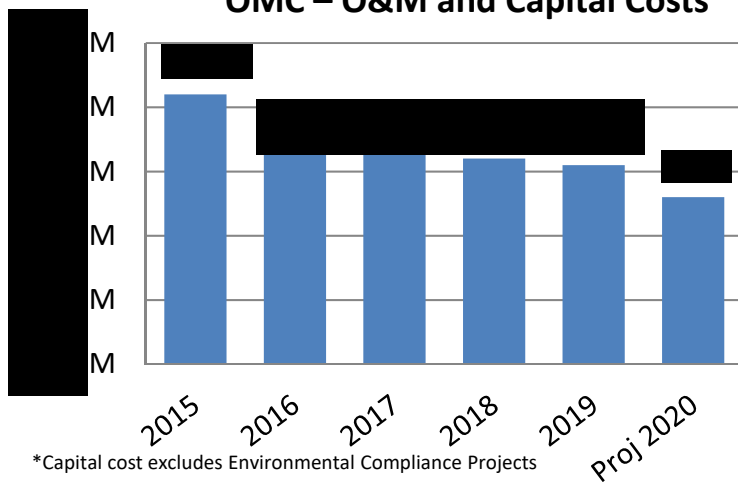
**Safety
 (Employee Recordable Rate)**



Equivalent Forced Outage Rate

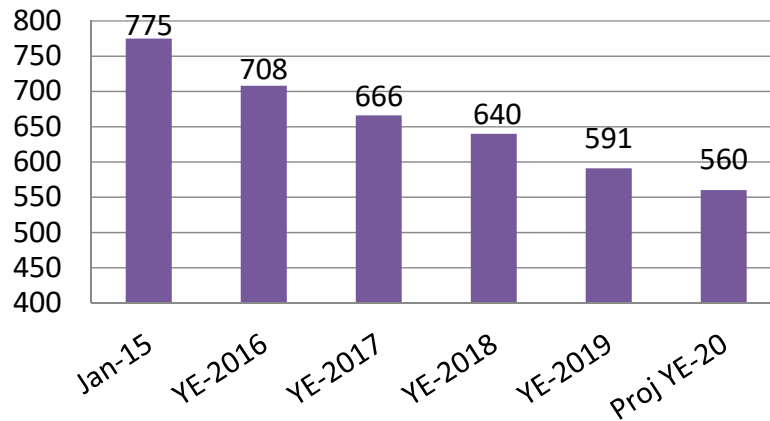


OMC – O&M and Capital Costs



*Capital cost excludes Environmental Compliance Projects

Employee Count



Open Book Leadership (OBL) Scoreboard Update – Mid-Year Performance

OVEC /IKEC – OBL Plant Scoreboards								
		Kyger Creek Plant			Clifty Creek Plant			
		2019	2020		2019	2020		
		Actual	Target	June YTD Actual	Actual	Target	June YTD Actual	
Safety	Recordable Rate (YTD)	2.17	0.55	1.76	0.00	0.55	0.00	
	DART Rate (YTD)	0.87	0.20	0.88	0.00	0.20	0.00	
Environmental Compliance	MATS (Mercury, Particulate Matter, Acid Gases)	Compliance	Compliance	Compliance	Compliance	Compliance	Compliance	
	NOx Tons (Ozone Season)	1,005	1,040	342	1,193	1,381	342	
Drivers of Critical Number Total Production Power Cost \$/MWhr	Reliability	EFOR	3.1%	5.5%	3.5%	7.8%	5.5%	3.5%
		Commercial Availability	91%	90.0%	90%	90%	90.0%	92%
	Energy Cost	Heat Rate ₁	10,636	10,823	10,918	10,788	10,929	11,128
		Fuel Cost Total Fuel/ Net Gen			\$24.09			\$28.66
	Demand Cost	O&M						
	Continuous Improvement	Process Improvements ₂	573	784	491	1,470	1,050	859

- Reviewed at Plant Huddles (weekly)
- Future Focused (80% / 20%)
- Highlight Opportunities for Improvement
- Metrics are key drivers to Critical Number - \$/MWhr

1) Heat Rate targets adjusted for increased low load operations
 2) Process Improvements include standard work development

OVEC Power Cost 2020

- **Weak Market and COVID impact drive Power Cost Variance**
- **Focus on controllable costs**
 - 2020 Total Demand Costs (non-fuel) projecting \$ [REDACTED]
 - 2020 Normalized (2019 market utilization) – YTD Power Cost [REDACTED] \$/MWhr
 - \$ [REDACTED] \$/MWhr reduction from 2019 Actual YTD-June

2020 Power Cost \$/MWhr				
	Org Budget	Projection	Variance	Variance Excluding Generation Impact
Generation (MWhr)	[REDACTED]			
Energy				
Operating Cost				
Generation Cost				
Transmission Cost				
Non- Operating Cost				
Total Billable Cost				

OHIO VALLEY ELECTRIC CORPORATION (OVEC)
INDIANA-KENTUCKY ELECTRIC CORPORATION (IKEC)
Agenda
Boards of Directors' Meeting
December 15, 2020

1. Call Meeting to Order (2 p.m.) Paul Chodak III
2. Roll Call Kay Martin
 - Quorum (OVEC and IKEC)
3. Safety and Culture Moment Justin Cooper
 - COVID Update
4. Administrative Items: Justin Cooper
 - a. Approve Minutes of Prior Meetings
 - Resolutions (OVEC and IKEC)
 - b. Election of Director
 - Gustavo Garavaglia (DPL) to replace Mark Miller (DPL) as OVEC Director
 - Resolutions (OVEC)
 - c. Annual Election of Officers and Board Committees
 - Resolutions (OVEC & IKEC)
5. AEP Service Corporation Service Charges Kay Martin
 - 2020 Projected Actual
 - 2021 Budget
 - 2021 Resolutions (OVEC and IKEC)
6. OVEC and IKEC Environmental Update Mike Brown
 - Compliance and Project Updates
7. Construction Budget Review Justin Cooper
 - 2021 Construction Budget
 - 2021 Resolutions (OVEC and IKEC)
8. Report on Operating Activities Justin Cooper
 - 2020 Culture Survey Results Cliff Carnes
 - 2020 Strategic Plan Annette Hope
9. OVEC Operating Committee Report Scott Cunningham
10. Treasurer's Report Kay Martin
 - Report on 2020 and 2021 Finance Activities Justin Cooper
 - Resolution for Line of Credit Extension/Agreement (OVEC)
11. OVEC Power Cost Projections Justin Cooper
 - 2020 Projected Actual
 - 2021-2024 Projection
12. Independent Auditor's Comments and Questions Bob Bitter
 - (Deloitte & Touche) Chad Palmer
13. Open Discussion
- Adjournment
- Executive Session
- Adjournment



**Boards of Directors' Meeting Presentation
December 15, 2020**

Administrative Items

OHIO VALLEY ELECTRIC CORPORATION (OVEC)
INDIANA-KENTUCKY ELECTRIC CORPORATION (IKEC)
Resolutions of Minutes of Prior Meetings
Boards of Directors' Meeting
December 15, 2020

OVEC

RESOLVED, that the Minutes of the Special Meetings of the Board of Directors of this Corporation, held on December 12, 2019, April 27, 2020, May 5, 2020, and July 8, 2020, are approved.

IKEC

RESOLVED, that the Minutes of the Special Meetings of the Board of Directors of this Corporation, held on December 12, 2019, April 27, 2020, May 5, 2020, and July 8, 2020, are approved.

Gustavo Garavaglia
Vice President and Chief Financial Officer, Dayton Power & Light



Gustavo Garavaglia, is Chief Financial Officer of IPALCO and the US SBU and has served as Vice President and Chief Financial Officer of IPL since November 2018. Mr. Garavaglia also serves as Chief Financial Officer of DPL and Vice President and Chief Financial Officer of DP&L and serves as a director or officer of other AES affiliates, including as Vice President and Chief Financial Officer of AES U.S. Investments and as a Director of IPL. Previously, Mr. Garavaglia served as the Director of Financial Planning and Analysis and Development and Transactions for the AES Mexico, Central America, and Caribbean SBU (the “MCAC SBU”) from April 2017 to November 2018. Mr. Garavaglia has held several other positions at AES, including as Senior Manager of Development and Transactions for AES MCAC from March 2015 to March 2017, Investment Analysis and Risk Manager for AES Brazil from November 2013 to February 2015, M&A Associate for AES from May 2013 to November 2013, and Strategic Planning Specialist for AES Brazil from June 2012 to April 2013. Mr. Garavaglia received a Bachelor’s degree in Electrical Engineering from University of Campinas (Unicamp) and a Master’s degree in Business from FGV Brazil, and is a CFA Charterholder.

OHIO VALLEY ELECTRIC CORPORATION (OVEC)
INDIANA-KENTUCKY ELECTRIC CORPORATION (IKEC)
Resolutions of Election
Board of Directors' Meeting
December 15, 2020

WHEREAS, effective as of December 15, 2020, Mr. Mark Miller resigned as a member of the Board of Directors (Board) of OVEC;

WHEREAS, OVEC and IKEC management has recommended to the remaining members of their respective Boards those persons named below to be elected and/or appointed as Director to the OVEC Board of OVEC.

NOW, THEREFORE, BE IT:

RESOLVED, that, subject to any necessary action by FERC under Section 305 of the Federal Power Act, Mr. Gustavo Garavaglia be elected a Director of the Board of OVEC.

RESOLVED, that the elections and appointments shall be effective as of December 15, 2020.

OHIO VALLEY ELECTRIC CORPORATION (OVEC)
Resolutions of Election
Board of Directors' Meeting
December 15, 2020

RESOLVED, that the following individuals be and hereby are appointed to serve as members of the Executive Committee of the Corporation pursuant to Article VI of the Code of Regulations of the Corporation:

Lonnie E. Bellar
Paul Chodak III
Patrick W. O'Loughlin
David W. Pinter
Raja Sundararajan
John A. Verderame

RESOLVED, that the following individuals be and hereby are confirmed to serve as Chairwoman and members of the Human Resources Committee of the Corporation pursuant to Section II of the Human Resources Committee Charter:

Thomas Alban
Christian T. Beam
Lonnie E. Bellar
Julie Sloat - Chairwoman

RESOLVED, that the following individuals be and hereby are elected to the offices of the Corporation set forth opposite their respective names pursuant to Article V of the Code of Regulations of the Corporation:

President	Paul Chodak III
Vice President, Chief Operating Officer and Chief Financial Officer.....	Justin J. Cooper
Secretary and Treasurer	Kassandra K. Martin
Assistant Secretary and Assistant Treasurer	Julie Sloat

INDIANA-KENTUCKY ELECTRIC CORPORATION (IKEC)
Resolutions of Election
Board of Directors' Meeting
December 15, 2020

RESOLVED, that the following individuals be and hereby are appointed to serve as members of the Executive Committee of the Corporation pursuant to Article V of the By-Laws of the Corporation:

- Paul Chodak III
- Patrick W. O'Loughlin
- David W. Pinter

RESOLVED, that the following individuals be and hereby are elected to the offices of the Corporation set forth opposite their respective names pursuant to Article IV of the By-Laws of the Corporation:

President	Paul Chodak III
Vice President, Chief Operating Officer and Chief Financial Officer.....	Justin J. Cooper
Secretary and Treasurer	Kassandra K. Martin
Assistant Secretary and Assistant Treasurer	Julie Sloat

AEP Service Corporation Service Charges & Budget

OHIO VALLEY ELECTRIC CORPORATION (OVEC)
 INDIANA-KENTUCKY ELECTRIC CORPORATION (IKEC)
 AMERICAN ELECTRIC POWER SERVICE CORPORATION CHARGES
 FOR CALENDAR YEAR 2020 PROJECTED THROUGH DECEMBER 31, 2020

	BUDGET FOR 2020			PROJECTED THROUGH 12/31/2020			DIFFERENCE OVER (UNDER)
	<u>OVEC</u>	<u>IKEC</u>	<u>TOTAL</u>	<u>OVEC</u>	<u>IKEC</u>	<u>TOTAL</u>	
<u>GENERAL SERVICES</u>							
OPERATION & MAINTENANCE							
WORK MANAGEMENT SYSTEM - MAXIMO CONVERSION							
ENVIRONMENTAL ACTIVITIES							
TRANSMISSION							
FUEL PROCUREMENT AND TRANSPORTATION							
NERC/CIP, CYBER SECURITY& IT SOFTWARE							
GENERAL ADMINISTRATIVE SERVICES							
OTHER GENERAL SERVICES							
TOTAL GENERAL SERVICES							

OHIO VALLEY ELECTRIC CORPORATION (OVEC)
INDIANA-KENTUCKY ELECTRIC CORPORATION (IKEC)
AMERICAN ELECTRIC POWER SERVICE CORPORATION CHARGES
BUDGET FOR CALENDAR YEAR 2021

	BUDGET FOR 2021		
	<u>OVEC</u>	<u>IKEC</u>	<u>TOTAL</u>
OPERATION & MAINTENANCE			
ENVIRONMENTAL ACTIVITIES			
NERC/CIP, CYBER SECURITY & IT SOFTWARE			
FUEL PROCUREMENT & TRANSPORTATION			
TRANSMISSION			
GENERAL ADMINISTRATIVE SERVICES			
OTHER GENERAL SERVICES			
TOTAL AEPSC GENERAL SERVICES			

**OHIO VALLEY ELECTRIC CORPORATION (OVEC)
INDIANA-KENTUCKY ELECTRIC CORPORATION (IKEC)
AEP Service Corporation 2021 Service Charges
Boards of Directors' Meeting
December 15, 2020**

OVEC

RESOLVED, that the officers of Ohio Valley Electric Corporation may request and obligate Ohio Valley Electric Corporation to pay for general services, exclusive of services for specific projects previously approved, under the Agreement among American Gas and Electric Service Corporation (now American Electric Power Service Corporation), Ohio Valley Electric Corporation, and Indiana-Kentucky Electric Corporation dated December 15, 1956, in an amount which, when added to amounts paid for general services by Indiana-Kentucky Electric Corporation, exclusive of services for specific projects previously approved, would aggregate a maximum of [REDACTED] million for calendar year 2021.

IKEC

RESOLVED, that the officers of Indiana-Kentucky Electric Corporation may request and obligate Indiana-Kentucky Electric Corporation to pay for general services, exclusive of services for specific projects previously approved, under the Agreement among American Gas and Electric Service Corporation (now American Electric Power Service Corporation), Ohio Valley Electric Corporation, and Indiana-Kentucky Electric Corporation dated December 15, 1956, in an amount which, when added to amounts paid for general services by Ohio Valley Electric Corporation, exclusive of services for specific projects previously approved, would aggregate a maximum of [REDACTED] million for calendar year 2021.

OVEC and IKEC Environmental Update

CSAPR Regulatory Update

DC Circuit Court Ruling on 9/13/19 Remanded CSAPR Update Rule to US EPA

In response to Court remand, EPA proposed new CSAPR Update Rules on October 30, 2020

- Comments due to EPA on December 14, 2020.
- New Rule expected to become final in the spring of 2021, and apply to 2021 May-September Ozone Season.
- Proposal includes more restrictive NO_x ozone season state budget caps for 12 states (including Ohio and Indiana).
 - Allowance allocations and cap and trade components are retained.
 - State budget for Indiana is substantially lower than prior rule.
 - OVEC evaluating compliance options internally while concurrently working with utility trade groups to seek additional flexibility under the rule.

Clifty Creek

- EPA is proposing a 40+% reduction in NO_x ozone season state budget.
 - OVEC is working with other Utilities and legal counsel on technical review of proposed state budget calculations.
- Internal NO_x optimization workgroup will be focused on optimizing SCR performance and unit generation under new rule.

Kyger Creek

- Proposed state budget reduction of 8% - expected to have limited impacts on Kyger's unit dispatch/operation during the 2021 ozone season.

Effluent Limitation Guidelines Regulatory Update

Final ELG Steam Electric Reconsideration Rule published in Federal Register on October 13, 2020

- The Rule includes:
 1. Amended Best Available Technology (BAT) determination for FGDWW discharges
 - Revised final effluent limits for arsenic, mercury, selenium, and nitrate-nitrite.
 - Revised compliance timeframe associated with BAT for treatment of FGDWW to “no later than” December 31, 2025.
 2. Changes for BATW BAT determination include limited blowdown (up to 10%) and a “no later than” compliance date of December 31, 2025.
- With final rule issuance, OVEC has initiated updated cost estimates and compliance analysis of potential use of Bio Reactors or similar technology for FGDWW ELG compliance.

Related Permit Activities:

Clifty Creek

- Permit Modification Request was filed with IDEM to remove the April 1, 2022, ELG limits and associated compliance date for FGDWW and BATW discharges, updated modification request filed on November 24, 2020 - request removal of obsolete ELG conditions.
- IDEM is expected to act on modification now that the EPA finalized ELG Reconsideration Rule.

Kyger Creek

- NPDES Permit Renewal Application was filed in October 2018. OEPA is still working to draft a renewal NPDES permit – no need to revise this permit to remove/eliminate obsolete ELG permit conditions.

CCR Regulatory Update

CCR Rule Changes – Part A Final Rule

CCR Part A Final Rule published in Federal Register on August 28, 2020

- The Final Rule required that all unlined CCR surface impoundments cease receipt of CCR and non-CCR waste streams and initiate closure by **April 11, 2021**.
 - Date to file a demonstration with US EPA for an alternate date to cease ash placement and initiate closure was **November 30, 2020**. The alternative date must still be a technically feasible and can be no longer than October 17, 2023. Possible 1-year extension for qualifying surface impoundments.
- As approved in the May 5, 2020 BOD meeting, OVEC is investing in Dry Fly Ash Conversion (Kyger), Boiler Slag Settling Basins, Low Volume Waste Water Treatment Systems and Water Redirects to cease sending CCR and non-CCR waste streams and initiate pond closures by October 2023.
 - **OVEC prepared and submitted the required Demonstrations for a site-specific alternative closure deadline by the November 30, 2020, filing date.**
 - Demonstrations outline alternate technically feasible dates beyond April 11, 2021, to cease placement of ash and initiate pond closures.
 - OVEC incorporated feedback from US EPA in the final submissions.

CCR/ELG - Environmental Projects Update

Dry Fly Ash Conversion – Kyger Creek

- Finalizing Front-End Engineering Development (FEED):
 - Geotechnical exploration of the site and data evaluation completed to confirm foundation design
 - Preparing required environmental submittals to OEPA
- Equipment Procurement – In Progress, deliveries expected to be completed by March 2022
- Construction start forecasted in April/May 2021

Phase I Closure of Clifty Creek West Boiler Slag Pond (WBSP) – Clifty Creek

- IDEM has completed its technical review of the Phase I Closure design
- IKEC held its public meeting on November 20
- IKEC anticipates receiving a permit from IDEM by December 30

CCR/ELG - Environmental Projects Update

Boiler Slag Settling Basins, Low Volume Wastewater Treatment System (LVWTS), Water Redirects & Ash Pond Closures – Kyger Creek and Clifty Creek

- Finalizing FEED:
 - Geotechnical exploration of the sites completed to confirm properties of the existing in situ materials, foundation soils, etc. to confirm foundation type and design
 - Refinement of Phase II project schedule
 - Design, Procurement, Construction, and environmental permitting activities are being built out
- Equipment Procurement – Bidding/Awards beginning February 2021, deliveries complete July 2022
- Target Construction start in May/June 2021
 - Scope and timelines provided in the Demonstrations filed with USEPA

Environmental Project Cost Update

Project Costs updated from Class 3 to current FEED/Bid estimate

- Current Capital Project estimated \$ [REDACTED] (BOD approved [REDACTED])

\$ [REDACTED] Total Capital Projects Clifty & Kyger	Class 3 Estimate (+30%/-20%)
+ \$ [REDACTED] Chemical Treatment System – Kyger	Risk Register Item Required (of the +\$ [REDACTED] identified)
+ \$ [REDACTED] Chemical Treatment System – Clifty	Risk Register Item Required (of the +\$ [REDACTED] identified)
+ \$ [REDACTED] Refined Scope and Updated Pricing	Due to refined engineering and increased material and labor pricing
- \$ [REDACTED] Cost Savings Ideas and Reductions	Value Engineering and Scope modification identified by OVEC and B&M (review still ongoing)
= \$ [REDACTED] Current Projected Capital Cost	Less than 1% change, excluding Risk Register Items

- OVEC and B&M will continue to look for opportunities to reduce scope and optimize cost with additional value engineering ideas.
 - Current FEED estimate include a 10% project contingency
- Capital Costs will be levelized for billing purposes at \$ [REDACTED] per year 2021-2023

Environmental Project Cost Update

Current cost estimates for related Decommissioning and Demolition (D&D) Funded Projects:

- FEED Price Estimates still in Development
 - Potential Boiler Slag Closure and LVWTS estimate increase of \$ [REDACTED]
 - Potential Cost increase due to updated material/labor estimates, refined scope and IDEM requirements.
 - Scope Reduction and Value Engineering Items currently being developed/reviewed
- Costs will be funded with current D&D billings, similar to other CCR required pond closures
 - Kyger South Fly Ash Pond
 - Clifty Land Fill Run Off Collection Pond
- Updated D&D study will be completed in 2021 to incorporate the final CCR and ELG rules

General Environmental Compliance Update - 2020

- **316 (b)** - 316(b) Section 122.21(r) reports filed in November 2018 (Kyger) and January 2019 (Clifty). Neither OEPA or IDEM have taken action, waiting for NPDES permit renewals.
- **MATS** – Both Plants have maintained compliance with MATS related obligations and emissions limits.
- **NAAQS** – Ambient network monitoring system around Kyger Creek Station shows attainment with SO₂ NAAQS – US EPA proposed rule on September 2, 2020, to change status for area around plant to “attainment” – expect EPA to issue a final rule by year end.
- **Landfill** – Both plants are undergoing landfill permit modifications and making modifications to landfill leachate management practices to reduce risk of future regulatory actions.

General Environmental Compliance – 2020 Process Improvements and Program Assessments

- **SO₂ mitigation** – Clifty Creek upgraded sorbent injection from Trona to Hydrated Lime – cost, performance, reliability and ash marketing benefits.
- **NO_x control reliability** - Kyger Creek improved NO_x removal performance and reliability with transition to direct urea injection.
- **Environmental Compliance Assessments** – third party assessment at Kyger Creek Station in 2020.
 - Evaluation of Compliance status and effectiveness of controls for six environmental programs (CCR, NPDES, CEMS, SPCC, CFCs, RICE)
 - Overall assessment indicates environmental compliance programs are being controlled/maintained
 - Minor improvements recommended in three areas – CEMS, CCR and NPDES programs

Affordable Clean Energy (ACE) Rule Update

U.S. EPA repealed CPP and in a separate action issued ACE Rule on July 8, 2019. Both actions continue to undergo legal challenges

- ACE Rule became effective on September 6, 2019.
 - Inside the fence line Heat Rate Improvements at the unit level is defined as the Best System of Emissions Reduction (BSER).
 - States have three years from ACE effective date to submit implementation plans.
 - No emissions trading and no fleet, facility or common stack averaging.
- OVEC is working with other state utilities, as well as Ohio EPA and IDEM on details of state implementation plans.
 - Unit specific ACE questionnaires submitted to state regulatory agencies.
 - Kyger Creek filed in February 2020.
 - Clifty Creek filed in August 2020.
 - Proposed compliance timeline for meeting standard of performance – July 8, 2024.
 - Ohio EPA issued Power Plant Efficiency Rules on December 2, 2020.

Gypsum and Ash Beneficial Reuse

Kyger Creek

- Nearly 100% of gypsum being sold for wallboard production.
 - A long-term gypsum contract in place.
- Boiler slag sales are above forecast.
- Participating in conversations with potential strategic partners interested in marketing fly ash.

Clifty Creek

- Nearly 100% of gypsum being sold for wallboard production.
 - A long-term gypsum contract in place.
- Pursuing environmental permitting for the installation of on-site barge loading system, gypsum currently being trucked off site.
- Fly ash marketing
 - IKEC is selling 50% of its fly ash production.

Benefits for both Plants:

- Reduced fuel costs, reduced future landfill expansion costs, reduced future environmental compliance risks.

Construction Budget Review



2021 Construction Budget

(requesting BOD approval)

Year	Loc	Project Name	Amount	IRR%	Paybk
2021	KCP	KC1 1st Baffle Wall Replacement			
2021	KCP	KC4 FD VFD Replacement			
2021		Minor Projects (under \$100k)			
2021		Contingency Fund			
2021 Total					

2021 Projects Economic Metrics Range:

Internal Rate of Return (IRR)
 Target: [REDACTED]
 Avg: [REDACTED]

Payback Period
 Target: [REDACTED]
 Avg: [REDACTED]

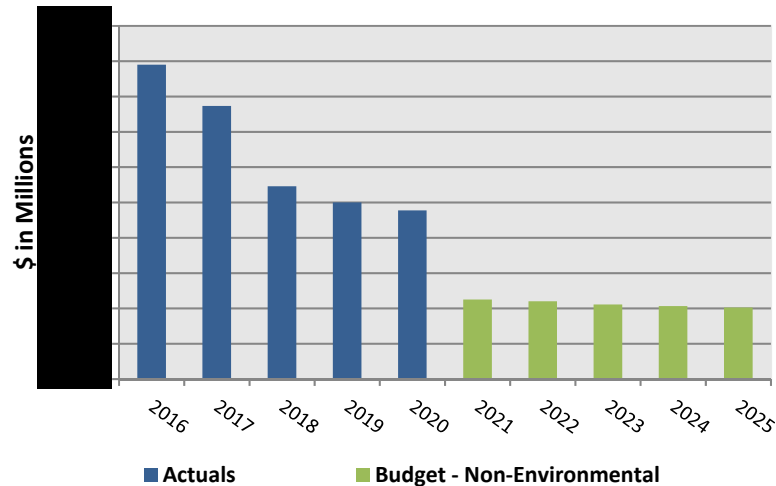
2021 Construction Projects highlights a [REDACTED] reduction from 2019 budget, while continuing the replacement of original boiler tubing to address current and future reliability issues.

- Examples of Projects Delayed due to Prioritization and Risk Evaluation**
- Baffle Wall Replacements
 - Generator Rewinds



Construction Budget Forecast

Historic and Projected Construction Costs



Construction Budget Forecast:

The Construction Forecast has been reduced through prioritization to provide funding for upcoming Environmental Projects and help to minimize the impact on total Demand Cost.

Projected Non-Environmental Construction Projects will continue to be reviewed and prioritized based on reliability impact and related economic benefit.

OVEC/IKEC Construction Forecast			
Year	Loc	Project Name	Amount
2022	KCP	KC4 1st Baffle Wall Replacement	
2022	CCP	Bus and Middle Air Blast Circuit Breaker Replacement (11/12 of 17)	
2022		Minor Projects (under \$500k)	
2022		Contingency Fund	
2022 Total Non-Environmental			
2023	KCP	KC1 and KC2 FD VFD Replacement	
2023	SYS	Microwave Communication System Replacement	
2023	SYS	X530 Switchyard Bypass Project (1 of 2)	
2023	CCP	Bus and Middle Air Blast Circuit Breaker Replacement (13/14 of 17)	
2023	CCP	Slagblower Controls Replacement - CC2-6	
2023		Minor Projects (under \$500k)	
2023		Contingency Fund	
2023 Total Non-Environmental			
2024	CCP	CC4 SSH Inlet Element Replacement	
2024	KCP	KC3 and KC5 FD VFD Replacement	
2024	SYS	X530 Switchyard Bypass Project (2 of 2)	
2024		Minor Projects (under \$500k)	
2024		Contingency Fund	
2024 Total Non-Environmental			
2025	CCP	CC6 1st Baffle Wall Replacement	
2025	SYS	Bus and Middle Air Blast Circuit Breaker Replacement (15/16 of 17)	
2025		Minor Projects (under \$500k)	
2025		Contingency Fund	
2025 Total Non-Environmental			

OHIO VALLEY ELECTRIC CORPORATION (OVEC)
INDIANA-KENTUCKY ELECTRIC CORPORATION (IKEC)
OVEC-IKEC Construction Budget
Boards of Directors' Meeting
December 15, 2020

OVEC-IKEC

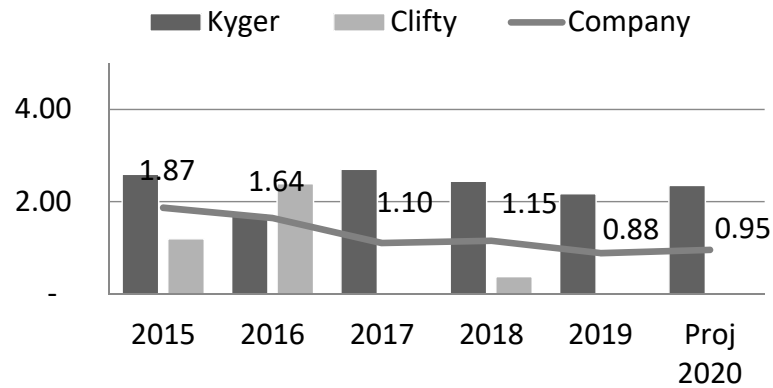
RESOLVED, that the OVEC-IKEC Construction Budget for 2021, indicating estimated total expenditures of \$ [REDACTED] for new or replacements of property, and [REDACTED] for Management Reserve, which totals \$ [REDACTED] is approved.

Report on Operating Activities

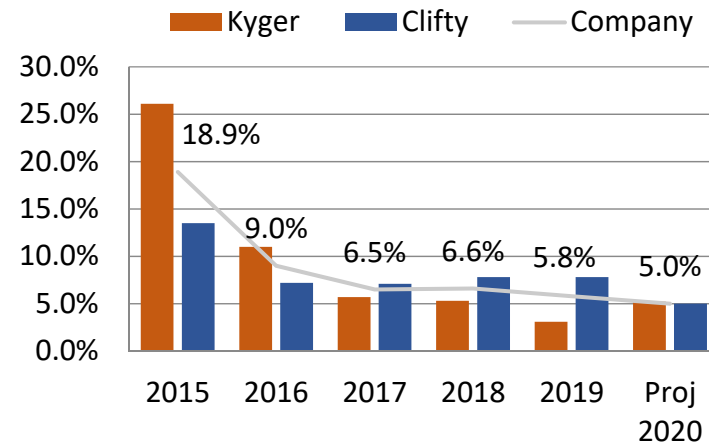


2015 – 2020 Performance

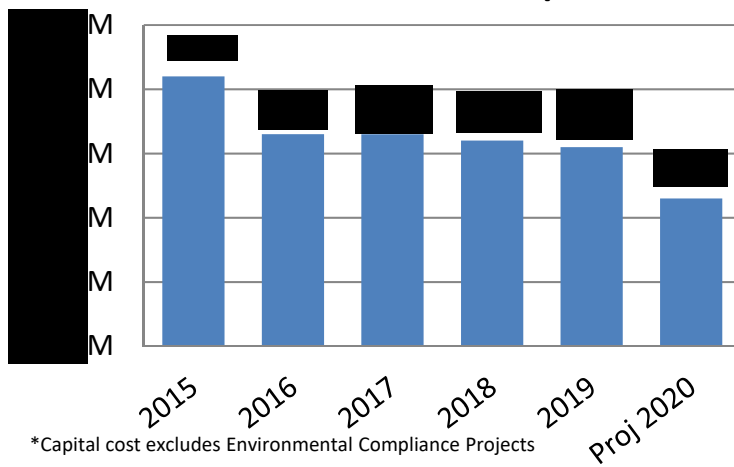
Safety
 (Employee Recordable Rate)



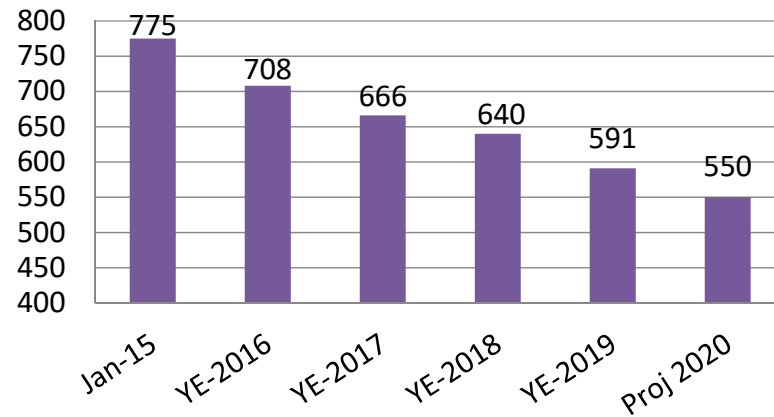
Equivalent Forced Outage Rate



OMC – O&M and Capital Costs



Employee Count



Open Book Leadership (OBL) Scoreboard Update – Year-End Performance

OVEC /IKEC – OBL Plant Scoreboards								
		Kyger Creek Plant			Clifty Creek Plant			
		2019	2020		2019	2020		
		Actual	Target	Projected YE	Actual	Target	Projected YE	
Safety	Recordable Rate (YTD)	2.17	0.55	2.34	0.00	0.55	0.00	
	DART Rate (YTD)	0.87	0.20	1.87	0.00	0.20	0.00	
Environmental Compliance	MATS (Mercury, Particulate Matter, Acid Gases)	Compliance	Compliance	Compliance	Compliance	Compliance	Compliance	
	NOx Tons (Ozone Season)	1,005	1,040	949	1,193	1,381	1,165	
Drivers of Critical Number Total Production Power Cost \$/MWhr	Reliability	EFOR	3.1%	5.5%	5.2%	7.8%	5.5%	5.0%
		Commercial Availability	91%	90.0%	90%	90%	90.0%	92%
	Energy Cost	Heat Rate ₁	10,636	10,823	11,084	10,788	10,929	11,166
		Fuel Cost Total Fuel/ Net Gen			\$23.70			\$27.97
	Demand Cost	O&M						
	Continuous Improvement	Process Improvements ₂	573	784	921	1,470	1,050	1,258

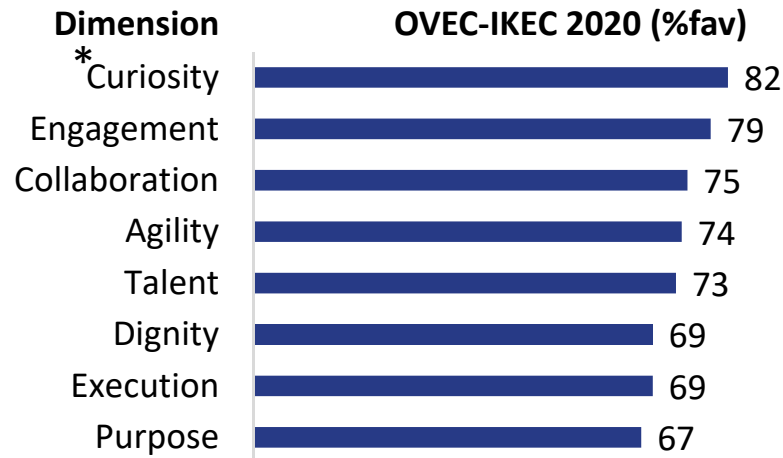
- Reviewed at Plant Huddles (weekly)
- Future Focused (80% / 20%)
- Highlight Opportunities for Improvement
- Metrics are key drivers to Critical Number - \$/MWhr

1) Heat Rate targets adjusted for increased low load operations
 2) Process Improvements include standard work development

2020 Culture Survey Highlights

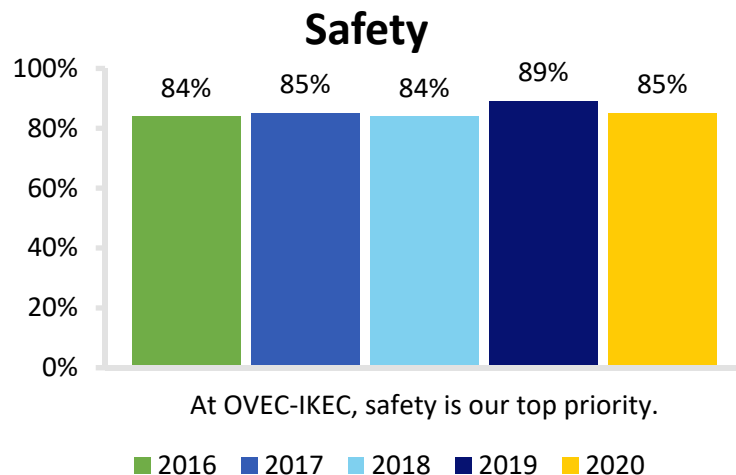
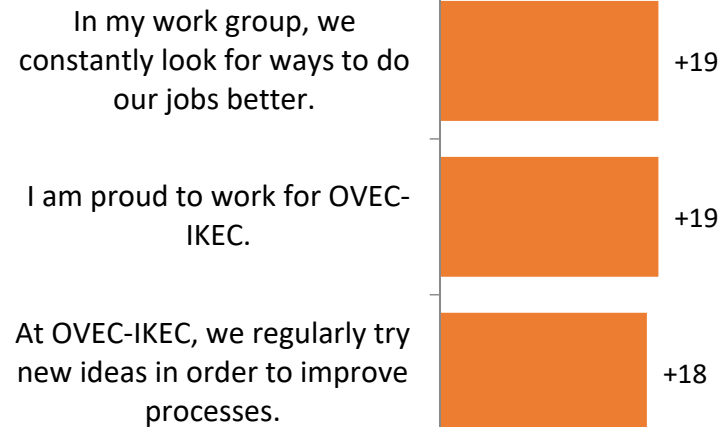
Participation - a record high at 87%

Dimension Summary



*Curiosity - The extent we are seeking and capitalizing on opportunities to learn, improve, and innovate

Top Variances Compared to Utilities Benchmark



I feel safe at work to do or say what I think is best for OVEC-IKEC.

-6

Communication in OVEC-IKEC is open and honest.

-7

People here are held accountable for results/performance.

-31

OVEC 2020 Strategic Plan - Corporate

Mission Objective	Initiative	Departmental Tactical Actions
Zero Harm	Improve Safety Culture by Making Safety Personal	Make Safety Personal and Communicate Business Impacts
		Increase Personal Commitment and Accountability
	Integrate Contractors/Strategic Partners Into OVEC/KEC Safety Culture	Contractor/Strategic Partner Oversight and Safety Standardization
	Improve Understanding and Use of HPI Tools	In-Field Training and Building Skill
Provider of Choice	Increase Reliability, Reduce EFOR, MOF and Optimize Commercial Availability	Disciplined Focus on Process Ownership and Asset Health to Prioritize Spend to Drive Reliability
	Improve Heat Rate	Cross Functional Heat Rate Team to Prioritize Actions and Communicate Results to Employees
		Focused Heat Rate Communication Based on Job Classification
	Continue to Identify and Optimize Core Business	Communicate Plans to Employees
Improve Fiscal Responsibility	Financial Education - Provide Leadership with Materials to Inform Employees of Corporate Finances	
Culture of Engagement	Improve Communication Processes	Execute Department Culture Improvement Plan Based on Gaps Identified in the Survey
		Communication Conducted in Small Groups in a Face-to-Face Format
		Communicate Results, Associated Actions and Outcomes
	Strengthen Accountability	Enhance the In-Field Observation Process to Include All Aspects of the Business
Improve Feedback and Coaching		
Operational Excellence	Improved Team Performance	Continus Cross-Functional Workforce Training
		Improve on Inter and Intra-Departmental Collaboration
	Employee Development	Skill and Knowledge Assessment to Enhance Development Plans for All Employees
	Commitment to Environmental Excellence	Pursue Environmental Excellence through Employee Engagement
Successful WAM Implementation	Quality and Focused WAM Refresher Training with Appropriate Energy	
Continuous Improvement	Optimize Continuous Improvement Process (CIP) and Open Book Leadership (OBL)	Focus on Quality CIP Engagement
	Root Cause Analysis (RCA) Focus	Implement Targeted Training for the RCA Process, Including Associated Criteria Based on Job/Department Functions
		Effectively Communicate Formal RCA Findings
Standard Work Focus	Based on Employee Input, Develop Standard Work to Ensure Knowledge Transfer to Optimize Performance	

- 1 - Initiative is a broad reaching generalized need.
- 2 - Tactical Action is a specific action to achieve a desired goal.
- 3 - Possible additional Tactical Actions to be determined by Business Unit.

OVEC 2020 Strategic Plan – Kyger Creek

Mission Objective	Initiative	Tactical Actions
Zero Harm	Improve Safety Culture by Making Safety Personal	Implement process to require written JHA for all jobs, with compliance and quality checking Implement process to require field evaluation of all jobs with elevated risk (use MELA conditions as trigger)
	Integrate Contractors/Strategic Partners into the OVEC/IKEC Safety Culture	Contractor/Strategic Partner Oversight and Safety Standardizations - Joint Safety Planning Meetings Prior to All Planned Outages
	Improve Understanding and Use of HPI Tools	In-Field Training and Building Skill - Improve Use of Safety Signs with HPI Triggers Placed in High Risk Areas
Provider of Choice	Increase Reliability, Reduce EFOR, MOF and Optimize Commercial Availability	Disciplined Focus on Process Ownership and Asset Health to Prioritize Spend to Drive Reliability with Monthly Asset Owner Meetings
	Improve Heat Rate	Cross Functional Heat Rate Team to Prioritize Actions and Communicate Results to Employees - Monthly Team Meetings Focused on High Impact Items
	Continue to Identify and Optimize Core Business	Communicate Plans to Employees with Explaining the "Why" and Review & Update Core versus Non-Core Quarterly
Culture of Engagement	Improve Fiscal Responsibility	Financial Education - Provide Leadership with Materials to Inform Employees of Corporate Finances with Improving Tracking Tools
	Improve Communication Processes	Communication Conducted in Small Groups in a Face-to-Face Format with Focus on Department Influence and & Action Items
Operational Excellence	Strengthen Accountability	Improve Feedback and Coaching with Development of a QA/QC process for Field-Observations
	Improved Team Performance	Continue Cross-Functional Workforce Training by Continued Development of Cross Functional Work Activities
	Employee Development	Skill and Knowledge Assessment to Enhance Development Plans for All Employees with Focus on Operations and Maintenance Assessments
Continuous Improvement	Commitment to Environmental Excellence	Pursue Environmental Excellence through Employee Engagement with Implementation of Environmental Good Catch Program for Awareness and Prevention
	Successful WAM Implementation	Quality and Focused WAM Refresher Training with Appropriate Energy with 100% Completion of Training
Continuous Improvement	Optimize Continuous Improvement Process (CIP) and Open Book Leadership (OBL)	Focus on Quality CIP Engagement with Clearly Defined Expectations & Improved Tracking and Continued Effort (during COVID)
	Root Cause Analysis (RCA) Focus	Implement Targeted Training for the RCA Process, Including Associated Criteria Based on Job/Department Functions with Selecting and Training RCA Champions
	Standard Work Focus	Based on Employee Input, Develop Standard Work to Ensure Knowledge Transfer to Optimize Performance with Identify Job Tasks Needing Standard Work Creation

Kyger Creek Plant's Strategic Plan **aligns directly** with OVEC's Corporate Strategic Plan's Mission Objectives and Initiatives

2 Top Areas of Success

2 Top Areas of Opportunity

OVEC 2020 Strategic Plan – Clifty Creek

Mission Objective	Initiative	Tactical Actions
Zero Harm	Improve Safety Culture by Making Safety Personal	Make Safety Personal and Communicate Business Impact - Safety Day, "Carry Safety Home" and other programs/slogans and reminders
	Integrate Contractors/Strategic Partners into the OVEC/IKEC Safety Culture	Contractor/Strategic Partner Oversight and Safety Standardizations - Include in Maintenance Daily Huddle
	Improve Understanding and Use of HPI Tools	In-Field Training and Building Skill - "Back to the Basics" HPI Tool Emphasis on JSA, 2 Minute Rule, and Stop When Uncertain
Provider of Choice	Increase Reliability, Reduce EFOR, MOF and Optimize Commercial Availability	Disciplined Focus on Process Ownership and Asset Health to Prioritize Spend to Drive Reliability - Annual Asset Health Reporting
	Improve Heat Rate	Cross Functional Heat Rate Team to Prioritize Actions and Communicate Results to Employees
	Continue to Identify and Optimize Core Business	Communicate Plans to Employees by Tell the "Why?" And Engage the Team for Better Understanding
	Improve Fiscal Responsibility	Financial Education - Provide Leadership with Materials to Inform Employees of Corporate Finances with Qualitative Analysis of Monthly Projections and Annual Goals
Culture of Engagement	Improve Communication Processes	Continue One-on-One Meetings at Various Levels of the Organization
	Strengthen Accountability	Enhance the In-Field Observation Process to Include All Aspects of the Business
Operational Excellence	Improved Team Performance	Continue Cross-Functional Workforce Training by Identifying Cross-Functional Tasks Across All Departments
	Employee Development	Skill and Knowledge Assessment to Enhance Development Plans for All Employees with Desired Skills and Knowledge Identified and Communicated
	Commitment to Environmental Excellence	Pursue Environmental Excellence through Employee Engagement with Training on Prevention as well as Response
	Successful WAM Implementation	Quality and Focused WAM Refresher Training with Appropriate Energy with High Attendance Percentage in Each Training Class
Continuous Improvement	Optimize Continuous Improvement Process (CIP) and Open Book Leadership (OBL)	Focus on Quality CIP Engagement with Quality Metric and using OBL Scoreboard to Monitor
	Root Cause Analysis (RCA) Focus	Implement Targeted Training for the RCA Process, Including Associated Criteria Based on Job/Department Functions - Simplified Process "5 Why?" to Stimulate Broader Use
	Standard Work Focus	Based on Employee Input, Develop Standard Work to Ensure Knowledge Transfer to Optimize Performance with Monitoring as OBL Metric

Clifty Creek Plant's Strategic Plan **aligns directly** with OVEC's Corporate Strategic Plan's Mission Objectives and Initiatives

2 Top Areas of Success

2 Top Areas of Opportunity

Operating Committee Update

Update of Operating Committee

Study of PJM Ancillary Services Markets

- Contracted with Filsinger Energy Partners to conduct analysis into feasibility of participation
- Considered Regulation and Voltage/Reactive Support
 - Voltage/Reactive Support
 - OVEC's Voltage Control Equipment is fully depreciated which could reduce opportunity for revenue
 - Regulation Market
 - Modeling of prior years of OVEC data and PJM Regulation Market prices
 - Analysis is ongoing with review of potential additional maintenance costs and adequacy of system controls
 - Preliminary results indicate some potential for additional revenue from participation
 - Need to validate with 2020 data
 - PJM Market prices showing a downward trend
- Study projected to be complete Q1-2021

Treasurer's Report

OHIO VALLEY ELECTRIC CORPORATION (OVEC)
INDIANA-KENTUCKY ELECTRIC CORPORATION (IKEC) Attachment to Response to SC-1 Question No. 11
Treasurer's Report
Boards of Directors' Meeting
December 15, 2020

Case No. 2021-00393
Page 251 of 341
Arbough

	<u>OVEC</u>	<u>IKEC</u>	<u>Consolidated</u>
<u>CASH AND INVESTMENTS</u>			
Cash and Short-Term Investments	\$ 46,726,779	\$ -	\$ 46,726,779
DOE Settlement Reserve Account	64,662,018	-	64,662,018
Debt Reserve Account	113,956,611	-	113,956,611
Total Cash and Investments at October 31, 2020	<u>\$ 225,345,408</u>	<u>\$ -</u>	<u>\$ 225,345,408</u>
<u>PLANT DECOMMISSIONING & DEMOLITION (D&D) FUND</u>			
Total D&D Assets at October 31, 2020	<u>\$ 34,394,054</u>	<u>\$ 42,037,177</u>	<u>\$ 76,431,231</u>
<u>EMPLOYEE BENEFIT PLAN ASSETS</u>			
Pension Plan			\$ [REDACTED]
Supplemental Pension & Savings Plan			[REDACTED]
Union Retiree Medical VEBA Trust			[REDACTED]
Retiree Medical VEBA Trust			[REDACTED]
Retiree Life Insurance VEBA Trust			[REDACTED]
401(h)			[REDACTED]
Total Benefit Plan Assets at October 31, 2020			<u>\$ [REDACTED]</u>
<u>EQUITY</u>			
Common Stock, 100,000 shares outstanding	\$ 10,000,000	\$ 3,400,000	\$ 10,000,000
Retained Earnings	19,695,519	-	19,695,519
Total Equity at October 31, 2020	<u>\$ 29,695,519</u>	<u>\$ 3,400,000</u>	<u>\$ 29,695,519</u>
<small>(OVEC's ownership of IKEC's Capital Stock (17,000 shares) is eliminated in consolidation.)</small>			
<u>LONG-TERM DEBT</u>			
2006 Senior Unsecured Notes, Series A, 5.80%, due February 15, 2026	\$ 146,533,289	\$ -	146,533,289
2006 Senior Unsecured Notes, Series B, 6.40% due June 15, 2040	52,846,460	-	52,846,460
2007 Senior Unsecured Notes, Series AA, AB & AC, 5.90%, due February 15, 2026	104,653,790	-	104,653,790
2007 Senior Unsecured Notes, Series BA, BB & BC, 6.50% due June 15, 2040	40,185,240	-	40,185,240
2008 Senior Unsecured Notes, Series A, 5.92%, due February 15, 2026	21,699,800	-	21,699,800
2008 Senior Unsecured Notes, Series B & C, 6.71%, due February 15, 2026	83,590,821	-	83,590,821
2008 Senior Unsecured Notes, Series D & E, 6.91% due June 15, 2040	77,641,327	-	77,641,327
2017 Senior Unsecured Notes, Series A, Floating Rate, due August 4, 2022	100,000,000	-	100,000,000
2009 Tax Exempt Bonds, \$100M Series A-D, Floating Rate, due February 1, 2026	100,000,000	-	100,000,000
2010 Tax Exempt Bonds, \$100M Series A & B, Floating Rate, due February 1, 2040	100,000,000	-	100,000,000
2012 Tax Exempt Bonds, \$200M Series A, 5%, due June 1, 2039	200,000,000	-	200,000,000
2012 Tax Exempt Bonds, \$100M Series B & C, Floating Rate, due June 1, 2040	100,000,000	-	100,000,000
2019 Tax Exempt Bonds, \$100M Series A, 3.250%, due September 9, 2029	100,000,000	-	100,000,000
Total Long-Term Debt Outstanding at October 31, 2020	<u>\$ 1,227,150,727</u>	<u>\$ -</u>	<u>\$ 1,227,150,727</u>
<u>SHORT-TERM DEBT</u>			
Total Short-Term Debt Outstanding at October 31, 2020	<u>\$ 60,000,000</u>	<u>\$ -</u>	<u>\$ 60,000,000</u>

2020 and 2021 Financing Activities

2020 Financing Activities:

- \$150 M Maturities/Expiring Tax-Exempt Debt Agreements refinanced July 2020
 - Keybank and PNC – Co-lead Remarketers
 - [REDACTED]
 - \$150 M 2010A, 2012B, 2012C IFA Tax Exempt bonds – Remarketed, 10 yr tenor, 3% fixed rate, full amortization by 2030

2021 Projected Financing Activities:

- Q1 – Extension of Revolving Line of Credit - \$185 M Capacity, 3 yr Term, 6 member Bank group
 - Resolution requested
- Q3 - Refinance \$100 M IFA Tax Exempt Bonds (expiring agreement), with similar structure and amortization by 2030
- Q3 - Refinance/Repayment of \$100 M Taxable Private Placement (Apollo), [REDACTED]
[REDACTED]

Rating Agencies:

- Fitch (rating affirmed February 28, 2020) BBB-, Stable Outlook
- Moody's (rating affirmed June 18, 2020) Ba1, Positive Outlook

**OHIO VALLEY ELECTRIC CORPORATION (OVEC)
INDIANA-KENTUCKY ELECTRIC CORPORATION (IKEC)**

**Boards of Directors' Meeting
December 15, 2020**

WHEREAS, Ohio Valley Electric Corporation (the "**Corporation**") has in place an existing revolving credit facility with aggregate loan commitments of \$185 million (the "**Existing Revolving Credit Facility**") under that certain Credit Agreement, dated as of April 25, 2019, by and among the Corporation, the lenders parties thereto and KeyBank National Association ("**KeyBank**"), as administrative agent, for the purposes of funding the working capital requirements and other general corporate purposes of the Corporation (including capital expenditures);

WHEREAS, the commitments under the Existing Revolving Credit Facility are set to expire, and all outstanding loans under the Existing Revolving Credit Facility are set to mature, on April 25, 2022; and

WHEREAS, the Corporation has determined that it should refinance and modify certain of the terms of the Existing Credit Facility, including, but not limited to, extending the commitment period and the final maturity of the loans (the "**Amended Revolving Credit Facility**").

NOW, THEREFORE, BE IT:

RESOLVED, that the Corporation's entering into a credit agreement, or an amendment to the credit agreement for the Existing Revolving Credit Facility, and other agreements, documents and instruments in connection therewith, including entering into an engagement letter with KeyBank, any of its affiliates or any other arrangers, in order to effectuate the Amended Revolving Credit Facility or a new revolving credit facility that replaces the Existing Revolving Credit Facility, as the Corporation shall deem necessary, proper, desirable or appropriate, with aggregate commitments of not more than \$185 million and otherwise in such form and with such terms as the Corporation may deem necessary, proper, desirable or appropriate (the "**Amended Documents**") is hereby approved. Such approval of the Corporation shall be evidenced by the execution of the Amended Documents by any of the President, any Vice President, the Secretary, the Treasurer or any Assistant Secretary or Assistant Treasurer of the Corporation (each, an "**Authorized Officer**"); and further

RESOLVED, that each Authorized Officer is authorized and directed to execute and deliver on behalf of the Corporation the Amended Documents to which the Corporation is to be a party; and further

RESOLVED, that each Authorized Officer of the Corporation is authorized and directed to execute and deliver on behalf of the Corporation such other agreements, instruments, financing statements, documents or certificates and to do and perform such things and acts, as they shall deem necessary or appropriate to carry out the transactions authorized by this resolution or contemplated by the Amended Documents, including but not

limited to one or more future agreements entered into by the Corporation or any one or more future instruments, documents or certificates to be signed by the Corporation under any of the Amended Documents or otherwise for such purpose; and further

RESOLVED, that the Authorized Officers of the Corporation are each hereby authorized to negotiate, execute and deliver from time to time one or more agreements with counterparties selected by such Authorized Officer, the purpose of which is to manage the transactions contemplated herein, all upon such terms and conditions as said officer shall approve, said approval to be conclusively presumed by their execution and delivery of the Amended Documents; and further

RESOLVED, that the Authorized Officers of the Corporation are each hereby authorized and directed, in the name and on behalf of the Corporation, to do and perform, or cause to be done and performed, any and all such acts, deeds and things, to make, execute and deliver, or cause to be made, executed and delivered, all such consents, approvals, agreements, undertakings, documents, instruments or certificates, or to effect any necessary filings, with any and all appropriate regulatory authorities, state and federal, in the name and on behalf of the Corporation, to incur and pay all such fees and expenses and to engage such persons as each such Authorized Officer may, in the judgment of such Authorized Officer, deem necessary, proper, desirable or appropriate to effectuate or carry out fully the intent and purposes of the foregoing resolutions, including, but not limited to, the performance of the obligations of the Corporation under any agreement or document referred to herein or therein; and the execution by such Authorized Officers of any such consent, agreement, undertakings, document, instrument or certificate or the payment of any such fees and expenses or the engagement of such persons or the doing by them of any act in connection with the foregoing matters shall conclusively establish their authority therefor and the approval and ratification of the agreements, undertakings, documents, instruments or certificates so executed, the expenses so paid, the persons so engaged and the actions so taken; and further

RESOLVED, that the Secretary or an Assistant Secretary of the Corporation be and hereby is authorized and empowered, for and on behalf of the Corporation, to certify and attest to any documents which such Secretary or Assistant Secretary may deem necessary, proper, advisable or appropriate to consummate the transactions contemplated by the documents heretofore authorized and empowered; provided, that such attestation shall not be required for the due authorization, execution and delivery or validity of the particular document; and further

RESOLVED, that all actions previously taken and expenses incurred by any officer or director of the Corporation in connection with the transactions contemplated by the foregoing resolutions are hereby adopted, ratified, confirmed and approved in all respects; and further

RESOLVED, that these actions by the Directors of this Corporation be filed in the minute book of this Corporation.

OVEC Power Cost Projections

Ohio Valley Electric Corporation
 Projected Inter-Company Power Agreement (ICPA) Billable Cost Summary
 Calendar Year 2020, in thousands of dollars

	Org Budget 2020	Updated Projected 2020	Over/(Under)	Percentage Over/(Under)	Excluding Generation Impact Over/(Under)
Generation Sales					
Estimated Delivered Power Sales from OVEC Generation (MWhr)					
Generation Costs (Energy and Generation Operating Costs)					
Energy Charge					
Projected Coal Cost (delivered)					
Projected Allowance Cost (based on projected weighted average inventory)					
Projected Other Fuel-Related Costs (reagents, fuel oil & coal handling less byproduct sales)					
Total Projected Energy Costs					
Projected Energy Costs - \$/MWhr					
Generation Operating Costs (Demand Charge)					
Projected Annual Capital Improvement Costs (ICPA Component A)					
Projected Operation and Maintenance Costs (ICPA Component B)					
Projected Administration and General Costs (ICPA Component B)					
Projected Taxes (ICPA Component C)					
Projected ROE Costs (ICPA Component D)					
Total Projected Generation Operating Costs (ICPA Components A, B, C, & D)					
Projected Generation Operating Costs (Demand Charge) - \$/MWhr					
Projected Total Generation Costs (Energy and Operating Costs) - \$/MWhr					
Transmission Costs					
Transmission Operating Costs (Demand Charge)					
Projected Annual Capital Improvement Costs (ICPA Component A) - Transmission					
Projected Transmission and Dispatch Costs (ICPA Component B)					
Projected Administration and General Costs (ICPA Component B) - Transmission					
Projected Total Transmission Costs					
Projected Transmission Costs - \$/MWhr					
Non-Operating Costs (Debt and Obligations)					
Non-Operating Cost (Demand Charge)					
Projected Debt Expense and Short-Term Debt Costs (ICPA Component A)					
Projected Long-Term Debt Costs (ICPA Component A)					
Projected Advance Billing of Debt Service - Debt Reserve (ICPA Component A)					
Projected Postretirement Benefit Obligation (ICPA Component E)					
Projected Decommissioning and Demolition Obligation (ICPA Component F)					
Total Projected Non-Production Demand Costs (ICPA Components A, E, & F)					
Projected Non-Operating Costs - \$/MWhr					
Total Billable Costs (Energy and Demand Charge)					
Summary of ICPA Billable Power Costs					
Grand Total Projected Energy Costs					
Grand Total Projected Demand Costs					
Grand Total Projected ICPA Billable Costs					
Projected Billable Costs (Energy and Demand) - \$/MWhr					

Ohio Valley Electric Corporation
Projected Inter-Company Power Agreement (ICPA) Billable Cost Summary
Calendar Years 2021 - 2025
Costs in thousands of dollars

	<u>2021</u>	<u>2022</u>	<u>2023</u>	<u>2024</u>	<u>2025</u>
Generation Sales					
Estimated Delivered Power Sales from OVEC Generated Power (MWhr)					
Projected Energy Use Factor %					
Projected Net Capacity Factor %					
Generation Costs (Energy and Generation Operating Costs)					
Energy Charge					
Projected Coal Cost (delivered)					
Projected Allowance Cost (based on projected weighted average inventory)					
Projected Other Fuel-Related Costs (reagents, fuel oil & coal handling less byproduct sales)					
Total Projected Energy Costs					
Projected Energy Costs - \$/MWhr					
Generation Operating Costs (Demand Charge)					
Projected Annual Capital Improvement Costs (ICPA Component A) - <i>Includes</i> [REDACTED]					
Projected Operation and Maintenance Costs (ICPA Component B)					
Projected Administration and General Costs (ICPA Component B)					
Projected Taxes (ICPA Component C)					
Projected ROE Costs (ICPA Component D)					
Total Projected Generation Operating Costs (ICPA Components A, B, C, & D)					
Projected Generation Operating Costs (Demand Charge) - \$/MWhr					
Projected Total Generation Costs (Energy and Operating Costs) - \$/MWhr					
Transmission Costs					
Transmission Operating Costs (Demand Charge)					
Projected Annual Capital Improvement Costs (ICPA Component A) - <i>Transmission</i>					
Projected Transmission and Dispatch Costs (ICPA Component B)					
Projected Administration and General Costs (ICPA Component B) - <i>Transmission</i>					
Projected Total Transmission Costs					
Projected Transmission Costs - \$/MWhr					
Non-Operating Costs (Debt and Obligations)					
Non-Operating Cost (Demand Charge)					
Projected Debt Expense and Short-Term Debt Costs (ICPA Component A)					
Projected Long-Term Debt Costs (ICPA Component A)					
Projected Postretirement Benefit Obligation (ICPA Component E)					
Projected Decommissioning and Demolition Obligation (ICPA Component F)					
Total Projected Non-Production Demand Costs (ICPA Components A, E, & F)					
Projected Non-Operating Costs - \$/MWhr					
Total Billable Costs (Energy and Demand Charge)					
Summary of ICPA Billable Power Costs					
Grand Total Projected Energy Costs					
Grand Total Projected Demand Costs					
Grand Total Projected ICPA Billable Costs					
Projected Billable Costs (Energy and Demand) - \$/MWhr at 9,750,000 MWhrs					
Projected Billable Costs (Energy and Demand) - \$/MWhr at 10,750,000 MWhrs					
Projected Billable Costs (Energy and Demand) - \$/MWhr at 8,750,000 MWhrs					

Critical Assumptions:

Major Environmental Capital Projects (CCR, ELG and 316B Compliance) billed through Annual Capital Improvements or O&M as applicable.
 Long-Term Debt costs projection assumes repayment of 2017A \$33M annually starting in 2021.
 Accelerated Decommissioning and Demolition (D&D) Costs due to updated CCR rule for pond closures, updated D&D study will be conducted in 2021.
 Generation Sales assumes Clifty Unit 6 minimal operation during Ozone period.

OHIO VALLEY ELECTRIC CORPORATION
Minutes of Special Meeting of the
Board of Directors held December 15, 2020

A Special Meeting of the Board of Directors of **OHIO VALLEY ELECTRIC CORPORATION** (OVEC) was called to order by the President via WebEx on Tuesday, December 15, 2020, at 2:00 p.m., pursuant to notice duly given.

Paul Chodak, President of the Corporation, acted as Chairman of the meeting, and Cassandra K. Martin, Secretary and Treasurer of the Corporation, acted as Secretary of the Meeting.

Ms. Martin reported that the following Directors were present for the meeting:

Thomas Alban	Steven K. Nelson
Daniel Arbough	Patrick W. O'Loughlin
Eric D. Baker	David W. Pinter
Christian T. Beam	Julie Sloat
Lonnie E. Beller	Raja Sundararajan
Paul Chodak	John A. Verderame
Gustavo Garavaglia	

Mr. Justin Cooper reported that the Minutes of the Special Meetings of the Board of Directors of this Corporation, held on December 12, 2019, April 27, 2020, May 5, 2020, and July 8, 2020, had been sent to each of the Directors. He asked that, if there were no corrections, such minutes be approved in the form in which they were circulated. On a motion duly made, seconded, and unanimously adopted, it was

RESOLVED, that the Minutes of the Special Meeting of the Board of Directors of this Corporation, held on December 12, 2019, April 27, 2020, May 5, 2020, and July 8, 2020, are approved.

Mr. Chodak asked Mr. Cooper to review the proposed Director change for OVEC with the resignation from the OVEC Board of Directors of Mr. Mark Miller effective December 15, 2020. On a motion duly made, seconded, and unanimously adopted it was

RESOLVED, that, subject to any necessary action by FERC under Section 305 of the Federal Power Act, Mr. Gustavo Garavaglia be elected a Director of the Board of OVEC.

Mr. Chodak asked Mr. Cooper to review the proposed election of Officers and Board Committees effective December 15, 2020. On a motion duly made, seconded, and unanimously adopted it was

RESOLVED, that the following individuals be and hereby are appointed to serve as members of the Executive Committee of the Corporation pursuant to Article VI of the Code of Regulations of the Corporation:

- Lonnie E. Bellar
- Paul Chodak III
- Patrick W. O'Loughlin
- David W. Pinter
- Raja Sundararajan
- John A. Verderame

RESOLVED, that the following individuals be and hereby are confirmed to serve as Chairwoman and members of the Human Resources Committee of the Corporation pursuant to Section II of the Human Resources Committee Charter:

- Thomas Alban
- Christian T. Beam
- Lonnie E. Bellar
- Julie Sloat – Chairwoman

RESOLVED, that the following individuals be and hereby are elected to the offices of the Corporation set forth opposite their respective names pursuant to Article V of the Code of Regulations of the Corporation:

- President Paul Chodak III
- Vice President, Chief Operating Officer
and Chief Financial Officer..... Justin J. Cooper
- Secretary and Treasurer Kassandra K. Martin
- Assistant Secretary and
Assistant Treasurer Julie Sloat

At the request of Mr. Chodak, Ms. Martin reviewed the 2020 Service Corporation general expenditures, which were expected to be approximately [REDACTED] Ms. Martin requested authorization for 2021 general expenditures for services from the AEP Service Corporation up to [REDACTED] The primary general expenditures are expected to be in the areas of operation and maintenance, environmental activities, fuel procurement, and coal transportation. Ms. Martin stated that the 2021 Budget is a [REDACTED] compared to the 2020 Budget. On a motion duly made, seconded, and unanimously adopted, it was

RESOLVED, that the officers of Ohio Valley Electric Corporation may request and obligate Ohio Valley Electric Corporation to pay for general services, exclusive of services for specific projects or support services previously approved, under the Agreement among American Gas and Electric Service Corporation (now American

Electric Power Service Corporation), Ohio Valley Electric Corporation, and Indiana-Kentucky Electric Corporation dated December 15, 1956, in an amount which, when added to amounts paid for general services by Indiana-Kentucky Electric Corporation, exclusive of services for specific projects or support services previously approved, would aggregate a maximum of [REDACTED] for calendar year 2021.

Mr. Chodak asked Mr. Mike Brown to give an update on the OVEC and IKEC environmental compliance status and to report on the work to update cost estimates for future environmental capital projects. Mr. Brown reported in response to the September 1, 2019, DC Circuit Court remand, the US EPA proposed new CSAPR Update Rules on October 30, 2020. The New Rule is expected to become final in the spring of 2021 and apply to the 2021 May-September ozone season. Mr. Brown reported that the OVEC and IKEC 2020 ozone season NO_x emission rates and overall performance was excellent. Both plants continued to operate at near historically low ozone season NO_x emission rates.

Mr. Brown also provided an update on the requirements contained in the new Coal Combustion Residual (CCR) Part A Closure regulations finalized by EPA in August 2020, as well as the new Effluent Limitation Guidelines finalized in October 2020. Mr. Brown then provided an update on OVEC's status with completing engineering, design and capital environmental cost estimates for the installation of the new treatment system installations, water redirects, and surface impoundment closure activities approved by the Board in May 2020 to meet requirements under both regulations. The updated project costs remain within Board-approved levels.

Mr. Chodak asked Mr. Cooper to review the 2021 Construction Budget and the 2022-2025 Construction Budget Forecast. Mr. Cooper commented that the 2021 Construction projects highlight continued replacement of original boiler tubing to address current and future reliability issues with an additional focus on replacement of the Kyger Creek Unit 1 first baffle wall. Mr. Cooper reported that the Construction Budget for 2021 indicates estimated total expenditures of [REDACTED] representing [REDACTED] for Replacements of property and [REDACTED] for Management Reserve. On a motion duly made, seconded, and unanimously adopted, it was

RESOLVED, that the OVEC-IKEC Construction Budget for 2021, indicating estimated total expenditures of [REDACTED] for Replacements of property and [REDACTED] for Management Reserve, which totals [REDACTED], is approved.

Mr. Chodak asked Mr. Cooper to report on the 2020 Culture Survey Results for the Corporation, as well as the operating activities for the Clifty Creek and Kyger Creek plants. Mr. Cooper asked Clifty Creek Plant Manager Cliff Carnes and Kyger Creek Plant Manager Annette Hope to report on the 2020 Strategic Plan for each respective location, highlighting two areas of success and two areas of opportunities.

Mr. Chodak asked Mr. Scott Cunningham to report on the OVEC Operating Committee and the status of pending Operating Committee actions.

At the request of Mr. Chodak, Ms. Martin reported on the status of the Corporation's financial balances and activities. Ms. Martin distributed to all members present a copy of the Treasurer's Report that included the following statistics:

OHIO VALLEY ELECTRIC CORPORATION (OVEC) INDIANA-KENTUCKY ELECTRIC CORPORATION (IKEC)			
Treasurer's Report Boards of Directors' Meeting December 15, 2020			
	<u>OVEC</u>	<u>IKEC</u>	<u>Consolidated</u>
<u>CASH AND INVESTMENTS</u>			
Cash and Short-Term Investments	\$ 46,726,779	\$ -	\$ 46,726,779
DOE Settlement Reserve Account	64,662,018	-	64,662,018
Debt Reserve Account	113,956,611	-	113,956,611
Total Cash and Investments at October 31, 2020	<u>\$ 225,345,408</u>	<u>\$ -</u>	<u>\$ 225,345,408</u>
<u>PLANT DECOMMISSIONING & DEMOLITION (D&D) FUND</u>			
Total D&D Assets at October 31, 2020	<u>\$ 34,394,054</u>	<u>\$ 42,037,177</u>	<u>\$ 76,431,231</u>
<u>EMPLOYEE BENEFIT PLAN ASSETS</u>			
Pension Plan			[REDACTED]
Supplemental Pension & Savings Plan			
Union Retiree Medical VEBA Trust			
Retiree Medical VEBA Trust			
Retiree Life Insurance VEBA Trust			
401(k)			
Total Benefit Plan Assets at October 31, 2020			
<u>EQUITY</u>			
Common Stock, 100,000 shares outstanding	\$ 10,000,000	\$ 3,400,000	\$ 10,000,000
Retained Earnings	19,695,519	-	19,695,519
Total Equity at October 31, 2020	<u>\$ 29,695,519</u>	<u>\$ 3,400,000</u>	<u>\$ 29,695,519</u>
<small>(OVEC's ownership of IKEC's Capital Stock (17,000 shares) is eliminated in consolidation.)</small>			
<u>LONG-TERM DEBT</u>			
2006 Senior Unsecured Notes, Series A, 5.80%, due February 15, 2026	\$ 146,533,289	\$ -	146,533,289
2006 Senior Unsecured Notes, Series B, 6.40% due June 15, 2040	52,846,460	-	52,846,460
2007 Senior Unsecured Notes, Series AA, AB & AC, 5.90%, due February 15, 2026	104,653,790	-	104,653,790
2007 Senior Unsecured Notes, Series BA, BB & BC, 6.50% due June 15, 2040	40,185,240	-	40,185,240
2008 Senior Unsecured Notes, Series A, 5.92%, due February 15, 2026	21,699,800	-	21,699,800
2008 Senior Unsecured Notes, Series B & C, 6.71%, due February 15, 2026	83,590,821	-	83,590,821
2008 Senior Unsecured Notes, Series D & E, 6.91% due June 15, 2040	77,641,327	-	77,641,327
2017 Senior Unsecured Notes, Series A, Floating Rate, due August 4, 2022	100,000,000	-	100,000,000
2009 Tax Exempt Bonds, \$100M Series A-D, Floating Rate, due February 1, 2026	100,000,000	-	100,000,000
2010 Tax Exempt Bonds, \$100M Series A & B, Floating Rate, due February 1, 2040	100,000,000	-	100,000,000
2012 Tax Exempt Bonds, \$200M Series A, 5%, due June 1, 2039	200,000,000	-	200,000,000
2012 Tax Exempt Bonds, \$100M Series B & C, Floating Rate, due June 1, 2040	100,000,000	-	100,000,000
2019 Tax Exempt Bonds, \$100M Series A, 3.250%, due September 9, 2029	100,000,000	-	100,000,000
Total Long-Term Debt Outstanding at October 31, 2020	<u>\$ 1,227,150,727</u>	<u>\$ -</u>	<u>\$ 1,227,150,727</u>
<u>SHORT-TERM DEBT</u>			
Total Short-Term Debt Outstanding at October 31, 2020	<u>\$ 60,000,000</u>	<u>\$ -</u>	<u>\$ 60,000,000</u>

Mr. Chodak asked Mr. Cooper to update the Board on 2020 and 2021 finance activities. Mr. Cooper reported that the Corporation has in place an existing revolving credit facility with

aggregate loan commitments of \$185 million (the “Existing Revolving Credit Facility”) under that certain Credit Agreement, dated as of April 25, 2019, by and among the Corporation, the lenders parties thereto and KeyBank National Association (“KeyBank”), as administrative agent, for the purposes of funding the working capital requirements and other general corporate purposes of the Corporation, including capital expenditures. The commitments under the Existing Revolving Credit Facility are set to expire, and all outstanding loans under the Existing Revolving Credit Facility, are set to mature on April 25, 2022. The Corporation has determined that it should refinance and modify certain of the terms of the Existing Credit Facility, including, but not limited to, extending the commitment period and the final maturity of the loans (the “Amended Revolving Credit Facility”). On a motion duly made, seconded, and unanimously adopted, it was

RESOLVED, that the Corporation’s entering into a credit agreement, or an amendment to the credit agreement for the Existing Revolving Credit Facility, and other agreements, documents and instruments in connection therewith, including entering into an engagement letter with KeyBank, any of its affiliates or any other arrangers, in order to effectuate the Amended Revolving Credit Facility or a new revolving credit facility that replaces the Existing Revolving Credit Facility, as the Corporation shall deem necessary, proper, desirable or appropriate, with aggregate commitments of not more than \$185 million and otherwise in such form and with such terms as the Corporation may deem necessary, proper, desirable or appropriate (the “**Amended Documents**”) is hereby approved. Such approval of the Corporation shall be evidenced by the execution of the Amended Documents by any of the President, any Vice President, the Secretary, the Treasurer or any Assistant Secretary or Assistant Treasurer of the Corporation (each, an “**Authorized Officer**”); and further

RESOLVED, that each Authorized Officer is authorized and directed to execute and deliver on behalf of the Corporation the Amended Documents to which the Corporation is to be a party; and further

RESOLVED, that each Authorized Officer of the Corporation is authorized and directed to execute and deliver on behalf of the Corporation such other agreements, instruments, financing statements, documents or certificates and to do and perform such things and acts, as they shall deem necessary or appropriate to carry out the transactions authorized by this resolution or contemplated by the Amended Documents, including but not limited to one or more future agreements entered into by the Corporation or any one or more future instruments, documents or certificates to be signed by the Corporation under any of the Amended Documents or otherwise for such purpose; and further

RESOLVED, that the Authorized Officers of the Corporation are each hereby authorized to negotiate, execute and deliver from time to time one or more agreements with counterparties selected by such Authorized Officer, the purpose of which is to manage the transactions contemplated herein, all upon such terms and conditions as said officer shall approve, said approval to be conclusively presumed by their execution and delivery of the Amended Documents; and further

RESOLVED, that the Authorized Officers of the Corporation are each hereby authorized and directed, in the name and on behalf of the Corporation, to do and perform, or cause to be done and performed, any and all such acts, deeds and things, to make, execute and deliver, or cause to be made, executed and delivered, all such consents, approvals, agreements, undertakings, documents, instruments or certificates, or to effect any necessary filings, with any and all appropriate regulatory authorities, state and federal, in the name and on behalf of the Corporation, to incur and pay all such fees and expenses and to engage such persons as each such Authorized Officer may, in the judgment of such Authorized Officer, deem necessary, proper, desirable or appropriate to effectuate or carry out fully the intent and purposes of the foregoing resolutions, including, but not limited to, the performance of the obligations of the Corporation under any agreement or document referred to herein or therein; and the execution by such Authorized Officers of any such consent, agreement, undertakings, document, instrument or certificate or the payment of any such fees and expenses or the engagement of such persons or the doing by them of any act in connection with the foregoing matters shall conclusively establish their authority therefor and the approval and ratification of the agreements, undertakings, documents, instruments or certificates so executed, the expenses so paid, the persons so engaged and the actions so taken; and further

RESOLVED, that the Secretary or an Assistant Secretary of the Corporation be and hereby is authorized and empowered, for and on behalf of the Corporation, to certify and attest to any documents which such Secretary or Assistant Secretary may deem necessary, proper, advisable or appropriate to consummate the transactions contemplated by the documents heretofore authorized and empowered; provided, that such attestation shall not be required for the due authorization, execution and delivery or validity of the particular document; and further

RESOLVED, that all actions previously taken and expenses incurred by any officer or director of the Corporation in connection with the transactions contemplated by the foregoing resolutions are hereby adopted, ratified, confirmed and approved in all respects.

At the request of Mr. Chodak, Mr. Cooper provided information and discussed OVEC's year-to-date power costs estimated for 2020 and projections for 2021-2025. Mr. Cooper stated that based on current estimates OVEC expected to end 2020 with an average power cost of [REDACTED] per MWhr, due to weak energy markets impacted by COVID-19 and continued low natural gas pricing. Mr. Cooper stated that the projected average power cost for OVEC power, delivered under the terms of the Inter-Company Power Agreement, ranges from [REDACTED] per MWhr in 2021 to [REDACTED] per MWhr in 2025 using an estimated available power use factor of [REDACTED] percent.

Mr. Chodak introduced Mr. Bob Bitter of Deloitte & Touche. Mr. Bitter reported that Deloitte & Touche just began its audit to certify the 2020 Financial Statements, which would be finalized in April 2021.

The Board moved to an Executive Session.

There being no further business to come before the Board, the meeting was adjourned.



Secretary
OHIO VALLEY ELECTRIC CORPORATION

**OHIO VALLEY ELECTRIC CORPORATION (OVEC)
INDIANA-KENTUCKY ELECTRIC CORPORATION (IKEC)
Agenda
Mid-Year Update Boards of Directors' Meeting
July 16, 2021
Conference # 1-719-325-2630 code 886457**

- | | |
|---|-----------------|
| 1. Call Meeting to Order (10 a.m.) | Paul Chodak III |
| 2. Roll Call
- Quorum (OVEC and IKEC) | Kay Martin |
| 3. Administrative Items:
- Election of Directors & Officer
- Elect Katie Davis (I&M) to IKEC Board,
replacing Marc Lewis (I&M)
- Elect Marc Reitter (AEP Ohio) to OVEC Board,
replacing Raja Sundararajan (AEP Ohio)
- Elect Julie Sherwood (AEP) as Assistant Secretary
& Assistant Treasurer of OVEC/IKEC
- Resolutions (OVEC & IKEC) | Kay Martin |
| 4. Safety and Culture Moment | Brian Hornsby |
| 5. OVEC and IKEC Environmental Update
- Compliance and Project Updates | Mike Brown |
| 6. 2021 Financing Plan
- 2021 Finance Activities
- Resolutions (OVEC & IKEC) | Justin Cooper |
| 7. Mid-Year Operational and Financial Performance Update
- 2021 OBL Metrics and 2021 Power Cost Projection | Justin Cooper |

Adjournment

OVEC-IKEC Mid-Year Update

July 16, 2021



Administrative Items

Katie Davis

I&M - Vice President External Affairs and Customer Experience



Katie Davis is an accomplished executive with deep experience developing multifaceted strategies that incorporate numerous disciplines and perspectives to deliver business objectives.

Most recently, Katie served as the Vice-President of External Affairs at Duquesne Light Company (DLC) where she led the Communications, Legislative, Regulatory, Community Relations, and Sustainability teams creating an integrated external affairs strategy designed to increase DLC's influence with key decision-makers and thought-leaders to achieve positive business outcomes.

Prior to DLC, Katie worked for over a decade at Pacific Gas and Electric Company where she served in multiple roles including as Director and Chief of Staff to the CEO and President of PG&E Corporation. She played a key role in providing counsel to the CEO and senior leaders including during major company events such as the most catastrophic wildfires in California's history, the largest proactive power shutoff in the energy industry, and one of the most complex bankruptcies in the country. She has also served as point person on developing regulatory, legislative and communications strategies to address critical business needs.

Earlier in her career, Katie also managed a team of Local Public Affairs Representatives serving as PG&E's liaisons to local government staff, elected officials and community stakeholders, managed energy efficiency contracts, and worked on several company-wide initiatives including corporate strategy, enterprise risk management, and emergency response.

Externally, Katie has served on a number of boards including workforce investment boards, energy trade associations, Chambers of Commerce and other business organizations, and non-profits.

In her spare time, she enjoys spending time with her family and staying active.

Marc Reitter

AEP Ohio - President & COO (effective 8/1/21)



Marc Reitter is vice president, Regulatory and Finance for AEP Ohio. In this position, Reitter is responsible for providing organizational leadership on AEP Ohio's financial and regulatory strategic plans, including financial investments. He provides technical direction on regulatory policy, state filing requirements, retail electric tariffs and represents AEP Ohio on all matters before the Public Utilities Commission of Ohio.

Reitter joined AEP in January 2002 as part of the AEP Texas Retail group. Since 2014, he has served as a managing director in AEP's Corporate Finance organization, responsible for debt and equity capital markets, rating agency activities and developing strong bank relationships.

He previously was a manager in Corporate Finance and held positions in AEP's Strategic Initiatives group, supporting corporate strategy and mergers and acquisitions, and in Utility Group Business Services, assisting in business development opportunities and the Spend Smart Use Smart initiative.

Reitter has testified as an expert witness on capital structure and cost of capital before various state regulatory commissions. He earned a bachelor's degree in finance from Arizona State University and a master's degree in business administration from the Fisher College of Business at The Ohio State University.

Formally, Reitter served as a member of the Investment Sub-Committee responsible for implementation and operation of investment policy and financial strategies for AEP's employee benefit programs.

He serves on the Board Finance Committee for the Down Syndrome Association of Central Ohio (DSACO). He also serves as a board member for Goodwill Columbus and is on the Executive Committee and Finance Committee.

Julie Sherwood

AEP - Senior Vice President, Treasury and Risk



Julie Sherwood is senior vice president, Treasury & Risk for American Electric Power. She is responsible for all elements of the treasury function, trusts and investments, and the comprehensive management of the corporation's risk.

Previously she served as senior vice president, Commercial Operations for AEP, responsible for energy marketing, energy trading, renewable energy, market operations, fuel procurement and commercial and financial analysis for AEP's regulated business units.

Sherwood joined AEP in 2004 as manager, External Financial Reporting. She became director, External Financial Reporting that same year and moved to director of Investor Relations in 2007. She served as vice president, market operations for AEP in 2014, responsible for the front office functions of energy trading, real time generation dispatch, production optimization, load forecasting, meteorology and bid development for the regulated operations within AEP Commercial Operations.

Prior to joining AEP, she was a senior audit manager with accounting firm KPMG LLP and served as an officer in the U.S. Army Finance Corps. A certified public accountant, Sherwood holds a bachelor's degree in business administration from Eastern Washington University. She is a member of the American Institute of Certified Public Accountants, and serves on the boards of the North American Generator Forum and Directions for Youth & Families, and on the DE&I Task Force of the Ohio Society of CPAs.

Sherwood currently resides in Clintonville, Ohio.

Election of New Directors & Officers

**OHIO VALLEY ELECTRIC CORPORATION (OVEC)
INDIANA-KENTUCKY ELECTRIC CORPORATION (IKEC)
Resolutions of Election
Board of Director' Meeting
July 16, 2021**

WHEREAS, effective as of June 30, 2021, Mr. Marc Lewis resigned as a member of the Board of Directors (Board) of IKEC;

WHEREAS, OVEC and IKEC management has recommended to the remaining members of their respective Boards those persons named below to be elected and/or appointed as Director to the Board of IKEC.

NOW, THEREFORE, BE IT:

RESOLVED, that, subject to any necessary action by FERC under Section 305 of the Federal Power Act, Ms. Katie Davis be elected a Director of the Board of IKEC.

RESOLVED, that the elections and appointments shall be effective as of July 1, 2021.

WHEREAS, effective as of July 30, 2021, Mr. Raja Sundararajan will resign as a member of the Board of Directors (Board) of OVEC;

WHEREAS, OVEC and IKEC management has recommended to the remaining members of their respective Boards those persons named below to be elected and/or appointed as Director to the Board of OVEC.

NOW, THEREFORE, BE IT:

RESOLVED, that, subject to any necessary action by FERC under Section 305 of the Federal Power Act, Mr. Marc Reitter be elected a Director of the Board of OVEC.

RESOLVED, that the elections and appointments shall be effective as of July 31, 2021.

RESOLVED, that the following individual be and hereby are elected to the offices of the Corporation set forth opposite their respective names pursuant to Article V of the Code of Regulations of OVEC;

RESOLVED, that the following individuals be and hereby are elected to the offices of the Corporation set forth opposite their respective names pursuant to Article IV of the By-Laws of IKEC:

Assistant Secretary and Assistant Treasurer Julie Sherwood

RESOLVED, that the elections and appointments shall be effective as of July 16, 2021.

Environmental Update

CCR Regulatory Update

CCR Rule – Part A Final Rule

- OVEC prepared and submitted the required Demonstrations to USEPA for a site-specific alternative closure deadline by the November 30, 2020, filing date.
 - Demonstrations outline alternate technically feasible dates beyond April 11, 2021, to cease placement of ash and initiate pond closures by no later than October 17, 2023.
 - OVEC incorporated feedback from USEPA in the final submissions.
 - EPA action on submission application is pending.
 - The Company continues with the implementation of compliance plans as provided for in the demonstrations and remains in compliance with all applicable CCR requirements.

ELG/CCR – Compliance Project Update

Environmental Investment Projects:

- Dry Fly Ash conversion at Kyger Creek Station (ELG & CCR);
 - Construction is underway and material procurement is in process

- Installation of Boiler Slag closed loop concrete basins within the footprint of the Boiler Slag Ponds at both Kyger & Clifty (ELG);
 - Site preparation and permitting for concrete basin installations at both plants is under way

- Construction of lined Low Volume Wastewater Treatment System (LVWTS) installations at both plants;
 - Site preparation and permitting for lined treatment systems under way

- Installation of new piping, pumps and ancillary equipment to redirect water for ash transport and to redirect miscellaneous wastewater flows to the new LVWTS to be constructed (CCR);
 - Piping associated with all water redirects will be conducted as the concrete basins are being constructed and as the LVWTS are being constructed.
 - Rerouting of wastewater will take place as systems are being commissioned to operate

Environmental Project Cost Update

Current Capital Project costs projected at \$ [REDACTED] (BOD approved \$ [REDACTED])

- OVEC and B&M identified an additional \$ [REDACTED] in scope reduction and value engineering ideas (since December BOD meeting).
 - Capital costs will be levelized for billing purposes at approx. \$ [REDACTED] per year 2021-2023
- Related Decommissioning & Demolition funded costs for the Boiler Slag ponds closure in 2021-2023 remain on budget.
 - D&D Costs will be funded with current D&D billings, similar to other CCR required pond closures
 - Kyger and Clifty Boiler Slag Ponds (post 2023)
 - Kyger South Fly Ash Pond
 - Clifty Land Fill Run Off Collection Pond
 - Updated D&D study will be completed in 4Q-2021 to incorporate the final CCR and ELG rules and cost estimates.

CCR Impoundment Closures - Update

CCR Rule, Part A - Requires Surface Impoundment Closures		
Surface Impoundment Name	Approximate Acreage	Actions to Initiate Closure
Kyger Creek Boiler Slag Pond	20	Install concrete basins, lined LVWTS, close remainder
Clifty Creek Boiler Slag Pond	75	Install concrete basins, lined LVWTS, close remainder
Clifty Creek LRCP	50	Redirect off-site storm water from site, close remainder
Kyger Creek Fly Ash Pond	70	Convert to dry fly ash handling, redirect wastewater to LVWTS, dewater and close
Note: Pond Closure Costs will be funded by Decommissioning and Demolition funds.		

Effluent Limitation Guidelines NPDES Permitting

Related NPDES Permit Activities for ELG compliance:

Clifty Creek

- IKEC filed NPDES Permit Modification Request with IDEM to remove the April 1, 2022, ELG limits and associated compliance date for FGDWW and BATW discharges based on obsolete ELG conditions from old rule.
- Modification request supplemented in June 2021 to further justify request for revised compliance dates for new ELG rule, defined the volume of limited blowdown from BATW system and aligned request with the Clifty CCR Demonstration Application dates.

Kyger Creek

- NPDES Permit Renewal Application was filed in October 2018. OEPA draft renewal NPDES permit expected to be received this summer. Draft permit expected to include the new ELG limits and corresponding compliance schedules outlined in updated rule and aligned with the Kyger CCR Demonstration Application dates.

Effluent Limitation Guidelines FGDWW

ELGs required treatment of FGDWW

- **FGD Wastewater** (FGDWW) discharges
 - Revised final effluent limits for arsenic, mercury, selenium, and nitrate-nitrite.
 - Revised compliance timeframe associated with BAT for treatment of FGDWW to “no later than” December 31, 2025.
 - OVEC is completing an RBTO on treatment technology options and cost estimates – including evaluation of modular systems, third party provided services and lease options.
 - Pilot of potential modular bioreactor is planned for fall of 2021 at Kyger Creek Station.

General Environmental Compliance Update - 2021

- **316 (b)** - 316(b) Section 122.21(r) reports filed in November 2018 (Kyger) and January 2019 (Clifty). Neither OEPA or IDEM have taken action, waiting for NPDES permit renewals to determine next steps.
- **MATS** – Both Plants continue to maintain compliance with MATS related obligations and emissions limits for Mercury, Particulate Matter and SO₂.
- **NAAQS** – Ambient network monitoring system around Kyger Creek Station shows attainment with SO₂ NAAQS – US EPA proposed rule on September 2, 2020, to change status for area around plant to “attainment” – expect EPA to issue a final rule sometime in 3rd quarter of 2021.
- **SO₃ mitigation** – Clifty Creek’s upgrade from Trona to Hydrated Lime – cost, performance, reliability and ash marketing benefits.
- **NO_x control reliability** - Kyger Creek improved NO_x removal performance and reliability with transition to direct urea injection.

Affordable Clean Energy (ACE) Rule Update

On January 19, 2021 the D.C. Circuit Court vacated the ACE Rule

- Court decision being litigated by 19 states
 - Litigation requesting Supreme Court to address whether Congress provided clear authorization under the Clean Air Act, for USEPA to unilaterally decarbonize virtually any sector of the economy and fundamentally transform the Nation's energy policy, without limits
- No current federal regulation and no new rulemaking under Section 111(d) is imminent
- State action on ACE implementation has stopped consistent with EPA guidance following DC Circuit Court vacature
- Biden Administration is evaluating various legislative and regulatory options for meeting climate change goals consistent with relevant Executive Orders

CSAPR Regulatory Update

Revised CSAPR Update Rule published April 30, 2021 (2008 Ozone NAAQS)

Revised rule in response to Court remand, became effective June 29, 2021

- Applicable for the entire May-September 2021 Ozone Season.
- Sets more restrictive NO_x ozone season state budget caps for 12 states - including Ohio and Indiana.
 - Assurance level flexibility and cap and trade components are retained.
 - State budget for Indiana is substantially lower than prior rule.
 - OVEC taking a disciplined approach in compliance options, revised rule is being appealed.

Clifty Creek

- Revised rule sets 38% reduction in NO_x ozone season allocations to Clifty Creek Station in 2022.
- Internal NO_x optimization workgroup is focused on reliability and optimizing SCR performance and unit generation under new rule.
- Using PJM Price Based and Opportunity Cost offer mechanisms for Unit 6 (only unit without an SCR). Also evaluating direct urea injection for all units.

Kyger Creek

- Final state budget reduction of 6% - expected to have less of an impact on Kyger Creek Station's unit dispatch/operation during the 2021 and future ozone seasons. Kyger completed direct urea injection on all units prior to start of 2021 ozone season.

Gypsum and Ash Beneficial Reuse

Kyger Creek

- Nearly 100% of gypsum being sold for wallboard production.
 - A long-term gypsum contract recently renewed.
- Boiler slag sales have paused during ash pond retrofit construction.
- Participating in conversations with potential strategic partners interested in marketing fly ash following completion of dry fly ash conversion project.

Clifty Creek

- Nearly 100% of gypsum being sold for wallboard production.
 - A long-term gypsum contract in place.
- Environmental permitting secured and construction of on-site barge loading system is under way, gypsum currently being trucked off site.
- Fly ash marketing
 - IKEC is selling 40-50% of its fly ash production, now approved for use by INDOT.

Benefits for both Plants:

- Reduced fuel costs, reduced future landfill expansion costs, reduced future environmental compliance risks.

2021 Financing Plan

2021 Financing Activities

Rating Agencies:

- Fitch (rating affirmed February 25, 2021) BBB-, Stable Outlook
- Moody's (rating affirmed June 18, 2020) Ba1, Positive Outlook
 - Pending rating review update

2021 Completed Financing Activities:

- 2/26/2021 Closed on OVEC Revolving Line of Credit new agreement
 - \$185 M Capacity, 3 year term, same rate structure
 - Strong support from Bank group: Keybank (lead), PNC, Huntington, Sumitomo Banking, and First Merchants Bank
 - Increased diversification by increasing group size from 6 – 7, adding CoBank and Citi Bank.

2021 Upcoming Financing Activities:

- Q3 - Repayment of \$33 M of \$100 M Taxable Private Placement (Apollo)
 - Remaining will be paid \$33 M 2022, \$34 M 2023 (will be on Line of Credit as Note term ends 2022)
 - \$33 M payment has replaced prior Debt Reserve billings, keeping Power Cost levelized
 - Reviewing economics of potential to refinance

- Q3 - Refinance \$100 M Tax Exempt Bonds (expiring agreement 8/25/21), reduce interest rate risk and reducing liability, part of \$1B liability reduction over next ten years. Targeted refinancing in Sept/Oct 2021.
 - 2009B \$25 M Tax Exempt Bonds refinanced, fix rate, 3 year put with full amortization in 2024
 - 2009C \$25 M Tax Exempt Bonds refinanced, fix rate, 4 year put with full amortization in 2025
 - 2010B \$50 M Tax Exempt Bonds refinanced, fix rate, 10 year term with full amortization from 2026-2030

Requesting Board Resolution

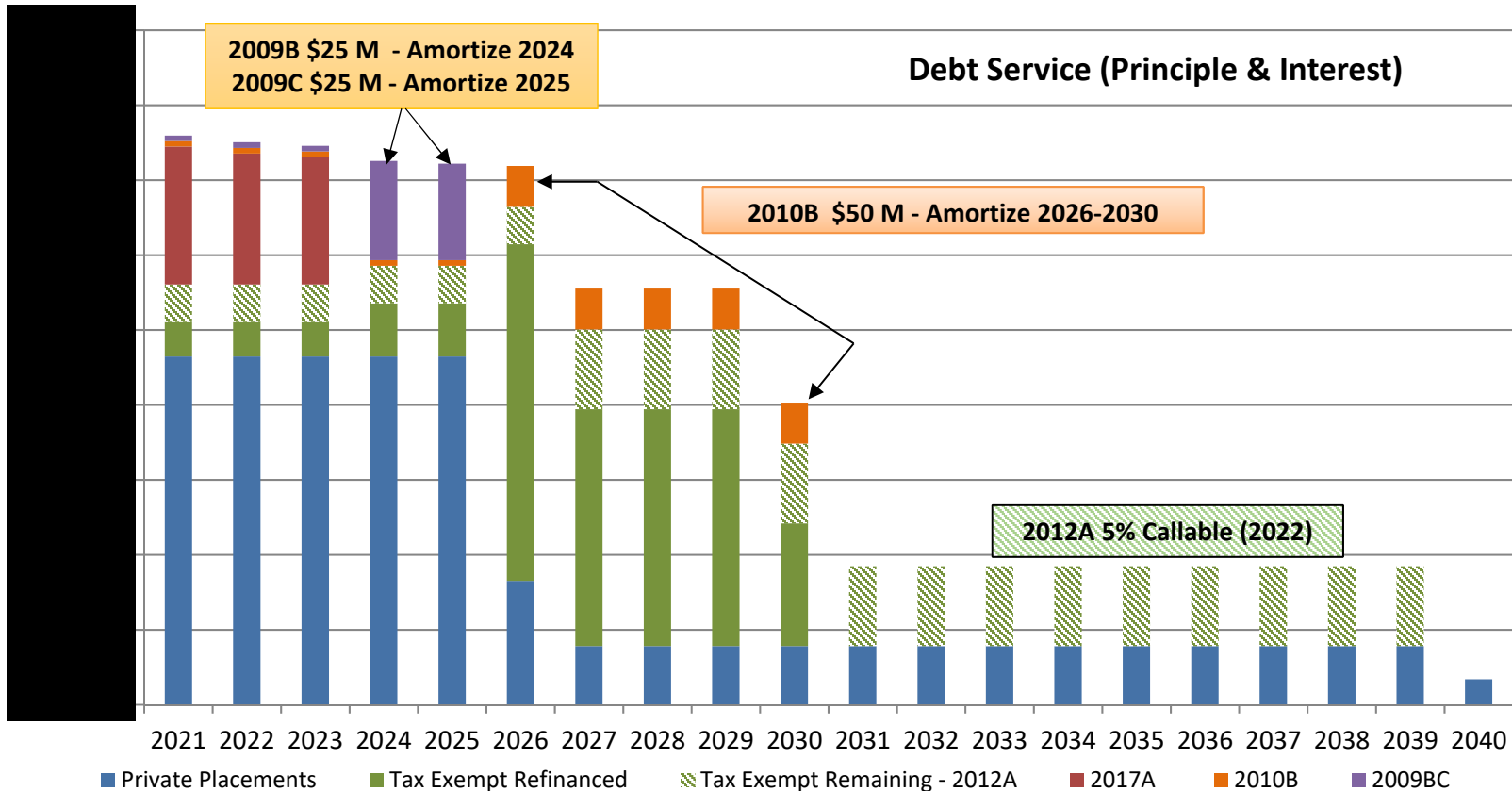
Debt Reduction Plan – Update

Debt Reduction Plan: Reduce approx. \$1 billion of total debt in ten years, reducing interest expense and levelize Power Costs.

2021 Financing Plan

- \$50M 2009BC (2024-2025 Put with full Amortization) █
- \$50M 2010B (2027-2030) – layering similar to 2020 refinancing █
- Repay \$33 M 2017A (Apollo) 2021-2023 █

2022 Proj. Financing Plan – Call 2012A and refinance, ████████████████████ and layer amortization 2027-2030 █

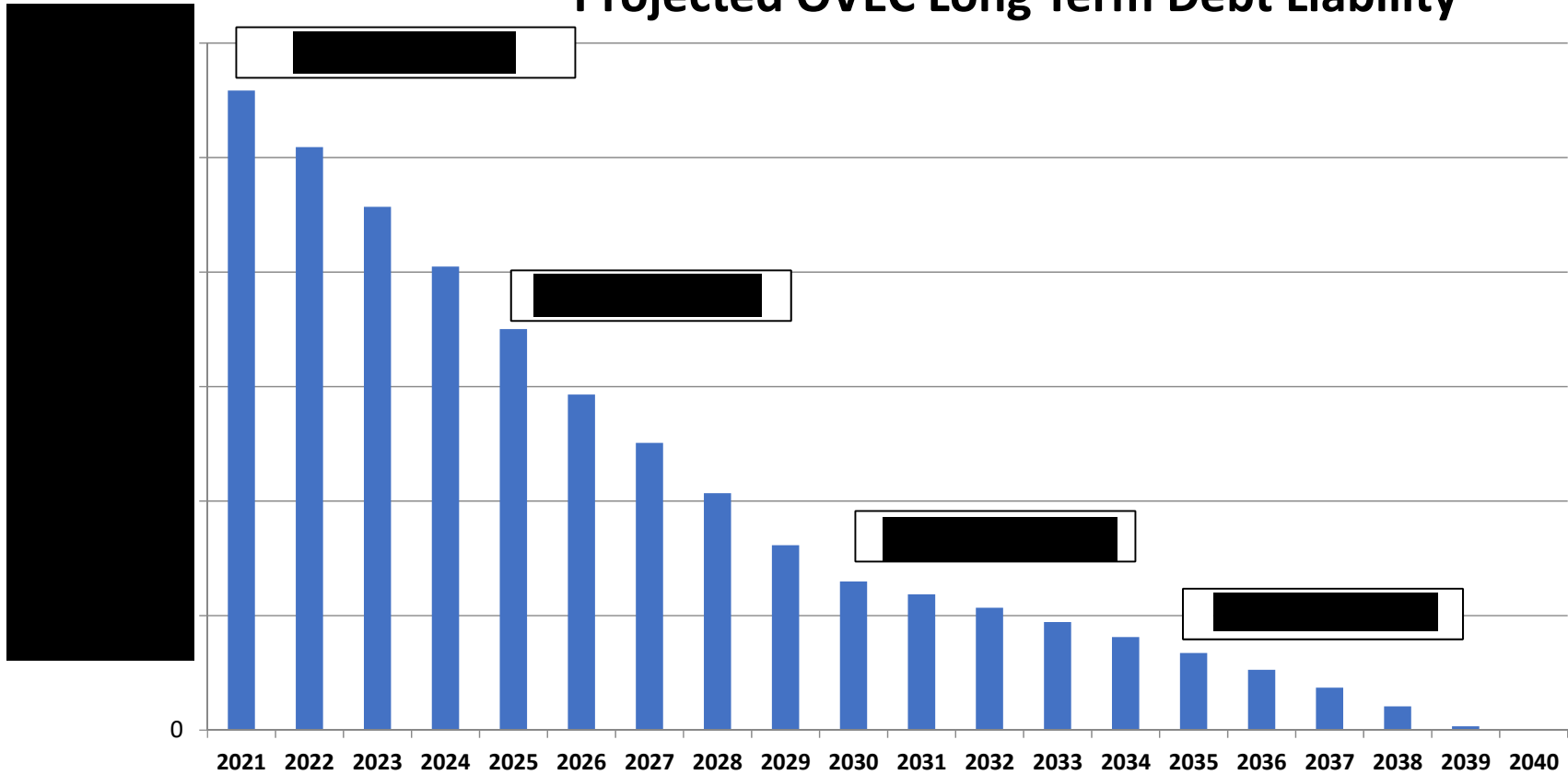


• Private Placements have Make Whole Provisions
 ** 2017A Apollo - \$34 M will be carried on the Line of Credit for 2023 to levelized payments



OVEC – Long Term Debt Reduction

Projected OVEC Long Term Debt Liability



OVEC is projecting to reduce long term debt of approx. \$1 billion in the next ten years, while also [REDACTED]

[REDACTED]

*Long term debt amounts do not take into account the Debt Reserve of approx. \$121 M 12/31/2020
**Does not include projected refinancing of 2012A Bonds in 2022

Resolution

Remarketing of Bonds:

WHEREAS, the outstanding indebtedness of Ohio Valley Electric Corporation (the “**Corporation**”) includes the obligation, under various loan agreements, to make payments with respect to the following bonds issued by the Ohio Air Quality Development Authority (the “**OAQDA**”) and by the Indiana Finance Authority (the “**IFA**”):

the \$25,000,000 Series 2009B State of Ohio Air Quality Revenue Bonds maturing on February 1, 2026, and bearing interest at a variable rate (the “**Series 2009B OAQDA Bonds**”);

the \$25,000,000 Series 2009C State of Ohio Air Quality Revenue Bonds maturing on February 1, 2026, and bearing interest at a variable rate (the “**Series 2009C OAQDA Bonds**”); and

the \$50,000,000 Indiana Finance Authority Pollution Control Revenue Bonds, Series 2010B (Ohio Valley Electric Corporation Project) maturing on February 1, 2040, and bearing interest at a variable rate (the “**Series 2010B IFA Bonds**”);

the Series 2009B OAQDA Bonds, the Series 2009C OAQDA Bonds and the Series 2010B IFA Bonds, collectively hereinafter referred to as the “**Bonds**”;

WHEREAS, each of the OAQDA and the IFA loaned the proceeds of the applicable series of the Bonds to the Corporation pursuant to various loan agreements, pursuant to which the Corporation is obligated to make payments, which correspond as to time, and are equal in amount, to the principal of, premium, if any, due on, the purchase price of, and interest due on each series of the Bonds (whether due at maturity or upon acceleration, tender, or redemption or otherwise);

WHEREAS, each series of the Bonds is secured by, among other things, the trust indenture with respect to such series of the Bonds, pursuant to which the interest of the OAQDA or the IFA, as applicable, with respect to the applicable series of the Bonds (except certain reserved rights of the OAQDA or the IFA, as applicable) are pledged to the trustee as security for payment of the principal, the premium, if any, due on, the purchase price of, and interest on such series of the Bonds and the loan agreement and the note relating to such series of the Bonds;

WHEREAS, pursuant to that certain Bond Purchase and Covenants Agreement, dated as of August 25, 2016, (the “**BPA**”), by and among the Corporation, the purchasers parties thereto, SunTrust Bank and PNC Capital Markets LLC, as co-lead arrangers, and SunTrust Bank, as administrative agent, certain purchasers purchased the Bonds;

WHEREAS, each of the Bonds are subject under the BPA to a mandatory tender for purchase by the Corporation on August 25, 2021;

WHEREAS, the Corporation has determined that it should refinance, refund or replace the Bonds by arranging for the Bonds to be resold or remarketed pursuant to one or more bond purchase or remarketing agreements to be dated on or before the date of the repurchase or remarketing of the Bonds, between the Corporation and one or more bond purchasers or remarketing agents;

WHEREAS, the Corporation will be unable to effect such reselling or remarketing of the Bonds by the mandatory tender for purchase date of August 25, 2021 and so intends to obtain an extension of such date, or, if it cannot obtain such an extension, it will repurchase the Bonds using cash on hand or borrowed under its revolving credit facility and then subsequently arrange for the resale or remarketing of the Bonds;

WHEREAS, the Corporation has determined that the amortization of the Series 2010B IFA Bonds should be modified in connection with the reselling or remarketing of such Bonds so such Bonds shall be fully amortized by 2030;

WHEREAS, for one or more of the series of the Bonds to be resold or remarketed, the interest rate determination method and other modifications to the terms and conditions thereof may need to be made;

Refinancing Documents:

WHEREAS, to effect the reselling or remarketing of the Bonds, the Corporation intends to enter into one or more bond purchase agreements, remarketing agreements, loan agreements, and other agreements, documents and instruments related thereto;

WHEREAS, the general terms and conditions of each series of the Bonds and the security therefor (if any), and the documents mentioned above will be described in one or more private placement memoranda, reoffering circulars or official statements to be dated on or before the date of the delivery, sale, or remarketing (as applicable) of the series of notes or bonds to which such official statement relates (collectively, the “**Official Statements**”, together with any bond purchase agreements, remarketing agreements, loan agreements, and any other agreements, documents and instruments related thereto to which the Corporation is a party, are hereinafter referred to as the “**Refinancing Documents**”).

NOW, THEREFORE, BE IT:

RESOLVED, that the Corporation will refinance the arrangements with respect to the Bonds by arranging for the Bonds to be resold or remarketed pursuant to one or more bond purchase or remarketing agreements to be dated on or before the date of the repurchase or remarketing of the Bonds, between the Corporation and one or more bond purchasers or remarketing agents, and other Refinancing Documents; and further

RESOLVED, that the Corporation’s entering into, delivery or issuance of each of the Refinancing Documents is hereby approved, in such form and with such terms and conditions as may be approved by the Corporation and it deems necessary, desirable or expedient to carry out the terms of the transactions described above. Such approval of the Corporation shall be evidenced by the execution of the Refinancing Documents by any of the President, any Vice President, the Secretary, the Treasurer, or any Assistant Secretary or Assistant Treasurer of the Corporation (each, an “**Authorized Officer**”); and further

RESOLVED, that each Authorized Officer is authorized and directed to execute and deliver on behalf of the Corporation the Refinancing Documents to which the Corporation is to be a party; and further

RESOLVED, that each Authorized Officer is authorized and directed to execute and deliver on behalf of the Corporation such other agreements, instruments, financing statements, documents or certificates, and to do and perform such things and acts, as they shall deem necessary or appropriate to carry out the transactions authorized by these resolutions or contemplated by any of the Refinancing Documents, including but not limited to (i) one or more future agreements entered into by the Corporation or any one or more future instruments, financing statements, documents or certificates to be signed by the Corporation under any of the Refinancing Documents or otherwise for such purpose and (ii) one or more continuing disclosure agreements with respect to the disclosure of financial and other information; and further

RESOLVED, that the Authorized Officers are each hereby authorized to negotiate, execute and deliver from time to time one or more agreements with counterparties selected by any Authorized Officer, the purpose of which is to manage the transactions contemplated herein, all upon such terms and conditions as any Authorized Officer shall approve, said approval to be conclusively presumed by the execution and delivery by an Authorized Officer of the aforementioned agreements; and further

RESOLVED, that the Authorized Officers are each hereby authorized and directed, in the name and on behalf of the Corporation, to do and perform, or cause to be done and performed, any and all such acts, deeds and things, to make, execute and deliver, or cause to be made, executed and delivered, all such consents, agreements, undertakings, documents, instruments or certificates, or to effect any necessary filings, with any and all appropriate regulatory authorities, state and federal, in the name and on behalf of the Corporation, to incur and pay all such fees and expenses and to engage such persons as each such Authorized Officer may, in the judgment of such Authorized Officer, deem necessary, proper or desirable to effectuate or carry out fully the intent and purposes of the foregoing resolutions, including, but not limited to, the performance of the obligations of the Corporation under any agreement or document referred to herein or therein; and the execution by any of such Authorized Officers of any such consent, agreement, undertakings, document, instrument or certificate or the payment of any such fees and expenses or the engagement of such persons or the doing by them of any act in connection with the foregoing matters shall conclusively establish their authority therefor and the approval and ratification of the agreements, undertakings, documents, instruments or certificates so executed, the expenses so paid, the persons so engaged and the actions so taken; and further

RESOLVED, that the Secretary or an Assistant Secretary of the Corporation be and hereby is authorized and empowered, for and on behalf of the Corporation, to certify and attest to any documents which such Secretary or Assistant Secretary may deem necessary, advisable or appropriate to consummate the transactions contemplated by the documents heretofore authorized and empowered; provided, that such attestation shall not be required for the due authorization, execution and delivery or validity of the particular document; and further

RESOLVED, that all actions previously taken and expenses incurred by any officer or director of the Corporation in connection with the transactions contemplated by the foregoing resolutions, are hereby adopted, ratified, confirmed and approved in all respects; and further

RESOLVED, that these actions by the Directors of this Corporation be filed in the minute book of this Corporation.

Mid-Year Operational and Financial Performance Update

Open Book Leadership (OBL) Scoreboard Update – Mid-Year Performance

OVEC /IKEC – OBL Plant Scoreboards								
		Kyger Creek Plant			Clifty Creek Plant			
		2020	2021		2020	2021		
		Actual YE	Target YE	May YTD Actual	Actual YE	Target YE	May YTD Actual	
Safety	Employee DART Rate	1.90	0.26	0.00	0.00	0.26	1.78 Proj YE 0.89	
	Employee Infield Observation & Coaching	419	420	184	504	492	231	
Environmental Compliance	MATS (Mercury, Particulate Matter, Acid Gases)	Compliance	Compliance	Compliance	Compliance	Compliance	Compliance	
	Environmental Good Catch	250	300	155	N/A	250	299	
Drivers of Critical Number Total Production Power Cost \$/MWhr	Reliability	EFOR	4.5%	5.8%	4.4%	4.4%	5.8%	6.3%
		Commercial Availability	91%	90%	88%	93%	90%	93%
	Energy Cost	Heat Rate ₁	10,965	10,746	10,427	11,094	10,853	10,638
		Total Fuel Cost ₂ Total Fuel/Net Gen			\$22.66			\$27.45
	Demand Cost	O&M						
	Continuous Improvement	Process Improvements ₃	837	660	386	760	630	607

- Reviewed at Plant Huddles (weekly)
- Future Focused (80% / 20%)
- Highlight Opportunities for Improvement
- Metrics are key drivers to Critical Number - \$/MWhr

1) Heat Rate targets adjust based on unit loading
 2) Represents ICPA Billable Fuel Costs (includes fuel related fixed costs), does not represent PJM dispatch cost (variable fuel costs only)
 3) Process Improvements include new standard work development

OVEC Power Cost 2021

- **Improved Market and Increased Generation**
- **Continued Focus on Optimizing costs**
 - 2021 Total Demand Costs (non-fuel) projecting [REDACTED]

2021 Power Cost \$/MWhr			
	Org Budget	Updated Projection	Variance
Generation (MWhr)	[REDACTED]		
Energy			
Operating Cost			
Generation Cost			
Transmission Cost			
Non- Operating Cost			
Total Billable Cost			

Confidential and Business Sensitive

OHIO VALLEY ELECTRIC CORPORATION
Minutes of Special Meeting of the
Board of Directors held July 16, 2021

A Special Meeting of the Board of Directors of **OHIO VALLEY ELECTRIC CORPORATION** (OVEC) via teleconference was called to order by the President on Friday, July 16, 2021, at 10:00 a.m., pursuant to notice duly given.

Paul Chodak, President of the Corporation, acted as Chairman of the meeting, and Cassandra K. Martin, Secretary and Treasurer of the Corporation, acted as Secretary of the Meeting.

Ms. Martin reported that the following Directors were present for the meeting:

Daniel K. Arbough	Gustavo Garavaglia
Eric D. Baker	Steven K. Nelson
Chris T. Beam	Patrick W. O'Loughlin
Lonnie E. Beller	Julie Sloat
Paul Chodak	Raja Sundarajan
Wayne D. Games	John A. Verderame

Mr. Chodak asked Ms. Martin to review the proposed Director change for OVEC with the resignation from the OVEC Board of Directors of Mr. Raja Sundarajan effective July 31, 2021. On a motion duly made, seconded, and unanimously adopted it was

RESOLVED, that, subject to any necessary action by FERC under Section 305 of the Federal Power Act, Mr. Marc Reitter be elected a Director of the Board of OVEC.

RESOLVED, that the elections and appointments shall be effective as of July 31, 2021.

Ms. Martin reviewed the proposed Officer change for OVEC, effective July 16, 2021. On a motion duly made, seconded, and unanimously adopted it was

RESOLVED, that the following individual be and hereby are elected to the offices of the Corporation set forth opposite their respective names pursuant to Article V of the Code of Regulations of OVEC;

RESOLVED, that the following individuals be and hereby are elected to the offices of the Corporation set forth opposite their respective names pursuant to Article IV of the By-Laws of IKEC:

Assistant Secretary and Assistant Treasurer Julie Sherwood

RESOLVED, that the elections and appointments shall be effective as of July 16, 2021.

The election of Mr. Reitter and Ms. Sherwood to such positions is subject to the appropriate filings with the Federal Energy Regulatory Commission ("FERC") to hold such interlocking positions with OVEC and IKEC, and continuing FERC authorization of such interlock.

Mr. Chodak asked Mr. Mike Brown to give an update on the OVEC and IKEC environmental compliance status and to report on the work to update cost estimates for future environmental capital projects. Mr. Brown provided an update on the requirements contained in the new Coal Combustion Residual (CCR) Part A Closure regulations finalized by EPA in August 2020, as well as the new Effluent Limitation Guidelines finalized in October 2020. Mr. Brown then provided an update on OVEC's status with completing engineering, design and capital environmental cost estimates for the installation of the new treatment system installations, water redirects, and surface impoundment closure activities approved by the Board in December 2020 to meet requirements under both regulations. The updated project costs remain within Board-approved levels. Since the December Board meeting, OVEC and B&M identified an additional [REDACTED] and value engineering ideas. Capital costs will be levelized for billing purposes at approximately [REDACTED] per year, 2021-2023.

Mr. Chodak asked Mr. Cooper to provide an update on 2021 financing activities. Mr. Cooper reported that in the 3rd Quarter of 2021 the agreement for refinancing of \$100M tax-exempt bonds will expire. A 2021 Financing Plan was presented to the Board. On a motion duly made, seconded, and unanimously adopted, it was resolved as follows:

Remarketing of Bonds:

WHEREAS, the outstanding indebtedness of Ohio Valley Electric Corporation (the "**Corporation**") includes the obligation, under various loan agreements, to make payments with respect to the following bonds issued by the Ohio Air Quality Development Authority (the "**OAQDA**") and by the Indiana Finance Authority (the "**IFA**"): the \$25,000,000 Series 2009B State of Ohio Air Quality Revenue Bonds maturing on February 1, 2026, and bearing interest at a variable rate (the "**Series 2009B OAQDA Bonds**"); the \$25,000,000 Series 2009C State of Ohio Air Quality Revenue Bonds maturing on February 1, 2026, and bearing interest at a variable rate (the "**Series 2009C OAQDA Bonds**"); and the \$50,000,000 Indiana Finance Authority Pollution Control Revenue Bonds, Series 2010B (Ohio Valley Electric Corporation Project) maturing on February 1, 2040, and bearing interest at a variable rate (the "**Series 2010B IFA Bonds**"); the Series 2009B OAQDA Bonds, the Series 2009C OAQDA Bonds and the Series 2010B IFA Bonds, collectively hereinafter referred to as the "**Bonds**";

WHEREAS, each of the OAQDA and the IFA loaned the proceeds of the applicable series of the Bonds to the Corporation pursuant to various loan agreements, pursuant to which the Corporation is obligated to make payments, which correspond as to time, and are equal in amount, to the principal of, premium, if any, due on, the purchase price of, and interest due on each series of the Bonds (whether due at maturity or upon acceleration, tender, or redemption or otherwise);

WHEREAS, each series of the Bonds is secured by, among other things, the trust indenture with respect to such series of the Bonds, pursuant to which the interest of the OAQDA or the IFA, as applicable, with respect to the applicable series of the Bonds (except certain reserved rights of the OAQDA or the IFA, as applicable) are pledged to the trustee as security for payment of the principal, the premium, if any, due on, the purchase price of, and interest on such series of the Bonds and the loan agreement and the note relating to such series of the Bonds;

WHEREAS, pursuant to that certain Bond Purchase and Covenants Agreement, dated as of August 25, 2016, (the “**BPA**”), by and among the Corporation, the purchasers parties thereto, SunTrust Bank and PNC Capital Markets LLC, as co-lead arrangers, and SunTrust Bank, as administrative agent, certain purchasers purchased the Bonds;

WHEREAS, each of the Bonds are subject under the BPA to a mandatory tender for purchase by the Corporation on August 25, 2021;

WHEREAS, the Corporation has determined that it should refinance, refund or replace the Bonds by arranging for the Bonds to be resold or remarketed pursuant to one or more bond purchase or remarketing agreements to be dated on or before the date of the repurchase or remarketing of the Bonds, between the Corporation and one or more bond purchasers or remarketing agents;

WHEREAS, the Corporation will be unable to effect such reselling or remarketing of the Bonds by the mandatory tender for purchase date of August 25, 2021, and so intends to obtain an extension of such date, or, if it cannot obtain such an extension, it will repurchase the Bonds using cash on hand or borrowed under its revolving credit facility and then subsequently arrange for the resale or remarketing of the Bonds;

WHEREAS, the Corporation has determined that the amortization of the Series 2010B IFA Bonds should be modified in connection with the reselling or remarketing of such Bonds so such Bonds shall be fully amortized by 2030;

WHEREAS, for one or more of the series of the Bonds to be resold or remarketed, the interest rate determination method and other modifications to the terms and conditions thereof may need to be made;

Refinancing Documents:

WHEREAS, to effect the reselling or remarketing of the Bonds, the Corporation intends to enter into one or more bond purchase agreements, remarketing agreements, loan agreements, and other agreements, documents and instruments related thereto;

WHEREAS, the general terms and conditions of each series of the Bonds and the security therefor (if any), and the documents mentioned above will be described in one or more private placement memoranda, reoffering circulars or official statements to be dated on or before the date of the delivery, sale, or remarketing (as applicable) of the series of notes or bonds to which such official statement relates (collectively, the “**Official Statements**,” together with any bond purchase agreements, remarketing agreements, loan agreements, and any other

agreements, documents and instruments related thereto to which the Corporation is a party, are hereinafter referred to as the “**Refinancing Documents.**”

NOW, THEREFORE, BE IT:

RESOLVED, that the Corporation will refinance the arrangements with respect to the Bonds by arranging for the Bonds to be resold or remarketed pursuant to one or more bond purchase or remarketing agreements to be dated on or before the date of the repurchase or remarketing of the Bonds, between the Corporation and one or more bond purchasers or remarketing agents, and other Refinancing Documents; and further

RESOLVED, that the Corporation’s entering into, delivery or issuance of each of the Refinancing Documents is hereby approved, in such form and with such terms and conditions as may be approved by the Corporation and it deems necessary, desirable or expedient to carry out the terms of the transactions described above. Such approval of the Corporation shall be evidenced by the execution of the Refinancing Documents by any of the President, any Vice President, the Secretary, the Treasurer, or any Assistant Secretary or Assistant Treasurer of the Corporation (each, an “**Authorized Officer**”); and further

RESOLVED, that each Authorized Officer is authorized and directed to execute and deliver on behalf of the Corporation the Refinancing Documents to which the Corporation is to be a party; and further

RESOLVED, that each Authorized Officer is authorized and directed to execute and deliver on behalf of the Corporation such other agreements, instruments, financing statements, documents or certificates, and to do and perform such things and acts, as they shall deem necessary or appropriate to carry out the transactions authorized by these resolutions or contemplated by any of the Refinancing Documents, including but not limited to (i) one or more future agreements entered into by the Corporation or any one or more future instruments, financing statements, documents or certificates to be signed by the Corporation under any of the Refinancing Documents or otherwise for such purpose and (ii) one or more continuing disclosure agreements with respect to the disclosure of financial and other information; and further

RESOLVED, that the Authorized Officers are each hereby authorized to negotiate, execute and deliver from time to time one or more agreements with counterparties selected by any Authorized Officer, the purpose of which is to manage the transactions contemplated herein, all upon such terms and conditions as any Authorized Officer shall approve, said approval to be conclusively presumed by the execution and delivery by an Authorized Officer of the aforementioned agreements; and further

RESOLVED, that the Authorized Officers are each hereby authorized and directed, in the name and on behalf of the Corporation, to do and perform, or cause to be done and performed, any and all such acts, deeds and things, to make, execute and deliver, or cause to be made, executed and delivered, all such consents, agreements, undertakings, documents, instruments or certificates, or to effect any necessary filings, with any and all appropriate regulatory authorities, state and federal, in the name and on behalf of the Corporation, to incur and pay all such fees and expenses and to engage such persons as each such Authorized Officer may, in the judgment of such Authorized Officer, deem necessary, proper or desirable to effectuate or carry out fully the intent and purposes of the foregoing resolutions, including, but not limited to, the performance of the obligations of the Corporation under any agreement

or document referred to herein or therein; and the execution by any of such Authorized Officers of any such consent, agreement, undertakings, document, instrument or certificate or the payment of any such fees and expenses or the engagement of such persons or the doing by them of any act in connection with the foregoing matters shall conclusively establish their authority therefor and the approval and ratification of the agreements, undertakings, documents, instruments or certificates so executed, the expenses so paid, the persons so engaged and the actions so taken; and further

RESOLVED, that the Secretary or an Assistant Secretary of the Corporation be and hereby is authorized and empowered, for and on behalf of the Corporation, to certify and attest to any documents which such Secretary or Assistant Secretary may deem necessary, advisable or appropriate to consummate the transactions contemplated by the documents heretofore authorized and empowered; provided, that such attestation shall not be required for the due authorization, execution and delivery or validity of the particular document; and further

RESOLVED, that all actions previously taken and expenses incurred by any officer or director of the Corporation in connection with the transactions contemplated by the foregoing resolutions, are hereby adopted, ratified, confirmed and approved in all respects; and further

RESOLVED, that these actions by the Directors of this Corporation be filed in the minute book of this Corporation.

There being no further business to come before the Board, the meeting was adjourned.



Secretary
OHIO VALLEY ELECTRIC CORPORATION

**OHIO VALLEY ELECTRIC CORPORATION (OVEC)
INDIANA-KENTUCKY ELECTRIC CORPORATION (IKEC)
Agenda
Boards of Directors' Meeting – Conference Call
December 8, 2021**

**Case No. 2021-00393
SC-1 Question No. 11
Page 297 of 341
Arbough**

- | | |
|---|----------------------------|
| 1. Call Meeting to Order (10 a.m.) | Paul Chodak III |
| 2. Roll Call
- Quorum (OVEC and IKEC) | Kay Martin |
| 3. Safety and Culture Moment | Shannon Gatke |
| 4. Administrative Items:
a. Approve Minutes of Prior Meetings
- Resolutions (OVEC and IKEC)

b. Election of Director
- Dave Isaacson (I&M) to replace Dave Lucas (I&M)
as IKEC Director
- Resolutions (OVEC)

c. Annual Election of Officers and Board Committees
- Resolutions (OVEC & IKEC) | Kay Martin |
| 5. AEP Service Corporation Service Charges
- 2021 Projected Actual
- 2022 Budget
- 2022 Resolutions (OVEC and IKEC) | Kay Martin |
| 6. OVEC and IKEC Environmental Update
- Compliance and Project Updates | Mike Brown |
| 7. Construction Budget Review
- 2022 Construction Budget
- 2022 Resolutions (OVEC and IKEC) | Justin Cooper |
| 8. Report on Operational and Financial Performance
- Performance Metrics and OBL Scoreboard
- Cost Optimization Efforts
- Fuel Strategy | Justin Cooper |
| 9. Report on Plant Strategic Plan
- 2021 Clifty Strategic Plan
- 2020 Kyger Strategic Plan | Cliff Carnes
Tom Staats |
| 10. OVEC Operating Committee and Transmission Update
- 2021 Operating Committee Activities
- Transmission Interconnections | Scott Cunningham |
| 11. Treasurer's Report
- Report on 2021 and 2022 Finance Activities | Kay Martin |
| 12. OVEC Power Cost Projections
- 2021 Projected Actual
- 2022-2025 Projection | Justin Cooper |
| 13. Independent Auditor's Comments and Questions
(Deloitte & Touche) | Bob Bitter
Chad Palmer |
| 14. Open Discussion

Adjournment

Executive Session

Adjournment | |



**Boards of Directors' Meeting
Presentation December 8, 2021**

Administrative Items

OHIO VALLEY ELECTRIC CORPORATION (OVEC)
INDIANA-KENTUCKY ELECTRIC CORPORATION (IKEC)
Resolutions of Minutes of Prior Meetings
Boards of Directors' Meeting
December 8, 2021

OVEC

RESOLVED, that the Minutes of the Special Meetings of the Board of Directors of this Corporation, held on December 15, 2020 and July 16, 2021, are approved.

IKEC

RESOLVED, that the Minutes of the Special Meetings of the Board of Directors of this Corporation, held on December 15, 2020 and July 16, 2021, are approved.

David Isaacson

Indian Michigan Power: Vice President – Distribution Region Operations

Dave Isaacson is Vice President for Distribution Region Operations for Indiana Michigan Power, an operating company of American Electric Power (AEP) headquartered in Fort Wayne, Indiana, that serves more than 593,000 customers in Indiana and Michigan.

As Vice President, Dave is responsible for overseeing and directing the design, construction, maintenance and emergency restoration of I&M's Distribution system to provide safe, reliable power to our customers. The Distribution system includes engineering, design, distribution line and safety, as well as meter reading and meter services.

Isaacson began his career with Indiana Michigan Power in 1986 and has held a variety of positions including forestry supervisor, district manager, region support manager and dispatch manager.

He holds a Bachelor of Science Degree with a focus in Forest Management from Michigan State University and a Master of Business Administration from Indiana Wesleyan University.

OHIO VALLEY ELECTRIC CORPORATION (OVEC)
INDIANA-KENTUCKY ELECTRIC CORPORATION (IKEC)
Resolutions of Election
Board of Director' Meeting
December 8, 2021

WHEREAS, effective as of December 31, 2021, Mr. Dave Lucas will resign as a member of the Board of Directors (Board) of IKEC;

WHEREAS, OVEC and IKEC management has recommended to the remaining members of their respective Boards those persons named below to be elected and/or appointed as Director to the IKEC Board of IKEC.

NOW, THEREFORE, BE IT:

RESOLVED, that, subject to any necessary action by FERC under Section 305 of the Federal Power Act, Mr. David Isaacson be elected a Director of the Board of IKEC.

RESOLVED, that the elections and appointments shall be effective as of January 1, 2022.

OHIO VALLEY ELECTRIC CORPORATION (OVEC)
Resolutions of Election
Board of Director' Meeting
December 8, 2021

RESOLVED, that the following individuals be and hereby are appointed to serve as members of the Executive Committee of the Corporation pursuant to Article VI of the Code of Regulations of the Corporation:

Lonnie E. Bellar
Paul Chodak III
Patrick W. O'Loughlin
David W. Pinter
Marc Reitter
John A. Verderame

RESOLVED, that the following individuals be and hereby are confirmed to serve as Chairwoman and members of the Human Resources Committee of the Corporation pursuant to Section II of the Human Resources Committee Charter:

Thomas Alban
Christian T. Beam
Lonnie E. Bellar
Julie Sloat - Chairwoman

RESOLVED, that the following individuals be and hereby are elected to the offices of the Corporation set forth opposite their respective names pursuant to Article V of the Code of Regulations of the Corporation:

President	Paul Chodak III
Vice President, Chief Operating Officer and Chief Financial Officer.....	Justin J. Cooper
Secretary and Treasurer	Kassandra K. Martin
Assistant Secretary and Assistant Treasurer	Julie Sherwood

INDIANA-KENTUCKY ELECTRIC CORPORATION (IKEC)
Resolutions of Election
Board of Director' Meeting
December 8, 2021

RESOLVED, that the following individuals be and hereby are appointed to serve as members of the Executive Committee of the Corporation pursuant to Article V of the By-Laws of the Corporation:

Paul Chodak III
Patrick W. O'Loughlin
David W. Pinter

RESOLVED, that the following individuals be and hereby are elected to the offices of the Corporation set forth opposite their respective names pursuant to Article IV of the By-Laws of the Corporation:

President	Paul Chodak III
Vice President, Chief Operating Officer and Chief Financial Officer.....	Justin J. Cooper
Secretary and Treasurer	Kassandra K. Martin
Assistant Secretary and Assistant Treasurer	Julie Sherwood

AEP Service Corporation Service Charges & Budget

OHIO VALLEY ELECTRIC CORPORATION (OVEC)
 INDIANA-KENTUCKY ELECTRIC CORPORATION (IKEC)
 AMERICAN ELECTRIC POWER SERVICE CORPORATION CHARGES
 FOR CALENDAR YEAR 2021 PROJECTED THROUGH DECEMBER 31, 2021

	BUDGET FOR 2021			PROJECTED THROUGH 12/31/2021			DIFFERENCE OVER (UNDER)
	<u>OVEC</u>	<u>IKEC</u>	<u>TOTAL</u>	<u>OVEC</u>	<u>IKEC</u>	<u>TOTAL</u>	
<u>GENERAL SERVICES</u>							
OPERATION & MAINTENANCE							
ENVIRONMENTAL ACTIVITIES							
NERC/CIP, CYBER SECURITY & IT SOFTWARE							
FUEL PROCUREMENT & TRANSPORTATION							
TRANSMISSION							
GENERAL ADMINISTRATIVE SERVICES							
OTHER GENERAL SERVICES							
TOTAL GENERAL SERVICES							

OHIO VALLEY ELECTRIC CORPORATION (OVEC)
INDIANA-KENTUCKY ELECTRIC CORPORATION (IKEC)
AMERICAN ELECTRIC POWER SERVICE CORPORATION CHARGES
BUDGET FOR CALENDAR YEAR 2022

	BUDGET FOR 2022		
	<u>OVEC</u>	<u>IKEC</u>	<u>TOTAL</u>
OPERATION & MAINTENANCE			
ENVIRONMENTAL ACTIVITIES			
NERC/CIP, CYBER SECURITY & IT SOFTWARE			
FUEL PROCUREMENT & TRANSPORTATION			
TRANSMISSION			
GENERAL ADMINISTRATIVE SERVICES			
OTHER GENERAL SERVICES			
TOTAL AEPSC GENERAL SERVICES			

**OHIO VALLEY ELECTRIC CORPORATION (OVEC)
INDIANA-KENTUCKY ELECTRIC CORPORATION (IKEC)
AEP Service Corporation 2022 Service Charges
Boards of Directors' Meeting
December 8, 2021**

OVEC

RESOLVED, that the officers of Ohio Valley Electric Corporation may request and obligate Ohio Valley Electric Corporation to pay for general services, exclusive of services for specific projects previously approved, under the Agreement among American Gas and Electric Service Corporation (now American Electric Power Service Corporation), Ohio Valley Electric Corporation, and Indiana-Kentucky Electric Corporation dated December 15, 1956, in an amount which, when added to amounts paid for general services by Indiana-Kentucky Electric Corporation, exclusive of services for specific projects previously approved, would aggregate a maximum of \$ [REDACTED] million for calendar year 2022.

IKEC

RESOLVED, that the officers of Indiana-Kentucky Electric Corporation may request and obligate Indiana-Kentucky Electric Corporation to pay for general services, exclusive of services for specific projects previously approved, under the Agreement among American Gas and Electric Service Corporation (now American Electric Power Service Corporation), Ohio Valley Electric Corporation, and Indiana-Kentucky Electric Corporation dated December 15, 1956, in an amount which, when added to amounts paid for general services by Ohio Valley Electric Corporation, exclusive of services for specific projects previously approved, would aggregate a maximum of \$ [REDACTED] million for calendar year 2022.

OVEC and IKEC Environmental Update

CSAPR Regulatory and Operational Update

Revised CSAPR Update Rule became effective June 29, 2021

EPA issued Revised CSAPR Update Rules (DC Circuit Court remand on 9/13/2019). Court invalidated the CSAPR Update – the prior rule was not considered adequate to fully implement CAA requirements.

New Rule Requirements

- More restrictive NOx ozone season state budget caps for 12 states (including Ohio and Indiana).
 - Allowance allocations and cap and trade components are retained.

2021 Ozone Season Performance: Clifty Creek – 1008 tons, Kyger Creek – 896 tons - on target with goals

- 2021 Ozone season included dispatch hours where Unit 6 was called on by PJM for grid reliability reasons.

2022 Ozone Season:

Clifty Creek

- NOx ozone season allowance budget reduced by 38.5% in 2022. From 1381 allowances in 2020 to 849 allowances in 2022. (Assurance Level: 1027 tons)
- Internal NOx optimization workgroup will continued to be focused on optimizing SCR performance and unit generation under new rule, Unit 6 dispatch during ozone season will continue to be limited.

Kyger Creek

- NOx ozone season allowance budget reduced by 6.2% - From 988 allowances in 2020 to 927 allowances in 2022. This budget reduction is expected to have limited impacts on Kyger unit dispatch/operation during the 2022 ozone season and beyond. (Assurance Level: 1121 tons)

Effluent Limitation Guidelines Regulatory Update

Final ELG Reconsideration Rule published in Federal Register on October 13, 2020, included the following changes:

1. Amended Best Available Technology (BAT) determination for FGDWW discharges.
2. Revised final effluent limits for arsenic, mercury, selenium, and nitrate-nitrite.
 - OVEC has initiated a pilot study and is updating cost estimates and compliance options for a bioreactor or similar technology for FGDWW ELG compliance.
 - Revised compliance timeframe associated with BAT for treatment of FGDWW to “no later than” December 31, 2025.
3. Changed Bottom Ash Transport Water BAT determination to include limited blowdown (up to 10%) and a “no later than” compliance date of December 31, 2025.

Effluent Limitation Guidelines Permitting Update

Clifty Creek

- Permit Modification Request filed with IDEM to remove the April 1, 2022 compliance date for obsolete ELG limits for FGDWW and BATW discharges.
- IDEM issued modification effective 12/1/2021 revising the NPDES permit FGDWW limits and extending the compliance deadline beyond current permit.
- IDEM will set new final ELG compliance dates in NPDES permit renewal expected to be reissued in summer 2022. IKEC requested new dates consistent with the ELG Reconsideration Rule.

Kyger Creek

- NPDES Permit Renewal Application was filed in October 2018. OEPA has issued a draft renewal permit. Draft permit includes an ELG compliance date for dry fly ash conversion consistent with old ELG rule, and ELG compliance dates consistent with the updated ELG regulations for FGDWW and BATW.
- Bioreactor pilot study under way at Kyger Creek. Pilot results to determine next steps in preparing for cost estimates and timelines for compliance with updated ELG requirements for FGDWW.
 - OVEC is focused on utilizing modular, sizable and potential 3rd party operated technology to reduce costs and have minimal cost impact.

CCR Regulatory Update

CCR Rule Changes – Part A Final Rule

- **CCR Part A Final Rule (published 8/28/20)** required that all unlined CCR surface impoundments cease receipt of CCR and non-CCR waste streams and initiate closure by **April 11, 2021; or**
 - File a demonstration with US EPA for an alternate date to cease ash placement and initiate closure by **November 30, 2020**. The alternative date must still be a technically feasible and can be no later than October 17, 2023.

- **OVEC prepared and submitted the required Demonstrations for a site-specific alternative closure deadline by the November 30, 2020, filing date.**
 - Demonstrations outline alternate technically feasible dates beyond April 11, 2021, to cease placement of ash and initiate pond closures.
 - OVEC incorporated feedback from US EPA in the final submissions.
 - Still waiting on EPA feedback on demonstration application acceptability.

- As approved in the May 5, 2020 BOD meeting, OVEC is installing Dry Fly Ash Conversion (Kyger), as well as Boiler Slag Settling Basins, Low Volume Waste Water Treatment Systems and Water Redirects at each plant to cease sending CCR and non-CCR waste streams to surface impoundments and initiate pond closures by October 2023.

CCR/ELG - Environmental Projects Update

Capital Project Status:

Boiler Slag Settling Basins, Low Volume Wastewater Treatment System (LVWTS), Water Redirects & related Ash Pond Closures – Kyger Creek and Clifty Creek

- Construction activity is underway
 - Equipment Procurement – Bidding/Awards & deliveries expected to be complete by end of 1st quarter 2022
 - Environmental permitting in process (majority is complete)
 - Scope and timelines aligns with Demonstrations filed with USEPA

Dry Fly Ash Conversion (DFAC) – Kyger Creek

- Construction activities started in June 2021
 - Environmental permits secured for construction and environmental permits being secured for future operations (Fly Ash system operations and potential sales)
 - South Fly Ash Pond closure to be initiated after DFAC and water redirect work is completed

Current Project Risks: Clifty Environmental Permitting

Phase I Closure of West Boiler Slag Pond (WBSP) – Clifty Creek

- IDEM issued Phase I closure permit on May 17, 2021
 - IKEC filed an appeal of Phase I closure permit on June 1, 2021 challenging certain provisions in the permit that conflict with federal CCR regulations
 - Action on appeal pending - spring/summer 2022 before action on appeal

Phase II-IV Closure of WBSP and LRCP Closure – Clifty Creek

- IKEC filed closure plans with IDEM for the remainder of ash pond (Phases 2-4) and the Landfill Runoff Collection Pond (LRCP) in June 2021.
 - IDEM has yet to act on Phase 2-4 or LRCP closure plans,
 - IKEC filed a request with IDEM's Commissioner to issue a variance or take actions consistent with Indiana Public Law 100 adopted in 2021,
- IKEC initiated construction on November 15, 2021 to ensure compliance with the EPA CCR/ELG rules and related OVEC demonstration application.

CCR/ELG - Environmental Projects Update

CCR/ELG Overall Project Assessment:

- Safety Recordable and Severity Rate are 0.0
- Engineering and design CPI and SPI are positive
- Team performance and productivity resulting in positive project indicators
- Construction is on schedule and with no material change to float
- Cost projections are on target and on budget
 - Capital Project costs projected at \$██████M (BOD approved \$██████M)

Pictured: Kyger's Dry Fly Ash Silo. The Silo is 108 ft tall and will have a 3.75 day capacity for all units at full load.



General Environmental Compliance Update - 2021

- **316 (b)** - 316(b) Section 122.21(r) reports filed in November 2018 (Kyger) and January 2019 (Clifty).
 - IDEM has taken no action - waiting for NPDES permit renewal in 2022.
 - OEPA issued draft NPDES permit in November 2021. The draft permit includes a schedule of compliance for the selection, piloting of modified traveling water screens.
 - The technology OVEC is piloting requires minimal existing equipment modification and is projected to be an O&M expense; while also offsetting current O&M maintenance costs.
- **MATS** – Both Plants have maintained compliance with all MATS related compliance obligations and emissions limits in 2021.
- **NAAQS** – Ambient network monitoring system around Kyger Creek Station shows attainment with SO₂ NAAQS – US EPA proposed rule on September 2, 2020, to change status for area around plant to “attainment” – expecting EPA to issue a final rule at any time.

General Environmental Compliance – 2021 Process Improvements and Program Assessments

- **Environmental Compliance Assessments** – assessment at Clifty Creek in November 2021.
 - Evaluation of Compliance status and effectiveness of controls for six environmental programs (NPDES, Storm water management, CEMS, Drinking Water, SPCC, universal waste, etc.).
 - Preliminary assessment results indicate environmental compliance programs are being maintained with opportunities for improvement in some areas.
 - Improvements recommended with storm water management including housekeeping improvements, updating the SWPPP, and implementation of more effective BMPs
 - Opportunity for improving housekeeping, recordkeeping and documentation in other programs

Affordable Clean Energy (ACE) Rule Update

U.S. EPA repealed CPP and in a separate action issued ACE Rule on July 8, 2019.

- ACE Rule was vacated by the D.C. Circuit Court on January 19, 2021.
 - The rule vacatur was appealed by West Virginia and several other states and coal companies.
 - U.S. Supreme Court announced on October 29, 2021 that it will hear the case about USEPA's authority to regulate power plant greenhouse gas emissions under the Clean Air Act via the ACE Rule.
 - Court decision expected to clarify how narrow/broad EPA's authority to regulate greenhouse gas emissions is under existing law.
- Updated Federal Legislation mandating further carbon emissions reductions from the utility industry remains uncertain.

Gypsum and Ash Beneficial Reuse

Kyger Creek

- Nearly 100% of gypsum continues to be sold for wallboard production.
- Boiler slag sales are temporarily suspended during pond retrofit/closure activities.
- Anticipate resuming boiler slag sales once ELG/CCR activities are complete. Also plan to seek strategic partners to market fly ash once DFAC is complete.

Clifty Creek

- Nearly 100% of gypsum being sold for wallboard production (currently trucked).
- On-site gypsum barge loading system under construction – expect to place into service by mid-December 2021.
- Fly ash marketing
 - IKEC is selling approximately 40-50% of its fly ash production.

Benefits for both Plants:

- Reduced fuel costs, lower O&M costs, reduced future landfill expansion costs, reduced future environmental compliance risks.

Construction Budget Review



2022 Construction Budget

(requesting BOD approval)

Year	Loc	Project Name	Amount	IRR%	Paybk
2022	KCP	KC4 1st Baffle Wall Replacement			
2022	KCP	KC3 FD VFD Replacement			
2022	CCP	Air Blast Circuit Breaker Replacement (13/14 of 17)			
2022		Contingency Fund			
2022 Total Non-Environmental					

2022 Projects Economic Metrics Range:

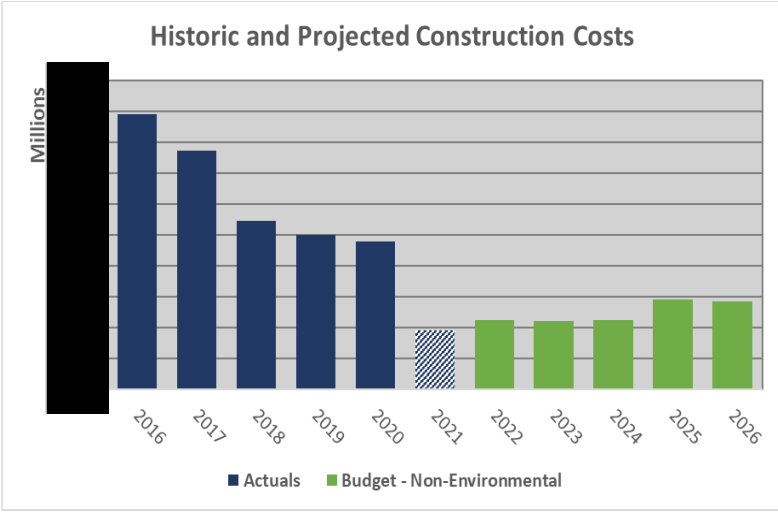
Internal Rate of Return (IRR)
 Target: [REDACTED]
 Avg: [REDACTED]

Payback Period
 Target: [REDACTED]
 Avg: [REDACTED]

- 2022 Construction Projects highlights a [REDACTED] compared to the 5 year average 2016-2020.
- Current projects continue the replacement of original boiler tubing and other end of life assets to address current and future reliability issues.



Construction Budget Forecast



OVEC/IKEC Construction Forecast			
Year	Loc	Project Name	Amount
2023	CCP	SNCR and Hybrid SNCR (1 of 2)	
2023	KCP	KC2 FD VFD Replacement	
2023	CCP	Air Blast Circuit Breaker Replacement (13/14 of 17)	
2023		Minor Projects (under 500k)	
2023		Contingency Fund	
2023 Total Non-Environmental			
2024	CCP	CC6 1st Baffle Wall Replacement	
2024	CCP	Corporate Communications System Replacement	
2024	CCP	SNCR and Hybrid SNCR (2 of 2)	
2024	KCP	KC5 FD VFD Replacement	
2024		Minor Projects (under 500k)	
		Contingency Fund	
2024 Total Non-Environmental			
2025	KCP	KC1 Ash Hopper Replacement	
2025	CCP	CC4 SSH Inlet Element Replacement	
2025	KCP	KC1 FD VFD Replacement	
2025	CCP	Air Blast Circuit Breaker Replacement (15/16 of 17)	
		Minor Projects (under 500k)	
		Contingency Fund	
2025 Total Non-Environmental			
2026	KCP	KC3 Ash Hopper Replacement	
2026	CCP	CC3 SSH Inlet Element Replacement	
2026	CCP	Air Blast Circuit Breaker Replacement (17 of 17)	
		Minor Projects (under 500k)	
		Contingency Fund	
2026 Total Non-Environmental			

Construction Budget Forecast:

The Construction Forecast has been reduced through prioritization to provide funding for Environmental Projects and help to minimize the impact on total Demand Cost.

Projected Non-Environmental Construction Projects will continue to be reviewed and prioritized based on reliability impact and related economic benefit.

OHIO VALLEY ELECTRIC CORPORATION (OVEC)
INDIANA-KENTUCKY ELECTRIC CORPORATION (IKEC)
OVEC-IKEC Construction Budget
Boards of Directors' Meeting
December 8, 2021

OVEC-IKEC

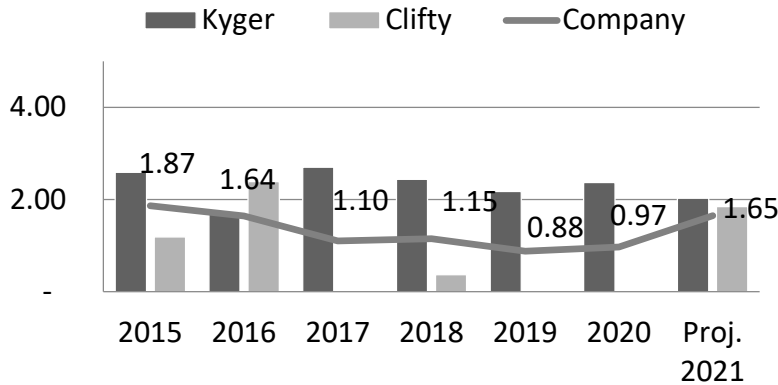
RESOLVED, that the OVEC-IKEC Construction Budget for 2022, indicating estimated total expenditures of \$ [REDACTED] for new or replacements of property, and [REDACTED] for Management Reserve, which totals [REDACTED] is approved.

Operational and Financial Performance

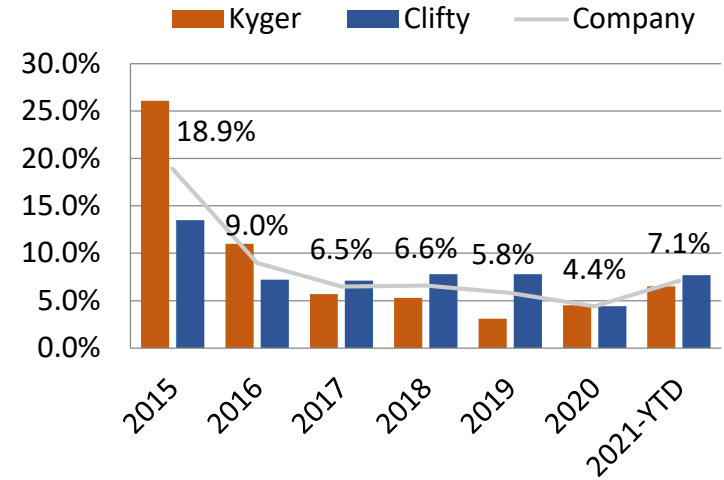


2015 – 2021 Performance

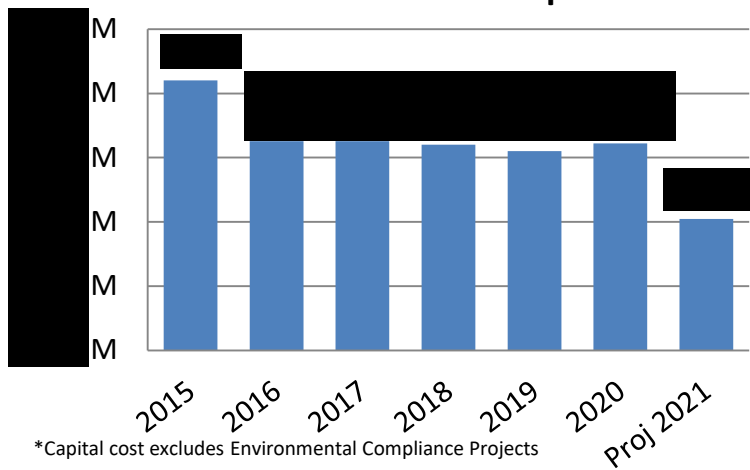
**Safety
(Employee Recordable Rate)**



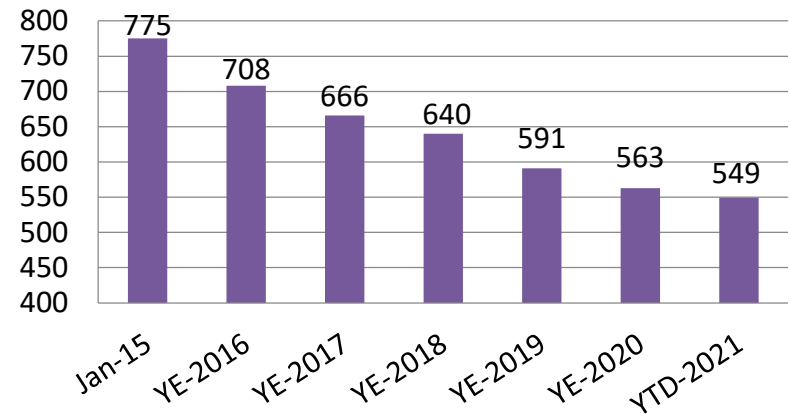
Equivalent Forced Outage Rate



OMC – O&M and Capital Costs



Employee Count



Open Book Leadership (OBL) Scoreboard Update – Mid-Year Performance

OVEC /IKEC – OBL Plant Scoreboards

		Kyger Creek Plant			Clifty Creek Plant			
		2020	2021		2020	2021		
		Actual	Target	Oct YTD Actual	Actual	Target	Oct YTD Actual	
Safety	DART Rate (YTD)	1.90	0.26	1.18 Proj YE 1.01	0.00	0.26	1.63 Proj YE 1.38	
	Employee Infield Observation & Coaching (YTD)	419	420	401	504	492	449	
Environmental Compliance	MATS (Mercury, Particulate Matter, Acid Gases)	Compliance	Compliance	Compliance	Compliance	Compliance	Compliance	
	Environmental Good Catch	219	300	249	N/A	250	361	
Drivers of Critical Number Total Production Power Cost \$/MWhr	Reliability	EFOR	4.5%	5.8%	6.5%	4.4%	5.8%	7.7%
		Commercial Availability	91%	90%	87%	93%	90%	90%
	Energy Cost	Heat Rate ₁	10,965	10,746	10,592	11,094	10,853	10,777
		Total Fuel Cost Total Fuel/ Net Gen			\$22.72			\$28.21
	Demand Cost	O&M						
	Continuous Improvement	Process Improvements	837	660	667	760	630	777

- Reviewed at Plant Huddles (weekly)
- Future Focused (80% / 20%)
- Highlight Opportunities for Improvement
- Metrics are key drivers to Critical Number - \$/MWhr

1) Heat Rate targets adjust based on unit loading
2) Commercial Availability adjusted for coal conservation starting in Sept 2021



Fuel Strategy and Coal Procurement

Case No. 2021-00393

Attachment to Response to SC-1 Question No. 11

Pages 1341

Arbough

Fuel Strategy:

- Previously OVEC used historical burn to project future burn and starting 2-3 years prior to secure commitments with final commitments [REDACTED] procured in Q3-Q4 for the coming year.
- [REDACTED] demand in 2020 resulted in average inventories on 1/1/2021 at [REDACTED] of Fuel. In 2021 the commitment for the year was [REDACTED] in order to achieve target levels of [REDACTED] of Fuel.
- Demand in late 2021 was [REDACTED] than anticipated due to high natural gas prices and resulted in OVEC being [REDACTED] for Q4-2021 and Q1-2022.
- In September, Kyger Creek’s inventory for [REDACTED] [REDACTED] (per our Operating Procedure).
- In October the Operating Committee requested and approved OVEC to modify the price offer on all units [REDACTED].
- Grid Reliability impact – [REDACTED] in November, OVEC’s available units were dispatch full load due to grid reliability

Coal Procurement:

- OVEC has procured all eastern tons available and is utilizing a [REDACTED] Powder River Basin coal blend for 2022.
- Coal commitments are [REDACTED] for 2022 and [REDACTED] for 2023 based on projected burn and current market forwards.
- OVEC’s goal is to meet the current market demand without allowing inventory to go [REDACTED] of Fuel.
 - *Forecast below assumes* [REDACTED]

	Kyger
Projected Deliveries (tons)	[REDACTED]
Projected Burn (tons)	[REDACTED]
Projected Inventory (days)	[REDACTED]
Projected Deliveries (tons)	[REDACTED]
Projected Burn (tons)	[REDACTED]
Projected Inventory (days)	[REDACTED]
Utilization %	[REDACTED]
Average Capacity Factor	[REDACTED]



Cost Optimization Efforts

Continuous Improvement/LEAN Efforts:

- Over 6,000 Process Improvements (from employees) since 2015
- Over \$ [REDACTED] in cost saving ideas (from employees) since 2015
- In 2021 - Over 1,000 new process improvements and new standard work developed
- For 2022 – OVEC will be targeting cost saving idea generation sessions at all locations to promote additional reductions to operating costs

Tax-Exempt Bond Refinancing Efforts:

- Approx. \$600 M of OVEC’s \$1.1 B of debt is tax-exempt (with ability to refinance)
- Since 2019, through refinancing efforts, OVEC has reduced the weighted average interest rate on tax-exempt debt from [REDACTED]
 - An estimated [REDACTED] = approx. [REDACTED]

Other Cost Reduction Efforts –Partnership with Alliance for Cooperative Energy Services (ACES)

- OVEC has been partnering with ACES to outsource OVEC’s Energy Scheduling function (in phases) over the past two years
- **New Opportunity** - [REDACTED]
 - [REDACTED]
 - [REDACTED]
 - [REDACTED]
 - [REDACTED]
 - [REDACTED]

Strategic Plans

OVEC 2021 Strategic Plan - Corporate

Case No. 2021-00393
Attachment to Response to SC-1 Question No. 11

Page 331 of 341
Arbough

Mission Objective	Initiative ¹	Tactical Actions ^{2, 3}
Zero Harm	Advance our Safety Culture	Impact Beliefs by Making Safety Personal
		Engage All Employees to Strengthen Ownership and Commitment
	Integrate Contractors/Strategic Partners into the OVEC/IKEC Safety Culture	Contractor/Strategic Partner Oversight and Safety Standardization
	Improve the Understanding and Application of Safety Policies, Procedures and Tools	Validate Knowledge and Skill through Formal Assessments Improve Safety Process Owner Proficiency
Provider of Choice	Improve and Maintain Reliability, Optimize Commercial Availability and Reduce EFOR and MOF	Disciplined Focus on Process Ownership and Asset Health to Prioritize Spend to Drive Reliability
	Optimize Heat Rate	Cross Functional Heat Rate Team to Prioritize Actions and Communicate Results to Employees
	Continue to Identify and Optimize Core Business	Communicate Core Business Plans to Employees
	Improve Fiscal Responsibility	Financial Education - Provide Leadership with Materials to Inform Employees of Corporate Finances
Culture of Engagement	Improve Communication Processes	Execute Department Culture Improvement Plan Based on Gaps Identified in the Survey
		Communication Conducted in Small Groups in a Face-to-Face Format
		Include Positive Recognition in Communication to Employees
	Strengthen Accountability	Communicate Results, Associated Actions and Outcomes
		Enhance the In-Field Observation Process to Help Identify Training and Development Needs
Operational Excellence	Improved Team Performance	Continue Cross-Functional Workforce Training Improve on Inter and Intra-Departmental Collaboration
	Employee Development	Skill and Knowledge Assessment to Enhance Development Plans for All Employees
	Commitment to Environmental Excellence	Pursue Environmental Excellence through Employee Engagement
Continuous Improvement	Optimize Continuous Improvement Process (CIP) and Open Book Leadership (OBL)	Focus on Quality CIP Engagement and Cost Savings Ideas to Improve Sustainability
		Develop Communication Processes to Include Implementation, Feedback, Revision, and Targeted Sharing of Information and Impact of CI Tools Across the Organization
	Root Cause Analysis (RCA) Focus	Implement Targeted Training for the RCA Process, Including Associated Criteria Based on Job/Department Functions
	Standard Work Focus	Based on Employee Input, Develop Standard Work to Ensure Knowledge Transfer to Optimize Performance Enhance the Standard Work Process to Include Feedback from the Subject Matter Experts (SMEs) and Follow Up to Improve Standard Work Quality

1 - Initiative is a broad reaching generalized need.

2 - Tactical Action is a specific action to achieve a desired goal.

3 - Possible additional Tactical Actions to be determined by Business Unit.

OVEC 2021 Strategic Plan – Kyger Creek

Mission Objective	Initiative	Tactical Actions
Zero Harm	Advance our Safety Culture	Engage All Employees to Strengthen Ownership and Commitment
	Integrate Contractors/Strategic Partners into the OVEC/IKEC Safety Culture	Integrate Strategic Partners into the Plant Safety Task Force
	Improve Understanding and Application of Safety Policies, Procedures and Tools	Validate Knowledge and Skill Through Formal Assessments
Provider of Choice	Increase and Maintain Reliability, Optimize Commercial Availability and Reduce EFOR and MOF	Disciplined Focus on Process Ownership and Asset Health to Prioritize Spend to Drive Reliability - Develop Top Ten Causes of Lost Generation Reporting and Assessment
	Optimize Heat Rate	Cross Functional Heat Rate Team to Prioritize Actions and Communicate Results to Employees
	Continue to Identify and Optimize Core Business	Communicate Plans to Employees - during State of the Business Meetings
	Improve Fiscal Responsibility	Financial Education - Provide Leadership with Materials to Inform Employees of Corporate Finances with Asset Owner Financial Reports
Culture of Engagement	Improve Communication Processes	Execute Department Culture Improvement Plan Based on Gaps Identified in the Annual Survey
	Strengthen Accountability	Consistent Coaching and Feedback to Ensure Expectations are Being Met
Operational Excellence	Improved Team Performance	Improve on Inter and Intra-Departmental Collaboration with Focus on Improvement of the Quality of the Electronic Logs
	Employee Development	Skill and Knowledge Assessment to Enhance Development Plans for All Employees
	Commitment to Environmental Excellence	Pursue Environmental Excellence through Employee Engagement - All Departments Participated in Environmental Good Catch Program
Continuous Improvement	Optimize Continuous Improvement Process (CIP) and Open Book Leadership (OBL)	Focus on Quality CIP Engagement and Cost Savings Ideas to Improve Sustainability - Implement and Track Quality Business Challenges
	Root Cause Analysis (RCA) Focus	Implement Targeted Training for the RCA Process, Including Associated Criteria Based on Job/Department Functions - RCA Refresher Training
	Standard Work Focus	Enhance the Standard Work Process to Include Feedback from the Subject Matter Experts (SMEs) and Follow Up to Improve Standard Work Quality

Kyger Creek Plant's Strategic Plan **aligns directly** with OVEC's Corporate Strategic Plan's Mission Objectives and Initiatives

2 Top Areas of Success

2 Top Areas of Opportunity

OVEC 2021 Strategic Plan – Clifty Creek

Mission Objective	Initiative	Tactical Actions
Zero Harm	Advance our Safety Culture	Impact Beliefs by Making Safety Personal
	Integrate Contractors/Strategic Partners into the OVEC/IKEC Safety Culture	Contractor/Strategic Partner Oversight and Safety Standardization - Include in All Maintenance Activities
	Improve Understanding and Application of Safety Policies, Procedures and Tools	Improve Safety Process Owner Proficiency
Provider of Choice	Increase and Maintain Reliability, Optimize Commercial Availability and Reduce EFOR and MOF	Disciplined Focus on Process Ownership and Asset Health to Prioritize Spend to Drive Reliability - Individual Ownership
	Optimize Heat Rate	Cross Functional Heat Rate Team to Prioritize Actions and Communicate Results to Employees
	Continue to Identify and Optimize Core Business	Communicate Plans to Employees by Tell the "Why?" And Engage the Team for Better Understanding
	Improve Fiscal Responsibility	Financial Education - Provide Leadership with Materials to Inform Employees of Corporate Finances with Qualitative Analysis of Monthly Projections and Annual Goals
Culture of Engagement	Improve Communication Processes	Include Positive Recognition in Communication to Employees
	Strengthen Accountability	Enhance the In-Field Observation Process to Help Identify Training and Development Needs
Operational Excellence	Improved Team Performance	Continue Cross-Functional Workforce Training by Identifying Cross-Functional Tasks Across All Departments
	Employee Development	Skill and Knowledge Assessment to Enhance Development Plans for All Employees
	Commitment to Environmental Excellence	Pursue Environmental Excellence through Employee Engagement - Implementation of Environmental Good Catch Program
Continuous Improvement	Optimize Continuous Improvement Process (CIP) and Open Book Leadership (OBL)	Develop Communication Processes to Include Implementation, Feedback, Revision, and Targeted Sharing of Information and Impact of CI Tools Across the Organization
	Root Cause Analysis (RCA) Focus	Implement Targeted Training for the RCA Process, Including Associated Criteria Based on Job/Department Functions
	Standard Work Focus	Based on Employee Input, Develop Standard Work to Ensure Knowledge Transfer to Optimize Performance

Clifty Creek Plant's Strategic Plan **aligns directly** with OVEC's Corporate Strategic Plan's Mission Objectives and Initiatives

2 Top Areas of Success

2 Top Areas of Opportunity

Operating Committee and Transmission Update

Operating Committee Activities

Operating Committee Actions in 2021:

- Fuel Supply
 - As presented earlier, the fuel supply issues triggered the use of the Operating Procedures provision [REDACTED]
 - To promote [REDACTED] the Operating Committee has been meeting every 2-3 weeks to receive updates from OVEC and [REDACTED]
 - 10/15/21 – Approved the temporary modification of the procedure [REDACTED]
 - 11/5/21 – Approved a modification to the temporary procedure [REDACTED]

Transmission Interconnection Requests

Transmission Update:

- Since joining PJM in December of 2018, OVEC has received five interconnection requests through PJM Queue Process
 - All are Solar or Solar Plus Storage Facilities
 - Four are in the System Impact or Feasibility Study Phase
 - One has moved to the Facilities Study Phase
- All costs for studies and required upgrades are paid by the interconnecting party
- Interconnections that ultimately move forward could potentially produce transmission revenue and offset costs the Sponsors

Treasurer's Report

**OHIO VALLEY ELECTRIC CORPORATION (OVEC)
INDIANA-KENTUCKY ELECTRIC CORPORATION (IKEC)
Treasurer's Report
Boards of Directors' Meeting
December 8, 2021**

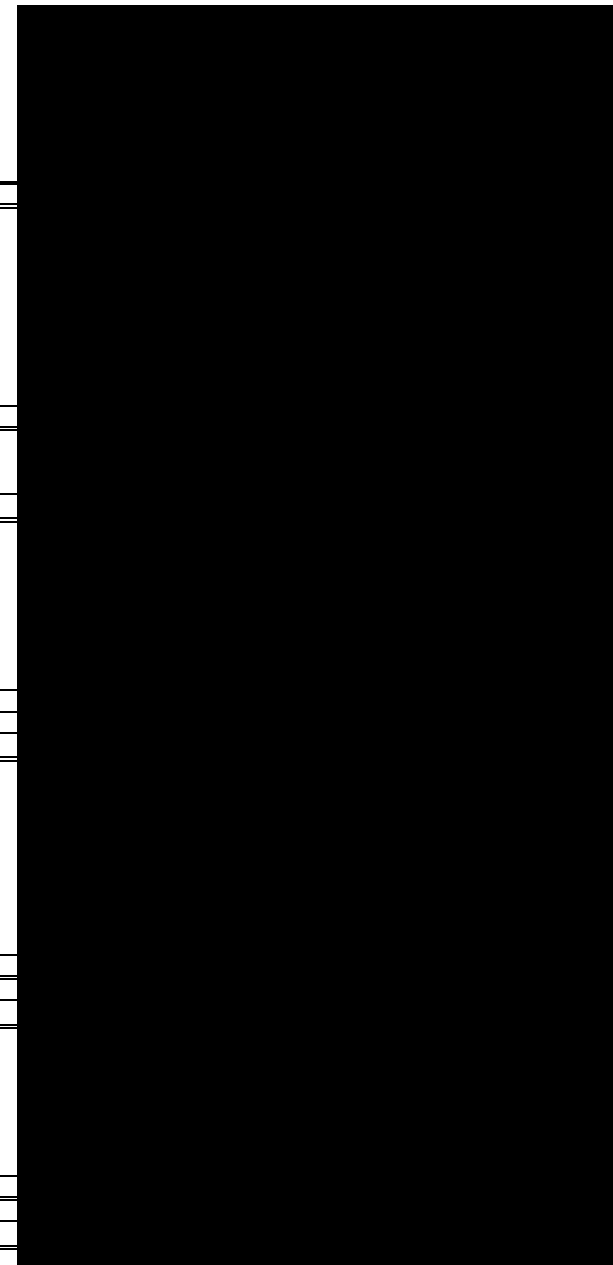
**Case No. 2021-00393
Attachment to Response to SC-1 Question No. 11
Page 338 of 341
Arbough**

	<u>OVEC</u>	<u>IKEC</u>	<u>Consolidated</u>
<u>CASH AND INVESTMENTS</u>			
Cash and Short-Term Investments	\$ 66,671,526	\$ -	\$ 66,671,526
DOE Settlement Reserve Account	65,361,148	-	65,361,148
Debt Reserve Account	121,468,913	-	121,468,913
Total Cash and Investments at October 31, 2021	<u>\$ 253,501,587</u>	<u>\$ -</u>	<u>\$ 253,501,587</u>
<u>PLANT DECOMMISSIONING & DEMOLITION (D&D) FUND</u>			
Total D&D Assets at October 31, 2021	<u>\$ 50,152,801</u>	<u>\$ 59,926,727</u>	<u>\$ 110,079,528</u>
<u>EMPLOYEE BENEFIT PLAN ASSETS</u>			
Pension Plan			
Supplemental Pension & Savings Plan			
Union Retiree Medical VEBA Trust			
Retiree Medical VEBA Trust			
Retiree Life Insurance VEBA Trust			
401(h)			
Total Benefit Plan Assets at October 31, 2021			
<u>EQUITY</u>			
Common Stock, 100,000 shares outstanding	\$ 10,000,000	\$ 3,400,000	\$ 10,000,000
Retained Earnings	22,399,362	-	22,399,362
Total Equity at October 31, 2021	<u>\$ 32,399,362</u>	<u>\$ 3,400,000</u>	<u>\$ 32,399,362</u>
<small>(OVEC's ownership of IKEC's Capital Stock (17,000 shares) is eliminated in consolidation.)</small>			
<u>LONG-TERM DEBT</u>			
2006 Senior Unsecured Notes, Series A, 5.80%, due February 15, 2026	\$ 123,200,017	\$ -	123,200,017
2006 Senior Unsecured Notes, Series B, 6.40% due June 15, 2040	51,465,748	-	51,465,748
2007 Senior Unsecured Notes, Series AA, AB & AC, 5.90%, due February 15, 2026	88,593,528	-	88,593,528
2007 Senior Unsecured Notes, Series BA, BB & BC, 6.50% due June 15, 2040	39,162,001	-	39,162,001
2008 Senior Unsecured Notes, Series A, 5.92%, due February 15, 2026	18,371,228	-	18,371,228
2008 Senior Unsecured Notes, Series B & C, 6.71%, due February 15, 2026	69,619,638	-	69,619,638
2008 Senior Unsecured Notes, Series D & E, 6.91% due June 15, 2040	75,694,537	-	75,694,537
2017 Senior Unsecured Notes, Series A, Floating Rate, due August 4, 2022	66,666,667	-	66,666,667
2009 Tax Exempt Bonds, \$50M Series A&D, 2.875%, due February 1, 2026	50,000,000	-	50,000,000
2009 Tax Exempt Bonds, \$25M Series B, 1.375%, due February 1, 2026	25,000,000	-	25,000,000
2009 Tax Exempt Bonds, \$25M Series C, 1.50%, due February 1, 2026	25,000,000	-	25,000,000
2010 Tax Exempt Bonds, \$50M Series A, 3.00%, due February 1, 2030	50,000,000	-	50,000,000
2010 Tax Exempt Bonds, \$50M Series B, 2.50%, due February 1, 2030	50,000,000	-	50,000,000
2012 Tax Exempt Bonds, \$200M Series A, 5%, due June 1, 2039	200,000,000	-	200,000,000
2012 Tax Exempt Bonds, \$100M Series B & C, 3.00%, due June 1, 2030	100,000,000	-	100,000,000
2019 Tax Exempt Bonds, \$100M Series A, 3.250%, due September 9, 2029	100,000,000	-	100,000,000
Total Long-Term Debt Outstanding at October 31, 2021	<u>\$ 1,132,773,364</u>	<u>\$ -</u>	<u>\$ 1,132,773,364</u>
<u>SHORT-TERM DEBT</u>			
Total Short-Term Debt Outstanding at October 31, 2021	<u>\$ 10,000,000</u>	<u>\$ -</u>	<u>\$ 10,000,000</u>
<u>CORPORATE UNSECURED CREDIT RATINGS</u>			
Fitch (rating affirmed February 26, 2021)		BBB-, Stable Outlook	
Moody's (rating affirmed July 14, 2021)		Ba1, Positive Outlook	
<u>FINANCING COMPLETED FOR 2021</u>			
Revolving Line of Credit \$185 M - 1Q 2021			
Refinanced 2021 Maturities/Expiring Agreements \$100 M Tax-Exempt bonds - 3Q 2021, avg interest cost of 2.156%, \$100 M Amortizing 2026-2030			
<u>FINANCING PLAN FOR 2022</u>			
Refinance \$200 M Tax-Exempt bonds - 2Q 2022 to reduce interest rate and liability - requesting BOD approval in 4/2022.			
Review options for remaining \$66 M of Private Placement Notes Due in 2022			

OVEC Power Cost Projections

Ohio Valley Electric Corporation
Projected Inter-Company Power Agreement (ICPA) Billable Cost Summary
Calendar Year 2021
 in thousands of dollars

	<u>Budget 2021</u>	<u>Projected 2021</u>	<u>Over/(Under)</u>	<u>Percentage Over/(Under)</u>
Generation Sales				
Estimated Delivered Power Sales from OVEC Generation (MWhr)				
Generation Costs (Energy and Generation Operating Costs)				
Energy Charge				
Projected Coal Cost (delivered)				
Projected Allowance Cost (based on projected weighted average inventory)				
Projected Other Fuel-Related Costs (reagents, fuel oil & coal handling less byproduct sales)				
Total Projected Energy Costs				
Projected Energy Costs - \$/MWhr				
Generation Operating Costs (Demand Charge)				
Projected Annual Capital Improvement Costs (ICPA Component A)				
Projected Operation and Maintenance Costs (ICPA Component B)				
Projected Administration and General Costs (ICPA Component B)				
Projected Taxes (ICPA Component C)				
Projected ROE Costs (ICPA Component D)				
Total Projected Generation Operating Costs (ICPA Components A, B, C, & D)				
Projected Generation Operating Costs (Demand Charge) - \$/MWhr				
Projected Total Generation Costs (Energy and Operating Costs) - \$/MWhr				
Transmission Costs				
Transmission Operating Costs (Demand Charge)				
Projected Annual Capital Improvement Costs (ICPA Component A) - Transmission				
Projected Transmission and Dispatch Costs (ICPA Component B)				
Projected Administration and General Costs (ICPA Component B) - Transmission				
Projected Total Transmission Costs				
Projected Transmission Costs - \$/MWhr				
Non-Operating Costs (Debt and Obligations)				
Non-Operating Cost (Demand Charge)				
Projected Debt Expense and Short-Term Debt Costs (ICPA Component A)				
Projected Long-Term Debt Costs (ICPA Component A)				
Projected Postretirement Benefit Obligation (ICPA Component E)				
Projected Decommissioning and Demolition Obligation (ICPA Component F)				
Total Projected Non-Production Demand Costs (ICPA Components A, E, & F)				
Projected Non-Operating Costs - \$/MWhr				
Total Billable Costs (Energy and Demand Charge)				
Summary of ICPA Billable Power Costs				
Grand Total Projected Energy Costs				
Grand Total Projected Demand Costs				
Grand Total Projected ICPA Billable Costs				
Projected Billable Costs (Energy and Demand) - \$/MWhr				



Ohio Valley Electric Corporation
Projected Inter-Company Power Agreement (ICPA) Billable Cost Summary
Calendar Years 2022 - 2026
Costs in thousands of dollars

2022 2023 2024 2025 2026

Generation Sales

Estimated Delivered Power Sales from OVEC Generated Power (MWhr)
Projected Energy Use Factor %
Projected Net Capacity Factor %

Generation Costs (Energy and Generation Operating Costs)

Energy Charge

Projected Coal Cost (delivered)
Projected Allowance Cost (based on projected weighted average inventory)
Projected Other Fuel-Related Costs (reagents, fuel oil & coal handling less byproduct sales)
Total Projected Energy Costs

Projected Energy Costs - \$/MWhr

Generation Operating Costs (Demand Charge)

Projected Annual Capital Improvement Costs (ICPA Component A) - Includes
Projected Operation and Maintenance Costs (ICPA Component B)
Projected Administration and General Costs (ICPA Component B)
Projected Taxes (ICPA Component C)
Projected ROE Costs (ICPA Component D)
Total Projected Generation Operating Costs (ICPA Components A, B, C, & D)

Projected Generation Operating Costs (Demand Charge) - \$/MWhr

Projected Total Generation Costs (Energy and Operating Costs) - \$/MWhr

Transmission Costs

Transmission Operating Costs (Demand Charge)

Projected Annual Capital Improvement Costs (ICPA Component A) - Transmission
Projected Transmission and Dispatch Costs (ICPA Component B)
Projected Administration and General Costs (ICPA Component B) - Transmission
Projected Total Transmission Costs

Projected Transmission Costs - \$/MWhr

Non-Operating Costs (Debt and Obligations)

Non-Operating Cost (Demand Charge)

Projected Debt Expense and Short-Term Debt Costs (ICPA Component A)
Projected Long-Term Debt Costs (ICPA Component A)
Projected Postretirement Benefit Obligation (ICPA Component E)
Projected Decommissioning and Demolition Obligation (ICPA Component F)
Total Projected Non-Production Demand Costs (ICPA Components A, E, & F)

Projected Non-Operating Costs - \$/MWhr

Total Billable Costs (Energy and Demand Charge)

Summary of ICPA Billable Power Costs

Grand Total Projected Energy Costs
Grand Total Projected Demand Costs
Grand Total Projected ICPA Billable Costs

Projected Billable Costs (Energy and Demand) \$

Reduction from 2021 Budget/Forecast \$

Critical Assumptions:

Major Environmental Projects (CCR, ELG and 316B Compliance) billed through Annual Capital Improvements or O&M as applicable.
Long-Term Debt costs projection assumes repayment of 2017A.
Accelerated Decommissioning and Demolition (D&D) Costs due to updated CCR rule for pond closures, updated D&D study to be completed by Q1 2022.
Generation Sales assumes Clifty Unit 6 minimal operation during Ozone period.

**LOUISVILLE GAS AND ELECTRIC COMPANY
KENTUCKY UTILITIES COMPANY**

**Response to Sierra Club's Initial Request for Information
Dated January 21, 2022**

Case No. 2021-00393

Question No. 12

Responding Witness: Daniel K. Arbough

- Q-12. Please specify the most current respective projections of costs for the OVEC Units to comply with current and foreseen environmental compliance requirements/obligations. (If this information can be seen on particular pages of documents produced in response to Request 2, above, please indicate the pertinent pages.)
- A-12. See the response to Question No. 11. See page 311 of the attachment, which is page 18 of the "Board of Directors' Meeting Presentation December 8, 2021."

**LOUISVILLE GAS AND ELECTRIC COMPANY
KENTUCKY UTILITIES COMPANY**

**Response to Sierra Club's Initial Request for Information
Dated January 21, 2022**

Case No. 2021-00393

Question No. 13

Responding Witness: Daniel K. Arbough

- Q-13. Please produce or identify the most current respective schedules for the OVEC Units to comply with CCR and ELG requirements.
- A-13. See the response to Question No. 11. See pages 306-311 of the attachment, which are pages 13-18 of the "Board of Directors' Meeting Presentation December 8, 2021."

**LOUISVILLE GAS AND ELECTRIC COMPANY
KENTUCKY UTILITIES COMPANY**

**Response to Sierra Club's Initial Request for Information
Dated January 21, 2022**

Case No. 2021-00393

Question No. 14

Responding Witness: Daniel K. Arbough

- Q-14. Please produce all emails and other correspondence between the Companies and OVEC, and between the Companies and other OVEC Sponsors, regarding CCR compliance and the US EPA's recent Proposed Denial of Alternative Closure Deadline for Clifty Creek (see, e.g., https://www.epa.gov/system/files/documents/2022-01/clifty_creek_proposed_decision-508_prepub.pdf).
- A-14. See the response to Question No. 11. See also the attached. Certain information requested is confidential and proprietary and is being provided under seal pursuant to a petition for confidential information.

Fendig, John

From: Tammy R Wallace [REDACTED] on behalf of Justin J Cooper
[REDACTED]
Sent: Wednesday, June 16, 2021 1:28 PM
To: Christian T Beam; Arbough, Dan; Dave - I&M Finance Lucas; David Pinter; Eric Baker
[REDACTED] Gustavo Garavaglia; John Verderame; Julie Sloat; Bellar, Lonnie;
Marc E Lewis; Pat O'Loughlin; Paul Chodak III; Raja Sundararajan; Steve Nelson
[REDACTED] Toby L Thomas; [REDACTED] Wayne Games
Cc: Brian Chisling [REDACTED] Clifford Carnes (OVEC); Dave Crusey - DPL
[REDACTED] G. Annette Hope (OVEC); Gabriel S. Coriell (OVEC); Ginger
MacKnight (OVEC); J. Michael Brown (OVEC); Jay E Jadwin; John Swez; Justin J. Cooper
(OVEC); Cassandra K. Martin (OVEC); Matthew W. Smith (OVEC); Sebourn, Michael;
Cunningham, Scott; Tammy R Wallace; William A. Hart (OVEC)
Subject: OVEC-IKEC Board Update
Attachments: Board Update June 2021.pdf

EXTERNAL email. STOP and THINK before responding, clicking on links, or opening attachments.

Ladies and Gentlemen:

The June 2021 Board Update is attached for your information.

Justin J. Cooper MAcc,CPA
Vice President – COO & CFO

Ohio Valley Electric Corporation
Desk: [REDACTED]
Cell: [REDACTED]
Email: [REDACTED]



June 2021

Board Update

OVEC-IKEC, 3932 U.S. Route 23, P.O. Box 468, Piketon, OH 45661
www.ovec.com | [REDACTED]

SAFETY AND HEALTH

2021 Year-to-Date Performance

Clifty Creek Plant celebrated another safety milestone at the end of 2020 by completing a second consecutive calendar year without a recordable injury. Also, Electrical Operations employees celebrated 6 years without a recordable injury at the beginning of April.

For 2021, OVEC has had 2 recordable injuries through May. Only one injury resulted in a DART case, with both events occurring at the Clifty Creek Plant. The cases, included a pinched finger and a slip/trip incident, highlight a need to increase our energy and focus on safety. In May, OVEC rolled out a new Human Performance Improvement (HPI) Refocus program at all facilities. The HPI Refocus program consists of 4 modules, which include scenario examples, and will be reviewed one per month over the next four months.

The Strategic Partner assessment program continues into 2021 in alignment with OVEC-IKEC's 2021 Strategic Plan to Integrate Strategic Partners into the OVEC-IKEC's Safety Culture. Eight strategic partners are scheduled for assessments during the year. These assessments are designed to validate and verify that the strategic partner's safety policies and practices align with OVEC-IKEC's expectations. Assessments began in December of 2020 with two of Kyger Creek Plant's strategic partners.

COVID-19 UPDATE

OVEC-IKEC continues to be committed to the health and safety of our employees and our families in the communities in which we live and work during this

COVID-19 pandemic. As we begin the transition out of the Pandemic, OVEC continues to take a cautious and disciplined approach and will continue to align with CDC guidance. As of May, OVEC has had 89 total cases. Similar to most areas in the country, OVEC has seen a dramatic decline in cases since vaccinations have become available with only one COVID case since February.

ENVIRONMENTAL UPDATE

2021 Performance to Date

Environmental stewardship remains a top priority of the OVEC corporate business strategy. Since the 2020 December Board meeting, OVEC has received one non-monetary Notice of Violation (NOV) from the Indiana Department of Environmental Management (IDEM) associated with Continuous Emissions Monitoring System (CEMS) monitor availability. OVEC is currently reviewing this issuance to potentially challenge as the violation is due to the Indiana state program conflicting with the federal EPA program due to a change by the U.S. EPA. OVEC complied with the new federal requirement and the actual monitor performance and reliability has not changed. OVEC is working with legal counsel, as well as other utilities, with the goal of developing a remedy to avoid the risk of IDEM issuing future NOV's due to the change in federal reporting obligations.

OVEC continues to operate in substantial compliance with all applicable air, water, and solid waste permit limits, as well as the monitoring and reporting requirements of the Coal Combustion Residuals (CCR) rule.



A commitment to environmental compliance will continue to be a point of focus for OVEC as lessons learned are applied across the organization to get better and provide value to the Sponsoring Companies. As part of that commitment, and in an effort to engage all employees in supporting the OVEC and IKEC environmental compliance strategy and strategic plan, the Company has initiated a company-wide environmental good catch program. To date, the new program has had a high degree of participation and has provided value.

Affordable Clean Energy (ACE) Rule

On January 19, 2021, the D.C. Circuit Court vacated the ACE rule and remanded to the U.S. EPA further proceedings consistent with the Court's decision. Following the Court's action, the U.S. EPA issued guidance clarifying that states no longer have an obligation under either the repealed Clean Power Plan (CPP) or the vacated ACE rule to submit plans on how they intend to regulate greenhouse gas emissions under Section 111(d) of the Clean Air Act.

OVEC will continue to monitor the progression of the associated litigation activities surrounding greenhouse gas emissions from the utility sector as well as any future regulatory or legislative greenhouse gas initiatives.

Mercury Air Toxics Standards (MATS) Rule

Kyger Creek and Clifty Creek continue to maintain compliance with MATS requirements. Both stations are currently performing well in meeting the MATS emissions limits for mercury, particulate matter and SO₂. Neither plant has experienced an emissions limit exceedance in 2021. JBR chemistry management and mercury control, combined with operator skills assessment and training consistent with our Operational Excellence guidelines, continue to help facility operators maintain compliance with regulatory requirements.

SO₂ National Ambient Air Quality Standards (NAAQS) Compliance Status

The Kyger Creek Station's three-station SO₂ monitoring network remains in service and the results

continue to show compliance with the SO₂ NAAQS. Ohio EPA has analyzed the first three years of ambient data from the local SO₂ monitoring network and filed a recommendation with U.S. EPA to classify the area in Gallia County surrounding the Kyger Creek Station and its neighbor, the Gavin Station, as "attainment/non-classifiable" with the 2010 SO₂ NAAQS. The Company is still waiting on U.S. EPA to issue a final determination on the attainment status of Gallia County.

Steam Electric Effluent Limitations Guidelines (ELGs)

On October 13, 2020, the U.S. EPA issued the final Steam Electric Reconsideration Rule, which revises the best available technology effluent limitations and pretreatment standards that apply to bottom ash transport water and FGD wastewater. The Company has reviewed the rule, and has determined that the compliance strategy developed for Kyger Creek and Clifty Creek are in alignment with the final rule requirements. Separately, the Company is working with both IDEM and OEPA to revise the ELG applicability dates for Clifty Creek and Kyger Creek to align each plant's ELG applicability date with the respective construction schedules. Currently, the Company expects each agency to approve of the revised compliance dates.

Coal Combustion Residuals (CCR) Rule Compliance

OVEC continues to work through the regulatory requirements contained within the version of the CCR rule currently in effect. The Company has completed each of the applicable compliance activities within the rule. The Company continues to monitor for potential impacts to the groundwater near the Clifty Creek Station's landfill runoff collection pond and the Kyger Creek Station's boiler slag pond. Continued evaluation of the groundwater monitoring system continues to conclude that groundwater is not being impacted beyond the property boundary at either site. In accordance with the CCR Rule, the Company is continuing to assess the sites to determine the most appropriate corrective measure for each surface impoundment. OVEC will continue to work closely with our qualified professional engineer (QPE) to complete the compliance requirements of the rule.



CONFIDENTIAL INFORMATION REDACTED

Effective September 28, 2020, Part A of the CCR Rule required that all impoundments that do not meet the liner requirements of the CCR Rule must cease receipt of CCR and non-CCR waste streams and initiate closure by April 30, 2021, unless approval to operate longer is requested by the Company and is secured from U.S. EPA.

The Company has not yet received feedback from U.S. EPA on its submitted CCR demonstrations, which is similar to all utilities, due to the change in administration. The Company has continued to execute the compliance strategy it proposed to U.S. EPA while it awaits feedback from the agency.

Burns & McDonnell continues to assist OVEC in the development of engineering and design for the various facility modifications associated with CCR and ELG compliance projects that the Board approved in May 2020. The Kyger Creek dry fly ash conversion project design has been finalized, contracts to perform the work have been awarded, and permits have been secured to support the initiation of construction beginning in June 2021. Separately, design and permitting continue in support of the work scope associated with the Kyger Creek and Clifty Creek CCR surface impoundment closures as required by the CCR Rule and to support the modifications necessary for compliance with the bottom ash transport modification portion of the ELG Rule. Construction activities associated with the bottom ash pond retrofits and closures to meet concurrent obligations under both the ELG and CCR rules are expected to begin later in 2021. Presently, the projects are on schedule and on budget, and have had no recordable safety events.

316(b) Compliance

There are no new updates to report on 316(b) compliance related activities. Both state regulatory agencies have received the comprehensive reports OVEC was required to submit under Section 122.21 (r) of U.S. EPA’s 2014 revisions to the 316(b) regulations, and the Company waiting on agency feedback before determining next steps. IDEM has already determined that action on Clifty Creek’s 316(b) reports will take place during the next NPDES permit reissuance, scheduled to take place in 2022. OVEC is anticipating feedback from Ohio EPA

regarding what actions they intend to take when Kyger Creek’s draft NPDES renewal permit is received.

CSAPR Update

OVEC has demonstrated sustained positive performance in operating within the tightened requirements of the CSAPR Update Rule that went into effect in 2017 through standard work procedures and disciplined action. The Company operated in a manner that met or surpassed the NOx allocation targets established by each plant during the 2020 ozone season. Kyger Creek successfully used Urea Direct Injection during the 2020 ozone season, which has provided more reliable NOx removal and increased system reliability, when compared to the prior Ammonia On-Demand system. Clifty Creek is currently evaluating a similar system conversion in 2021.

A new CSAPR Update was enacted in March 2021 and resulted in a reduction of the state ozone seasons NOx budgets and the creation of a new NOx ozone season trading program for 12 states, including Ohio and Indiana. The Company is reviewing this final rule and will be preparing for compliance with the associated revisions that are expected to go into effect during the 2021 ozone season.

By-Product Marketing

The Company continues to sell nearly all of the gypsum produced at Kyger Creek and Clifty Creek into the wallboard market, with a small percentage to the cement and agriculture markets. Also, the Company continues to see sales of fly ash from Clifty Creek of nearly half of total plant production being sold. These fly ash sales, which have seasonal fluctuations, are being driven by the hard work and continued effort of plant personnel, as well as the efforts of the plant’s strategic partner. Kyger Creek has continued to successfully market the majority of the plant’s boiler slag from with the support of its strategic partner. The marketing of boiler slag [REDACTED]

[REDACTED] The Company anticipates that marketing of boiler slag [REDACTED]



CONFIDENTIAL INFORMATION REDACTED

modifications. Clifty Creek boiler slag is not being marketed currently since the material is being beneficially used for onsite construction activities.

chemistry. JBR performance issues through March 2021 have been primarily related to failure of gas cooling nozzles and corrosion of ducts and piping.

GENERATION

Fuel

As of April 30, 2021, the approximate on-hand inventory was █ days at Kyger Creek and █ days at Clifty Creek. Higher market demand in the first quarter of 2021 has resulted in █

Kyger Creek and Clifty Creek are approximately █ percent committed for 2021 fuel supply and █ percent committed for 2022 fuel supply. AEP Fuel Procurement is assisting OVEC and will be requesting proposals in the third quarter to cover █

Reliability

Through April 30, 2021, OVEC-IKEC had an equivalent forced outage rate (EFOR) of 5.5 percent. On a unit basis, 7 of the 11 OVEC-IKEC units had an EFOR of less than 5 percent through March.

The primary drivers of lost generation through April 2021 were associated with JBRs, boiler tube leaks, boiler slagging/fouling, ash removal and condenser leaks. Kyger Creek and Clifty Creek continue to improve planning and use of opportunity outages, especially during weak market periods, to mitigate contributors of forced outages. OVEC continues to use down market periods for maintenance outage opportunities to our advantage. The Company's commercial availability performance through April was 90.0 percent.

JBR Reliability Group

The JBR Reliability Group meetings are a regular part of pre- and post-outage planning. The group continues to meet approximately every 6 months and share lessons learned. OVEC has made progress in the last year by controlling mercury through the JBR

Heat Rate Improvement Team

OVEC's Heat Rate Improvement Team continues its efforts in heat rate optimization to improve unit performance and reduce fuel costs. The team has set a Heat Rate Target (HRT) that adjusts based on actual loading, by doing this the team is able to monitor and focus on actual changes due to performance of equipment. Going forward the team will be tracking the difference in actual performance versus the adjusted HRT. Over time the change in this difference will indicate if we are making real sustainable improvement. The team also continues to focus on optimization of heat rate at low-load operation through improved operator knowledge. Additionally, the team continues to focus on condenser performance, high-pressure heaters out of service, feedwater, air preheater efficiency, pulverizer performance, along with use of auxiliaries (condensate usage, plant air, and soot blowers).

Optimizing Our Workforce

Cross-functional continues to be a strategic focus for OVEC in order to leverage staffing and improve productivity. Both facilities continue using cross-functional teams to troubleshoot and solve problems, along with safely complete work tasks while reducing costs. Improved field observations and coaching is a vital part of this effort.

OVEC-IKEC continues to focus on core vs non-core as we utilize attrition to optimize our workforce. We have engaged strategic partners for our pulverizer maintenance/rebuilds, major pump rebuilds, catalyst replacement, misc. support in the coal yard and warehouse, and some operations duties, as well as other functions, such as chemical technician on-site support. We track our non-outage contractor usage as part of our OBL process and have worked to communicate with our team the reasons why this is the right direction in order to control our overall costs and be more competitive in the market.



CONFIDENTIAL INFORMATION REDACTED

CONTINUOUS IMPROVEMENT/LEAN

The continuous improvement process (CIP) remains an integral part of the way we do business. Through the consistent efforts of OVEC-IKEC’s engaged employees, hundreds of ideas and process improvements continue to produce results at all levels of the organization. Our goal continues to be active engagement of every employee in the CIP process by targeting 100 percent participation. The 2021 focus continues to be in alignment with the Corporate Strategic Plan with disciplined efforts to further embrace CIP maturity through skill development, the establishment and revision of key standard work processes, and the implementation of challenging metrics while reinforcing the importance of employee engagement.

Open Book Leadership (OBL) continues to be one of the most effective tools in our continuous improvement “tool box” by creating transparency around Company performance metrics and helping every employee at an individual level realize the impact they can have on the Company’s bottom line. The process created by OBL is a systematic way to communicate information from the bottom to the top and from the top to the bottom, while breaking down the key drivers of the Company’s “critical numbers,” which ultimately determine whether the Company is successful.

OBL “business challenges” that provide focus and incentive to improve a specific area continue at all locations. Business challenges are short (one to three months) and are geared towards recognition with celebrations held if the team is successful in improving the specific area.

The Clifty Creek plant’s “Environmental Good Catch” business challenge is a current example of OBL at work. During this challenge, employees identify an environmental issue or improvement, remediate the issue (i.e. label a container, clean up an oil leak, etc.) or get other departments involved if needed. The purpose of this challenge is to teach employees to recognize and remediate a condition that could lead to a reportable environmental event. Another great example is the Kyger Creek plant’s “Find and Fix Slip/Trips” business challenge. During this 6-week

challenge, employees identified 370 areas of concern and mitigated 354 areas immediately. Condition reports were written for the remaining 16 areas and they were corrected with assistance from a strategic partner. This promotes and reinforces our commitment to the Zero Harm Mission Objective and shows the willingness of our employees to act on and correct possible hazardous conditions.

Additional challenges continue at the department and crew levels at both the corporate office and the plants specific to safety tools, employee engagement, development of standard work, and the development of standard process. These challenges are in alignment with the Company’s strategic planning focus and are helping OVEC-IKEC capture critical knowledge and identify the best way to complete specific jobs. The common theme in all business challenges is that they not only provide immediate correction, but also drive sustainable behaviors and provide focus on key areas important to the success of our business.



NERC COMPLIANCE

OVEC underwent NERC Compliance Audits for the period from 2016-2018. [REDACTED]



FINANCIAL PERFORMANCE

2021 has seen improved demand for OVEC power and has driven an increase in generation compared to the forecast. OVEC’s total power cost through March was approximately [REDACTED] as compared to [REDACTED] per MWhr through March 2020. This reduction is mainly due to the impact of additional generation as Utilization has increased from 57% (YTD March 2020) to 77% (YTD March 2021). Along with improved generation, OVEC’s operating or fixed costs



CONFIDENTIAL INFORMATION REDACTED

are currently [REDACTED]
[REDACTED]

of Ohio on August 22, 2018. The completion of the milestones needed for transfer of service will take place over the next 4 to 6 years.

Based on year-to-date results, OVEC's 2021 year-end total power cost is projected at approximately [REDACTED] per MWhr with 10 million MWhrs of generation, which is over a [REDACTED] reduction from the original budget of [REDACTED] per MWhr. OVEC is projecting annual operating costs, on a total dollar basis, to be under budget with cost optimization and continuing challenging of cost structure.



BOARD OF DIRECTORS AND OFFICERS CHANGES

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.

OVEC is planning to refinance \$100 million of tax-exempt bonds and potentially a \$100 million of private placement notes in the third quarter of 2021. The refinancing is a part of the financing plan to [REDACTED]

[REDACTED] OVEC will be working with AEP Finance, along with KeyBank and PNC to complete the refinancing. OVEC will be seeking Board approval for the refinancing at the mid-year July Board meeting.

Sincerely,

Justin J. Cooper
Vice President, Chief Financial Officer
and Chief Operating Officer

HUMAN RESOURCES

Culture Improvement Initiative

2021 is the sixth year OVEC-IKEC will engage its employees to provide feedback to assess its culture. The recently developed survey design will enable the Company to assess the team's progress in its continuous improvement initiative, benchmark results, and generate data for future trend analysis. The survey will commence mid-summer. OVEC-IKEC leadership will utilize the valuable feedback in its strategic planning process and further improve its culture.

DOE ARRANGED POWER AGREEMENT

OVEC, AEP, and the DOE continue to work on the transfer of OVEC's retail service obligations to AEP Ohio, as approved by the Public Utilities Commission

Fendig, John

From: [REDACTED]
Sent: Wednesday, January 12, 2022 5:57 PM
To: [REDACTED] Arbough, Dan; [REDACTED]
[REDACTED] Bellar, Lonnie; [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
Cc: David J Crusey; [REDACTED]
[REDACTED] N. Trevor Alexander [REDACTED] Steven T
Nourse
Subject: Clifty Creek - CCR Compliance
Follow Up Flag: Follow up
Flag Status: Flagged

EXTERNAL email. STOP and THINK before responding, clicking on links, or opening attachments.

Ladies and Gentlemen,

On January 11th, US EPA notified the Clifty Creek plant of its **conditional denial** of the plant's CCR demonstration application for alternative (extended) closure dates for CCR surface impoundments (unlined ponds). However, it is not a final agency action. The proposed decision will undergo a 30-day public notice and comment period that will begin January 25 and end February 23, 2022. Once the comment period has ended and all comments and data have been analyzed, EPA will issue a final decision.

Over the next 6-8 weeks OVEC will be working with our independent engineers and US EPA to try to address issues or concerns that has led to the conditional denial. Potential re-engineering or design changes to current construction may be necessary, although we currently do not know to what extent, or if other actions or commitments may be required. If the decision would ultimately become final, it would shorten the time Clifty has to continue placing ash in the current ponds. Clifty was requesting April 2023 in the application, the conditional denial requires ceasing placement 135 days after the final denial decision is issued (if issued, could be sometime later this year). After the 135 days, Clifty will be in temporary outage until the new treatment systems are operational.

Along with working to provide comments to address issues in the US EPA's assessment of our CCR compliance strategy and potential re-engineering, OVEC will also be working on legal strategies. We believe the US EPA is overreaching or misinterpreting the CCR Rule and this will be an industry issue, not only impacting the Clifty Creek Plant.

At this time, we anticipate scheduling a Board meeting in late February/early March, by which time we should be able to provide our updated compliance, construction, and legal strategies. If any material events occur prior, we will provide updates as they occur. Please reach out to me directly if you have any questions.

Justin J. Cooper MAcc, CPA
Vice President - COO & CFO

Ohio Valley Electric Corporation

Desk: [REDACTED]
Cell [REDACTED]
Fax: [REDACTED]
Email: [REDACTED]

Fendig, John

From: [REDACTED]
Sent: Wednesday, June 20, 2018 9:21 AM
To: Sebourn, Michael
Cc: Arbough, Dan; Justin J. Cooper (OVEC); Wilson, Stuart; [REDACTED]
Subject: Re: OVEC environmental capital

Follow Up Flag: Follow up
Flag Status: Flagged

EXTERNAL email. STOP and THINK before responding, clicking on links, or opening attachments.

Mike,

Here is the thought process behind the "best case" timelines used in the Board presentation:

1. **316(b) Compliance timeline for Clifty Creek.** The NPDES permit recently issued to Clifty Creek outlines a requirement to submit the various studies required by the [REDACTED]
[REDACTED]
2. **316(b) Compliance timeline for Kyger Creek** - The NPDES permit renewal application for Kyger Creek will be filed by the end of October 2018. Unlike Clifty, we expect to have all of the studies required under the 316(b) rule completed and peer reviewed by then, so we expect this to be part of the renewal package. With that assumption, [REDACTED]
[REDACTED]
3. **Dry Fly Ash Conversion - Kyger -** [REDACTED]
[REDACTED]
4. **Bioreactor Kyger and Bioreactor Clifty** - For the ELG provisions applicable to FGD wastewater, we assumed as a "best case" [REDACTED]
[REDACTED]
5. **Boiler Slag Ponds at both plants** - Our "best case" assumption here is [REDACTED]
[REDACTED]

As of now, we have not changed the best case forecast.. We will review and update, if appropriate, later this year.

If you have any questions, please let me know.

Thanks,
Mike

J. Michael Brown
Environmental, Safety & Health Director
Ohio Valley Electric Corporation

Indiana-Kentucky Electric Corporation
PO Box 468, 3932 U.S. Rt. 23
Piketon, Ohio 45661
Phone: [REDACTED]
Cell: [REDACTED]
Audinet: [REDACTED]
Email: [REDACTED]

Know Safety - No Accidents!

From: "Sebourn, Michael" [REDACTED]
To: "Mike Brown - OVEC" [REDACTED] "Justin J. Cooper (OVEC)" [REDACTED]
Cc: "Arbough, Dan" [REDACTED] "Wilson, Stuart" [REDACTED]
Date: 06/19/2018 12:39 PM
Subject: OVEC environmental capital

Mike/Justin,

Can you share with me the compliance deadlines that were assumed (for each regulation at each station) driving the projected environmental investments that were communicated in the Dec. 2017 OVEC Board materials (see related slide below), please?

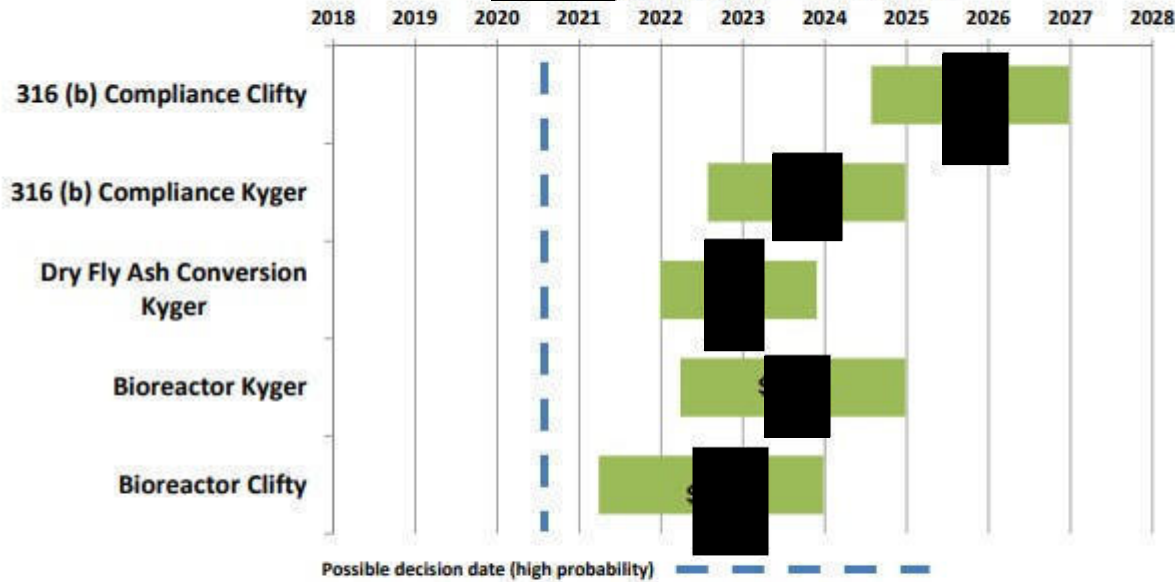
Have any of those assumed deadlines changed since the Dec. 2017 Board meeting?

Thanks,
Mike



Projected Environmental Investment

Best Case – Timeline



Assumptions:
 Current ELG reconsideration results in a revision of the rule:

- **FGD Wastewater Treatment requirements will have less stringent limits**
 - Possible approval of current Wastewater Treatment as best technology
 - **Potential to Reduce Best Case by [REDACTED]*
- **Boiler Slag Dry Conversion (Bottom Ash) not required**

Any pond closure requirements will be funded through decommissioning reserves

1) Graph excludes approx. \$2M of conceptual engineering studies for Boiler Slag while reissue of the ELG rule is pending

Michael Sebourn

Manager, Generation Planning | LG&E and KU
220 W. Main St., Louisville, KY 40202

O: [REDACTED] | M: [REDACTED] | F: [REDACTED]
[REDACTED]

----- The information contained in this transmission is intended only for the person or entity to which it is directly addressed or copied. It may contain material of confidential and/or private nature. Any review, retransmission, dissemination or other use of, or taking of any action in reliance upon, this information by persons or entities other than the intended recipient is not allowed. If you received this message and the information contained therein by error, please contact the sender and delete the material from your/any storage medium.

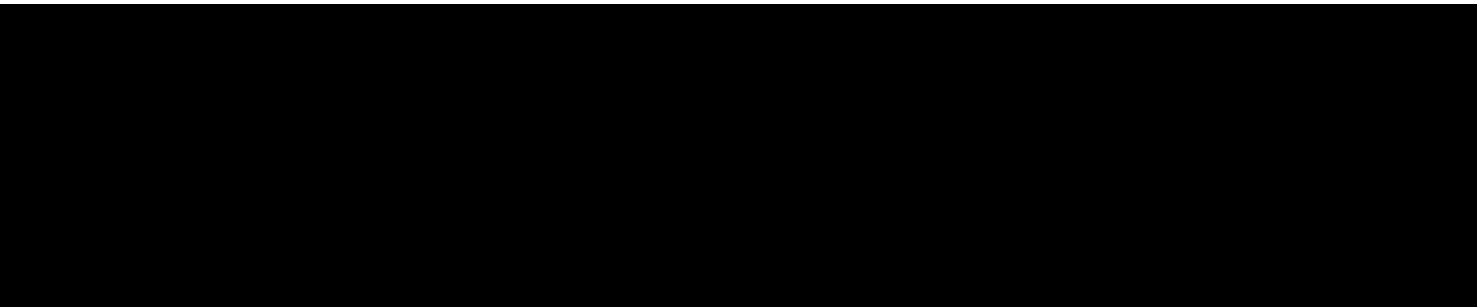
Fendig, John

From: [REDACTED] on behalf of [REDACTED]
Sent: Wednesday, February 28, 2018 2:35 PM
To: [REDACTED] Bellar, Lonnie;
 [REDACTED]
 [REDACTED]
 [REDACTED]
 [REDACTED]
Cc: [REDACTED]
 [REDACTED]
 [REDACTED]
 [REDACTED]
Subject: Confidential: OVEC-IKEC Coal Combustion Residual (CCR) Rule Update

EXTERNAL email. STOP and THINK before responding, clicking on links, or opening attachments.

Ladies and Gentlemen:

In prior meetings, OVEC-IKEC staff outlined our expectations that we were not anticipating material impacts resulting from our CCR groundwater monitoring efforts around the plant landfills and ash ponds. We shared this same message to the Environmental Subcommittee in the past as well. While we still expect this will ultimately be true, we wanted to share with you updated information around the results of baseline groundwater monitoring data that will be posted to our CCR public website this Friday, March 2, 2018, which will show some parameters in both up-gradient and down-gradient wells that are above drinking water maximum contaminate levels (MCLs) at both plant bottom ash (boiler slag) ponds and the Kyger Creek Landfill.



We also wanted to reaffirm that OVEC-IKEC has met all of its CCR compliance obligations to date, and we are committed to being good stewards of the environment and satisfying our future environmental compliance obligations under this rule. Part of that obligation includes continuing to make the groundwater monitoring data around the CCR units at our facilities publically available on our CCR website on March 2, 2018.

As outlined in the rule, the next phase in our CCR compliance demonstration will be to conduct additional monitoring and compare the additional data to the baseline data we have now established. The results of future monitoring will help determine what our next compliance steps will be.

Based on our initial evaluation, we do not believe that the operation of our CCR units is posing a risk to public health; however, we will continue to gather and evaluate data and are also committed to initiating corrective actions, if required, consistent with the provisions and timelines of the rule.

Finally, we have prepared talking points for internal use in the event of local or national media inquiries or local public inquiries. We have also met with Ohio EPA, the Indiana Department of Environmental Management, and ~~Arbough~~ authorized Environmental Subcommittee in the past two weeks to brief them on our CCR data and our next steps.

Should you have any questions or receive any media inquiries regarding OVEC-IKEC CCR compliance, please direct those inquiries to: Mike Brown, [REDACTED] or Gabe Coriell [REDACTED]

Rob Osborne

Fendig, John

From: [REDACTED]
Sent: Tuesday, October 09, 2018 11:39 AM
To: Arbough, Dan
Cc: Randy Boteler
Subject: Re: OVEC Financing

Follow Up Flag: Follow up
Flag Status: Flagged

EXTERNAL email. STOP and THINK before responding, clicking on links, or opening attachments.

Dan,

We are confident the the plant will be in compliance for the next 5 years. As you said we have provide plans for ELG compliance, and we currently review the ACE rule, but our initial review indicates we should not have a need for extensive capital. Give me a call if you have any more questions. Thanks.

Justin J. Cooper MAcc, CPA
CFO, Secretary and Treasurer

Ohio Valley Electric Corporation
Desk: [REDACTED]
Cell [REDACTED]
Fax: [REDACTED]
Email: [REDACTED]

From: "Arbough, Dan" [REDACTED]
To: Randy Boteler [REDACTED]
Date: 10/09/2018 10:58 AM
Subject: OVEC Financing

Randy and Justin,

One of the elements that LG&E and KU are interested in understanding as we evaluate financing decisions for OVEC is where the plants stand with respect to environmental regulations. I know you have been working to provide information on ELG compliance capital expenditures, but as the Affordable Clean Energy Rule details become known we will be keen to understand what additional capital might be required to comply. The financing plan needs to be in sync with such operational considerations.

If we look to lock in tax-exempt bonds for up to 5 years, we just want to make sure we are confident that the plant can comply with regulations for that period at a minimum.

Daniel K. Arbough

Treasurer - LG&E and KU Energy LLC
220 W. Main Street | Louisville, KY 40202

O: [REDACTED] F: [REDACTED]
[REDACTED]
[REDACTED]

----- The information contained in this transmission is intended only for the person or entity to which it is directly addressed or copied. It may contain material of confidential and/or private nature. Any review, retransmission, dissemination or other use of, or taking of any action in reliance upon, this information by persons or entities other than the intended recipient is not allowed. If you received this message and the information contained therein by error, please contact the sender and delete the material from your/any storage medium.

Fendig, John

From: Sinclair, David
Sent: Friday, July 26, 2019 8:51 AM
To: Fendig, John; Arbough, Dan; Wilson, Stuart; Sebourn, Michael
Subject: FW: OVEC Environmental Subcommittee Meeting Presentation - July 26,2019
Attachments: OVEC Environmental Subcommittee Presentation July 2019.pptx

Follow Up Flag: Follow up
Flag Status: Flagged

Mike,

How does this info mesh with what we have on OVEC's budget and our model for future expenses? Also, we need to follow Ohio and Indiana ACE rule activities.

Thanks

From: Straight, Scott [REDACTED]
Sent: Friday, July 26, 2019 7:33 AM
To: Revlett, Gary [REDACTED] Imber, Philip [REDACTED] Sinclair, David
[REDACTED] Schetzel, Doug [REDACTED]
Subject: FW: OVEC Environmental Subcommittee Meeting Presentation - July 26,2019

All,

Sending as an fyi. Always good to compare what others are doing. Note their gypsum sales and permit ap to put in a gypsum river barge loading system.

Scott

From: [REDACTED]
Sent: Thursday, July 25, 2019 9:17 AM
To: [REDACTED]
[REDACTED] Straight, Scott [REDACTED]
Cc: [REDACTED]
Subject: OVEC Environmental Subcommittee Meeting Presentation - July 26,2019

EXTERNAL email. STOP and THINK before responding, clicking on links, or opening attachments.

Attached below is an advance copy of the presentation for tomorrow's environmental subcommittee meeting. Mike and I look forward to discussing the environmental activities here at OVEC and welcome the opportunity to assist you in preparing your board member for the upcoming August 1 OVEC Board of Directors meeting.

Thanks!

Gabriel S. Coriell
Environmental Services Manager
Environmental Affairs
Ohio Valley Electric Corp.
Indiana-Kentucky Electric Corp.
Phone: [REDACTED]
Cell: [REDACTED]
Fax: [REDACTED]
E-mail: [REDACTED]

"Work SAFE today, someone will need you tomorrow!"

Environmental Subcommittee Update

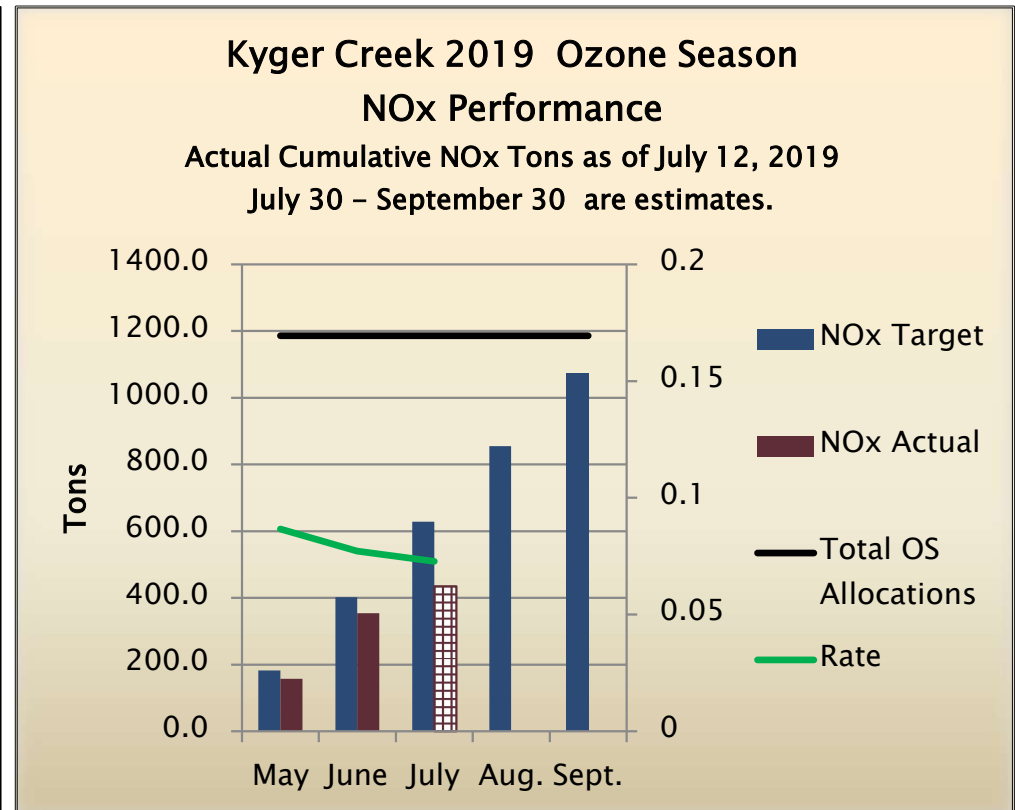
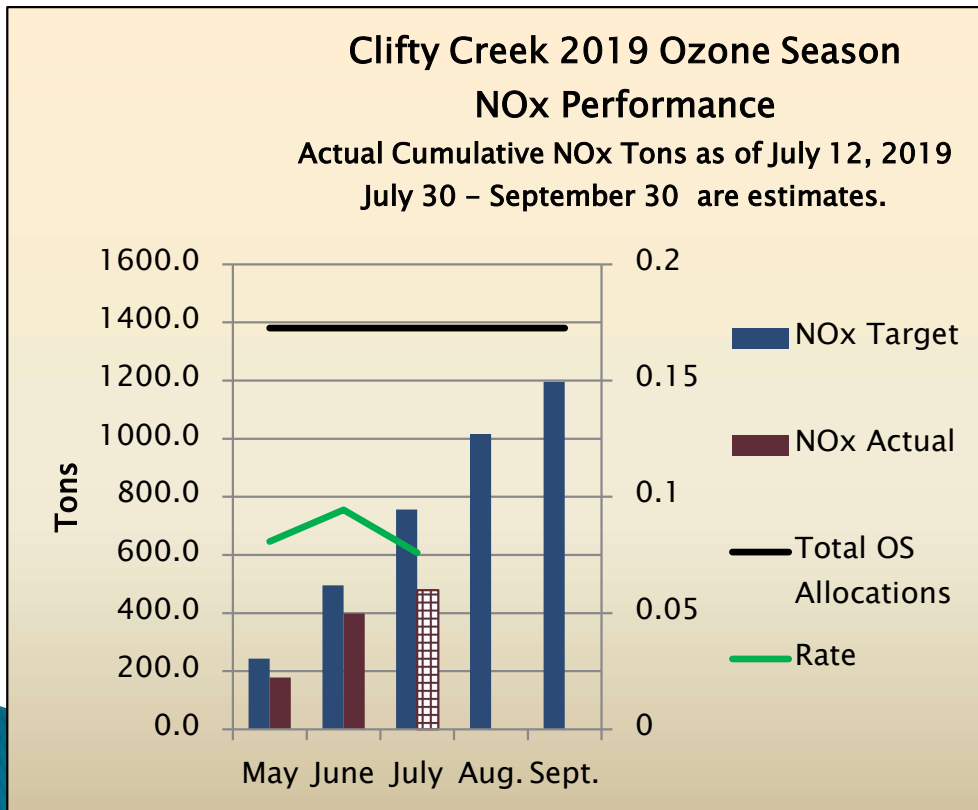
J. Michael Brown
Environmental, Safety & Health Director

July 26, 2019



Review of Ozone NO_x Performance

- ▶ To date, OVEC–IKEC ozone season NO_x performance has been excellent. Both plants are operating near historically low NO_x emission rates, and we are on track to be at or below the Company’s NO_x ozone season emission targets for 2019.



ELG Environmental Regulatory Update

Effluent Limitations Guidelines Update

- EPA issued final ELG Postponement Rule in September 2017 for FGD Wastewater (FGDWW) and bottom ash transport water (BATW).
- EPA delayed the original compliance window for both wastewaters by two years, leaving the remainder of ELG Rule in tact.
- A new draft rule revising effluent limits was expected by December 2018 and a final rule by December 2019. However, the new rule's issuance has been delayed.
- Timely issuance of the new draft rule by end of 2018 would have given us an opportunity to improve forecast, costs and timing of required investment. The delay in issuing a draft rule will delay refinement in updated compliance cost estimates.
- Indications are that EPA may issue a new rule with some additional flexibility/optionality.

ELG Legal Update

United States Court of Appeals for the 5th Circuit Decision on eNGO legal challenge of portions of ELG Rule

- Unfavorable court decision issued on 4/12/19.
- The Court determined EPA was “arbitrary and capricious” in its ELG rule determinations relative to legacy wastewater and landfill leachate.
- The Court vacated and remanded these portions of the rule back to EPA for further consideration.
- EPA did not file appeal, and will need to update record
- This may ultimately result in additional treatment and compliance costs for the industry.
 - OVEC–IKEC future risk on leachate may be low due to recycle, reuse plans at Kyger Creek, and CCR compliance activities associated with the landfill runoff collection pond at Clifty Creek.
 - Risk from legacy wastewater vacature/remand is currently unknown.

ELG Environmental Compliance Update

➤ Clifty Creek


- Permit Modification Request was filed with IDEM to remove the April 1, 2022 ELG compliance dates for FGDWW and BATW. IDEM has not taken any formal action.
- IDEM is expected to act on modification request when EPA completes its new rule determining new compliance dates and/or new BAT limits.
- EPA delay in issuing new ELG rules results in some risk at Clifty Creek.

➤ Kyger Creek

- NPDES Permit Renewal Application was filed in October 2018. OEPA is still working to draft a renewal NPDES permit.
- Updated engineering evaluation of dry fly ash conversion has been completed, and cost estimate range has been narrowed to [REDACTED]. Updated economic analysis and business case determination now under way.

CCR Environmental Compliance Update

OVEC–IKEC has two landfills and four ponds that meet the definition of a CCR Unit


- Groundwater analysis shows statistically significant increases (SSIs) at one pond at each plant.
 - The landfill runoff collection pond complex at Clifty Creek,
 - The boiler slag pond at Kyger Creek, and
 - Any pond closure requirements will be funded through decommissioning reserves.
 - Alternative source demonstrations (ASDs) were conducted in 2018 and early 2019, and no alternative sources were definitively identified.
 - Additional evaluations have shown no off–site migration of SSI parameters from either pond.
 - We continue to work with our Qualified Professional Engineer on compliance activities while waiting on additional EPA rulemaking.
 - Public meetings on the CCR ponds and optionality on next steps will be held in the fall.
 - EPA expected to undergo additional CCR regulatory action within the next year as well.
- 

316(b) Environmental Compliance Update

Kyger Creek

- 316(b) Section 122.21(r) reports were completed and submitted to Ohio EPA as part of the NPDES permit renewal application in November 2018.
- OEPA has not taken action on 316(b) report or the NPDES permit renewal. We have been in discussions with OEPA and will have an opportunity to provide feedback prior to permit renewal.

Clifty Creek

- 316(b) Section 122.21(r) report filed with IDEM in January 2019.
 - IDEM to act on cooling system upgrades next permit cycle (i.e. during the 2022 NPDES permit renewal).
- 

Clean Power Plan (CPP)/Affordable Clean Energy (ACE) Rule Update

- USEPA repealed CPP and in a separate action issued ACE Rule on July 8, 2019. Both actions will undergo legal challenges.
- ACE rule becomes effective on September 6, 2019.
 - Inside the fence line Heat Rate Improvements at the unit level is defined as the Best System of Emissions Reduction (BSER).
 - States have three years from ACE effective date to submit implementation plans.
 - States have a lot of flexibility in crafting state implementation plans; however, ACE is somewhat inflexible regarding EGU compliance options.
 - No emissions trading and no fleet, facility or common stack averaging.

Gypsum and Ash Beneficial Reuse

Kyger Creek

- Majority of gypsum continues to be sold for wallboard production.
- Pursuing environmental permitting for the installation of on-site barge loading system, gypsum currently being trucked off site.
- Boiler slag sales are above forecast (Harsco).
- Evaluating system modifications to comply with possible CCR/ELG requirements.

Clifty Creek

- Majority of gypsum being sold for wallboard production.
- Negotiating a separate long-term sales agreement for majority of gypsum.
- Pursuing environmental permitting for the installation of on-site barge loading system, gypsum currently being trucked off site.
- Fly ash marketing efforts continue, but no significant sales.

Benefits for both Plants:

- Reduced fuel costs, reduced future landfill expansion costs, reduced future environmental compliance risks.

Fendig, John

From: [REDACTED]
Sent: Wednesday, November 13, 2019 5:31 PM
To: [REDACTED] Bellar,
Lonnie; [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED] Thompson, Paul
Cc: [REDACTED]
[REDACTED] Cunningham, Scott; [REDACTED]
[REDACTED] Sebourn, Michael;
[REDACTED]
Subject: OVEC-IKEC Board Update
Attachments: Board Update 11-19.pdf

EXTERNAL email. STOP and THINK before responding, clicking on links, or opening attachments.

Ladies and Gentlemen:

Attached for your information is the November 2019 OVEC-IKEC Board Update.

Justin J. Cooper MAcc, CPA
CFO, Secretary and Treasurer

Ohio Valley Electric Corporation
Desk: [REDACTED]
Cell [REDACTED]
Fax: [REDACTED]
Email: [REDACTED]



November 2019

Board Update

OVEC-IKEC, 3932 U.S. Route 23, P.O. Box 468, Piketon, OH 45661
www.ovec.com | 740.289.7200

SAFETY AND HEALTH

2019 Year-to-Date Performance

Through September 2019, there have been four recordable injuries companywide (0.9 recordable incidence rate). OVEC is forecasting a year-end recordable rate of 0.68 with no additional recordable injuries, as compared to the 2018 recordable rate of 1.15. This is being driven by both Clifty Creek and System Division employees having been successful at maintaining zero harm for 2019 with no recordable injuries through September. Kyger has achieved 169 days without a recordable injury as of November 12, 2019 and continues to focus on education and training for routine movements and work readiness.

Proactive internal quarterly safety assessments continue at all OVEC locations to identify and close any gaps that may exist. The fourth quarter assessment will include a measure of adherence to newest and newly revised OSHA regulations. The development of the internal contractor assessment program for the Company will be finalized during the fourth quarter of 2019. Contractor assessments will begin in the first quarter of 2020 and determine adherence to the new contractor safety and health requirements.

In direct alignment with our 2019 Strategic Plan, specifically the tactical action of Contractor Oversight and Safety Standardization, System Office employees who perform contractor oversight duties were provided with training during the second and third quarters to aid them in their role. Similar training sessions are scheduled for Clifty Creek and Kyger Creek during the fourth quarter of 2019.

ENVIRONMENTAL UPDATE

2019 Performance to Date

Environmental stewardship remains a top priority of the OVEC corporate business strategy. Since the last Board Update in May 2019, OVEC was issued a Notice of Violation (NOV) by the Ohio Environmental Protection Agency (OEPA) following a site inspection of the facility's landfill water compliance program. The NOV did not include a proposed fine or penalty, and it is still being discussed with the agency as to its appropriateness since language exists in the current National Pollutant Discharge Elimination System (NPDES) permit providing OVEC authorization to perform the activity that is cited in the NOV. OVEC is committed to working closely with OEPA to resolve this issue. OVEC continues to operate in compliance with all applicable air, water, and solid waste permits, as well as the monitoring and reporting requirements of the Coal Combustion Residuals rule.

A commitment to environmental compliance will continue to be a point of focus for OVEC as lessons learned are applied across the organization to get better and provide value to the Sponsoring Companies.

Clean Power Plan (CPP)/Affordable Clean Energy Update

On July 8, 2019, U.S. EPA issued three final rules in the Federal Register. The first rule repealed the Clean Power Plan (CPP) because the EPA determined that the original issuance of that rule



exceeded EPA’s authority under the Clean Air Act (CAA). The second final rule issued was the Affordable Clean Energy (ACE) Rule. This rule establishes emission guidelines for states to develop plans to address greenhouse gas emissions from existing coal-fired power plants. The ACE rule is more limited in scope than the CPP. The third rule included details of how the EPA and the states are to implement the ACE rule as well as any future emissions guidelines issued under CAA Section 11(d). All three rules became effective September 6, 2019, and are subject to litigation.

OVEC will continue to monitor the legal challenges of each rule and anticipate working with our respective state regulatory agencies and utility trade groups on the logistics of ACE rule implementation and compliance.

Mercury Air Toxics Standards (MATS) Rule

Kyger Creek and Clifty Creek continue to maintain compliance with MATS requirements. Both stations are performing well in meeting the MATS emissions limits for particulate matter and SO₂. Neither plant has experienced an emissions limit exceedance in 2019. JBR chemistry management and mercury control, combined with operator skills assessment and training consistent with our Operational Excellence guidelines, continue to help our facility operators to maintain compliance with regulatory requirement.

SO₂ National Ambient Air Quality Standards (NAAQS) Compliance Status

For SO₂ NAAQS related to Kyger Creek Station, the three-station SO₂ monitoring network placed into service on January 1, 2017 remains in service, and the results continue to show compliance with the SO₂ NAAQS. Absent a material change in results from the data collected in 2017, 2018, and year-to-date 2019, OVEC expects that the data will confirm attainment with the NAAQS standard. Ohio EPA must analyze the data and submit a recommendation to U.S. EPA by May of 2020, and U.S. EPA must make a final determination on the attainment status of Gallia County by December of 2020.

Steam Electric Effluent Limitations Guidelines (ELGs)

On November 4, 2019, the U.S. EPA issued a draft update to the ELG rule, which revises the best available technology effluent limitations and pretreatment standards that apply to bottom ash transport water and FGD wastewater. OVEC is currently reviewing the draft rule and plans to present an update to the Board at the December 12, 2019 Board meeting.

Kyger Creek’s NPDES permit renewal application was submitted to the Ohio EPA on November 1, 2018. OVEC requested maximum flexibility on the ELG timeline in the new NPDES permit. Originally, OVEC expected the new permit to be issued in the spring of 2019; however, that timeline has been delayed due to agency resource constraints. Currently, OVEC anticipates receiving the permit renewal in the near-term.

Coal Combustion Residuals (CCR) Rule Compliance

OVEC continues to work through the regulatory requirements contained within the version of the CCR rule currently in effect. The Company has completed each of the applicable compliance activities within the rule. The most recent significant compliance obligations have included an Assessment of Corrective Measures for potential impacts to the groundwater near the Clifty Creek Station’s landfill runoff collection pond and the Kyger Creek Station’s boiler slag pond. Each pond has experienced a significant statistical increase (SSI) in one well for one parameter included in the list of parameters monitored as required by the CCR Rule. In conjunction with performing the Assessment of Corrective Measures, OVEC also installed additional wells, which are being referred to as “sentinel wells,” as part of the requirements contained in the CCR rule to characterize potential releases. Evaluation of these wells has concluded that groundwater is not being impacted beyond the property boundary at either site. In accordance with the CCR rule, on November 6 and 7, 2019, OVEC held public meetings, to discuss our proposed corrective actions with interested citizens.



CONFIDENTIAL INFORMATION REDACTED

OVEC will continue to work closely with our qualified professional engineer to complete the compliance requirements of the rule.

On November 4, 2019, the U.S. EPA issued a draft update to the CCR rule, in response to a D.C. Circuit Court ruling, related to surface impoundment (treatment pond) closure requirements for those wastewater treatment ponds at power plants that are also subject to the CCR rules. The draft rule outlines pond closure requirements and timelines for CCR ponds that are not considered lined under the proposed new standard. OVEC is currently reviewing the draft rule and plans to present an update to the Board at the December 12, 2019 Board meeting.

316(b) Compliance

The comprehensive reports required under Section 122.21 (r) of U.S. EPA's 2014 revisions to the 316(b) regulations were finalized for the Kyger Creek Station in early October 2018 and submitted to the Ohio EPA with the NPDES permit renewal package in late 2018. Clifty Creek's reports were completed in early 2019 and submitted to Indiana Department of Environmental Management (IDEM). IDEM has already determined that action on our 316(b) reports will take place during the next NPDES permit reissuance scheduled to take place in 2022. OVEC is still waiting for feedback from Ohio EPA regarding what actions they intend to take in the upcoming NPDES permit renewal.

CSAPR Update

OVEC has demonstrated sustained positive performance in operating within the tightened requirements of the new CSAPR through standard work procedures and disciplined action. The Company continued to operate in a manner that met or surpassed the NOx allocation targets established by each plant in 2019.

During the past few months the D.C. Circuit Court has also issued several Orders and Judgments regarding myriad lawsuits filed challenging the legality of the CSAPR Update Rule and the CSAPR Close-Out Rule. Any one of these legal actions could possibly result in additional NOx constraints either on our states or perhaps on our specific units. OVEC

will continue to monitor litigation and be prepared to check and adjust accordingly.

Gypsum Marketing

The Company continues to sell in excess of 80 percent of the gypsum produced at Kyger Creek and Clifty Creek into the wallboard market. Both plants are working with their respective gypsum buyers to negotiate long term contracts, as well as barge loading facilities, which is anticipated to increase the benefit realized by the plants from gypsum sales. Gypsum sales continue to help reduce future needs of potential landfill expansions.

GENERATION

Fuel

As of September 30, 2019, the approximate on-hand inventory was [REDACTED] days at Kyger Creek and [REDACTED] days at Clifty Creek. To help to mitigate any unplanned supplier and river condition driven inventory issues during the winter months, OVEC has been building inventory levels through the end of the year.

OVEC has recently finalized contract purchases for both facilities for 2020 and future years. Kyger Creek finalized two contracts for a total of [REDACTED] tons and has two continuing contracts for [REDACTED] million tons and [REDACTED] tons. Clifty Creek has finalized two contracts for a total [REDACTED] tons for 2020 along with [REDACTED] tons from an existing contract. Both Kyger Creek and Clifty Creek are approximately [REDACTED] percent committed for 2020 fuel supply. OVEC, with assistance from AEP Fuel Procurement, continues to obtain favorable market pricing to promote continued reduction in fuel costs.

Reliability

Through September 30, 2019, OVEC-IKEC had an equivalent forced outage rate (EFOR) of 6.26 percent. EFOR performance continues to show improved performance compared with the prior five-year average of 10.9 percent for 2014-2018. On a



CONFIDENTIAL INFORMATION REDACTED

unit basis, 7 of the 11 OVEC-IKEC units had an EFOR of less than 5 percent through September.

The primary drivers of lost generation through September were issues experienced with generator cooling at Kyger, air heater pluggage and boiler fouling at Clifty, and JBRs and boiler tube leaks at both facilities. Kyger Creek and Clifty Creek continue to improve planning and use of opportunity outages especially during weak market periods to mitigate contributors of forced outages, which has been one of the drivers in our improved overall EFOR performance. This is highlighted in the Company's commercial availability performance through September of [REDACTED] percent.

JBR Reliability Group

The JBR Reliability Group continues as a company-wide effort as we work to reduce lost generation caused by JBR outages. The facilities continue to meet and share lessons learned. Other utilities have joined our pursuit of continuous improvement. Participation continues in a number of User Group forums in order to learn from others in the industry. OVEC has made improvements in inspection and PM programs with the increased operating time. Performance issues have been related to booster fans, along with corrosion of ducts and piping and failures of expansion joints. Kyger Creek has been utilizing sodium formate in both JBR12 and JBR35 and based on results of reducing scaling, plans on continued use going forward. Improvement efforts are paying off as the lost MWhrs attributed to JBRs through September 2019 for Kyger and Clifty have reduced by [REDACTED] compared to 2018, respectively.

Heat Rate Improvement Team

OVEC's Heat Rate Improvement Team continues its efforts in heat rate optimization to improve unit performance and reduce fuel costs. 2019 heat rate results have been impacted by an increase in low-load operation compared to prior years due to the soft energy market. The team will be adding optimization of heat rate at low load operation as a focus for 2020. Both facilities continue to concentrate efforts on operator knowledge and the impact each individual employee has on overall heat rate performance.

Operationally, the team has found opportunities for improvements with impacts associated with condenser performance, high-pressure heaters out of service, and feedwater contributed to higher than expected heat rate. In addition, other areas for improvements are air preheater efficiency and pulverizer performance, along with monitoring the use of auxiliaries including condensate usage, plant air, and soot blowers.

Cross-Functional Work

Development of a cross-functional workforce continues to be a strategic focus for OVEC in order to leverage staffing and improve productivity. We have continued to take a disciplined approach to identify job tasks that are a natural extension to reduce handoffs in order to complete the job task. Using Standard Work Procedures and on-site SMEs, we have trained and qualified employees on these new job tasks. By training to the procedure and then doing in-field observation of the task being performed, we are ensuring both safety and work quality. Both facilities have implemented cross-functional work and continue to progress in this area.

CONTINUOUS IMPROVEMENT/LEAN

The continuous improvement process (CIP) has become an integral part of the way we do business. The many accomplishments through the continuous improvement process are solely attributable to the hard work of OVEC-IKEC's engaged employees as they continue to generate and implement hundreds of ideas and process improvements that produce results at all levels of the organization. To date, over 90% of employees have been actively engaged in CIP. The 2019 focus continues to be in alignment with the Corporate Strategic Plan with disciplined efforts to further embrace CIP maturity through skill development, the establishment of key standard work processes, and the implementation of challenging metrics all while reinforcing the importance of employee engagement.

Employees continue to build skill through targeted training sessions on root cause analysis (RCA). RCA



CONFIDENTIAL INFORMATION REDACTED

is a methodical process for identifying “root causes” of problems or events and an approach for not only responding to them but learning from them. RCA helps identify gaps in process and aids in the recognition of need and the development or modification of standard work. Trained employees are currently utilizing this tool to not only respond to problems but also to proactively look at processes to identify positives as well.

Open Book Leadership (OBL) continues to be one of the most effective tools in our continuous improvement “tool box” by creating transparency around Company performance metrics and helping every employee at an individual level realize the impact they can have on the Company’s bottom line. The process created by OBL is a systematic way to communicate information from the bottom to the top and from the top to the bottom, while breaking down the key drivers of the Company’s “critical numbers,” which ultimately determine whether the Company is successful.

OBL “business challenges” that provide focus and incentive to improve a specific area continue at all locations. Business challenges are short (one to three months) and are geared towards recognition with celebrations held if the team is successful in improving the specific area.

The Kyger Creek plant operations department’s “Heat Rate Improvement” business challenge is a current example of OBL at work. During this challenge, employees from each shift will focus on identifying twenty-five significant heat rate losses. The purpose of this challenge is to improve the overall heat rate and lower the overall operating cost. Another great example is the Treasury and Accounting department’s “A Penny for Your Thoughts” business challenge. During this three-month challenge, employees will promote communication and collaboration between departments by focusing on multi-department kaizens.

Additional challenges continue at the department and crew levels at both the corporate office and the plants specific to employee engagement, development of standard work, and the development of standard process. These challenges are in alignment with the

Company’s strategic planning focus and are helping OVEC-IKEC capture critical knowledge and identify the best way to complete specific jobs. The common theme in all business challenges is that they not only provide immediate correction, but also drive sustainable behaviors and provide focus on key areas important to the success of our business.

2019 BALANCE OF THE BUDGETS

OVEC’s employees continue their efforts for better by prioritizing spend and focus on overall fiscal responsibility aided by continuous improvement and OBL. To date, OVEC has not utilized or required any of the [REDACTED] million Board-approved construction contingency funding. From a generation cost standpoint, the Company projects [REDACTED]

[REDACTED] For general and administrative costs, [REDACTED]

[REDACTED]

[REDACTED] From an overall financial perspective, [REDACTED]

[REDACTED]

FINANCIAL UPDATE

OVEC completed a successful refinance of \$150 million expiring or maturing tax exempt bonds in August 2019. OVEC, working with AEP Finance, along with KeyBank and PNC, the co-lead underwriters, was successful at achieving interest cost reduction of [REDACTED] annually compared to prior rates. OVEC anticipates similar results with additional \$150 million refinancing in 1st Quarter 2020.

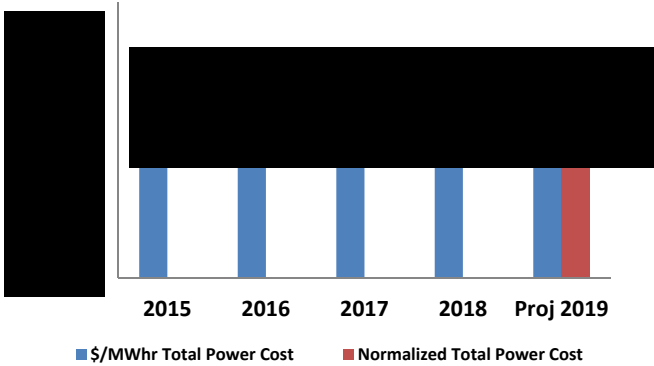
OVEC’s average power cost for energy supplied to the Sponsoring Companies, based upon the terms of the Inter-Company Power Agreement (ICPA), was [REDACTED] per MWh through September 2019. The average Sponsor use factor for the 3rd quarter was



CONFIDENTIAL INFORMATION REDACTED

[REDACTED]
The reduction is primarily driven by weak energy pricing due to compressed natural gas pricing and mild summer weather. OVEC is currently projecting [REDACTED]

[REDACTED] The difference is a direct result of reduced demand for generation as fuel and fixed costs are projected to be near target. However, OVEC’s “normalized” cost for year-end 2019 is projected at [REDACTED]



NERC COMPLIANCE

OVEC underwent NERC Compliance Audits for the Operations and Planning Standards in August and the Critical Infrastructure Protection Standards in October. Both Audits included observers from the FERC staff. Each Audit resulted in five Potential Non-Compliance findings, which OVEC considers relatively minor and have been or will be promptly mitigated. OVEC does not expect any additional NERC action until the next scheduled audit.

DOE ARRANGED POWER AGREEMENT

OVEC, AEP, and the DOE continue to work on the transfer of OVEC’s retail service obligations to AEP Ohio, as approved by the Public Utilities Commission of Ohio on August 22, 2018. The completion of the milestones needed for transfer of service will take place over the next 5 to 7 years.

HUMAN RESOURCES

Culture Improvement Initiative

Employees completed a pulse survey in May 2019 to assess our effectiveness in the areas of communication and collaboration. The survey resulted in 30 and 28 percent improvement respectively in the two areas. Business units utilized the feedback to develop culture action plans specific to their unit to address identified gaps and to build upon demonstrated strengths. OVEC-IKEC leadership is utilizing the valuable feedback in its strategic planning process to further improve our culture.

Sincerely,

Robert A. Osborne
Vice President and Chief Operating Officer

November 12, 2019

Fendig, John

From: [REDACTED]
Sent: Friday, May 01, 2020 4:35 PM
To: Arbough, Dan
Cc: [REDACTED]
Subject: Re: Updated Slide
Attachments: Investment comparison with advance closure cost.pdf

Follow Up Flag: Follow up
Flag Status: Flagged

EXTERNAL email. STOP and THINK before responding, clicking on links, or opening attachments.

Dan,

Per your request, attached is an updated slide providing additional information on investment compared closure costs. Give me a call if you have any questions. Thanks.

Justin J. Cooper MAcc, CPA
CFO, Secretary and Treasurer

Ohio Valley Electric Corporation
Desk: [REDACTED]
Cell: [REDACTED]
Fax: [REDACTED]
Email: [REDACTED]

From: "Arbough, Dan" [REDACTED]
To: [REDACTED]
Date: 05/01/2020 10:05 AM
Subject: Updated Slide

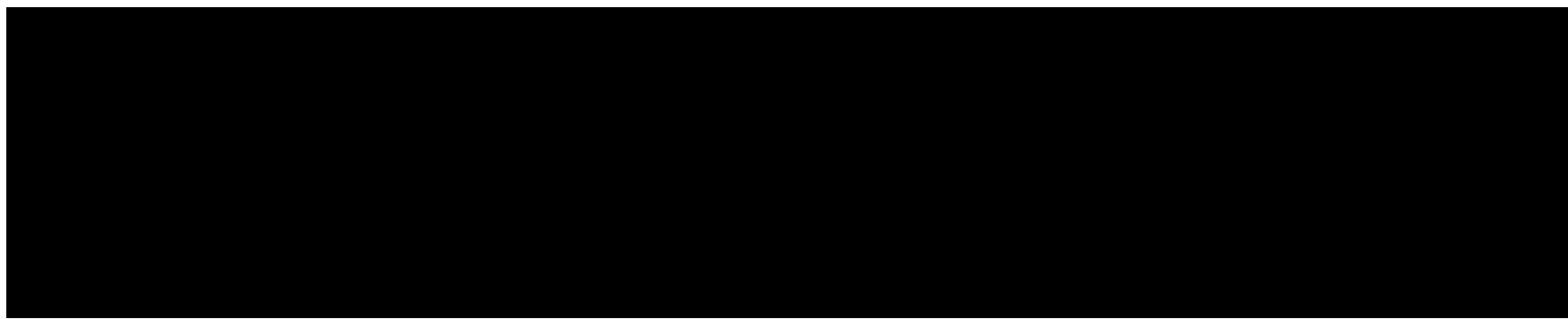
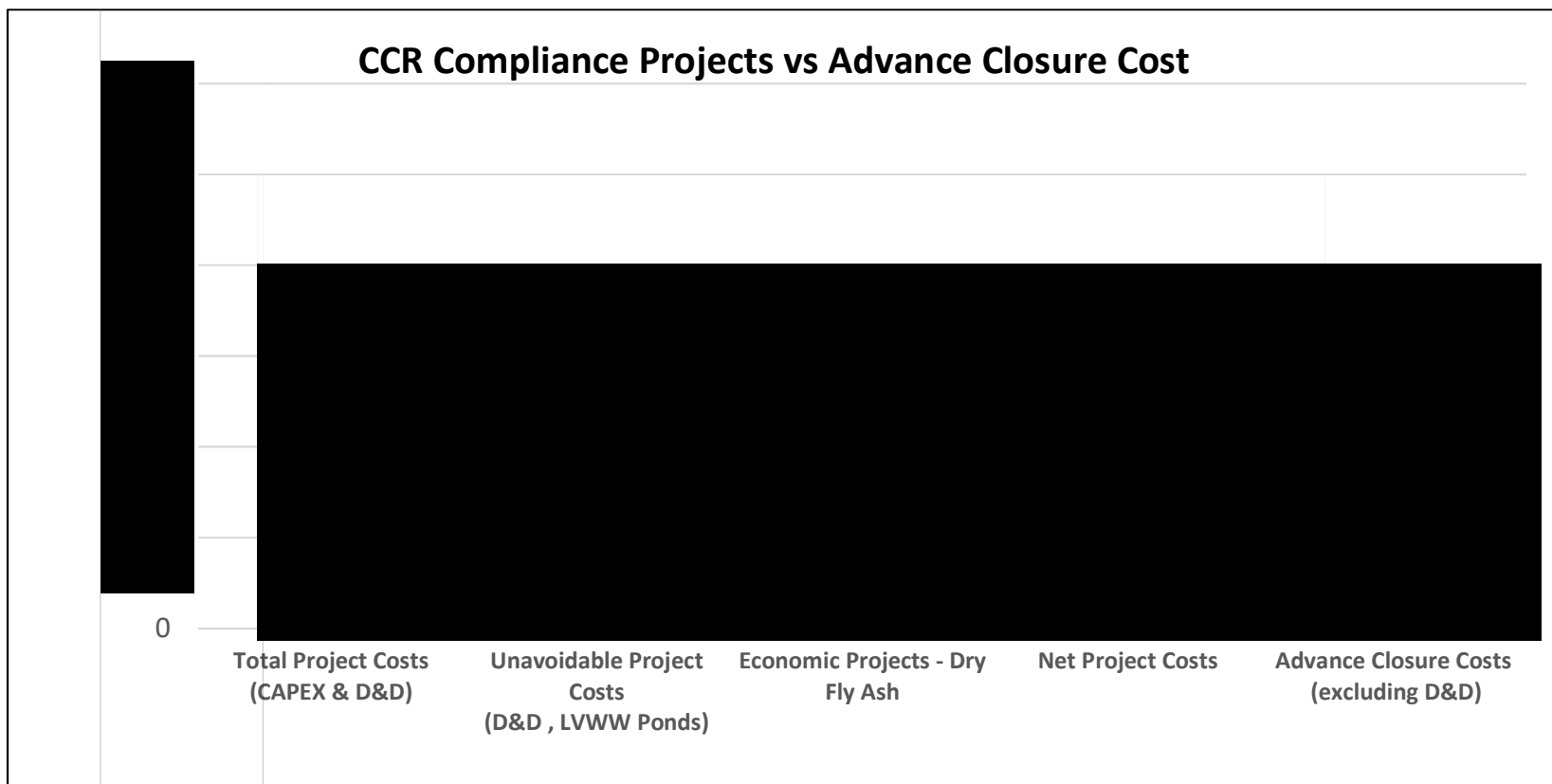
Justin,

Just wondered if you were planning to provide the updated slide we discussed in our call earlier this week?

Daniel K. Arbough
Treasurer - LG&E and KU Energy LLC
220 W. Main Street | Louisville, KY 40202
O: [REDACTED] | F: [REDACTED]
[REDACTED]

----- The information contained in this transmission is intended only for the person or entity to which it is directly addressed or copied. It may contain material of confidential and/or private nature. Any review, retransmission, dissemination or other use of, or taking of any action in reliance upon, this information by persons or entities other than the intended recipient is not allowed. If you received this message and the information contained therein by error, please contact the sender and delete the material from your/any storage medium.

CONFIDENTIAL INFORMATION REDACTED



Confidential Business Information



May 2018

Board Update

OVEC-IKEC, 3932 U.S. Route 23, P.O. Box 468, Piketon, OH 45661
www.ovec.com | [REDACTED]

SAFETY AND HEALTH

2017 Year-End and 2018 Year-to-Date Performance

Clifty Creek and System Division employees completed the calendar year of 2017 without a recordable injury. This is an inaugural milestone reached by the employees of Clifty Creek. Electrical Operations, which includes station mechanic employees, completed three years without a recordable injury in April 2018.

Through April 2018, there have been two recordable injuries companywide (1.23 recordable incidence rate). OVEC is forecasting a year-end recordable rate of 0.46 with no additional recordable injuries.

An external audit of safety programs at Kyger Creek was conducted in the third quarter of 2017. Only medium- and low-level gaps were identified, and all gaps have been addressed and closed. The internal quarterly safety assessments continue and have been instrumental in being proactive in identifying and correcting gaps.

The Supervisor Field Observation safety training program continues in its evaluation phase with the focus being on the quality and effectiveness of all evaluations completed. Contractor oversight and safety standardization, a 2018 Strategic Plan focus for OVEC, is being supported through the review and revision of contractor safety and health requirements. Contractor orientation processes at all three facilities are next in the review process to ensure a thorough and standardized process.

ENVIRONMENTAL UPDATE

2018 Performance to Date

Environmental stewardship remains a top priority of the OVEC corporate business strategy. Since the last Board Update, OVEC has continued to operate primarily in compliance with all applicable air, water, and solid waste permits, as well as the CCR rule. However, OVEC did report one exceedance of an NPDES permit limit for biological oxygen demand at Kyger Creek and an exceedance of a MATS particulate matter limit on Stack 12 at Kyger Creek. Both events were minor in scope and corrective actions have been implemented. In addition, Clifty Creek Station received a notice of violation from the Indiana Department of Environmental Management (IDEM) for alleged mercury monitor downtime issues on the common stack serving Units 1 through 3 from the first quarter of 2017. OVEC prepared a written response and also held a meeting with IDEM outlining that the monitor downtime during the first quarter of 2017 was impacted by two unusual and nonrecurring events – a set of broken mercury traps and a software upgrade on the CEMS system, resulting in 243 hours of monitor unavailability that quarter. Absent these two unusual events, monitor reliability would have been in excess of 95 percent. No proposed penalty has been assessed at this time.

A commitment to environmental compliance will continue to be a point of focus for OVEC and IKEC, and we are working to improve our efficiencies within this area to continue to provide value to the Sponsor Companies.

Clean Power Plan (CPP) Update

U.S. EPA extended the public comment deadline on their October 16, 2017 proposed rule entitled,



“*Repeal of the Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units.*” The proposed rule seeks to repeal the October 23, 2015 CPP in its entirety, and EPA extended the public comment period on the proposed CPP repeal through April 26, 2018.

EPA also issued an Advanced Notice of Proposed Rulemaking on February 26, 2018, on whether EPA should propose new carbon emission guidelines for potential replacement of the current CPP with a rule that is more limited in scope and legally defensible.

OVEC will continue to monitor the impact of the proposed CPP repeal, potential CPP replacement, as well as the legal challenges that will likely follow.

Mercury Air Toxics Standards (MATS) Rule

Kyger Creek and Clifty Creek continue to maintain compliance with MATS requirements, and both stations are performing very well in meeting the MATS emissions limits for all three pollutants (mercury, particulate matter, and SO₂). Since the last update, Kyger Creek did report one exceedance of a PM emission limit on Stack 12 following a series of unusual events and operating conditions. Elevated PM readings were primarily caused by the type of calibration curve used in the PM monitor, and not a result of an actual PM emissions exceedance. A series of corrective actions were initiated, including the recertification of the PM monitor, and we do not anticipate a similar recurrence. There are no new material legal developments on the MATS rule.

SO₂ NAAQS Compliance Status

There are no new developments on SO₂ NAAQS compliance. The three-station monitoring network placed into service on January 1, 2017, remains in service and no hourly values have exceeded the standard at any of the three locations. The monthly average values at all three locations are consistently less than 5 ppb.

Steam Electric Effluent Limitations Guidelines (ELGs)

Several significant developments have taken place with the ELG rules. In the prior update, OVEC

reported that EPA issued a final rule announcing plans to reconsider the ELG rule on September 18, 2017, entitled, “*Postponement of Certain Compliance Dates for the Effluent Limitations Guidelines and Standards for the Steam Electric Power Generating Point Sources Category.*” This ELG “Postponement Rule” effectively postpones the near-term ELG applicability dates for FGD wastewater and bottom ash transport water (BATW) from November 1, 2018 to November 1, 2020. The rule also outlines EPA’s plan to reconsider best available technology (BAT) for FGD wastewater and BATW and undertakes additional rulemaking that could result in the establishment of new ELG requirements, including new compliance dates for one or both waste streams.

EPA issued a May 2 *Federal Register* Notice Biennial ELG report indicating that U.S. EPA intends to revise the BAT effluent limitations and pretreatment standards that apply to bottom ash transport water and FGD wastewater and will issue a proposed rule in December 2018 and a final rule in December 2019, which is a full year earlier than originally proposed.

OVEC also completed a pilot study on FGD wastewater at Clifty Creek Station, and we are awaiting a final report from the vendor documenting performance and results.

OVEC also continues to evaluate technologies and costs to convert Kyger Creek to dry fly ash handling by no later than December 31, 2023.

OVEC also filed for an NPDES permit modification for the Clifty Creek Station in early November to ideally remove the ELG requirements placed in the permit when it was reissued, effective May 1, 2017. The current permit has ELG requirements applicable to FGD wastewater and BATW that are now subject to reconsideration. IDEM denied our immediate request to remove the new ELG language for FGD wastewater and BATW. However, IDEM did state they are willing to modify the permit once EPA completes its reconsideration and new rulemaking. As long as EPA maintains its current rulemaking schedule, we expect to have the time and opportunity to modify the permit and adjust compliance plans to align with any new technology and/or compliance



timelines that may result from EPA’s additional ELG rulemaking.

Kyger Creek’s NPDES permit renewal application is being prepared for submittal in October 2018. We expect to have a provision to convert to dry fly ash handling by no later than December 31, 2023, incorporated into the new permit. How Ohio EPA plans to address FGD wastewater and bottom ash transport water may likely depend on where U.S. EPA is with its ELG rulemaking efforts.

**Coal Combustion Residuals (CCR)
Rule Compliance**

In the previous update, OVEC outlined that EPA determined that it was appropriate to reconsider portions of the CCR rule. On November 15, 2017, EPA filed a status report with the D.C. Circuit Court of Appeals outlining provisions of the CCR rule that EPA intends to reconsider. The provisions EPA intends to reconsider include three general categories. The first category includes provisions in the rule that have already been remanded pursuant to a prior D.C. Circuit Court Order. The second category of issues includes other provisions that are subject to ongoing legal challenges before the D.C. Circuit Court. And the third category includes provisions of the current CCR rule that EPA intends to reconsider, but they are items not currently before the Court. EPA also outlined plans to take a two-phased approach to address the items it will be reconsidering. EPA states that Phase 1 will be completed by no later than June 14, 2019, and Phase 2 will be completed by no later than December 2019. On March 1, 2018, U.S. EPA issued the CCR Remand Rule Proposal, which was the first step in addressing issues with the CCR rule that they are required to reconsider, as well as several other changes that are designed to provide flexibility in the rule. OVEC participated in providing comments on the proposed remand rule and will continue to work with our trade associations to evaluate all of the provisions subject to reconsideration, as well as evaluate how the latest developments will impact the Company’s overall long-term CCR compliance strategy. In addition, OVEC will continue to work with Ohio and Indiana, through our state utility associations, to help each state regulatory agency manage their next steps

toward implementing their own CCR programs in light of these latest developments.

In the interim, OVEC will continue to work through the regulatory requirements contained within the version of the CCR rule currently in effect. The Company has completed each of the applicable compliance activities within the rule. The most recent compliance obligations have included the posting of initial groundwater monitoring data from each of the CCR units at Kyger Creek and Clifty Creek. To date, no issues or complaints have been received regarding our sites. We are continuing to work closely with our qualified professional engineer to complete the compliance requirements of the rule. The first round of detection groundwater monitoring has been collected at each plant and is currently being statistically evaluated against the background data that was posted earlier this year. Depending on the conclusion of the statistical analysis, OVEC may be required to begin a groundwater assessment monitoring program for CCR units that are found to have detection monitoring parameters with statistically significant increases (SSIs) over background. Assessment monitoring includes additional parameters and is used to determine if there has been a release from the unit.

OVEC continues to evaluate Kyger Creek’s boiler slag pond to determine if SSIs for boron, calcium, total dissolved solids, and sulfate are present. OVEC is currently collecting confirmation samples to determine if the results returned from the original sampling event was a function of the flooding experienced in the area at the time the samples were collected. Alternative source demonstrations are being conducted simultaneously to determine what influence, if any, surrounding activities may have on the units. We are also taking steps to identify the appropriate corrective actions in the event issues are identified that would negatively impact the facilities.

316(b) Compliance

There are no developments to report regarding 316(b) compliance.



CONFIDENTIAL INFORMATION REDACTED

CSAPR Update

OVEC met the challenges of the new CSAPR Update head-on in 2017, and both plants’ ozone season emissions were not only below the allowance allocations EPA assigned to each plant, but the NO_x emission rates each plant achieved were 60 percent or more below the prior five-year average emission rate. OVEC achieved this performance while maintaining ozone season generation at a level equivalent to our prior five-year average.

The success for 2017’s ozone season performance can be attributed to a variety of factors including the establishment of plant specific NO_x emission targets, the creation of a NO_x Optimization Workgroup charged with implementing NO_x emission improvements, and changes in how Clifty Creek Unit 6 was dispatched in the PJM Market.

OVEC’s next steps are to maintain the level of 2017 ozone season performance in 2018 by focusing on continued incremental improvements. OVEC has also been capturing and implementing lessons learned from the 2017 ozone season to help position the plants for success again in 2018, and Kyger Creek Station’s Technical Department has also been working with AEP to develop and test the viability of direct urea injection upstream of the SCR using the existing urea waste utilization system. The test goal was to determine the viability of using urea in place of ammonia to control NO_x, which would eliminate the need for hydrolyzers, improve overall system reliability, and reduce maintenance costs. The initial testing was very successful at both Kyger Creek and a second location at an AEP power plant with a similar ammonia injection system to Kyger Creek. Given the promising results, we expect to move forward with the engineering, design, and installation of a urea injection system prior to the beginning of the 2019 ozone season. The viability of using this process improvement at the Clifty Creek Station will also be evaluated.

Clifty Creek Unit 6 Operation During 2018 Ozone Season

OVEC intends to continue to operate Unit 6 in the 2018 ozone season in a similar manner as the 2017

ozone season. In addition, OVEC recently applied procedural process improvements implemented with the approval of the Operating Committee to optimize the efficiency and effectiveness of how Unit 6 is operated in the 2018 ozone season.

Gypsum Marketing

OVEC continues to sell gypsum as an agricultural amendment and continues to work with drywall manufacturers to develop long-term sales agreements. In early May, OVEC concluded contract negotiations with a gypsum end user and signed a contract that should put us in a position to sell the majority of Kyger’s gypsum production for up to 15 years. In the short term, there will be incremental savings realized in lower fuel costs. In the long term, there is the potential of avoided landfill expansion costs and lower environmental compliance risks.

In addition, a Letter of Intent (LOI) to enter into similar contract negotiations at Clifty Creek with a separate gypsum end user was signed. The terms of that LOI give us 180 days to negotiate contract terms that may result in an agreement similar to Kyger’s – a long-term contract for the sale of the majority of the gypsum production at Clifty Creek with similar short-term and long-term financial upside for OVEC.



GENERATION

Fuel

OVEC-IKEC’s coal types and specifications remain the same with Kyger Creek utilizing [REDACTED] percent Northern Appalachian coal and Clifty Creek utilizing [REDACTED] percent Illinois Basin. As of April 30, 2018, the approximate on-hand inventory of coal tonnage was [REDACTED] at Kyger Creek and [REDACTED] at Clifty Creek. In the first quarter of 2018, coal inventory was [REDACTED] days’ supply due to river issues of high water, icing, and closed locks in addition to supplier quality issues. [REDACTED]





CONFIDENTIAL INFORMATION REDACTED

recovering inventory levels. Clifty and Kyger coal inventories will be approaching the normal [REDACTED] day supply this summer.

Kyger Creek completed a successful test burn of a coal from a different supplier giving the opportunity to diversify the coal supply for this facility. We will be pursuing a contract for 2019 for approximately [REDACTED] tons.

OVEC is currently finalizing contract purchases for both facilities for 2018 and future years. Kyger Creek finalized two contracts for one million tons each for 2018 with similar volumes for 2019 and 2020. Along with approximately [REDACTED] carryover tons from 2017, Kyger Creek is projected to be [REDACTED] percent committed for 2018. Contract purchases for 2018 will provide a reduction of approximately [REDACTED] in price per ton including transportation compared with 2017. Clifty Creek has finalized three contracts for a total of [REDACTED] million tons for 2018. Along with one million tons from an existing long-term contract through 2021, Clifty Creek is projected to be [REDACTED] percent committed for 2018. Contract purchases for 2018 will provide a reduction of approximately [REDACTED] per ton including transportation compared with 2017. OVEC, with assistance from AEP Fuel Procurement, continues to obtain favorable market pricing to promote continued reduction in fuel costs.

Reliability

Through April 30, 2018, OVEC-IKEC had an equivalent forced outage rate (EFOR) of 6.58 percent compared with 5.73 percent for the same period in 2017. Although the EFOR is higher when compared to the same period last year, performance continues to display the trend of improved performance compared with the prior three-year average of 11.18 percent for 2015-2017. On a plant basis through April, EFOR was 8.74 percent at Clifty Creek and 4.02 percent at Kyger Creek. On a unit basis, 7 of the 11 OVEC-IKEC units had an EFOR of less than 6 percent through April.

The primary drivers of lost generation through April were issues experienced on the JBRs, boiler fouling, and boiler tube leaks. We have continued to improve our planning and use of opportunity outages to

mitigate contributors of forced outages resulting in improvement of the overall EFOR performance.

JBR Reliability Group

The JBR Reliability Group that was launched as a companywide effort continued to implement improvements in the six areas of focus:

- Development of common critical equipment lists for the JBRs.
- Defined inspections required every time a JBR is removed from service for both short duration and tank drain outages – including criteria for response to be taken based on action levels.
- Determined monitoring and alarms, along with trend analysis and operator actions.
- Reviewed and updated PM requirements.
- Developed chemical operating guidelines and actions to be taken.
- Determined requirements to define asset health and investment required.

The group did reconvene prior to the spring 2018 outages to ensure both plants have continued with improvement efforts. This will be an ongoing process following every outage season.

Kyger Creek will be testing the use of Sodium Formate in JBR12 during May 2018 while JBR35 remains in outage. This will allow isolated testing and give us the information needed to determine effectiveness and the cost/benefit of using this chemical for reduction of scaling. The Cardinal facility has had success with use of this chemical.

Clifty Creek hosted the JBR User’s Group meeting for two days in early May. Representatives from Kyger Creek, Conesville, Cardinal, AEP Service Corporation, and the Southern Company participated. The event was timed to allow attendees to tour JBR46 during the annual drain outage.

Operational Excellence Program

Skills assessments have continued to progress at both facilities. The results of these assessments have led to more targeted training based on individual



CONFIDENTIAL INFORMATION REDACTED

knowledge gaps. This program has continued to expand with the first round of assessments having been completed with the maintenance employees at Kyger Creek in April. Training will be developed and conducted to address the gaps in knowledge and another round of assessments will be conducted. Assessments will continue with both operations and maintenance employees as a key to retaining a skilled workforce.

The Treasury and Accounting Department’s “Bingo” business challenge is a current example of OBL at work. During this three-month challenge, the team will utilize and track up to eleven different continuous improvement activities to obtain a bingo. If everyone gets a bingo, the team will celebrate their success.

Several additional challenges continue at the department level at the corporate office and at the plants specific to the development of standard work and standard process. These challenges are in alignment with the Company’s strategic planning focus and are helping OVEC-IKEC capture critical knowledge and identify the best way to complete specific jobs. The common theme in all business challenges is that they not only provide immediate correction, but also drive sustainable behaviors and provide focus on key areas important to the success of our business.

CONTINUOUS IMPROVEMENT/LEAN

The continuous improvement process (CIP) remains strong through the hard work and engagement of OVEC-IKEC’s employees. Focus remains on strategic planning through a five-year look ahead and the establishment of key standard work processes at all levels.

Root cause analysis (RCA), the newest tool in our continuous improvement or LEAN skill “tool box,” remains a focal point. RCA is a methodical process for identifying “root causes” of problems or events and an approach for not only responding to them but learning from them. RCA helps identify gaps in process and aids in the recognition of need and the development of standard work. Multiple training sessions to build skill have been completed at each site and are expected to continue through 2018.

Open Book Leadership (OBL) continues to be a very effective tool in creating transparency around Company performance and helping every employee realize the impact they can have on the Company’s bottom line. The process created by OBL is a systematic way to communicate information from the bottom to the top and from the top to the bottom, while breaking down the key drivers of the Company’s “critical numbers,” which ultimately determine whether the Company is successful.

OBL “business challenges” that provide focus and incentive to improve a specific area continue at all locations. Business challenges are short (one to three months) and are geared towards recognition with celebrations held if the team is successful in improving the specific area.

2018 BALANCE OF THE BUDGETS

The impact of continuous improvement and OBL process has resulted in a continued focus on optimizing and challenge spending. To date, OVEC has not utilized or required any of the [REDACTED] million Board approved construction contingency funding. From an operating expense standpoint, the different divisions of the Company are projected to be on target for projected year-end results. To achieve these results, OVEC has actively been reviewing and reallocating funds as necessary with the goal to mitigate [REDACTED]

[REDACTED] From an overall financial perspective, OVEC continues to maintain an adequate level of liquidity to cover FES’s nonpayment of OVEC’s billed charges during the bankruptcy process.



CONFIDENTIAL INFORMATION REDACTED

INTEGRATION OF THE OVEC-IKEC TRANSMISSION SYSTEM INTO PJM

On February 13, 2018, the Federal Energy Regulatory Commission (FERC) approved the integration of the OVEC-IKEC system into PJM; and on February 21, 2018, the OVEC-IKEC Boards of Directors unanimously approved proceeding with the integration, effective June 1, 2018. OVEC would be integrated as a separate zone within PJM. Subsequent to the February 21 approval vote, PJM provided information that materially impacted the cost-benefit analysis presented to the Boards. PJM admitted that they failed to include the losses incurred on the OVEC transmission system in their analyses. Many PJM charges are based on load, both inclusive and exclusive of losses. These include Regional Transmission Expansion Plan (RTEP) and Reliability Assurance Agreement (RAA) charges as well as administrative charges. As a 345-kV transmission system with little or no load, the OVEC system is unique. PJM has indicated that, once the Department of Energy load is migrated out of the OVEC zone, they plan tariff and RAA changes to address the situation of a transmission zone with no load, to include losses as load, subjecting that zone to load-based charges, including RTEP and RAA charges. OVEC is working to update the approximate value of potential additional revenues in the cost-benefit analysis.

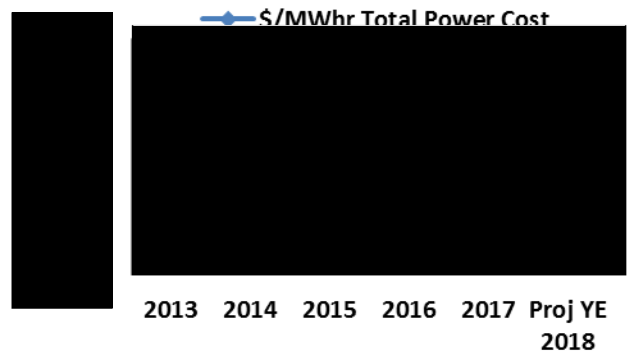
[REDACTED]

Pending approval by the Boards of Directors, a new integration date of September 1, 2018 is anticipated.

FINANCIAL UPDATE

OVEC's average power cost for energy supplied to the Sponsoring Companies, based upon the terms of the Inter-Company Power Agreement (ICPA), was

[REDACTED] per MWh through March 2018, which was a reduction of [REDACTED] compared with March 2017 year to date of [REDACTED] per MWh. The average Sponsor use factor continues to see an increase at [REDACTED] percent through March compared with [REDACTED] percent through March 2017. This continued increase is directly related to the PJM pseud-tie of OVEC's generation, continued focus on optimizing costs, and availability of the units. OVEC utilization is currently projected to be [REDACTED] percent for year-end as compared with the original budget target of [REDACTED] percent. OVEC is currently projecting a year-end \$/MWhr of [REDACTED] as compared with the original budget target of [REDACTED]. Projected utilization and \$/MWhr are due to higher market demand than originally budgeted with fuel and operating costs at or below budgeted targets.



HUMAN RESOURCES

Culture Improvement Initiative

The team remains focused on improving the OVEC-IKEC culture by addressing opportunities specifically around communications and continuous improvement. We are on target to conduct a third culture survey early this summer to measure our progress. Leadership plans to use the information garnered from the survey to make any necessary adjustments to the OVEC-IKEC Strategic Plan in 2019.



DOE ARRANGED POWER AGREEMENT

OVEC continues to work toward the termination of the “arranged power” Letter Agreement with the Department of Energy (DOE) pursuant to which OVEC procures power and energy from third parties to serve the load at the DOE’s Piketon facility. Since the last update, the DOE and OVEC negotiated a seventh amendment to the Termination Agreement with respect to the Letter Agreement, which extends the date for termination of the Letter Agreement for an additional six months to July 31, 2018.

In addition, AEP, OVEC, and the DOE recently reached agreement on a Joint Stipulation and Recommendation (“Stipulation”) filed with the Public Utilities Commission of Ohio (“PUCO”) in Docket No. 15-0892-EL-AEC on April 10, 2018, that seeks PUCO approval to transfer OVEC’s retail service obligations to AEP Ohio. Upon PUCO approval, the Stipulation will initiate a series of milestone activities that will ultimately result in the build-out of a new 138-kV delivery substation with connection points, the termination of 345-kV transmission activities associated with DOE’s X-530 switchyard, and the transfer of service to AEP Ohio. The three parties are anticipating PUCO approval prior to July 31, 2018, and the completion of the transfer of service is scheduled to take place over the next several years.

On a parallel path, OVEC and DOE are working on an eighth amendment to the Termination Agreement that is designed, pending PUCO approval of the Stipulation, to bridge the gap between the expiration of the seventh amendment scheduled to terminate on July 31, 2018, and the ultimate transfer of service to AEP Ohio.

BOARD OF DIRECTORS AND OFFICERS CHANGES

The 2018 Annual Meetings of Shareholders of OVEC and IKEC were held on April 16, 2018, to elect the directors to serve for a period of one year or until a successor is chosen and qualified.

At the OVEC and IKEC Boards of Directors’ meeting held on April 27, 2018, Mark C. McCullough, executive vice president–generation of American Electric Power Company, Inc., was elected a director of IKEC and appointed to the Executive Committee of IKEC. Mr. McCullough also was elected to serve as president of both Companies. He succeeds Nicholas K. Akins, who resigned from his positions as a director, member of the Executive Committee and president of OVEC and IKEC. Mr. Akins had served on the OVEC board since 2009 and on the IKEC board since 2011. He also had served as president and a member of the Executive Committee of both Companies since 2011. On that same date, Mr. McCullough resigned as a member and chairman of the Human Resources Committee of OVEC. Also on April 27, 2018, Christian T. Beam, president and chief operating officer of Appalachian Power, was elected a director of OVEC and was appointed as a member of the Human Resources Committee of OVEC. Also on April 27, 2018, Julie Sloat, president and chief operating officer of AEP Ohio, was appointed to the Executive Committee of OVEC; and Lana L. Hillebrand, senior vice president and chief administrative officer, was appointed chairwoman of the Human Resources Committee of OVEC.

Sincerely,

Robert A. Osborne
Vice President and Chief Operating Officer

May 30, 2018



November 2018

Board Update

OVEC-IKEC, 3932 U.S. Route 23, P.O. Box 468, Piketon, OH 45661
www.ovec.com | [REDACTED]

SAFETY AND HEALTH

2018 Year-to-Date Performance

Through September 2018, there have been seven recordable injuries companywide (1.48 recordable incidence rate). OVEC is forecasting a year-end recordable rate of 1.11 with no additional recordable injuries. Of the recordable injuries, five of the seven have been routine movement type injuries. OVEC continues to focus on fitness for duty and incorporating it in our Supervisor Field Observation program.

An external audit of safety programs at Clifty Creek was conducted in the third quarter of 2018. The three gaps identified were medium- and low-level gaps, and all gaps have been addressed and will be closed on or by December 1. The internal quarterly safety assessment program continues with the fourth quarter assessment focusing on ensuring past gap corrective action plan sustainability.

The Supervisor Field Observation program continues in its evaluation phase with the focus being on the quality and effectiveness of all evaluations completed. In direct alignment with our Strategic Plan Zero Harm objective, new contractor safety and health requirements were implemented in the third quarter of 2018. The contractor orientation process at all three facilities is currently under review to ensure a thorough and standardized process.

ENVIRONMENTAL UPDATE

2018 Performance to Date

Environmental stewardship remains a top priority of the OVEC corporate business strategy. Since the last Board Update, OVEC has continued to operate primarily in compliance with all applicable air, water, and solid waste permits, as well as the CCR rule. However, OVEC did incur an exceedance of the MATS 30-day rolling average mercury emissions limit on Stack 12 at Kyger Creek, which is explained further in the below MATS section. In addition, a Notice of Violation (NOV) associated with the NPDES stormwater management program at Kyger Creek was received. The NOV at Kyger was associated with Ohio EPA's allegations that the plant did not have adequate details documenting controls within its stormwater pollution prevention plan and was not associated with an exceedance with any specific permit limit. The plant has updated the plan to address Ohio EPA's requests, and we do not anticipate further action. OVEC shared its results from a learning perspective with the Environmental Subcommittee of the Board.

A commitment to environmental compliance will continue to be a point of focus for OVEC and IKEC, and we are working to close gaps and apply lessons learned across the organization to get better and provide value to the Sponsoring Companies.

Clean Power Plan (CPP) Update

On August 21, 2018, the U.S. EPA proposed the Affordable Clean Energy (ACE) rule, which would establish emission guidelines for states to develop plans to address greenhouse gas emissions from existing coal-fired power plants. The ACE rule is more limited in scope, and OVEC believes it will



yield a better approach than the controversial Clean Power Plan (CPP) originally proposed in 2015 and subsequently “stayed” by the U.S. Supreme Court. Comments on the proposed ACE rule are being accepted through October 31, 2018. EPA will likely formally repeal the CPP either close to or concurrent with the issuance of a final ACE rule.

OVEC will continue to monitor the impact of the proposed CPP repeal, the proposed ACE replacement, as well as the legal challenges that will likely follow.

Mercury Air Toxics Standards (MATS) Rule

Kyger Creek and Clifty Creek continue to maintain compliance with MATS requirements with one exception outlined in greater detail below. Both stations are performing very well in meeting the MATS emissions limits for particulate matter and SO₂. Since the last update, Kyger Creek experienced an exceedance of the 30-day rolling average MATS mercury emissions limit on Stack 12 following a series of unusual events and operating conditions resulting in a chemistry upset in the JBR and a subsequent mercury re-emission event. The chemistry event resulting in mercury re-emissions lasted approximately 26 hours; however, despite operating in compliance with the mercury limit since the event, it took the plant 30 operating days for the Stack 12 mercury emissions average to fall back below the established MATS 30-day rolling average emissions limit. A series of corrective actions were initiated, including adjusting default settings to the SO₂ inlet probe in the event of an equipment failure, physical modifications to chemical feed systems to allow for simultaneous injection for Mercontrol and sodium formate into the JBR for chemistry management and mercury control, and follow-up operator skills assessment training consistent with our Operational Excellence guidelines.

SO₂ NAAQS Compliance Status

There is one new development on SO₂ NAAQS compliance for Kyger Creek Station located in Gallia County, Ohio. The D.C. Circuit Court of Appeals took oral argument on a series of attainment designations that the Sierra Club and other non-

governmental organizations have challenged – one of those being the attainment/non-classifiable designation for Gallia County, Ohio. We expect the D.C. Circuit Court to issue a decision later this fall or early next year. Regardless of the outcome, the three-station SO₂ monitoring network placed into service on January 1, 2017, remains in service. The monthly average values at all three locations are consistently less than 5 ppb, while there have only been a few one-hour values higher than the standard and those are associated with unusual weather conditions. Absent a material change in results from the data collected in 2017 and year-to-date 2018, we expect that the data will show attainment with the NAAQS standard once the required three-year dataset has been gathered and evaluated.

Steam Electric Effluent Limitations Guidelines (ELGs)

Several significant developments have taken place with the ELG rules. In the prior update, OVEC reported that EPA issued a May 2 *Federal Register* Notice Biennial ELG report indicating that U.S. EPA intends to revisit the best available technology effluent limitations and pretreatment standards that apply to bottom ash transport water and FGD wastewater. OVEC originally anticipated a proposed rule from EPA to be issued in December 2018. However, OVEC has recently learned that EPA may issue the proposed rule in early 2019.

Kyger Creek’s NPDES permit renewal application was also submitted to Ohio EPA in October 2018. We requested to have maximum flexibility on the timeline in the new NPDES permit expected to be issued in the spring of 2019. Specifically, we requested until no later than December 31, 2023, to convert Kyger to dry fly ash handling. We also requested that no ELG compliance dates for FGD and bottom ash transport water be included until EPA publishes a new rule establishing new requirements for these waste streams. How Ohio EPA plans to address FGD wastewater and bottom ash transport water may likely depend on where U.S. EPA is with its ELG rulemaking efforts at the time the permit renewal takes place.



CONFIDENTIAL INFORMATION REDACTED

**Coal Combustion Residuals (CCR)
Rule Compliance**

In the previous update, OVEC outlined that the CCR rule continues to undergo reconsideration of various portions of the rule. EPA issued Phase 1, Part 1 of CCR rule revisions, which:

1. Extended the deadline by which owners must cease operation of some surface impoundments;
2. Established groundwater protection standards for cobalt, molybdenum, lithium and lead;
3. Provided for incorporation of risk-based changes by state or federal CCR permit programs.

EPA has indicated that additional revisions to the CCR rule will be addressed in a subsequent phase of rulemaking.

Independent from the rule revisions noted above, additional revisions are expected to portions of the CCR rule as a result of the August 21, 2018 D.C. Circuit Court decision that vacated portions of the rule back to EPA. The Court found that the EPA will need to revisit portions of the CCR rule. OVEC will continue to participate in the appropriate industry trade groups to stay current on this issue, and we will be evaluating the implications and potential consequences of the vacature on our future CCR and ELG compliance plans.

In the interim, OVEC will continue to work through the regulatory requirements contained within the version of the CCR rule currently in effect. The Company has completed each of the applicable compliance activities within the rule. The most recent compliance obligations have included the review of the groundwater monitoring data to determine if any potential significant statistical increases (SSIs) were observed at any of OVEC's CCR units, as well as siting criteria evaluations postings made in October. Evaluation of groundwater monitoring data indicated potential SSIs at the Kyger Creek boiler slag pond and the Clifty Creek landfill run-off collection pond. Alternative source evaluations were conducted in an attempt to

demonstrate that offsite sources were influencing groundwater monitored near our sites. Not all of the constituents could be justified by an alternative source. As a result, the Kyger Creek boiler slag pond and the Clifty Creek landfill run-off collection pond were placed in assessment monitoring.

The siting criteria evaluations were completed and posted to OVEC's external website in accordance with the CCR rule requirements. All of the Kyger Creek and Clifty Creek CCR surface impoundments and landfills demonstrated compliance with the applicable siting criteria.

OVEC continues to work closely with our qualified professional engineer to complete the compliance requirements of the rule.

316(b) Compliance

The comprehensive reports required under Section 122.21 (r) of U.S. EPA's 2014 revisions to the 316(b) regulations were finalized for the Kyger Creek Station in early October and submitted to the Ohio EPA with the NPDES permit renewal package in late October 2018. Clifty Creek's reports are nearing completion and are expected to be submitted to IDEM in early 2019. OVEC leveraged expertise within AEP and the Electric Power Research Institute (EPRI) to coordinate field data collection, research, and final report preparation.

CSAPR Update

OVEC met the challenges of the new CSAPR Update head-on in 2017 and repeated that successful performance in 2018. Both plants' 2018 ozone season emissions were not only below the allowance allocations EPA assigned to each plant, but the NO_x emission rates remained low and ozone season generation actually increased by almost 500,000 MW above our prior five-year average.

The success for 2018's ozone season performance can be attributed to a variety of factors including the discipline both plants used to follow through with the processes, controls, and lessons learned following the establishment of a NO_x Optimization Workgroup in 2017. While we also continued to offer [REDACTED]



CONFIDENTIAL INFORMATION REDACTED

[REDACTED] in the PJM Market during the ozone season, it also dispatched [REDACTED] days in 2018 compared with 2017 due to [REDACTED]
[REDACTED]
[REDACTED]

OVEC expects to continue to maintain the level of performance achieved in the 2017 and 2018 ozone seasons by focusing on continued incremental improvements and the application of lessons learned. Kyger Creek also continues to work with AEP on the viability of direct urea injection upstream of the SCR. Given the promising results from initial testing, we expect to move forward with the engineering, design, and installation of a urea injection system on at least one unit prior to the beginning of the 2019 ozone season. The viability of using this process improvement at the Clifty Creek Station will also be evaluated.

Gypsum Marketing

OVEC continues to sell gypsum as an agricultural amendment and continues to work with drywall manufacturers to develop long-term sales agreements. OVEC signed a contract with a gypsum end user who will purchase a majority of Kyger’s gypsum production for up to 15 years. We have sold over 145,000 tons through mid-October 2018 from Kyger Creek. In the short term, these sales will result in lower fuel costs; and in the long term, there is the potential of avoided landfill expansion costs and lower environmental compliance risks.

In addition, a Letter of Intent (LOI) to enter into similar contract negotiations at Clifty Creek with a separate gypsum end user was signed. The terms of that LOI give us 180 days to negotiate contract terms that may result in an agreement similar to Kyger’s – a long-term contract for the sale of the majority of the gypsum production at Clifty Creek with similar short-term and long-term financial upside for OVEC.

GENERATION

Fuel

OVEC-IKEC’s desired coal types and specifications remain the same with Kyger Creek utilizing Northern Appalachian coal and Clifty Creek utilizing Illinois Basin. As of September 30, 2018, the approximate on-hand inventory of coal tonnage was [REDACTED] at Kyger Creek and [REDACTED] at Clifty Creek. In addition, [REDACTED] tons of western Powder River Basin coal has been purchased for the fourth quarter of 2018 to supplement inventory at both plants. Coal inventory remained [REDACTED] days’ supply during the third quarter due to a combination of river issues of high water and closed locks and continued supplier quality issues. To mitigate risk and to ensure availability during higher price periods, OVEC utilized a strategy of [REDACTED]
[REDACTED]

The start of the fall outages has allowed Kyger Creek and Clifty Creek to improve inventory levels, resulting in an average of [REDACTED] days’ supply currently at the facilities.

OVEC finalized contract purchases for both facilities for 2018 and future years. Kyger Creek finalized two contracts for one million tons each and a contract with a separate supplier for 500,000 tons for 2019. This separate contract was competitively priced and also provides additional diversity to the coal supply at Kyger Creek. Kyger Creek also finalized a contract for 1.2 million tons for 2020. Clifty Creek has finalized two contracts for a total of 1.1 million tons for 2019 along with 1 million tons from an existing long-term contract through 2021. The projected percent committed for 2019 is approximately [REDACTED] for Kyger Creek and approximately [REDACTED] for Clifty Creek. OVEC’s 2018 coal costs are projected to result in an estimated [REDACTED] per ton including transportation compared with 2017. OVEC, with assistance from AEP Fuel Procurement, continues to obtain favorable market pricing to promote continued reduction in fuel costs.



Reliability

Through September 30, 2018, OVEC-IKEC had an equivalent forced outage rate (EFOR) of 5.59 percent compared with 6.57 percent for the same period in 2017. EFOR performance continues to display the trend of improved performance compared with the prior three-year average of 11.18 percent for 2015-2017. On a plant basis through September, EFOR was 6.35 percent at Clifty Creek and 4.71 percent at Kyger Creek. On a unit basis, 8 of the 11 OVEC-IKEC units had an EFOR of less than 6 percent through September.

The primary drivers of lost generation through September were issues experienced on the JBRs, boiler slagging/fouling, and air heater pluggage. Lost generation associated with boiler tube leaks has been significantly reduced at both locations. We continue to improve our planning and use of opportunity outages especially during weak market periods to mitigate contributors of forced outages, which has resulted in improved overall EFOR performance.

JBR Reliability Group

The JBR Reliability Group continues as a companywide effort as we work to reduce lost generation caused by JBR outages. The facilities not only share lessons learned between the two plants, but also participate in a number of User Group forums in order to learn from others in the industry. Clifty Creek hosted the JBR User Group earlier this year that was attended by not only OVEC personal, but also representatives from several AEP locations, Cardinal Operating Company, and Southern Company. These interactions are helping to improve our inspection program, PMs, and approach to asset health.

Kyger Creek tested the use of sodium formate in JBR12 during May 2018 while JBR35 was out of service. By isolating the test, it gave us the information needed to determine effectiveness for reduction of scaling. Based on the results, Kyger was able to forego a tank drain outage in the fall of 2018.

Heat Rate Improvement Team

Similar to the JBR Reliability Group, OVEC launched a Heat Rate Improvement Team in order to combine efforts, share lessons learned, and focus on specific improvement actions. The team focused efforts in three areas: operator knowledge and function, equipment, and auxiliaries.

Key activities within the operator knowledge and function include: knowledge assessments and training, development of heat rate loss screens by unit that can be monitored by the operators, and a guide that operators can use to minimize the losses. Within the equipment area, the major focus has been condenser performance, air preheater efficiency, high-pressure heaters and pulverizer performance. The primary areas within auxiliaries include condensate usage, plant air, and soot blowers.

The team is currently focused on ensuring we target the highest priority areas for improvement as we move into 2019.

Cross-Functional Work

Development of a cross-functional workforce is one of our tactical actions within the Operational Excellence objective in our Corporate Strategic Plan. In order to leverage staffing and continue to improve productivity, we are identifying those job tasks that are a natural extension to reduce handoffs in order to complete the job task.

We are taking a disciplined approach to identify these job tasks, use our Standard Work Procedures, and on-site SMEs to train and qualify our employees on these new job tasks. By training to the procedure and then doing in-field observation of the task being performed, we are ensuring both safety and work quality. Both facilities have a list of tasks that have been successfully transitioned, along with a list of tasks currently in progress.



CONFIDENTIAL INFORMATION REDACTED

CONTINUOUS IMPROVEMENT/LEAN

Through the hard work of OVEC-IKEC’s engaged employees, the continuous improvement process (CIP) has become an integral part of the way we do business. The many accomplishments through the continuous improvement process are solely attributable to the employees as they continue to generate and implement ideas and process improvements at all levels of the organization. Currently, 93 percent of employees are engaged in CIP activities. Relentless energy and focus for 2018 remains on strategic planning through a five-year look ahead and the establishment and consistent review of key standard work processes at all levels. The 2019 focus will be in alignment with the Corporate Strategic Plan with continued efforts to further embrace CIP maturity through skill development and the establishment of key standard work processes, while increasing more employee engagement.

Employees continue to build skill through targeted training session on root cause analysis (RCA). RCA is a methodical process for identifying “root causes” of problems or events and an approach for not only responding to them but learning from them. RCA helps identify gaps in process and aids in the recognition of need and the development or modification of standard work. Multiple training sessions have been completed at each site and are expected to continue into 2019.

Open Book Leadership (OBL) continues to be one of the most effective tools in our continuous improvement “tool box,” by creating transparency around Company performance metrics and helping every employee realize the impact they can have on the Company’s bottom line. The process created by OBL is a systematic way to communicate information from the bottom to the top and from the top to the bottom, while breaking down the key drivers of the Company’s “critical numbers,” which ultimately determine whether the Company is successful.

OBL “business challenges” that provide focus and incentive to improve a specific area continue at all locations. Business challenges are short (one to three

months) and are geared towards recognition with celebrations held if the team is successful in improving the specific area.

The Clifty Creek plant’s “Why we do it!” business challenge is a current example of OBL at work. During this one-month challenge, each employee will bring a picture of their reason to work safely to be displayed on a banner in high traffic work areas. The purpose of this challenge is to remind employees “why” they need to go home safe by making safety personal and reinforcing our goal of zero harm.

Additional challenges continue at the department level at the corporate office and at the plants specific to the development of standard work and standard process. These challenges are in alignment with the Company’s strategic planning focus and are helping OVEC-IKEC capture critical knowledge and identify the best way to complete specific jobs. The common theme in all business challenges is that they not only provide immediate correction, but also drive sustainable behaviors and provide focus on key areas important to the success of our business.

2018 BALANCE OF THE BUDGETS

The impact of continuous improvement and OBL process has resulted in a continued focus on optimizing and challenge spending. To date, OVEC has not utilized or required any of the [REDACTED] million Board approved construction contingency funding. From an operating expense standpoint, the different divisions of the Company are projected to be on target for projected year-end results. To achieve these results, OVEC has actively been reviewing and reallocating funds as necessary with the goal to

[REDACTED]

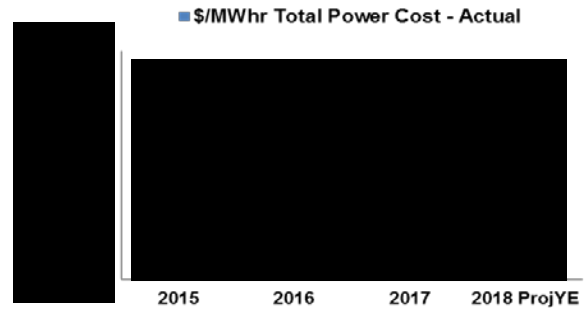
[REDACTED] From an overall financial perspective, OVEC continues to maintain an adequate level of liquidity to cover FES’s nonpayment of OVEC’s billed charges during the bankruptcy process.



CONFIDENTIAL INFORMATION REDACTED

INTEGRATION OF THE OVEC-IKEC TRANSMISSION SYSTEM INTO PJM

On June 28, 2018, the Board approved proceeding with the integration of the OVEC-IKEC transmission system into PJM on December 1, 2018. On July 12, OVEC filed with FERC to approve the December 1 date and to request waivers of certain PJM tariff provisions to allow OVEC to participate in the PJM Capacity Market. On August 1, FERC issued an order approving the December 1 integration date. OVEC does not anticipate any changes to the identified cost savings resulting from the elimination of services from outside entities that will benefit all Sponsors, nor will there be any changes to the “grandfathered” treatment for Sponsoring Companies not participating in the PJM Market with respect to charges for deliveries to such Sponsoring Companies. OVEC has begun the process of terminating various agreements with other entities for reliability-based services, obtaining the necessary capacity requirements, and completing the other administrative items for integration.



HUMAN RESOURCES

Culture Improvement Initiative

Employees participated in a targeted pulse survey in June of 2018. This is the third culture survey conducted since the inception of the assessment initiative in 2016. The survey was designed to assess primarily three focus areas: employee engagement, communications, and continuous improvement. Employee participation in the survey was remarkable again this year at 86 percent. Leadership is currently reviewing the information provided and will utilize the valuable feedback in OVEC-IKEC’s strategic planning process to modify locational culture action plans to continue efforts to improve our culture.

FINANCIAL UPDATE

OVEC’s average power cost for energy supplied to the Sponsoring Companies, based upon the terms of the Inter-Company Power Agreement (ICPA), was [REDACTED] per MWh through September 2018, which was a [REDACTED] compared with September 2017 year to date of [REDACTED] per MWh. The average Sponsor use factor continues to see an increase at [REDACTED] percent through September compared with [REDACTED] percent through September 2017. This continued increase is directly related to [REDACTED]

[REDACTED] OVEC utilization is currently projected to be [REDACTED] percent for year-end as compared with the original budget target of [REDACTED] percent. OVEC is currently projecting a year-end \$/MWhr of [REDACTED] as compared with the budget target of [REDACTED]. Projected utilization and \$/MWhr are due to [REDACTED]

DOE ARRANGED POWER AGREEMENT

OVEC, AEP, and the DOE reached agreement on a Joint Stipulation and Recommendation (“Stipulation”) filed with the Public Utilities Commission of Ohio (“PUCO”) in Docket No. 15-0892-EL-AEC on April 10, 2018. That agreement was subsequently approved by the PUCO on August 22, 2018, and this approval clears the path to transfer OVEC’s retail service obligations to AEP Ohio. With the PUCO approval now in place, OVEC will be working with both parties to implement a series of milestone activities that will ultimately result in the build-out of a new 138-kV delivery substation with connection points, the termination of 345-kV transmission activities associated with



DOE's X-530 switchyard, and the transfer of service to AEP Ohio. The completion of the transfer of service is scheduled to take place over the next several years.

BOARD OF DIRECTORS AND OFFICERS CHANGES

There have been no changes since the last Board Update.

Sincerely,

A handwritten signature in black ink, appearing to read "R A Osborne", with a long horizontal stroke extending to the right.

Robert A. Osborne
Vice President and Chief Operating Officer

November 15, 2018



May 2019

Board Update

OVEC-IKEC, 3932 U.S. Route 23, P.O. Box 468, Piketon, OH 45661
www.ovec.com | [REDACTED]

SAFETY AND HEALTH

2019 Year-to-Date Performance

On March 26, Clifty Creek employees completed one year with no recordable injuries. System Office employees, including Electrical Operations, completed four years in April with no recordable injuries; and on May 11, they also reached a milestone of 16 years without a lost-time injury.

Through April 2019, there have been two recordable injuries companywide (1.01 recordable incidence rate). OVEC is forecasting a year-end recordable rate of 0.34 with no additional recordable injuries.

All gaps identified in the third quarter 2018 external safety audit of Clifty Creek programs have been addressed and closed. The internal quarterly safety assessment program continues.

Aligning with OVEC's 2019 Strategic Plan and the tactical action of Contractor Oversight and Safety Standardization, training guidance for System Office employees providing contractor oversight is in development and will be delivered in August. Also, an internal contractor assessment program for the Company will begin in the third quarter of 2019 focusing on adherence to the new contractor safety and health requirements implemented in the third quarter of 2018.

ENVIRONMENTAL UPDATE

2019 Performance to Date

Environmental stewardship remains a top priority of the OVEC corporate business strategy. Since the last

Board Update in November 2018, OVEC has operated in compliance with all applicable air, water, and solid waste permits, as well as the monitoring and reporting requirements of the Coal Combustion Residuals rule. Further, no Notices of Violations (NOVs) were received for any on-site agency inspections or associated environmental compliance related activities.

A commitment to environmental compliance will continue to be a point of focus for OVEC as lessons learned are applied across the organization to get better and provide value to the Sponsoring Companies.

Clean Power Plan (CPP)/Affordable Clean Energy Update

U.S. EPA accepted comments on its proposed Affordable Clean Energy (ACE) rule through October 31, 2018. This proposed rule would establish emission guidelines for states to develop plans to address greenhouse gas emissions from existing coal-fired power plants. The ACE rule is more limited in scope, and OVEC believes it is legally defensible compared with the controversial 2015 CPP subsequently "stayed" by the U.S. Supreme Court. After processing public comments, EPA sent the final ACE rule to the Office of Management and Budget (OMB) for review in late April 2019. Barring negative OMB feedback, it is anticipated that EPA will issue the final ACE rule this summer. EPA will likely formally repeal the CPP either close to or concurrent with the issuance of a final ACE rule.

OVEC will continue to monitor the impact of the anticipated CPP repeal, expected issuance of the final ACE rule replacement, as well as the legal challenges that will likely follow.



Mercury Air Toxics Standards (MATS) Rule

Kyger Creek and Clifty Creek continue to maintain compliance with MATS requirements. Both stations are performing well in meeting the MATS emissions limits for particulate matter and SO₂. Neither plant has experienced an emissions limit exceedance in 2019. JBR chemistry management and mercury control, combined with operator skills assessment training consistent with our Operational Excellence guidelines, will be an ongoing focus area.

SO₂ NAAQS Compliance Status

For SO₂ NAAQS related to Kyger Creek Station, the D.C. Circuit Court recently issued a favorable decision for EPA’s determination on the current attainment/non-classifiable designation for the Gallia County area around Kyger Creek. The three-station SO₂ monitoring network placed into service on January 1, 2017, remains in service, and the results continue to show compliance with the SO₂ NAAQS. Absent a material change in results from the data collected in 2017, 2018, and year-to-date 2019, OVEC expects that the data will confirm attainment with the NAAQS standard once the required three-year dataset has been gathered and evaluated at the end of this year.

Steam Electric Effluent Limitations Guidelines (ELGs)

Several significant developments have taken place with the ELG rules. In the prior update, OVEC reported that U.S. EPA intends to revisit the best available technology effluent limitations and pretreatment standards that apply to bottom ash transport water and FGD wastewater via a proposed rule to be issued in early 2019. The issuance of that rule has been delayed and is now anticipated to be issued as a draft rule in June or July 2019.

In addition, the 5th District Circuit Court issued a decision on a separate legal challenge to the ELG rules brought by environmental groups. That decision was issued on April 12, 2019, and the Court ruled that EPA was “arbitrary and capricious” by failing to establish discharge limits aligned with current “Best Available Technology” on landfill leachate and legacy wastewater discharges. The

Court vacated this portion of the rule and remanded it back to EPA for further regulatory action. OVEC will closely monitor what EPA ultimately decides to do in response to this court decision. The EPA does have the opportunity to appeal this decision and/or address the court decision through a variety of regulatory paths.

Kyger Creek’s NPDES permit renewal application was submitted to Ohio EPA on November 1, 2018. We requested to have maximum flexibility on the ELG timeline in the new NPDES permit. Originally, OVEC expected the new permit to be issued in the spring of 2019; however, that timeline is likely to slip due to agency resource constraints. How Ohio EPA plans to address FGD wastewater and bottom ash transport water in the new permit may likely depend on where U.S. EPA is with its ELG rulemaking efforts at the time the permit renewal takes place.

Coal Combustion Residuals (CCR) Rule Compliance

OVEC will continue to work through the regulatory requirements contained within the version of the CCR rule currently in effect. The Company has completed each of the applicable compliance activities within the rule. The most recent compliance obligations have included the review of the groundwater monitoring data to determine if any potential significant statistical increases (SSIs) were observed at any of OVEC’s CCR units, as well as the compilation of that information into the 2018 annual groundwater monitoring report, which was posted to the Company’s CCR website. Evaluation of groundwater monitoring data indicated potential assessment monitoring SSIs at the Kyger Creek boiler slag pond and the Clifty Creek landfill run-off collection pond. Alternative source evaluations are being conducted in an attempt to evaluate whether offsite sources are influencing groundwater monitored near our sites. OVEC is also installing additional wells, which are being referred to as “sentinel wells,” as part of the requirements contained in the CCR rule to characterize potential releases. This work is being performed concurrently with the alternative source demonstrations at each site. Should the alternative source demonstrations conclude that there are no alternative sources, OVEC



CONFIDENTIAL INFORMATION REDACTED

will already be positioned in alignment with the timeline associated with the CCR rule. After characterizing the release, OVEC will need to begin an assessment of corrective measures and then hold public meetings to discuss our proposed corrective actions with interested citizens.

OVEC will continue to work closely with our qualified professional engineer to complete the compliance requirements of the rule.

316(b) Compliance

The comprehensive reports required under Section 122.21 (r) of U.S. EPA’s 2014 revisions to the 316(b) regulations were finalized for the Kyger Creek Station in early October 2018 and submitted to the Ohio EPA with the NPDES permit renewal package in late 2018. Clifty Creek’s reports were completed in early 2019 and submitted to Indiana Department of Environmental Management (IDEM). IDEM has already determined that action on our 316(b) reports will take place during the next NPDES permit reissuance scheduled to take place in 2022. OVEC is still waiting for feedback from Ohio EPA regarding what actions they intend to take in the upcoming NPDES permit renewal.

CSAPR Update

OVEC met the challenges of the new CSAPR Update head-on in 2017 and 2018, and we expect similar performance in 2019.

Kyger Creek also continues to work on incremental improvements that include direct urea injection upstream of the SCR. Given the promising results from initial testing, OVEC has moved forward with the engineering, design, and partial installation of a urea injection system on all five units prior to the beginning of the 2019 ozone season. Pending favorable results at Kyger Creek, the viability of using this process improvement at the Clifty Creek Station will also be evaluated.

Gypsum Marketing

As provided in the last Board Update, the Company has been selling gypsum at Kyger Creek to a

wallboard manufacturer. Clifty Creek is now also selling gypsum to a separate wallboard manufacturer. Through 2019, approximately [REDACTED] percent of the gypsum being produced is being sold as feedstock into the wallboard market and reducing future needs of potential landfill expansions.



GENERATION

Fuel

As of April 30, 2019, the approximate on-hand inventory is [REDACTED] days at Kyger Creek and [REDACTED] days at Clifty Creek. Due to a combination of river issues of high water and closed locks and continued supplier quality issues, the plants continued to [REDACTED]



[REDACTED] Also, to mitigate risk and to ensure availability during higher price periods, OVEC utilized a strategy of [REDACTED]



The start of the spring outages has allowed Kyger Creek and Clifty Creek to [REDACTED] inventory levels.

OVEC has recently finalized contract purchases for both facilities for 2019 and future years. Kyger Creek finalized three contracts; one for 1.8 million tons, one for 620,000 tons, and one for 40,000 tons (test burn). These contracts provide competitive costs as well as additional diversity to the coal supply at Kyger Creek. Kyger Creek also recently finalized contracts for an additional 1 million tons in 2020. Clifty Creek has finalized two contracts for a total of 1.1 million tons for 2019 along with 1 million tons from an existing long-term contract through 2021. The percent committed for 2019 is [REDACTED] percent for Kyger Creek and approximately [REDACTED] percent for Clifty Creek, which will help to mitigate any unplanned supplier and river condition driven inventory issues during the winter months of 2020. OVEC, with assistance from AEP Fuel Procurement, continues to obtain favorable market pricing to promote continued reduction in fuel costs.



CONFIDENTIAL INFORMATION REDACTED

Reliability

Through April 30, 2019, OVEC-IKEC had an equivalent forced outage rate (EFOR) of 5.9 percent compared with 6.6 percent for the same period in 2018. EFOR performance continues to display the trend of improved performance compared with the prior five-year average of 10.9 percent for 2014-2018. On a plant basis through April, EFOR was 8.8 percent at Clifty Creek and 1.9 percent at Kyger Creek. On a unit basis, 7 of the 11 OVEC-IKEC units had an EFOR of less than 4 percent through April.

The primary drivers of lost generation through April were issues experienced on the JBRs, boiler tube leaks, and air heater pluggage. Kyger Creek and Clifty Creek continue to improve planning and use of opportunity outages especially during weak market periods to mitigate contributors of forced outages, which has been one of the drivers in our improved overall EFOR performance. This is highlighted in the Company's commercial availability performance through April of [REDACTED] percent.

JBR Reliability Group

The JBR Reliability Group continues as a companywide effort as we work to reduce lost generation caused by JBR outages. The facilities will meet following the spring 2019 outages to share lessons learned between the two plants. We also continue to participate in a number of User Group forums in order to learn from others in the industry. We have made improvements in our inspection and PM programs with the increased operating time. Recent performance issues have been related to booster fans, along with corrosion of ducts and piping. Kyger Creek has been utilizing sodium formate in both JBR12 and JBR35 based on its results of reducing scaling and plans on continuing use going forward. The team will continue to use these as opportunities to learn and share with the groups.

Heat Rate Improvement Team

OVEC's Heat Rate Improvement Team set an improvement target of [REDACTED] percent for 2019. Both facilities continue to concentrate efforts on operator knowledge and the impact each individual employee has on overall heat rate performance. In addition, we continue to look for improvements in condenser performance, air preheater efficiency, high-pressure heaters, and pulverizer performance along with monitoring the use of auxiliaries which include condensate usage, plant air, and soot blowers.

Cross-Functional Work

Development of a cross-functional workforce continues to be a strategic focus for OVEC in order to leverage staffing and to improve productivity. We have continued to take a disciplined approach to identify job tasks that are a natural extension to reduce handoffs in order to complete the job task. Using Standard Work Procedures, and on-site SMEs, we have trained and qualified employees on these new job tasks. By training to the procedure and then doing in-field observation of the task being performed, we are ensuring both safety and work quality. Both facilities have implemented cross-functional work and continue to progress in this area.

CONTINUOUS IMPROVEMENT/LEAN

The continuous improvement process (CIP) has become an integral part of the way we do business. The many accomplishments through the continuous improvement process are solely attributable to the hard work of OVEC-IKEC's engaged employees as they continue to generate and implement hundreds of ideas and process improvements that produce results at all levels of the organization. The 2019 focus continues to be in alignment with the Corporate Strategic Plan with disciplined efforts to further embrace CIP maturity through skill development, the establishment of key standard work processes, and the implementation of challenging metrics all while increasing more employee engagement.



CONFIDENTIAL INFORMATION REDACTED

Employees continue to build skill through targeted training session on root cause analysis (RCA). RCA is a methodical process for identifying “root causes” of problems or events and an approach for not only responding to them but learning from them. RCA helps identify gaps in process and aids in the recognition of need and the development or modification of standard work. Multiple training sessions have been completed at each site and are expected to continue throughout 2019.

Open Book Leadership (OBL) continues to be one of the most effective tools in our continuous improvement “tool box,” by creating transparency around Company performance metrics and helping every employee at an individual level realize the impact they can have on the Company’s bottom line. The process created by OBL is a systematic way to communicate information from the bottom to the top and from the top to the bottom, while breaking down the key drivers of the Company’s “critical numbers,” which ultimately determine whether the Company is successful.

OBL “business challenges” that provide focus and incentive to improve a specific area continue at all locations. Business challenges are short (one to three months) and are geared towards recognition with celebrations held if the team is successful in improving the specific area.

The Kyger Creek plant operations department’s “Hazard Recognition!” business challenge is a current example of OBL at work. During this challenge, employees will focus on hazard recognition techniques and improve upon job safety and job hazard analysis review and utilization. The purpose of this challenge is to support the desired safety culture and reinforce our goal of zero harm. Another great example is the Clifty Creek plant’s “Sign, Sign Everywhere a Sign” visual management business challenge. During this two-month challenge, employees will identify and repair damaged signs or labels, remove unnecessary signs, and add new signs or labels where needed. This challenge improves area and equipment identification with clear visual management.

Additional challenges continue at the department and crew levels at both the corporate office and the plants specific to employee engagement, development of standard work, and the development of standard process. These challenges are in alignment with the Company’s strategic planning focus and are helping OVEC-IKEC capture critical knowledge and identify the best way to complete specific jobs. The common theme in all business challenges is that they not only provide immediate correction, but also drive sustainable behaviors and provide focus on key areas important to the success of our business.

2018 BALANCE OF THE BUDGETS

OVEC’s employees continued engagement in our continuous improvement and OBL processes aides in our focus of fiscal responsibility. To date, OVEC has not utilized or required any of the [REDACTED] million Board approved construction contingency funding. From a generation cost standpoint, the Company projects to be on target for projected year-end results. To achieve these results, OVEC has actively been reviewing and reallocating funds as necessary with the goal to help mitigate [REDACTED]

[REDACTED]

From an overall financial perspective, OVEC continues to maintain an adequate level of liquidity to cover FES’s nonpayment of OVEC’s billed charges during the bankruptcy process.

INTEGRATION OF THE OVEC-IKEC TRANSMISSION SYSTEM INTO PJM

On December 1, 2018, the OVEC-IKEC transmission system was successfully integrated into the PJM footprint and has resulted in a reduction of OVEC’s transmission operating cost for 2019 and future years.



CONFIDENTIAL INFORMATION REDACTED

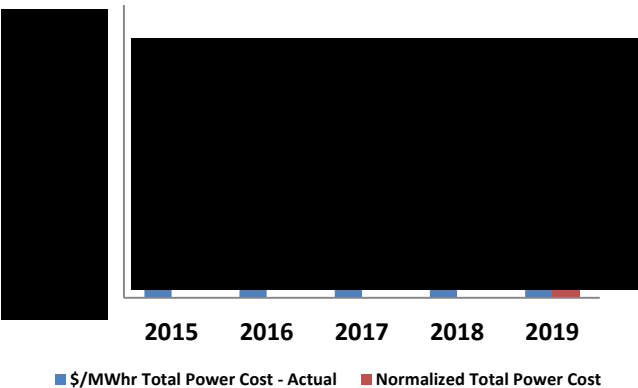
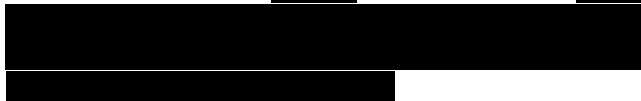
NERC COMPLIANCE

OVEC will be undergoing NERC Compliance Audits for the Operations and Planning and Critical Infrastructure Protection Standards in August 2019 and October 2019, respectively. OVEC did well in its audits during the last audit cycle in 2016, and we anticipate similar results this year.



FINANCIAL UPDATE

OVEC’s average power cost for energy supplied to the Sponsoring Companies, based upon the terms of the Inter-Company Power Agreement (ICPA), was [REDACTED] per MWh through March 2019. The average Sponsor use factor is [REDACTED] than 2018 1st quarter at [REDACTED] percent as compared with [REDACTED] percent. The [REDACTED] is primarily driven by [REDACTED]. OVEC utilization is currently projected to be [REDACTED] percent for year-end and on target with the original budget target of [REDACTED] percent, with anticipated utilization improvements in the summer and shoulder months. OVEC is currently projecting a year-end \$/MWhr of [REDACTED] as compared with the budget target of [REDACTED]. However, OVEC’s “normalized” cost for year-end 2019 is projected at [REDACTED] which excludes [REDACTED].



HUMAN RESOURCES

Culture Improvement Initiative

Employees completed another targeted pulse survey in May 2019. This is the fourth culture survey conducted since the inception of the assessment initiative in 2016. This recent survey was primarily designed to assess our effectiveness in the areas of communication and collaboration. Employee participation in the survey was exceptional again this year at 83 percent. Overall scores have improved 15 percent from 60 in 2018 to 69 in 2019. Scoring for communication improved from 27 in 2018 to 35 in 2019 for a 30 percent improvement. Also, scoring for collaboration improved from 29 in 2018 to 37 in 2019 for a 28 percent improvement. Leadership will be reviewing the information provided and will utilize the valuable feedback in OVEC-IKEC’s strategic planning process.



DOE ARRANGED POWER AGREEMENT

OVEC, AEP, and the DOE continue to work on meeting the Joint Stipulation and Recommendation (“Stipulation”) approved by the Public Utilities Commission of Ohio on August 22, 2018. This approval cleared the path to transfer OVEC’s retail service obligations to AEP Ohio. The completion of the milestones needed for transfer of service will take place over the next several years.



BOARD OF DIRECTORS AND OFFICERS CHANGES

At the OVEC and IKEC Boards of Directors’ meeting held on December 5, 2018, Paul Chodak III, executive vice president-generation of American Electric Power Company, Inc., was elected a director of OVEC and IKEC and appointed to the Executive Committees of both Companies, effective January 1, 2019. Mr. Chodak also was elected to serve as president of OVEC and IKEC, effective January 1, 2019. He succeeds Mr. McCullough, who resigned



as a director, a member of the Executive Committee, and president of OVEC and IKEC. Mr. McCullough had served as a member of the OVEC board and Executive Committee of OVEC since 2011 and 2015, respectively, and as a member of the IKEC board and its Executive Committee since 2018. Mr. McCullough also had served as president of OVEC and IKEC since 2018. Also effective January 1, 2019, Raja Sundararajan, president and chief operating officer of AEP Ohio, was elected a director of OVEC and appointed as a member of the Executive Committee of OVEC following the resignation of Julie Sloat. Ms. Sloat had served on the OVEC board since 2016 and as a member of the Executive Committee of OVEC since 2018. Also effective January 1, 2019, Julie Sloat, senior vice president-treasury and risk of American Electric Power, was elected assistant secretary and assistant treasurer of OVEC and IKEC, replacing Lonni L. Dieck. Ms. Dieck had served as an officer of both Companies since 2016.

The 2019 Annual Meetings of Shareholders of OVEC and IKEC were held on April 15, 2019, to elect the directors to serve for a period of one year or until a successor is chosen and qualified.

Sincerely,

A handwritten signature in black ink that reads "R A O" followed by a long horizontal stroke.

Robert A. Osborne
Vice President and Chief Operating Officer

May 20, 2019



June 2020

Board Update

OVEC-IKEC, 3932 U.S. Route 23, P.O. Box 468, Piketon, OH 45661
www.ovec.com | [REDACTED]

SAFETY AND HEALTH

2020 Year-to-Date Performance

On March 26, 2020, Clifty Creek employees completed two years with no recordable injuries. System Office employees, including Electrical Operations, completed five years in April with no recordable injuries; and on May 11, they also reached a milestone of 17 years without a lost-time injury.

Through May 31, 2020, there has been one recordable injury within the Company, which occurred at the Kyger Creek Plant. The injury, a hand laceration sustained while performing a routine valve operation movement, did not result in a days away, restricted or transferred (DART) case.

Aligning with OVEC's 2020 Strategic Plan Zero Harm and Continuous Improvement objectives, a new safety training process is in the initial stages. The new safety training process will allow flexibility during this challenging time for employees to receive key and required training in more than one format. Remote, online training will be available to employees in addition to traditional instructor-led training. Full implementation is targeted by August 31.

COVID-19 UPDATE

OVEC-IKEC continues to be committed to the health and safety of our employees and our families in the communities in which we live and work during this COVID-19 pandemic. As of May 31, 2020, we have not experienced any additional confirmed cases.

All facilities continue to remain disciplined and

focused on preventative actions as discussed in our prior updates, such as mask requirements, temperature checks, self-evaluations, area cleaning and other measures to promote social distancing. We continue to learn from our experiences and the experiences of our Sponsors.

ENVIRONMENTAL UPDATE

2020 Performance to Date

Environmental stewardship remains a top priority of the OVEC corporate business strategy. Since the Board Update in November 2019, OVEC has not received any new Notices of Violation (NOV) from either of our state regulatory agencies; however, an NOV issued by the Ohio Environmental Protection Agency (OEPA) following a site inspection of the facility's landfill water compliance program, outlined in the November 2019 update remains unresolved. The NOV issued in 2019 did not include a proposed fine or penalty, and OVEC will continue to work closely with OEPA to resolve this issue. OVEC continues to operate in compliance with all applicable air, water, and solid waste permits, as well as the monitoring and reporting requirements of the Coal Combustion Residuals rule.

A commitment to environmental compliance will continue to be a point of focus for OVEC as lessons learned are applied across the organization to get better and provide value to the Sponsoring Companies.

Affordable Clean Energy Update

Over the past several months, OVEC has gathered data for submittal to our respective state regulatory agencies as they both initiate activities to prepare State



Implementation Plans (SIPs) to comply with the Affordable Clean Energy (ACE) Rule, U.S. EPA promulgated on July 8, 2019. Both states have three years from the effective date of the federal rule to develop and submit their respective state SIPs. The U.S. EPA's repeal of the Clean Power Plan (CPP) concurrent with the promulgation of the ACE rule remain subject to litigation.

OVEC will continue to monitor the progression of each rule. In the interim, we continue working with our respective state regulatory agencies and utility trade groups on the logistics of ACE rule implementation and compliance.

Mercury Air Toxics Standards (MATS) Rule

Kyger Creek and Clifty Creek continue to maintain compliance with MATS requirements. Both stations are currently performing well in meeting the MATS emissions limits for particulate matter and SO₂. Neither plant experienced an emissions limit exceedance in 2019, or year-to-date 2020. JBR chemistry management and mercury control, combined with operator skills assessment and training consistent with our Operational Excellence guidelines, continue to help our facility operators maintain compliance with regulatory requirements. One recent challenge at Clifty Creek involved learning to manage mercury emissions under extended periods of low-load operations. Lessons learned from that experience have helped improve the knowledge and understanding of chemistry management activities that vary based on load conditions.

SO₂ National Ambient Air Quality Standards (NAAQS) Compliance Status

The Kyger Creek Station's three-station SO₂ monitoring network, which was placed into service on January 1, 2017, remains in service, and the results continue to show compliance with the SO₂ NAAQS. Ohio EPA has analyzed the first three years of ambient data from the local SO₂ monitoring network and filed a recommendation with U.S. EPA to classify the area in Gallia County surrounding the Kyger Creek Station and its neighbor, the Gavin Station, as "attainment/nonclassifiable" with the 2010 SO₂ NAAQS. U.S. EPA must make a final determination

on the attainment status of Gallia County by December of 2020.

Steam Electric Effluent Limitations Guidelines (ELGs)

On November 4, 2019, the U.S. EPA issued a draft update to the ELG rule, which revises the best available technology effluent limitations and pretreatment standards that apply to bottom ash transport water and FGD wastewater. Earlier in 2020, the U.S. EPA announced that it plans to issue this rule as a final rule by August or September of 2020. OVEC continues to plan its ELG compliance activities based on this latest draft rule, and will update plans as appropriate, once the final rule is issued later this year.

Kyger Creek's NPDES permit renewal application was submitted to the Ohio EPA on November 1, 2018, and a new permit was anticipated by mid-year 2019. However, Ohio EPA has yet to issue a new permit, and the timeline for receiving a draft continues to be delayed due to agency resource constraints. OVEC does not currently anticipate receiving the permit renewal in the near-term.

Coal Combustion Residuals (CCR) Rule Compliance

OVEC continues to work through the regulatory requirements contained within the version of the CCR rule currently in effect. The Company has completed each of the applicable compliance activities within the rule. The most recent significant compliance obligations have included an Assessment of Corrective Measures for potential impacts to the groundwater near the Clifty Creek Station's landfill runoff collection pond and the Kyger Creek Station's boiler slag pond. Each pond has experienced a significant statistical increase (SSI) in one well for one parameter included in the list of parameters monitored as required by the CCR Rule. In conjunction with performing the Assessment of Corrective Measures, OVEC also installed additional wells, which are being referred to as "sentinel wells," as part of the requirements contained in the CCR rule to characterize potential releases. Evaluation of these wells has concluded that groundwater is not being impacted beyond the property boundary at either site. In accordance with the CCR rule, on November 6 and



7, 2019, OVEC held public meetings to discuss our proposed corrective actions with interested citizens.

OVEC will continue to work closely with our qualified professional engineer to complete the compliance requirements of the rule.

U.S. EPA continues to revise the CCR rule, which adds to the complexity of the compliance program. In late 2019, the agency announced plans to issue additional revisions to the CCR rule, some of which would deal directly with the D.C. Circuit Court's decision, as well as plans that addressed outstanding issues identified by the agency. U.S. EPA has drafted two additional revisions to the CCR rule, Part A and Part B. Part A of the CCR rule, which is not yet final, has a significant revision to the original rule that will require all impoundments that do not meet the liner requirements of the CCR rule to cease receiving of CCR material and initiate closure by August 31, 2020, unless approval to operate longer is requested by the Company and is secured from U.S. EPA. Based on evaluations completed by OVEC-IKEC's QPE early in the compliance activities, the determination was made that the surface impoundments at Kyger Creek and Clifty Creek do not meet the liner design requirements. As a result, the Company has completed an initial engineering evaluation to determine what is technically feasible from a schedule standpoint in regard to closing the CCR surface impoundments and what costs might be associated with the closures. Subsequently, the Company intends to submit a technical justification document to the U.S. EPA that demonstrates why additional time should be granted to cease placement of CCR in the surface impoundments and initiate closure. The Company anticipates the U.S. EPA will approve the alternative schedule at this time. Separately, the Part B revisions to the CCR rule, which are also not yet final, propose the development of a federal permitting program to regulate and enforce the CCR rule at facilities subject to the rule, as opposed to the current enforcement mechanism of a self-implementing rule enforced through citizen suits.

OVEC-IKEC is actively monitoring these developments and adapting their CCR compliance program to ensure compliance obligations and timelines are adjusted accordingly. In addition, the Company continues to work toward the development

of facility modifications and closures project designs, which were approved by the Board of Directors in May 2020, in support of the schedule that will be included in the application to the U.S. EPA.

316(b) Compliance

There are no new updates to report on 316(b) compliance related activities. Both state regulatory agencies have received the comprehensive reports OVEC was required to submit under Section 122.21 (r) of U.S. EPA's 2014 revisions to the 316(b) regulations, and the Company waiting on agency feedback before determining next steps. IDEM has already determined that action on Clifty Creek's 316(b) reports will take place during the next NPDES permit reissuance, scheduled to take place in 2022. OVEC is anticipating feedback from Ohio EPA regarding what actions they intend to take when a draft NPDES renewal permit is received.

CSAPR Update

OVEC has demonstrated sustained positive performance in operating within the tightened requirements of the new CSAPR through standard work procedures and disciplined action. The Company operated in a manner that met or surpassed the NOx allocation targets established by each plant in 2019, and expect to continue doing so during the 2020 ozone season.

In mid-May, the U.S. EPA signaled that they have initiated a new rulemaking effort to respond to a 2019 D.C. Circuit Court decision remanding portions of the CSAPR Update Rule. The Company anticipates that rulemaking effort could ultimately result in a reduction of the state NOx budgets. Whether that results in a lowering of NOx allowances allocated to the Kyger Creek and Clifty Creek units remains uncertain.

OVEC will continue to monitor the outcome of this litigation and other legal challenges to utility NOx emissions brought by environmental groups and northeast states, and will be prepared to check and adjust accordingly.



CONFIDENTIAL INFORMATION REDACTED

Gypsum Marketing

The Company continues to sell a majority of the gypsum produced at Kyger Creek and Clifty Creek into the wallboard market. Both plants are working with their respective gypsum buyers to negotiate long-term contracts, as well as barge loading facilities, which is anticipated to increase the benefit realized by the plants from gypsum sales. Gypsum sales continue to help reduce future needs of potential landfill expansions.

GENERATION

Fuel

As of April 30, 2020, the approximate on-hand inventory was █ days at Kyger Creek and █ days at Clifty Creek. The weak market demand has resulted in _____
_____ AEP Fuel Procurement is assisting OVEC on working with our coal suppliers on opportunities to _____

Kyger Creek and Clifty Creek are approximately █ percent committed for 2021 fuel supply and █ percent committed for 2022 fuel supply. OVEC, with assistance from AEP Fuel Procurement, continues to obtain favorable market pricing to promote continued reduction in fuel costs.

Reliability

Through April 30, 2020, OVEC-IKEC had an equivalent forced outage rate (EFOR) of 3.64 percent. On a unit basis, 9 of the 11 OVEC-IKEC units had an EFOR of less than 5 percent through April.

The primary drivers of lost generation through April were associated with boiler tube leaks, air heater and SCR pluggage and the JBRs. Kyger Creek and Clifty Creek continue to improve planning and use of opportunity outages, especially during weak market periods, to mitigate contributors of forced outages, which has been one of the drivers in our improved overall EFOR performance. This is highlighted in the

Company's commercial availability performance through April of █ percent.

JBR Reliability Group

The JBR Reliability Group continues its company-wide effort as we work to reduce lost generation caused by JBR outages. The facilities continue to meet and share lessons learned. Other utilities have joined our pursuit of continuous improvement. Participation continues in a number of User Group forums in order to learn from others in the industry. OVEC has made improvements in inspection and PM programs with the increased operating time. The majority of performance issues through April 2020 have been related to corrosion of ducts and piping and failures of expansion joints. Kyger Creek continues to utilize sodium formate in both JBR12 and JBR35 with good results.

Heat Rate Improvement Team

OVEC's Heat Rate Improvement Team continues its efforts in heat rate optimization to improve unit performance and reduce fuel costs. Heat rate results through April 2020 have continued to be impacted by an increase in low-load operation compared to prior years due to the weak energy market. The team has added optimization of heat rate at low-load operation as a focus for 2020. Both facilities continue to concentrate efforts on operator knowledge and the impact each individual employee has on overall heat rate performance. Operationally, the team continues to focus on opportunities for improvements associated with condenser performance, high-pressure heaters out of service, and feedwater contributing to higher than expected heat rate. Other areas for improvements include air preheater efficiency, pulverizer performance, along with use of auxiliaries (condensate usage, plant air, and soot blowers).

Cross-Functional Work

Cross-functional continues to be a strategic focus for OVEC in order to leverage staffing and improve productivity. We have continued to take a disciplined approach to identify job tasks that are a natural extension to reduce handoffs in order to complete the job task. Using Standard Work Procedures and on-site SMEs, we have trained and qualified employees on



these new job tasks. By training to the procedure and then conducting in-field observation of the task being performed, we are ensuring both safety and work quality. Both facilities have implemented cross-functional work and have several examples during the recent spring 2020 outages where using cross-functional teams has saved cost and outage time.

CONTINUOUS IMPROVEMENT/LEAN

The continuous improvement process (CIP) remains an integral part of the way we do business. The many accomplishments through the continuous improvement process are solely attributable to the hard work of OVEC-IKEC's engaged employees as they continue to generate and implement hundreds of ideas and process improvements that produce results at all levels of the organization. Our goal continues to be active engagement of every employee in the CIP process. The 2020 focus continues to be in alignment with the Corporate Strategic Plan with disciplined efforts to further embrace CIP maturity through skill development, the establishment and revision of key standard work processes, and the implementation of challenging metrics all while reinforcing the importance of employee engagement.

Employees continue to build skill through targeted training sessions on root cause analysis (RCA). RCA is a methodical process for identifying "root causes" of problems or events and an approach for not only responding to them but learning from them. RCA helps identify gaps in processes and aids in the recognition of need and the development or modification of standard work. Trained employees are currently utilizing this tool to not only respond to problems but also to proactively look at processes to identify positives as well.

Open Book Leadership (OBL) continues to be one of the most effective tools in our continuous improvement "tool box" by creating transparency around Company performance metrics and helping every employee at an individual level realize the impact they can have on the Company's bottom line. The process created by OBL is a systematic way to communicate information from the bottom to the top

and from the top to the bottom, while breaking down the key drivers of the Company's "critical numbers," which ultimately determine whether the Company is successful.

OBL "business challenges" that provide focus and incentive to improve a specific area continue at all locations. Business challenges are short (one to three months) and are geared towards recognition with celebrations held if the team is successful in improving the specific area.

The Clifty Creek plant's "Strategic Plan March Madness" business challenge is a current example of OBL at work. During this challenge, employees completed activities that involve Strategic Plan metrics: Zero Harm, Provider of Choice, Culture of Engagement, Operational Excellence and Continuous Improvement. The purpose of this challenge is to participate in activities that positively impact our Strategic Plan and business objectives. Another great example is the Treasury and Accounting department's "Baseball" hazard recognition business challenge. During this 3-month challenge, each employee will identify and turn in at least four hazard recognitions or close calls to promote and reinforce our desired Zero Harm culture.

Additional challenges continue at the department and crew levels at both the corporate office and the plants specific to employee engagement, development of standard work, and the development of standard process. These challenges are in alignment with the Company's strategic planning focus and are helping OVEC-IKEC capture critical knowledge and identify the best way to complete specific jobs. The common theme in all business challenges is that they not only provide immediate correction, but also drive sustainable behaviors and provide focus on key areas important to the success of our business.

FES BANKRUPTCY

On May 18, OVEC executed a settlement agreement (in the form of a joint stipulation) with Energy Harbor (formerly FirstEnergy Solutions) with respect to all claims in bankruptcy and related litigation. The



CONFIDENTIAL INFORMATION REDACTED

settlement provides for Energy Harbor to assume its share (4.85%) of the Inter-Company Power Agreement (ICPA) as of June 1, 2020, and be obligated to perform its obligations under the ICPA going forward. OVEC, with the assistance of the Sponsors, has worked with PJM to reallocate Energy Harbor’s rights to energy and capacity. The settlement agreement requires a final order from the Bankruptcy Court before it becomes fully effective, which is anticipated to be completed by the end of June based on the current court schedule.

advantage of the weak market period to utilize maintenance outages and shifted a portion of planned outage work from the fall. We are also currently reviewing 2020 budgets and fall outage scope to optimize operating costs and available generation during this unprecedented time.

Based on year-to-date results and the assumption of an incremental improvement in the energy demand in Q3 and Q4, OVEC’s 2020 year-end total power cost is projected at approximately [REDACTED] per MWhr with 9.5 million MWhrs of generation. OVEC is projecting annual operating costs, on a total dollar basis, to be [REDACTED]

NERC COMPLIANCE

OVEC underwent NERC Compliance Audits for the Operations and Planning Standards in August and the Critical Infrastructure Protection Standards in October 2019, which resulted in [REDACTED]

OVEC’s effort to refinance of \$150 million tax exempt bonds in March 2020 was delayed due to market volatility caused by COVID-19. OVEC continues to work with AEP Finance, along with KeyBank and PNC, the co-lead re-marketers, to evaluate the appropriate timing to re-enter the market in the near term as markets continue to stabilize. The refinance is projected to provide interest cost reduction and reduced future debt liability with structured amortization.

[REDACTED] OVEC does not expect any additional NERC action until the next scheduled audit.

FINANCIAL PERFORMANCE

COVID-19’s impact on an already depressed energy market has caused historically low energy prices and weak demand, which as has resulted in [REDACTED]

HUMAN RESOURCES

Culture Improvement Initiative

2020 is the fifth year OVEC-IKEC has sought feedback from employees to assess its culture. Employees will be encouraged to complete a full culture survey later this year. The survey design will leverage a new model to produce results that are easier to understand, provide better benchmarking capabilities, and generate strategic actions to further reduce gaps in key areas such as communication and collaboration. The 2020 survey will incorporate specific questions to assess the team’s progress in its continuous improvement initiative. Survey questions are in the process of being critiqued by key OVEC-IKEC team members to assure effectiveness and clarity. OVEC-IKEC leadership intends to utilize the valuable feedback to aid in the further development of each business unit’s culture action plan and in the

[REDACTED] OVEC’s total power cost through April was approximately [REDACTED] per MWhr as compared to [REDACTED] per MWhr through April 2019. This [REDACTED] is exclusively due to the impact of [REDACTED]

[REDACTED] Normalizing the 2020 total power costs through April, by substituting the 2019 energy market as a basis for utilization of generation, results in a total power cost of approximately [REDACTED] per MWhr, which is a [REDACTED] per MWhr [REDACTED] from year-to-date April 2019 actual results.

During the past few months OVEC has taken



organization's strategic planning process to further improve our culture.

DOE ARRANGED POWER AGREEMENT

OVEC, AEP, and the DOE continue to work on the transfer of OVEC's retail service obligations to AEP Ohio, as approved by the Public Utilities Commission of Ohio on August 22, 2018. The completion of the milestones needed for transfer of service will take place over the next 4 to 6 years.

BOARD OF DIRECTORS AND OFFICERS CHANGES

On April 28, 2020, Mr. Dan Arbough, treasurer at LG&E and KU Energy, LLC, was elected a director of OVEC following the resignation of Mr. Paul W. Thompson. Mr. Thompson had served as an OVEC director since 2001. Mr. Lonnie Bellar, Chief Operating Officer at LG&E and KU Energy, LLC, was appointed as a member of the Human Resource Committee, replacing Mr. Thompson.

Sincerely,

A handwritten signature in black ink, appearing to read "R A Osborne", followed by a long horizontal flourish.

Robert A. Osborne
Vice President and Chief Operating Officer

June 8, 2020



November 2019

Board Update

OVEC-IKEC, 3932 U.S. Route 23, P.O. Box 468, Piketon, OH 45661
www.ovec.com | [REDACTED]

SAFETY AND HEALTH

2019 Year-to-Date Performance

Through September 2019, there have been four recordable injuries companywide (0.9 recordable incidence rate). OVEC is forecasting a year-end recordable rate of 0.68 with no additional recordable injuries, as compared to the 2018 recordable rate of 1.15. This is being driven by both Clifty Creek and System Division employees having been successful at maintaining zero harm for 2019 with no recordable injuries through September. Kyger has achieved 169 days without a recordable injury as of November 12, 2019 and continues to focus on education and training for routine movements and work readiness.

Proactive internal quarterly safety assessments continue at all OVEC locations to identify and close any gaps that may exist. The fourth quarter assessment will include a measure of adherence to newest and newly revised OSHA regulations. The development of the internal contractor assessment program for the Company will be finalized during the fourth quarter of 2019. Contractor assessments will begin in the first quarter of 2020 and determine adherence to the new contractor safety and health requirements.

In direct alignment with our 2019 Strategic Plan, specifically the tactical action of Contractor Oversight and Safety Standardization, System Office employees who perform contractor oversight duties were provided with training during the second and third quarters to aid them in their role. Similar training sessions are scheduled for Clifty Creek and Kyger Creek during the fourth quarter of 2019.

ENVIRONMENTAL UPDATE

2019 Performance to Date

Environmental stewardship remains a top priority of the OVEC corporate business strategy. Since the last Board Update in May 2019, OVEC was issued a Notice of Violation (NOV) by the Ohio Environmental Protection Agency (OEPA) following a site inspection of the facility's landfill water compliance program. The NOV did not include a proposed fine or penalty, and it is still being discussed with the agency as to its appropriateness since language exists in the current National Pollutant Discharge Elimination System (NPDES) permit providing OVEC authorization to perform the activity that is cited in the NOV. OVEC is committed to working closely with OEPA to resolve this issue. OVEC continues to operate in compliance with all applicable air, water, and solid waste permits, as well as the monitoring and reporting requirements of the Coal Combustion Residuals rule.

A commitment to environmental compliance will continue to be a point of focus for OVEC as lessons learned are applied across the organization to get better and provide value to the Sponsoring Companies.

Clean Power Plan (CPP)/Affordable Clean Energy Update

On July 8, 2019, U.S. EPA issued three final rules in the Federal Register. The first rule repealed the Clean Power Plan (CPP) because the EPA determined that the original issuance of that rule



exceeded EPA’s authority under the Clean Air Act (CAA). The second final rule issued was the Affordable Clean Energy (ACE) Rule. This rule establishes emission guidelines for states to develop plans to address greenhouse gas emissions from existing coal-fired power plants. The ACE rule is more limited in scope than the CPP. The third rule included details of how the EPA and the states are to implement the ACE rule as well as any future emissions guidelines issued under CAA Section 11(d). All three rules became effective September 6, 2019, and are subject to litigation.

OVEC will continue to monitor the legal challenges of each rule and anticipate working with our respective state regulatory agencies and utility trade groups on the logistics of ACE rule implementation and compliance.

Mercury Air Toxics Standards (MATS) Rule

Kyger Creek and Clifty Creek continue to maintain compliance with MATS requirements. Both stations are performing well in meeting the MATS emissions limits for particulate matter and SO₂. Neither plant has experienced an emissions limit exceedance in 2019. JBR chemistry management and mercury control, combined with operator skills assessment and training consistent with our Operational Excellence guidelines, continue to help our facility operators to maintain compliance with regulatory requirement.

SO₂ National Ambient Air Quality Standards (NAAQS) Compliance Status

For SO₂ NAAQS related to Kyger Creek Station, the three-station SO₂ monitoring network placed into service on January 1, 2017 remains in service, and the results continue to show compliance with the SO₂ NAAQS. Absent a material change in results from the data collected in 2017, 2018, and year-to-date 2019, OVEC expects that the data will confirm attainment with the NAAQS standard. Ohio EPA must analyze the data and submit a recommendation to U.S. EPA by May of 2020, and U.S. EPA must make a final determination on the attainment status of Gallia County by December of 2020.

Steam Electric Effluent Limitations Guidelines (ELGs)

On November 4, 2019, the U.S. EPA issued a draft update to the ELG rule, which revises the best available technology effluent limitations and pretreatment standards that apply to bottom ash transport water and FGD wastewater. OVEC is currently reviewing the draft rule and plans to present an update to the Board at the December 12, 2019 Board meeting.

Kyger Creek’s NPDES permit renewal application was submitted to the Ohio EPA on November 1, 2018. OVEC requested maximum flexibility on the ELG timeline in the new NPDES permit. Originally, OVEC expected the new permit to be issued in the spring of 2019; however, that timeline has been delayed due to agency resource constraints. Currently, OVEC anticipates receiving the permit renewal in the near-term.

Coal Combustion Residuals (CCR) Rule Compliance

OVEC continues to work through the regulatory requirements contained within the version of the CCR rule currently in effect. The Company has completed each of the applicable compliance activities within the rule. The most recent significant compliance obligations have included an Assessment of Corrective Measures for potential impacts to the groundwater near the Clifty Creek Station’s landfill runoff collection pond and the Kyger Creek Station’s boiler slag pond. Each pond has experienced a significant statistical increase (SSI) in one well for one parameter included in the list of parameters monitored as required by the CCR Rule. In conjunction with performing the Assessment of Corrective Measures, OVEC also installed additional wells, which are being referred to as “sentinel wells,” as part of the requirements contained in the CCR rule to characterize potential releases. Evaluation of these wells has concluded that groundwater is not being impacted beyond the property boundary at either site. In accordance with the CCR rule, on November 6 and 7, 2019, OVEC held public meetings, to discuss our proposed corrective actions with interested citizens.



CONFIDENTIAL INFORMATION REDACTED

OVEC will continue to work closely with our qualified professional engineer to complete the compliance requirements of the rule.

On November 4, 2019, the U.S. EPA issued a draft update to the CCR rule, in response to a D.C. Circuit Court ruling, related to surface impoundment (treatment pond) closure requirements for those wastewater treatment ponds at power plants that are also subject to the CCR rules. The draft rule outlines pond closure requirements and timelines for CCR ponds that are not considered lined under the proposed new standard. OVEC is currently reviewing the draft rule and plans to present an update to the Board at the December 12, 2019 Board meeting.

316(b) Compliance

The comprehensive reports required under Section 122.21 (r) of U.S. EPA’s 2014 revisions to the 316(b) regulations were finalized for the Kyger Creek Station in early October 2018 and submitted to the Ohio EPA with the NPDES permit renewal package in late 2018. Clifty Creek’s reports were completed in early 2019 and submitted to Indiana Department of Environmental Management (IDEM). IDEM has already determined that action on our 316(b) reports will take place during the next NPDES permit reissuance scheduled to take place in 2022. OVEC is still waiting for feedback from Ohio EPA regarding what actions they intend to take in the upcoming NPDES permit renewal.

CSAPR Update

OVEC has demonstrated sustained positive performance in operating within the tightened requirements of the new CSAPR through standard work procedures and disciplined action. The Company continued to operate in a manner that met or surpassed the NOx allocation targets established by each plant in 2019.

During the past few months the D.C. Circuit Court has also issued several Orders and Judgments regarding myriad lawsuits filed challenging the legality of the CSAPR Update Rule and the CSAPR Close-Out Rule. Any one of these legal actions could possibly result in additional NOx constraints either on our states or perhaps on our specific units. OVEC

will continue to monitor litigation and be prepared to check and adjust accordingly.

Gypsum Marketing

The Company continues to sell in excess of [REDACTED] percent of the gypsum produced at Kyger Creek and Clifty Creek into the wallboard market. Both plants are working with their respective gypsum buyers to negotiate long term contracts, as well as barge loading facilities, which is anticipated to increase the benefit realized by the plants from gypsum sales. Gypsum sales continue to help reduce future needs of potential landfill expansions.

GENERATION

Fuel

As of September 30, 2019, the approximate on-hand inventory was 43 days at Kyger Creek and 42 days at Clifty Creek. To help to mitigate any unplanned supplier and river condition driven inventory issues during the winter months, OVEC has been building inventory levels through the end of the year.

OVEC has recently finalized contract purchases for both facilities for 2020 and future years. Kyger Creek finalized two contracts for a total of 600,000 tons and has two continuing contracts for 1.2 million tons and 500,000 tons. Clifty Creek has finalized two contracts for a total 735,000 tons for 2020 along with 850,000 tons from an existing contract. Both Kyger Creek and Clifty Creek are approximately [REDACTED] percent committed for 2020 fuel supply. OVEC, with assistance from AEP Fuel Procurement, continues to obtain favorable market pricing to promote continued reduction in fuel costs.

Reliability

Through September 30, 2019, OVEC-IKEC had an equivalent forced outage rate (EFOR) of 6.26 percent. EFOR performance continues to show improved performance compared with the prior five-year average of 10.9 percent for 2014-2018. On a



CONFIDENTIAL INFORMATION REDACTED

unit basis, 7 of the 11 OVEC-IKEC units had an EFOR of less than 5 percent through September.

The primary drivers of lost generation through September were [REDACTED]

[REDACTED]

[REDACTED] Kyger Creek and Clifty Creek continue to improve planning and use of [REDACTED]

[REDACTED]

[REDACTED] which has been one of the drivers in our improved overall EFOR performance. This is highlighted in the Company's commercial availability performance through September of [REDACTED] percent.

JBR Reliability Group

The JBR Reliability Group continues as a company-wide effort as we work to reduce lost generation caused by JBR outages. The facilities continue to meet and share lessons learned. Other utilities have joined our pursuit of continuous improvement. Participation continues in a number of User Group forums in order to learn from others in the industry. OVEC has made improvements in inspection and PM programs with the increased operating time. Performance issues have been related to booster fans, along with corrosion of ducts and piping and failures of expansion joints. Kyger Creek has been utilizing sodium formate in both JBR12 and JBR35 and based on results of reducing scaling, plans on continued use going forward. Improvement efforts are paying off as the lost MWhrs attributed to JBRs through September 2019 for Kyger and Clifty have reduced by 70-80% compared to 2018, respectively.

Heat Rate Improvement Team

OVEC's Heat Rate Improvement Team continues its efforts in heat rate optimization to improve unit performance and reduce fuel costs. 2019 heat rate results have been impacted by an increase in low-load operation compared to prior years due to the soft energy market. The team will be adding optimization of heat rate at low load operation as a focus for 2020. Both facilities continue to concentrate efforts on operator knowledge and the impact each individual employee has on overall heat rate performance.

Operationally, the team has found opportunities for improvements with impacts associated with condenser performance, high-pressure heaters out of service, and feedwater contributed to higher than expected heat rate. In addition, other areas for improvements are air preheater efficiency and pulverizer performance, along with monitoring the use of auxiliaries including condensate usage, plant air, and soot blowers.

Cross-Functional Work

Development of a cross-functional workforce continues to be a strategic focus for OVEC in order to leverage staffing and improve productivity. We have continued to take a disciplined approach to identify job tasks that are a natural extension to reduce handoffs in order to complete the job task. Using Standard Work Procedures and on-site SMEs, we have trained and qualified employees on these new job tasks. By training to the procedure and then doing in-field observation of the task being performed, we are ensuring both safety and work quality. Both facilities have implemented cross-functional work and continue to progress in this area.

CONTINUOUS IMPROVEMENT/LEAN

The continuous improvement process (CIP) has become an integral part of the way we do business. The many accomplishments through the continuous improvement process are solely attributable to the hard work of OVEC-IKEC's engaged employees as they continue to generate and implement hundreds of ideas and process improvements that produce results at all levels of the organization. To date, over 90% of employees have been actively engaged in CIP. The 2019 focus continues to be in alignment with the Corporate Strategic Plan with disciplined efforts to further embrace CIP maturity through skill development, the establishment of key standard work processes, and the implementation of challenging metrics all while reinforcing the importance of employee engagement.

Employees continue to build skill through targeted training sessions on root cause analysis (RCA). RCA



CONFIDENTIAL INFORMATION REDACTED

is a methodical process for identifying “root causes” of problems or events and an approach for not only responding to them but learning from them. RCA helps identify gaps in process and aids in the recognition of need and the development or modification of standard work. Trained employees are currently utilizing this tool to not only respond to problems but also to proactively look at processes to identify positives as well.

Open Book Leadership (OBL) continues to be one of the most effective tools in our continuous improvement “tool box” by creating transparency around Company performance metrics and helping every employee at an individual level realize the impact they can have on the Company’s bottom line. The process created by OBL is a systematic way to communicate information from the bottom to the top and from the top to the bottom, while breaking down the key drivers of the Company’s “critical numbers,” which ultimately determine whether the Company is successful.

OBL “business challenges” that provide focus and incentive to improve a specific area continue at all locations. Business challenges are short (one to three months) and are geared towards recognition with celebrations held if the team is successful in improving the specific area.

The Kyger Creek plant operations department’s “Heat Rate Improvement” business challenge is a current example of OBL at work. During this challenge, employees from each shift will focus on identifying twenty-five significant heat rate losses. The purpose of this challenge is to improve the overall heat rate and lower the overall operating cost. Another great example is the Treasury and Accounting department’s “A Penny for Your Thoughts” business challenge. During this three-month challenge, employees will promote communication and collaboration between departments by focusing on multi-department kaizens.

Additional challenges continue at the department and crew levels at both the corporate office and the plants specific to employee engagement, development of standard work, and the development of standard process. These challenges are in alignment with the

Company’s strategic planning focus and are helping OVEC-IKEC capture critical knowledge and identify the best way to complete specific jobs. The common theme in all business challenges is that they not only provide immediate correction, but also drive sustainable behaviors and provide focus on key areas important to the success of our business.

2019 BALANCE OF THE BUDGETS

OVEC’s employees continue their efforts for better by prioritizing spend and focus on overall fiscal responsibility aided by continuous improvement and OBL. To date, OVEC has not utilized or required any of the [REDACTED] million Board-approved construction contingency funding. From a generation cost standpoint, the Company projects to be near to on target for projected year-end results. For general and administrative costs, OVEC has continued to reallocate any available funds to try to mitigate [REDACTED]

[REDACTED] From an overall financial perspective, OVEC continues to maintain an adequate level of liquidity to cover FES’s nonpayment of OVEC’s billed charges during the bankruptcy process.

FINANCIAL UPDATE

OVEC completed a successful refinance of \$150 million expiring or maturing tax exempt bonds in August 2019. OVEC, working with AEP Finance, along with KeyBank and PNC, the co-lead underwriters, was successful at achieving interest cost reduction of [REDACTED] million annually compared to prior rates. OVEC anticipates similar results with additional \$150 million refinancing in 1st Quarter 2020.

OVEC’s average power cost for energy supplied to the Sponsoring Companies, based upon the terms of the Inter-Company Power Agreement (ICPA), was [REDACTED] per MWh through September 2019. The average Sponsor use factor for the 3rd quarter was



CONFIDENTIAL INFORMATION REDACTED

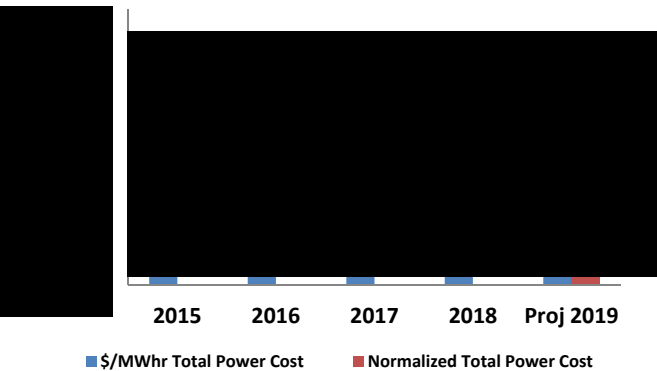
percent as compared to percent in 2018. The is primarily driven by

OVEC is currently projecting a year-end \$/MWhr of as compared with the budget target of. The difference is a direct result of

However, OVEC's "normalized" cost for year-end 2019 is projected at which excludes event driven cost impacts, such as

NERC COMPLIANCE

OVEC underwent NERC Compliance Audits for the Operations and Planning Standards in August and the Critical Infrastructure Protection Standards in October. Both Audits included observers from the FERC staff. Each Audit resulted in five Potential Non-Compliance findings, which OVEC considers relatively minor and have been or will be promptly mitigated. OVEC does not expect any additional NERC action until the next scheduled audit.



DOE ARRANGED POWER AGREEMENT

OVEC, AEP, and the DOE continue to work on the transfer of OVEC's retail service obligations to AEP Ohio, as approved by the Public Utilities Commission of Ohio on August 22, 2018. The completion of the milestones needed for transfer of service will take place over the next 5 to 7 years.

HUMAN RESOURCES

Culture Improvement Initiative

Employees completed a pulse survey in May 2019 to assess our effectiveness in the areas of communication and collaboration. The survey resulted in 30 and 28 percent improvement respectively in the two areas. Business units utilized the feedback to develop culture action plans specific to their unit to address identified gaps and to build upon demonstrated strengths. OVEC-IKEC leadership is utilizing the valuable feedback in its strategic planning process to further improve our culture.

Sincerely,

Robert A. Osborne
Vice President and Chief Operating Officer

November 12, 2019



November 2020

Board Update

OVEC-IKEC, 3932 U.S. Route 23, P.O. Box 468, Piketon, OH 45661
www.ovec.com | [REDACTED]

SAFETY AND HEALTH

2020 Year-to-Date Performance

Through October 31, 2020, there have been five recordable injuries that occurred at the Kyger Creek Plant. Four of the five recordable injuries were also classified as days away, restricted or transferred (DART) cases. Clifty Creek employees have completed 950 days, and Electrical Operations employees have completed 2,033 days without a recordable injury as of the end of October.

The recordable injury total for the year includes the three employees involved in the arc flash event in early August resulting in two DART cases and one fatality. Both facilities are focused on re-enforcing the pre-job process and verifying employees understanding of safety-related work practices and procedures. We are re-emphasizing employee understanding and application of safety policies, with specific focus on work practices and procedures for the clearance permit policy and procedure and the electrical arc flash policy and work activity tables, including a focus on minimum approach distances, and proper personal protective equipment and insulated tool use. OVEC-IKEC employees continue to send thoughts and prayers to the employees and families that were affected by this tragic event.

In alignment with OVEC-IKEC's 2020 Strategic Plan to Integrate Strategic Partners into the OVEC-IKEC's Safety Culture, an assessment program of on-site strategic partners was started in the fourth quarter of 2020. These assessments are designed to validate and verify that the Strategic Partner's safety policies and practices align with OVEC-IKEC's expectations. Assessments of two Clifty Creek Plant strategic partners were performed in October, and Kyger Creek

Plant's strategic partner assessments are planned for December.

COVID-19 UPDATE

OVEC-IKEC continues to be committed to the health and safety of our employees and our families in the communities in which we live and work during this COVID-19 pandemic. As most in the United States and Midwest, we have seen a recent trend of increased cases at all locations. As of November 15, 2020, we have had 25 total cases; 1 at the System Office, 5 at the Kyger Creek Plant, and 19 at the Clifty Creek Plant (with 13 cases occurring in April).

Due to this recent trend, all facilities have reviewed and updated sequestering plans, to be prepared if needed. The teams are actively monitoring the percentage of operations employees exposed or infected, as it is a triggering point for our determination of sequestering. We continue to remain disciplined and focused on preventative actions as discussed in our prior updates, such as mask requirements, temperature checks, self-evaluations, area cleaning and other measures to promote social distancing.

ENVIRONMENTAL UPDATE

2020 Performance to Date

Environmental stewardship remains a top priority of the OVEC corporate business strategy. Since the Board Update in June 2020, OVEC has not received any new Notices of Violation (NOV) from either of our state regulatory agencies; however, an NOV



issued by the Ohio Environmental Protection Agency (OEPA) following a site inspection of the facility's landfill water compliance program, outlined in the November 2019 update, remains unresolved. The NOV issued in 2019 did not include a proposed fine or penalty, and OVEC continues to work closely with OEPA to resolve this issue. OVEC continues to operate in compliance with all applicable air, water, and solid waste permits, as well as the monitoring and reporting requirements of the Coal Combustion Residuals (CCR) rule.

Separately, the Company received an information request from U.S. EPA regarding Clean Water Act compliance activities at the Kyger Creek Station. A response package was developed and submitted to U.S. EPA on September 19, 2020. No follow up has been received from U.S. EPA following the Company's response submittal.

A commitment to environmental compliance will continue to be a point of focus for OVEC as lessons learned are applied across the organization to get better and provide value to the Sponsoring Companies.

Affordable Clean Energy (ACE) Rule

OVEC has gathered data and submitted questionnaires to our respective state regulatory agencies as they both initiate activities to prepare State Implementation Plans (SIPs) to comply with the Affordable Clean Energy (ACE) Rule that U.S. EPA promulgated on July 8, 2019. Both states have separately initiated rulemaking actions.

The U.S. EPA's repeal of the Clean Power Plan (CPP) concurrent with the promulgation of the ACE rule remain subject to litigation.

OVEC will continue to monitor the progression of each rule, as well as the associated litigation activities surrounding the CPP.

Mercury Air Toxics Standards (MATS) Rule

Kyger Creek and Clifty Creek continue to maintain compliance with MATS requirements. Both stations are currently performing well in meeting the MATS emissions limits for particulate matter and SO₂.

Neither plant experienced an emissions limit exceedance in 2020. JBR chemistry management and mercury control, combined with operator skills assessment and training consistent with our Operational Excellence guidelines, continue to help our facility operators maintain compliance with regulatory requirements. Lessons learned from longer periods of low load operations earlier in the year have helped improve the knowledge and understanding of JBR chemistry management activities that vary based on load conditions.

SO₂ National Ambient Air Quality Standards (NAAQS) Compliance Status

The Kyger Creek Station's three-station SO₂ monitoring network, which was placed into service on January 1, 2017, remains in service, and the results continue to show compliance with the SO₂ NAAQS. Ohio EPA has analyzed the first three years of ambient data from the local SO₂ monitoring network and filed a recommendation with U.S. EPA to classify the area in Gallia County surrounding the Kyger Creek Station and its neighbor, the Gavin Station, as "attainment/non-classifiable" with the 2010 SO₂ NAAQS. U.S. EPA agreed with this recommendation and proposed a rulemaking in the Federal Register on September 2, 2020, to reclassify the area to "attainment/non-classifiable." We expect U.S. EPA to issue a final determination on the attainment status of Gallia County by the end of December 2020.

Steam Electric Effluent Limitations Guidelines (ELGs)

On October 13, 2020, the U.S. EPA issued the final Steam Electric Reconsideration Rule, which revises the best available technology effluent limitations and pretreatment standards that apply to bottom ash transport water and FGD wastewater. OVEC is reviewing this rule, and it appears our current plans to meet ELG compliance activities are in alignment with the final rule requirements.

Coal Combustion Residuals (CCR) Rule Compliance

OVEC continues to work through the regulatory requirements contained within the version of the CCR rule currently in effect. The Company has completed



each of the applicable compliance activities within the rule. The Company continues to monitor for potential impacts to the groundwater near the Clifty Creek Station's landfill runoff collection pond and the Kyger Creek Station's boiler slag pond. As detailed in previous updates, each pond has experienced a significant statistical increase (SSI) in one well for one parameter included in the list of parameters monitored as required by the CCR Rule. Continued evaluation of the groundwater monitoring system continues to conclude that groundwater is not being impacted beyond the property boundary at either site. In accordance with the CCR Rule, the Company is continuing to assess the sites to determine the most appropriate corrective measure for each surface impoundment. OVEC will continue to work closely with our qualified professional engineer (QPE) to complete the compliance requirements of the rule.

On August 28, 2020, U.S. EPA published the final Part A Rule in the Federal Register, which became effective on September 28, 2020. Part A of the CCR Rule requires that all impoundments that do not meet the liner requirements of the CCR Rule must cease receipt of CCR and non-CCR waste streams and initiate closure by April 30, 2021, unless approval to operate longer is requested by the Company and is secured from U.S. EPA. Based on evaluations completed by OVEC-IKEC's QPE early in the compliance activities, the determination was made that the surface impoundments at Kyger Creek and Clifty Creek do not meet the liner design requirements of the CCR Rule.

As a result, the Company completed an engineering evaluation to determine what is technically feasible from a schedule standpoint with regard to closing the CCR surface impoundments to develop a technical justification document, which was submitted to U.S. EPA on October 15, 2020, for each plant, requesting an alternative compliance date on which closure must be initiated. The Company received preliminary feedback from U.S. EPA in late October and received additional feedback in November. The Company is currently updating the justification to provide additional clarity and information requested. Revised demonstrations are in the process of being internally reviewed and will be filed with U.S. EPA prior to the compliance deadline of November 30, 2020.

The Company is engaged with Burns & McDonald on development and management of required facility modifications and closures projects. Front-End Engineering and Development (FEED) is being finalized for all the projects. The procurement of major system components of the Kyger Dry Fly Ash Conversion project is currently underway. These efforts are in support of the schedule that was included in the application to the U.S. EPA as previously described and in alignment with the Board approval of capital investment in May 2020.

316(b) Compliance

There are no new updates to report on 316(b) compliance related activities. Both state regulatory agencies have received the comprehensive reports OVEC was required to submit under Section 122.21 (r) of U.S. EPA's 2014 revisions to the 316(b) regulations, and the Company waiting on agency feedback before determining next steps. IDEM has already determined that action on Clifty Creek's 316(b) reports will take place during the next NPDES permit reissuance, scheduled to take place in 2022. OVEC is anticipating feedback from Ohio EPA regarding what actions they intend to take when a draft NPDES renewal permit is received.

CSAPR Update

OVEC has demonstrated sustained positive performance in operating within the tightened requirements of the new CSAPR through standard work procedures and disciplined action. The Company operated in a manner that met or surpassed the NO_x allocation targets established by each plant during the 2020 ozone season. Kyger Creek successfully used Urea Direct Injection during the 2020 ozone season, which has provided more reliable NO_x removal and increased system reliability, when compared to the prior Ammonia On-Demand system. Clifty Creek is currently evaluating a similar system conversion in 2021.

In mid-May, the U.S. EPA signaled that they have initiated a new rulemaking effort to respond to a 2019 D.C. Circuit Court decision remanding portions of the CSAPR Update Rule. This effort resulted in the publication of a draft rule on October 30, 2020, that



CONFIDENTIAL INFORMATION REDACTED

proposes, among other things, a reduction of the state ozone seasons NOx budgets. We are currently reviewing this final draft rule and will be preparing for compliance with the associated revisions that are expected to be finalized and become effective beginning with the 2021 ozone season.

CCR Marketing

The Company continues to sell nearly all of the gypsum produced at Kyger Creek and Clifty Creek into the wallboard market. Both plants are working with their respective gypsum buyers to negotiate long-term contracts, as well as barge loading facilities, which, it is anticipated, will increase the benefit realized by the plants from gypsum sales. Gypsum sales continue to help reduce future needs of potential landfill expansions.

The Company has been able to increase sales of fly ash from Clifty Creek to [REDACTED] percent. These fly ash sales are being driven by the hard work and continued effort of plant personnel, as well as the efforts of the plant’s strategic partner.

The Company continues to successfully market boiler slag from Kyger Creek with the support of its strategic partner.

[REDACTED]

GENERATION

Fuel

As of October 31, 2020, the approximate on-hand inventory was [REDACTED] days at Kyger Creek and [REDACTED] days at Clifty Creek. The weak market demand has resulted in [REDACTED]

[REDACTED] AEP Fuel Procurement has assisted OVEC in working with our coal suppliers to [REDACTED] [REDACTED] In addition, the bankruptcy of a Clifty Creek coal supplier and ultimate termination of the agreement provided [REDACTED] [REDACTED]

Kyger Creek and Clifty Creek are approximately 80 percent committed for 2021 fuel supply and 50 percent committed for 2022 fuel supply. OVEC, with assistance from AEP Fuel Procurement, continues to work to obtain favorable market pricing to optimize fuel costs.

Reliability

Through October 31, 2020, OVEC-IKEC had an equivalent forced outage rate (EFOR) of 5.1 percent. On a unit basis, 5 of the 11 OVEC-IKEC units had an EFOR of less than 5 percent through October.

The primary drivers of lost generation through October were associated with boiler tube leaks, air heater pluggage and electrical systems. Kyger Creek and Clifty Creek continue to improve planning and use of opportunity outages, especially during weak market periods, to mitigate contributors of forced outages. Much of the work performed, including cleaning, on the units during late fall and summer outages was performed by in-house resources. Using down market periods for maintenance outage opportunities to our advantage is highlighted in the Company’s commercial availability performance through October of [REDACTED] percent.

JBR Reliability Group

The JBR Reliability Group continues its company-wide effort as we work to reduce lost generation caused by JBR outages. The group continues to meet approximately every 6 months and share lessons learned. Other utilities have joined our pursuit of continuous improvement. Participation of other User Group forums has been curtailed due to the COVID virus. OVEC has made improvements in inspection, PM programs and chemical additions for improved environmental compliance. The majority of performance issues through October 2020 have been related to corrosion of ducts and piping, failures of expansion joints, and JBR vessel level probe pluggage. Kyger Creek continues to utilize sodium formate to reduce sparger tube pluggage in both JBR12 and JBR35 with good results. Clifty Creek has been testing additives to reduce mercury emissions.



Heat Rate Improvement Team

OVEC's Heat Rate Improvement Team continues its efforts in heat rate optimization to improve unit performance and reduce fuel costs. Heat rate results through October 2020 continued to be impacted by an increase in low-load operation compared to prior years due to the weak energy market. The team has added optimization of heat rate at low-load operation as a focus for 2020. Both facilities continue to concentrate efforts on operator knowledge and the impact each individual employee has on overall heat rate performance. Operationally, the team continues to focus on opportunities for improvements associated with condenser performance, high-pressure heaters out of service, and feedwater contributing to higher than expected heat rate. Other areas for improvements include air preheater efficiency, pulverizer performance, along with use of auxiliaries (condensate usage, plant air, and soot blowers).

Optimizing Our Workforce

Cross-functional continues to be a strategic focus for OVEC in order to leverage staffing and improve productivity. Both facilities have implemented cross-functional work and have several examples during the recent spring and fall 2020 outages where using cross-functional teams has saved cost and outage time. Improved field observations and coaching is a vital part of this effort.

OVEC-IKEC continues to focus on core vs non-core as we utilize attrition to optimize our workforce. We have engaged strategic partners for our pulverizer maintenance/rebuilds, major pump rebuilds, catalyst replacement, misc. support in the coal yard and warehouse, and some operations duties, as well as other functions, such as chemical technician on-site support. We track our non-outage contractor usage as part of our OBL process and have worked to communicate with our team the reasons why this is the right direction in order to control our overall costs and be more competitive in the market.

CONTINUOUS IMPROVEMENT/LEAN

The continuous improvement process (CIP) remains an integral part of the way we do business. Through the consistent efforts of OVEC-IKEC's engaged employees, hundreds of ideas and process improvements continue to produce results at all levels of the organization. Our goal continues to be active engagement of every employee in the CIP process, and we have met that goal this year with 100 percent participation. The 2020 focus continues to be in alignment with the Corporate Strategic Plan with disciplined efforts to further embrace CIP maturity through skill development, the establishment and revision of key standard work processes, and the implementation of challenging metrics while reinforcing the importance of employee engagement.

Open Book Leadership (OBL) continues to be one of the most effective tools in our continuous improvement "tool box" by creating transparency around Company performance metrics and helping every employee at an individual level realize the impact they can have on the Company's bottom line. The process created by OBL is a systematic way to communicate information from the bottom to the top and from the top to the bottom, while breaking down the key drivers of the Company's "critical numbers," which ultimately determine whether the Company is successful.

OBL "business challenges" that provide focus and incentive to improve a specific area continue at all locations. Business challenges are short (one to three months) and are geared towards recognition with celebrations held if the team is successful in improving the specific area.

The Clifty Creek plant's "Environmental Standard Work" business challenge is a current example of OBL at work. During this challenge, employees developed new or revised existing standard work procedures to support overall plant standard work goals in alignment with our Corporate Strategic Plan. The purpose of this challenge is to participate in activities that positively impact our Strategic Plan and business objectives. Another great example is the Kyger Creek plant's "Compressed Air Leaks" business challenge. During this 3-month challenge,



CONFIDENTIAL INFORMATION REDACTED

employees identified and repaired 200 leaks from compressed air sources to promote and reinforce our Operational Excellence Mission Objective.

Additional challenges continue at the department and crew levels at both the corporate office and the plants specific to employee engagement, development of standard work, revised standard work, and the development of standard process. These challenges are in alignment with the Company’s strategic planning focus and are helping OVEC-IKEC capture critical knowledge and identify the best way to complete specific jobs. The common theme in all business challenges is that they not only provide immediate correction, but also drive sustainable behaviors and provide focus on key areas important to the success of our business.

FES BANKRUPTCY

On May 18, 2020, OVEC executed a settlement agreement (in the form of a joint stipulation) with Energy Harbor (formerly FirstEnergy Solutions) with respect to all claims in bankruptcy and related litigation. The settlement provides for Energy Harbor to assume its share (4.85%) of the Inter-Company Power Agreement (ICPA) as of June 1, 2020, and be obligated to perform its obligations under the ICPA going forward. The settlement agreement was approved by the Bankruptcy Court on June 15, 2020, and Energy Harbor has assumed this interest in the ICPA, with effect as of June 1, 2020.

NERC COMPLIANCE

OVEC underwent NERC Compliance Audits for the Operations and Planning Standards in August and the Critical Infrastructure Protection Standards in October 2019, which resulted in ten Potential Non-Compliance findings, five from each audit. OVEC considers these findings to be relatively minor and has already mitigated a majority of the findings and is on schedule to address the remainder. Some of the findings have

been granted Find, Fix, Track, Report (FFT) status.

FINANCIAL PERFORMANCE

COVID-19’s impact on an already depressed energy market has caused historically low energy prices and weak demand, which as has resulted in [REDACTED] OVEC’s total power cost through September was approximately [REDACTED] per MWhr as compared to [REDACTED] per MWhr through September 2019. This [REDACTED] is exclusively due to [REDACTED]

Normalizing the 2020 total power costs through September, by substituting the 2019 energy market as a basis for utilization of generation, results in a total power cost of approximately [REDACTED] per MWhr, which is [REDACTED] to September 2019 YTD actual results.

OVEC has taken advantage of the weak market period to utilize maintenance outages and shifted a portion of planned outage work. The plants reduced fall outage scope to optimize operating cost and available generation during this unprecedented time.

Based on year-to-date results, OVEC’s 2020 year-end total power cost is projected at approximately [REDACTED] per MWhr with 8.75 million MWhrs of generation. OVEC is projecting annual operating costs, on a total dollar basis, to be [REDACTED]

OVEC completed a successful refinance of \$150 million expiring or maturing tax-exempt bonds in July 2020. OVEC, working with AEP Finance, along with KeyBank and PNC, the co-lead underwriters, was successful at achieving interest cost reduction of [REDACTED] million annually compared to prior rates. [REDACTED]

[REDACTED] OVEC is planning to refinance an additional \$100 million tax-exempt bonds in the third quarter of 2021 with similar terms to continue to reduce future debt liability.



HUMAN RESOURCES

Culture Improvement Initiative

Employees completed a newly designed culture survey in August 2020. This is the fifth year OVEC-IKEC has sought feedback from employees to assess its culture. The survey consisted of 43 questions and solicited feedback within several areas, including continuous improvement. Twenty-eight (28) of the questions had an available external benchmark. OVEC-IKEC scored above the benchmark in 20 of the questions. Strengths include the areas of safety, continuous improvement, and engagement. Opportunities for further improvement are in the areas of communication, collaboration, and accountability. OVEC-IKEC leadership is in the process of utilizing the valuable feedback to further develop and refine its strategic plan. Each individual business unit will use their results to update their culture action plans to further improve our culture.

DOE ARRANGED POWER AGREEMENT

OVEC, AEP, and the DOE continue to work on the transfer of OVEC's retail service obligations to AEP Ohio, as approved by the Public Utilities Commission of Ohio on August 22, 2018. The completion of the milestones needed for transfer of service will take place over the next 4 to 6 years.

BOARD OF DIRECTORS AND OFFICERS CHANGES

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.

Sincerely,

Justin J. Cooper
Vice President, Chief Financial Officer
and Chief Operating Officer

November 23, 2020



June 2021

Board Update

OVEC-IKEC, 3932 U.S. Route 23, P.O. Box 468, Piketon, OH 45661
www.ovec.com | [REDACTED]

SAFETY AND HEALTH

2021 Year-to-Date Performance

Clifty Creek Plant celebrated another safety milestone at the end of 2020 by completing a second consecutive calendar year without a recordable injury. Also, Electrical Operations employees celebrated 6 years without a recordable injury at the beginning of April.

For 2021, OVEC has had 2 recordable injuries through May. Only one injury resulted in a DART case, with both events occurring at the Clifty Creek Plant. The cases, included a pinched finger and a slip/trip incident, highlight a need to increase our energy and focus on safety. In May, OVEC rolled out a new Human Performance Improvement (HPI) Refocus program at all facilities. The HPI Refocus program consists of 4 modules, which include scenario examples, and will be reviewed one per month over the next four months.

The Strategic Partner assessment program continues into 2021 in alignment with OVEC-IKEC's 2021 Strategic Plan to Integrate Strategic Partners into the OVEC-IKEC's Safety Culture. Eight strategic partners are scheduled for assessments during the year. These assessments are designed to validate and verify that the strategic partner's safety policies and practices align with OVEC-IKEC's expectations. Assessments began in December of 2020 with two of Kyger Creek Plant's strategic partners.

COVID-19 UPDATE

OVEC-IKEC continues to be committed to the health and safety of our employees and our families in the communities in which we live and work during this

COVID-19 pandemic. As we begin the transition out of the Pandemic, OVEC continues to take a cautious and disciplined approach and will continue to align with CDC guidance. As of May, OVEC has had 89 total cases. Similar to most areas in the country, OVEC has seen a dramatic decline in cases since vaccinations have become available with only one COVID case since February.

ENVIRONMENTAL UPDATE

2021 Performance to Date

Environmental stewardship remains a top priority of the OVEC corporate business strategy. Since the 2020 December Board meeting, OVEC has received one non-monetary Notice of Violation (NOV) from the Indiana Department of Environmental Management (IDEM) associated with Continuous Emissions Monitoring System (CEMS) monitor availability. OVEC is currently reviewing this issuance to potentially challenge as the violation is due to the Indiana state program conflicting with the federal EPA program due to a change by the U.S. EPA. OVEC complied with the new federal requirement and the actual monitor performance and reliability has not changed. OVEC is working with legal counsel, as well as other utilities, with the goal of developing a remedy to avoid the risk of IDEM issuing future NOV's due to the change in federal reporting obligations.

OVEC continues to operate in substantial compliance with all applicable air, water, and solid waste permit limits, as well as the monitoring and reporting requirements of the Coal Combustion Residuals (CCR) rule.



A commitment to environmental compliance will continue to be a point of focus for OVEC as lessons learned are applied across the organization to get better and provide value to the Sponsoring Companies. As part of that commitment, and in an effort to engage all employees in supporting the OVEC and IKEC environmental compliance strategy and strategic plan, the Company has initiated a company-wide environmental good catch program. To date, the new program has had a high degree of participation and has provided value.

Affordable Clean Energy (ACE) Rule

On January 19, 2021, the D.C. Circuit Court vacated the ACE rule and remanded to the U.S. EPA further proceedings consistent with the Court's decision. Following the Court's action, the U.S. EPA issued guidance clarifying that states no longer have an obligation under either the repealed Clean Power Plan (CPP) or the vacated ACE rule to submit plans on how they intend to regulate greenhouse gas emissions under Section 111(d) of the Clean Air Act.

OVEC will continue to monitor the progression of the associated litigation activities surrounding greenhouse gas emissions from the utility sector as well as any future regulatory or legislative greenhouse gas initiatives.

Mercury Air Toxics Standards (MATS) Rule

Kyger Creek and Clifty Creek continue to maintain compliance with MATS requirements. Both stations are currently performing well in meeting the MATS emissions limits for mercury, particulate matter and SO₂. Neither plant has experienced an emissions limit exceedance in 2021. JBR chemistry management and mercury control, combined with operator skills assessment and training consistent with our Operational Excellence guidelines, continue to help facility operators maintain compliance with regulatory requirements.

SO₂ National Ambient Air Quality Standards (NAAQS) Compliance Status

The Kyger Creek Station's three-station SO₂ monitoring network remains in service and the results

continue to show compliance with the SO₂ NAAQS. Ohio EPA has analyzed the first three years of ambient data from the local SO₂ monitoring network and filed a recommendation with U.S. EPA to classify the area in Gallia County surrounding the Kyger Creek Station and its neighbor, the Gavin Station, as "attainment/non-classifiable" with the 2010 SO₂ NAAQS. The Company is still waiting on U.S. EPA to issue a final determination on the attainment status of Gallia County.

Steam Electric Effluent Limitations Guidelines (ELGs)

On October 13, 2020, the U.S. EPA issued the final Steam Electric Reconsideration Rule, which revises the best available technology effluent limitations and pretreatment standards that apply to bottom ash transport water and FGD wastewater. The Company has reviewed the rule, and has determined that the compliance strategy developed for Kyger Creek and Clifty Creek are in alignment with the final rule requirements. Separately, the Company is working with both IDEM and OEPA to revise the ELG applicability dates for Clifty Creek and Kyger Creek to align each plant's ELG applicability date with the respective construction schedules. Currently, the Company expects each agency to approve of the revised compliance dates.

Coal Combustion Residuals (CCR) Rule Compliance

OVEC continues to work through the regulatory requirements contained within the version of the CCR rule currently in effect. The Company has completed each of the applicable compliance activities within the rule. The Company continues to monitor for potential impacts to the groundwater near the Clifty Creek Station's landfill runoff collection pond and the Kyger Creek Station's boiler slag pond. Continued evaluation of the groundwater monitoring system continues to conclude that groundwater is not being impacted beyond the property boundary at either site. In accordance with the CCR Rule, the Company is continuing to assess the sites to determine the most appropriate corrective measure for each surface impoundment. OVEC will continue to work closely with our qualified professional engineer (QPE) to complete the compliance requirements of the rule.

**CONFIDENTIAL INFORMATION REDACTED**

Effective September 28, 2020, Part A of the CCR Rule required that all impoundments that do not meet the liner requirements of the CCR Rule must cease receipt of CCR and non-CCR waste streams and initiate closure by April 30, 2021, unless approval to operate longer is requested by the Company and is secured from U.S. EPA.

The Company has not yet received feedback from U.S. EPA on its submitted CCR demonstrations, which is similar to all utilities, due to the change in administration. The Company has continued to execute the compliance strategy it proposed to U.S. EPA while it awaits feedback from the agency.

Burns & McDonnell continues to assist OVEC in the development of engineering and design for the various facility modifications associated with CCR and ELG compliance projects that the Board approved in May 2020. The Kyger Creek dry fly ash conversion project design has been finalized, contracts to perform the work have been awarded, and permits have been secured to support the initiation of construction beginning in June 2021. Separately, design and permitting continue in support of the work scope associated with the Kyger Creek and Clifty Creek CCR surface impoundment closures as required by the CCR Rule and to support the modifications necessary for compliance with the bottom ash transport modification portion of the ELG Rule. Construction activities associated with the bottom ash pond retrofits and closures to meet concurrent obligations under both the ELG and CCR rules are expected to begin later in 2021. Presently, the projects are on schedule and on budget, and have had no recordable safety events.

316(b) Compliance

There are no new updates to report on 316(b) compliance related activities. Both state regulatory agencies have received the comprehensive reports OVEC was required to submit under Section 122.21 (r) of U.S. EPA's 2014 revisions to the 316(b) regulations, and the Company waiting on agency feedback before determining next steps. IDEM has already determined that action on Clifty Creek's 316(b) reports will take place during the next NPDES permit reissuance, scheduled to take place in 2022. OVEC is anticipating feedback from Ohio EPA

regarding what actions they intend to take when Kyger Creek's draft NPDES renewal permit is received.

CSAPR Update

OVEC has demonstrated sustained positive performance in operating within the tightened requirements of the CSAPR Update Rule that went into effect in 2017 through standard work procedures and disciplined action. The Company operated in a manner that met or surpassed the NO_x allocation targets established by each plant during the 2020 ozone season. Kyger Creek successfully used Urea Direct Injection during the 2020 ozone season, which has provided more reliable NO_x removal and increased system reliability, when compared to the prior Ammonia On-Demand system. Clifty Creek is currently evaluating a similar system conversion in 2021.

A new CSAPR Update was enacted in March 2021 and resulted in a reduction of the state ozone seasons NO_x budgets and the creation of a new NO_x ozone season trading program for 12 states, including Ohio and Indiana. The Company is reviewing this final rule and will be preparing for compliance with the associated revisions that are expected to go into effect during the 2021 ozone season.

By-Product Marketing

The Company continues to sell [REDACTED] of the gypsum produced at Kyger Creek and Clifty Creek into the wallboard market, with a [REDACTED] percentage to the cement and agriculture markets. Also, the Company continues to see sales of fly ash from Clifty Creek of [REDACTED] of total plant production being sold. These fly ash sales, which have seasonal fluctuations, are being driven by the hard work and continued effort of plant personnel, as well as the efforts of the plant's strategic partner. Kyger Creek has continued to successfully market the majority of the plant's boiler slag from with the support of its strategic partner. The marketing of boiler slag will be temporarily ceased beginning in May of 2021 to support the CCR and ELG project modifications being made at the Kyger Creek boiler slag pond. The Company anticipates that marketing of boiler slag will resume in late 2022 after completion of the facility



CONFIDENTIAL INFORMATION REDACTED

modifications. Clifty Creek boiler slag is not being marketed currently since the material is being beneficially used for onsite construction activities.

chemistry. JBR performance issues through March 2021 have been primarily related to failure of gas cooling nozzles and corrosion of ducts and piping.

GENERATION

Fuel

As of April 30, 2021, the approximate on-hand inventory was █ days at Kyger Creek and █ days at Clifty Creek. Higher market demand in the first quarter of 2021 has resulted in █

Kyger Creek and Clifty Creek are approximately █ percent committed for 2021 fuel supply and █ percent committed for 2022 fuel supply. AEP Fuel Procurement is assisting OVEC and will be requesting proposals in the third quarter to █

Reliability

Through April 30, 2021, OVEC-IKEC had an equivalent forced outage rate (EFOR) of 5.5 percent. On a unit basis, 7 of the 11 OVEC-IKEC units had an EFOR of less than 5 percent through March.

The primary drivers of lost generation through April 2021 were associated with JBRs, boiler tube leaks, boiler slagging/fouling, ash removal and condenser leaks. Kyger Creek and Clifty Creek continue to improve planning and use of opportunity outages, especially during weak market periods, to mitigate contributors of forced outages. OVEC continues to use down market periods for maintenance outage opportunities to our advantage. The Company's commercial availability performance through April was █ percent.

JBR Reliability Group

The JBR Reliability Group meetings are a regular part of pre- and post-outage planning. The group continues to meet approximately every 6 months and share lessons learned. OVEC has made progress in the last year by controlling mercury through the JBR

Heat Rate Improvement Team

OVEC's Heat Rate Improvement Team continues its efforts in heat rate optimization to improve unit performance and reduce fuel costs. The team has set a Heat Rate Target (HRT) that adjusts based on actual loading, by doing this the team is able to monitor and focus on actual changes due to performance of equipment. Going forward the team will be tracking the difference in actual performance versus the adjusted HRT. Over time the change in this difference will indicate if we are making real sustainable improvement. The team also continues to focus on optimization of heat rate at low-load operation through improved operator knowledge. Additionally, the team continues to focus on condenser performance, high-pressure heaters out of service, feedwater, air preheater efficiency, pulverizer performance, along with use of auxiliaries (condensate usage, plant air, and soot blowers).

Optimizing Our Workforce

Cross-functional continues to be a strategic focus for OVEC in order to leverage staffing and improve productivity. Both facilities continue using cross-functional teams to troubleshoot and solve problems, along with safely complete work tasks while reducing costs. Improved field observations and coaching is a vital part of this effort.

OVEC-IKEC continues to focus on core vs non-core as we utilize attrition to optimize our workforce. We have engaged strategic partners for our pulverizer maintenance/rebuilds, major pump rebuilds, catalyst replacement, misc. support in the coal yard and warehouse, and some operations duties, as well as other functions, such as chemical technician on-site support. We track our non-outage contractor usage as part of our OBL process and have worked to communicate with our team the reasons why this is the right direction in order to control our overall costs and be more competitive in the market.



CONFIDENTIAL INFORMATION REDACTED

CONTINUOUS IMPROVEMENT/LEAN

The continuous improvement process (CIP) remains an integral part of the way we do business. Through the consistent efforts of OVEC-IKEC’s engaged employees, hundreds of ideas and process improvements continue to produce results at all levels of the organization. Our goal continues to be active engagement of every employee in the CIP process by targeting 100 percent participation. The 2021 focus continues to be in alignment with the Corporate Strategic Plan with disciplined efforts to further embrace CIP maturity through skill development, the establishment and revision of key standard work processes, and the implementation of challenging metrics while reinforcing the importance of employee engagement.

Open Book Leadership (OBL) continues to be one of the most effective tools in our continuous improvement “tool box” by creating transparency around Company performance metrics and helping every employee at an individual level realize the impact they can have on the Company’s bottom line. The process created by OBL is a systematic way to communicate information from the bottom to the top and from the top to the bottom, while breaking down the key drivers of the Company’s “critical numbers,” which ultimately determine whether the Company is successful.

OBL “business challenges” that provide focus and incentive to improve a specific area continue at all locations. Business challenges are short (one to three months) and are geared towards recognition with celebrations held if the team is successful in improving the specific area.

The Clifty Creek plant’s “Environmental Good Catch” business challenge is a current example of OBL at work. During this challenge, employees identify an environmental issue or improvement, remediate the issue (i.e. label a container, clean up an oil leak, etc.) or get other departments involved if needed. The purpose of this challenge is to teach employees to recognize and remediate a condition that could lead to a reportable environmental event. Another great example is the Kyger Creek plant’s “Find and Fix Slip/Trips” business challenge. During this 6-week

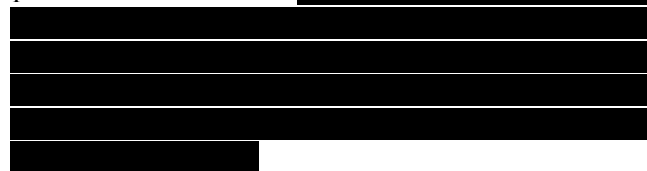
challenge, employees identified 370 areas of concern and mitigated 354 areas immediately. Condition reports were written for the remaining 16 areas and they were corrected with assistance from a strategic partner. This promotes and reinforces our commitment to the Zero Harm Mission Objective and shows the willingness of our employees to act on and correct possible hazardous conditions.

Additional challenges continue at the department and crew levels at both the corporate office and the plants specific to safety tools, employee engagement, development of standard work, and the development of standard process. These challenges are in alignment with the Company’s strategic planning focus and are helping OVEC-IKEC capture critical knowledge and identify the best way to complete specific jobs. The common theme in all business challenges is that they not only provide immediate correction, but also drive sustainable behaviors and provide focus on key areas important to the success of our business.



NERC COMPLIANCE

OVEC underwent NERC Compliance Audits for the period from 2016-2018. [REDACTED]



FINANCIAL PERFORMANCE

2021 has seen [REDACTED] compared to the forecast. OVEC’s total power cost through March was approximately [REDACTED] per MWhr as compared to [REDACTED] per MWhr through March 2020. This reduction is mainly due to the impact of additional generation as Utilization has increased from [REDACTED] (YTD March 2020) to [REDACTED] (YTD March 2021). Along with improved generation, OVEC’s operating or fixed costs



CONFIDENTIAL INFORMATION REDACTED

are currently [REDACTED] target through the first quarter.

Based on year-to-date results, OVEC's 2021 year-end total power cost is projected at approximately [REDACTED] per MWhr with 10 million MWhrs of generation, which is [REDACTED] per MWhr [REDACTED] from the original budget of [REDACTED] per MWhr. OVEC is projecting annual operating costs, on a total dollar basis, to be [REDACTED]

OVEC is planning to refinance \$100 million of tax-exempt bonds and potentially a \$100 million of private placement notes in the third quarter of 2021. The refinancing is a part of the financing plan [REDACTED]

[REDACTED] OVEC will be working with AEP Finance, along with KeyBank and PNC to complete the refinancing. OVEC will be seeking Board approval for the refinancing at the mid-year July Board meeting.

of Ohio on August 22, 2018. The completion of the milestones needed for transfer of service will take place over the next 4 to 6 years.

BOARD OF DIRECTORS AND OFFICERS CHANGES

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.

Sincerely,

Justin J. Cooper
Vice President, Chief Financial Officer
and Chief Operating Officer

HUMAN RESOURCES

Culture Improvement Initiative

2021 is the sixth year OVEC-IKEC will engage its employees to provide feedback to assess its culture. The recently developed survey design will enable the Company to assess the team's progress in its continuous improvement initiative, benchmark results, and generate data for future trend analysis. The survey will commence mid-summer. OVEC-IKEC leadership will utilize the valuable feedback in its strategic planning process and further improve its culture.

DOE ARRANGED POWER AGREEMENT

OVEC, AEP, and the DOE continue to work on the transfer of OVEC's retail service obligations to AEP Ohio, as approved by the Public Utilities Commission

Fendig, John

From: Sebourn, Michael
Sent: Tuesday, July 31, 2018 1:38 PM
To: Sinclair, David; Arbough, Dan; Wilson, Stuart; Freibert, Charlie; Fendig, John; Lovekamp, Rick
Subject: FW: OVEC-IKEC BOD 8/1/18 Meeting Documents
Attachments: BOD Agenda 8-1-18.pdf; BOD Presentation 8-1-18.pdf

Follow Up Flag: Follow up
Flag Status: Flagged

FYI – see the attached materials for OVEC’s Board update meeting on Wed. 8/1 at 10 am.

There’s not much content on the agenda that is relevant to this group, but if anyone would like to join the call, we will call from Paul’s office.

Mike

Michael Sebourn

Manager, Generation Planning | LG&E and KU
220 W. Main St., Louisville, KY 40202

O: [REDACTED] | M: [REDACTED] | F: [REDACTED]
[REDACTED]

From: [REDACTED] On Behalf Of [REDACTED]
Sent: Tuesday, July 31, 2018 9:56 AM
To: [REDACTED] Bellar, Lonnie
[REDACTED]
[REDACTED] Thompson, Paul [REDACTED]
[REDACTED]
Cc: [REDACTED]
[REDACTED] Sebourn, Michael
[REDACTED] Cunningham, Scott
[REDACTED]
Subject: OVEC-IKEC BOD 8/1/18 Meeting Documents

EXTERNAL email. STOP and THINK before responding, clicking on links, or opening attachments.

Ladies and Gentlemen:

Attached for your information are the August 1, 2018, Board meeting documents.

Justin J. Cooper MAcc, CPA
CFO, Secretary and Treasurer

Ohio Valley Electric Corporation
Desk: [REDACTED]
Cell [REDACTED]
Fax: [REDACTED]
Email: [REDACTED]

Fendig, John

From: [REDACTED] on behalf of [REDACTED]
Sent: Thursday, November 15, 2018 1:12 PM
To: [REDACTED]
Bellar, Lonnie; [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED] Thompson, Paul; [REDACTED]
[REDACTED]
Cc: [REDACTED]
[REDACTED] Cunningham, Scott; [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED] Sebourn, Michael; [REDACTED]
[REDACTED]
Subject: OVEC-IKEC Board Update
Attachments: Board Update 11-18.pdf
Follow Up Flag: Follow up
Flag Status: Completed

EXTERNAL email. STOP and THINK before responding, clicking on links, or opening attachments.

Ladies and Gentlemen:

Attached for your information is the November 2018 OVEC-IKEC Board Update.

Rob Osborne

Fendig, John

From: [REDACTED]
Sent: Monday, December 03, 2018 3:59 PM
To: [REDACTED]
Bellar, Lonnie; [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED] Thompson, Paul; [REDACTED]
[REDACTED]
Cc: [REDACTED]
[REDACTED] Cunningham, Scott; [REDACTED]
[REDACTED]
[REDACTED] Sebourn, Michael; [REDACTED]
[REDACTED]
[REDACTED] Mooney, Lisa;
[REDACTED]
[REDACTED]
[REDACTED] Quinn, Julie; [REDACTED]
[REDACTED]
Subject: OVEC-IKEC Boards of Directors' Meeting
Attachments: BOD Agenda 12-5-18.pdf; BOD Package 12-5-18.pdf

EXTERNAL email. STOP and THINK before responding, clicking on links, or opening attachments.

Ladies and Gentlemen

This is to confirm the OVEC-IKEC annual Boards of Directors' meeting to be held on Wednesday, December 5, 2018 at 2 p.m. in the Sub-company Board Room on the 30th floor of AEP's 1 Riverside Plaza building in Columbus, Ohio.

Final documents for the Board meeting are attached and copies will be available at the meeting.

Dial in information:
[REDACTED]
Participant Passcode: [REDACTED]

Justin J. Cooper MAcc, CPA
CFO, Secretary and Treasurer

Ohio Valley Electric Corporation
Desk: [REDACTED]
Cell [REDACTED]
Fax: [REDACTED]
Email: [REDACTED]

Fendig, John

From: [REDACTED]
Sent: Monday, December 03, 2018 3:59 PM
To: [REDACTED]
Bellar, Lonnie; [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED] Thompson, Paul; [REDACTED]
[REDACTED]
Cc: [REDACTED]
[REDACTED] Cunningham, Scott; [REDACTED]
[REDACTED]
[REDACTED] Sebourn, Michael; [REDACTED]
[REDACTED]
[REDACTED] Mooney, Lisa;
[REDACTED]
[REDACTED]
[REDACTED] Quinn, Julie; [REDACTED]
[REDACTED]
Subject: OVEC-IKEC Boards of Directors' Meeting
Attachments: BOD Agenda 12-5-18.pdf; BOD Package 12-5-18.pdf

EXTERNAL email. STOP and THINK before responding, clicking on links, or opening attachments.

Ladies and Gentlemen

This is to confirm the OVEC-IKEC annual Boards of Directors' meeting to be held on Wednesday, December 5, 2018 at 2 p.m. in the Sub-company Board Room on the 30th floor of AEP's 1 Riverside Plaza building in Columbus, Ohio.

Final documents for the Board meeting are attached and copies will be available at the meeting.

Dial in information:
[REDACTED]
Participant Passcode: [REDACTED]

Justin J. Cooper MAcc, CPA
CFO, Secretary and Treasurer

Ohio Valley Electric Corporation
Desk: [REDACTED]
Cell [REDACTED]
Fax: [REDACTED]
Email: [REDACTED]

Fendig, John

From: [REDACTED]
Sent: Tuesday, December 04, 2018 1:13 PM
To: [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED] Thompson, Paul; [REDACTED]
[REDACTED]
Cc: [REDACTED]
[REDACTED] Cunningham, Scott; [REDACTED]
[REDACTED]
[REDACTED] Sebourn, Michael; [REDACTED]
[REDACTED]
[REDACTED] Mooney, Lisa;
[REDACTED]
[REDACTED]
[REDACTED] Quinn, Julie; [REDACTED]
[REDACTED]
Subject: OVEC-IKEC Board Presentation
Attachments: 12-5-18 BOD Presentation - updated.pdf

EXTERNAL email. STOP and THINK before responding, clicking on links, or opening attachments.

Ladies and Gentlemen:

Attached is an updated version of the OVEC-IKEC Board Presentation to correct a minor wording error in the document. Copies of the presentation will be available at the meeting.

Justin J. Cooper MAcc, CPA
CFO, Secretary and Treasurer

Ohio Valley Electric Corporation
Desk: [REDACTED]
Cell: [REDACTED]
Fax: [REDACTED]
Email: [REDACTED]

Fendig, John

From: [REDACTED]
Sent: Wednesday, December 05, 2018 12:08 PM
To: [REDACTED]
Bellar, Lonnie; [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED] Thompson, Paul; [REDACTED]
[REDACTED]
Cc: [REDACTED]
[REDACTED] Cunningham, Scott; [REDACTED]
[REDACTED]
[REDACTED] Sebourn, Michael; [REDACTED]
[REDACTED]
[REDACTED] Mooney, Lisa;
[REDACTED]
[REDACTED]
[REDACTED] Quinn, Julie; [REDACTED]
[REDACTED]
Subject: OVEC-IKEC Board Presentation - revised agenda and additional resolution
Attachments: 12-5-18 BOD Presentation - updated.pdf; BOD Agenda 12-5-18 revised.pdf; OVEC-IKEC Resolution for Election of Director and Officer.pdf

EXTERNAL email. STOP and THINK before responding, clicking on links, or opening attachments.

Ladies and Gentlemen:

Attached is a revised agenda and additional resolution which will be discussed during the Election of Directors and Officers section of the meeting. Copies of these documents will be available at the meeting.

Justin J. Cooper MAcc, CPA
CFO, Secretary and Treasurer

Ohio Valley Electric Corporation
Desk: [REDACTED]
Cell [REDACTED]
Fax: [REDACTED]
Email: [REDACTED]

Ladies and Gentlemen:

Attached is an updated version of the OVEC-IKEC Board Presentation to correct a minor wording error in the document. ~~Arbough~~
Copies of the presentation will be available at the meeting.

Justin J. Cooper MAcc, CPA
CFO, Secretary and Treasurer

Ohio Valley Electric Corporation
Desk: [REDACTED]
Cell [REDACTED]
Fax: [REDACTED]
Email: [REDACTED]

Fendig, John

From: [REDACTED]
Sent: Thursday, December 10, 2020 6:58 PM
To: [REDACTED]; Arbough, Dan; [REDACTED]; [REDACTED]; [REDACTED]; Bellar, Lonnie; [REDACTED]; [REDACTED]; Cunningham, Scott; [REDACTED]
Cc: [REDACTED]; [REDACTED]; Sebourn, [REDACTED]
Subject: OVEC-IKEC Boards of Directors Meeting - Agenda and Presentation
Attachments: 12-15-20 OVEC-IKEC Boards Meeting Presentation vFinal .pdf; BOD Agenda 12-15-20.pdf

EXTERNAL email. STOP and THINK before responding, clicking on links, or opening attachments.

Ladies and Gentlemen,

Attached are the agenda and presentation for the OVEC-IKEC Boards of Directors' meeting on 12/15/2020. The meeting will be held by conference call and the invitation has been updated with the call information and attached documents. Please note on the agenda, the annual election of officers and Board committees is typically a required administrative item we process through mail, but in a process improvement effort we have included it in the administrative section of the agenda. All other agenda items are similar to past years. Please reach out if you have any questions. Thank you.

Justin J. Cooper MAcc, CPA
Vice President - COO & CFO

Ohio Valley Electric Corporation
Desk: [REDACTED]
Cell: [REDACTED]
Fax: [REDACTED]
Email: [REDACTED]

Fendig, John

From: [REDACTED]
Sent: Tuesday, April 30, 2019 4:26 PM
To: [REDACTED] Bellar,
Lonnie; [REDACTED]
[REDACTED]
[REDACTED]
Cc: [REDACTED] Thompson, Paul; [REDACTED]
[REDACTED]
[REDACTED] Sebourn, Michael; [REDACTED]
[REDACTED]
Subject: OVEC and IKEC Board Minutes
Attachments: OVEC Minutes - Special Meeting 12-5-18.pdf; IKEC Minutes - Special Meeting 12-5-18.pdf; OVEC Shareholders Meeting Minutes 4-15-19.pdf; IKEC Shareholders Meeting Minutes 4-15-19.pdf

EXTERNAL email. STOP and THINK before responding, clicking on links, or opening attachments.

Ladies and Gentlemen:

For your review and files, please find the attached OVEC and IKEC Minutes of Special Meeting dated December 5, 2018, and OVEC and IKEC Shareholders Meeting Minutes dated April 15, 2019.

Justin J. Cooper MAcc, CPA
CFO, Secretary and Treasurer

Ohio Valley Electric Corporation
Desk: [REDACTED]
Cell [REDACTED]
Fax: [REDACTED]
Email: [REDACTED]

Fendig, John

From: [REDACTED]
Sent: Tuesday, April 30, 2019 4:26 PM
To: [REDACTED] Bellar,
Lonnie; [REDACTED]
[REDACTED]
[REDACTED]
Cc: [REDACTED] Thompson, Paul; [REDACTED]
[REDACTED]
[REDACTED] Sebourn, Michael; [REDACTED]
[REDACTED]
Subject: OVEC and IKEC Board Minutes
Attachments: OVEC Minutes - Special Meeting 12-5-18.pdf; IKEC Minutes - Special Meeting 12-5-18.pdf; OVEC Shareholders Meeting Minutes 4-15-19.pdf; IKEC Shareholders Meeting Minutes 4-15-19.pdf

EXTERNAL email. STOP and THINK before responding, clicking on links, or opening attachments.

Ladies and Gentlemen:

For your review and files, please find the attached OVEC and IKEC Minutes of Special Meeting dated December 5, 2018, and OVEC and IKEC Shareholders Meeting Minutes dated April 15, 2019.

Justin J. Cooper MAcc, CPA
CFO, Secretary and Treasurer

Ohio Valley Electric Corporation
Desk: [REDACTED]
Cell [REDACTED]
Fax: [REDACTED]
Email: [REDACTED]

Fendig, John

From: [REDACTED] on behalf of [REDACTED]
Sent: Monday, May 20, 2019 10:02 AM
To: [REDACTED] Bellar,
Lonnie; [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED] Thompson, Paul; [REDACTED]
[REDACTED]
Cc: [REDACTED]
[REDACTED] Cunningham, Scott;
[REDACTED]
[REDACTED] Sebourn, Michael;
[REDACTED]
Subject: OVEC-IKEC Board Update
Attachments: Board Update 5-19.pdf

EXTERNAL email. STOP and THINK before responding, clicking on links, or opening attachments.

Ladies and Gentlemen:

Attached for your information is the May 2019 OVEC-IKEC Board Update.

Fendig, John

From: [REDACTED]
Sent: Wednesday, November 13, 2019 5:31 PM
To: [REDACTED] Bellar,
Lonnie; [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED] Thompson, Paul
Cc: [REDACTED]
[REDACTED] Cunningham, Scott; [REDACTED]
[REDACTED] Sebourn, Michael;
[REDACTED]
Subject: OVEC-IKEC Board Update
Attachments: Board Update 11-19.pdf

EXTERNAL email. STOP and THINK before responding, clicking on links, or opening attachments.

Ladies and Gentlemen:

Attached for your information is the November 2019 OVEC-IKEC Board Update.

Justin J. Cooper MAcc, CPA
CFO, Secretary and Treasurer

Ohio Valley Electric Corporation
Desk: [REDACTED]
Cell [REDACTED]
Fax: [REDACTED]
Email: [REDACTED]

Fendig, John

From: [REDACTED]
Sent: Monday, December 09, 2019 5:05 PM
To: [REDACTED] Bellar,
Lonnie; [REDACTED]
[REDACTED] Thompson, Paul; [REDACTED]
[REDACTED]
Cc: J. Michael Brown (OVEC); Brian Chisling [REDACTED] Julie Sloat; Jay E
Jadwin; [REDACTED]
Sebourn, Michael; Cassandra K. Martin (OVEC); [REDACTED]
[REDACTED] Bitter, Robert (US - Cincinnati); Palmer, Chad D (US - Columbus);
Cunningham, Scott; [REDACTED]
Subject: OVEC-IKEC Board of Directors Meetings - Documents
Attachments: 12-12-19 OVEC-IKEC BOD meeting agenda.pdf; OVEC Minutes - Special Meeting
12-5-18.pdf; IKEC Minutes - Special Meeting 12-5-18.pdf; 12-12-19 OVEC-IKEC BOD
meeting presentation.pdf

EXTERNAL email. STOP and THINK before responding, clicking on links, or opening attachments.

All,

Attached are the documents for the December 12th OVEC-IKEC Board of Directors Meetings. Hard copies will be provided at the meeting. Please contact me if you have any questions. Thanks.

Justin J. Cooper MAcc, CPA
CFO, Secretary and Treasurer

Ohio Valley Electric Corporation
Desk: [REDACTED]
Cell [REDACTED]
Fax: [REDACTED]
Email: [REDACTED]

Fendig, John

From: [REDACTED]
Sent: Wednesday, March 11, 2020 12:49 PM
To: [REDACTED] Bellar,
Lonnie; [REDACTED]
[REDACTED]
[REDACTED]
Cc: Arbough, Dan
J. Michael Brown (OVEC); Brian Chisling [REDACTED] Julie Sloat; Jay E
Jadwin; Kassandra K. Martin (OVEC); [REDACTED]
Subject: OVEC-IKEC Minutes
Attachments: OVEC Minutes - Special Meeting 12-12-19.pdf; IKEC Minutes - Special Meeting
12-12-19.pdf

EXTERNAL email. STOP and THINK before responding, clicking on links, or opening attachments.

Ladies and Gentlemen:

For your review and files, please find the attached set of OVEC and IKEC Minutes dated December 12, 2019.

Justin J. Cooper MAcc, CPA
CFO, Secretary and Treasurer

Ohio Valley Electric Corporation
Desk: [REDACTED]
Cell: [REDACTED]
Fax: [REDACTED]
Email: [REDACTED]

Fendig, John

Subject: OVEC-IKEC Environmental Capital Projects
Location: Conference Call

Start: Mon 4/27/2020 3:00 PM
End: Mon 4/27/2020 4:00 PM
Show Time As: Tentative

Recurrence: (none)

Organizer: Justin J. Cooper/OVEC/US

EXTERNAL email. STOP and THINK before responding, clicking on links, or opening attachments.

Description

Ladies and Gentlemen,

Attached is the agenda and related director election documents for the meeting, the presentation will be provided by 4/23. As originally scheduled on 4/8, the purpose of the meeting is to present information and associated board resolutions for approval of funding for required CCR Environmental Capital projects and provide the proposed plan for required pond closures/modifications. A review meeting will be held with the Environmental Sub Committee prior to the Board meeting on 4/22.

(See attached file: BOD Agenda 4-27-20 & Director Election Docs.pdf)

Conf call info:

Audinet: [REDACTED]

Direct: [REDACTED]

Toll Free: [REDACTED]

Conf ID [REDACTED]

Fendig, John

Subject: OVEC-IKEC Environmental Capital Projects - Informational
Location: Conference Call

Start: Mon 4/27/2020 3:00 PM
End: Mon 4/27/2020 4:00 PM
Show Time As: Tentative

Recurrence: (none)

Organizer: Justin J. Cooper/OVEC/US

EXTERNAL email. STOP and THINK before responding, clicking on links, or opening attachments.

Description

Ladies and Gentlemen,

Based on feedback from Board members on preparedness and ability to have more time to review prior to approval, OVEC will be converting the 4/27 meeting to an informational meeting with respect to Environmental Compliance Project Recommendations and will schedule an additional Board meeting for formal vote on the proposed resolution within the next two weeks. Attached is the updated agenda for 4/27, the presentation remains unchanged. Please let me know if you have any questions. Thanks.

(See attached file: UPDATED - BOD Agenda 4-27-20.pdf)

(See attached file: BOD Env Presentation April BOD meeting - Final.pdf)

Conf call info:

Audinet: [REDACTED]

Direct: [REDACTED]

Toll Free: [REDACTED]

Conf ID [REDACTED]

Fendig, John

Subject: OVEC-IKEC Environmental Capital Projects
Location: Conference Call

Start: Mon 4/27/2020 3:00 PM
End: Mon 4/27/2020 4:00 PM
Show Time As: Tentative

Recurrence: (none)

Organizer: Justin J. Cooper/OVEC/US

EXTERNAL email. STOP and THINK before responding, clicking on links, or opening attachments.

Description

(See attached file: BOD Env Presentation April BOD meeting - Final.pdf) Ladies and Gentlemen,

Attached is the agenda and related director election documents for the meeting, the presentation will be provided by 4/23. As originally scheduled on 4/8, the purpose of the meeting is to present information and associated board resolutions for approval of funding for required CCR Environmental Capital projects and provide the proposed plan for required pond closures/modifications. A review meeting will be held with the Environmental Sub Committee prior to the Board meeting on 4/22.

(See attached file: BOD Agenda 4-27-20 & Director Election Docs.pdf)

Conf call info:

Audinet: [REDACTED]

Direct: [REDACTED]

Toll Free: [REDACTED]

Conf ID [REDACTED]

Fendig, John

From: [REDACTED]
Sent: Thursday, April 23, 2020 1:48 PM
To: [REDACTED]
[REDACTED] Bellar,
Lonnie; [REDACTED]
[REDACTED]
[REDACTED]
Cc: [REDACTED] Arbough, Dan; [REDACTED]
[REDACTED]
[REDACTED] Sebourn, Michael
Subject: OVEC-IKEC Environmental Capital Projects
Attachments: BOD Agenda 4-27-20 & Director Election Docs.pdf; BOD Env Presentation April BOD meeting - Final.pdf
Follow Up Flag: Follow up
Flag Status: Flagged

EXTERNAL email. STOP and THINK before responding, clicking on links, or opening attachments.

Ladies and Gentlemen,

Attached is the agenda and related director election documents and presentation for the meeting. As originally scheduled on 4/8, the purpose of the meeting is to present information and associated board resolution for approval of funding for required CCR Environmental Capital projects and provide the proposed plan for required pond closures/modifications. A review meeting was held with the Environmental Sub Committee 4/22.

Conf call info:

Audinet: [REDACTED]

Direct: [REDACTED]

Toll Free: [REDACTED]

Conf ID [REDACTED]

Fendig, John

From: Tammy R Wallace [REDACTED] on behalf of Robert A Osborne
[REDACTED]
Sent: Thursday, April 23, 2020 10:14 AM
To: Justin J. Cooper (OVEC); [REDACTED] Christian T Beam; Dave - I&M Finance
Lucas; [REDACTED]
[REDACTED] J. Michael Brown (OVEC); Bellar, Lonnie; [REDACTED] Marc E
Lewis; Paul Chodak III; [REDACTED] Robert A Osborne; Raja Sundararajan;
[REDACTED] Toby L Thomas;
[REDACTED] Lana L Hillebrand
Cc: [REDACTED] Clifford Carnes (OVEC); Arbough, Dan; [REDACTED]
Gabriel S. Coriell (OVEC); G. Annette Hope (OVEC); Jay E Jadwin; James M Brown;
[REDACTED] Julie Sloat; Cassandra K. Martin (OVEC); Sebourn, Michael
Subject: RESPONSE REQUESTED: OVEC-IKEC Environmental Capital Projects

EXTERNAL email. STOP and THINK before responding, clicking on links, or opening attachments.

Please confirm your participation in the OVEC IKEC Environmental Capital Projects meeting with the OVEC and IKEC Boards at 3:00 p.m. EDT on Monday, April 27.

Please see the copy of the meeting invite below for details.

TAMMY R WALLACE | GEN BUS SVCS / OVEC-IKEC [REDACTED] | D [REDACTED]
1 RIVERSIDE PLAZA, COLUMBUS, OH 43215

-----Original Appointment-----

From: Justin J. Cooper (OVEC) [REDACTED]
Sent: Friday, March 20, 2020 8:52 AM
To: Justin J. Cooper (OVEC); [REDACTED] Christian T Beam; Dave - I&M Finance Lucas;
[REDACTED] J.
Michael Brown (OVEC); [REDACTED] Marc E Lewis; Paul Chodak III;
[REDACTED] Robert A Osborne; Raja Sundararajan; [REDACTED] Toby
L Thomas; [REDACTED]
Cc: [REDACTED] Clifford Carnes (OVEC); [REDACTED] Gabriel S. Coriell
(OVEC); G. Annette Hope (OVEC); Jay E Jadwin; James M Brown; [REDACTED] Julie Sloat; Cassandra K.
Martin (OVEC); [REDACTED]
Subject: [EXTERNAL] OVEC-IKEC Environmental Capital Projects
When: Monday, April 27, 2020 3:00 PM-4:00 PM (UTC-05:00) Eastern Time (US & Canada).
Where: Conference Call

Ladies and Gentlemen,

Attached is the agenda and related director election documents for the meeting, the presentation will be provided by 4/23. As originally scheduled on 4/8, the purpose of the meeting is to present information and associated board resolutions for approval of funding for required CCR Environmental Capital projects and provide the proposed plan for required pond closures/modifications. A review meeting will be held with the Environmental Sub Committee prior to the Board meeting on 4/22.

Conf call info:

Audinet: [REDACTED]

Direct: [REDACTED]

Toll Free: [REDACTED]

Conf ID [REDACTED]

Fendig, John

Subject: OVEC-IKEC BOD Meeting - Vote on Environmental Projects
Location: Conference Call

Start: Tue 5/5/2020 1:00 PM
End: Tue 5/5/2020 1:30 PM
Show Time As: Tentative

Recurrence: (none)

Organizer: Justin J. Cooper/OVEC/US

EXTERNAL email. STOP and THINK before responding, clicking on links, or opening attachments.

Description

Ladies and Gentlemen,

The purpose of this meeting is for the OVEC-IKEC Boards to vote on the resolution presented at the 4/27/2020 OVEC-IKEC Board meeting related to the proposed CCR compliance plan. Attached is the agenda including the resolution.

(See attached file: BOD Agenda 5-5-20.pdf)

Conf call info:

Audinet: [REDACTED]

Direct: [REDACTED]

Toll Free: [REDACTED]

Conf ID [REDACTED]

Fendig, John

From: [REDACTED]
Sent: Tuesday, June 09, 2020 4:25 PM
To: [REDACTED] Bellar,
Lonnie; [REDACTED]
[REDACTED]
[REDACTED] Arbough, Dan
Cc: [REDACTED]
[REDACTED] Cunningham, Scott; [REDACTED]
[REDACTED] Sebourn, Michael; [REDACTED]
[REDACTED]
Subject: OVEC-IKEC Board Update
Attachments: Board Update June 2020.pdf

EXTERNAL email. STOP and THINK before responding, clicking on links, or opening attachments.

Ladies and Gentlemen:

Attached for your information is the June 2020 OVEC-IKEC Board Update.

Justin J. Cooper MAcc, CPA
CFO, Secretary and Treasurer

Ohio Valley Electric Corporation
Desk: [REDACTED]
Cell [REDACTED]
Fax: [REDACTED]
Email: [REDACTED]

Fendig, John

From: [REDACTED]
Sent: Sunday, August 02, 2020 8:51 PM
To: [REDACTED] Bellar,
Lonnie; [REDACTED]
[REDACTED]
[REDACTED]
Cc: Arbough, Dan
J. Michael Brown (OVEC); Brian Chisling [REDACTED] Julie Sloat; Jay E
Jadwin; Cassandra K. Martin (OVEC); [REDACTED]
Subject: OVEC-IKEC Minutes
Attachments: IKEC Minutes - Special Meeting 4-27-20.pdf; IKEC Minutes - Special Meeting 5-5-20.pdf;
IKEC Minutes - Special Meeting 7-8-20.pdf; OVEC Minutes - Special Meeting
4-27-20.pdf; OVEC Minutes - Special Meeting 5-5-20.pdf; OVEC Minutes - Special
Meeting 7-8-20.pdf

EXTERNAL email. STOP and THINK before responding, clicking on links, or opening attachments.

Ladies and Gentlemen:

For your review and files, please find the attached set of OVEC and IKEC Minutes dated April 27, 2020; May 5, 2020; and July 8, 2020.

Justin J. Cooper MAcc, CPA
CFO, Secretary and Treasurer

Ohio Valley Electric Corporation
Desk: [REDACTED]
Cell [REDACTED]
Fax: [REDACTED]
Email: [REDACTED]

Fendig, John

Subject: OVEC-IKEC Mid-Year Update
Location: Conference Call 1-719-325-2630, 886457

Start: Wed 8/5/2020 11:00 AM
End: Wed 8/5/2020 12:00 PM
Show Time As: Tentative

Recurrence: (none)

Organizer: Justin J. Cooper/OVEC/US

EXTERNAL email. STOP and THINK before responding, clicking on links, or opening attachments.

Description

OVEC-IKEC Mid-Year Update for the Boards of Directors. Attached is the Agenda and Presentation. Call information has been updated as well.

Attached is an updated presentation to correct a date on page 3.

(See attached file: BOD Agenda 8-5-20.pdf)(See attached file: BOD Presentation 8-5-20 updated.pdf)

Call info:

██████████
code ██████████

Fendig, John

From: [REDACTED]
Sent: Wednesday, November 25, 2020 10:00 AM
To: [REDACTED] Arbough, Dan; [REDACTED]
[REDACTED] Bellar,
Lonnie; [REDACTED]
[REDACTED]
Cc: [REDACTED]
[REDACTED] Sebourn,
Michael; [REDACTED]
[REDACTED]
Subject: Cunningham, Scott
OVEC-IKEC Board Update
Attachments: OVEC-IKEC Board Update November 2020.pdf

EXTERNAL email. STOP and THINK before responding, clicking on links, or opening attachments.

Ladies and Gentlemen:

Attached for your information is the November 2020 OVEC-IKEC Board Update.

Justin J. Cooper MAcc, CPA
Vice President - COO & CFO

Ohio Valley Electric Corporation
Desk: [REDACTED]
Cell [REDACTED]
Fax: [REDACTED]
Email: [REDACTED]

Fendig, John

From: [REDACTED]
Sent: Monday, December 14, 2020 4:00 PM
To: [REDACTED]; Arbough, Dan; [REDACTED]
[REDACTED]
[REDACTED]; Bellar, Lonnie; [REDACTED]
[REDACTED]
[REDACTED]; Cunningham, Scott; [REDACTED]
Cc: [REDACTED]
[REDACTED]; Sebourn,
Michael; [REDACTED]
Subject: OVEC-IKEC Boards of Directors Meeting - Updated presentation
Attachments: 12-15-20 OVEC-IKEC Boards Meeting Presentation vFinal 12-14-20.pdf
Follow Up Flag: Follow up
Flag Status: Flagged

EXTERNAL email. STOP and THINK before responding, clicking on links, or opening attachments.

Ladies and Gentlemen,

Attached is an updated presentation for the OVEC-IKEC Boards of Directors meeting tomorrow. The update was only to page 38, to correct a transposition error of the numbers presented. I apologize for the inconvenience. The updated presentation has been attached to the meeting invite as well. Thanks.

Justin J. Cooper MAcc, CPA
Vice President - COO & CFO

Ohio Valley Electric Corporation
Desk: [REDACTED]
Cell [REDACTED]
Fax: [REDACTED]
Email: [REDACTED]

Fendig, John

From: [REDACTED]
Sent: Thursday, February 25, 2021 4:26 PM
To: [REDACTED]; Bellar, Lonnie;
[REDACTED];
[REDACTED]; Arbough, Dan;
[REDACTED]
Cc: J. Michael Brown (OVEC); Brian Chisling [REDACTED] Jay E Jadwin;
[REDACTED]
Subject: OVEC-IKEC Minutes
Attachments: OVEC Minutes - Special Meeting 12-15-2020.pdf; IKEC Minutes - Special Meeting 12-15-2020.pdf

EXTERNAL email. STOP and THINK before responding, clicking on links, or opening attachments.

Ladies and Gentlemen:

For your review and files, please find the attached set of OVEC and IKEC Minutes dated December 15, 2020.

Thanks,
Kay

Kassandra K. Martin
Secretary & Treasurer
Ohio Valley Electric Corporation
Indiana-Kentucky Electric Corporation
3932 US Route 23
Piketon, OH 45661
Phone: [REDACTED]
Cell: [REDACTED]
Fax: [REDACTED]
Email: [REDACTED]



Fendig, John

From: [REDACTED]
Sent: Wednesday, May 26, 2021 4:07 PM
To: [REDACTED]; Bellar, Lonnie;
[REDACTED]
[REDACTED] Arbough, Dan;
[REDACTED]
Cc: [REDACTED] Chisling, Brian
Subject: OVEC and IKEC Annual Shareholder Minutes
Attachments: OVEC Shareholders Meeting Minutes 4-19-2021.pdf; IKEC Shareholders Meeting Minutes 4-19-2021.pdf

EXTERNAL email. STOP and THINK before responding, clicking on links, or opening attachments.

Ladies and Gentlemen,

Attached please find copies of the minutes of the OVEC and IKEC Annual Shareholder's meeting held on April 19, 2021.

Thanks,
Kay

Kassandra K. Martin
Secretary & Treasurer
Ohio Valley Electric Corporation
Indiana-Kentucky Electric Corporation
3932 US Route 23
Piketon, OH 45661
Phone: [REDACTED]
Cell: [REDACTED]
Fax: [REDACTED]
Email: [REDACTED]



Fendig, John

From: Tammy R Wallace [REDACTED] on behalf of Justin J Cooper
[REDACTED]
Sent: Wednesday, June 16, 2021 1:28 PM
To: Christian T Beam; Arbough, Dan; Dave - I&M Finance Lucas; David Pinter; Eric Baker
[REDACTED] Gustavo Garavaglia; John Verderame; Julie Sloat; Bellar, Lonnie;
Marc E Lewis; Pat O'Loughlin; Paul Chodak III; Raja Sundararajan; Steve Nelson
[REDACTED] Toby L Thomas; [REDACTED] Wayne Games
Cc: Brian Chisling [REDACTED] Clifford Carnes (OVEC); Dave Crusey - DPL
[REDACTED] G. Annette Hope (OVEC); Gabriel S. Coriell (OVEC); Ginger
MacKnight (OVEC); J. Michael Brown (OVEC); Jay E Jadwin; John Swez; Justin J. Cooper
(OVEC); Cassandra K. Martin (OVEC); Matthew W. Smith (OVEC); Sebourn, Michael;
Cunningham, Scott; Tammy R Wallace; William A. Hart (OVEC)
Subject: OVEC-IKEC Board Update
Attachments: Board Update June 2021.pdf
Follow Up Flag: Follow up
Flag Status: Completed

EXTERNAL email. STOP and THINK before responding, clicking on links, or opening attachments.

Ladies and Gentlemen:

The June 2021 Board Update is attached for your information.

Justin J. Cooper MAcc,CPA
Vice President – COO & CFO

Ohio Valley Electric Corporation
Desk: [REDACTED]
Cell: [REDACTED]
Email: [REDACTED]

Fendig, John

From: Tammy R Wallace [REDACTED] on behalf of Justin J Cooper
[REDACTED]
Sent: Wednesday, June 16, 2021 1:28 PM
To: Christian T Beam; Arbough, Dan; Dave - I&M Finance Lucas; David Pinter; Eric Baker
[REDACTED] Gustavo Garavaglia; John Verderame; Julie Sloat; Bellar, Lonnie;
Marc E Lewis; Pat O'Loughlin; Paul Chodak III; Raja Sundararajan; Steve Nelson
[REDACTED] Toby L Thomas; [REDACTED] Wayne Games
Cc: Brian Chisling [REDACTED] Clifford Carnes (OVEC); Dave Crusey - DPL
[REDACTED] G. Annette Hope (OVEC); Gabriel S. Coriell (OVEC); Ginger
MacKnight (OVEC); J. Michael Brown (OVEC); Jay E Jadwin; John Swez; Justin J. Cooper
(OVEC); Cassandra K. Martin (OVEC); Matthew W. Smith (OVEC); Sebourn, Michael;
Cunningham, Scott; Tammy R Wallace; William A. Hart (OVEC)
Subject: OVEC-IKEC Board Update
Attachments: Board Update June 2021.pdf

EXTERNAL email. STOP and THINK before responding, clicking on links, or opening attachments.

Ladies and Gentlemen:

The June 2021 Board Update is attached for your information.

Justin J. Cooper MAcc,CPA
Vice President – COO & CFO

Ohio Valley Electric Corporation
Desk: [REDACTED]
Cell: [REDACTED]
Email: [REDACTED]

Fendig, John

Subject: OVEC-IKEC Mid-Year Board Update
Location: Conference call

Start: Fri 7/16/2021 10:00 AM
End: Fri 7/16/2021 11:00 AM
Show Time As: Tentative

Recurrence: (none)

Organizer: Justin J Cooper

EXTERNAL email. STOP and THINK before responding, clicking on links, or opening attachments.

Update - Attached are the presentation and agenda

Conference Call Info: [REDACTED]

Passcode: [REDACTED]

Fendig, John

Subject: OVEC-IKEC Annual Board of Directors Meeting
Location: Conference Call / Remote

Start: Wed 12/8/2021 10:00 AM
End: Wed 12/8/2021 12:00 PM
Show Time As: Tentative

Recurrence: (none)

Organizer: Justin J Cooper

EXTERNAL email. STOP and THINK before responding, clicking on links, or opening attachments.

Update: attached is an updated presentation to correct a title and formatting error on page 29.

Attached is the presentation and prior meeting minutes

Also, attached is the agenda for the 12/8/21 Boards of Directors meeting. The meeting will be a conference call this year due to the continued impacts of COVID-19 on travel and gatherings.

Conference Call Info: [REDACTED]

Passcode: [REDACTED]

**LOUISVILLE GAS AND ELECTRIC COMPANY
KENTUCKY UTILITIES COMPANY**

**Response to Sierra Club's Initial Request for Information
Dated January 21, 2022**

Case No. 2021-00393

Question No. 15

Responding Witness: Daniel K. Arbough

Q-15. Please produce all emails and other correspondence between the Companies and OVEC, and between the Companies and other OVEC Sponsors, as well as any internal documents prepared at the Companies, concerning Ohio House Bill 6 and the ongoing criminal investigation in Ohio associated with the same.

A-15. To the extent responsive documents exist and are protected from disclosure by the attorney-client privilege (including common-interest privilege) or the work-product doctrine, the Companies object to the production of such documents. The Companies are filing a privilege log describing the responsive documents the Companies are not producing on the ground of attorney-client, work-product privilege, or both.

With regard to non-privileged responsive documents, see the attached.

Fendig, John

From: Sebourn, Michael
Sent: Friday, April 02, 2021 9:29 AM
To: Arbough, Dan; Bellar, Lonnie; Sinclair, David; Fendig, John; Wilson, Stuart
Subject: RE: Ohio repeal

Dan,

S&P's article from yesterday (below) says that the OVEC subsidies are still being debated by the OH legislature, but were not addressed in newly enacted HB 128. So they are still currently in effect, but may be subject to future legislation.

Mike

Repealing subsidies to 2,176 MW of Ohio nuclear power leaves uncertainty

New York — Ohio Governor Mike DeWine has signed House Bill 128, ending the customer-funded subsidies for two of Energy Harbor's nuclear power plants, and leaving questions about the future of the 2,176 MW of carbon-free resources. Analysts and experts are mixed on whether replacement legislation to support the nuclear plants could emerge.

Register Now DeWine signed HB 128 on March 31, which repealed key pieces of the highly controversial House Bill 6 that was tied to an alleged bribery scheme promoted by FirstEnergy and subsidiary FirstEnergy Solutions. The US Attorney's Office for the Southern District of Ohio and the Federal Bureau of Investigation in July 2020 announced charges related to a more than \$60 million bribe paid to Ohio House Speaker Larry Householder and his associates. Householder pleaded not guilty in the case and a trial is pending.

Following a bankruptcy proceeding, FirstEnergy Solutions was renamed Energy Harbor, now a private company which owns the Davis-Besse and Perry nuclear plants that received the subsidies, as well as three other nuclear power plants located in Ohio, Pennsylvania and West Virginia.

Former owner FirstEnergy Solutions argued financial support was required to keep Davis-Besse and Perry from retiring due to revenue shortfalls resulting from declining wholesale energy, capacity, and ancillary service market prices in the PJM Interconnection markets where the plants are located.

The subsidy debate was heated, with opponents claiming the nuclear power plants did not require a financial boost. Ultimately, a referendum push to overturn the HB 6 legislation failed.

"The nuclear subsidies included in HB 6 were unnecessary and unjustified, and only passed due to the alleged unprecedented corruption in the legislative process and referendum effort," Todd Snitchler, president and CEO of merchant generator trade group Electric Power Supply Association, said in an emailed statement.

Replacement legislation

It is unclear if a new effort to support the nuclear plants will emerge from the Ohio Legislature.

The definition of power generation units at risk of retirement is that they are not expected to recover their avoidable costs from market revenues, which are a combination of energy and ancillary service revenues and capacity market revenues, according to Monitoring Analytics, PJM's independent market monitor.

Based on the IMM's analysis in its 2020 State of the Market Report for PJM, no nuclear plants are considered to be at risk of retirement. "The single site nuclear plants, Davis Besse and Perry, receive a subsidy and are not expected to retire," the IMM said in the report which was published before the subsidy was repealed.

"We believe that nuclear subsidies will come back in some form," Matt Williams, power market analyst with S&P Global Platts Analytics, said in an April 1 email.

"Though with how slow the legislature has been moving on this issue, specifics and timing remain uncertain," Williams added.

However, EPSA's Snitchler is less optimistic about Ohio policymakers reinstating a financial support mechanism.

"It is unlikely that new legislation to support the plants will come forward," he said in an April 1 email.

"First, the new owners have said they don't want the subsidies," Snitchler said. And after having passed and now repealed the plant bailouts, in addition to the widespread public outcry surrounding the issue, it's highly unlikely lawmakers will have the appetite to revisit this unpopular policy AGAIN for the third year in a row."

Just over 8 GW of nuclear capacity across the US is currently slated for retirement, with Platts Analytics assessing roughly 5 GW of nuclear capacity at high risk of retirement before license expiration, according to a recent research note.

The alleged corruption involving passage of HB 6 has clouded other aspects of Ohio energy policy because the law significantly walked back support for energy efficiency and the state's renewable portfolio standard. The law also provided subsidies to two Ohio Valley Electric Corporation coal-fired power plants.

"HB 128 does not address the modifications made to energy efficiency and renewable portfolio standards by HB 6. With that, we are not expecting these measures to revert to their pre-HB 6 levels," Platts Analytics' Williams said.

Other elements of the HB 6 legislation, including the repeal of subsidies for OVEC coal generation, are still being debated in the Ohio Legislature, Snitchler said.

"We are watching this closely, and hope to see more good news for Ohio consumers and competition," he said.

"Subsidies for existing resources are unnecessary and damaging at a time when PJM markets are delivering the energy resources to reliably meet consumer demand and reduce carbon emissions at historically low costs."

Energy Harbor did not return a request for comment.

Michael Sebourn

Manager, Generation Planning | LG&E and KU
220 W. Main St., Louisville, KY 40202

O: [REDACTED] | M: [REDACTED] | F: [REDACTED]

[REDACTED]

From: Arbough, Dan [REDACTED]
Sent: Friday, April 02, 2021 5:17 AM
To: Sebourn, Michael [REDACTED]
Subject: Fwd: Ohio repeal

From: Arbough, Dan [REDACTED]
Date: April 2, 2021 at 5:16:11 AM EDT
To: Justin J. Cooper/OVEC/US [REDACTED]
Cc: Mike Sebourn [REDACTED] Fendig, John [REDACTED] Sinclair, David [REDACTED] >, Bellar, Lonnie [REDACTED]
Subject: Ohio repeal

Justin,

I see that the Ohio legislature has repealed the nuclear subsidies associated with HB6, but I haven't seen any discussion about whether the OVEC related payments were also repealed. Can you provide an update on the status of those payments?

Thanks.

Dan

Fendig, John

From: [REDACTED]
Sent: Monday, April 05, 2021 3:43 PM
To: Arbough, Dan
Cc: Sinclair, David; Fendig, John; Bellar, Lonnie; Mike Sebourn; [REDACTED]
Subject: Re: Ohio repeal

Follow Up Flag: Follow up
Flag Status: Flagged

EXTERNAL email. STOP and THINK before responding, clicking on links, or opening attachments.

Dan,

Hope you are doing well, glad to give you an update. You are correct, the repeal bill that was put into legislation just removed the nuclear subsidies and other items that directly benefited FirstEnergy. The OVEC cost recovery portion for the Ohio Utilities still remains in place. There are other repeal bills being proposed, that focus on the remaining items, including OVEC recovery. However, none have moved forward at this time. I'll let you and the LGE team know if there is any significant changes. Thanks and let me know if you need anything else.

Justin J. Cooper MAcc, CPA
Vice President - COO & CFO

Ohio Valley Electric Corporation

Desk: [REDACTED]
Cell [REDACTED]
Fax: [REDACTED]
Email: [REDACTED]

From: "Arbough, Dan" [REDACTED]
To: "Justin J. Cooper/OVEC/US" [REDACTED]
Cc: Mike Sebourn [REDACTED] "Fendig, John" [REDACTED] "Sinclair, David" [REDACTED] "Bellar, Lonnie" [REDACTED]
Date: 04/02/2021 05:16 AM
Subject: Ohio repeal

Justin,

I see that the Ohio legislature has repealed the nuclear subsidies associated with HB6, but I haven't seen any discussion about whether the OVEC related payments were also repealed. Can you provide an update on the status of those payments?

Thanks.

Dan
----- The information contained in this transmission is intended only for the person

or entity to which it is directly addressed or copied. It may contain material of confidential and/or private nature. Any review, retransmission, dissemination or other use of, or taking of any action in reliance upon, this information by persons or entities other than the intended recipient is not allowed. If you received this message and the information contained therein by error, please contact the sender and delete the material from your/any storage medium.

Fendig, John

From: Quinn, Julie
Sent: Wednesday, January 26, 2022 8:53 AM
To: Gregor, Christy
Subject: FW: OVEC Q&A

From: Thompson, Paul [REDACTED]
Sent: Saturday, August 08, 2020 11:10 PM
To: Sorgi, Vincent [PPL] [REDACTED]
Cc: Ludwig, Andrew [PPL] [REDACTED] Bergstein Jr, Joseph P [PPL] [REDACTED] Wunderly, Mark Andrew [PPL] [REDACTED]
Subject: Re: OVEC Q&A

Without HB6 I cannot say for sure what AEP's financial viewpoint is of their interest in OVEC, but generally I agree that the near term risk is low. It likely means that the plants would be closing well before the end of decade, but not imminent.

Paul

From: Sorgi, Vincent [PPL] [REDACTED]
Date: August 8, 2020 at 9:57:27 PM EDT
To: Thompson, Paul [REDACTED]
Cc: Ludwig, Andrew [PPL] [REDACTED] Bergstein Jr, Joseph P [PPL] [REDACTED] Wunderly, Mark Andrew [PPL] [REDACTED]
Subject: OVEC Q&A

Paul,

As you know we have an HB6 question regarding OVEC in the Q&A. AEP indicated the repeal of HB 6 would not impact their operations of OVEC, so it doesn't look like the risk identified in the Q&A is high regarding us needing to cover the debt.

Do you agree?

Vince

Get [Outlook](#) for iOS

Fendig, John

From: Sebourn, Michael
Sent: Tuesday, January 05, 2021 11:01 AM
To: Bellar, Lonnie; Arbough, Dan; Fendig, John
Subject: RE: ed010521.pdf (HB 6, OVEC)

Follow Up Flag: Follow up
Flag Status: Flagged

I talked with Justin this morning. He noted that the legislative efforts and the current temporary court injunction that have been in the news are both focused only on the nuclear payments, and not the OVEC side. The OVEC payments started in 2020 and are continuing. He doesn't currently see anything that would change that.

Mike

Michael Sebourn

Manager, Generation Planning | LG&E and KU
220 W. Main St., Louisville, KY 40202

O: [REDACTED] M: [REDACTED] | F: [REDACTED]
[REDACTED]

From: Bellar, Lonnie [REDACTED]
Sent: Tuesday, January 05, 2021 9:28 AM
To: Arbough, Dan [REDACTED] Sebourn, Michael [REDACTED] Fendig, John [REDACTED]
Subject: RE: ed010521.pdf (HB 6, OVEC)

Agree we can start with Justin...

From: Arbough, Dan [REDACTED]
Sent: Tuesday, January 05, 2021 9:26 AM
To: Sebourn, Michael [REDACTED] Fendig, John [REDACTED] Bellar, Lonnie [REDACTED]
Subject: RE: ed010521.pdf (HB 6, OVEC)

I would suggest reaching out to Justin

From: Sebourn, Michael [REDACTED]
Sent: Tuesday, January 05, 2021 9:24 AM
To: Fendig, John [REDACTED] Arbough, Dan [REDACTED] Bellar, Lonnie [REDACTED]
Subject: RE: ed010521.pdf (HB 6, OVEC)

I haven't seen anything specific to OVEC on this. Would you like me to reach out to Justin? Or prefer for him to go through Brian Chisling first?

Mike

Michael Sebourn

Manager, Generation Planning | LG&E and KU
220 W. Main St., Louisville, KY 40202

O: [REDACTED] | M: [REDACTED] | F: [REDACTED]
[REDACTED]

From: Fendig, John [REDACTED]
Sent: Tuesday, January 05, 2021 8:38 AM
To: Arbough, Dan [REDACTED]; Bellar, Lonnie [REDACTED] Sebourn, Michael [REDACTED]
Subject: RE: ed010521.pdf (HB 6, OVEC)

I haven't generally seen anything on the various scenarios either; but can research more specifically and also check-in with Brian Chisling (OVEC's outside counsel).

From: Arbough, Dan [REDACTED]
Sent: Tuesday, January 05, 2021 8:13 AM
To: Bellar, Lonnie [REDACTED] Fendig, John [REDACTED] Sebourn, Michael [REDACTED]
Subject: RE: ed010521.pdf

I haven't seen anything on the impact of the court stays. Justin Cooper ought to be able to provide us with some information on this issue.

Dan

From: Bellar, Lonnie [REDACTED]
Sent: Tuesday, January 05, 2021 8:11 AM
To: Fendig, John [REDACTED] Arbough, Dan [REDACTED] Sebourn, Michael [REDACTED]
Subject: ed010521.pdf

John,

Some quick research I did on HB6 notes impact to the OVEC related portions of the bill are uncertain even if HB6 is repealed or as noted in this article, as related to nuclear collections, blocked. The reference questions if the PUCO could retain the OVEC collections even if HB6 is repealed.

Do we have any other information on this topic? Likely to get questions on this in the rate case.

Thanks,

Lonnie

Fendig, John

From: Bellar, Lonnie
Sent: Tuesday, January 05, 2021 11:24 AM
To: Sebourn, Michael; Arbough, Dan; Fendig, John
Subject: RE: ed010521.pdf (HB 6, OVEC)

Thanks, that seemed to be the view from reading a couple of articles on the topic, the collections are tariffed with each company with guidelines on collections being part of the tariff. Obviously, if the legislation is overturned and not replaced the opportunity for the collections to be successfully challenged down the road exists...

Lonnie

From: Sebourn, Michael <[REDACTED]>
Sent: Tuesday, January 05, 2021 11:01 AM
To: Bellar, Lonnie [REDACTED]; Arbough, Dan [REDACTED]; Fendig, John [REDACTED]
Subject: RE: ed010521.pdf (HB 6, OVEC)

I talked with Justin this morning. He noted that the legislative efforts and the current temporary court injunction that have been in the news are both focused only on the nuclear payments, and not the OVEC side. The OVEC payments started in 2020 and are continuing. He doesn't currently see anything that would change that.

Mike

Michael Sebourn

Manager, Generation Planning | LG&E and KU
220 W. Main St., Louisville, KY 40202

O: [REDACTED] | M: [REDACTED] | F: [REDACTED]
[REDACTED]

From: Bellar, Lonnie [REDACTED]
Sent: Tuesday, January 05, 2021 9:28 AM
To: Arbough, Dan [REDACTED]; Sebourn, Michael [REDACTED]; Fendig, John [REDACTED]
Subject: RE: ed010521.pdf (HB 6, OVEC)

Agree we can start with Justin...

From: Arbough, Dan [REDACTED]
Sent: Tuesday, January 05, 2021 9:26 AM
To: Sebourn, Michael [REDACTED]; Fendig, John [REDACTED]; Bellar, Lonnie [REDACTED]
Subject: RE: ed010521.pdf (HB 6, OVEC)

I would suggest reaching out to Justin

From: Sebourn, Michael [REDACTED]
Sent: Tuesday, January 05, 2021 9:24 AM
To: Fendig, John [REDACTED] >; Arbough, Dan [REDACTED] >; Bellar, Lonnie [REDACTED]
Subject: RE: ed010521.pdf (HB 6, OVEC)

I haven't seen anything specific to OVEC on this. Would you like me to reach out to Justin? Or prefer John to go through Brian Chisling first?

Mike

Michael Sebourn

Manager, Generation Planning | LG&E and KU
220 W. Main St., Louisville, KY 40202

O: [REDACTED] | M: [REDACTED] | F: [REDACTED]
[REDACTED]

From: Fendig, John <[REDACTED]>
Sent: Tuesday, January 05, 2021 8:38 AM
To: Arbough, Dan <[REDACTED]> Bellar, Lonnie [REDACTED] >; Sebourn, Michael [REDACTED]
Subject: RE: ed010521.pdf (HB 6, OVEC)

I haven't generally seen anything on the various scenarios either; but can research more specifically and also check-in with Brian Chisling (OVEC's outside counsel).

From: Arbough, Dan [REDACTED]
Sent: Tuesday, January 05, 2021 8:13 AM
To: Bellar, Lonnie [REDACTED] Fendig, John [REDACTED] Sebourn, Michael [REDACTED]
Subject: RE: ed010521.pdf

I haven't seen anything on the impact of the court stays. Justin Cooper ought to be able to provide us with some information on this issue.

Dan

From: Bellar, Lonnie [REDACTED]
Sent: Tuesday, January 05, 2021 8:11 AM
To: Fendig, John [REDACTED] >; Arbough, Dan [REDACTED] Sebourn, Michael [REDACTED]
Subject: ed010521.pdf

John,

Some quick research I did on HB6 notes impact to the OVEC related portions of the bill are uncertain even if HB6 is repealed or as noted in this article, as related to nuclear collections, blocked. The reference questions if the PUCO could retain the OVEC collections even if HB6 is repealed.

Do we have any other information on this topic? Likely to get questions on this in the rate case.

Thanks,

Lonnie

Fendig, John

From: Thompson, Paul
Sent: Thursday, March 25, 2021 9:56 AM
To: Arbough, Dan; Bellar, Lonnie
Subject: RE: OVEC

Ok, thanks. That was my general understanding, too.

From: Arbough, Dan [REDACTED]
Sent: Thursday, March 25, 2021 9:34 AM
To: Thompson, Paul [REDACTED] Bellar, Lonnie [REDACTED]
Subject: RE: OVEC

I don't think there would be a direct impact on OVEC. The companies that are receiving the extra revenue as a result of HB6 will not receive the additional revenue which will make OVEC less attractive to them. This could impact their willingness to support further OVEC capex and to push for lower O&M at OVEC. Those owners may also push for earlier plant shutdown.

Dan

From: Thompson, Paul <[REDACTED]>
Sent: Thursday, March 25, 2021 9:17 AM
To: Bellar, Lonnie <[REDACTED]> Arbough, Dan [REDACTED]
Subject: OVEC

Guys, what will be the near term impact if the Ohio subsidy law gets rolled back?

Paul

**LOUISVILLE GAS AND ELECTRIC COMPANY
KENTUCKY UTILITIES COMPANY**

**Response to Sierra Club's Initial Request for Information
Dated January 21, 2022**

Case No. 2021-00393

Question No. 16

Responding Witness: Daniel K. Arbough

- Q-16. Please produce all emails and any other written correspondence with any other OVEC Sponsor, between 2018 and the present, about the disposition of the plants or the ICPA, including but not limited to any proposals to sell or purchase units or participation shares, or to modify or to terminate the ICPA.
- A-16. To the extent responsive documents exist and are protected from disclosure by the attorney-client privilege (including common-interest privilege) or the work-product doctrine, the Companies object to the production of such documents. The Companies are filing a privilege log describing the responsive documents the Companies are not producing on the ground of attorney-client, work-product privilege, or both.

With regard to non-privileged responsive documents, see the attached.



550 South Tryon Street
Charlotte, NC 28202

O:
C:

Copy on FYI!

Lonnie B
Sinclair
Spartan Wilson
Mike Seboran
Dan Arbaugh

Paul
3/11/19

RECEIVED

MAR 11 2019

Office of the Chairman,
President and CEO

Mar. 4, 2019

Mr. Paul W. Thompson
Chief Operating Officer
LG&E and KU Energy LLC
220 W. Main Street
Louisville, KY 40202

Subject: OVEC Ownership Solicitation

Dear Mr. Thompson:

Duke Energy Ohio, Inc. ("DE Ohio") is pursuing the sale of 100 percent of its ownership interest in Ohio Valley Electric Corporation ("OVEC") and the assignment of the associated Inter-Company Power Agreement ("ICPA"). DE Ohio has a nine percent entitlement to the output of OVEC-owned generating units, which equates to 203 megawatts. DE Ohio is a shareholder of OVEC and a sponsoring company to the ICPA.

If your company has interest in acquiring DE Ohio's ownership in OVEC and the associated ICPA, contact me no later than March 31, 2019.

Sincerely,

Mr. Karl Newlin
SVP Corporate Development and Treasurer
Duke Energy Corporation

CC: John Verderame, DE Ohio OVEC Director



550 South Tryon Street
Charlotte, NC 28202

O:
C:

Feb. 8, 2021

Mr. Dan Arbough
Treasurer
LG&E and KU Energy LLC
220 W. Main Street
Louisville, KY 40202

Subject: OVEC Ownership Solicitation

Dear Mr. Arbough:

Duke Energy Ohio, Inc. ("DE Ohio") is pursuing the sale of 100 percent of its ownership interest in Ohio Valley Electric Corporation ("OVEC") and the assignment of the associated Inter-Company Power Agreement ("ICPA"). DE Ohio has a nine percent entitlement to the output of OVEC-owned generating units, which equates to 203 megawatts. DE Ohio is a shareholder of OVEC and a sponsoring company to the ICPA.

If your company has interest in acquiring DE Ohio's ownership in OVEC and the associated ICPA, contact me no later than June 30, 2021.

Sincerely,

A handwritten signature in black ink, appearing to read "K. Newlin", written in a cursive style.

Mr. Karl Newlin
SVP Corporate Development and Treasurer
Duke Energy Corporation

CC: John Verderame, DE Ohio OVEC Director

**LOUISVILLE GAS AND ELECTRIC COMPANY
KENTUCKY UTILITIES COMPANY**

**Response to Sierra Club's Initial Request for Information
Dated January 21, 2022**

Case No. 2021-00393

Question No. 17

Responding Witness: Daniel K. Arbough / Stuart A. Wilson

- Q-17. Please provide any forward-looking assessments—either possessed by, or known to and obtainable by, the Companies—of OVEC costs and/or value, whether conducted by the Companies, by OVEC, and/or by another OVEC Sponsor, and conducted between 2018 and the present.
- A-17. OVEC has provided several cost forecasts to the Companies since 2018. See attached. Also, the Companies have prepared two internal forecasts of OVEC costs using their own financing assumptions. See attachments being provided in Excel format. Certain information requested is confidential and proprietary and is being provided under seal pursuant to a petition for confidential information. Also see the responses to Question No. 11 and SREA 1-13(h).

Ohio Valley Electric Corporation
Projected Inter-Company Power Agreement (ICPA) Billable Cost Summary
Calendar Years 2018 - 2040
in thousands of dollars

	<u>2018</u>	<u>2019</u>	<u>2020</u>	<u>2021</u>	<u>2022</u>	<u>2023</u>	<u>2024</u>	<u>2025</u>
Generation Sales								
Estimated Delivered Power Sales from OVEC Generation (MWhr)								
Projected Energy Use Factor %								
Demand Charge								
Projected Annual Capital Improvement Costs (excluding								
Projected Debt Expense and Short-Term Debt Costs (including								
Projected Long-Term Debt Costs (including								
Projected Advance Billing of Debt Service (Debt Reserve)								
Projected Capital Improvements and Debt Costs (ICPA Component A)								
Projected Operation and Maintenance Costs (ICPA Component B)								
Projected Administration and General Costs (ICPA Component B)								
Projected Transmission and Dispatch Costs (ICPA Component B)								
Projected Taxes (ICPA Component C)								
Projected ROE Costs (ICPA Component D)								
Projected Postretirement Benefit Obligation (ICPA Component E)								
Projected Decommissioning and Demolition Obligation (ICPA Component F)								
Total Projected Demand Costs (ICPA Components A, B, C, D, E & F)								
Projected Demand Costs - \$/MWhr								
Energy Charge								
Projected Coal Cost (delivered)								
Projected Allowance Cost (based on projected weighted average inventory)								
Projected Other Fuel-Related Costs (reagents, fuel oil & coal handling less byproduct sales)								
Total Projected Energy Costs								
Projected Energy Costs - \$/MWhr								
Transmission Charge								
Projected Transmission Charges								
Less Transmission Charges Credit to Demand Charge (ICPA Component B)								
Total Transmission Costs								
Projected Transmission Costs - \$/MWhr								
Summary of ICPA Billable Power Production Costs								
Total Projected Power Production Costs								
Dividend								
Projected Dividend								
Summary of ICPA Billable Power Production Costs Less Projected Dividend								
Total Projected Power Production Costs Less Projected Dividend								
Projected Power Production Costs - \$/MWhr								

Critical Assumptions:

Increased Long-Term Debt costs due to Sponsor related Credit downgrades (\$250M at L +400 2018 & 2019, L+450 2020), projected to refinanced 12/2019 at investment grade rates if Sponsor credit issue is resolved
Election of Funding Holiday on contributions to Postretirement Benefit Obligation from 12/31/2025.
Generation Sales assumes Clifty Unit 6 minimal operation during Ozone period.
OVEC Finance Working Group reviewing extension of Debt Reserve billings past June 2018
Forecast assumes ICPA termination is 6/30/2040.

CONFIDENTIAL INFORMATION REDACTED

Case No. 2021-00393
Attachment 1 to Response to SC-1 Question No. 17
Page 1 of 3
Arbough

Ohio Valley Electric Corporation
Projected Inter-Company Power Agreement (ICPA) Billable Cost Summary
Calendar Years 2018 - 2040
in thousands of dollars

	<u>2026</u>	<u>2027</u>	<u>2028</u>	<u>2029</u>	<u>2030</u>	<u>2031</u>	<u>2032</u>	<u>2033</u>
Generation Sales								
Estimated Delivered Power Sales from OVEC Generation (MWhr)								
Projected Energy Use Factor %								
Demand Charge								
Projected Annual Capital Improvement Costs (excluding								
Projected Debt Expense and Short-Term Debt Costs (including								
Projected Long-Term Debt Costs (including								
Projected Advance Billing of Debt Service (Debt Reserve)								
Projected Capital Improvements and Debt Costs (ICPA Component A)								
Projected Operation and Maintenance Costs (ICPA Component B)								
Projected Administration and General Costs (ICPA Component B)								
Projected Transmission and Dispatch Costs (ICPA Component B)								
Projected Taxes (ICPA Component C)								
Projected ROE Costs (ICPA Component D)								
Projected Postretirement Benefit Obligation (ICPA Component E)								
Projected Decommissioning and Demolition Obligation (ICPA Component F)								
Total Projected Demand Costs (ICPA Components A, B, C, D, E & F)								
Projected Demand Costs - \$/MWhr								
Energy Charge								
Projected Coal Cost (delivered)								
Projected Allowance Cost (based on projected weighted average inventory)								
Projected Other Fuel-Related Costs (reagents, fuel oil & coal handling less byproduct sales)								
Total Projected Energy Costs								
Projected Energy Costs - \$/MWhr								
Transmission Charge								
Projected Transmission Charges								
Less Transmission Charges Credit to Demand Charge (ICPA Component B)								
Total Transmission Costs								
Projected Transmission Costs - \$/MWhr								
Summary of ICPA Billable Power Production Costs								
Total Projected Power Production Costs								
Dividend								
Projected Dividend								
Summary of ICPA Billable Power Production Costs Less Projected Dividend								
Total Projected Power Production Costs Less Projected Dividend								
Projected Power Production Costs - \$/MWhr								

Critical Assumptions:

Increased Long-Term Debt costs due to Sponsor related Credit downgrades (\$250M at L +400 2018 & 2019, L+450 2020), projec
Election of Funding Holiday on contributions to Postretirement Benefit Obligation from 12/31/2025.
Generation Sales assumes Clifty Unit 6 minimal operation during Ozone period.
OVEC Finance Working Group reviewing extension of Debt Reserve billings past June 2018
Forecast assumes ICPA termination is 6/30/2040.

CONFIDENTIAL INFORMATION REDACTED

Case No. 2021-00393
Attachment 1 to Response to SC-1 Question No. 17
Page 2 of 3
Arbough

Ohio Valley Electric Corporation
Projected Inter-Company Power Agreement (ICPA) Billable Cost Summary
Calendar Years 2018 - 2040
in thousands of dollars

	<u>2034</u>	<u>2035</u>	<u>2036</u>	<u>2037</u>	<u>2038</u>	<u>2039</u>	<u>2040</u>
Generation Sales							
Estimated Delivered Power Sales from OVEC Generation (MWhr)							
Projected Energy Use Factor %							
Demand Charge							
Projected Annual Capital Improvement Costs (excluding							
Projected Debt Expense and Short-Term Debt Costs (including							
Projected Long-Term Debt Costs (including							
Projected Advance Billing of Debt Service (Debt Reserve)							
Projected Capital Improvements and Debt Costs (ICPA Component A)							
Projected Operation and Maintenance Costs (ICPA Component B)							
Projected Administration and General Costs (ICPA Component B)							
Projected Transmission and Dispatch Costs (ICPA Component B)							
Projected Taxes (ICPA Component C)							
Projected ROE Costs (ICPA Component D)							
Projected Postretirement Benefit Obligation (ICPA Component E)							
Projected Decommissioning and Demolition Obligation (ICPA Component F)							
Total Projected Demand Costs (ICPA Components A, B, C, D, E & F)							
Projected Demand Costs - \$/MWhr							
Energy Charge							
Projected Coal Cost (delivered)							
Projected Allowance Cost (based on projected weighted average inventory)							
Projected Other Fuel-Related Costs (reagents, fuel oil & coal handling less byproduct sales)							
Total Projected Energy Costs							
Projected Energy Costs - \$/MWhr							
Transmission Charge							
Projected Transmission Charges							
Less Transmission Charges Credit to Demand Charge (ICPA Component B)							
Total Transmission Costs							
Projected Transmission Costs - \$/MWhr							
Summary of ICPA Billable Power Production Costs							
Total Projected Power Production Costs							
Dividend							
Projected Dividend							
Summary of ICPA Billable Power Production Costs Less Projected Dividend							
Total Projected Power Production Costs Less Projected Dividend							
Projected Power Production Costs - \$/MWhr							

Critical Assumptions:

Increased Long-Term Debt costs due to Sponsor related Credit downgrades (\$250M at L +400 2018 & 2019, L+450 2020), projec
Election of Funding Holiday on contributions to Postretirement Benefit Obligation from 12/31/2025.
Generation Sales assumes Clifty Unit 6 minimal operation during Ozone period.
OVEC Finance Working Group reviewing extension of Debt Reserve billings past June 2018
Forecast assumes ICPA termination is 6/30/2040.

CONFIDENTIAL INFORMATION REDACTED

Case No. 2021-00393
Attachment 1 to Response to SC-1 Question No. 17
Page 3 of 3
Arbough

Ohio Valley Electric Corporation
Projected Inter-Company Power Agreement (ICPA) Billable Cost Summary
Calendar Years 2018 - 2040
in thousands of dollars

	<u>2018</u>	<u>2019</u>	<u>2020</u>	<u>2021</u>	<u>2022</u>	<u>2023</u>	<u>2024</u>
Generation Sales							
Estimated Delivered Power Sales from OVEC Generation (MWhr)							
Projected Energy Use Factor %							
Demand Charge							
Projected Annual Capital Improvement Costs (excluding [REDACTED])							
Projected Debt Expense and Short-Term Debt Costs (including [REDACTED])							
Projected Long-Term Debt Costs (including [REDACTED])							
Projected Advance Billing of Debt Service (Debt Reserve)							
Projected Capital Improvements and Debt Costs (ICPA Component A)							
Projected Operation and Maintenance Costs (ICPA Component B)							
Projected Administration and General Costs (ICPA Component B)							
Projected Transmission and Dispatch Costs (ICPA Component B)							
Projected Taxes (ICPA Component C)							
Projected ROE Costs (ICPA Component D)							
Projected Postretirement Benefit Obligation (ICPA Component E)							
Projected Decommissioning and Demolition Obligation (ICPA Component F)							
Total Projected Demand Costs (ICPA Components A, B, C, D, E & F)							
Projected Demand Costs - \$/MWhr							
Energy Charge							
Projected Coal Cost (delivered)							
Projected Allowance Cost (based on projected weighted average inventory)							
Projected Other Fuel-Related Costs (reagents, fuel oil & coal handling less byproduct sales)							
Total Projected Energy Costs							
Projected Energy Costs - \$/MWhr							
Transmission Charge							
Projected Transmission Charges							
Less Transmission Charges Credit to Demand Charge (ICPA Component B)							
Total Transmission Costs							
Projected Transmission Costs - \$/MWhr							
Summary of ICPA Billable Power Production Costs							
Total Projected Power Production Costs							
Dividend							
Projected Dividend							
Summary of ICPA Billable Power Production Costs Less Projected Dividend							
Total Projected Power Production Costs Less Projected Dividend							
Projected Power Production Costs - \$/MWhr							

Critical Assumptions:

Increased Long-Term Debt costs due to Sponsor related Credit downgrades (\$250M at L +400 2018 & 2019, L+450 2020), projected to refinanced 12/2019 at investment grade rates if Sponsor credit issue is resolved
Election of Funding Holiday on contributions to Postretirement Benefit Obligation from 12/31/2025.
Generation Sales assumes Clifty Unit 6 minimal operation during Ozone period.
OVEC is reviewing extension of Debt Reserve billings past June 2018
Forecast assumes ICPA termination is 6/30/2040.

CONFIDENTIAL INFORMATION REDACTED

Ohio Valley Electric Corporation
Projected Inter-Company Power Agreement (ICPA) Billable Cost Summary
Calendar Years 2018 - 2040
in thousands of dollars

	<u>2025</u>	<u>2026</u>	<u>2027</u>	<u>2028</u>	<u>2029</u>	<u>2030</u>	<u>2031</u>
Generation Sales							
Estimated Delivered Power Sales from OVEC Generation (MWhr)							
Projected Energy Use Factor %							
Demand Charge							
Projected Annual Capital Improvement Costs (excluding							
Projected Debt Expense and Short-Term Debt Costs (including							
Projected Long-Term Debt Costs (including							
Projected Advance Billing of Debt Service (Debt Reserve)							
Projected Capital Improvements and Debt Costs (ICPA Component A)							
Projected Operation and Maintenance Costs (ICPA Component B)							
Projected Administration and General Costs (ICPA Component B)							
Projected Transmission and Dispatch Costs (ICPA Component B)							
Projected Taxes (ICPA Component C)							
Projected ROE Costs (ICPA Component D)							
Projected Postretirement Benefit Obligation (ICPA Component E)							
Projected Decommissioning and Demolition Obligation (ICPA Component F)							
Total Projected Demand Costs (ICPA Components A, B, C, D, E & F)							
Projected Demand Costs - \$/MWhr							
Energy Charge							
Projected Coal Cost (delivered)							
Projected Allowance Cost (based on projected weighted average inventory)							
Projected Other Fuel-Related Costs (reagents, fuel oil & coal handling less byproduct sales)							
Total Projected Energy Costs							
Projected Energy Costs - \$/MWhr							
Transmission Charge							
Projected Transmission Charges							
Less Transmission Charges Credit to Demand Charge (ICPA Component B)							
Total Transmission Costs							
Projected Transmission Costs - \$/MWhr							
Summary of ICPA Billable Power Production Costs							
Total Projected Power Production Costs							
Dividend							
Projected Dividend							
Summary of ICPA Billable Power Production Costs Less Projected Dividend							
Total Projected Power Production Costs Less Projected Dividend							

Projected Power Production Costs - \$/MWhr

Critical Assumptions:

Increased Long-Term Debt costs due to Sponsor related Credit downgrades (\$250M at L +400 2018 & 2019, L+450 2020), project Election of Funding Holiday on contributions to Postretirement Benefit Obligation from 12/31/2025.
 Generation Sales assumes Clifty Unit 6 minimal operation during Ozone period.
 OVEC is reviewing extension of Debt Reserve billings past June 2018
 Forecast assumes ICPA termination is 6/30/2040.

CONFIDENTIAL INFORMATION REDACTED

Ohio Valley Electric Corporation
Projected Inter-Company Power Agreement (ICPA) Billable Cost Summary
Calendar Years 2018 - 2040
in thousands of dollars

	<u>2032</u>	<u>2033</u>	<u>2034</u>	<u>2035</u>	<u>2036</u>	<u>2037</u>	<u>2038</u>
Generation Sales							
Estimated Delivered Power Sales from OVEC Generation (MWhr)							
Projected Energy Use Factor %							
Demand Charge							
Projected Annual Capital Improvement Costs (excluding							
Projected Debt Expense and Short-Term Debt Costs (including							
Projected Long-Term Debt Costs (including							
Projected Advance Billing of Debt Service (Debt Reserve)							
Projected Capital Improvements and Debt Costs (ICPA Component A)							
Projected Operation and Maintenance Costs (ICPA Component B)							
Projected Administration and General Costs (ICPA Component B)							
Projected Transmission and Dispatch Costs (ICPA Component B)							
Projected Taxes (ICPA Component C)							
Projected ROE Costs (ICPA Component D)							
Projected Postretirement Benefit Obligation (ICPA Component E)							
Projected Decommissioning and Demolition Obligation (ICPA Component F)							
Total Projected Demand Costs (ICPA Components A, B, C, D, E & F)							
Projected Demand Costs - \$/MWhr							
Energy Charge							
Projected Coal Cost (delivered)							
Projected Allowance Cost (based on projected weighted average inventory)							
Projected Other Fuel-Related Costs (reagents, fuel oil & coal handling less byproduct sales)							
Total Projected Energy Costs							
Projected Energy Costs - \$/MWhr							
Transmission Charge							
Projected Transmission Charges							
Less Transmission Charges Credit to Demand Charge (ICPA Component B)							
Total Transmission Costs							
Projected Transmission Costs - \$/MWhr							
Summary of ICPA Billable Power Production Costs							
Total Projected Power Production Costs							
Dividend							
Projected Dividend							
Summary of ICPA Billable Power Production Costs Less Projected Dividend							
Total Projected Power Production Costs Less Projected Dividend							
Projected Power Production Costs - \$/MWhr							

Critical Assumptions:

Increased Long-Term Debt costs due to Sponsor related Credit downgrades (\$250M at L +400 2018 & 2019, L+450 2020), project Election of Funding Holiday on contributions to Postretirement Benefit Obligation from 12/31/2025.
 Generation Sales assumes Clifty Unit 6 minimal operation during Ozone period.
 OVEC is reviewing extension of Debt Reserve billings past June 2018
 Forecast assumes ICPA termination is 6/30/2040.

CONFIDENTIAL INFORMATION REDACTED

Ohio Valley Electric Corporation
Projected Inter-Company Power Agreement (ICPA) Billable Cost Summary
Calendar Years 2018 - 2040
in thousands of dollars

	<u>2039</u>	<u>2040</u>
Generation Sales		
Estimated Delivered Power Sales from OVEC Generation (MWhr)		
Projected Energy Use Factor %		
Demand Charge		
Projected Annual Capital Improvement Costs (excluding		
Projected Debt Expense and Short-Term Debt Costs (including		
Projected Long-Term Debt Costs (including		
Projected Advance Billing of Debt Service (Debt Reserve)		
Projected Capital Improvements and Debt Costs (ICPA Component A)		
Projected Operation and Maintenance Costs (ICPA Component B)		
Projected Administration and General Costs (ICPA Component B)		
Projected Transmission and Dispatch Costs (ICPA Component B)		
Projected Taxes (ICPA Component C)		
Projected ROE Costs (ICPA Component D)		
Projected Postretirement Benefit Obligation (ICPA Component E)		
Projected Decommissioning and Demolition Obligation (ICPA Component F)		
Total Projected Demand Costs (ICPA Components A, B, C, D, E & F)		
Projected Demand Costs - \$/MWhr		
Energy Charge		
Projected Coal Cost (delivered)		
Projected Allowance Cost (based on projected weighted average inventory)		
Projected Other Fuel-Related Costs (reagents, fuel oil & coal handling less byproduct sales)		
Total Projected Energy Costs		
Projected Energy Costs - \$/MWhr		
Transmission Charge		
Projected Transmission Charges		
Less Transmission Charges Credit to Demand Charge (ICPA Component B)		
Total Transmission Costs		
Projected Transmission Costs - \$/MWhr		
Summary of ICPA Billable Power Production Costs		
Total Projected Power Production Costs		
Dividend		
Projected Dividend		
Summary of ICPA Billable Power Production Costs Less Projected Dividend		
Total Projected Power Production Costs Less Projected Dividend		
Projected Power Production Costs - \$/MWhr		

Critical Assumptions:

Increased Long-Term Debt costs due to Sponsor related Credit downgrades (\$250M at L +400 2018 & 2019, L+450 2020), project Election of Funding Holiday on contributions to Postretirement Benefit Obligation from 12/31/2025.
 Generation Sales assumes Clifty Unit 6 minimal operation during Ozone period.
 OVEC is reviewing extension of Debt Reserve billings past June 2018
 Forecast assumes ICPA termination is 6/30/2040.

CONFIDENTIAL INFORMATION REDACTED

Ohio Valley Electric Corporation
Projected Inter-Company Power Agreement (ICPA) Billable Cost Summary
Calendar Years 2020 - 2040
in thousands of dollars

	<u>2020</u>	<u>2021</u>	<u>2022</u>	<u>2023</u>
Generation Sales				
Estimated Delivered Power Sales from OVEC Generation (MWhr)				
Projected Energy Use Factor %				
Projected Net Capacity Factor %				
<u>Generation Costs (Energy and Generation Operating Costs)</u>				
Energy Charge				
Projected Coal Cost (delivered)				
Projected Allowance Cost (based on projected weighted average inventory)				
Projected Other Fuel-Related Costs (reagents, fuel oil & coal handling less byproduct sales)				
Total Projected Energy Costs				
Projected Energy Costs - \$/MWhr				
<u>Generation Operating Costs (Demand Charge)</u>				
Projected Annual Capital Improvement Costs (ICPA Component A) - <i>Includes</i>				
Projected Operation and Maintenance Costs (ICPA Component B)				
Projected Administration and General Costs (ICPA Component B)				
Projected Taxes (ICPA Component C)				
Projected ROE Costs (ICPA Component D)				
Total Projected Generation Operating Costs (ICPA Components A, B, C, & D)				
Projected Generation Operating Costs (Demand Charge) - \$/MWhr				
Projected Total Generation Costs (Energy and Operating Costs) - \$/MWhr				
<u>Transmission Costs</u>				
<u>Transmission Operating Costs (Demand Charge)</u>				
Projected Annual Capital Improvement Costs (ICPA Component A) - <i>Transmission</i>				
Projected Transmission and Dispatch Costs (ICPA Component B)				
Projected Administration and General Costs (ICPA Component B) - <i>Transmission</i>				
Projected Total Transmission Costs				
Projected Transmission Costs - \$/MWhr				
<u>Non-Operating Costs (Debt and Obligations)</u>				
<u>Non-Operating Cost (Demand Charge)</u>				
Projected Debt Expense and Short-Term Debt Costs (ICPA Component A)				
Projected Long-Term Debt Costs (ICPA Component A) - <i>Does not include incremental financing</i>				
Projected Advance Billing of Debt Service - Debt Reserve (ICPA Component A)				
Projected Postretirement Benefit Obligation (ICPA Component E)				
Projected Decommissioning and Demolition Obligation (ICPA Component F)				
Total Projected Non-Production Demand Costs (ICPA Components A, E, & F)				
Projected Non-Operating Costs - \$/MWhr				
<u>Total Billable Costs (Energy and Demand Charge)</u>				
Summary of ICPA Billable Power Costs				
Grand Total Projected Energy Costs				
Grand Total Projected Demand Costs				
Grand Total Projected ICPA Billable Costs				
Projected Billable Costs (Energy and Demand) - \$/MWhr				
Critical Assumptions:				

Long-Term Debt costs projection assumes repayment of 2017A \$33M annually starting in 2021, Debt Reserve \$120 M utilized to for debt service 2037-2040, and does not include additional debt for defaulting Sponsor shortfall.
Resume Funding Contributions to Postretirement Benefits in 2020.
Accelerated and increased Decommissioning and Demolition (D&D) Costs due to updated CCR rule for pond closures, updated D&D study projected for Q2-2020.
Generation Sales assumes Clifty Unit 6 minimal operation during Ozone period.
Forecast assumes ICPA termination is 6/30/2040.

Ohio Valley Electric Corporation
Projected Inter-Company Power Agreement (ICPA) Billable Cost Sum
Calendar Years 2020 - 2040
in thousands of dollars

2024 2025 2026 2027 2028

Generation Sales					
Estimated Delivered Power Sales from OVEC Generation (MWhr) Projected Energy Use Factor % Projected Net Capacity Factor %					
<u>Generation Costs (Energy and Generation Operating Costs)</u>					
Energy Charge					
Projected Coal Cost (delivered) Projected Allowance Cost (based on projected weighted average inventory) Projected Other Fuel-Related Costs (reagents, fuel oil & coal handling less byproduct sales) Total Projected Energy Costs Projected Energy Costs - \$/MWhr					
Generation Operating Costs (Demand Charge)					
Projected Annual Capital Improvement Costs (ICPA Component A) - <i>Includes</i> Projected Operation and Maintenance Costs (ICPA Component B) Projected Administration and General Costs (ICPA Component B) Projected Taxes (ICPA Component C) Projected ROE Costs (ICPA Component D) Total Projected Generation Operating Costs (ICPA Components A, B, C, & D) Projected Generation Operating Costs (Demand Charge) - \$/MWhr Projected Total Generation Costs (Energy and Operating Costs) - \$/MWhr					
<u>Transmission Costs</u>					
Transmission Operating Costs (Demand Charge)					
Projected Annual Capital Improvement Costs (ICPA Component A) - <i>Transmission</i> Projected Transmission and Dispatch Costs (ICPA Component B) Projected Administration and General Costs (ICPA Component B) - <i>Transmission</i> Projected Total Transmission Costs Projected Transmission Costs - \$/MWhr					
<u>Non-Operating Costs (Debt and Obligations)</u>					
Non-Operating Cost (Demand Charge)					
Projected Debt Expense and Short-Term Debt Costs (ICPA Component A) Projected Long-Term Debt Costs (ICPA Component A) - <i>Does not include incremental financing</i> Projected Advance Billing of Debt Service - Debt Reserve (ICPA Component A) Projected Postretirement Benefit Obligation (ICPA Component E) Projected Decommissioning and Demolition Obligation (ICPA Component F) Total Projected Non-Production Demand Costs (ICPA Components A, E, & F) Projected Non-Operating Costs - \$/MWhr					
<u>Total Billable Costs (Energy and Demand Charge)</u>					
Summary of ICPA Billable Power Costs					
Grand Total Projected Energy Costs Grand Total Projected Demand Costs Grand Total Projected ICPA Billable Costs					
Projected Billable Costs (Energy and Demand) - \$/MWhr Critical Assumptions:					

Long-Term Debt costs projection assumes repayment of 2017A \$33M annually starting in 2021, Debt Reserve \$120 M utilized to for debt service 2037-2040, and does no Resume Funding Contributions to Postretirement Benefits in 2020.
 Accelerated and increased Decommissioning and Demolition (D&D) Costs due to updated CCR rule for pond closures, updated D&D study projected for Q2-2020.
 Generation Sales assumes Clifty Unit 6 minimal operation during Ozone period.
 Forecast assumes ICPA termination is 6/30/2040.

Ohio Valley Electric Corporation
Projected Inter-Company Power Agreement (ICPA) Billable Cost Sum
Calendar Years 2020 - 2040
in thousands of dollars

2029 2030 2031 2032 2033

Generation Sales					
Estimated Delivered Power Sales from OVEC Generation (MWhr) Projected Energy Use Factor % Projected Net Capacity Factor %					
<u>Generation Costs (Energy and Generation Operating Costs)</u>					
Energy Charge					
Projected Coal Cost (delivered) Projected Allowance Cost (based on projected weighted average inventory) Projected Other Fuel-Related Costs (reagents, fuel oil & coal handling less byproduct sales) Total Projected Energy Costs Projected Energy Costs - \$/MWhr					
Generation Operating Costs (Demand Charge)					
Projected Annual Capital Improvement Costs (ICPA Component A) - <i>Includes</i> ██████████ Projected Operation and Maintenance Costs (ICPA Component B) Projected Administration and General Costs (ICPA Component B) Projected Taxes (ICPA Component C) Projected ROE Costs (ICPA Component D) Total Projected Generation Operating Costs (ICPA Components A, B, C, & D) Projected Generation Operating Costs (Demand Charge) - \$/MWhr Projected Total Generation Costs (Energy and Operating Costs) - \$/MWhr					
<u>Transmission Costs</u>					
Transmission Operating Costs (Demand Charge)					
Projected Annual Capital Improvement Costs (ICPA Component A) - <i>Transmission</i> Projected Transmission and Dispatch Costs (ICPA Component B) Projected Administration and General Costs (ICPA Component B) - <i>Transmission</i> Projected Total Transmission Costs Projected Transmission Costs - \$/MWhr					
<u>Non-Operating Costs (Debt and Obligations)</u>					
Non-Operating Cost (Demand Charge)					
Projected Debt Expense and Short-Term Debt Costs (ICPA Component A) Projected Long-Term Debt Costs (ICPA Component A) - <i>Does not include incremental financing</i> Projected Advance Billing of Debt Service - Debt Reserve (ICPA Component A) Projected Postretirement Benefit Obligation (ICPA Component E) Projected Decommissioning and Demolition Obligation (ICPA Component F) Total Projected Non-Production Demand Costs (ICPA Components A, E, & F) Projected Non-Operating Costs - \$/MWhr					
<u>Total Billable Costs (Energy and Demand Charge)</u>					
Summary of ICPA Billable Power Costs					
Grand Total Projected Energy Costs Grand Total Projected Demand Costs Grand Total Projected ICPA Billable Costs					
Projected Billable Costs (Energy and Demand) - \$/MWhr Critical Assumptions:					

Long-Term Debt costs projection assumes repayment of 2017A \$33M annually starting in 2021, Debt Reserve \$120 M utilized to for debt service 2037-2040, and does no Resume Funding Contributions to Postretirement Benefits in 2020.
 Accelerated and increased Decommissioning and Demolition (D&D) Costs due to updated CCR rule for pond closures, updated D&D study projected for Q2-2020.
 Generation Sales assumes Clifty Unit 6 minimal operation during Ozone period.
 Forecast assumes ICPA termination is 6/30/2040.

Ohio Valley Electric Corporation
Projected Inter-Company Power Agreement (ICPA) Billable Cost Sum
Calendar Years 2020 - 2040
in thousands of dollars

2034 2035 2036 2037 2038

Generation Sales					
Estimated Delivered Power Sales from OVEC Generation (MWhr) Projected Energy Use Factor % Projected Net Capacity Factor %					
<u>Generation Costs (Energy and Generation Operating Costs)</u>					
Energy Charge					
Projected Coal Cost (delivered) Projected Allowance Cost (based on projected weighted average inventory) Projected Other Fuel-Related Costs (reagents, fuel oil & coal handling less byproduct sales) Total Projected Energy Costs Projected Energy Costs - \$/MWhr					
Generation Operating Costs (Demand Charge)					
Projected Annual Capital Improvement Costs (ICPA Component A) - <i>Includes</i> Projected Operation and Maintenance Costs (ICPA Component B) Projected Administration and General Costs (ICPA Component B) Projected Taxes (ICPA Component C) Projected ROE Costs (ICPA Component D) Total Projected Generation Operating Costs (ICPA Components A, B, C, & D) Projected Generation Operating Costs (Demand Charge) - \$/MWhr Projected Total Generation Costs (Energy and Operating Costs) - \$/MWhr					
<u>Transmission Costs</u>					
Transmission Operating Costs (Demand Charge)					
Projected Annual Capital Improvement Costs (ICPA Component A) - <i>Transmission</i> Projected Transmission and Dispatch Costs (ICPA Component B) Projected Administration and General Costs (ICPA Component B) - <i>Transmission</i> Projected Total Transmission Costs Projected Transmission Costs - \$/MWhr					
<u>Non-Operating Costs (Debt and Obligations)</u>					
Non-Operating Cost (Demand Charge)					
Projected Debt Expense and Short-Term Debt Costs (ICPA Component A) Projected Long-Term Debt Costs (ICPA Component A) - <i>Does not include incremental financing</i> Projected Advance Billing of Debt Service - Debt Reserve (ICPA Component A) Projected Postretirement Benefit Obligation (ICPA Component E) Projected Decommissioning and Demolition Obligation (ICPA Component F) Total Projected Non-Production Demand Costs (ICPA Components A, E, & F) Projected Non-Operating Costs - \$/MWhr					
<u>Total Billable Costs (Energy and Demand Charge)</u>					
Summary of ICPA Billable Power Costs					
Grand Total Projected Energy Costs Grand Total Projected Demand Costs Grand Total Projected ICPA Billable Costs					
Projected Billable Costs (Energy and Demand) - \$/MWhr Critical Assumptions:					

Long-Term Debt costs projection assumes repayment of 2017A \$33M annually starting in 2021, Debt Reserve \$120 M utilized to for debt service 2037-2040, and does no Resume Funding Contributions to Postretirement Benefits in 2020.
 Accelerated and increased Decommissioning and Demolition (D&D) Costs due to updated CCR rule for pond closures, updated D&D study projected for Q2-2020.
 Generation Sales assumes Clifty Unit 6 minimal operation during Ozone period.
 Forecast assumes ICPA termination is 6/30/2040.

Ohio Valley Electric Corporation
Projected Inter-Company Power Agreement (ICPA) Billable Cost Sum
Calendar Years 2020 - 2040
in thousands of dollars

	<u>2039</u>	<u>2040</u>
Generation Sales		
Estimated Delivered Power Sales from OVEC Generation (MWhr)		
Projected Energy Use Factor %		
Projected Net Capacity Factor %		
<u>Generation Costs (Energy and Generation Operating Costs)</u>		
Energy Charge		
Projected Coal Cost (delivered)		
Projected Allowance Cost (based on projected weighted average inventory)		
Projected Other Fuel-Related Costs (reagents, fuel oil & coal handling less byproduct sales)		
Total Projected Energy Costs		
Projected Energy Costs - \$/MWhr		
<u>Generation Operating Costs (Demand Charge)</u>		
Projected Annual Capital Improvement Costs (ICPA Component A) - <i>Includes</i>		
Projected Operation and Maintenance Costs (ICPA Component B)		
Projected Administration and General Costs (ICPA Component B)		
Projected Taxes (ICPA Component C)		
Projected ROE Costs (ICPA Component D)		
Total Projected Generation Operating Costs (ICPA Components A, B, C, & D)		
Projected Generation Operating Costs (Demand Charge) - \$/MWhr		
Projected Total Generation Costs (Energy and Operating Costs) - \$/MWhr		
<u>Transmission Costs</u>		
<u>Transmission Operating Costs (Demand Charge)</u>		
Projected Annual Capital Improvement Costs (ICPA Component A) - <i>Transmission</i>		
Projected Transmission and Dispatch Costs (ICPA Component B)		
Projected Administration and General Costs (ICPA Component B) - <i>Transmission</i>		
Projected Total Transmission Costs		
Projected Transmission Costs - \$/MWhr		
<u>Non-Operating Costs (Debt and Obligations)</u>		
<u>Non-Operating Cost (Demand Charge)</u>		
Projected Debt Expense and Short-Term Debt Costs (ICPA Component A)		
Projected Long-Term Debt Costs (ICPA Component A) - <i>Does not include incremental financing</i>		
Projected Advance Billing of Debt Service - Debt Reserve (ICPA Component A)		
Projected Postretirement Benefit Obligation (ICPA Component E)		
Projected Decommissioning and Demolition Obligation (ICPA Component F)		
Total Projected Non-Production Demand Costs (ICPA Components A, E, & F)		
Projected Non-Operating Costs - \$/MWhr		
<u>Total Billable Costs (Energy and Demand Charge)</u>		
<u>Summary of ICPA Billable Power Costs</u>		
Grand Total Projected Energy Costs		
Grand Total Projected Demand Costs		
Grand Total Projected ICPA Billable Costs		
Projected Billable Costs (Energy and Demand) - \$/MWhr		
Critical Assumptions:		

Long-Term Debt costs projection assumes repayment of 2017A \$33M annually starting in 2021, Debt Reserve \$120 M utilized to for debt service 2037-2040, and does no
Resume Funding Contributions to Postretirement Benefits in 2020.
Accelerated and increased Decommissioning and Demolition (D&D) Costs due to updated CCR rule for pond closures, updated D&D study projected for Q2-2020.
Generation Sales assumes Clifty Unit 6 minimal operation during Ozone period.
Forecast assumes ICPA termination is 6/30/2040.

Ohio Valley Electric Corporation
Projected Inter-Company Power Agreement (ICPA) Billable Cost Summary
Calendar Years 2020 - 2040
in thousands of dollars

2020 2021 2022 2023 2024

Generation Sales					
Estimated Delivered Power Sales from OVEC Generation (MWhr)					
Projected Energy Use Factor %					
Projected Net Capacity Factor %					

Generation Costs (Energy and Generation Operating Costs)

Energy Charge					
Projected Coal Cost (delivered)					
Projected Allowance Cost (based on projected weighted average inventory)					
Projected Other Fuel-Related Costs (reagents, fuel oil & coal handling less byproduct sales)					
Total Projected Energy Costs					
Projected Energy Costs - \$/MWhr					

Generation Operating Costs (Demand Charge)

Projected Annual Capital Improvement Costs (ICPA Component A) - <i>Includes</i>					
Projected Operation and Maintenance Costs (ICPA Component B)					
Projected Administration and General Costs (ICPA Component B)					
Projected Taxes (ICPA Component C)					
Projected ROE Costs (ICPA Component D)					
Total Projected Generation Operating Costs (ICPA Components A, B, C, & D)					
Projected Generation Operating Costs (Demand Charge) - \$/MWhr					
Projected Total Generation Costs (Energy and Operating Costs) - \$/MWhr					

Transmission Costs

Transmission Operating Costs (Demand Charge)					
Projected Annual Capital Improvement Costs (ICPA Component A) - <i>Transmission</i>					
Projected Transmission and Dispatch Costs (ICPA Component B)					
Projected Administration and General Costs (ICPA Component B) - <i>Transmission</i>					
Projected Total Transmission Costs					
Projected Transmission Costs - \$/MWhr					

Non-Operating Costs (Debt and Obligations)

Non-Operating Cost (Demand Charge)					
Projected Debt Expense and Short-Term Debt Costs (ICPA Component A)					
Projected Long-Term Debt Costs (ICPA Component A) - <i>Does not include incremental financing</i>					
Projected Advance Billing of Debt Service - Debt Reserve (ICPA Component A)					
Projected Postretirement Benefit Obligation (ICPA Component E)					
Projected Decommissioning and Demolition Obligation (ICPA Component F)					
Total Projected Non-Production Demand Costs (ICPA Components A, E, & F)					
Projected Non-Operating Costs - \$/MWhr					

Total Billable Costs (Energy and Demand Charge)

Summary of ICPA Billable Power Costs					
Grand Total Projected Energy Costs					
Grand Total Projected Demand Costs					
Grand Total Projected ICPA Billable Costs					

Projected Billable Costs (Energy and Demand) - \$/MWhr at 11,500,000 MWhrs

Projected Billable Costs (Energy and Demand) - \$/MWhr at 10,500,000 MWhrs

Projected Billable Costs (Energy and Demand) - \$/MWhr at 9,500,000 MWhrs

Critical Assumptions:

Long-Term Debt costs projection assumes repayment of 2017A \$33M annually starting in 2021, assumes \$120 M debt reserve used to pay debt service 2037-2040
Resume Funding Contributions to Postretirement Benefits in 2020.
Accelerated Decommissioning and Demolition (D&D) Costs due to updated CCR rule for pond closures, updated D&D study will be conducted after CCR rules are final.
Generation Sales assumes Clifty Unit 6 minimal operation during Ozone period.
Forecast assumes ICPA termination is 6/30/2040.

Case No. 2021-00393

Attachment 4 to Response to SC-1 Question No. 17

Page 1 of 4

Arbough

Ohio Valley Electric Corporation
Projected Inter-Company Power Agreement (ICPA) Billable Cost Sum
Calendar Years 2020 - 2040
in thousands of dollars

2025 2026 2027 2028 2029 2030

Generation Sales	<u>2025</u>	<u>2026</u>	<u>2027</u>	<u>2028</u>	<u>2029</u>	<u>2030</u>
Estimated Delivered Power Sales from OVEC Generation (MWhr)						
Projected Energy Use Factor %						
Projected Net Capacity Factor %						
<u>Generation Costs (Energy and Generation Operating Costs)</u>						
<u>Energy Charge</u>						
Projected Coal Cost (delivered)						
Projected Allowance Cost (based on projected weighted average inventory)						
Projected Other Fuel-Related Costs (reagents, fuel oil & coal handling less byproduct sales)						
Total Projected Energy Costs						
Projected Energy Costs - \$/MWhr						
<u>Generation Operating Costs (Demand Charge)</u>						
Projected Annual Capital Improvement Costs (ICPA Component A) - <i>Includes</i>						
Projected Operation and Maintenance Costs (ICPA Component B)						
Projected Administration and General Costs (ICPA Component B)						
Projected Taxes (ICPA Component C)						
Projected ROE Costs (ICPA Component D)						
Total Projected Generation Operating Costs (ICPA Components A, B, C, & D)						
Projected Generation Operating Costs (Demand Charge) - \$/MWhr						
Projected Total Generation Costs (Energy and Operating Costs) - \$/MWhr						
<u>Transmission Costs</u>						
<u>Transmission Operating Costs (Demand Charge)</u>						
Projected Annual Capital Improvement Costs (ICPA Component A) - <i>Transmission</i>						
Projected Transmission and Dispatch Costs (ICPA Component B)						
Projected Administration and General Costs (ICPA Component B) - <i>Transmission</i>						
Projected Total Transmission Costs						
Projected Transmission Costs - \$/MWhr						
<u>Non-Operating Costs (Debt and Obligations)</u>						
<u>Non-Operating Cost (Demand Charge)</u>						
Projected Debt Expense and Short-Term Debt Costs (ICPA Component A)						
Projected Long-Term Debt Costs (ICPA Component A) - <i>Does not include incremental financing</i>						
Projected Advance Billing of Debt Service - Debt Reserve (ICPA Component A)						
Projected Postretirement Benefit Obligation (ICPA Component E)						
Projected Decommissioning and Demolition Obligation (ICPA Component F)						
Total Projected Non-Production Demand Costs (ICPA Components A, E, & F)						
Projected Non-Operating Costs - \$/MWhr						
<u>Total Billable Costs (Energy and Demand Charge)</u>						
<u>Summary of ICPA Billable Power Costs</u>						
Grand Total Projected Energy Costs						
Grand Total Projected Demand Costs						
Grand Total Projected ICPA Billable Costs						
Projected Billable Costs (Energy and Demand) - \$/MWhr at 11,500,000 MWhrs						
Projected Billable Costs (Energy and Demand) - \$/MWhr at 10,500,000 MWhrs						
Projected Billable Costs (Energy and Demand) - \$/MWhr at 9,500,000 MWhrs						
Critical Assumptions:						

Long-Term Debt costs projection assumes repayment of 2017A \$33M annually starting in 2021, assumes \$120 M debt reserve used to pay debt service 2037-2040
Resume Funding Contributions to Postretirement Benefits in 2020.
Accelerated Decommissioning and Demolition (D&D) Costs due to updated CCR rule for pond closures, updated D&D study will be conducted after CCR rules are final.
Generation Sales assumes Clifty Unit 6 minimal operation during Ozone period.
Forecast assumes ICPA termination is 6/30/2040.

Case No. 2021-00393

Attachment 4 to Response to SC-1 Question No. 17

Page 2 of 4

Arbough

Ohio Valley Electric Corporation
Projected Inter-Company Power Agreement (ICPA) Billable Cost Sum
Calendar Years 2020 - 2040
in thousands of dollars

2031 2032 2033 2034 2035 2036

Generation Sales					
Estimated Delivered Power Sales from OVEC Generation (MWhr)					
Projected Energy Use Factor %					
Projected Net Capacity Factor %					
<u>Generation Costs (Energy and Generation Operating Costs)</u>					
<u>Energy Charge</u>					
Projected Coal Cost (delivered)					
Projected Allowance Cost (based on projected weighted average inventory)					
Projected Other Fuel-Related Costs (reagents, fuel oil & coal handling less byproduct sales)					
Total Projected Energy Costs					
Projected Energy Costs - \$/MWhr					
<u>Generation Operating Costs (Demand Charge)</u>					
Projected Annual Capital Improvement Costs (ICPA Component A) - <i>Includes</i>					
Projected Operation and Maintenance Costs (ICPA Component B)					
Projected Administration and General Costs (ICPA Component B)					
Projected Taxes (ICPA Component C)					
Projected ROE Costs (ICPA Component D)					
Total Projected Generation Operating Costs (ICPA Components A, B, C, & D)					
Projected Generation Operating Costs (Demand Charge) - \$/MWhr					
Projected Total Generation Costs (Energy and Operating Costs) - \$/MWhr					
<u>Transmission Costs</u>					
<u>Transmission Operating Costs (Demand Charge)</u>					
Projected Annual Capital Improvement Costs (ICPA Component A) - <i>Transmission</i>					
Projected Transmission and Dispatch Costs (ICPA Component B)					
Projected Administration and General Costs (ICPA Component B) - <i>Transmission</i>					
Projected Total Transmission Costs					
Projected Transmission Costs - \$/MWhr					
<u>Non-Operating Costs (Debt and Obligations)</u>					
<u>Non-Operating Cost (Demand Charge)</u>					
Projected Debt Expense and Short-Term Debt Costs (ICPA Component A)					
Projected Long-Term Debt Costs (ICPA Component A) - <i>Does not include incremental financing</i>					
Projected Advance Billing of Debt Service - Debt Reserve (ICPA Component A)					
Projected Postretirement Benefit Obligation (ICPA Component E)					
Projected Decommissioning and Demolition Obligation (ICPA Component F)					
Total Projected Non-Production Demand Costs (ICPA Components A, E, & F)					
Projected Non-Operating Costs - \$/MWhr					
<u>Total Billable Costs (Energy and Demand Charge)</u>					
<u>Summary of ICPA Billable Power Costs</u>					
Grand Total Projected Energy Costs					
Grand Total Projected Demand Costs					
Grand Total Projected ICPA Billable Costs					
Projected Billable Costs (Energy and Demand) - \$/MWhr at 11,500,000 MWhrs					
Projected Billable Costs (Energy and Demand) - \$/MWhr at 10,500,000 MWhrs					
Projected Billable Costs (Energy and Demand) - \$/MWhr at 9,500,000 MWhrs					
Critical Assumptions:					

Long-Term Debt costs projection assumes repayment of 2017A \$33M annually starting in 2021, assumes \$120 M debt reserve used to pay debt service 2037-2040
Resume Funding Contributions to Postretirement Benefits in 2020.
Accelerated Decommissioning and Demolition (D&D) Costs due to updated CCR rule for pond closures, updated D&D study will be conducted after CCR rules are final.
Generation Sales assumes Clifty Unit 6 minimal operation during Ozone period.
Forecast assumes ICPA termination is 6/30/2040.

Case No. 2021-00393

Attachment 4 to Response to SC-1 Question No. 17

Page 3 of 4

Arbough

Ohio Valley Electric Corporation
Projected Inter-Company Power Agreement (ICPA) Billable Cost Sum
Calendar Years 2020 - 2040
in thousands of dollars

	<u>2037</u>	<u>2038</u>	<u>2039</u>	<u>2040</u>
Generation Sales				
Estimated Delivered Power Sales from OVEC Generation (MWhr)				
Projected Energy Use Factor %				
Projected Net Capacity Factor %				
Generation Costs (Energy and Generation Operating Costs)				
Energy Charge				
Projected Coal Cost (delivered)				
Projected Allowance Cost (based on projected weighted average inventory)				
Projected Other Fuel-Related Costs (reagents, fuel oil & coal handling less byproduct sales)				
Total Projected Energy Costs				
Projected Energy Costs - \$/MWhr				
Generation Operating Costs (Demand Charge)				
Projected Annual Capital Improvement Costs (ICPA Component A) - <i>Includes</i>				
Projected Operation and Maintenance Costs (ICPA Component B)				
Projected Administration and General Costs (ICPA Component B)				
Projected Taxes (ICPA Component C)				
Projected ROE Costs (ICPA Component D)				
Total Projected Generation Operating Costs (ICPA Components A, B, C, & D)				
Projected Generation Operating Costs (Demand Charge) - \$/MWhr				
Projected Total Generation Costs (Energy and Operating Costs) - \$/MWhr				
Transmission Costs				
Transmission Operating Costs (Demand Charge)				
Projected Annual Capital Improvement Costs (ICPA Component A) - <i>Transmission</i>				
Projected Transmission and Dispatch Costs (ICPA Component B)				
Projected Administration and General Costs (ICPA Component B) - <i>Transmission</i>				
Projected Total Transmission Costs				
Projected Transmission Costs - \$/MWhr				
Non-Operating Costs (Debt and Obligations)				
Non-Operating Cost (Demand Charge)				
Projected Debt Expense and Short-Term Debt Costs (ICPA Component A)				
Projected Long-Term Debt Costs (ICPA Component A) - <i>Does not include incremental financing</i>				
Projected Advance Billing of Debt Service - Debt Reserve (ICPA Component A)				
Projected Postretirement Benefit Obligation (ICPA Component E)				
Projected Decommissioning and Demolition Obligation (ICPA Component F)				
Total Projected Non-Production Demand Costs (ICPA Components A, E, & F)				
Projected Non-Operating Costs - \$/MWhr				
Total Billable Costs (Energy and Demand Charge)				
Summary of ICPA Billable Power Costs				
Grand Total Projected Energy Costs				
Grand Total Projected Demand Costs				
Grand Total Projected ICPA Billable Costs				
Projected Billable Costs (Energy and Demand) - \$/MWhr at 11,500,000 MWhrs				
Projected Billable Costs (Energy and Demand) - \$/MWhr at 10,500,000 MWhrs				
Projected Billable Costs (Energy and Demand) - \$/MWhr at 9,500,000 MWhrs				
Critical Assumptions:				

Long-Term Debt costs projection assumes repayment of 2017A \$33M annually starting in 2021, assumes \$120 M debt reserve used to pay debt service 2037-2040
Resume Funding Contributions to Postretirement Benefits in 2020.
Accelerated Decommissioning and Demolition (D&D) Costs due to updated CCR rule for pond closures, updated D&D study will be conducted after CCR rules are final.
Generation Sales assumes Clifty Unit 6 minimal operation during Ozone period.
Forecast assumes ICPA termination is 6/30/2040.

Case No. 2021-00393

Attachment 4 to Response to SC-1 Question No. 17

Page 4 of 4

Arbough

Ohio Valley Electric Corporation
Projected Inter-Company Power Agreement (ICPA) Billable Cost Summary
Calendar Year 2020
in thousands of dollars

	Org Projection 2020	Updated Projected 2020	Actuals Jan	Actuals Feb	Actuals Mar	Actuals Apr	Actuals May	Actuals Jun	Jul	Aug	Sep	Oct	Nov	Dec
Generation Sales														
Estimated Delivered Power Sales from OVEC Generation (MWhr)														
Generation Costs (Energy and Generation Operating Costs)														
Energy Charge														
Projected Coal Cost (delivered)														
Projected Allowance Cost (based on projected weighted average inventory)														
Projected Other Fuel-Related Costs (reagents, fuel oil & coal handling less byproduct sale)														
Total Projected Energy Costs														
Projected Energy Costs - \$/MWhr														
Generation Operating Costs (Demand Charge)														
Projected Annual Capital Improvement Costs (ICPA Component A)														
Projected Operation and Maintenance Costs (ICPA Component B)														
Projected Administration and General Costs (ICPA Component B)														
Projected Taxes (ICPA Component C)														
Projected ROE Costs (ICPA Component D)														
Total Projected Generation Operating Costs (ICPA Components A, B, C, & D)														
Projected Generation Operating Costs (Demand Charge) - \$/MWhr														
Projected Total Generation Costs (Energy and Operating Costs) - \$/MWhr														
Transmission Costs														
Transmission Operating Costs (Demand Charge)														
Projected Annual Capital Improvement Costs (ICPA Component A) - Transmission														
Projected Transmission and Dispatch Costs (ICPA Component B)														
Projected Administration and General Costs (ICPA Component B) - Transmission														
Projected Total Transmission Costs														
Projected Transmission Costs - \$/MWhr														
Non-Operating Costs (Debt and Obligations)														
Non-Operating Cost (Demand Charge)														
Projected Debt Expense and Short-Term Debt Costs (ICPA Component A)														
Projected Long-Term Debt Costs (ICPA Component A)														
Projected Advance Billing of Debt Service - Debt Reserve (ICPA Component A)														
Projected Postretirement Benefit Obligation (ICPA Component E)														
Projected Decommissioning and Demolition Obligation (ICPA Component F)														
Total Projected Non-Production Demand Costs (ICPA Components A, E, & F)														
Projected Non-Operating Costs - \$/MWhr														
Total Billable Costs (Energy and Demand Charge)														
Summary of ICPA Billable Power Costs														
Grand Total Projected Energy Costs														
Grand Total Projected Demand Costs														
Grand Total Projected ICPA Billable Costs														
Projected Billable Costs (Energy and Demand) - \$/MWhr														

CONFIDENTIAL INFORMATION REDACTED

Ohio Valley Electric Corporation
Projected Inter-Company Power Agreement (ICPA) Billable Cost Summary
Calendar Year 2021
in thousands of dollars

	Budget 2021	Projected 2021	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Generation Sales														
Estimated Delivered Power Sales from OVEC Generation (MWhr)														
Generation Costs (Energy and Generation Operating Costs)														
Energy Charge														
Projected Coal Cost (delivered)														
Projected Allowance Cost (based on projected weighted average inventory)														
Projected Other Fuel-Related Costs (reagents, fuel oil & coal handling less byproduct sales)														
Total Projected Energy Costs														
Projected Energy Costs - \$/MWhr														
Generation Operating Costs (Demand Charge)														
Projected Annual Capital Improvement Costs (ICPA Component A)														
Projected Operation and Maintenance Costs (ICPA Component B)														
Projected Administration and General Costs (ICPA Component B)														
Projected Taxes (ICPA Component C)														
Projected ROE Costs (ICPA Component D)														
Total Projected Generation Operating Costs (ICPA Components A, B, C, & D)														
Projected Generation Operating Costs (Demand Charge) - \$/MWhr														
Projected Total Generation Costs (Energy and Operating Costs) - \$/MWhr														
Transmission Costs														
Transmission Operating Costs (Demand Charge)														
Projected Annual Capital Improvement Costs (ICPA Component A) - Transmission														
Projected Transmission and Dispatch Costs (ICPA Component B)														
Projected Administration and General Costs (ICPA Component B) - Transmission														
Projected Total Transmission Costs														
Projected Transmission Costs - \$/MWhr														
Non-Operating Costs (Debt and Obligations)														
Non-Operating Cost (Demand Charge)														
Projected Debt Expense and Short-Term Debt Costs (ICPA Component A)														
Projected Long-Term Debt Costs (ICPA Component A)														
Projected Postretirement Benefit Obligation (ICPA Component E)														
Projected Decommissioning and Demolition Obligation (ICPA Component F)														
Total Projected Non-Production Demand Costs (ICPA Components A, E, & F)														
Projected Non-Operating Costs - \$/MWhr														
Total Billable Costs (Energy and Demand Charge)														
Summary of ICPA Billable Power Costs														
Grand Total Projected Energy Costs														
Grand Total Projected Demand Costs														
Grand Total Projected ICPA Billable Costs														
Projected Billable Costs (Energy and Demand) - \$/MWhr														

CONFIDENTIAL INFORMATION REDACTED

Ohio Valley Electric Corporation
Projected Inter-Company Power Agreement (ICPA) Billable Cost Summary
Calendar Year 2022
in thousands of dollars

	Budget 2022	Projected 2022	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct
Generation Sales												
Estimated Delivered Power Sales from OVEC Generation (MWhr)												
Generation Costs (Energy and Generation Operating Costs)												
Energy Charge												
Projected Coal Cost (delivered)												
Projected Allowance Cost (based on projected weighted average inventory)												
Projected Other Fuel-Related Costs (reagents, fuel oil & coal handling less byproduct sales)												
Total Projected Energy Costs												
Projected Energy Costs - \$/MWhr												
Generation Operating Costs (Demand Charge)												
Projected Annual Capital Improvement Costs (ICPA Component A)												
Projected Operation and Maintenance Costs (ICPA Component B)												
Projected Administration and General Costs (ICPA Component B)												
Projected Taxes (ICPA Component C)												
Projected ROE Costs (ICPA Component D)												
Total Projected Generation Operating Costs (ICPA Components A, B, C, & D)												
Projected Generation Operating Costs (Demand Charge) - \$/MWhr												
Projected Total Generation Costs (Energy and Operating Costs) - \$/MWhr												
Transmission Costs												
Transmission Operating Costs (Demand Charge)												
Projected Annual Capital Improvement Costs (ICPA Component A) - Transmission												
Projected Transmission and Dispatch Costs (ICPA Component B)												
Projected Administration and General Costs (ICPA Component B) - Transmission												
Projected Total Transmission Costs												
Projected Transmission Costs - \$/MWhr												
Non-Operating Costs (Debt and Obligations)												
Non-Operating Cost (Demand Charge)												
Projected Debt Expense and Short-Term Debt Costs (ICPA Component A)												
Projected Long-Term Debt Costs (ICPA Component A)												
Projected Postretirement Benefit Obligation (ICPA Component E)												
Projected Decommissioning and Demolition Obligation (ICPA Component F)												
Total Projected Non-Production Demand Costs (ICPA Components A, E, & F)												
Projected Non-Operating Costs - \$/MWhr												
Total Billable Costs (Energy and Demand Charge)												
Summary of ICPA Billable Power Costs												
Grand Total Projected Energy Costs												
Grand Total Projected Demand Costs												
Grand Total Projected ICPA Billable Costs												
Projected Billable Costs (Energy and Demand) - \$/MWhr												

CONFIDENTIAL INFORMATION REDACTED

Ohio Valley Electric
Projected Inter-Company Power Agreement
Calendar Year
in thousands of

Nov Dec

Generation Sales	Nov	Dec
Estimated Delivered Power Sales from OVEC Generation (MWhr)		

Generation Costs (Energy and Generation Operating Costs)

Energy Charge	Nov	Dec
Projected Coal Cost (delivered)		
Projected Allowance Cost (based on projected weighted average inventory)		
Projected Other Fuel-Related Costs (reagents, fuel oil & coal handling less byproduct sales)		
Total Projected Energy Costs		
Projected Energy Costs - \$/MWhr		

Generation Operating Costs (Demand Charge)	Nov	Dec
Projected Annual Capital Improvement Costs (ICPA Component A)		
Projected Operation and Maintenance Costs (ICPA Component B)		
Projected Administration and General Costs (ICPA Component B)		
Projected Taxes (ICPA Component C)		
Projected ROE Costs (ICPA Component D)		
Total Projected Generation Operating Costs (ICPA Components A, B, C, & D)		
Projected Generation Operating Costs (Demand Charge) - \$/MWhr		
Projected Total Generation Costs (Energy and Operating Costs) - \$/MWhr		

Transmission Costs

Transmission Operating Costs (Demand Charge)	Nov	Dec
Projected Annual Capital Improvement Costs (ICPA Component A) - Transmission		
Projected Transmission and Dispatch Costs (ICPA Component B)		
Projected Administration and General Costs (ICPA Component B) - Transmission		
Projected Total Transmission Costs		
Projected Transmission Costs - \$/MWhr		

Non-Operating Costs (Debt and Obligations)

Non-Operating Cost (Demand Charge)	Nov	Dec
Projected Debt Expense and Short-Term Debt Costs (ICPA Component A)		
Projected Long-Term Debt Costs (ICPA Component A)		
Projected Postretirement Benefit Obligation (ICPA Component E)		
Projected Decommissioning and Demolition Obligation (ICPA Component F)		
Total Projected Non-Production Demand Costs (ICPA Components A, E, & F)		
Projected Non-Operating Costs - \$/MWhr		

Total Billable Costs (Energy and Demand Charge)

Summary of ICPA Billable Power Costs	Nov	Dec
Grand Total Projected Energy Costs		
Grand Total Projected Demand Costs		
Grand Total Projected ICPA Billable Costs		
Projected Billable Costs (Energy and Demand) - \$/MWhr		

CONFIDENTIAL INFORMATION REDACTED

Ohio Valley Electric Corporation
Projected Inter-Company Power Agreement (ICPA) Billable Cost Summary
Calendar Year 2021
in thousands of dollars

	Budget 2021	Projected 2021	Actual Jan	Actual Feb	Actual Mar	Actual Apr	Actual May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Generation Sales														
Estimated Delivered Power Sales from OVEC Generation (MWhr)														
Generation Costs (Energy and Generation Operating Costs)														
Energy Charge														
Projected Coal Cost (delivered)														
Projected Allowance Cost (based on projected weighted average inventory)														
Projected Other Fuel-Related Costs (reagents, fuel oil & coal handling less byproduct sales)														
Total Projected Energy Costs														
Projected Energy Costs - \$/MWhr														
Generation Operating Costs (Demand Charge)														
Projected Annual Capital Improvement Costs (ICPA Component A)														
Projected Operation and Maintenance Costs (ICPA Component B)														
Projected Administration and General Costs (ICPA Component B)														
Projected Taxes (ICPA Component C)														
Projected ROE Costs (ICPA Component D)														
Total Projected Generation Operating Costs (ICPA Components A, B, C, & D)														
Projected Generation Operating Costs (Demand Charge) - \$/MWhr														
Projected Total Generation Costs (Energy and Operating Costs) - \$/MWhr														
Transmission Costs														
Transmission Operating Costs (Demand Charge)														
Projected Annual Capital Improvement Costs (ICPA Component A) - Transmission														
Projected Transmission and Dispatch Costs (ICPA Component B)														
Projected Administration and General Costs (ICPA Component B) - Transmission														
Projected Total Transmission Costs														
Projected Transmission Costs - \$/MWhr														
Non-Operating Costs (Debt and Obligations)														
Non-Operating Cost (Demand Charge)														
Projected Debt Expense and Short-Term Debt Costs (ICPA Component A)														
Projected Long-Term Debt Costs (ICPA Component A)														
Projected Postretirement Benefit Obligation (ICPA Component E)														
Projected Decommissioning and Demolition Obligation (ICPA Component F)														
Total Projected Non-Production Demand Costs (ICPA Components A, E, & F)														
Projected Non-Operating Costs - \$/MWhr														
Total Billable Costs (Energy and Demand Charge)														
Summary of ICPA Billable Power Costs														
Grand Total Projected Energy Costs														
Grand Total Projected Demand Costs														
Grand Total Projected ICPA Billable Costs														
Projected Billable Costs (Energy and Demand) - \$/MWhr														

CONFIDENTIAL INFORMATION REDACTED

Ohio Valley Electric Corporation
Projected Inter-Company Power Agreement (ICPA) Billable Cost Summary
Calendar Year 2022
in thousands of dollars

	Budget 2022	Projected 2022	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Generation Sales														
Estimated Delivered Power Sales from OVEC Generation (MWhr)														
Generation Costs (Energy and Generation Operating Costs)														
Energy Charge														
Projected Coal Cost (delivered)														
Projected Allowance Cost (based on projected weighted average inventory)														
Projected Other Fuel-Related Costs (reagents, fuel oil & coal handling less byproduct sales)														
Total Projected Energy Costs														
Projected Energy Costs - \$/MWhr														
Generation Operating Costs (Demand Charge)														
Projected Annual Capital Improvement Costs (ICPA Component A)														
Projected Operation and Maintenance Costs (ICPA Component B)														
Projected Administration and General Costs (ICPA Component B)														
Projected Taxes (ICPA Component C)														
Projected ROE Costs (ICPA Component D)														
Total Projected Generation Operating Costs (ICPA Components A, B, C, & D)														
Projected Generation Operating Costs (Demand Charge) - \$/MWhr														
Projected Total Generation Costs (Energy and Operating Costs) - \$/MWhr														
Transmission Costs														
Transmission Operating Costs (Demand Charge)														
Projected Annual Capital Improvement Costs (ICPA Component A) - Transmission														
Projected Transmission and Dispatch Costs (ICPA Component B)														
Projected Administration and General Costs (ICPA Component B) - Transmission														
Projected Total Transmission Costs														
Projected Transmission Costs - \$/MWhr														
Non-Operating Costs (Debt and Obligations)														
Non-Operating Cost (Demand Charge)														
Projected Debt Expense and Short-Term Debt Costs (ICPA Component A)														
Projected Long-Term Debt Costs (ICPA Component A)														
Projected Postretirement Benefit Obligation (ICPA Component E)														
Projected Decommissioning and Demolition Obligation (ICPA Component F)														
Total Projected Non-Production Demand Costs (ICPA Components A, E, & F)														
Projected Non-Operating Costs - \$/MWhr														
Total Billable Costs (Energy and Demand Charge)														
Summary of ICPA Billable Power Costs														
Grand Total Projected Energy Costs														
Grand Total Projected Demand Costs														
Grand Total Projected ICPA Billable Costs														
Projected Billable Costs (Energy and Demand) - \$/MWhr														

CONFIDENTIAL INFORMATION REDACTED

Ohio Valley Electric Corporation

Projected Inter-Company Power Agreement (ICPA) Billable Cost Summary

Calendar Year 2023

in thousands of dollars

Budget 2023 Projected 2023 Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec

Generation Sales

Estimated Delivered Power Sales from OVEC Generation (MWhr)

Generation Costs (Energy and Generation Operating Costs)

Energy Charge

Projected Coal Cost (delivered)
 Projected Allowance Cost (based on projected weighted average inventory)
 Projected Other Fuel-Related Costs (reagents, fuel oil & coal handling less byproduct sales)
Total Projected Energy Costs

Projected Energy Costs - \$/MWhr

Generation Operating Costs (Demand Charge)

Projected Annual Capital Improvement Costs (ICPA Component A)
 Projected Operation and Maintenance Costs (ICPA Component B)
 Projected Administration and General Costs (ICPA Component B)
 Projected Taxes (ICPA Component C)
 Projected ROE Costs (ICPA Component D)
Total Projected Generation Operating Costs (ICPA Components A, B, C, & D)

Projected Generation Operating Costs (Demand Charge) - \$/MWhr

Projected Total Generation Costs (Energy and Operating Costs) - \$/MWhr

Transmission Costs

Transmission Operating Costs (Demand Charge)

Projected Annual Capital Improvement Costs (ICPA Component A) - Transmission
 Projected Transmission and Dispatch Costs (ICPA Component B)
 Projected Administration and General Costs (ICPA Component B) - Transmission
Projected Total Transmission Costs

Projected Transmission Costs - \$/MWhr

Non-Operating Costs (Debt and Obligations)

Non-Operating Cost (Demand Charge)

Projected Debt Expense and Short-Term Debt Costs (ICPA Component A)
 Projected Long-Term Debt Costs (ICPA Component A)
 Projected Postretirement Benefit Obligation (ICPA Component E)
 Projected Decommissioning and Demolition Obligation (ICPA Component F)
Total Projected Non-Production Demand Costs (ICPA Components A, E, & F)

Projected Non-Operating Costs - \$/MWhr

Total Billable Costs (Energy and Demand Charge)

Summary of ICPA Billable Power Costs

Grand Total Projected Energy Costs
 Grand Total Projected Demand Costs
Grand Total Projected ICPA Billable Costs

Projected Billable Costs (Energy and Demand) - \$/MWhr

CONFIDENTIAL INFORMATION REDACTED

Ohio Valley Electric Corporation
Projected Inter-Company Power Agreement (ICPA) Billable Cost Summary
Calendar Years 2022 - 2040
in thousands of dollars

	<u>2022</u>	<u>2023</u>	<u>2024</u>	<u>2025</u>	<u>2026</u>
Generation Sales					
Estimated Delivered Power Sales from OVEC Generation (MWhr)					
Projected Energy Use Factor %					
Projected Net Capacity Factor %					
Generation Costs (Energy and Generation Operating Costs)					
Energy Charge					
Projected Coal Cost (delivered)					
Projected Allowance Cost (based on projected weighted average inventory)					
Projected Other Fuel-Related Costs (reagents, fuel oil & coal handling less byproduct sales)					
Total Projected Energy Costs					
Projected Energy Costs - \$/MWhr					
Generation Operating Costs (Demand Charge)					
Projected Annual Capital Improvement Costs (ICPA Component A) - <i>Includes</i>					
Projected Operation and Maintenance Costs (ICPA Component B)					
Projected Administration and General Costs (ICPA Component B)					
Projected Taxes (ICPA Component C)					
Projected ROE Costs (ICPA Component D)					
Total Projected Generation Operating Costs (ICPA Components A, B, C, & D)					
Projected Generation Operating Costs (Demand Charge) - \$/MWhr					
Projected Total Generation Costs (Energy and Operating Costs) - \$/MWhr					
Transmission Costs					
Transmission Operating Costs (Demand Charge)					
Projected Annual Capital Improvement Costs (ICPA Component A) - <i>Transmission</i>					
Projected Transmission and Dispatch Costs (ICPA Component B)					
Projected Administration and General Costs (ICPA Component B) - <i>Transmission</i>					
Projected Total Transmission Costs					
Projected Transmission Costs - \$/MWhr					
Non-Operating Costs (Debt and Obligations)					
Non-Operating Cost (Demand Charge)					
Projected Debt Expense and Short-Term Debt Costs (ICPA Component A)					
Projected Long-Term Debt Costs (ICPA Component A)					
Projected Postretirement Benefit Obligation (ICPA Component E)					
Projected Decommissioning and Demolition Obligation (ICPA Component F)					
Total Projected Non-Production Demand Costs (ICPA Components A, E, & F)					
Projected Non-Operating Costs - \$/MWhr					
Total Billable Costs (Energy and Demand Charge)					
Summary of ICPA Billable Power Costs					
Grand Total Projected Energy Costs					
Grand Total Projected Demand Costs					
Grand Total Projected ICPA Billable Costs					
Projected Billable Costs (Energy and Demand) - \$/MWhr at 9,750,000 MWhrs					
Projected Billable Costs (Energy and Demand) - \$/MWhr at 10,750,000 MWhrs					
Projected Billable Costs (Energy and Demand) - \$/MWhr at 8,750,000 MWhrs					

Critical Assumptions:

Long-Term Debt costs projection assumes repayment of 2017A \$33M annually starting in 2021, assumes \$120 M debt reserve used to pay debt service 2037-2040
Accelerated Decommissioning and Demolition (D&D) Costs due to updated CCR rule for pond closures, updated D&D study will be conducted in 2021.
Generation Sales assumes Clifty Unit 6 minimal operation during Ozone period.
Forecast assumes ICPA termination is 6/30/2040.

Ohio Valley Electric Corporation
Projected Inter-Company Power Agreement (ICPA) Billable Cost Summary
Calendar Years 2022 - 2040
in thousands of dollars

2027 2028 2029 2030 2031

Generation Sales					
Estimated Delivered Power Sales from OVEC Generation (MWhr)					
Projected Energy Use Factor %					
Projected Net Capacity Factor %					

Generation Costs (Energy and Generation Operating Costs)

Energy Charge					
Projected Coal Cost (delivered)					
Projected Allowance Cost (based on projected weighted average inventory)					
Projected Other Fuel-Related Costs (reagents, fuel oil & coal handling less byproduct sales)					
Total Projected Energy Costs					
Projected Energy Costs - \$/MWhr					

Generation Operating Costs (Demand Charge)					
Projected Annual Capital Improvement Costs (ICPA Component A) - <i>Includes</i>					
Projected Operation and Maintenance Costs (ICPA Component B)					
Projected Administration and General Costs (ICPA Component B)					
Projected Taxes (ICPA Component C)					
Projected ROE Costs (ICPA Component D)					
Total Projected Generation Operating Costs (ICPA Components A, B, C, & D)					
Projected Generation Operating Costs (Demand Charge) - \$/MWhr					
Projected Total Generation Costs (Energy and Operating Costs) - \$/MWhr					

Transmission Costs

Transmission Operating Costs (Demand Charge)					
Projected Annual Capital Improvement Costs (ICPA Component A) - <i>Transmission</i>					
Projected Transmission and Dispatch Costs (ICPA Component B)					
Projected Administration and General Costs (ICPA Component B) - <i>Transmission</i>					
Projected Total Transmission Costs					
Projected Transmission Costs - \$/MWhr					

Non-Operating Costs (Debt and Obligations)

Non-Operating Cost (Demand Charge)					
Projected Debt Expense and Short-Term Debt Costs (ICPA Component A)					
Projected Long-Term Debt Costs (ICPA Component A)					
Projected Postretirement Benefit Obligation (ICPA Component E)					
Projected Decommissioning and Demolition Obligation (ICPA Component F)					
Total Projected Non-Production Demand Costs (ICPA Components A, E, & F)					
Projected Non-Operating Costs - \$/MWhr					

Total Billable Costs (Energy and Demand Charge)

Summary of ICPA Billable Power Costs					
Grand Total Projected Energy Costs					
Grand Total Projected Demand Costs					
Grand Total Projected ICPA Billable Costs					
Projected Billable Costs (Energy and Demand) - \$/MWhr at 9,750,000 MWhrs					
Projected Billable Costs (Energy and Demand) - \$/MWhr at 10,750,000 MWhrs					
Projected Billable Costs (Energy and Demand) - \$/MWhr at 8,750,000 MWhrs					

Critical Assumptions:

Long-Term Debt costs projection assumes repayment of 2017A \$33M annually starting in 2021, assumes \$120 M debt reserve used to pay debt service 2037-2040
Accelerated Decommissioning and Demolition (D&D) Costs due to updated CCR rule for pond closures, updated D&D study will be conducted in 2021.
Generation Sales assumes Clifty Unit 6 minimal operation during Ozone period.
Forecast assumes ICPA termination is 6/30/2040.

Ohio Valley Electric Corporation
Projected Inter-Company Power Agreement (ICPA) Billable Cost Summary
Calendar Years 2022 - 2040
in thousands of dollars

2032 2033 2034 2035 2036

Generation Sales

Estimated Delivered Power Sales from OVEC Generation (MWhr) Projected Energy Use Factor % Projected Net Capacity Factor %	
---	--

Generation Costs (Energy and Generation Operating Costs)

Energy Charge

Projected Coal Cost (delivered) Projected Allowance Cost (based on projected weighted average inventory) Projected Other Fuel-Related Costs (reagents, fuel oil & coal handling less byproduct sales) Total Projected Energy Costs	
--	--

Projected Energy Costs - \$/MWhr

Generation Operating Costs (Demand Charge)

Projected Annual Capital Improvement Costs (ICPA Component A) - <i>Includes</i> Projected Operation and Maintenance Costs (ICPA Component B) Projected Administration and General Costs (ICPA Component B) Projected Taxes (ICPA Component C) Projected ROE Costs (ICPA Component D) Total Projected Generation Operating Costs (ICPA Components A, B, C, & D)	
--	--

Projected Generation Operating Costs (Demand Charge) - \$/MWhr

Projected Total Generation Costs (Energy and Operating Costs) - \$/MWhr

Transmission Costs

Transmission Operating Costs (Demand Charge)

Projected Annual Capital Improvement Costs (ICPA Component A) - <i>Transmission</i> Projected Transmission and Dispatch Costs (ICPA Component B) Projected Administration and General Costs (ICPA Component B) - <i>Transmission</i> Projected Total Transmission Costs	
---	--

Projected Transmission Costs - \$/MWhr

Non-Operating Costs (Debt and Obligations)

Non-Operating Cost (Demand Charge)

Projected Debt Expense and Short-Term Debt Costs (ICPA Component A) Projected Long-Term Debt Costs (ICPA Component A) Projected Postretirement Benefit Obligation (ICPA Component E) Projected Decommissioning and Demolition Obligation (ICPA Component F) Total Projected Non-Production Demand Costs (ICPA Components A, E, & F)	
--	--

Projected Non-Operating Costs - \$/MWhr

Total Billable Costs (Energy and Demand Charge)

Summary of ICPA Billable Power Costs

Grand Total Projected Energy Costs Grand Total Projected Demand Costs Grand Total Projected ICPA Billable Costs	
---	--

Projected Billable Costs (Energy and Demand) - \$/MWhr at 9,750,000 MWhrs

Projected Billable Costs (Energy and Demand) - \$/MWhr at 10,750,000 MWhrs

Projected Billable Costs (Energy and Demand) - \$/MWhr at 8,750,000 MWhrs

Critical Assumptions:

Long-Term Debt costs projection assumes repayment of 2017A \$33M annually starting in 2021, assumes \$120 M debt reserve used to pay debt service 2037-2040
 Accelerated Decommissioning and Demolition (D&D) Costs due to updated CCR rule for pond closures, updated D&D study will be conducted in 2021.
 Generation Sales assumes Clifty Unit 6 minimal operation during Ozone period.
 Forecast assumes ICPA termination is 6/30/2040.

Ohio Valley Electric Corporation
Projected Inter-Company Power Agreement (ICPA) Billable Cost Summary
Calendar Years 2022 - 2040
in thousands of dollars

	<u>2037</u>	<u>2038</u>	<u>2039</u>	<u>2040</u>
Generation Sales				
Estimated Delivered Power Sales from OVEC Generation (MWhr)				
Projected Energy Use Factor %				
Projected Net Capacity Factor %				
<u>Generation Costs (Energy and Generation Operating Costs)</u>				
Energy Charge				
Projected Coal Cost (delivered)				
Projected Allowance Cost (based on projected weighted average inventory)				
Projected Other Fuel-Related Costs (reagents, fuel oil & coal handling less byproduct sales)				
Total Projected Energy Costs				
Projected Energy Costs - \$/MWhr				
<u>Generation Operating Costs (Demand Charge)</u>				
Projected Annual Capital Improvement Costs (ICPA Component A) - <i>Includes</i>				
Projected Operation and Maintenance Costs (ICPA Component B)				
Projected Administration and General Costs (ICPA Component B)				
Projected Taxes (ICPA Component C)				
Projected ROE Costs (ICPA Component D)				
Total Projected Generation Operating Costs (ICPA Components A, B, C, & D)				
Projected Generation Operating Costs (Demand Charge) - \$/MWhr				
Projected Total Generation Costs (Energy and Operating Costs) - \$/MWhr				
<u>Transmission Costs</u>				
<u>Transmission Operating Costs (Demand Charge)</u>				
Projected Annual Capital Improvement Costs (ICPA Component A) - <i>Transmission</i>				
Projected Transmission and Dispatch Costs (ICPA Component B)				
Projected Administration and General Costs (ICPA Component B) - <i>Transmission</i>				
Projected Total Transmission Costs				
Projected Transmission Costs - \$/MWhr				
<u>Non-Operating Costs (Debt and Obligations)</u>				
<u>Non-Operating Cost (Demand Charge)</u>				
Projected Debt Expense and Short-Term Debt Costs (ICPA Component A)				
Projected Long-Term Debt Costs (ICPA Component A)				
Projected Postretirement Benefit Obligation (ICPA Component E)				
Projected Decommissioning and Demolition Obligation (ICPA Component F)				
Total Projected Non-Production Demand Costs (ICPA Components A, E, & F)				
Projected Non-Operating Costs - \$/MWhr				
<u>Total Billable Costs (Energy and Demand Charge)</u>				
Summary of ICPA Billable Power Costs				
Grand Total Projected Energy Costs				
Grand Total Projected Demand Costs				
Grand Total Projected ICPA Billable Costs				
Projected Billable Costs (Energy and Demand) - \$/MWhr at 9,750,000 MWhrs				
Projected Billable Costs (Energy and Demand) - \$/MWhr at 10,750,000 MWhrs				
Projected Billable Costs (Energy and Demand) - \$/MWhr at 8,750,000 MWhrs				

Critical Assumptions:

Long-Term Debt costs projection assumes repayment of 2017A \$33M annually starting in 2021, assumes \$120 M debt reserve used to pay debt service 2037-2040
Accelerated Decommissioning and Demolition (D&D) Costs due to updated CCR rule for pond closures, updated D&D study will be conducted in 2021.
Generation Sales assumes Clifty Unit 6 minimal operation during Ozone period.
Forecast assumes ICPA termination is 6/30/2040.

**LOUISVILLE GAS AND ELECTRIC COMPANY
KENTUCKY UTILITIES COMPANY**

**Response to Sierra Club's Initial Request for Information
Dated January 21, 2022**

Case No. 2021-00393

Question No. 18

Responding Witness: Daniel K. Arbough

- Q-18. Please provide any projections—either possessed by, or known to and obtainable by, the Companies—of OVEC's expected billing between 2018 and the present.
- A-18. See the responses to Question Nos. 11 and 17.

**LOUISVILLE GAS AND ELECTRIC COMPANY
KENTUCKY UTILITIES COMPANY**

**Response to Sierra Club's Initial Request for Information
Dated January 21, 2022**

Case No. 2021-00393

Question No. 19

Responding Witness: Daniel K. Arbough

- Q-19. Please provide a copy of monthly OVEC bills to the Companies dated 2018 through the present.
- A-19. See attached. The information requested is confidential and proprietary and is being provided under seal pursuant to a petition for confidential protection.

The entire attachment is
Confidential and
provided separately
under seal.

**LOUISVILLE GAS AND ELECTRIC COMPANY
KENTUCKY UTILITIES COMPANY**

**Response to Sierra Club's Initial Request for Information
Dated January 21, 2022**

Case No. 2021-00393

Question No. 20

Responding Witness: David S. Sinclair

Q-20. Please specify the revenues to the Companies from the following, and include the timeframe/frequency of such revenues (e.g., monthly or otherwise), 2018 through the present:

- a) sales of OVEC capacity
- b) sales of OVEC energy
- c) any other sales of ancillary services or otherwise from OVEC

A-20.

- a) The Companies do not sell OVEC capacity.
- b) See the responses to SREA 13(b)(2-3).
- c) The Companies do not sell ancillary services from OVEC.

**LOUISVILLE GAS AND ELECTRIC COMPANY
KENTUCKY UTILITIES COMPANY**

**Response to Sierra Club's Initial Request for Information
Dated January 21, 2022**

Case No. 2021-00393

Question No. 21

Responding Witness: Daniel K. Arbough

Q-21. OVEC's 2020 annual report (available at: <https://www.ovec.com/FinancialStatements/AnnualReport-2020-Signed.pdf>) lists a line item of "advance billing of debt reserve" (at 6) and describe it as follows: "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" (at 11). Please quantify the debt reserve.

- a) Please explain why OVEC began "advance billing" of the debt reserve in 2017.
- b) Please indicate:
 - i) how the Companies have paid in total to date for "advance billing" of the debt reserve.
 - ii) how much the Companies project to pay for "advance billing" of the debt reserve into the future.
- c) Please provide all emails and any other written correspondence between the Companies and OVEC, and between the Companies and other OVEC Sponsors, that specifically addresses why advance billing of debt reserve was necessary.
- d) Please explain whether and how the regulatory liability will be credited to customer bills, including on what time frame.

A-21.

- a) In late 2016, OVEC began billing the sponsors for the debt service reserve fund in response to concerns raised by credit rating agencies. First Energy Solutions was nearing bankruptcy at the time, and rating agencies were concerned about the impact of a potential bankruptcy on the financial condition of OVEC given that the obligations of the sponsors are several under the ICPA. Moody's said that OVEC most closely resembled what they

call Municipal Joint Action Agencies (“JAA”) and noted that JAAs typically have a debt service reserve fund totaling one year of debt service.

b)

i) The Companies have paid their pro-rata share of the debt service reserve fund via the monthly bills from OVEC. OVEC has collected a total of \$120 million from the sponsors for the debt service reserve account.

ii) The debt service reserve fund is now fully funded, and no additional funding is expected.

c) To the extent responsive documents exist and are protected from disclosure by the attorney-client privilege (including common-interest privilege) or the work-product doctrine, the Companies object to the production of such documents. The Companies are filing a privilege log describing the responsive documents the Companies are not producing on the ground of attorney-client, work-product privilege, or both.

With regard to non-privileged responsive documents, see the attached.

d) As the debt balances decline toward the end of the ICPA term, the debt service reserve will be used to make the debt service payments to the bondholders. At that time, OVEC will not need to bill for debt service under Component A of the ICPA.

Fendig, John

From: [REDACTED]
Sent: Friday, January 04, 2019 4:53 PM
To: [REDACTED] Bellar,
Lonnie; [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
Cc: [REDACTED]
[REDACTED] Sebourn,
Michael; [REDACTED]
[REDACTED] Arbough, Dan;
[REDACTED]
[REDACTED]
Subject: OVEC Annual Credit Rating Review
Attachments: OVEC 2018 CO.pdf;
RatingsDirect_ResearchUpdateOhioValleyElectricCorpDowngradedToBBFromBBBOnCre
ditWatchNegative_40438958_Dec-21-2018.PDF; Fitch Affirms Ohio Valley Electric Corp.
at 'BBB-'; Outlook Negative Nov 8 2018.pdf

EXTERNAL email. STOP and THINK before responding, clicking on links, or opening attachments.

Ladies and Gentlemen,

As a follow-up to the discussion at the December 5, 2018 Boards of Directors' meeting, OVEC has completed the annual credit rating review process. On December 13, 2018, Moody's affirmed OVEC's Ba1 rating and improved the outlook from negative to stable. Moody's cited OVEC's actions of extending the debt reserve funding and maintaining other forms of liquidity to provide coverage of future payment shortfalls as the key reasons for stabilization. On December 20, 2018, S&P downgraded OVEC one notch from BBB- to BB+ and maintained a negative outlook. S&P cited the lack of a Sponsor or Sponsors explicitly covering OVEC's shortfall, caused by the FirstEnergy Solutions' bankruptcy, as a driver of the downgrade. This downgrade action by S&P combined with the 2017 Moody's downgrade results in OVEC having non-investment grade credit ratings from two of the three credit rating agencies, with Fitch affirming their investment grade credit rating of BBB- while maintaining a negative outlook on November 8, 2018. The near term impact to OVEC is an increase of 25 bps in OVEC's current revolving credit facility interest cost, with the longer term implication of increased pricing for refinancing of OVEC's debt maturities in 2019. As we previously discussed, OVEC is currently pursuing an extension of the revolving credit facility, which matures in November 2019. OVEC will be working with assistance from AEP Finance and the OVEC Finance Working Group to complete this extension in the first quarter of 2019.

Attached are the rating reports discussed above.

If you have any questions, please let me know.

Justin J. Cooper MAcc, CPA
CFO, Secretary and Treasurer

Ohio Valley Electric Corporation

Desk: [REDACTED]
Cell [REDACTED]
Fax: [REDACTED]
Email: [REDACTED]

CREDIT OPINION

13 December 2018

Update

✓ Rate this Research

RATINGS

Ohio Valley Electric Corp

Domicile	Piketon, Ohio, United States
Long Term Rating	Ba1
Type	Senior Unsecured - Dom Curr
Outlook	Stable

Please see the [ratings section](#) at the end of this report for more information. The ratings and outlook shown reflect information as of the publication date.

Contacts

- Laura Schumacher
VP-Sr Credit Officer
- Cliff Wang
Associate Analyst
- Michael G. Haggarty
Associate Managing Director
- Jim Hempstead
MD-Utilities

CLIENT SERVICES

- Americas
- Asia Pacific
- Japan
- EMEA

Ohio Valley Electric Corp

Update following ratings affirmation with stable outlook

Summary

Ohio Valley Electric Corporation's (OVEC) credit profile reflects the governing provisions of its long-term Inter-Company Power Agreement (ICPA) between thirteen investor-owned and cooperative utility companies (collectively, the sponsors), one of which is currently in default. Our view considers the steps taken by management and the remaining sponsors to mitigate the financial impact of the small (under 5% of revenues) defaulting sponsor as well as the overall credit quality of the sponsor group.

Under the ICPA, the sponsors pay monthly demand and transmission charges designed to cover all non-fuel related costs of owning, operating, and maintaining electric generation and transmission facilities, including debt service, irrespective of plant availability or usage. Fuel related costs are recovered through a volumetric energy charge. We currently view the sponsors' overall average credit profile to be investment grade; however, the sponsor obligations are several – not joint, which in the context of our rating methodology for US Municipal Joint Action Agencies, limits our view of their collective credit quality and caps the score for this factor at two notches above the "weakest link". Since the ICPA currently does not include a requirement for non-defaulting sponsors to "step-up" their payments in the event of a default, the weakest link is the sponsor with the lowest credit quality, First Energy Solutions Corp. (FES, unrated), which contributes under 5% of non-fuel related costs (approximately \$17 million per year) and is currently in default.

Despite the limitation on methodology factor scoring noted above, our view of OVEC's overall credit profile considers the financial strength of the majority of its sponsors, which are predominately investment grade utilities, the mitigating actions taken by OVEC and the sponsors in response to the current default, and the small, manageable, size of that default. Actions taken include the ongoing funding of a debt reserve at a rate of \$2.4 million per month, and the retention of earnings that could be used to offset future payment shortfalls.

Credit strengths

- » Effective management of sponsor default and bankruptcy
- » Fixed and variable costs, including debt service, are recovered through a strong ownership contract, albeit with a flaw
- » Primarily investment grade sponsors/off-takers
- » Diminished regulatory uncertainty for Ohio based utility sponsors

Credit challenges

- » Sponsor obligations that are several and not joint
- » Bankruptcy and subsequent payment default by one sponsor company representing about 5% of revenues
- » Weak credit quality of a second merchant power sponsor company, representing about 3% of revenues, which has divested all its non-OVEC generating assets
- » Challenging competitive conditions arising from current low prices for natural gas and power
- » Constrained liquidity with bank credit facility due within one year
- » Elevated carbon transition risk

Rating outlook

The stable outlook recognizes the credit quality of OVEC's non-defaulting sponsors, and the company's actions to address the limited financial impact of the current, ongoing, default. The outlook assumes payment shortfalls will continue to be addressed with excess operating cash, existing reserves, or via short-term borrowing. The outlook assumes OVEC will continue to collect reserve funds at the current rate at least until it has accumulated a full year of debt service (currently about 45% funded), and that it will extend the maturity of its revolving credit facility well in advance of its current November 2019 termination date.

Factors that could lead to an upgrade

- » Rating upgrades are unlikely over the near-term
- » Credit supportive changes to the ICPA, such as an inclusion of a step-up provision
- » Longer term, an improvement in the overall credit profile of the sponsor group
- » Stronger financial metrics, including a debt service coverage ratio above 1.6x

Factors that could lead to a downgrade

- » An inability or unwillingness to continue collecting reserve or excess operating funds sufficient to cover payment shortfalls
- » Failure to extend OVEC's revolving credit facility beyond its 2019 termination date by early 2019
- » Further declines in the credit quality of any sponsors
- » A sponsor payment default that was not able to be covered by existing reserves or through a swift replacement of the defaulting party

Profile

OVEC owns and operates two coal-fired generating power plants, Kyger Creek in Ohio and Clifty Creek in Indiana, that have a combined capacity of approximately 2,400 MW. OVEC is sponsored by nine investor-owned regulated electric utilities, two independent generating companies (subsidiaries of a utility holding company) and two affiliates of generation and transmission cooperatives (collectively, the sponsors). By virtue of their ownership, the sponsors purchase OVEC's power at wholesale, cost based, rates. The ownership structure is governed by a long-term Inter-Company Power Agreement (ICPA) expiring in 2040. OVEC's fuel, operating, capital and debt service requirements costs are passed-through to the sponsors pursuant to the ICPA. The sponsors participate in the management and financial planning of OVEC through the OVEC Board of Directors, and a long-standing management and services agreement with American Electric Power Company Inc. (AEP: Baa1 stable).

This publication does not announce a credit rating action. For any credit ratings referenced in this publication, please see the ratings tab on the issuer/entity page on www.moody's.com for the most updated credit rating action information and rating history.

Detailed credit considerations

Effective management of the bankruptcy and subsequent payment default by one sponsor company representing about 5% of revenues

In March 2018, FES filed for Chapter 11 bankruptcy protection, sought to reject the ICPA, and stopped paying its approximately 5% share of OVEC's costs. In July 2018, the bankruptcy court granted FES's motion to reject the contract based on a "business judgment" rather than a "public interest" standard. OVEC is currently challenging the bankruptcy court's approval of FES' rejection of the ICPA, as well as the court's decision to bar the Federal Energy Regulatory Commission (FERC) from the process. OVEC's challenges have been accepted for review by the United States Court of appeals for the Sixth Circuit. In the meantime, OVEC has filed a rejection damages claim of approximately \$540 million against FES. Any damage awards could be used to offset future FES obligations, and for debt repayment.

Following rejection of the ICPA, the FES share of energy and capacity has been allocated to the other sponsors, who have been paying their share of OVEC's variable costs; however, no one has "stepped-up" for FES' share of OVEC's fixed cost obligations. We estimate FES' share of OVEC's fixed costs to be approximately \$17 million per year. In sensitivity testing taking into account FES' share of energy and capacity revenues that are being paid, we estimate the shortfall could be reduced to about \$10-\$13 million per year; however these revenues are currently being allocated to the non-defaulting sponsors. As such, OVEC is currently bearing the entire cost of the shortfall, illustrating the exposure created by the lack of step-up provision in the current ICPA.

Fortunately for OVEC, the shortfall created by the FES default is relatively modest and, as there was ample warning of FES' impending default, management was able to take steps to mitigate its impact. These steps include funding a debt reserve at a rate of about \$30 million per year (current balance is about \$60 million), and the retention of the return on equity portion of its rates (approximately \$2.5 million per year) as a cushion. This equity cushion would be sufficient to cover future FES shortfalls in the event the current FES shortfall is covered by short-term borrowing.

To date, there have been no draws from the debt reserve, and as of September 30, 2018, OVEC had \$60 million of unrestricted cash on hand. In addition to the debt reserve, OVEC's long-term investments include about \$70 million received as part of a prior settlement with the Department of Energy (DOE) that could be utilized to cover future shortfalls. The DOE funds had been ear-marked as a source of funding for future postretirement benefits; however OVEC has the ability to include a postretirement benefits charge in the fixed costs billed to the sponsors. This liquidity provides sufficient near term coverage for the FES shortfall, and we expect the sponsors will continue to work toward implementing a longer term solution, including potential credit enhancing improvements to the ICPA, after there is resolution of the issues surrounding the FES bankruptcy.

While it has not filed for bankruptcy, FirstEnergy Corp.'s (FirstEnergy: Baa3, stable) other merchant subsidiary, Allegheny Energy Supply (AES, not rated) (3% of revenues) recently sold all of its non-OVEC generating assets and repaid all of its debt, leaving the company with very limited independent revenue generating ability. AES is continuing to meet its OVEC obligations, however we estimate its earnings shortfall to be around \$5 million per year. AES' share of OVEC's fixed cost is about \$10 million per year. As such, if it were also to default, the combined FES and AES shortfalls would still be less than the approximately \$30 million per year OVEC is currently collecting as a reserve.

Full cost pass through of costs provided by the ICPA historically offset OVEC's weak financial profile

The ICPA contractually binds the sponsor group to pay a demand charge covering all non-fuel costs incurred by OVEC, including debt service, irrespective of plant availability or whether the sponsors take power from OVEC. Sponsor payments are semi-monthly, which we view positively versus the semi-annual payment of interest, as the timing allows OVEC to build the collection of required debt service before it is due. There is also an energy charge designed to recover all fuel-related costs and is payable based on each sponsor's pro-rata share of electricity volumes.

Prior to June 2016, the sponsors made dispatch decisions independently. If a sponsor decided not to take its allocation of the output, it was offered to the remaining sponsors. If the other sponsors did not choose to take that energy, OVEC did not generate the power. Beginning in 2016, OVEC bids over 90% of its energy into the PJM Interconnection (PJM) market on behalf of all of the sponsors, and its two plants will only generate power to the extent it is economic (dispatched by the system operator). Sponsor companies receive their pro-rata share of energy revenues and pay their pro-rata share of fuel costs.

Following FES' March 2018 bankruptcy filing, and the court's July 2018 acceptance of FES' rejection of the ICPA, FES' share of energy has been taken by the remaining sponsors. The sponsors have accepted their allocations and have been paying their pro-rata share of the related variable production costs, but not fixed costs.

The cost recovery provided by the ICPA helps to offset financial metrics that are weak when viewed in the context of Moody's rating methodology for regulated electric and gas utilities (which applies to the majority of the off-takers). In 2017, cash flow from operations excluding changes in working capital (CFO pre-WC) to debt was about 7.5%, marginally stronger than the 5.0% and 4.1% demonstrated in 2016 and 2015. Within the context of our rating methodology for regulated electric and gas utilities, these metrics are typically reflective of a speculative grade credit profile.

On the other hand, the sponsor take-or-pay type obligations that are created under the ICPA result in a structure that, within our rated universe, is more akin to that of a municipal joint action agency, (albeit with primarily non-municipal participants). As a result, we evaluate OVEC under the US municipal joint action agencies rating methodology (JAA Methodology). It is fairly common for joint action agencies to look to recover their costs with little or no margin. Within the context of the JAA Methodology for take-or-pay projects, a fixed obligation charge coverage ratio in the range of 1.0x-1.6x receives a score of "Baa". For 2017, we calculate OVEC's fixed obligation coverage ratio as 1.23x, and its three year historical average is 1.21x. Going forward, even with the shortfall created by the FES bankruptcy, we expect that OVEC will produce a fixed obligation coverage ratio above 1.0x, incorporating the ongoing debt reserve funding, the metric should remain around 1.2x.

Primarily investment grade credit quality of owner/off-takers

With the exception of FES and AES, we view the remainder of OVEC's sponsors (approximately 92%) as having strong investment grade characteristics. However, as the obligations are several and not joint, within the context of our JAA Methodology scorecard grid, the score for this factor is capped at two notches above the weakest link. Since there currently is no "step-up" requirement in the OVEC ICPA, the "weakest link" is the lowest rating in the sponsor group (currently FES which is in default), thereby constraining the score for this factor (45% weight) at B3 - the floor for this factor in the scorecard grid.

The OVEC sponsor group includes: American Electric Power Company, Inc. (AEP), the largest shareholder with 43.5% in total, through its subsidiaries Ohio Power Company (OPCo: A2, stable) at 19.9%, Appalachian Power Company (Baa1, stable) at 15.7%, and Indiana Michigan Power Company (A3, stable) at 7.9%. Buckeye Power Generating LLC (Baa1, stable) is the next largest shareholder with about 18.0%, followed by Duke Energy Ohio, Inc. (Duke Ohio: Baa1, stable) with 9.0% and FirstEnergy Corp. (FirstEnergy: Baa3, stable) with 8.4% through its wholesale generating subsidiaries FirstEnergy Solutions Corp. (not rated) at 4.9%, Allegheny Energy Supply (not rated) at 3.0% and regulated utility Monongahela Power (Baa2, stable) at 0.5%. PPL Corporation (Baa2, stable) has an 8.1% stake through Louisville Gas and Electric (A3, stable) at 5.6% and Kentucky Utilities (A3, stable) at 2.5%, with the remainder held by Peninsula Generation Cooperative (not rated) at 6.7%, Dayton Power & Light (DPL, Baa2, positive) at 4.9%, and Southern Indiana Gas & Electric (A2, negative) at 1.5%. Peninsula Generation Cooperative (Peninsula) and its parent company, Wolverine Power Supply (Wolverine), are not rated by Moody's. However, we view Peninsula and Wolverine as having investment grade-like characteristics.

Regulatory uncertainty for Ohio based sponsors has diminished

The state of Ohio's transition to a deregulated market for electricity resulted in some uncertainty regarding the permanency and mechanics by which the Ohio based OVEC participants that were once vertically integrated utilities (OPCo, Duke Ohio and DPL) would recover their OVEC obligations. Importantly, the OVEC obligations of these entities remain with the utilities that are parties to the ICPA, even though the sponsors may no longer own any generating assets. The ICPA does not contain a "regulatory out" provision, so the risk of non-recovery lies with the sponsor participants.

In prior rate proceedings, the Public Utilities Commission of Ohio (PUCO) allowed the establishment of placeholder riders, initially set at zero, for the recovery of costs associated with the Ohio utilities' OVEC obligations. In 2016 and 2017, the PUCO authorized OPCo and DPL's utilization of their specific OVEC riders through 2024 and 2023, respectively. The PUCO'S OPCo decision was recently upheld by the Ohio Supreme Court. Duke Ohio's request is still pending. Legislative efforts to make utility cost recovery of OVEC obligations more permanent are also underway.

OVEC's plants are challenged to be cost competitive in current low priced power markets

The low natural gas price environment and greater customer efficiencies/conservation efforts have kept the market price for on-peak energy at the AEP-Dayton hub of PJM during 2018 around \$40 per MWh; off-peak prices have generally been around \$30 per MWh. This is considerably less than OVEC's all-in cost of power to its participants, which in 2018 is estimated to be about \$55 per MWh (including fixed costs and debt service). OVEC has been undertaking cost reduction efforts and estimates its energy only costs are currently around \$25 MWh, which frequently allows the plants to run as base load, as they were designed, which reduces operational costs and brings down their overall cost per MWh. For example, OVEC's 2018 all-in cost of \$55 MWh is a significant improvement from the \$64-65 MWh experienced in 2013 and 2015, and below the \$56 MWh experienced in 2014 when production spiked due to severe winter weather. For 2019, OVEC estimates the all-in cost of power to its sponsor companies will be similar to 2018.

Beginning in June 2016, OVEC became responsible for bidding all of the PJM sponsor's available energy into the market, so the entirety of the plants are dispatched on a consistent basis when it is economic. This dispatch practice has improved the plant's use factor (percentage of power scheduled versus power availability) to approximately 84% in 2018 and 2017 compared to approximately 71% in 2016. Increased usage contributes to a lower all-in per MWh cost of power for the sponsors. We note that as a strictly merchant plant, in today's market, the plant would not be able to generate sufficient cash flow cover its fixed costs and service its \$1.4 billion of debt.

Elevated carbon transition risk

OVEC has an elevated carbon transition risk profile because its operations are limited to the generation of electricity from two coal-fired electric generating plants: the Kyger Creek Plant (1,086 MW) in Ohio and the Clifty Creek plant (1,304 MW) in Indiana. This places the company at a higher risk than other joint action agencies or regulated and municipal utilities that may have a more diversified generating base or own transmission and distribution assets.

Liquidity analysis

OVEC's liquidity is constrained as its partially drawn bank credit facility, which includes a material adverse change clause for new borrowings, is current and due in less than one year. For the twelve months ended September 30, 2018, OVEC generated approximately \$123 million in cash flow from operations (CFO), invested \$14 million in capital expenditures and made no dividend payments, resulting in free cash flow (FCF) of approximately \$109 million. Over the next 12 months, with limited capital expenditures and no dividend payments, the company should continue to be free cash flow positive. In addition, as of December 31, 2017, OVEC had approximately 97 days of liquidity (including the liquid portion of long term investments) on hand, an increase compared to the 68 days at the end of 2016. These figures fall within the range of 30 – 100 days indicated for a score of "Baa" on this factor in the JAA methodology.

Additional external liquidity is provided by OVEC's \$200 million unsecured bank revolving facility which matures in November 2019, but is currently in the process of being extended. Our rating and stable outlook assume this extension is completed in the early part of 2019. At September 30, 2018, OVEC had \$85 million borrowed under this line of credit. The facility has a covenant requiring maintenance of a minimum of \$11 million of consolidated net worth (defined as stockholders' equity); as of September 30, 2018, we estimated the level to be about \$23 million. Draws under the facility require a representation of no material adverse change, a credit negative as it may preclude borrowing under the facility when it is needed most. As such, we have not included revolver availability in our calculation of days liquidity on hand.

As mentioned earlier, management has taken proactive steps to shore up its available liquidity in order to provide near-term coverage for the FES shortfall. Traditionally, joint action agencies will establish a debt service reserve (typically covering one year of debt service) for the benefit of the lenders. At its December 2016 meeting, the OVEC Board authorized the funding of a \$44 million debt service reserve over 18 months beginning January 2017, which was equivalent to approximately one third of a year of debt service. OVEC now plans to continue funding this debt reserve at a rate of about \$30 million per year (current balance is about \$60 million), at least until there is one year of debt service. To date, there have been no draws from the reserve and as of September 30, 2018, OVEC had \$60 million of unrestricted cash on hand. In addition to the debt reserve, OVEC's long-term investments also include about \$70 million received as part of a prior settlement with the Department of Energy, which could be utilized to cover shortfalls.

Over the next twelve months, we expect OVEC's scheduled debt amortization of approximately \$50 million to be recovered through the sponsor's demand charge payments. The company's next non-amortizing debt maturity is in October 2019, when \$100 million of revenue bonds mature. In addition, OVEC's upcoming maturities include: 1) \$25 million of Ohio Air Quality Development Authority

(OAQDA) variable rate revenue bonds (due in 2026) with letter of credit backing expiring in November 2019, and 2) \$50 million of Indiana Finance Authority (IFA) variable rate revenue bonds (due in 2040) with a bank agreement expiring in August 2020. OVEC expects to extend the maturities of these upcoming facilities.

Structural considerations

The strength of the OVEC ICPA is a key factor in determining its credit quality. However, as noted above, the sponsor obligations under the ICPA are several, and there is no requirement for a step-up in payments in the event of a shortfall. A step-up provision, which is common for joint action agencies, would typically require the non-defaulting participants to increase their payments by a maximum percentage (typically 15-25%) in the event a participant default. The ICPA limits assignments of the sponsor obligations to entities that have investment grade ratings from both Moody's and Standard & Poor's. However, there is no ongoing requirement that the existing Sponsors maintain investment grade ratings.

Rating methodology and scorecard factors

Moody's evaluates OVEC's financial performance relative to the US Municipal Joint Action Agencies rating methodology and, as depicted below, based on a lowest possible sponsor score of "B3", the scorecard indicated rating for OVEC is Ba3, two notches below OVEC's Ba1 rating. The Ba1 rating recognizes the small, manageable size of the defaulting sponsor and the overall credit quality of the sponsor group. Our view reflects our expectation that the non-defaulting sponsors will continue to support OVEC through reserves or other means until a longer term solution to the FES shortfall is achieved. Notching factors reflect the current lack of a traditional step-up feature.

Exhibit 1

Factor	Subfactor/Description	Score	Metric
1. Participant Credit Quality and Cost Recovery Framework	a) Participant credit quality. Cost recovery structure and governance	B3	
2. Asset Quality	a) Asset diversity, complexity and history	Baa	
3. Competitiveness	a) Cost competitiveness relative to market	Ba	
4. Financial Strength and Liquidity	a) Adjusted days liquidity on hand (3-year avg) (days)	Baa	69
	b) Debt ratio (3-year avg) (%)	Baa	97%
	c) Fixed obligation charge coverage ratio (3-year avg) (x)	Baa	1.21
Material Asset Event Risk	Does agency have event risk?	No	
Notching Factors		Notch	
	1 - Contractual Structure and Legal Environment	-0.5	
	2- Participant Diversity and Concentration	0	
	3 - Construction Risk	0	
	4 - Debt Service Reserve, Debt Structure and Financial Engineering	0	
	5 - Unmitigated Exposure to Wholesale Power Markets	0	
Scorecard Indicated Rating:		Ba3	

Source: Moody's Investors Service

Ratings

Exhibit 2

Category	Moody's Rating
OHIO VALLEY ELECTRIC CORP	
Outlook	Stable
Sr Unsec Bank Credit Facility	Ba1
Senior Unsecured	Ba1

Source: Moody's Investors Service

© 2018 Moody's Corporation, Moody's Investors Service, Inc., Moody's Analytics, Inc. and/or their licensors and affiliates (collectively, "MOODY'S"). All rights reserved.

CREDIT RATINGS ISSUED BY MOODY'S INVESTORS SERVICE, INC. AND ITS RATINGS AFFILIATES ("MIS") ARE MOODY'S CURRENT OPINIONS OF THE RELATIVE FUTURE CREDIT RISK OF ENTITIES, CREDIT COMMITMENTS, OR DEBT OR DEBT-LIKE SECURITIES, AND MOODY'S PUBLICATIONS MAY INCLUDE MOODY'S CURRENT OPINIONS OF THE RELATIVE FUTURE CREDIT RISK OF ENTITIES, CREDIT COMMITMENTS, OR DEBT OR DEBT-LIKE SECURITIES. MOODY'S DEFINES CREDIT RISK AS THE RISK THAT AN ENTITY MAY NOT MEET ITS CONTRACTUAL, FINANCIAL OBLIGATIONS AS THEY COME DUE AND ANY ESTIMATED FINANCIAL LOSS IN THE EVENT OF DEFAULT. CREDIT RATINGS DO NOT ADDRESS ANY OTHER RISK, INCLUDING BUT NOT LIMITED TO: LIQUIDITY RISK, MARKET VALUE RISK, OR PRICE VOLATILITY. CREDIT RATINGS AND MOODY'S OPINIONS INCLUDED IN MOODY'S PUBLICATIONS ARE NOT STATEMENTS OF CURRENT OR HISTORICAL FACT. MOODY'S PUBLICATIONS MAY ALSO INCLUDE QUANTITATIVE MODEL-BASED ESTIMATES OF CREDIT RISK AND RELATED OPINIONS OR COMMENTARY PUBLISHED BY MOODY'S ANALYTICS, INC. CREDIT RATINGS AND MOODY'S PUBLICATIONS DO NOT CONSTITUTE OR PROVIDE INVESTMENT OR FINANCIAL ADVICE, AND CREDIT RATINGS AND MOODY'S PUBLICATIONS ARE NOT AND DO NOT PROVIDE RECOMMENDATIONS TO PURCHASE, SELL, OR HOLD PARTICULAR SECURITIES. NEITHER CREDIT RATINGS NOR MOODY'S PUBLICATIONS COMMENT ON THE SUITABILITY OF AN INVESTMENT FOR ANY PARTICULAR INVESTOR. MOODY'S ISSUES ITS CREDIT RATINGS AND PUBLISHES MOODY'S PUBLICATIONS WITH THE EXPECTATION AND UNDERSTANDING THAT EACH INVESTOR WILL, WITH DUE CARE, MAKE ITS OWN STUDY AND EVALUATION OF EACH SECURITY THAT IS UNDER CONSIDERATION FOR PURCHASE, HOLDING, OR SALE.

MOODY'S CREDIT RATINGS AND MOODY'S PUBLICATIONS ARE NOT INTENDED FOR USE BY RETAIL INVESTORS AND IT WOULD BE RECKLESS AND INAPPROPRIATE FOR RETAIL INVESTORS TO USE MOODY'S CREDIT RATINGS OR MOODY'S PUBLICATIONS WHEN MAKING AN INVESTMENT DECISION. IF IN DOUBT YOU SHOULD CONTACT YOUR FINANCIAL OR OTHER PROFESSIONAL ADVISER. ALL INFORMATION CONTAINED HEREIN IS PROTECTED BY LAW, INCLUDING BUT NOT LIMITED TO, COPYRIGHT LAW, AND NONE OF SUCH INFORMATION MAY BE COPIED OR OTHERWISE REPRODUCED, REPACKAGED, FURTHER TRANSMITTED, TRANSFERRED, DISSEMINATED, REDISTRIBUTED OR RESOLD, OR STORED FOR SUBSEQUENT USE FOR ANY SUCH PURPOSE, IN WHOLE OR IN PART, IN ANY FORM OR MANNER OR BY ANY MEANS WHATSOEVER, BY ANY PERSON WITHOUT MOODY'S PRIOR WRITTEN CONSENT.

CREDIT RATINGS AND MOODY'S PUBLICATIONS ARE NOT INTENDED FOR USE BY ANY PERSON AS A BENCHMARK AS THAT TERM IS DEFINED FOR REGULATORY PURPOSES AND MUST NOT BE USED IN ANY WAY THAT COULD RESULT IN THEM BEING CONSIDERED A BENCHMARK.

All information contained herein is obtained by MOODY'S from sources believed by it to be accurate and reliable. Because of the possibility of human or mechanical error as well as other factors, however, all information contained herein is provided "AS IS" without warranty of any kind. MOODY'S adopts all necessary measures so that the information it uses in assigning a credit rating is of sufficient quality and from sources MOODY'S considers to be reliable including, when appropriate, independent third-party sources. However, MOODY'S is not an auditor and cannot in every instance independently verify or validate information received in the rating process or in preparing the Moody's publications.

To the extent permitted by law, MOODY'S and its directors, officers, employees, agents, representatives, licensors and suppliers disclaim liability to any person or entity for any indirect, special, consequential, or incidental losses or damages whatsoever arising from or in connection with the information contained herein or the use of or inability to use any such information, even if MOODY'S or any of its directors, officers, employees, agents, representatives, licensors or suppliers is advised in advance of the possibility of such losses or damages, including but not limited to: (a) any loss of present or prospective profits or (b) any loss or damage arising where the relevant financial instrument is not the subject of a particular credit rating assigned by MOODY'S.

To the extent permitted by law, MOODY'S and its directors, officers, employees, agents, representatives, licensors and suppliers disclaim liability for any direct or compensatory losses or damages caused to any person or entity, including but not limited to by any negligence (but excluding fraud, willful misconduct or any other type of liability that, for the avoidance of doubt, by law cannot be excluded) on the part of, or any contingency within or beyond the control of, MOODY'S or any of its directors, officers, employees, agents, representatives, licensors or suppliers, arising from or in connection with the information contained herein or the use of or inability to use any such information.

NO WARRANTY, EXPRESS OR IMPLIED, AS TO THE ACCURACY, TIMELINESS, COMPLETENESS, MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE OF ANY SUCH RATING OR OTHER OPINION OR INFORMATION IS GIVEN OR MADE BY MOODY'S IN ANY FORM OR MANNER WHATSOEVER.

Moody's Investors Service, Inc., a wholly-owned credit rating agency subsidiary of Moody's Corporation ("MCO"), hereby discloses that most issuers of debt securities (including corporate and municipal bonds, debentures, notes and commercial paper) and preferred stock rated by Moody's Investors Service, Inc. have, prior to assignment of any rating, agreed to pay to Moody's Investors Service, Inc. for appraisal and rating services rendered by it fees ranging from \$1,500 to approximately \$2,500,000. MCO and MIS also maintain policies and procedures to address the independence of MIS's ratings and rating processes. Information regarding certain affiliations that may exist between directors of MCO and rated entities, and between entities who hold ratings from MIS and have also publicly reported to the SEC an ownership interest in MCO of more than 5%, is posted annually at www.moody's.com under the heading "Investor Relations — Corporate Governance — Director and Shareholder Affiliation Policy."

Additional terms for Australia only: Any publication into Australia of this document is pursuant to the Australian Financial Services License of MOODY'S affiliate, Moody's Investors Service Pty Limited ABN 61 003 399 657 AFSL 336969 and/or Moody's Analytics Australia Pty Ltd ABN 94 105 136 972 AFSL 383569 (as applicable). This document is intended to be provided only to "wholesale clients" within the meaning of section 761G of the Corporations Act 2001. By continuing to access this document from within Australia, you represent to MOODY'S that you are, or are accessing the document as a representative of, a "wholesale client" and that neither you nor the entity you represent will directly or indirectly disseminate this document or its contents to "retail clients" within the meaning of section 761G of the Corporations Act 2001. MOODY'S credit rating is an opinion as to the creditworthiness of a debt obligation of the issuer, not on the equity securities of the issuer or any form of security that is available to retail investors. It would be reckless and inappropriate for retail investors to use MOODY'S credit ratings or publications when making an investment decision. If in doubt you should contact your financial or other professional adviser.

Additional terms for Japan only: Moody's Japan K.K. ("MJJK") is a wholly-owned credit rating agency subsidiary of Moody's Group Japan G.K., which is wholly-owned by Moody's Overseas Holdings Inc., a wholly-owned subsidiary of MCO. Moody's SF Japan K.K. ("MSFJ") is a wholly-owned credit rating agency subsidiary of MJJK. MSFJ is not a Nationally Recognized Statistical Rating Organization ("NRSRO"). Therefore, credit ratings assigned by MSFJ are Non-NRSRO Credit Ratings. Non-NRSRO Credit Ratings are assigned by an entity that is not a NRSRO and, consequently, the rated obligation will not qualify for certain types of treatment under U.S. laws. MJJK and MSFJ are credit rating agencies registered with the Japan Financial Services Agency and their registration numbers are FSA Commissioner (Ratings) No. 2 and 3 respectively.

MJJK or MSFJ (as applicable) hereby disclose that most issuers of debt securities (including corporate and municipal bonds, debentures, notes and commercial paper) and preferred stock rated by MJJK or MSFJ (as applicable) have, prior to assignment of any rating, agreed to pay to MJJK or MSFJ (as applicable) for appraisal and rating services rendered by it fees ranging from JPY200,000 to approximately JPY350,000,000.

MJJK and MSFJ also maintain policies and procedures to address Japanese regulatory requirements.

CLIENT SERVICES

Americas	[REDACTED]
Asia Pacific	[REDACTED]
Japan	[REDACTED]
EMEA	[REDACTED]

RatingsDirect®

Research Update:

Ohio Valley Electric Corp. Downgraded To 'BB+' From 'BBB-'; On CreditWatch Negative

Primary Credit Analyst:

William Hernandez, New York + [REDACTED]

Secondary Contact:

Gerrit W Jepsen, CFA, New York [REDACTED]

Table Of Contents

Rating Action Overview

Rating Action Rationale

CreditWatch

Company Description

Issue Ratings - Recovery Analysis

Ratings Score Snapshot

Related Criteria

Ratings List

Research Update:

Ohio Valley Electric Corp. Downgraded To 'BB+' From 'BBB-'; On CreditWatch Negative

Rating Action Overview

- Ohio Valley Electric Corp. (OVEC) encountered the loss of one of its sponsors/off-takers in 2018 that has not been offset by other sponsors.
- On Dec. 20, 2018, S&P Global Ratings lowered its issuer credit rating on OVEC to 'BB+' from 'BBB-' and placed the rating on CreditWatch with negative implications.
- At the same time, we lowered the rating on OVEC's senior unsecured debt to 'BB+' from 'BBB-' and placed the rating on CreditWatch with negative implications. We assigned a '4' recovery rating to this debt, which reflects our expectations for an average recovery (30%-50%; rounded estimate: 35%) in a simulated default scenario.
- We revised OVEC's stand-alone credit profile to 'b+' from 'bb-' to reflect the heightened risk around renewing the credit facility, refinancing debt maturities, and extremely leveraged financial measures. This offsets any benefit derived from the large majority of the sponsors being regulated utilities.
- The CreditWatch with negative implications reflects greater uncertainty regarding debt repayment following the loss of one of its sponsors amid material 2019 maturities. We would lower the ratings if we do not see near-term tangible evidence of progress toward the extension of its credit facility and the refinancing of its late 2019 maturities, or if OVEC sponsor support weakens.

Rating Action Rationale

The downgrade on OVEC reflects the loss of one of its sponsors in 2018. FirstEnergy Solutions (FES), an approximate 5% sponsor of OVEC, filed for bankruptcy in March 2018 and defaulted on its contractual obligations under the Inter-Company Power Agreement (ICPA) between OVEC and its sponsors. We view this default as raising risk for OVEC as none of its remaining sponsors have explicitly compensated for the FES shortfall.

Our assessment of OVEC's business risk profile incorporates the company's merchant generation assets that benefit from the ICPA for all of the available capacity and energy. The ICPA, which includes numerous entities that take power from OVEC under the ICPA, a long-term, off-take agreement, provides for recovery of all of OVEC's costs, including fuel, operations and maintenance, and debt-service payments, including principal and interest, regardless of unit performance, on a semi-monthly basis and ensuring a stable and

predictable revenue stream. The agreement terminates in 2040, when the company's debt matures. The obligation of the off-takers under the agreement is several but not joint, exposing OVEC to the risk of nonpayment in the event of a defaulting participant because non-defaulting members are not obligated to cover the shortfall.

Our assessment of OVEC's business risk also reflects the negative challenges OVEC and its sponsors face in managing its business risk in a market and operating environment that is becoming increasingly more difficult for coal-fired generating plants. OVEC owns two coal plants with about 2,400 MW of capacity that consist of 11 units in Indiana and Ohio. The assets lack fuel diversity since they are all coal fired. OVEC has completed the installation of all current necessary environmental compliance equipment, affording the company some operating flexibility. OVEC began dispatching the assets into PJM Interconnection LLC (PJM) in 2016, allowing the off-takers to participate in PJM's capacity market by economically dispatching the individual generating units and leading to overall improved capacity utilization. Earlier this month, OVEC integrated its transmission system into PJM, facilitating cost savings and improved efficiencies of reliability, coordination, and planning services provided by PJM. Some of these efficiencies will translate into additional capacity that the sponsors can sell back into PJM.

Our assessment of OVEC's financial risk profile largely is a function of the company's capitalization which consists almost entirely of debt. We expect OVEC's capital spending will average \$15 million per year through 2020 but could increase significantly starting in 2021 pending proposed environmental regulations. Under our base-case scenario, gross margins benefit from recovery of all expenses including debt service and scheduled amortization. Thus, we expect that adjusted funds from operations (FFO) to debt will be in the 5%-6% range while debt to EBITDA will moderate to about 8x-9x. Both measures indicate OVEC has minimal financial cushion, and debt will have to be gradually and consistently reduced to support credit quality.

CreditWatch

The CreditWatch with negative implications on OVEC addresses the increase in uncertainty following FES' filing for bankruptcy in 2018 and the lack of clarity surrounding sponsor support amid the company's upcoming 2019 maturities, which includes its credit facility that expires on Nov. 14, 2019, and \$100 million in long-term debt maturing on Oct. 1, 2019. We would lower the ratings if we do not see tangible evidence in early 2019 regarding the renewal of its credit facility in addition to proactive steps facilitating the extension of its long-term debt scheduled late 2019.

The ratings on OVEC are highly dependent on sponsor support, including the largest sponsor, American Electric Power Co. Inc. As such, we would lower the ratings if we determine that sponsor support wavers slightly at any time.

OVEC has minimal financial cushion at its current rating, and under our

base-case we expect adjusted FFO to debt of 5%-6%. Any deterioration below our base-case expectations would likely result in a downgrade.

Company Description

Ohio Valley Electric Corp. (OVEC) and its subsidiary Indiana Kentucky Electric Corp. (IKEC) were formed in 1952. Today, OVEC owns and operates two coal-fired electric generating plants consisting of 11 generating units with total capacity of about 2,400 MW in Ohio and Indiana and 705 circuit miles of related 345 KV transmission system. OVEC has 12 different common stock holders & 13 sponsoring companies made up of 11 investor owned utilities and two public power entities. These entities purchase power from OVEC under the long-term power agreement that ends in 2040.

Issue Ratings - Recovery Analysis

Key analytical conclusions

- Our recovery analysis assumes a hypothetical default in 2019 due to OVEC's significant debt maturities due next year. Our default scenario assumes the inability to refinance these debt maturities. If these maturities are extended we will update our recovery analysis.
- Our valuation assumes an EBITDA multiple of 4.0x, which is at the low end of what we assume for other contracted power generation entities, reflecting the limited diversity of the assets in terms of geography and fuel type, as well as uncertainty about the long-term viability of coal generation and the age of the plants. Our emergence EBITDA assumption is consistent with recent profitability.

Recovery assumptions and simplified waterfall

- Simulated year of default: 2019

Simplified waterfall

- Emergence multiple: 4.0x
- Emergence EBITDA: \$147 million
- Gross enterprise value: \$587 million
- Net recovery value after administrative costs (5%): \$557 million
- Total value available to unsecured claims: \$557 million
- Unsecured debt claims: \$1,527 million
- --Recovery range: 30%-50%; rounded estimate: 35%

Notes: Debt amounts include six months of accrued interest that we assume will be owed at default. We generally assume usage of 85% for cash flow revolvers at default.

Ratings Score Snapshot

Issuer Credit Rating: BB+/Watch Neg/--

Business risk: Satisfactory

- Country risk: Very low
- Industry risk: Moderately high
- Competitive position: Satisfactory

Financial risk: Highly leveraged

- Cash flow/Leverage: Highly leveraged

Anchor: b+

Modifiers

- Diversification/Portfolio effect: Neutral (no impact)
- Capital structure: Neutral (no impact)
- Financial policy: Neutral (no impact)
- Liquidity: Adequate (no impact)
- Management and governance: Satisfactory (no impact)
- Comparable rating analysis: Neutral (no impact)

Stand-alone credit profile: b+

- Group credit profile: a-
- Entity status within group: Strategically Important (+3 notches from SACP)

Related Criteria

- General Criteria: Methodology For Linking Long-Term And Short-Term Ratings , April 7, 2017
- Criteria - Corporates - General: Recovery Rating Criteria For Speculative-Grade Corporate Issuers, Dec. 7, 2016
- Criteria - Corporates - General: Methodology And Assumptions: Liquidity Descriptors For Global Corporate Issuers, Dec. 16, 2014
- Criteria - Corporates - Industrials: Key Credit Factors For The Unregulated Power And Gas Industry, March 28, 2014
- General Criteria: Group Rating Methodology, Nov. 19, 2013
- Criteria - Corporates - General: Corporate Methodology: Ratios And Adjustments, Nov. 19, 2013

- Criteria - Corporates - General: Corporate Methodology, Nov. 19, 2013
- General Criteria: Country Risk Assessment Methodology And Assumptions, Nov. 19, 2013
- General Criteria: Methodology: Industry Risk, Nov. 19, 2013
- General Criteria: Methodology: Management And Governance Credit Factors For Corporate Entities And Insurers, Nov. 13, 2012
- General Criteria: Use Of CreditWatch And Outlooks, Sept. 14, 2009

Ratings List

Downgraded; CreditWatch Action

	To	From
Ohio Valley Electric Corp. Issuer Credit Rating	BB+/Watch Neg/--	BBB-/Negative/--

Issue-level Ratings Lowered; CreditWatch Action; Recovery Ratings Assigned

	To	From
Ohio Valley Electric Corp. Senior Unsecured Recovery Rating	BB+/Watch Neg 4 (35%)	BBB- --

Certain terms used in this report, particularly certain adjectives used to express our view on rating relevant factors, have specific meanings ascribed to them in our criteria, and should therefore be read in conjunction with such criteria. Please see Ratings Criteria at www.standardandpoors.com for further information. Complete ratings information is available to subscribers of RatingsDirect at www.capitaliq.com. All ratings affected by this rating action can be found on S&P Global Ratings' public website at www.standardandpoors.com. Use the Ratings search box located in the left column.

Copyright © 2018 by Standard & Poor's Financial Services LLC. All rights reserved.

No content (including ratings, credit-related analyses and data, valuations, model, software or other application or output therefrom) or any part thereof (Content) may be modified, reverse engineered, reproduced or distributed in any form by any means, or stored in a database or retrieval system, without the prior written permission of Standard & Poor's Financial Services LLC or its affiliates (collectively, S&P). The Content shall not be used for any unlawful or unauthorized purposes. S&P and any third-party providers, as well as their directors, officers, shareholders, employees or agents (collectively S&P Parties) do not guarantee the accuracy, completeness, timeliness or availability of the Content. S&P Parties are not responsible for any errors or omissions (negligent or otherwise), regardless of the cause, for the results obtained from the use of the Content, or for the security or maintenance of any data input by the user. The Content is provided on an "as is" basis. S&P PARTIES DISCLAIM ANY AND ALL EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, ANY WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR USE, FREEDOM FROM BUGS, SOFTWARE ERRORS OR DEFECTS, THAT THE CONTENT'S FUNCTIONING WILL BE UNINTERRUPTED OR THAT THE CONTENT WILL OPERATE WITH ANY SOFTWARE OR HARDWARE CONFIGURATION. In no event shall S&P Parties be liable to any party for any direct, indirect, incidental, exemplary, compensatory, punitive, special or consequential damages, costs, expenses, legal fees, or losses (including, without limitation, lost income or lost profits and opportunity costs or losses caused by negligence) in connection with any use of the Content even if advised of the possibility of such damages.

Credit-related and other analyses, including ratings, and statements in the Content are statements of opinion as of the date they are expressed and not statements of fact. S&P's opinions, analyses and rating acknowledgment decisions (described below) are not recommendations to purchase, hold, or sell any securities or to make any investment decisions, and do not address the suitability of any security. S&P assumes no obligation to update the Content following publication in any form or format. The Content should not be relied on and is not a substitute for the skill, judgment and experience of the user, its management, employees, advisors and/or clients when making investment and other business decisions. S&P does not act as a fiduciary or an investment advisor except where registered as such. While S&P has obtained information from sources it believes to be reliable, S&P does not perform an audit and undertakes no duty of due diligence or independent verification of any information it receives. Rating-related publications may be published for a variety of reasons that are not necessarily dependent on action by rating committees, including, but not limited to, the publication of a periodic update on a credit rating and related analyses.

To the extent that regulatory authorities allow a rating agency to acknowledge in one jurisdiction a rating issued in another jurisdiction for certain regulatory purposes, S&P reserves the right to assign, withdraw or suspend such acknowledgment at any time and in its sole discretion. S&P Parties disclaim any duty whatsoever arising out of the assignment, withdrawal or suspension of an acknowledgment as well as any liability for any damage alleged to have been suffered on account thereof.

S&P keeps certain activities of its business units separate from each other in order to preserve the independence and objectivity of their respective activities. As a result, certain business units of S&P may have information that is not available to other S&P business units. S&P has established policies and procedures to maintain the confidentiality of certain non-public information received in connection with each analytical process.

S&P may receive compensation for its ratings and certain analyses, normally from issuers or underwriters of securities or from obligors. S&P reserves the right to disseminate its opinions and analyses. S&P's public ratings and analyses are made available on its Web sites, www.standardandpoors.com (free of charge), and www.ratingsdirect.com and www.globalcreditportal.com (subscription), and may be distributed through other means, including via S&P publications and third-party redistributors. Additional information about our ratings fees is available at www.standardandpoors.com/usratingsfees.

STANDARD & POOR'S, S&P and RATINGSDIRECT are registered trademarks of Standard & Poor's Financial Services LLC.



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

Fitch Ratings-New York-08 November 2018: Fitch Ratings has affirmed the 'BBB-' Long-Term Issuer Default Rating (IDR) and senior unsecured rating of Ohio Valley Electric Corporation (OVEC). The ratings reflect the average credit profile of the sponsors under OVEC's intercompany power agreement (ICPA) while the Negative Outlook reflects the uncertainty surrounding the bankruptcy filing of sponsor FirstEnergy Solutions Corp (FES). The 'BBB-' rating reflects Fitch's view that OVEC has sufficient liquidity and flexibility to weather a transitory revenue shortfall and ultimately offset the loss of a sponsor.

Fitch considers steps taken by OVEC to date to be supportive of the maintenance of current ratings, even with the potential permanent loss of FES financial participation. In resolving the Negative Outlook, Fitch will consider not only the status of FES bankruptcy litigation but also potential steps to address the November 2019 maturity of the company's revolving credit facility and other potential refinancing opportunities.

KEY RATING DRIVERS

FirstEnergy Solutions Bankruptcy: The Negative Outlook reflects the uncertainty surrounding the March 31, 2018 bankruptcy filing of sponsor FES. Under the ICPA, FES is a 4.85% participant and is contractually obligated for its pro-rata share of power and expenses. OVEC has taken steps in anticipation of a FES bankruptcy, such as funding a debt service reserve and asserting the jurisdiction of the Federal Energy Regulatory Commission (FERC). The company started billing all of the sponsor companies for additional debt service in January 2017, and as of Sept. 30, 2018, OVEC had collected \$50 million to fund a debt service reserve. The company's stated intention is to build the reserve by \$30 million per year to ultimately \$120 million. OVEC is vigorously pursuing dual legal avenues of asserting FERC jurisdiction in the U.S. Court of Appeals and pursuing recovery for liquidated damages in the U.S. Bankruptcy Court proceedings.

Additional ICPA Protections: Since contract rejection, FES's share of the OVEC power has been made available to the other Sponsor Companies on a pro-rata basis, which pay only the energy (not demand) charge. Under the cost-plus recovery provision of the ICPA, OVEC has the ability to charge an equity return but has forgone doing so since 2014. The company is expected to reinstate the equity return, which will serve to partially offset the FES demand charge shortfall.

Short-Term Disruption Manageable: In addition to the debt service reserve, OVEC has sufficient liquidity to meet a temporary revenue shortfall with unrestricted cash equivalents and long-term investments totalling \$192 million at Sept. 30, 2018. The company also has \$115 million available on its \$200 million revolving credit facility. Fitch estimates that FES's annual OVEC demand charges prior to bankruptcy were approximately \$17 million per year.

ICPA Enforceability Is Key: OVEC's credit profile derives from the legal enforceability of the ICPA among OVEC and its sponsors. Sponsors are severally responsible to reimburse all of OVEC's expenditures, including debt service obligations, regardless of total electricity generated and supplied by OVEC. Due to the diversity of the sponsor base, Fitch takes into consideration the average credit profile of the sponsors rather than tying OVEC's ratings to that of the lowest-rated sponsor. Excluding FES, the average credit profile of the sponsor base has improved over the few past years, as evidenced by Fitch's upgrades of the IDRs of four sponsors with a total 48% share.

Off-Takers' Ability to Recover Costs: The continued ability of the sponsors to recover OVEC-related costs is an important rating driver. Off-takers representing 83% of OVEC's generation capacity can recover their OVEC-related costs either through a regulatory construct or through sponsors' membership charter provisions. Duke Energy Ohio is the only regulated off-taker that does not recover OVEC costs through a rate mechanism. The company reached a comprehensive settlement in April 2018, which if approved, would allow Duke Energy Ohio to recover OVEC costs via a rider mechanism and would bring the total amount of OVEC sponsors recovering expenses through regulated mechanisms to 92%.

Improving Capacity Factor: OVEC's generation profile compares favorably to similar coal-fired merchant generators and operating performance measures have historically been solid, with heat rate averaging 10,700 Btu/kWh and availability exceeding 70% in 2013-2017. The utilization factor has increased significantly since the integration into the PJM Interconnection LLC region in May 2016, reaching almost 84% in 2017. Nonetheless, OVEC's all-in costs exceed prevailing merchant power prices, and Fitch expects the plants to remain uneconomical for the foreseeable future.

DERIVATION SUMMARY

OVEC's credit profile is unique within Fitch's universe of rated power generators given the terms of the ICPA and ownership structure. The ratings on OVEC are derived from the legal enforceability of the ICPA and the average credit profile of the sponsors under the

agreement, since sponsors are severally responsible for reimbursing all of OVEC's expenditures irrespective of total electricity generated. 83% of generation capacity is contracted to investment-grade off-takers that can recover their OVEC-related costs either through a regulatory construct or through their membership charter. An additional utility sponsor is expected to receive regulatory approval soon for rider pass through of OVEC expenses, bringing the total to 92% of capacity. OVEC has strong legal ties to all its owners and strong operational ties to American Electric Power Company, Inc (AEP; BBB+/Stable), indirect owner of a 43% stake in OVEC, who provides key managerial and operational support. Fitch does not directly tie OVEC's ratings to that of the lowest-rated sponsor due to the diversity of the sponsor base.

OVEC's ratings are most closely comparable to merchant power generators selling power primarily under long term contracts to creditworthy counterparties and do not take on material commodity exposure. OVEC's IDR is above that of Nextera Energy Partners, LP (NEP; BB+/Stable), given the absence of structural subordination to project-level debt, but weaker than Southern Power Co. (BBB+/Negative), which has a superior diversified portfolio of assets and conservative forecasted leverage metrics.

KEY ASSUMPTIONS

Fitch's Key Assumptions Within Our Rating Case for the Issuer

- Capacity factor averaging 60% in 2018-2021;
- Stable credit profiles of off-takers, excluding FES;
- Debt repayments limited to amortization schedule;
- Brief revenue shortfall under the ICPA followed by replacement of sponsor and/or other permanent remediation mechanism.

RATING SENSITIVITIES

Developments That May, Individually or Collectively, Lead to Positive Rating Action

- Fitch would affirm OVEC's ratings should the sponsors with stressed financial profiles transfer their obligations to entities with investment grade profiles. Modification of the ICPA, incremental contributions or other similar mitigating actions from remaining sponsors or shareholders to permanently offset the loss a sponsor could also stabilize the ratings.
- Legislative and/or regulatory mechanisms establishing permanent regulated rate of return on OVEC investments, through charges and/or credits on customers' bills, could also stabilize the ratings.
- Material improvement of the average credit profiles of sponsors party to the ICPA.
- Refinancing or repayment of 2019 maturities.

Developments That May, Individually or Collectively, Lead to Negative Rating Action

- Financial restructuring of a sponsor leading to material financial losses and/or weakened liquidity would likely result in a negative rating action. Although not contemplated at this time, failure to replace a defaulted sponsor or to establish a reserve to meet permanent recovery shortfalls could result in a more-than-one-notch downgrade.
- Fitch would also take a negative rating action if compliance with new environmental rules, or other changes to the operating environment, materially limits OVEC's ability to achieve a high capacity factor and render the ICPA very expensive for the sponsors.

LIQUIDITY

Adequate Liquidity: At Sept. 30, 2018, OVEC had \$357 million of available liquidity, including \$61 million in unrestricted cash and cash equivalents. \$115 million available under its \$200 million revolving credit facility (expiry on Nov. 17, 2019). \$50 million debt service reserve and \$131 million unrestricted long-term financial investments. Semi-monthly settlement of accounts receivable from sponsors/off-takers materially reduces OVEC's working capital needs. Debt maturities in 2018 - 2021 are considered manageable. The company has \$85 million drawn on its \$200 million revolving credit facility that expires on Nov. 17, 2019, which Fitch expects the company to address prior to maturity.

FULL LIST OF RATING ACTIONS

Fitch has affirmed the following ratings:

Ohio Valley Electric Corporation

- Long-term IDR at 'BBB-';
- Senior unsecured debt and revenue bonds at 'BBB-'.

The Rating Outlook is Negative.

Contact:

Primary Analyst
Barbara Chapman, CFA
Senior Director

Fitch Ratings, Inc.
33 Whitehall Street
New York, NY 10004

Secondary Analyst
Jodi Hecht
Director
[REDACTED]

Committee Chairperson
Phil Smyth, CFA
Senior Director
[REDACTED]

Summary of Financial Statement Adjustments - There were no financial statement adjustments made that were material to the rating rationale outlined above.

Media Relations: Elizabeth Fogerty, New York, Tel: [REDACTED] Email: [REDACTED]

Additional information is available on www.fitchratings.com

Applicable Criteria

Corporate Rating Criteria (pub. 23 Mar 2018) (<https://www.fitchratings.com/site/re/10023785>)

Corporates Notching and Recovery Ratings Criteria (pub. 23 Mar 2018) (<https://www.fitchratings.com/site/re/10024585>)

Parent and Subsidiary Rating Linkage (pub. 16 Jul 2018) (<https://www.fitchratings.com/site/re/10036366>)

Additional Disclosures

Dodd-Frank Rating Information Disclosure Form (<https://www.fitchratings.com/site/dodd-frank-disclosure/10051420>)

Solicitation Status (<https://www.fitchratings.com/site/pr/10051420#solicitation>)

Endorsement Policy (<https://www.fitchratings.com/regulatory>)

ALL FITCH CREDIT RATINGS ARE SUBJECT TO CERTAIN LIMITATIONS AND DISCLAIMERS. PLEASE READ THESE LIMITATIONS AND DISCLAIMERS BY FOLLOWING THIS LINK:

[HTTPS://WWW.FITCHRATINGS.COM/UNDERSTANDINGCREDITRATINGS](https://www.fitchratings.com/understandingcreditratings). IN ADDITION, RATING DEFINITIONS AND THE TERMS OF USE OF SUCH RATINGS ARE AVAILABLE ON THE AGENCY'S PUBLIC WEB SITE AT WWW.FITCHRATINGS.COM. PUBLISHED RATINGS, CRITERIA, AND METHODOLOGIES ARE AVAILABLE FROM THIS SITE AT ALL TIMES. FITCH'S CODE OF CONDUCT, CONFIDENTIALITY, CONFLICTS OF INTEREST, AFFILIATE FIREWALL, COMPLIANCE, AND OTHER RELEVANT POLICIES AND PROCEDURES ARE ALSO AVAILABLE FROM THE CODE OF CONDUCT SECTION OF THIS SITE. DIRECTORS AND SHAREHOLDERS RELEVANT INTERESTS ARE AVAILABLE AT [HTTPS://WWW.FITCHRATINGS.COM/SITE/REGULATORY](https://www.fitchratings.com/site/regulatory). FITCH MAY HAVE PROVIDED ANOTHER PERMISSIBLE SERVICE TO THE RATED ENTITY OR ITS RELATED THIRD PARTIES. DETAILS OF THIS SERVICE FOR RATINGS FOR WHICH THE LEAD ANALYST IS BASED IN AN EU-REGISTERED ENTITY CAN BE FOUND ON THE ENTITY SUMMARY PAGE FOR THIS ISSUER ON THE FITCH WEBSITE.

Copyright © 2018 by Fitch Ratings, Inc., Fitch Ratings Ltd. and its subsidiaries. 33 Whitehall Street, NY, NY 10004. Telephone: 1-800-753-4824, (212) 908-0500. Fax: (212) 480-4435. Reproduction or retransmission in whole or in part is prohibited except by permission. All rights reserved. In issuing and maintaining its ratings and in making other reports (including forecast information), Fitch relies on factual information it receives from issuers and underwriters and from other sources Fitch believes to be credible. Fitch conducts a reasonable investigation of the factual information relied upon by it in accordance with its ratings methodology, and obtains reasonable verification of that information from independent sources, to the extent such sources are available for a given security or in a given jurisdiction. The manner of Fitch's factual investigation and the scope of the third-party verification it obtains will vary depending on the nature of the rated security and its issuer, the requirements and practices in the jurisdiction in which the rated security is offered and sold and/or the issuer is located, the availability and nature of relevant public information, access to the management of the issuer and its advisers, the availability of pre-existing third-party verifications such as audit reports, agreed-upon procedures letters, appraisals, actuarial reports, engineering reports, legal opinions and other reports provided by third parties, the availability of independent and competent third-party verification sources with respect to the particular security or in the particular jurisdiction of the issuer, and a variety of other factors. Users of Fitch's ratings and reports should understand that neither an enhanced factual investigation nor any third-party verification can ensure that all of the information Fitch relies on in connection with a rating or a report will be accurate and complete. Ultimately, the issuer and its advisers are responsible for the accuracy of the information they provide to Fitch and to the market in offering documents and other reports. In issuing its ratings and its reports, Fitch must rely on the work of experts, including independent auditors with respect to financial statements and attorneys with respect to legal and tax matters. Further, ratings and forecasts of financial and other information are inherently forward-looking and embody assumptions and predictions about future events that by their nature cannot be verified as facts. As a result, despite any verification of current facts, ratings and forecasts can be affected by future events or conditions that were not anticipated at the time a rating or forecast was issued or affirmed.

The information in this report is provided "as is" without any representation or warranty of any kind, and Fitch does not represent or

warrant that the report or any of its contents will meet any of the requirements of a recipient of the report. A Fitch rating is an opinion as to the creditworthiness of a security. This opinion and reports made by Fitch are based on established criteria and methodologies that Fitch is continuously evaluating and updating. Therefore, ratings and reports are the collective work product of Fitch and no individual, or group of individuals, is solely responsible for a rating or a report. The rating does not address the risk of loss due to risks other than credit risk, unless such risk is specifically mentioned. Fitch is not engaged in the offer or sale of any security. All Fitch reports have shared authorship. Individuals identified in a Fitch report were involved in, but are not solely responsible for, the opinions stated therein. The individuals are named for contact purposes only. A report providing a Fitch rating is neither a prospectus nor a substitute for the information assembled, verified and presented to investors by the issuer and its agents in connection with the sale of the securities. Ratings may be changed or withdrawn at any time for any reason in the sole discretion of Fitch. Fitch does not provide investment advice of any sort. Ratings are not a recommendation to buy, sell, or hold any security. Ratings do not comment on the adequacy of market price, the suitability of any security for a particular investor, or the tax-exempt nature or taxability of payments made in respect to any security. Fitch receives fees from issuers, insurers, guarantors, other obligors, and underwriters for rating securities. Such fees generally vary from US\$1,000 to US\$750,000 (or the applicable currency equivalent) per issue. In certain cases, Fitch will rate all or a number of issues issued by a particular issuer, or insured or guaranteed by a particular insurer or guarantor, for a single annual fee. Such fees are expected to vary from US\$10,000 to US\$1,500,000 (or the applicable currency equivalent). The assignment, publication, or dissemination of a rating by Fitch shall not constitute a consent by Fitch to use its name as an expert in connection with any registration statement filed under the United States securities laws, the Financial Services and Markets Act of 2000 of the United Kingdom, or the securities laws of any particular jurisdiction. Due to the relative efficiency of electronic publishing and distribution, Fitch research may be available to electronic subscribers up to three days earlier than to print subscribers.

For Australia, New Zealand, Taiwan and South Korea only: Fitch Australia Pty Ltd holds an Australian financial services license (AFS license no. 337123) which authorizes it to provide credit ratings to wholesale clients only. Credit ratings information published by Fitch is not intended to be used by persons who are retail clients within the meaning of the Corporations Act 2001

Fitch Ratings, Inc. is registered with the U.S. Securities and Exchange Commission as a Nationally Recognized Statistical Rating Organization (the "NRSRO"). While certain of the NRSRO's credit rating subsidiaries are listed on Item 3 of Form NRSRO and as such are authorized to issue credit ratings on behalf of the NRSRO (see <https://www.fitchratings.com/site/regulatory>), other credit rating subsidiaries are not listed on Form NRSRO (the "non-NRSROs") and therefore credit ratings issued by those subsidiaries are not issued on behalf of the NRSRO. However, non-NRSRO personnel may participate in determining credit ratings issued by or on behalf of the NRSRO.

SOLICITATION STATUS

The ratings above were solicited and assigned or maintained at the request of the rated entity/issuer or a related third party. Any exceptions follow below.

Fitch Updates Terms of Use & Privacy Policy

We have updated our Terms of Use and Privacy Policies which cover all of Fitch Group's websites. Learn more (<https://www.thefitchgroup.com/site/policies>).

Endorsement Policy

Fitch's approach to ratings endorsement so that ratings produced outside the EU may be used by regulated entities within the EU for regulatory purposes, pursuant to the terms of the EU Regulation with respect to credit rating agencies, can be found on the EU Regulatory Disclosures (<https://www.fitchratings.com/regulatory>) page. The endorsement status of all International ratings is provided within the entity summary page for each rated entity and in the transaction detail pages for all structured finance transactions on the Fitch website. These disclosures are updated on a daily basis.



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

3932 U. S. Route 23
P. O. Box 468
Piketon, Ohio 45661
[REDACTED]

WRITER'S DIRECT DIAL NO:
[REDACTED]

June 29, 2018

Members of the Boards	T. Alban	M. C. McCullough
	E. D. Baker	M. E. Miller
	C. T. Beam	S. K. Nelson
	L. E. Bellar	P. W. O'Loughlin
	W. D. Games	D. W. Pinter
	J. R. Haney	J. Sloat
	L. L. Hillebrand	T. Thomas
	M. E. Lewis	P. W. Thompson
	D. A. Lucas	J. A. Verderame

Ladies and Gentlemen:

As discussed in the December Board meeting on December 8, 2017, OVEC has been evaluating the extension of funding a Debt Reserve past June 2018 to provide support for OVEC's impaired debt credit ratings and aid in providing additional financial stability to the Company. OVEC has been billing approximately \$2.4 million monthly from January 2017 through June 2018 to collect \$44 million in Debt Reserve. The Debt Reserve, as discussed prior, is an advance collection of debt expense from the Sponsors, as provided for in the ICPA.

OVEC has received feedback from the credit rating agencies, key lenders, and the OVEC Finance Working Group, which was formed in 2017 with representatives from all the Sponsors. Based on that feedback, OVEC will continue to fund the Debt Reserve past June of 2018 at a similar monthly rate to collect \$30 million of funding annually through 2020 to accumulate one year of OVEC's debt service, which is approximately \$120 million.

The value of funding a one-year Debt Reserve will provide credit stability in the near term, aid OVEC in improving its future finance costs, and provide additional flexibility in future refinancing. OVEC will continue to work with the OVEC Finance Working Group to evaluate additional measures to stabilize and improve OVEC's credit, as well as

optimize OVEC's future finance costs. Please contact me at [REDACTED]
[REDACTED] with any questions.

Sincerely,



Justin J. Cooper
Chief Financial Officer,
Secretary and Treasurer

JJC:glh

c: J. Baumann
B. E. Chisling
R. D. Cook
D. Crusey
L. L. Dieck
J. E. Jadwin
R. A. Osborne
M. Sebourn
D. J. Sensius
J. Swez
B. Warner

Fendig, John

From: [REDACTED]
Sent: Friday, June 29, 2018 3:54 PM
To: [REDACTED]
[REDACTED] Thompson, Paul; [REDACTED]
Cc: [REDACTED] Sebourn, Michael;
[REDACTED] m
Subject: OVEC Debt Reserve
Attachments: OVEC-IKEC BOD Letter Debt Reserve 6-29-18.pdf

EXTERNAL email. STOP and THINK before responding, clicking on links, or opening attachments.

Ladies and Gentlemen:

Attached is a letter to the OVEC-IKEC Directors that discusses the extension of funding a Debt Reserve past June 2018.

Justin J. Cooper MAcc, CPA
CFO, Secretary and Treasurer

Ohio Valley Electric Corporation
Desk: [REDACTED]
Cell [REDACTED]
Fax: [REDACTED]
Email: [REDACTED]

**LOUISVILLE GAS AND ELECTRIC COMPANY
KENTUCKY UTILITIES COMPANY**

**Response to Sierra Club’s Initial Request for Information
Dated January 21, 2022**

Case No. 2021-00393

Question No. 22

Responding Witness: David S. Sinclair

- Q-22. Please identify the forced outage rate for each of the years 2018 through the present, for each of the OVEC Units.
- A-22. The following table shows the equivalent forced outage rates (“EFOR”) for OVEC’s units that are available to the Companies.

EFOR	2018	2019	2020	2021
Clifty Creek 1	8.9%	3.8%	2.1%	4.9%
Clifty Creek 2	6.7%	4.9%	6.1%	6.3%
Clifty Creek 3	4.5%	4.1%	7.3%	8.4%
Clifty Creek 4	6.5%	3.0%	2.7%	4.5%
Clifty Creek 5	11.7%	10.3%	1.7%	5.3%
Clifty Creek 6	9.4%	24.7%	6.8%	15.6%
Kyger Creek 1	5.5%	2.5%	6.3%	3.6%
Kyger Creek 2	4.2%	1.0%	2.7%	9.1%
Kyger Creek 3	5.4%	4.2%	3.7%	3.5%
Kyger Creek 4	6.0%	5.1%	5.8%	6.8%
Kyger Creek 5	5.2%	2.6%	3.8%	7.1%