

**Goss
Samford**

ATTORNEYS AT LAW | PLLC

David S. Samford
(859) 368-7740
david@gosssamfordlaw.com

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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: 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 Bluegrass Station and to assume the evidences of indebtedness associated with the Bluegrass Station acquisition, and ordered EKPC to file an annual Operating Report due to the Commission by March 31 of each year, please find enclosed for filing EKPC's 2018 Bluegrass Station Annual Report.

Very truly yours,



David S. Samford

Enclosure

Bluegrass Generating Station 2018 Annual Operating Report

In 2018, the Bluegrass Generating Station (“Bluegrass”) successfully operated a total of 710.24 hours, producing 112,628 gross megawatts and 111,766 net megawatts of generation; experienced fifty unplanned outage hours; and performed to an overall average net heat rate of 10,975.99 (BTU/kWh).

Unit Characteristics

Bluegrass Unit 1 successfully operated 143.70 hours, generating 22,341 gross megawatts and 22,178 net megawatts; experienced 38.03 hours of unplanned outage; performed to an average net heat rate of 11,053.82 (BTU/kWh); and successfully started 26 times. Bluegrass Unit 1 experienced six unplanned/forced outage events:

- Unplanned maintenance outage of 7.78 hours to repair an oil leak on a Generator Step-up Transformer (GSU)
- Unplanned maintenance outage of 7.65 hours to replace a failed turning gear motor
- Unplanned outage due to a lightning strike that disabled the fire suppression system making the Unit unavailable for 11.33 hours; not a forced outage
- Unplanned, forced outage of 2.48 hours to repair a failed relay
- Unplanned outage of 8.75 hours due to LG&E issues within its switchyard; Outside Management Control (OMC)
- Unplanned, forced outage/unit trip due to a swing in the Texas Gas supply control valve; Unit returned to service after 0.03 hours

Bluegrass Unit 2 successfully operated 161.96 hours, generating 25,700 gross megawatts and 25,506 net megawatts; experienced 11.23 hours of unplanned outage hours; performed to an average net heat rate of 10,924.76 (BTU/kWh); and successfully started 27 times. Bluegrass Unit 2 experienced two unplanned/forced outage events:

- Unplanned, forced outage of 2.48 hours for repairs to a failed relay
- Unplanned outage of 8.75 hours due to LG&E issues within its switchyard; OMC

Bluegrass Unit 3 successfully operated 404.58 hours, generating 64,587 gross megawatts and 64,082 net megawatts; experienced 0.73 hours of unplanned outage hours; performed to an average net heat rate of 10,969.46 (BTU/kWh); and successfully started 64 times. Bluegrass Unit 3 experienced one forced outage, which occurred during a start-up while ramping to load, resulting in a trip. No mechanical issues were discovered; the Unit was restarted to meet dispatch.

Capital Expenditures

In 2018, East Kentucky Power Cooperative spent \$75k of its budgeted \$450k for capital equipment expenditures, due to a reallocation of expenses to the Bluegrass maintenance budget. In 2019, Bluegrass has budgeted \$26.1 million for capital expenditures, due primarily to the construction of back-up fuel facilities, approved by the Kentucky Public Service Commission in Case No. 2018-00202, and to a major turbine inspection on Bluegrass Unit 3.

Operating & Maintenance Expenses

In 2018, Bluegrass budgeted \$3.9 million (excluding fuel) for O&M expenses and had expenditures of \$3.1 million performing various maintenance activities to increase availability and reliability, including, but not limited to, a third-party independent calibration of all critical instrumentation; the installation of turning gear reduction logic for efficiency and optimization of plant readiness; a rebuild of the CT-1 starting system torque converter; and the recommended 15-year generator circuit breaker maintenance on all three units. Bluegrass has budgeted \$5.2 million (excluding fuel) for O&M expenses in 2019.

Environmental Compliance

Bluegrass Station resources compliance planning is covered by this section to meet the requirements of the Clean Air Act amendments of 1990 (CAA), and Clean Water Act (CWA).

EKPC Bluegrass Station is currently in compliance with the following CAA and CWA rules:

- New Source Performance Standards (NSPS);
 - NSPS Green-House Gas (GHG) for New, Modified and Reconstructed Fossil Fueled Units
- New Source Review (NSR);
- Title IV of the CAA and the rules governing pollutants that contribute to Acid Deposition (Acid Rain program);

- Title V operating permit requirements (Title V);
- Summer ozone trading program requirements promulgated after EPA action on Section 126 petitions and the Ozone State Implementation Plan (SIP) Call (Summer Ozone program);
- Clean Air Interstate Rule (CAIR) (Phased Out 12/31/15);
- Cross-State Air Pollution Rule (CSAPR);
- National Ambient Air Quality Standards (NAAQS) for Sulfur Dioxide (SO₂), Nitrogen Dioxide (NO₂), Carbon Monoxide (CO), Ozone, Particulate Matter (PM), Particulate Matter 2.5 microns or less (PM 2.5) and Lead;
- EPA Affordable Clean Energy Rule (ACE), formerly known as the Clean Power Plan
- Waters of the United States (WOTUS)