

Kentucky Power Company
KPSC Case No. 2019-00154
AG First set of Data Requests
Dated September 16, 2019

DATA REQUEST

- AG 1_1** Refer to Mr. Ali's testimony, Exhibit KA-1, AEP Guidelines for Transmission Owner Identified Needs.
- a. Refer further to page 14 of Exhibit KA-1. Fully explain how KPCo considered and incorporated any stakeholder input through either the Annual Stakeholder Summits or through the processes at PJM.

RESPONSE

Kentucky Power and American Electric Power Service Corporation Transmission employees meet with customers during the Annual Stakeholder Summit to discuss transmission needs. This annual meeting is an additional opportunity for stakeholder feedback and review of the needs across the system. Participants in these meetings include all wholesale customers, PJM, and the Company.

In addition to the annual meeting, Kentucky Power engages stakeholders that are directly impacted by a given project during the project's development and prior to its submission as a Solution to PJM stakeholders to ensure that those direct impacts are considered in identifying and evaluating potential Solutions. The FERC-approved PJM Project Submission Process also provides multiple opportunities for stakeholders to comment, provide input on additional needs, and propose alternative solutions for PJM Transmission Owners to consider. *See* Testimony of Company Witness Ali at page 7 lines 5 continuing to page 8 line 3.

Work related to the proposed Hazard-Wooton project included in the Company's Application in this proceeding was presented at the Company facilitated stakeholder meetings on April 18, 2017 and August 7, 2018. The Company is not aware of any feedback received through the Stakeholder process related to the proposed Hazard-Wooton project.

Witness: Kamran Ali

DATA REQUEST

- AG 1_2** Refer to Mr. Ali's testimony, unnumbered page 10. Fully explain KPCo's approach and methodology to providing alternative solutions to stakeholders for Supplemental Projects in the PJM TEAC and Sub-regional RTEP meetings.
- a. Further refer to Mr. Ali's testimony, unnumbered pages 10–11, which describes Supplemental projects as just as necessary as Baseline projects and "grounded in good utility practice." Confirm that each Supplemental project is subject to review and analysis by the Kentucky Public Service Commission ("Commission") of its necessity and that it will not result in wasteful duplication under the statutes regarding Certificate of Public Convenience and Necessity ("CPCN").
 - b. Explain why KPCo would choose to designate a project as Supplemental which may be justified as Baseline under PJM criteria.
 - c. Identify any recent projects which KPCo designated as Supplemental, but which could have been justified as a Baseline project.

RESPONSE

Please refer to Company Witness Ali's testimony at pages 10 and 11. As described in Company Witness Ali's testimony (Section IV), all of Kentucky Power's transmission projects affecting the topology of the grid are subject, pursuant to PJM's Regional Transmission Expansion Plan ("RTEP"), to the stakeholder process within PJM. As part of this process, stakeholders have the opportunity to provide alternatives not already considered by Kentucky Power.

For example, two alternatives for the Hazard Station portion of the project were presented at the PJM stakeholder process; the alternative solutions were either more costly or not practicable. Kentucky Power did not receive any feedback regarding these alternatives through the PJM stakeholder process.

Please also refer to the Company Response to AG 1-001.

- a. The Company objects to subsection a. of this data request to the extent it purports to seek a legal conclusion. Without waiving this objection, the Company states as follows:

Kentucky Power cannot provide the requested confirmation. A certificate of public convenience and necessity may or may not be required for either Baseline or Supplemental projects depending upon the nature of the project and the application of KRS 278.020 and 807 KAR 5:001, Section 15 to the project.

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b. Kentucky Power Company does not choose to designate a project as Supplemental or Baseline. If the project meets the requirements and criteria for a Baseline project, the project is classified as a Baseline project. Supplemental projects address the other important needs that are not included in the minimum criteria for Baseline projects that are required to maintain reliability and serve customers. While a Project can resolve both Baseline needs and Supplemental needs, if the project meets the Baseline requirements, it is considered Baseline. It is possible that previously identified Supplemental components can become required Baseline components if, for example, and as occurred with the Hazard-Wooton Project, further engineering determines the components are required to implement the solution to the Baseline violations. *See* the Company's response to Staff 1-03. Further, the cost allocation for the Hazard-Wooton project remains within the AEP Zone, regardless of a Baseline or Supplemental designation.

c. AEP transmission and Kentucky Power are unaware of are any such additional projects. Please also see the Company's response to Staff 1-003 for a discussion of this project's re-classification.

Witness: Kamran Ali

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- AG 1_3** Refer to Mr. Lasslo's testimony, page 15. Explain the extent of emergency repairs that have been necessary for the components in the current application, the specific effects of any such emergency repairs, and state roughly when those emergency repairs occurred.
- a. Provide the Operations and Maintenance expenses for the Hazard and Wooton substations for the past five (5) years.

RESPONSE

The following conditions have been addressed, or continue to exist, at the Hazard station:

- May 2017: Replaced motor-operated air break switch X1 on 138 kV transformer #1.
- August 2015: Arrestor on 161 kV transformer #4 sending false signal to pressure relief system (pending)
- May 2017: A Relay on 138 kV transformer #2 failed to calibrate properly.
- September 2014: 69 kV circuit breaker S exhibited low air pressure.
- July 2016: 69 kV circuit breaker F exhibited low hydraulic pressure
- July 2015: 161 kV circuit breaker M exhibited low gas pressure.

a. For the Hazard substation, the Operations and Maintenance expenses for the past five years were \$185,288.22.

For the Wooton substation, the Operations and Maintenance expenses for the past five years were \$71,213.30.

It is possible there were additional Operations and Maintenance expenses for the Hazard or Wooton Stations that are not captured in the totals above due to a change approximately three years ago in systems that record such repairs.

Witness: Michael G. Lasslo

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AG 1_4 Refer to Mr. Lasslo's testimony, page 17. Explain what specific factors will determine the final cost of the mobilization described herein, ranging from \$50,000 up to potentially \$250,000.

RESPONSE

See the Direct testimony of Company Witness Lasslo, Page 17 Line 21 through Page 18, Line 16, for a general description of potential mobilization costs and the factors that will affect those costs.

In addition to the factors described in Company Witness Lasslo's testimony, the following activities may also affect the magnitude of mobilization costs:

The final cost of mobilization can be affected by the cost of the preparation of drawings and bid documents, solicitation, evaluation, and acceptance of bids, evaluation and selection of contractors and subcontractors, contracting for material deliveries, and preparation of the work site. Other factors include the cost required for contractors to transport their employees, tools, vehicles, and construction equipment to the work site. Some construction equipment, such as heavy lift cranes and earth moving equipment is very expensive and requires significant effort to transport and assemble at the construction site.

Mobilization and execution costs also include the cost of work to obtain or renew construction and other permits related to roads or storm water that may have to be renewed.

Requiring that work be performed through multiple mobilizations can increase the cost as a result of duplication of costs. Also, executing a project over a longer period can also have extended impacts on the public and nearby property owners due to continued construction activities and increased traffic.

Witness: Michael G. Lasslo

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AG 1_5 Refer to Mr. Wohnhas' testimony, page 7. Explain whether any aspect of the current project specifications has changed since the filing of the Application. If so, explain the financial impact of any change.

RESPONSE

There have been no changes to the project specifications.

Witness: Ranie K. Wohnhas

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AG 1_6 Refer to the Application, generally. Has KPCo begun any of the work subject to this Application?

RESPONSE

No. Construction has not started for the components listed within this application.

Witness: Ranie K. Wohnhas

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- AG 1_7** Refer to the Application, page 4, wherein it states that "The Hazard Substation originally was constructed in the early 1940s."
a. Explain whether Kentucky Power's territory, generally, is the same today as it was in the 1940s. For instance, are the load centers and generation sites generally the same today as they were in 1940?

RESPONSE

a. Kentucky Power's territory has evolved since the 1940s. Generation retirements in the Ohio Valley area, over time, have continued to increase the company's reliance on imports of bulk power in order to reliably serve its customers. This increased reliance on power imports from neighboring utilities and off-footprint generation has amplified the criticality of transmission stations at or near interconnections, such as Hazard and Wootton stations, to ensure reliable service to Kentucky Power's customers. Not only does Hazard station serve as the primary source to the local area distribution system and the surrounding area 69 kV subtransmission network, it also serves as a major thoroughfare for power imported from the Tennessee Valley Authority and Louisville Gas and Electric into the southern portion Kentucky Power's transmission network across the Hazard – Pineville 161 kV corridor.

Witness: Kamran Ali

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- AG 1_8** Refer to the Application, page 6, wherein it states that "The designation of a project or project component as Baseline or Supplemental in turn determines the procedure by which PJM reviews a project.
- a. Explain, in detail, the procedure by which PJM reviews projects designated as Supplemental.

RESPONSE

Please see the Direct Testimony of Company Witness Ali beginning at page 7 line 7. In contrast, Baseline projects are reviewed as a need and a solution in two independent sub-regional Regional Transmission Expansion Plan (SRRTEP) or Transmission Expansion Advisory Committee (TEAC) meetings.

See the Company's response to AG 1-01 in this proceeding.

Witness: Kamran Ali

DATA REQUEST

- AG 1_9** Refer to the Application, page 8.
- a. Explain what Kentucky Power's current minimum design standards are.
 - b. Explain what PJM's current minimum design standards are.
 - c. Explain to what degree equipment's failure to meet "current minimum design standards" is taken into account when planning Kentucky Power's transmission system.
 - d. Explain Kentucky Power's current substation communication and protection equipment standards are.
 - e. Explain to what degree failure to meet current standards for substation communications and protection equipment is taken into account when planning Kentucky Power's transmission system.

RESPONSE

- a. AEP Service Corporation, on behalf of Kentucky Power and all other operating companies, develops and maintains numerous design standards covering all aspects of transmission equipment design. Specific to substation equipment, the applicable standards cover many elements including, but not limited to, the following:
 - Site Development
 - Foundations
 - Grounding
 - Major Equipment (Transformers, Circuit Breakers, etc.)
 - Control and Power Cabling
 - Fencing
 - Control Buildings and Structures
 - Insulators
 - Surge Arresters
 - Bus
 - Service Power
 - Lighting
 - Oil Containment
 - Protection and Control
 - Intrusion Detection

Kentucky Power's substation physical design standards are based upon industry accepted standards and all applicable federal, state, and local codes. A brief list of

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these standards is provided below as an example and should not be considered all-inclusive:

- American Association of State Highway and Transportation Officials (AASHTO)
- American Concrete Institute (ACI)
- American Institute of Steel Construction (AISC)
- American National Standards Institute (ANSI)
- American Society for Testing and Materials (ASTM)
- American Society of Civil Engineers (ASCE)
- Institute of Electrical and Electronics Engineers (IEEE)
- National Electrical Code (NEC)
- National Electrical Manufacturer's Association (NEMA)
- National Electrical Safety Code (NESC)
- National Fire Protection Association (NFPA)
- Occupational Safety and Health Administration (OSHA)
- Kentucky Power's design standards are also in compliance with the PJM minimum design standards.

b. PJM's minimum design standards are also known as "Designated Entity Design Standards". These were developed by the Designated Entity Design Standards Task Force (DEDSTF) to govern the minimum standards that any entity must design to when interconnecting with the PJM transmission system. Although the Designated Entity Design Standards originally were developed specifically for competitively solicited projects, Kentucky Power ensures that its own standards are consistent with and in compliance with the PJM standards.

c. Kentucky Power endeavors to bring all equipment up to current standards when practical and cost-effective. This is consistent with Kentucky Power's obligation to provide adequate, efficient, and reasonable service to its customers and is grounded in good utility practice. As described in Company Witness Ali's Direct Testimony at pages 9-10 and further in Exhibit KA-1, the Company addresses identified needs by considering the condition, performance, and risk of equipment failure. When Kentucky Power undertakes a project to address condition, performance, and risk, and subject to the need for cost-effectiveness, it designs the solution to current standards whenever an asset is replaced.

d. Kentucky Power's substation communication and protection equipment standards establish a design baseline for reliable and secure protection, control, metering, monitoring, and SCADA (Supervisory Control and Data Acquisition) systems. These

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standards include wiring and configuration details for all applicable substation equipment.

Current standards utilize multi-function, microprocessor-based protection, control, metering, and SCADA devices to leverage features including self-checking functionality, high protection flexibility, disturbance monitoring, remote access capabilities, plus detailed alarm and equipment status information. Multi-function devices permit a space-conscious design and decreased material costs by having fewer devices. The standard communication system utilizes substation-hardened network equipment with sufficient bandwidth to meet data requirements for remote situational awareness. The standard line protection panel includes redundant relays from two different vendors to avoid common mode failure. Each of these elements leverage modern technology but are required to integrate and coordinate with new and legacy systems at other substations across the transmission system.

Kentucky Power's substation communication and protection equipment standards are based upon industry accepted standards, applicable federal, state, and local codes, and general operating experience. Applicable standards and codes include but are not limited to, the following:

- IEEE C37.100-1992 Protective Relays
- IEEE C37.21 Control Switchboards
- IEEE C37.90.1 Surge Withstand Capability for Relay Systems
- IEEE C57.13 Requirements for Instrument Transformers
- NFPA 70 National Electrical Code
- UL 44/UL 486A wires, cables, connectors, and lugs.

e. Refer to the response to subpart c. of this question.

Witness: Michael G. Lasslo

Witness: Kamran Ali

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DATA REQUEST

- AG 1_10** Refer to the Application, page 9, wherein it discusses the existing 161 kV Circuit Breaker M being "29 years old."
- a. What is the useful life for a circuit breaker of that type?
 - b. What is the manufacturer's recommendation for number of fault operations for that type of circuit breaker?
 - c. How many fault operations has Circuit Breaker M experienced?
 - d. Does Kentucky Power treat the criteria of fault operations exceeding the manufacturer's recommendation equally for any fault in excess of the manufacturer's recommendation? For instance, if the manufacturer's recommendation is 10 fault operations, is a circuit breaker with 11 fault operations treated, all else equal, the same as a circuit breaker with 100 fault operations, or is the number of instances in excess of the manufacturer's recommendation weighted differently?

RESPONSE

a. In general, the useful chronological life expectancy for circuit breakers is approximately 50 years. However, system conditions and other factors, such as spare part availability, maintenance difficulties or lack of vendor support, can impact this approximation and reduce or increase a circuit breaker's useful life. Existing 161 kV Circuit Breaker M is the lone remaining unit of this type in the entire AEP system. As such, spare parts for this breaker are not available. Circuit breaker M also has a history of malfunctions over its life due to gas leaks that have raised reliability concerns for the unit. Circuit breaker M also needs to be physically relocated in connection with the construction plan for the baseline portions submitted in this application. The combination of these factors led Kentucky Power to determine this is the appropriate time to replace the unit.

b. The manufacturer's recommendation is 10 fault operations.

c. Circuit breaker M has experienced 21 fault operations.

d. No. The Company does not treat differing exceedances of manufacturer recommendations for fault operations equally. While exceeding the manufacturer recommendation is not ideal, each additional fault operation leads to accelerated aging and deterioration of the breaker's internal contacts and other mechanisms/internal components.

Witness: Kamran Ali

DATA REQUEST

- AG 1_11** Refer to the Application, page 11, paragraph 29, wherein it states that many of the Hazard Substation's components "are approaching or have exceeded their projected operating lives."
- a. Does this statement apply to "many" or a majority of the Hazard Substation's components?
 - b. Substantiate with documentary evidence the statement made in the Application.
 - c. Which of the components on page 12, paragraph 30 "are approaching or have exceeded their projected operating lives?"

RESPONSE

- a. The statement refers to many of the components. In addition to projected operating life, other factors also determine whether or not replacement of components is warranted. Please see Exhibit 2 of the Application, which discusses the drivers for each of the components.
- b. The Company objects to subpart b. of this data request to the extent it is unduly burdensome; the additional documentation requested could include decades of operating and other records, the review and assembly of which is unduly burdensome, particularly in light of the fact that the Application itself is supported by sufficient specific documentation related to the Project.

Without waiving this objection, Kentucky Power states as follows:

Please refer to Exhibit 2 of the Application. The Company further states that the statement that many of the Hazard Substation's components "are approaching or have exceeded their projected operating lives" made in paragraph 29 of the Application is based on the knowledge and expertise of the AEP Transmission and Kentucky Power employees involved with the project and the operation of the Hazard Substation.

- c. The following components listed in paragraph 30 of the application are approaching or have exceeded their projected useful lives in terms of age:
 - 69kV Breaker S (Exhibit 2 One Line Identifier (9))
 - 69kV Breaker E (Exhibit 2 One Line Identifier (10))
 - 69kV Breaker F (Exhibit 2 One Line Identifier (11))
 - 138kV Circuit Switcher BB (Exhibit 2 One Line Identifier (5))
 - 69kV Circuit Switcher CC (Exhibit 2 One Line Identifier (8))

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- 12kV Breaker C (Exhibit 2 One Line Identifier (17))
- 12kV Breaker D (Exhibit 2 One Line Identifier (18))
- Transformer Electromechanical Protection Devices

As described in the Company's response to AG 1-010 part (a), useful life can be decreased or increased by system conditions and other factors such as spare part availability, maintenance difficulties, and availability or lack of vendor support.

Witness: Kamran Ali

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AG 1_12 Refer to the Application, page 16, paragraph 44. Explain if the amounts provided are absolute costs or are incremental to current operating costs and ad valorem taxes.

RESPONSE

The operating costs referenced in paragraph 44 are absolute costs related to the projects being installed in connection with this application. The ad valorem taxes referenced in paragraph 44 are incremental to current ad valorem taxes.

Witness: Ranie K. Wohnhas

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AG 1_13 Refer to the Application, page 16, paragraph 48. Explain which permits are expected to be required.

RESPONSE

Hazard Substation

-Hazard Substation is currently located in the floodplain. Any work in the floodplain would require the submittal of an *Application for Permit to Construct Across or Along a Stream and/or Water Quality Certification* with the Commonwealth of Kentucky Energy and Environment Cabinet DEP Division of Water. Kentucky Power has submitted this application for the transmission lines outside of the substation.

-An Erosion and Sediment (E&S) plan will be developed for the site.

Wooton Substation:

-An Erosion and Sediment (E&S) plan will be developed for the site.

Witness: Ranie K. Wohnhas

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AG 1_14 Refer to the Application, page 20, paragraph 58. Which equipment, plant, or property subject to this Application that is being replaced, upgraded or repaired has not reached the end of their useful life?

RESPONSE

All of the components in this application need to be upgraded or replaced for the reasons identified in Exhibit 2. The chronological age of an asset does not determine if it needs to be replaced. Chronological age provides one indicator of the need for further investigation of specific assets. There are many other factors such as performance, history of malfunctions, maintenance challenges, availability of spare parts, and vendor support in determining the need to replace a specific component.

Further, the risk of failure of the component and its effect on the Company's customers can be increased by system conditions and other factors such as spare part availability, maintenance difficulties or lack of vendor support. Finally, because Kentucky Power does not run the electrical components of its system to failure, replacement of equipment before it fails is necessary. *See also* Kentucky Power's Response to AG 1-010 part (a).

Specifically, the following components have not reached the end of their useful lives in terms of age *only*:

- 138/69kV Transformer #1 (Exhibit 2 One Line Identifier (6))
- 138/69kV Transformer #2 (Exhibit 2 One Line Identifier (7))
- 138kV Circuit Breaker M (Exhibit 2 One Line Identifier (1))
- 34.5kV Circuit Breaker A (Exhibit 2 One Line Identifier (15))

Witness: Kamran Ali

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DATA REQUEST

- AG 1_15** Refer to Mr. Ali's testimony, unnumbered page 4, wherein he discusses certain equipment that is "no longer supported by manufacturers." Further reference is made to Exhibit KA-1, Page 9 of 16.
- a. Explain what "failure adder" was added to the Hazard Substation for the equipment that was no long supported by manufacturers.
 - b. Explain how these "failure adders" are calculated and to what degree they were considered in prioritizing the Hazard Substation improvements.

RESPONSE

- a. The probability of failure adder is not a quantitative value, but rather is used to prioritize needs to be addressed on the system.
- b. See the response to part (a) of this request. Additionally, see Exhibit 2 to the Company's Application for a list of components that are no longer supported by manufacturers.

Witness: Kamran Ali

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DATA REQUEST

AG 1_16 Refer to Mr. Ali's testimony, unnumbered page 4, lines 2–4. Specifically which components subject to this Application "are approaching or have exceeded their projected operating lives, are no longer supported by their manufacturers or are suffering from corrosion, damage, leaks and other malfunctions?"

RESPONSE

Please refer to the Company's responses to questions to AG 1-011 and AG 1-014. Also, see Exhibit 2 of the Application labelled "Project Components". The requested information is listed by component in the column labelled "Driver for Asset Replacement/Installation."

Witness: Kamran Ali

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DATA REQUEST

AG 1_17 Refer to Mr. Ali's testimony, unnumbered pages 5–6. Explain to what degree Kentucky Power independently participates in the PJM transmission planning process so as to protect and represent its and its customers' interests.

RESPONSE

Kentucky Power management, in conjunction with AEP Transmission, reviews and approves all proposed transmission investments. The Company works directly with AEP Transmission personnel to ensure that the interests of the Company and its customers are represented and protected in all aspects of the transmission planning process, including before PJM. The AEP East transmission system, which includes Kentucky Power's service territory, is planned and operated on an integrated basis by AEP Transmission. Through this arrangement, Kentucky Power is able to achieve economies and efficiencies in planning transmission investments that benefit the Company and its customers.

Witness: Kamran Ali

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DATA REQUEST

AG 1_18 Refer to Mr. Ali's testimony, unnumbered page 6, lines 21–22. Explain the PJM standards that certain Supplemental Projects must address referenced in the testimony.

RESPONSE

The PJM standards, referenced in Company Witness Ali' testimony, that certain Supplemental Projects must address are contained in the FERC-approved PJM tariff available at: <https://agreements.pjm.com/oatt/3897>.

Witness: Kamran Ali

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AG 1_19 Refer to Mr. Ali's testimony, unnumbered page 8. Explain the statement on lines 7-8, "It is also important to understand that Supplemental Projects that the Company presents through the PJM stakeholder process are no different from the types of projects for which the Company previously sought, and the Commission previously granted, certificates of public convenience and necessity before Kentucky Power joined PJM."

RESPONSE

Under the existing PJM framework, Transmission Owners retain planning responsibility for managing the maintenance and replacement of their transmission assets and planning of their local transmission systems. As discussed on pages 6-7 and 10-11 of Company Witness Ali's testimony, Supplemental projects presented through the PJM stakeholder process are required to address these local planning criteria. Prior to joining PJM, Kentucky Power applied the same planning criteria to identify projects for which it sought and obtained certificates of public convenience and necessity from the Commission.

Witness: Kamran Ali

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DATA REQUEST

AG 1_20 Refer to Mr. Ali's testimony, unnumbered page 8, lines 18-20. Explain what is meant by "Kentucky Power ultimately determines the mix of Supplemental Projects needed to maintain the reliability of its transmission grid within the AEP Zone." Any response should include the identification of the employee(s) of Kentucky Power with the power and responsibility to make the ultimate determination.

RESPONSE

As set forth in the Company's response to AG 1-17, Kentucky Power actively participates in meetings with the AEP Transmission organization to review the projects planned for Kentucky Power's area. Kentucky Power's President and Chief Operating Officer has the power and responsibility to make the ultimate determination regarding which Supplemental projects Kentucky Power pursues, based upon consultation and analysis undertaken between Kentucky Power leadership and AEP Transmission and the authorization of Kentucky Power's Board of Directors.

Please also refer to the Company's responses to AG 1-21.

Witness: Ranie K. Wohnhas

Witness: Kamran Ali

DATA REQUEST

- AG 1_21** Refer to Mr. Ali's testimony, unnumbered page 10.
- a. What entity has the ultimate authority to determine the need underlying a Supplemental Project?
 - b. What entity has the ultimate authority to determine the need underlying a Baseline Project?
 - c. Does PJM review the need underlying a Supplemental Project proposed by a transmission owner?
 - d. What entity has the ultimate authority to determine the solution deemed a Supplemental Project?
 - e. What entity has the ultimate authority to determine the solution deemed a Baseline Project?

RESPONSE

The Company objects to this data request to the extent that purport to seek a legal conclusion. Without waiving this objection, the Company states that the authority and review discussed below are set forth in the FERC-approved PJM tariff and the PJM Operating Agreement, and applicable FERC orders. The Company further states as follows:

- a. Kentucky Power, working in conjunction with AEP Transmission, is responsible for identifying and validating the needs underlying Supplemental projects.
- b. PJM ultimately designates Baseline projects. AEP Transmission, in conjunction with Kentucky Power, works with PJM to identify needs that must be addressed by Baseline projects.
- c. Yes. *See also*, Direct Testimony of Company Witness Ali, including Section IV.
- d. Kentucky Power is responsible for evaluating, selecting, and ultimately determining the mix of Supplemental projects needed to maintain the reliability of Kentucky Power's transmission grid within the AEP Zone. AEP Transmission provides technical support and assistance to Kentucky Power throughout this process. PJM also ensures, through a no-harm study, that the project will not adversely impact the reliability of the Transmission System.
- e. PJM has the ultimate authority to determine solutions for Baseline projects. As further explained in Company Witness Ali's testimony, Kentucky Power, through AEP

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Transmission, participates in development of solutions deemed Baseline projects. *See also*, Kentucky Power's response to AG 1-17.

Witness: Kamran Ali

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DATA REQUEST

AG 1_22 Refer to the Mr. Ali's testimony, unnumbered page 15. Explain whether the communication equipment at the Wooton substation has exceeded its useful life and/or whether it is support by the manufacturer.

RESPONSE

While the communication equipment at the Wooton station, viewed in isolation, has not exceeded its chronological useful life, it is no longer compatible with the relaying and telecommunication fiber upgrades needed at the Wooton station.

Witness: Kamran Ali

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- AG 1_23** Refer to Mr. Ali’s testimony, unnumbered page 8. As to the issue of obsolescence and concerns over the expected life of equipment, confirm that any new equipment Kentucky Power installs as a result of this case will also have an expected lifespan or planned obsolescence from the manufacturer.
- a. Fully explain the Company’s stance toward this as an ongoing issue and any steps Kentucky Power will take to extend the expected lifespan of equipment or otherwise mitigate the impact of obsolescence.

RESPONSE

The Company cannot confirm the statement because the term “planned obsolescence” is inapplicable to the upgrades described in the Application. Further, all of the equipment to be installed as part of the Project has a long useful life expectancy, often measured in decades. Such long useful life expectancies are consistent with the Company’s experience with comparable equipment and facilities, which in some cases can exceed their expected life expectancies by many years, and in some cases decades.

- a. Kentucky Power, in conjunction with AEP Transmission and other operating companies, investigate equipment and manufacturers, to understand equipment characteristics prior to its purchase and installation. The Company is also responsible for properly maintaining its equipment to maximize the use life to the extent practicable. Kentucky Power also performs maintenance to extend the life of station assets in conformity with industry practice. Kentucky Power works with third-party suppliers to develop non-OEM (Original Equipment Manufacturer) replacement parts for more common consumable components to provide good purchase value and sufficient availability for the benefit of customers. Kentucky Power also has access to a limited supply of more-expensive OEM replacement parts. The number of third-party supplier components is diminishing and the current supply of OEM parts is very limited depending on asset type. Kentucky Power also salvages and reuses parts from old retired equipment of the same type to keep equipment functional, where practicable.

Witness: Michael G. Lasslo

Witness: Kamran Ali

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DATA REQUEST

- AG 1_24** Refer to Mr. Ali's testimony, unnumbered page 8, discussing inputs and drivers of its Supplemental projects, including Infrastructure Resilience. Explain whether the Company is able to quantify the specific benefits of the proposed upgrades in terms of infrastructure resilience.
- a. If so, provide any such quantification and explanation.
 - b. If not, explain why not.

RESPONSE

The analysis requested has not been, and cannot be, performed because this project is not an Infrastructure Resilience project. The list on pages 9-10 of Company Witness Ali's testimony was provided to identify the types of important drivers, including Infrastructure Resilience, that are addressed by Supplemental projects generally.

Witness: Kamran Ali

Kentucky Power Company
KPSC Case No. 2019-00154
AG First set of Data Requests
Dated September 16, 2019

DATA REQUEST

AG 1_25 Refer to Mr. Ali's testimony, unnumbered page 8, discussing inputs and drivers of its Supplemental projects, including Customer Service. Explain whether the Company is able to quantify any amount of expected increases to future load.

RESPONSE

The Company has not quantified expected increases in future load in connection with this project. The list on pages 9-10 of Company Witness Ali's testimony was provided to identify the types of important drivers, including Customer Service, that are addressed by Supplemental projects generally.

Witness: Kamran Ali

Kentucky Power Company
KPSC Case No. 2019-00154
AG First set of Data Requests
Dated September 16, 2019

DATA REQUEST

AG 1_26 Reference the Application, generally. For the projects subject to the Application, provide the stations' percentile within the Kentucky Power footprint using AEP's internal metrics that measure stations' risk and subsequent impact of failure.

RESPONSE

Kentucky Power utilizes metrics concerning Substation historical performance, condition, and risk in its needs identification process. Using these metrics, Hazard substation is in the 99th percentile of Kentucky Power stations that need to be addressed. The Wooton Substation is in the 27th percentile.

The Company does not measure the "subsequent impact of failure" in the manner requested.

Witness: Kamran Ali

VERIFICATION

The undersigned, Kamran Ali, being duly sworn, deposes and says he is the Managing Director of Transmission Planning, American Electric Power Service Corporation, that he has personal knowledge of the matters set forth in the foregoing responses and the information contained therein is true and correct to the best of his information, knowledge, and belief.

Kamran Ali

Kamran Ali

State of Ohio)
)
County of Franklin) Case No. 2019-00154

Subscribed and sworn before me, a Notary Public, by Kamran Ali this
27th day of September, 2019.

Nancy Spencer

Notary Public

My Commission Expires May 10, 2021



