COMMONWEALTH OF KENTUCKY
BEFORE THE PUBLIC SERVICE COMMISSION

In The Matter Of:

Electronic Review Of The Adequacy Of Kentucky's Generation Capacity And And Transmission System	)))	Admin. Case No. 387

Kentucky Power Company's Notice of Filing Unredacted Attachment 1 to KPSC 1-9

Kentucky Power Company gives notice of its filing of unredacted Attachment 1 to its response to KPSC 1-9 ("Attachment 1 to KPSC 1-9"). Kentucky Power initially filed Attachment 1 to KPSC 1-9 confidentially (and in redacted form publicly). The Commission granted confidential treatment to the indicated information in Attachment 1 to KPSC 1-9 by order dated November 30, 2022. The confidential information contained in Attachment 1 to KPSC 1-9 has been disclosed publicly in the normal course of business since its initial filing and no longer requires confidential treatment. Kentucky Power therefore is filing unredacted Attachment 1 to KPSC 1-9 herewith.

Respectfully submitted,

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ALL CAPACITIES AND IN-SERVICE DATES ARE APPROXIMATE AND SUBJECT TO CHANGE

Hazard – Wooton 161 kV Project – This project addresses thermal violations, equipment material condition, performance, and risk concerns identified with the Hazard-Wooton 161 kV line and 161/138 kV transformer. Specifically, this project will rebuild approximately 6.6 miles of the Hazard - Wooton 161 kV line and replace three, single phase 161/138 kV transformers at Hazard with a single higher capacity three phase transformer. Additionally, the existing 138/69 kV transformers at Hazard are being evaluated for replacement, due to identified equipment material condition, performance, and risk concerns. The revised in-service date for this project is June 2021.

Hazard – Wooton 161 kV Line
Existing Summer Emergency Conductor Capacity: 215 MVA
Proposed Summer Emergency Conductor Capacity: 390 MVA
Hazard 161/138 kV Transformer
Existing Nameplate Capacity: 135 MVA
Proposed Nameplate Capacity: 350 MVA
Hazard 138/69 kV Transformer #1
Existing Nameplate Capacity: 50 MVA
Proposed Nameplate Capacity: 130 MVA

Wooton - Stinnett 161 kV Project –This project addresses equipment material condition, performance, and risk concerns associated with the Wooton - Stinnett 161 kV line's 1940's vintage wood structures and copper conductor, by rebuilding the approximate 11 mile long line. The current projected in service date for this project is May 2022.

Wooton – Stinnett 161 kV Line
Existing Summer Emergency Conductor Capacity: 215 MVA
Proposed Summer Emergency Conductor Capacity: 390 MVA

Stinnett - Pineville 161 kV Project – This project addresses equipment material condition, performance, and risk concerns associated with the Stinnett - Pineville 161 kV line's 1940's vintage wood structures and copper conductor, by rebuilding the approximate 30 mile long line. The current projected in service date for this project is December 2023.

Stinnett - Pineville 161 kV Line
Existing Summer Emergency Conductor Capacity: 215 MVA
Proposed Summer Emergency Conductor Capacity: 390 MVA

Leslie Transformer Replacement – This project will replace the 161/69 kV transformer at Leslie station. The transformer is being replaced, due to insulation and short circuit strength breakdown. The current projected in-service date for the transformer replacement is December 2021

Leslie Transformer
Existing Nameplate Capacity: 90 MVA
Proposed Nameplate Capacity: 130 MVA

Cannonsburg – South Neal 69 kV Line Section Rebuild – To address thermal violations, this project will rebuild approximately 5 miles of the Cannonsburg – South Neal 69 kV line. The current projected in-service date for the project is December 2019.

Cannonsburg - South Neal 69 kV Line
Existing Summer Emergency Conductor Capacity: 75 MVA
Proposed Summer Emergency Conductor Capacity: 102 MVA

Dorton Transformer Replacement – This project will replace the 138/46 kV transformer at Dorton station with a 138/69/46 kV transformer. The transformer is being replaced, due to insulation and short circuit strength breakdown. The current projected in-service date for the transformer replacement is December 2019.

Dorton Transformer
Existing 46 kV Nameplate Capacity: 45 MVA
Proposed 46 kV Nameplate Capacity: 60 MVA

EastPark 138 kV Transmission Line – This project will construct approximately 3 miles of 138 kV line to connect the existing Chadwick – Kentucky Electric Steel 138 kV line to the proposed Moore Hollow 138 kV substation located in the EastPark Industrial Center. The project will serve as a transmission service delivery point to industrial customers at the EastPark Industrial Center. The current projected in-service date for the project is December 2020.

EastPark 138 kV transmission line
Proposed Summer Emergency Conductor Capacity: 413 MVA

Boyd County Area Improvements - This project will construct approximately 8 miles of 138 kV line to connect the proposed Moore Hollow 138 kV substation located in the EastPark Industrial Center to the proposed Ramey substation off the existing Bellefonte – Grangston 138 kV circuit. The project will serve as the second transmission source to industrial customers at the EastPark Industrial Center. The project also addresses equipment material condition performance, and risk concerns associated with the Hoods Creek Station, while establishing a new distribution source to the area at Ramey. The current projected in-service date for the project is December 2021.

Moore Hollow - Ramey 138 kV transmission line
Proposed Summer Emergency Conductor Capacity: 413 MVA

Chadwick Station Improvements – This project will install a second 138/69 kV transformer at the existing Chadwick station. The project will address thermal and voltage violations identified on the South Neal area 69 kV network. The current projected in-service date for the project is April 2020.

Chadwick Transformer #2
Proposed Nameplate Capacity: 200 MVA

Kenwood Looped Service - This project will construct approximately 2 miles of 69 kV line (operated at 46 kV) to provide looped service to the existing Kenwood station. Currently, Kenwood station is fed radially from the Thelma – Prestonsburg 46 kV circuit via a 3-way phase over phase switch. Condition issues have been identified on the 3-way phase over phase switch along with the existing radial 46 kV line between the switch and Kenwood station. The proposed project will allow for retirement of the phase over phase switch, and the condition issues associated with the radial tap to be addressed, while improving reliability to customers served out of the Kenwood station. The current projected in-service date for the project is December 2021.

Kenwood 69 kV transmission line
Proposed Summer Emergency Conductor Capacity: 68 MVA

Kentucky 46 kV Conversions – There are approximately 145 miles of transmission line and approximately 30 stations/switching stations with equipment operated at 46 kV in the Kentucky Power system. The majority of these assets were installed between the 1920s and 1960s. Kentucky Power intends to begin conversion of these 46 kV facilities to operate at 69 kV or 138 kV, within the next 10 years. These future conversions will address equipment material conditions, performance, and risk concerns associated with the 46 kV facilities. Some facilities currently operating at 46 kV are already designed for the higher voltage class, while other facilities will require improvements.

Kentucky 46 kV Facilities

Increasing the operating voltages of 46 kV facilities will result in higher MVA capacities on the equipment.