ELECTRIC ENERGY, INC.

Joppa Power Station
2100 Portland Road
Joppa, IL 62953

January 20, 2021

Mr. Darin LeCrone, P.E.
Manager, Industrial Unit
Bureau of Water, Division of Water Pollution Control, Permits Section
Illinois Environmental Protection Agency
1021 North Grand Avenue, East
Springfield, IL 62794-9276

Re: Joppa Power Plant – Federal ELG Notice of Planned Participation to Achieve Permanent Cessation; NPDES Permit (IL0004171) Renewal Application Supplement

Dear Mr. LeCrone:

Pursuant to 40 C.F.R. 423.19(f), Electric Energy, Inc. (EEI) submits this Notice of Planned Participation to the Illinois Environmental Protection Agency (IEPA) demonstrating that the Joppa Power Plant's Units 1-6 qualify as electric generating units that will achieve permanent cessation of coal combustion by December 31, 2028. Accordingly, Bottom Ash Transport Waters (BATW) may continue to discharge on and after October 13, 2023 under 40 C.F.R. § 423.16(g)(1). EEI is also hereby supplementing the Joppa Power Plant NPDES renewal application submitted in January 2020 as required by 40 C.F.R. § 423.18.

EEI has provided below and enclosed the information required by 40 C.F.R. § 423.19(f)(2):

- *Expected date that each electric generating unit is projected to achieve permanent cessation of coal combustion*
    - Joppa Unit 1: December 31, 2025
    - Joppa Unit 2: December 31, 2025
    - Joppa Unit 3: December 31, 2025
    - Joppa Unit 4: December 31, 2025
    - Joppa Unit 5: December 31, 2025
    - Joppa Unit 6: December 31, 2025
- *Whether each date represents a retirement or a fuel conversion*
    - Retirement for Joppa Units 1 through 6
- *Whether each retirement or fuel conversion has been approved by a regulatory body, and what the relevant regulatory body is*
    - Retirement has not yet been approved. The relevant regulatory body is MISO.
- *A copy of (1) the most recent integrated resource plan for which the applicable state agency approved the retirement or repowering of the unit subject to the ELGs, (2) certification of electric generating unit cessation under 40 CFR 257.103(b),* ***or*** *(3) other documentation supporting that the electric generating unit will permanently cease the combustion of coal by December 31, 2028*
    - See enclosed demonstration submitted to USEPA pursuant to 40 C.F.R. § 257.103(b) on November 30, 2020.
    - See enclosed company press release indicating a 2025 retirement date for Joppa.
- *A timeline to achieve the permanent cessation of coal combustion*
    - See timeline on pages 6-2 through 6-4 of the enclosed demonstration submitted to USEPA pursuant to 40 C.F.R. 257.103(b) on November 30, 2020.

Joppa Power Plant's Unit 1 through 6 will cease coal combustion pursuant to § 423.19(f), and therefore, discharge of pollutants in BATW generated on and after October 13, 2023 can continue until closure, but no later than December 31, 2028. *See* 40 C.F.R. § 423.16(g)(1). EEI is requesting that IEPA revise the Joppa NPDES permit accordingly. Moreover, IEPA should include the language below in accordance with 40 C.F.R. § 423.18 which states that "All permits subject to this part shall include the following permit conditions." In addition to the language set forth at40 C.F.R. § 423.18, EEI further offers the additional language underlined below that would include a System Support Resource designation as a qualifying event.

a) An electric generating unit shall qualify as a low utilization electric generating unit or permanently ceasing the combustion of coal by December 31, 2028, if such qualification would have been demonstrated absent the following qualifying event:
    1) An emergency order issued by the Department of Energy under Section 202(c) of the Federal Power Act,
    2) A System Support Resource designation by MISO, or
    3) A reliability must run agreement issued by a Public Utility Commission, or
    4) Any other reliability-related order or agreement issued by a competent electricity regulator (e.g., an independent system operator) which results in that electric generating unit operating in a way not contemplated when the certification was made; or
    5) The operation of the electric generating unit was necessary for load balancing in an area subject to a declaration under 42 U.S.C. 5121 et seq., that there exists:
        i. An ''Emergency,'' or
        ii. A ''Major Disaster,'' and
        iii. That load balancing was due to the event that caused the ''Emergency'' or ''Major Disaster'' in paragraph (a)(4) of this section to be declared,
b) Any facility providing the required documentation pursuant to § 423.19(g) may avail itself of the protections of this permit condition.

If you have any questions regarding this submittal, please contact Phil Morris at 618-343-7794 or phil.morris@vistracorp.com.

Sincerely,
Joppa Power Plant

Stephen A. Wait
Plant Manager

Enclosures

February 02, 2021

Dear Customer,

The following is the proof-of-delivery for tracking number: 772772650269

Delivery Information:			
Status:	Delivered	**Delivered To:**	Mailroom
Signed for by:	D.HOLLIS	**Delivery Location:**	
Service type:	FedEx Standard Overnight		
Special Handling:	Deliver Weekday		SPRINGFIELD, IL,
		Delivery date:	Feb 1, 2021 09:08

Shipping Information:			
Tracking number:	772772650269	**Ship Date:**	Jan 29, 2021
		Weight:	1.0 LB/0.45 KG

Recipient:	**Shipper:**
SPRINGFIELD, IL, US,	Collinsville, IL, US,

Purchase Order	Baldwin,Edwards,Joppa,Kincaid
Invoice	& Newton: ELG NOPP and NPDES
Department Number	Renewal Supplement

Proof-of-delivery details appear below; however, no signature is available for this FedEx Express shipment because a signature was not required.

Thank you for choosing FedEx

CCR SURFACE IMPOUNDMENT DEMONSTRATION

W/O ATTACHMENTS

Cynthia Vodopivec
Electric Energy, Inc.
Luminant
6555 Sierra Dr.
Irving, TX 75039

November 24, 2020

Sent via email

Mr. Andrew R. Wheeler, EPA Administrator
Environmental Protection Agency
1200 Pennsylvania Avenue, N.W.
Mail Code 5304-P
Washington, DC 20460

Re: Joppa Power Station Revised Alternative Closure Demonstration

Dear Administrator Wheeler:

Electric Energy, Inc. (Electric Energy) submits this revised request to the U.S. Environmental Protection Agency (EPA) for approval of a site-specific alternative deadline to initiate closure pursuant to 40 C.F.R. § 257.103(f)(2) for the East Ash Pond located at the Joppa Power Station near Joppa, Illinois. Electric Energy is requesting an extension pursuant to 40 C.F.R. § 257.103(f)(2) so that the East Ash Pond may continue to receive CCR and non-CCR wastestreams after April 11, 2021, and complete closure no later than October 17, 2028.

The enclosed demonstration prepared by Burns & McDonnell replaces the demonstration that was previously submitted by Electric Energy to EPA on November 16, 2020. This demonstration addresses all of the criteria in 40 C.F.R. § 257.103(f)(2)(i)-(iv) and contains the documentation required by 40 C.F.R. § 257.103(f)(2)(v). As allowed by the agency, in lieu of hard copies of these documents, electronic files were submitted to Kirsten Hillyer, Frank Behan, and Richard Huggins via email. The demonstration is also available on Electric Energy's publicly available website: https://www.luminant.com/ccr/

Sincerely,

Cynthia Vodopivec
VP - Environmental Health & Safety

Enclosure

cc: Kirsten Hillyer
Frank Behan
Richard Huggins

CCR Surface Impoundment Demonstration for a Site-Specific Alternative to Initiation of Closure Deadline

Electric Energy, Inc.

Joppa Power Station
Project No. 122702

Revision 2
11/24/2020

CCR Surface Impoundment Demonstration for a Site-Specific Alternative to Initiation of Closure Deadline

prepared for

Electric Energy, Inc.
Joppa Power Station
Joppa, Illinois

Project No. 122702

Revision 2
11/24/2020

prepared by

Burns & McDonnell Engineering Company, Inc.
Kansas City, Missouri

INDEX AND CERTIFICATION

Electric Energy, Inc.
CCR Surface Impoundment
Demonstration for a Site-Specific Alternative to Initiation of Closure Deadline
Project No. 122702

Report Index

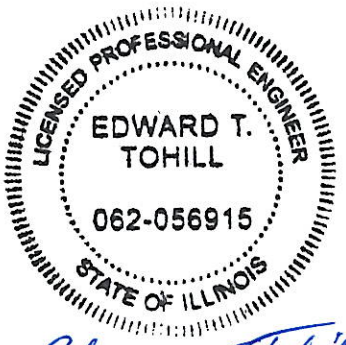
Chapter Number	Chapter Title	Number of Pages
1.0	Executive Summary	1
2.0	Introduction	2
3.0	Documentation of No Alternative Disposal Capacity	7
6.0	Documentation of Closure Completion Timeframe	4
7.0	Conclusion	1
Appendix A	Site Plan	1

Certification

I hereby certify, as a Professional Engineer in the state of Illinois, that the information in this document as noted in the above Report Index was assembled under my direct personal charge. This report is not intended or represented to be suitable for reuse by the Electric Energy, Inc. or others without specific verification or adaptation by the Engineer.

Edward T. Tohill, P.E., (Illinois License No. 062-056915)

Date: 11/24/20



11/24/20
LIC EXPIRES
11/30/21

TABLE OF CONTENTS

Page No.

1.0 EXECUTIVE SUMMARY 1-1

2.0 INTRODUCTION 2-1

3.0 DOCUMENTATION OF NO ALTERNATIVE DISPOSAL CAPACITY 3-1
3.1 Site-Layout and Wastewater Processes 3-1
3.2 CCR Wastestreams 3-1
3.3 Non-CCR Wastestreams 3-5

4.0 RISK MITIGATION PLAN 4-1

5.0 DOCUMENTATION AND CERTIFICATION OF COMPLIANCE 5-1
5.1 Owner's Certification of Compliance - § 257.103(f)(2)(v)(C)(1) 5-1
5.2 Visual representation of hydrogeologic information - § 257.103(f)(2)(v)(C)(2) 5-2
5.3 Groundwater monitoring results - § 257.103(f)(2)(v)(C)(3) 5-2
5.4 Description of site hydrogeology including stratigraphic cross-sections - § 257.103(f)(2)(v)(C)(4) 5-2
5.5 Corrective measures assessment - § 257.103(f)(2)(v)(C)(5) 5-2
5.6 Remedy selection progress report - § 257.103(f)(2)(v)(C)(6) 5-2
5.7 Structural stability assessment - § 257.103(f)(2)(v)(C)(7) 5-2
5.8 Safety factor assessment - § 257.103(f)(2)(v)(C)(8) 5-3

6.0 DOCUMENTATION OF CLOSURE COMPLETION TIMEFRAME 6-1

7.0 CONCLUSION 7-1

APPENDIX A – SITE PLAN
APPENDIX B – WATER BALANCE DIAGRAM

ATTACHMENT 1 – RISK MITIGATION PLAN
ATTACHMENT 2 – MAP OF GROUNDWATER MONITORING WELL LOCATIONS
ATTACHMENT 3 – WELL CONSTRUCTION DIAGRAMS AND DRILLING LOGS
ATTACHMENT 4 – MAPS OF THE DIRECTION OF GROUNDWATER FLOW
ATTACHMENT 5 – TABLES SUMMARIZING CONSTITUENT CONCENTRATIONS AT EACH MONITORING WELL
ATTACHMENT 6 – SITE HYDROGEOLOGY AND STRATIGRAPHIC CROSS-SECTIONS OF THE SITE

ATTACHMENT 7 – STRUCTURAL STABILITY ASSESSMENT
ATTACHMENT 8 – SAFETY FACTOR ASSESSMENT
ATTACHMENT 9 – CLOSURE PLAN

LIST OF TABLES

Page No.

Table 3-1: Joppa CCR Wastestreams 3-2
Table 3-2: Joppa Non-CCR Wastestreams 3-5
Table 6-1: Joppa East Ash Pond Closure Schedule 6-2

LIST OF ABBREVIATIONS

Abbreviation	Term/Phrase/Name
CCR	Coal Combustion Residual
CFR	Code of Federal Regulations
Electric Energy	Electric Energy, Inc.
ELG Rule	Effluent Limitations Guidelines and Standards for the Steam Electric Power Generating Point Source Category
EPA	Environmental Protection Agency
IDNR	Illinois Department of Natural Resources
Joppa	Joppa Power Station
OWS	Office of Water Resources
POTW	Publicly Owned Treatment Works
PSD	Prevention of Significant Deterioration
RCRA	Resource Conservation and Recovery Act
SWPPP	Stormwater Pollution Prevention Plan
TSS	total suspended solids

1.0 EXECUTIVE SUMMARY

Electric Energy, Inc. (Electric Energy) submits this request to the U.S. Environmental Protection Agency (EPA) for approval of a site-specific alternative deadline to initiate closure pursuant to 40 C.F.R. § 257.103(f)(2) —"Permanent Cessation of a Coal-Fired Boiler(s) by a Date Certain"— for the East Ash Pond located at the Joppa Power Station (Joppa) in Illinois. The East Ash Pond is a 111-acre CCR surface impoundment used to manage CCR and non-CCR wastestreams at Joppa. As discussed herein, the six boilers at the station will cease coal-fired operations no later than December 31, 2025, and the impoundment will complete closure no later than October 17, 2028. Therefore, Electric Energy is requesting an extension pursuant to 40 C.F.R. § 257.103(f)(2) so that the East Ash Pond may continue to receive CCR and non-CCR waste streams after April 11, 2021, and complete closure no later than October 17, 2028.

2.0 INTRODUCTION

Joppa is an 802-megawatt, six-unit coal-fueled electric generating station near Joppa, Illinois. The Joppa facility includes a CCR unit (the East Ash Pond) that is the subject of this demonstration. Joppa utilizes the 111-acre East Ash Pond to manage sluiced bottom ash, economizer ash, non-marketable dry fly ash (when not hauled offsite for beneficial use), dredged material from the settling lagoon and cooling water intake, and non-CCR wastewaters. The northern portion of the East Ash Pond was constructed in 1973, and the southern portion of the East Ash Pond was constructed between the years of 1977 and 1985. The East Ash Pond is considered to be a single perched impoundment with an internal separator dike creating the northern portion and the southern portion. The two portions are hydraulically connected by a 36-inch HDPE pipe culvert, which allows water to flow from the southern portion of the pond to the northern portion and ultimately discharge via the permitted outfall. The top of dam elevation of the perimeter embankment is nearly constant around the structure, while the separation dike was constructed at a lower elevation and is maintained slightly lower. The Illinois Department of Natural Resources (IDNR) Office of Water Resources (OWR) – Dam Safety Section regulates the ash pond structure pursuant to 615 ILCS 5/23, 23a and 35. The OWR considers the Joppa East Ash Pond to be a single structure containing two sub-basins for regulatory purposes. Regardless, the north and south sub-basins are both larger than 40 acres[1] meaning that either of them individually, or both of them together as one unit, would still qualify for closure timeframe allowed at 40 C.F.R. § 257.103(f)(2)(iv)(B).

The various non-CCR wastewaters routed to the East Ash Pond originate from the water treatment floor drains, demineralizer regeneration flows, reverse osmosis reject, and stormwater. A site plan is provided on Figure 1 in Appendix A, and the plant water balance diagram is included in Appendix B. Note that the East Ash Pond is referred to as the Ash Pond on the water balance diagram.

On April 17, 2015, the Environmental Protection Agency (EPA) issued the federal Coal Combustion Residual (CCR) Rule, 40 C.F.R. Part 257, Subpart D, to regulate the disposal of CCR materials generated at coal-fueled units. The rule is being administered under Subtitle D of the Resource Conservation and Recovery Act (RCRA, 42 U.S.C. § 6901 et seq.). On August 28, 2020, the EPA Administrator issued revisions to the CCR Rule that require all unlined surface impoundments to initiate closure by April 11, 2021, unless an alternative deadline is requested and approved. 40 C.F.R. § 257.101(a)(1) (85 Fed. Reg. 53,516 (Aug. 28, 2020)). Specifically, owners and operators of a CCR surface impoundment may continue

[1]Table 4 of the History of Construction (AECOM, October 2016) notes surface areas for the North Sub-Basin and South Sub-Basin as 31.8 acres and 63.4 acres, respectively. These areas indicate water storage areas used in the hydraulic analysis and are not representative of the total footprint of each basin.

to receive CCR and non-CCR wastestreams if the facility will cease operation of the coal-fired boiler(s) and complete closure of the impoundments within certain specified timeframes. 40 C.F.R. § 257.103(f)(2). To qualify for an alternative closure deadline under § 257.103(f)(2), a facility must meet the following four criteria:

1. **§ 257.103(f)(2)(i)** – No alternative disposal capacity is available on-site or off-site. An increase in costs or the inconvenience of existing capacity is not sufficient to support qualification.
2. **§ 257.103(f)(2)(ii)** - Potential risks to human health and the environment from the continued operation of the CCR surface impoundment have been adequately mitigated;
3. **§ 257.103(f)(2)(iii)** - The facility is in compliance with the CCR rule, including the requirement to conduct any necessary corrective action; and
4. **§ 257.103(f)(2)(iv)** - The coal-fired boilers must cease operation and closure of the impoundment must be completed within the following timeframes:
    a. For a CCR surface impoundment that is 40 acres or smaller, the coal-fired boiler(s) must cease operation and the CCR surface impoundment must complete closure no later than October 17, 2023.
    b. For a CCR surface impoundment that is larger than 40 acres, the coal-fired boiler(s) must cease operation, and the CCR surface impoundment must complete closure no later than October 17, 2028.

Section 257.103(f)(2)(v) sets out the documentation that must be provided to EPA to demonstrate that the four criteria set out above have been met. Therefore, this demonstration is organized based on the documentation requirements of §§ 257.103(f)(2)(v)(A) – (D).

3.0 DOCUMENTATION OF NO ALTERNATIVE DISPOSAL CAPACITY

To demonstrate that the criteria in § 257.103(f)(2)(i) has been met, the following provides documentation that no alternative disposal capacity is currently available on-site or off-site for each CCR and non-CCR wastestream that IPRG seeks to continue placing into the Ash Pond after April 11, 2021. Consistent with the regulations, neither an increase in costs nor the inconvenience of existing capacity was used to support qualification under this criteria. Instead, as EPA explained in the preamble to the proposed Part A revisions, "it would be illogical to require [] facilities [ceasing power generation] to construct new capacity to manage CCR and non-CCR wastestreams." 84 Fed. Reg. 65,941, 65,956 (Dec. 2, 2019). EPA again reiterated in the preamble to the final revisions that "[i]n contrast to the provision under § 257.103(f)(1), the owner or operator does not need to develop alternative capacity because of the impending closure of the coal fired boiler. Since the coal-fired boiler will shortly cease power generation, it would be illogical to require these facilities to construct new capacity to manage CCR and non-CCR wastestreams." 85 Fed. Reg. at 53,547. Thus, new construction or the development of new alternative disposal capacity was not considered a viable option for any wastestream discussed below.

3.1 Site-Layout and Wastewater Processes

The East Ash Pond receives all CCR sluice flows and a portion of the non-CCR wastewater flows onsite. Many of the remaining plant process flows are routed through the Settling Lagoon for treatment, as shown in Appendix B. The Settling Lagoon is not authorized to receive the CCR sluice flows and is not large enough to independently treat the total volume of the plant process water flows. The Settling Lagoon is 3.15 acres and has a capacity of approximately 10.3 million gallons. The pond located northwest of the closed West Ash Pond system on Figure 1 is the station's permitted and active sanitary sewage treatment pond, which is not permitted to accept any other wastestreams. Electric Energy constructed a new off-site CCR landfill in 2009 to receive scrubber by-products; however, the landfill was never made operational and is unable to receive sluiced materials. The landfill is currently unusable due to the deterioration of the landfill cell freeze protection layer and damage to the leachate collection system and cell perimeter berms. Additionally, since the landfill has never been operated, a landfill operator, leachate hauling contractor, and leachate disposal facility have not been retained.

3.2 CCR Wastestreams

Electric Energy evaluated each CCR wastestream placed in the East Ash Pond at Joppa. For the reasons discussed below in Table 3-1, each of the following CCR wastestreams must continue to be placed in the East Ash Pond at Joppa due to lack of alternative capacity both on and off-site.

Table 3-1: Joppa CCR Wastestreams

CCR Wastestreams	Estimated Average Flow (MGD)	Alternative Capacity Currently Available? YES/NO	Details
Bottom Ash, Economizer Ash, and non-CCR mill rejects Sluice	6.2	NO	Alternative capacity is not currently available on or off-site and would have to be developed. Alternative capacity would need to be designed, permitted, and installed on-site. Off-site alternative capacity would include development of on-site temporary tanks to support transport of sluice material offsite for disposal. Refer to the discussion below for a more detailed evaluation on the development of alternative capacity.
Unmarketable Dry Fly Ash (includes air heater ash)	NA (Dry) 5,300 tons/year in 2019; minimal projected in upcoming years due to a change in ash marketer and more aggressive marketing efforts.	NO	Fly ash is collected dry and is conditioned and disposed in the East Ash Pond intermittently when not hauled offsite for beneficial use. In 2019, approximately 95% of the fly ash was beneficially reused off-site. Electric Energy changed ash marketers in January 2020 and is currently marketing 100% of the fly ash for beneficial reuse off-site. As a result, unmarketable fly ash is projected to be minimal for the remainder of 2020 and over the next several years. Electric Energy does not have a CCR landfill or another CCR surface impoundment located onsite that is available or ready to accept this material. Consequently, there are currently no on-site alternatives for this wastestream, and alternative capacity would need to be designed, permitted, and installed. As discussed above, the offsite CCR landfill constructed for Joppa in 2009 is inactive and would require significant repairs and/or improvements prior to receiving CCR material. Off-site alternative capacity is not currently available and is not considered a feasible option. Refer to the discussion below for a more detailed evaluation on the development of alternative capacity.

Electric Energy evaluated the following on-site and off-site alternative capacity options for these CCR wastestreams:

- Dry fly ash (includes air heater ash; approximately 5,300 tons disposed in East Ash Pond in 2019, but reduced to minimal disposal in 2020):
  - On-site alternative capacity is currently not available and would need to be developed. It should be noted that the landfill located on-site is currently not authorized to accept this wastestream. As previously discussed, the landfill is currently unusable due to the deterioration of the landfill cell freeze protection layer and damage to the leachate collection system and cell perimeter berms. Additionally, since the landfill has never been operated, Electric Energy does not have a landfill operator, leachate hauling contractor, and leachate disposal facility available.
  - Off-site alternative capacity is currently not available and would need to be developed. It should be noted that Electric Energy changed ash marketers in January 2020 and is currently marketing 100% of the fly ash for beneficial reuse off-site. As a result, unmarketable fly ash is projected to be minimal, both in 2020 and over the next several years. Developed off-site alternative capacity for any potential unmarketable fly ash would potentially consist of off-site transportation to a contracted landfill. The unmarketable fly ash is conditioned (to ~10% moisture) in an on-site pug mill, and this low-sulfur Powder River Basin Class C fly ash develops cementitious characteristics when conditioned with water rather quickly. Because of this, and based on the experience of our ash marketers, off-site transportation must be limited to less than a one-hour haul time, or within 40 miles of the station, to prevent the fly ash from setting up and hardening and causing adverse disposal/unloading issues at the offsite landfill. Based on our survey, municipal landfills are not located within 40 miles of the station (see Figure 2 in Appendix A).
- Bottom ash, economizer ash, and non-CCR mill rejects sluice (6.2 MGD):
  - On-site alternative capacity is currently not available and would need to be developed. The Settling Lagoon and sanitary sewage treatment pond are not a CCR surface impoundments and cannot receive CCR materials.
  - Development of on-site alternative capacity would require the design, permitting, and installation of a new treatment system including CCR ponds, clarifiers, and/or storage tank(s), to provide the necessary retention time to meet the NPDES permit limits. The environmental permitting would include a modification to the current individual NPDES permit (to allow for the rerouting of this wastestream to another outfall), general NPDES stormwater construction permit (includes threatened and endangered species and historic preservation assessments), a construction & operating permit under the Illinois CCR rule (35 IAC 845), and a Stormwater

Pollution Prevention Plan (SWPPP) at a minimum. Based on our experience with environmental permitting, this effort could require three to four years.

- Off-site alternative capacity is currently not available and would need to be developed. Developed off-site alternative capacity would consist of both temporary on-site wet storage (frac tanks), and off-site transportation, via tanker trucks. With an average daily flow of 6.2 MGD of sluice water, approximately 295 frac tanks and 827 daily tanker trucks (~7500 gallons per truck to maintain DOT weight restrictions) would be required, if a Publicly Owned Treatment Works (POTW) could be identified to receive it. The daily tanker truck traffic would result in increased potential for safety and noise impacts and further increases in fugitive dust, greenhouse gas emissions and carbon footprint which may require a PSD permit and modification under the Clean Air Act Permit Program if the calculated increases in emissions are over the PSD limits. Setting up contractual arrangements for a local POTW to accept the sandy wastewater would prove to be difficult since this amount of wastewater would most likely upset their treatment systems causing them to exceed their NPDES discharge limits. The potential for leaks/spills from the tank system or transportation of the wastewater offsite exist as well. Furthermore, the temporary wet storage needed to accommodate off-site disposal would require reconfiguration, design, installation, and associated environmental permitting which would require a minimum of three years to implement. For all of these reasons, Electric Energy has determined that offsite disposal is not feasible for these flows at Joppa.

As stated previously, because Electric Energy has elected to pursue the option to permanently cease coal-fired operations of the six boilers at the station by no later than December 31, 2025, developing alternative disposal capacity is "illogical," to use EPA's words, and also counterproductive to the work to cease coal-fired operations of the boilers and close the impoundments. As long as Electric Energy continues to wet handle the bottom ash, economizer ash, and mill reject materials, there are no other onsite CCR impoundments to receive and treat these flows and it is not feasible to dispose of the wet-handled material offsite. As EPA explained in the preamble of the 2015 rule, it is not possible for sites that sluice CCR material to an impoundment to eliminate the impoundment and dispose of the material offsite. *See* 80 Fed. Reg. 21,301, 21,423 (Apr. 17, 2015) ("[W]hile it is possible to transport dry ash off-site to [an] alternate disposal facility that is simply not feasible for wet-generated CCR. Nor can facilities immediately convert to dry handling systems."). As a result, the conditions at Joppa satisfy the demonstration requirement in § 257.103(f)(2)(i).

Consequently, in order to continue to operate and generate electricity, Joppa must continue to use the 111-acre CCR surface impoundment to manage the CCR wastestreams discussed above. Accordingly, the projected minimal amounts of non-marketable fly ash must be placed in the only available onsite disposal location (i.e., the East Ash Pond) when not hauled offsite for beneficial use due to seasonal market impacts.

3.3 Non-CCR Wastestreams

Electric Energy evaluated each non-CCR wastestream placed in the East Ash Pond at Joppa. For the reasons discussed below in Table 3-2, each of the following non-CCR wastestreams must continue to be placed in the East Ash Pond at Joppa due to lack of alternative capacity both on and off-site.

Table 3-2: Joppa Non-CCR Wastestreams

Non-CCR Wastestreams	Estimated Average Flow (MGD)	Alternative Capacity Currently Available? YES/NO	Details
Settling Lagoon and Cooling Water Intake Dredged Material	0.96 during intermittent dredging operations	NO	The Settling Lagoon and cooling water intake require dredging to ensure the capacity of the systems are maintained. The dredged material is then placed in the East Ash Pond. This stream requires significant retention time for TSS removal to meet the permitted discharge limits. Currently, alternative capacity is not available on or off-site and would have to be developed. Alternative capacity would need to be designed, permitted, and installed on-site. Off-site alternative capacity would include development of on-site temporary tanks to support transport of this material offsite for disposal. Refer to the discussion below for a more detailed evaluation on the development of alternative capacity.
Water Treatment Building Floor Drains (including wash waters and demineralizer regeneration flows)	0.05	NO	Currently, alternative capacity is not available on or off-site and would have to be developed. Alternative capacity would need to be designed, permitted, and installed on-site. Off-site alternative capacity would include development of on-site temporary tanks to support transport of this material offsite for disposal. Refer to the discussion below for a more detailed evaluation on the development of alternative capacity.

Non-CCR Wastestreams	Estimated Average Flow (MGD)	Alternative Capacity Currently Available? YES/NO	Details
Reverse Osmosis Reject	0.2	YES	As required by the NPDES permit, this wastestream is currently piped to both the East Ash Pond and Settling Lagoon. The Settling Lagoon will serve as the alternative disposal capacity for this wastestream after April 11, 2021.

The reverse osmosis reject wastewater can be discharged to the Settling Lagoon, as allowed by the NPDES permit. The Settling Lagoon serves as current and practical alternative disposal capacity for this wastestream; therefore, it is not a part of this request. Electric Energy evaluated the following on-site and off-site alternative capacity options for the remaining non-CCR wastestreams:

- Settling lagoon and cooling water intake dredged material (0.96 MGD during discharge):
  - On-site alternative capacity is currently not available and would need to be developed. The East Ash Pond is the only impoundment onsite that can receive this flow and provide adequate retention time for treatment to remove the total suspended solids (TSS) and comply with the site NPDES discharge permit limits.
  - Development of on-site alternative capacity would require the design, permitting, and installation of a new treatment system including non-CCR ponds, clarifiers, and/or storage tank(s), to provide the necessary retention time for TSS removal to meet the NPDES permit limits. The environmental permitting would include a modification to the current individual NPDES permit (to allow for the rerouting of this wastestream to another outfall); general NPDES stormwater construction permit; a construction & operating permit, and a SWPPP at a minimum.
  - Off-site alternative capacity is currently not available and would need to be developed. Off-site alternative capacity would consist of both temporary on-site wet storage (frac tanks) and off-site transportation, via tanker trucks. Approximately 46 frac tanks and 128 daily tanker trucks (assuming 7,500 gallons per truck) would be required when discharging, if a local POTW could be identified to receive these flows. Setting up arrangements for a POTW to accept the wastewater would prove to be difficult since this large increase in flow could upset their treatment system causing them to exceed their NPDES discharge limits. The potential for leaks/spills from the tank system or transportation of the wastewater offsite exists as well. Furthermore, the temporary wet storage needed to accommodate off-site disposal would

require reconfiguration, design, installation, and associated environmental permitting which would require a minimum of three years to implement. For all of these reasons, Electric Energy has determined that offsite disposal is not feasible for these flows at Joppa.

- Water treatment building floor drains (including wash waters and demineralizer regeneration flows (0.05 MGD):
  - On-site alternative capacity is currently not available and would need to be developed. Rerouting this to the Settling Lagoon would require over 1,000 feet of new piping, a neutralization tank, and potentially new pumps and power supply. The environmental permitting would include a modification to the current individual NPDES permit (to allow for the rerouting of this wastestream to another outfall); general NPDES stormwater construction permit; a construction & operating permit, and a SWPPP at a minimum. This reroute would require a minimum of three years to design and implement.
  - Off-site alternative capacity is currently not available and would need to be developed. Developed off-site alternative capacity would consist of both temporary on-site wet storage (frac tanks) and off-site transportation, via tanker trucks. Approximately three frac tank and seven daily tanker trucks (assuming 7,500 gallons per truck) would be required, if a local POTW could be identified to receive it. Setting up arrangements for a POTW to accept the wastewater would prove to be difficult since this increase in flow and contaminants could upset their treatment system causing them to exceed their NPDES discharge limits. The potential for leaks/spills from the tank system or transportation of the wastewater offsite does exist. Furthermore, the temporary wet storage needed to accommodate off-site disposal would require reconfiguration, design, installation, and associated environmental permitting which would require a minimum of three years to implement. For all of these reasons, Electric Energy has determined that offsite disposal is not feasible for these flows at Joppa.

As stated previously, because Electric Energy has elected to pursue the option to permanently cease coal-fired operations of the six boilers at the station by no later than December 31, 2025, developing alternative disposal capacity is “illogical,” to use EPA’s words, and also counterproductive to the work to cease coal-fired operation of the boilers and close the impoundments. There is currently no existing installed infrastructure at the plant to support reroute of these flows (except the reverse osmosis reject). For the reasons discussed above, each of the remaining non-CCR wastestreams (except the reverse osmosis reject) must continue to be placed in the East Ash Pond due to lack of alternative capacity both on and off-site. Consequently, in order to continue to operate and generate electricity, Joppa must continue to use the 111-acre East Ash Pond to manage the non-CCR wastestreams discussed above.

4.0 RISK MITIGATION PLAN

To demonstrate that the criteria in § 257.103(f)(2)(ii) has been met, Electric Energy has prepared and attached a Risk Mitigation Plan for the Joppa East Ash Pond (see Attachment 1). Per § 257.103(f)(2)(v)(B), this Risk Mitigation Plan is only required for the specific CCR Unit(s) that are the subject of this demonstration.

5.0 DOCUMENTATION AND CERTIFICATION OF COMPLIANCE

In the Part A rule preamble, EPA reiterates that compliance with the CCR rule is a prerequisite to qualifying for an alternative closure extension, as it "provides some guarantee that the risks at the facility are properly managed and adequately mitigated." 85 Fed. Reg. at 53,543. EPA further stated that it "must be able to affirmatively conclude that facility meets this criterion prior to any continued operation." 85 Fed. Reg. at 53,543. Accordingly, EPA "will review a facility's current compliance with the requirements governing groundwater monitoring systems." 85 Fed. Reg. at 53,543. In addition, EPA will also "require and examine a facility's corrective action documentation, structural stability documents and other pertinent compliance information." 85 Fed. Reg. at 53,543. Therefore, EPA is requiring a certification of compliance and specific compliance documentation be submitted as part of the demonstration. 40 C.F.R. § 257.103(f)(2)(v)(C).

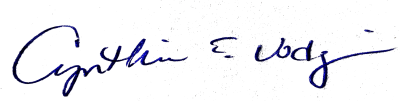
The Joppa facility includes a CCR unit (the East Ash Pond) that is the subject of this demonstration. The Joppa Power Station CCR Landfill referenced on the Joppa CCR compliance website requires a two to three-mile haul route from the Joppa site, across public roadways with several landowners located between the plant and the landfill site. As this CCR unit is not located on contiguous land, this unit is part of a separate facility. 40 C.F.R. § 257.53. Consequently, Electric Energy has not included compliance documents for this unit as part of this submittal for the Joppa facility.

To demonstrate that the criteria in § 257.103(f)(2)(iii) has been met, Electric Energy is submitting the following information as required by § 257.103(f)(2)(v)(C):

5.1 Owner's Certification of Compliance - § 257.103(f)(2)(v)(C)(1)

I hereby certify that, based on my inquiry of those persons who are immediately responsible for compliance with environmental regulations for Joppa, the facility is in compliance with all of the requirements contained in 40 C.F.R. Part 257, Subpart D – Standards for the Disposal of Coal Combustion Residuals in Landfills and Surface Impoundments. The Joppa CCR compliance website is up-to-date and contains all the necessary documentation and notification postings.

On behalf of Electric Energy:



Cynthia Vodopivec
VP - Environmental Health & Safety
November 24, 2020

5.2 Visual representation of hydrogeologic information - § 257.103(f)(2)(v)(C)(2)

Consistent with the requirements of § 257.103(f)(2)(v)(C)(2)(i) – (iii), Electric Energy has attached the following items to this demonstration:

- Map(s) of groundwater monitoring well locations in relation to the CCR unit (Attachment 2)
- Well construction diagrams and drilling logs for all groundwater monitoring wells (Attachment 3)
- Maps that characterize the direction of groundwater flow accounting for seasonal variations (Attachment 4)

5.3 Groundwater monitoring results - § 257.103(f)(2)(v)(C)(3)

Tables summarizing constituent concentrations at each groundwater monitoring well through the first 2020 semi-annual monitoring period are included as Attachment 5. Samples were taken for the second 2020 semi-annual monitoring period, but results are still under review.

5.4 Description of site hydrogeology including stratigraphic cross-sections - § 257.103(f)(2)(v)(C)(4)

A description of the site hydrogeology and stratigraphic cross-sections of the site are included as Attachment 6.

5.5 Corrective measures assessment - § 257.103(f)(2)(v)(C)(5)

Background sampling began at Joppa in late 2015 and continued for eight consecutive quarters. The first semiannual detection monitoring samples were collected in November 2017. The first assessment monitoring samples were collected in June 2018. The results, through the 2020 monitoring period, indicate that the Joppa East Ash Pond is currently in assessment monitoring, with no exceedances of the Appendix IV parameters. Accordingly, an assessment of corrective measures is not currently required at the site. Joppa will continue to conduct groundwater monitoring in accordance with all state and federal requirements.

5.6 Remedy selection progress report - § 257.103(f)(2)(v)(C)(6)

As noted above, an assessment of corrective measures and the resulting selection of remedy is not currently required for the East Ash Pond.

5.7 Structural stability assessment - § 257.103(f)(2)(v)(C)(7)

Pursuant to § 257.73(d), the initial structural stability assessment for the East Ash Pond was prepared in October 2016 and is included as Attachment 7, as well as a memorandum which confirms the structural stability assessment.

5.8 Safety factor assessment - § 257.103(f)(2)(v)(C)(8)

Pursuant to § 257.73(e), the initial safety factor assessment for the East Ash Pond was prepared in October 2016 and is included as Attachment 8.

6.0 DOCUMENTATION OF CLOSURE COMPLETION TIMEFRAME

To demonstrate that the criteria in § 257.103(f)(2)(iv) has been met, "the owner or operator must submit the closure plan required by § 257.102(b) and a narrative that specifies and justifies the date by which they intend to cease receipt of waste into the unit in order to meet the closure deadlines." The closure plan for the East Ash Pond, along with an addendum, is included as Attachment 9.

In order for a CCR surface impoundment over 40 acres to continue to receive CCR and non-CCR wastestreams after the initial April 11, 2021 deadline, the coal-fired boiler(s) at the facility must cease operation and the CCR surface impoundment must complete closure no later than October 17, 2028. As discussed below, Joppa will begin construction of the East Ash Pond closure by October 17, 2025, the six boilers will cease coal-fired operations no later than December 31, 2025, and Joppa will cease placing wastestreams into the East Ash Pond no later than July 17, 2027, in order for closure to be completed by this deadline.

Table 6-1 is included below to summarize the major tasks and durations associated with closing the East Ash Pond in place. These durations are consistent with the durations experienced with the closure of approximately 500 acres of other CCR impoundments already completed by Electric Energy and its affiliates to date as noted below:

- Baldwin Fly Ash Pond System – 230 acres closed in-place with an approximate 30-month construction schedule
- Hennepin West Ash Ponds System – 35 acres closed in-place with an approximate 24-month construction schedule (includes closure by removal of an adjacent 6-acre settling pond and installing a sheet pile wall)
- Hennepin East Ash Ponds 2 and 4 – 25 acres closed in-place with an approximate 6-month construction schedule
- Coffeen Ash Pond 2 – 60 acres closed in-place with an approximate 24-month construction schedule
- Duck Creek Ash Ponds 1 and 2 – 130 acres closed in-place with an approximate 24-month construction schedule

Each CCR impoundment closure indicated above utilized a closely coordinated passive or gravity dewatering method, which consisted of the use of trenches excavated to lower the phreatic surface in portions of the impoundment to obtain a stable ash surface to permit the safe construction of the final cover system. The phreatic water in the trenches flows by gravity to sumps constructed within the impoundment.

The major benefit associated with this passive or gravity dewatering method is that the sumps are designed to provide holding time to allow the TSS to settle within the impoundment prior to discharge (an active dewatering method with wells would result in potential discharges of unsettled TSS). After solids settling, the water is discharged through the NPDES outfall in compliance with permitted limits.

Construction progressed sequentially as the dewatering of an area stabilized the ash surface. The CCR was graded to subgrade level, then overlain with the compacted clay layers and/or geomembrane liners. Vegetative soil cover was then placed on top of the infiltration layer. As each section of the impoundment was closed, this sequencing progressed to the completion of the pond closure. A similar process will be utilized to close the Joppa East Ash Pond in order to allow the final open section of the impoundment to be large enough for the impoundment to remain in operation until the pond ceases the receipt of waste on July 17, 2027. This would provide sufficient time for closure to be completed by October 17, 2028.

The first construction effort will involve modifying the pond operations by relocating the influent lines, minimizing the pond water levels, and isolating flow to a smaller portion of the current 111-acre impoundment that can be closed during the last two construction seasons. The smaller active portion of the pond will remain in operation while Electric Energy begins dewatering and closing the impoundment as described above. This reduction in footprint may require the addition of chemical feeds to provide adequate treatment but that has not been the case at our other sequenced closures. This approach simultaneously allows for continued operation of the plant to maintain generating capacity for the MISO markets and minimizes the risk to the environment both by minimizing the pond size and the potential for any impacts to groundwater and by opening up a significant portion of the remaining impoundment to allow for dewatering, grading, and closure (in Phase 1).

Table 6-1 provides estimates for the estimated durations required to close a portion of the pond footprint after the date noted to begin closure construction (Phase 1), as well as the current estimates for the closure of the active area (Phase 2, or the remaining 40-50 acres). In order to dewater the closure area, Electric Energy will likely release pond water through the existing Outfall 001.

Table 6-1: Joppa East Ash Pond Closure Schedule

Action	Estimated Timeline (Months)
Spec, bid, and Award Engineering Services for CCR Impoundment Closure	3
Finalize CCR unit closure plan and seek IEPA approval for CCR unit closure	12

Action	Estimated Timeline (Months)
Obtain environmental permits (based on IEPA approval of closure plan): • State Waste Pollution Control Construction/Operating Permit • NPDES Industrial Wastewater Permit Modification (*modification would be required to allow the associated ponded and subsurface free liquids generated before the pond closure to be discharged to Waters of the US and to allow reconfiguration of the various wastestreams to either other NPDES-permitted outfalls or newly-constructed NPDES-permitted outfalls*) • General NPDES Permit for Storm Water Discharges from Construction Site Activities and a SWPPP • Proposed 35 Ill. Admin Code 845 operating permit application is due NLT September 2021. Construction permit application is anticipated to be due NLT July 2022.	21
Spec, bid, and Award Construction Services for CCR Impoundment Closure	3
Begin Construction of Closure	October 17, 2025
Minimize Active Area of Impoundment / Dewater Phase 1 Area	6
Cease Coal-Fired Operations of the Six Boilers onsite (No Later Than)	December 31, 2025
Regrade CCR Material in Phase 1 Area	12
Install Cover System – Phase 1 Area*	7
Establish Vegetation – Phase 1 Area**	2
Cease Placement of Waste (No Later Than, allowing for plant cleanup and dredging of Settling Lagoon following coal pile and plant closure)	July 17, 2027
Dewater Impoundment – Phase 2 Area	3
Regrade CCR Material – Phase 2 Area	6
Install Cover System – Phase 2 Area	5

Action	Estimated Timeline (Months)
Establish Vegetation, Perform Site Restoration Activities, Complete Closure, and Initiate Post-Closure Care**	2
Total Estimated Time to Complete Closure	75 months
Date by Which Closure Must be Complete	October 17, 2028

* Activity expected to overlap with grading operations, finishing 2 months after grading is completed.

** Activity expected to overlap with cover system installation, finishing 1 month after cover installation is completed.

7.0 CONCLUSION

Based upon the information included in and attached to this demonstration, Electric Energy has demonstrated that the requirements of 40 C.F.R. § 257.103(f)(2) are satisfied for the 111-acre East Ash Pond at Joppa. This CCR surface impoundment is needed to continue to manage the CCR and non-CCR wastestreams identified in Section 3.2 and 3.3 above, is larger than 40 acres, the six boilers at the station will cease coal-fired operations no later than December 31, 2025, and the East Ash Pond will be closed by the October 17, 2028, deadline. Therefore, this CCR unit qualifies for the site-specific alternative deadline for the initiation of closure authorized by 40 C.F.R. § 257.103(f)(2).

Therefore, it is requested that EPA approve Electric Energy's demonstration and authorize the East Ash Pond at Joppa to continue to receive CCR and non-CCR wastestreams notwithstanding the deadline in § 257.101(a)(1) and to grant the alternative deadline of October 17, 2028, by which to complete closure of the impoundment.

COMPANY PRESS RELEASE

View All News

VISTRA ACCELERATES PIVOT TO INVEST IN CLEAN ENERGY AND COMBAT CLIMATE CHANGE

September 29, 2020

Company to break ground on nearly 1,000 megawatts of renewables and storage; announces planned retirement of entire Midwest coal fleet
Provides financial update, raises 2020 financial guidance, and announces long-term capital allocation plan from continued strong financial outlook

IRVING, Texas, Sept. 29, 2020 /PRNewswire/ -- Vistra (NYSE: VST) today announced a comprehensive plan to accelerate its transition to clean power generation sources and advance efforts to significantly reduce its carbon footprint. The company launched Vistra Zero, a portfolio of zero-carbon power generation facilities, including seven new developments announced today in its primary market of ERCOT that total nearly 1,000 megawatts. In addition, the company committed to more ambitious long-term emissions reduction targets, released its first climate report, and announced its intention to retire all of its generation subsidiaries' coal plants in Illinois and Ohio.

"The aggregate impact of these milestone initiatives is clear: Vistra's commitment to our transformation to a low-to-no-carbon future is unequivocal and offers unique opportunities for growth and innovation," said Curt Morgan, president and CEO of Vistra. "As evidenced by the actions we take and investments we make, Vistra is paving its way for a sustainable future – economically and environmentally – and we've been focused on transitioning our generation portfolio for the benefit of the environment, our customers, our communities, our people, and our shareholders."

Morgan continued, "Importantly, Vistra's leadership on these issues will not impact our core mission to provide consumers with reliable, affordable, and sustainable energy while lowering emissions. Electricity is an essential resource, and the demand for it will continue to grow as climate initiatives are implemented and the economy is further electrified. So, while the way we produce electricity is changing, our essential role in the process and core mission will not. Vistra is well-positioned to not only prove our resiliency during this important transformation to cleaner generation sources, but to lead the way. Our value proposition has never been stronger, and our sustainability has never been clearer. We are confident over time that the severe under-valuation of our stock price will be recognized, and our fair value achieved."

New Zero-Carbon Development Projects: Vistra Zero

Vistra, which is already developing the world's largest battery energy storage project, the 400-MW/1,600-MWh Moss Landing Energy Storage Facility in California, today announced that it is breaking ground on six new solar projects and one battery energy storage project. These new zero-carbon developments, which are part of a newly launched Vistra Zero portfolio, represent a capital investment of approximately $850 million and are all located in the attractive Texas ERCOT market where Vistra has a leadership position:

Expected online in 2021

- Andrews Solar Facility, Andrews County – 100 MW
- Brightside Solar Facility, Live Oak County – 50 MW
- Emerald Grove Solar Facility, Crane County – 108 MW
- Upton 2 Solar and Energy Storage Facility – Phase III, Upton County – 10 MW solar
  - Additional solar capacity to be added to the already operational facility, bringing its total solar capacity to 190 MW

Expected online in 2022

- DeCordova Energy Storage Facility, Hood County – 260 MW/260 MWh
  - Co-located on site of Luminant's natural gas-fueled DeCordova Power Plant
- Forest Grove Solar Facility, Henderson County – 200 MW
- Oak Hill Solar Facility, Rusk County – 200 MW

The Vistra Zero portfolio also includes the company's existing nuclear, renewable, and energy storage facilities:

- Comanche Peak Nuclear Power Plant (2,300 MW)

- Upton 2 Solar (180 MW) and Energy Storage Facility (10 MW/42 MWh)
- Moss Landing Energy Storage Facility (400 MW/1,600 MWh) – 300 MW Phase I expected online December 2020; 100 MW Phase II expected online by August 2021
- Oakland Energy Storage Facility (36.25 MW/ 145 MWh) – expected online January 2022

Inclusive of its new carbon-free projects, the Vistra Zero portfolio now consists of approximately 4,000 MW of zero-carbon assets. In addition, the company continues to evaluate additional solar and battery projects, including more than 1,000 MW in Texas, more than 1,000 MW in California, and approximately 450 MW in Illinois under the Coal to Solar and Energy Storage Act. Vistra is also exploring potential future development opportunities at many of the company's existing power plant sites.

Updated 2030/2050 Emissions Reduction Targets

Consistent with its strategic priorities, the company also accelerated its greenhouse gas emissions reduction targets. Vistra is now setting out to achieve a 60% reduction, up from 50%, in CO_2 equivalent emissions by 2030 as compared to a 2010 baseline, and a long-term objective to achieve net-zero carbon emissions, up from an 80% reduction target, by 2050[1].

1 Assuming necessary advancements in technology and supportive market constructs and public policy.

CO_2 Reductions Through Coal Retirements

Vistra also announced its next phase of coal plant closures in Illinois and Ohio. The company expects to retire seven Luminant power plants, of which the company owns a combined capacity of more than 6,800 MW, between 2022 and 2027.

By year-end 2022

- Edwards Power Plant, Bartonville, IL (MISO) – 585 MW previously announced

By year-end 2025 or sooner should economic or other conditions dictate

- Baldwin Power Plant, Baldwin, IL (MISO) – 1,185 MW
- Joppa Power Plant, Joppa, IL (MISO) – 1,002 MW (plus 239 MW of gas-fueled combustion turbines)[1]

By year-end 2027 or sooner should economic or other conditions dictate

- Kincaid Power Plant, Kincaid, IL (PJM) – 1,108 MW
- Miami Fort Power Plant, North Bend, OH (PJM) – 1,020 MW
- Newton Power Plant, Newton, IL (MISO) – 615 MW
- Zimmer Power Plant, Moscow, OH (PJM) – 1,300 MW

These plants, especially those operating in the irreparably dysfunctional MISO market, remain economically challenged. Today's retirement announcements are also prompted by upcoming Environmental Protection Agency filing deadlines, which require either significant capital expenditures for compliance or retirement declarations.

"Our team members have gone above and beyond to make these plants viable, and they have been safely powering these communities with affordable and reliable electricity for decades," said Jim Burke, chief operating officer of Vistra. "The advance notice of these retirements provides us with ample time to work with our impacted employees and communities to ease the impact of the closures, including seeking the passage of the Illinois Coal to Solar and Energy Storage Act. We've proven ourselves in previous similar situations to live up to our core principles, taking care of our employees and communities. That will not change."

Since the company's leadership change in 2016, Vistra and its subsidiaries have closed or announced the closure of 19 coal plants totaling more than 16,000 MW across Texas (2018: Big Brown, Monticello, Sandow), Pennsylvania (2018: Northeastern Power Co.), Ohio (2018: J.M. Stuart, Killen; no later than 2027: Miami Fort, Zimmer), Illinois (2016: Wood River; 2019: Coffeen, Duck Creek, Havana, Hennepin; 2022: Edwards; no later than 2025: Baldwin, Joppa; no later than 2027: Kincaid, Newton), and Massachusetts (2017: Brayton Point). In total, Vistra and its subsidiaries have now retired or announced the retirement of more than 19,000 MW at 23 coal and natural gas plants since 2010.

1 Vistra has an 80% ownership interest in Joppa Power Plant that, when combined with its 80-100% ownership interest in the Joppa combustion turbines, totals 1,023 MW of the site's total capacity.

Vistra's Climate Report

A comprehensive review of Vistra's climate strategy is contained in Vistra's first Climate Report, published today in accordance with the guidance set forth by the Task Force on Climate-related Financial Disclosures (TCFD). Among other topics, the Climate Report discusses various climate-related risks and opportunities that Vistra management has identified as influencing the company's long-term strategy. Importantly, as an innovative, market-leading integrated power company, Vistra believes global climate change mitigation will create significant opportunities for the company to grow, even as it reduces its total emissions over the next several decades.

Financial Update

Also this morning, Vistra provided certain financial updates, including raising and narrowing its 2020 financial guidance, initiating its 2021 financial guidance, and announcing its long-term capital allocation plan. Specifically, Vistra:

- Raised and narrowed its 2020 financial guidance:

($ in millions)	**Prior 2020**	**Current 2020**
Ongoing Ops. Adj. EBITDA[1]	$ 3,285 – 3,585	$ 3,485 – 3,685
Ongoing Ops. Adj. FCFbG[1]	$ 2,160 – 2,460	$ 2,375 – $2,575
FCF Conversion	~67%	~69%

- Initiated its 2021 financial guidance:

($ in millions)	**2021**
Ongoing Ops. Adj. EBITDA[1]	$ 3,075 – 3,475
Ongoing Ops. Adj. FCFbG[1]	$ 1,765 – 2,165
FCF Conversion	~60%

- And announced its long-term capital allocation plan:

($ in millions)

	2021	**2022**
Debt Reduction	~$550	
Enhanced Dividend[2]	~$275 ($0.58/share)	~$350 ($0.76/share)
Share Repurchases	Up to $1,500	
Transformation Growth	~$650	~$500

As depicted in the table above, in September 2020 Vistra's board of directors authorized a $1.5 billion share repurchase program. The program commences Jan. 1, 2021, does not expire, and replaces any authorization that remains at the end of 2020 under Vistra's existing repurchase plan.

With today's financial updates, Vistra is on track to beat its original guidance midpoint for the fifth year in a row and potentially even exceed the top end of its original guidance range — despite a pandemic tail event in 2020. In addition, with the continued debt reduction in 2021 and 2022 Vistra believes it is well-positioned to achieve improved credit ratings including the potential to achieve investment grade ratings over this timeframe. The company also believes it is well-positioned to consistently deliver strong long-term earnings into the future, while investing in the transformation of the company and returning a significant amount of its free cash flow to its financial stakeholders on an annual basis.

1 Excludes the Asset Closure segment. Ongoing Operations Adjusted EBITDA and Ongoing Operations Adjusted FCFbG are non-GAAP financial measures. See the "Non-GAAP Reconciliation" tables for further details.

2 Management recommendation; subject to Board of Director's approval at the applicable time.

Media
Meranda Cohn
Media.Relations@vistracorp.com
214-875-8004

Analysts
Molly Sorg
214-812-0046
Investor@vistracorp.com

About Vistra
Vistra (NYSE: VST) is a leading, Fortune 275 integrated retail electricity and power generation company based in Irving, Texas, providing essential resources for customers, commerce, and communities. Vistra combines an innovative, customer-centric approach to retail with safe, reliable, diverse, and efficient power generation. The company brings its products and services to market in 20 states and the District of Columbia, including six of the seven competitive wholesale markets in the U.S. and markets in Canada and Japan, as well. Serving nearly 5 million residential, commercial, and industrial retail customers with electricity and natural gas, Vistra is the largest competitive residential electricity provider in the country and offers over 50 renewable energy plans. The company is also the largest competitive power generator in the U.S. with a capacity of approximately 39,000 megawatts powered by a diverse portfolio, including natural gas, nuclear, solar, and battery energy storage facilities. In addition, the company is a large purchaser of wind power. The company is currently constructing a 400-MW/1,600-MWh battery energy storage system in Moss Landing, California, which will be the largest of its kind in the world when it comes online. Vistra is guided by four core principles: we do business the right way, we work as a team, we compete to win, and we care about our stakeholders, including our customers, our communities

we work as a team, we compete to win, and we care about our stakeholders, including our customers, our communities where we work and live, our employees, and our investors. Learn more about our environmental, social, and governance efforts and read the company's sustainability report at https://www.vistracorp.com/sustainability/.

Cautionary Note Regarding Forward-Looking Statements

The information presented herein includes forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. These forward-looking statements, which are based on current expectations, estimates and projections about the industry and markets in which Vistra Corp. ("Vistra") operates and beliefs of and assumptions made by Vistra's management, involve risks and uncertainties, which are difficult to predict and are not guarantees of future performance, that could significantly affect the financial results of Vistra. All statements, other than statements of historical facts, that are presented herein, or in response to questions or otherwise, that address activities, events or developments that may occur in the future, including such matters as activities related to our financial or operational projections, the potential impacts of the COVID-19 pandemic on our results of operations, financial condition and cash flows, projected synergy, value lever and net debt targets, capital allocation, capital expenditures, liquidity, projected Adjusted EBITDA to free cash flow conversion rate, dividend policy, business strategy, competitive strengths, goals, future acquisitions or dispositions, development or operation of power generation assets, market and industry developments and the growth of our businesses and operations (often, but not always, through the use of words or phrases, or the negative variations of those words or other comparable words of a future or forward-looking nature, including, but not limited to: "intends," "plans," "will likely," "unlikely," "believe," "confident", "expect," "seek," "anticipate," "estimate," "continue," "will," "shall," "should," "could," "may," "might," "predict," "project," "forecast," "target," "potential," "goal," "objective," "guidance" and "outlook"), are forward-looking statements. Readers are cautioned not to place undue reliance on forward-looking statements. Although Vistra believes that in making any such forward-looking statement, Vistra's expectations are based on reasonable assumptions, any such forward-looking statement involves uncertainties and risks that could cause results to differ materially from those projected in or implied by any such forward-looking statement, including, but not limited to: (i) adverse changes in general economic or market conditions (including changes in interest rates) or changes in political conditions or federal or state laws and regulations; (ii) the ability of Vistra to execute upon the contemplated strategic, capital allocation, and performance initiatives and to successfully integrate acquired businesses; (iii) actions by credit ratings agencies; (iv) the severity, magnitude and duration of pandemics, including the COVID-19 pandemic, and the resulting effects on our results of operations, financial condition and cash flows; and (v) those additional risks and factors discussed in reports filed with the Securities and Exchange Commission by Vistra from time to time, including the uncertainties and risks discussed in the sections entitled "Risk Factors" and "Forward-Looking Statements" in Vistra's annual report on Form 10-K for the year ended Dec. 31, 2019 and any subsequently filed quarterly reports on Form 10-Q.

Any forward-looking statement speaks only at the date on which it is made, and except as may be required by law, Vistra will not undertake any obligation to update any forward-looking statement to reflect events or circumstances after the date on which it is made or to reflect the occurrence of unanticipated events. New factors emerge from time to time, and it is not possible to predict all of them; nor can Vistra assess the impact of each such factor or the extent to which any factor, or combination of factors, may cause results to differ materially from those contained in any forward-looking statement.

VISTRA CORP.

NON-GAAP RECONCILIATIONS – PRIOR 2020 GUIDANCE[1]

(Unaudited) (Millions of Dollars)

	Ongoing Operations		Asset Closure		Vistra Consolidated	
	Low	High	Low	High	Low	High
Net Income (loss)	**$ 849**	**$ 1,081**	**$ (95)**	**$ (75)**	**$ 754**	**$ 1,006**
Income tax expense	252	320	—	—	252	320
Interest expense and related charges (a)	463	463	—	—	463	463
Depreciation and amortization (b)	1,600	1,600	—	—	1,600	1,600
EBITDA before Adjustments	**$ 3,164**	**$ 3,464**	**$ (95)**	**$ (75)**	**$ 3,069**	**$ 3,389**
Unrealized net (gain)/loss resulting from hedging transactions	(29)	(29)	—	—	(29)	(29)
Impacts of Tax Receivable Agreement	69	69	—	—	69	69
Non-cash compensation expenses	44	44	—	—	44	44
Transition and merger expenses	35	35	—	—	35	35
Other, net	2	2	—	—	2	2
Adjusted EBITDA guidance	**$ 3,285**	**$ 3,585**	**$ (95)**	**$ (75)**	**$ 3,190**	**$ 3,510**
Interest paid, net	(543)	(543)	—	—	(543)	(543)
Tax (paid)/received (c)	153	153	—	—	153	153
Tax receivable agreement payments	(3)	(3)	—	—	(3)	(3)
Working capital and margin deposits	2	2	—	—	2	2

Reclamation and remediation	(60)	(60)	(126)	(126)	(186)	(186)
Other changes in other operating assets and liabilities	(80)	(80)	31	31	(49)	(49)
Cash provided by operating activities	**$ 2,754**	**$ 3,054**	**$ (190)**	**$ (170)**	**$ 2,564**	**$ 2,884**
Capital expenditures including nuclear fuel purchases and LTSA Prepayments	(613)	(613)	—	—	(613)	(613)
Solar and Moss Landing development and other growth expenditures	(315)	(315)	—	—	(315)	(315)
(Purchase)/sale of environmental credits and allowances	(39)	(39)	—	—	(39)	(39)
Other net investing activities	(20)	(20)	—	—	(20)	(20)
Free cash flow	**$ 1,767**	**$ 2,067**	**$ (190)**	**$ (170)**	**$ 1,577**	**$ 1,897**
Working capital and margin deposits	(2)	(2)	—	—	(2)	(2)
Solar and Moss Landing development and other growth expenditures	315	315	—	—	315	315
Purchase/(sale) of environmental credits and allowances	39	39	—	—	39	39
Transition and merger expenses	38	38	—	—	38	38
Transition capital expenditures	3	3	—	—	3	3
Adjusted free cash flow before growth guidance	**$ 2,160**	**$ 2,460**	**$ (190)**	**$ (170)**	**$ 1,970**	**$ 2,290**

[1] Regulation G Table for 2020 Guidance prepared as of November 5, 2019.

(a) Includes unrealized gain on interest rate swaps of $21 million.

(b) Includes nuclear fuel amortization of $74 million.

(c) Includes state tax payments.

VISTRA CORP.

NON-GAAP RECONCILIATIONS – CURRENT 2020 GUIDANCE[1]

(Unaudited) (Millions of Dollars)

	Ongoing Operations		**Asset Closure**		**Vistra Consolidated**	
	Low	**High**	**Low**	**High**	**Low**	**High**
Net Income (loss)	**$ 897**	**$ 1,053**	**$ (87)**	**$ (77)**	**$ 810**	**$ 976**
Income tax expense	249	293	—	—	249	293
Interest expense and related charges (a)	657	657	—	—	657	657
Depreciation and amortization (b)	1,750	1,750	—	—	1,750	1,750
EBITDA before Adjustments	**$ 3,553**	**$ 3,753**	**$ (87)**	**$ (77)**	**$ 3,466**	**$ 3,376**
Unrealized net (gain)/loss resulting from hedging transactions	(364)	(364)	—	—	(364)	(364)
Fresh start / purchase accounting impacts	31	31	—	—	31	31
Impacts of Tax Receivable Agreement	47	47	—	—	47	47
Non-cash compensation expenses	59	59	—	—	59	59
Transition and merger expenses	40	40	1	1	41	41
Other, net	119	119	1	1	120	120
Adjusted EBITDA guidance	**$ 3,485**	**$ 3,685**	**$ (85)**	**$ (75)**	**$ 3,400**	**$ 3,610**
Interest paid, net	(514)	(514)	—	—	(514)	(514)
Tax (paid)/received (c)	136	136	—	—	136	136
Tax receivable agreement payments	(1)	(1)	—	—	(1)	(1)
Working capital and margin deposits	17	17	(5)	(5)	12	12
Reclamation and remediation	(34)	(34)	(94)	(94)	(128)	(128)
Other changes in other operating assets and liabilities	(129)	(129)	(3)	(3)	(132)	(132)
Cash provided by operating activities	**$ 2,960**	**$ 3,160**	**$ (187)**	**$ (177)**	**$ 2,773**	**$ 2,983**
Capital expenditures including nuclear fuel purchases and LTSA Prepayments	(704)	(704)	—	—	(704)	(704)
Solar and Moss Landing development and other growth expenditures	(377)	(377)	—	—	(377)	(377)
(Purchase)/sale of environmental credits and allowances	(253)	(253)	—	—	(253)	(253)
Other net investing activities	(1)	(1)	7	7	6	6
Free cash flow	**$ 1,625**	**$ 1,825**	**$ (180)**	**$ (170)**	**$ 1,445**	**$ 1,655**
Working capital and margin deposits	(17)	(17)	5	5	(12)	(12)

Solar and Moss Landing development and other growth expenditures	377	377	—	—	377	377
Purchase/(sale) of environmental credits and allowances	253	253	—	—	253	253
Transition and merger expenses	114	114	10	10	124	124
Transition capital expenditures	23	23	—	—	23	23
Adjusted free cash flow before growth guidance	**$ 2,375**	**$ 2,575**	**$ (165)**	**$ (155)**	**$ 2,210**	**$ 2,420**

[1] Regulation G Table for 2020 Guidance prepared as of September 29, 2020.

(a) Includes unrealized loss on interest rate swaps of $181 million (an incremental loss of $202 million from prior 2020 guidance).

(b) Includes nuclear fuel amortization of $74 million.

(c) Includes state tax payments.

VISTRA CORP.

NON-GAAP RECONCILIATIONS – 2021 GUIDANCE[1]

(Unaudited) (Millions of Dollars)

	Ongoing Operations		**Asset Closure**		**Vistra Consolidated**	
	Low	**High**	**Low**	**High**	**Low**	**High**
Net Income (loss)	**$ 607**	**$ 920**	**$ (80)**	**$ (60)**	**$ 527**	**$ 860**
Income tax expense	195	283	—	—	195	283
Interest expense and related charges (a)	429	429	—	—	429	429
Depreciation and amortization (b)	1,650	1,650	—	—	1,650	1,650
EBITDA before Adjustments	**$ 2,881**	**$ 3,282**	**$ (80)**	**$ (60)**	**$ 2,801**	**$ 3,222**
Unrealized net (gain)/loss resulting from hedging transactions	59	59	—	—	59	59
Fresh start / purchase accounting impacts	2	2	—	—	2	2
Impacts of Tax Receivable Agreement	75	75	—	—	75	75
Non-cash compensation expenses	45	45	—	—	45	45
Transition and merger expenses	10	10	—	—	10	10
Other, net	3	2	—	—	3	2
Adjusted EBITDA guidance	**$ 3,075**	**$ 3,475**	**$ (80)**	**$ (60)**	**$ 2,995**	**$ 3,415**
Interest paid, net	(456)	(456)	—	—	(456)	(456)
Tax (paid)/received (c)	(60)	(60)	—	—	(60)	(60)
Tax receivable agreement payments	(3)	(3)	—	—	(3)	(3)
Working capital and margin deposits	60	60	—	—	60	60
Reclamation and remediation	(38)	(38)	(100)	(100)	(138)	(138)
Other changes in other operating assets and liabilities	1	1	(6)	(6)	(5)	(5)
Cash provided by operating activities	**$ 2,579**	**$ 2,979**	**$ (186)**	**$ (166)**	**$ 2,393**	**$ 2,813**
Capital expenditures including nuclear fuel purchases and LTSA Prepayments	(771)	(771)	—	—	(771)	(771)
Solar and Moss Landing development and other growth expenditures	(687)	(687)	—	—	(687)	(687)
(Purchase)/sale of environmental credits and allowances	(29)	(29)	—	—	(29)	(29)
Other net investing activities	(20)	(20)	6	6	(14)	(14)
Free cash flow	**$ 1,072**	**$ 1,472**	**$ (180)**	**$ (160)**	**$ 892**	**$ 1,312**
Working capital and margin deposits	(60)	(60)	—	—	(60)	(60)
Solar and Moss Landing development and other growth expenditures	687	687	—	—	687	687
Purchase/(sale) of environmental credits and allowances	29	29	—	—	29	29
Transition and merger expenses	28	28	—	—	28	28
Transition capital expenditures	9	9	—	—	9	9
Adjusted free cash flow before growth guidance	**$ 1,765**	**$ 2,165**	**$ (180)**	**$ (160)**	**$ 1,585**	**$ 2,005**

[1] Regulation G Table for 2021 Guidance prepared as of September 29, 2020.

(a) Includes unrealized gain on interest rate swaps of $52 million.

(b) Includes nuclear fuel amortization of $82 million.

(c) Includes state tax payments.

View original content to download multimedia:http://www.prnewswire.com/news-releases/vistra-accelerates-pivot-to-invest-in-clean-energy-and-combat-climate-change-301139377.html

SOURCE Vistra

View All News

QUICK LINKS

- SEC Filings
- FAQs
- Tax Form
- Sustainability