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PUBLIC SERVICE COMMISSION

Ms. Gwen Pinson **Executive Director** Kentucky Public Service Commission P.O. Box 615 211 Sower Boulevard Frankfort, KY 40602

> Re: PSC Case Nos. 2015-00267 - Bluegrass Station Annual Report

Dear Ms. Pinson:

Pursuant to the Commission's December 1, 2015 Order in Case No. 2015-00267, in which the Commission approved East Kentucky Power Cooperative, Inc's. ("EKPC") requests to acquire the Bluegrass Station and to assume the evidences of indebtedness associated with the acquisition, enclosed please find a copy of EKCP's 2018 Bluegrass Station Annual Operating Report. Please file this in the post-case correspondence file and return a file-stamped copy to my office.

Very truly yours,

. Samford (kyRyn Rlevele)

David S. Samford

Enclosure

#### **Bluegrass Station 2017 Annual Operating Report**

Bluegrass Station successfully operated 565.98 hours in 2017 generating 80,791 gross megawatts and 80,151 net megawatts. The plant experienced 37.45 unplanned outage hours during 2017. The station also performed to an average net heat rate of 11,377.59 (BTU/KWH). Bluegrass Station budgeted \$4,724,904 for capital expenditures in 2017, but spent only \$3,449,252 of this allocation for capital equipment. This reduction was due to a renegotiated pricing of capital components and services, and the ability to re-use the Row 1 vanes during the Combustion Inspection on Unit 2 in the fall of 2017. Bluegrass Station has budgeted \$599,570 for capital expenditures in 2018. The Station had budgeted \$11, 285,511 in 2017 for O&M expenses and had expenditures of \$5,207,663. Bluegrass has budgeted \$4,594,668 for O&M expenses in 2018.

Bluegrass Unit 1 successfully operated 161.37 hours in 2017 generating 19,880 gross megawatts and 19,715 net megawatts. The unit experienced no unplanned outage hours during 2017. Bluegrass Unit 1 also performed to an average net heat rate of 11,387.56 (BTU/KWH). Unit 1 successfully started 33 times in 2017 with no failures. Unit 1 experienced no forced outages in 2017.

Bluegrass Unit 2 successfully operated 142.40 hours in 2017 generating 19,195 gross megawatts and 19,042 net megawatts. The unit experienced 27.35 hours of unplanned outage hours during 2017. Bluegrass Unit 2 also performed to an average net heat rate of 11,343.07 (BTU/KWH). Unit 2 successfully started 30 times in 2017 with 1 failed start. The failed start was due to inadequate time on turning gear and caused a high rotor vibration. The unit was shut down by plant operations and successfully restarted after an appropriate amount of time on turning gear (turning the rotor at slow speed) to correct the rotor's eccentricity. The Unit did experience one unit trip during the Distributed Control System(DCS) upgrade and initial re-tuning of the machine during testing in October. Bluegrass 2 experienced two forced outages in 2017. The first forced outage was due to scavenging the RAC (rotor air cooler) fan motor from Unit 2 to replace a failed motor on Unit 3 to minimize Unit 3's forced outage time. The second forced outage was attributed to the abovementioned failed start in October during commissioning of the DCS upgrade. The unit was placed on turning gear for approximately four hours to work out any eccentricity in the turbine shaft, and returned to service.

Bluegrass Unit 3 successfully operated 265.22 hours in 2017 generating 41,716 gross megawatts and 41,394 net megawatts. The unit experienced 10.10 hours of unplanned outage hours during 2017. Bluegrass Unit 3 also performed to an average net heat rate of 11,062.90 (BTU/KWH). Unit 3 successfully started 41 times in 2017 with no failed starts. Bluegrass 3 experienced one forced outage in 2017. The forced outage was due to a failed RAC (rotor air cooler) fan motor. The unit also experience one unplanned outage, which was due to Texas Gas Transmission's need to perform an annual inspection on the gas yard piping and instrumentation. Unit 3, which is listed as a Designated Network Resource for LG&E/KU under the existing executed tolling agreement agreed to the unplanned four-hour outage.

Extensive tuning was performed on the units' combustion systems in October due to the installation of the new Distributed Control System installed on all three units. The new DCS was installed to increase the starting and operational reliability of the units. The new control system will limit the required tuning of the units for seasonal conditions. The units will be tuned on an as needed basis.

# **Environmental Update**

EKPC is closely monitoring and evaluating the impact of the following regulatory developments on its electric power generation assets, including Bluegrass Station.

#### <u>CSAPR</u>

On July 6, 2011, EPA finalized a rule known as the Cross-State Air Pollution Rule (CSAPR) that requires states to reduce power plant emissions that contribute to ozone and/or fine particle pollution in other states as provided under the CAA, Section 110(a)(2)(D)(i)(I), often referred to as the "good neighbor" provision. CSAPR required a total of 28 states to reduce annual sulfur dioxide (SO<sub>2</sub>) emissions, annual nitrogen oxide (NOx) emissions, and/or ozone season (OS) NOx

emissions to assist in attaining the 1997 ozone and fine particle and 2006 fine particle National Ambient Air Quality Standards (NAAQS).

The timing of CSAPR's implementation has been affected by several court actions. On December 30, 2011, CSAPR was stayed prior to implementation. On April 29, 2014, the U.S. Supreme Court issued an opinion reversing an August 21, 2012, United States Federal District Court for the District of Columbia (D.C. Circuit) decision that had vacated CSAPR. Following the remand of the case to the DC Circuit, the Environmental Protection Agency (EPA) requested the court lift the CSAPR stay and toll the CSAPR compliance deadlines by three years. On October 23, 2014, the DC Circuit granted EPA's request. Accordingly, CSAPR Phase 1 implementation began in 2015, and Phase 2 was scheduled to begin in 2017.

In November 2016, EPA proposed the CSAPR Update Rule (CSAPR II), addressing earlier court concerns and interstate transport of air pollution under the 2008 ozone NAAQS. The updated rule was effective on December 27, 2016. The updated rule does not affect the SO<sub>2</sub> allocations or the NOx allocations for 2015 and 2016. CSAPR NOx emissions allowances will likely be reduced further in the next couple of years to achieve compliance with the new 2015 ozone NAAQS (70 ppb).

## Ozone Transport Challenge

On December 9, 2013, Connecticut, Delaware, Maryland, Massachusetts, New Hampshire, New York, Pennsylvania, Rhode Island, and Vermont (the NE States), filed a petition to the EPA Administrator pursuant to Clean Air Act Section 176A requesting that EPA add several states, including Kentucky, to the Ozone Transport Region (OTR). Ohio, Kentucky, Indiana, West Virginia and Michigan sent a letter to EPA on May 16, 2016, finding that the technical analysis of the Section 176A petition was outdated, technically flawed and failed to support the petition. Ultimately, EPA denied the NE States' petition under Section 176A to add Kentucky and other states based on EPA's assertion "…that the statute provides other, more effective means of addressing the impact of interstate ozone transport on states within the OTR with respect to the 2008 ozone NAAQs." 82 Fed. Reg. 6509, 6520 (Jan. 19, 2017). On February 21, 2017, the Kentucky Energy and Environment Cabinet (EEC) filed a letter supporting EPA's denial of the

petition, stating that there are several other existing national mobile source rules designed to achieve the emission reductions from on-road vehicles through 2025 and beyond that are better suited to address air quality in the NE States.

#### Clean Power Plan

On August 3, 2015, EPA announced the final rule on the emission guidelines, the Clean Power Plan (CPP), for states to follow in developing plans to reduce greenhouse gas emissions from existing fossil fuel-fired electric generating units. The final version of the rule became effective on December 22, 2015. Under the CPP, by 2030, carbon emissions in the power industry are to be reduced by approximately 32 percent from 2005 levels. The CPP allows states to develop their own compliance plans to meet certain CO2 emissions requirements, but the states would also still need to comply with existing federal and state emissions regulations. States were required, at a minimum, to submit an initial plan by September 6, 2016 and finalize plans by September 6, 2018. On February 9, 2016, the Supreme Court stayed implementation of the CPP pending judicial review. Oral argument was held before eight judges of the D.C. Circuit on September 27, 2016. The court has not yet issued a decision.

On January 17, 2017, EPA denied all pending administrative petitions for reconsideration of the CPP (including an administrative petition for reconsideration filed by EKPC, Hoosier Energy Rural Electric Cooperative, Inc. and Minnkota Power Cooperative, Inc.). On March 6, 2017, 13 petitions for review of EPA's denial were filed, including one from EKPC, Hoosier Energy and Minnkota Power. On March 6, 2017, the court consolidated the petitions into a single case and ordered docketing statements and statements of issues due April 5, 2017.

On March 28, 2017, President Trump signed an Executive Order (EO), EO 17833, entitled "*Promoting Energy Independence and Economic Growth*," directing EPA to review and, if appropriate, suspend, revise, or rescind the Clean Power Plan (CPP). EPA announced its intent to review and, if appropriate, suspend, revise or rescind the CPP on April 4, 2017. Subsequently, EPA proposed a rule repealing the CPP (October 16, 2017). Comments on the proposed repeal rule are due April 26, 2018. Following this announcement, the Department of Justice on behalf

of EPA filed a motion to the D.C. Circuit seeking that the Court hold the CPP appeal in abeyance while EPA reconsiders the rule. The D.C. Circuit granted the motion and continues to extend it.

EPA also issued an Advanced Notice of Proposed Rulemaking (ANPR) on December 28, 2017, seeking comments on a potential CPP Replacement rule. Comments on the ANPR were submitted on February 26, 2018. Next, EPA will issue a proposed a CPP Replacement rule. The timeframe for the issuance or content of the proposed rule is uncertain. EPA is taking public comments until April 26, 2018.

## <u>ELG</u>

On September 30, 2015, EPA finalized the Effluent Limitations Guidelines (ELG) that govern the quality of the wastewater that can be discharged from power plants. The final rule was published in the Federal Register on November 3, 2015. The final rule phases in more stringent effluent limits for arsenic, mercury, selenium, and nitrogen discharged from wet scrubber systems, and zero discharge of pollutants in ash transport water. Power plants must comply between 2018 and 2023, depending upon when new Clean Water Act permits are required for each respective plant.

On February 24, 2017, the President issued EO 13777 that required agencies to review regulations that create undue burden on regulated entities. As part of this process, EPA is reviewing the ELG rule and reconsidering a number of issues. The result of this reconsideration will be addressed in a future rule. At this time, future revisions to the ELG rule cannot be determined.

### <u>NAAQS</u>

On October 1, 2015, EPA issued a rule that reset the ozone National Ambient Air Quality Standard (NAAQS) for ground level ozone emissions from 75 ppb to 70 ppb. State designations were due October 1, 2016 and were to be finalized by EPA by October 1, 2017. However, the rule is being challenged before the D.C. Circuit. Oral argument is currently scheduled for April 19, 2017. On November 2, 2016, EPA proposed nonattainment classification thresholds and

implementation requirements for the 2015 ozone NAAQS. The extended comment period closed on February 13, 2017. The new Administration may or may not finalize the 2015 ozone standard in a proposed rule. The Administration was open to receiving comments on the 2015 ozone standard after EPA made designations. EKPC submitted comments to EPA on February 5, 2018.

On December 20, 2017, EPA provided notice to Governor Bevin of Kentucky concerning the air quality designations for the revised 2015 National Ambient Air Quality Standard (NAAQS) for ozone (2015 NAAQS Ozone Standards) throughout Kentucky. The 2015 Ozone NAAQS Ozone Standard lowered the 8-hour ozone standard from 0.075 parts per million (ppm) to 0.070 ppm.

On January 5, 2018, EPA published a notification of availability and public comment period concerning the state designation recommendations for the 2015 NAAQS Ozone Standard. The Notification identified EPA's responses sent to the states, including the letter sent to Governor Bevin (Kentucky Nonattainment Designation Letter), technical support information for designations, and opened the comment period for the 2015 NAAQS Ozone Standard designations. The Kentucky Nonattainment Designation Letter identified certain counties in Kentucky that EPA determined violate the 2015 NAAQS Ozone Standard and nearby areas that contribute to the violating areas.

The 2015 NAAQS Ozone Standard designations affect Bluegrass Station, owned and operated by EKPC, which is located in a county designated nonattainment as an area contributing to a 2015 NAAQS Ozone Standard violation. The impact of this designation cannot be determined at this time.

## Clean Air Act Risk Management Program

On December 21, 2016, EPA finalized revisions to its Risk Management Program (RMP) regulations under the Clean Air Act. The RMP regulations require facilities with over a threshold quantity of a regulated substance to undertake accident prevention steps and to submit a risk management plan to various local, state, and federal planning entities. Congress has introduced two pieces of legislation aimed at revoking this rule, but these bills do not seem likely to pass.

#### Clean Water Act

On June 29, 2015, EPA and the U.S. Department of the Army published a final rule changing the definition of "Waters of the United States" (WOTUS) (80 Fed. Reg. 37054 (June 29, 2015) (2015 Clean Water Act (CWA) Rule)). The final rule redefines the scope of waters protected under the CWA as "traditional navigable waters, interstate waters, territorial seas, and impoundments of jurisdictional waters in the definition of 'waters of the United States," (Id. at 37058).

The rule was promulgated to ensure protection for the nation's public health and aquatic resources by clarifying which waters constitute "waters of the United States" protected under the Act and are subject to programs established by the CWA. Such CWA programs include: Section 402 National Pollution Discharge Elimination System (NPDES) permit program, Section 404 permit program for discharge of dredged or fill material, and Section 311 oil spill prevention and response programs. Essentially, with some exceptions, the rule added non-navigable streams (intermittent and ephemeral streams) to navigable streams, which have been traditionally regulated under the CWA. Thirty-one states, businesses, farmers and agricultural groups are arguing before the D.C. Circuit that EPA did not have the authority to promulgate this revision of the CWA. On February 28, 2017, President Trump issued an Executive Order calling on EPA and the Assistant Secretary of the Army for Public Works to review the 2015 CWA Rule and to "publish for notice and comment a proposed rule rescinding or revising the rule, as appropriate and consistent with law." EPA published a Notice in the Federal Register on March 6, 2017 indicating the Agencies' intent to review the 2015 CWA and to consider the interpretation of the CWA term "navigable waters," ( 82 Fed. Reg. 12532 (Mar. 6, 2017)).

On January 22, 2018, the Supreme Court ruled that any challenges to the WOTUS rule must be filed in Federal District courts and not the D.C. Circuit. Federal District court challenges are ongoing.

# National Pollution Discharge Elimination System (NPDES)

EKPC submitted an application to the Kentucky Division of Water (KDOW). The Division issued a renewal NPDES / Kentucky Pollution Discharge Elimination System (KPDES) permit for the facility on August 7, 2017.

EKPC will continue to monitor the developments to EPA regulations as they apply to its facilities.