DATA REQUEST

KPSC 2-1 State whether the book value of the Fords Branch 46 kV Substation used to calculate depreciation expense included salvage value. If so, state the total amount Kentucky Power has expensed for salvage value to date.

RESPONSE

Subject to the limitations described below, the depreciation rate used to calculate the depreciation expense associated with the Fords Branch 46 KV Substation includes a *combined* functional salvage and removal percentage.

The current distribution depreciation rate was first established by the Commission's order in Case No. 91-066 and most recently confirmed by its January 18, 2018 order in Case No. 2017-00179. This rate was established on a functional basis. Individual calculations of the salvage value for the Fords Branch 46 kV Substation or its components are not available and cannot be performed.

Witness: Ranie K. Wohnhas

DATA REQUEST

KPSC 2-2 Provide documentation, if any, received by Kentucky Power from Enerblu, Inc. or its representatives indicating or supporting the 40-MW projected peak load for Enerblu, Inc.

RESPONSE

Please see KPCO_R_KPSC_2_2_Attachment1.pdf for the requested information.

Witness: Ranie K. Wohnhas

From: Ben Rainwater
Sent: Thursday, April 19, 2018 11:24 AM
To: Matthew J Satterwhite
Cc: Michael Weber; Gary S Sumner; Delinda Borden; E Clayton; Daniel Elliott; Jacob S Colley; Philip Schaefer
Subject: [EXTERNAL] RE: EnerBlu Electrical Load

Hi Matt,

Our apologies. We prepared our responses on the 12th but Dan's travel schedule has delayed our sending it to you. Following are our responses:

Questions:

1) What is the expected peak amount of electrical load that will be connected to the KY Power system (answer in kW) at this facility for this project? Often, a "One Line Diagram" is used to supply this info. 40,000 kw (40 MVA)
2) Do you expect **all** of the connected load to be used/turned on simultaneously in your process? If not, what is the peak portion of load that will be on simultaneously (answer in kW)? We also call this "diversified demand." No, loads are sequenced.
3) How many Hours per Day and Days per Week will you run your process at this facility? This points to Load Factor. 24/7/365
4) What is your expected monthly or annual kWh consumption at the facility? Monthly is best. 19,000,000 kWh
5) Is your process seasonal? Or, will there be extra electrical needs during different parts of the year (i.e. heating or cooling loads)? No
6) We offer an interruptible load credit. Are you able and willing to interrupt the process in order to receive this credit? If yes, how much load must be maintained in cases when the power is interrupted (this is considered your firm load in kW)? Yes, offer cost reduction options.
7) Will natural gas or other alternate sources of energy (CHP) be used in this facility? If so, please list the energy source and what it will be used for. If using CHP, how much load (in kW) do you expect will be supplied from CHP. No CHP
8) At what voltage do you prefer to have service delivered to the facility? Please keep in mind that our rates are cheaper with service delivered at transmission voltages since you will own your transformers, etc. Our standard voltages that could be made available to this site are: Our campus distribution is 12,470 v so we prefer 40 MAV at 12.47kv. If there is a savings to installing 34.5 kv we will look into this option.
    a. Primary Voltage at 12 kV or 34 kV
    b. Transmission Voltage at 138 kV – ***recommended***

Again, our apologies for this delay.

EnerBlu
Ben Rainwater, Chief Operating Officer

DATA REQUEST

KPSC 2-3 State whether Kentucky Power contends that the Enterprise Park Economic & Area Improvements Transmission Project, as defined in its application, would be necessary to serve Kentucky Power's current and projected customers in the event that the Enerblu, Inc., manufacturing campus was not being constructed in the Kentucky Enterprise Industrial Park.

RESPONSE

Yes. The majority of the Enterprise Park Economic & Area Improvements Transmission Project would be required even in the absence of the Enerblu, Inc. manufacturing campus. The Project is required to address the following major needs: to remedy thermal and voltage criteria violations on the Company's existing 46 kV Pikeville area sub-transmission network; to provide added reliability and capacity for the 12 kV distribution network in the area and to provide additional capacity for the area's 34.5 kV distribution system; and to support any additional load associated with the development of the Kentucky Enterprise Industrial Park even in the absence of the Enerblu, Inc. campus. Finally, the Project will enable Kentucky Power to address the aging infrastructure concerns of the Fords Branch 46 kV Substation and also to upgrade certain components at the Cedar Creek 138/69/46 kV Substation.

Minor elements of the Kewanee Substation were modified to meet Enerblu's need, but the core elements of the Project are required even in the absence of the Enerblu Inc. manufacturing campus.

Witness: Michael G. Lasslo

DATA REQUEST

KPSC 2-4 Provide an update on the status of the construction of the Enerblu, Inc., manufacturing campus based on the latest information received by Kentucky Power.

RESPONSE

An Enerblu representative indicated to the Company on October 23, 2018 that it expects to start construction of its Enterprise Industrial Park manufacturing campus in either December 2018 or January 2019.

Witness: Ranie K. Wohnhas

DATA REQUEST

KPSC 2-5 State when the Enterprise Park Economic & Area Improvements Transmission Project, as defined in Kentucky Power's application, must be completed to meet the needs of the Enerblu, Inc., manufacturing campus, and state when the Enerblu, Inc., manufacturing campus is expected to require the projected peak load of 40 MW.

RESPONSE

The Project must be in-service to meet Enerblu, Inc. manufacturing campus' start-up and testing power needs in excess of 4MW.

In the application, the in-service date of the Kewanee Substation was anticipated to be September 2019, consistent with the timing of Enerblu's electrical service requirements. Due to recent updates to Enerblu Inc.'s construction schedule, the in-service date for the Kewanee Substation has been revised to December 2019.

Witness: Michael G. Lasslo

DATA REQUEST

KPSC 2-6 State whether the "upgraded version of the relay panel" Kentucky Power proposes to install at the Cedar Creek 138/69/46 kV Substation is necessary to serve Enerblu, Inc.

a. If so, explain why Kentucky Power could not use the current panel.

b. If not, explain why the upgraded relay panel is necessary.

RESPONSE

(a)-(b) The upgraded relay panel is necessary to provide reliable electrical service to all customers served from the Kewanee Substation, including Enerblu, Inc.

The new Kewanee Substation will be served by a double circuit 138kV transmission line that will connect to the existing Beaver Creek – Sprigg 138kV transmission line between Beaver Creek Substation and Cedar Creek Substation. After the project is complete, the Beaver Creek – Sprigg 138kV transmission line will consist of the following segments: Beaver Creek Substation to Kewanee Substation, Kewanee Substation to Cedar Creek Substation, Cedar Creek Substation to Johns Creek Substation and then through several more substations to the Sprigg Substation.

The upgraded Cedar Creek 138/69/46 kV Substation relay panel is required to provide reliable relay coordination between the Beaver Creek, Kewanee, Cedar Creek and Johns Creek substations. The shorter length of the line section between Kewanee Substation and Cedar Creek Substation compared to the longer line sections to the adjacent stations could result in the Kewanee Substation and the Cedar Creek Substation appearing as a single substation to the Beaver Creek Substation or the Johns Creek Substation in the event of a fault between the Kewanee Substation and the Cedar Creek Substation. In addition, the disparity in the relative lengths of the Kewanee-Cedar Creek line segment and adjoining line segments could result in the Beaver Creek – Kewanee relays “seeing” into the realm of the Kewanee – Cedar Creek relays. Both of these issues could result in unintended substation outages in the event of a faulted line section.

To prevent these types of malfunctions, it is an industry practice to install a high speed communication system that allows the line protection relays to communicate between adjacent substations using power line carrier technology. With this system, a relay communication signal is coupled onto and “carried” on the actual transmission conductors between the stations. However, with this technology, short line sections result in high reflected carrier signal power, which over time can cause carrier system equipment failure.

To assure proper relay coordination in the event of carrier relay failure, a second high speed communication system is required. This second system will use the fiber optic cable that will be installed within one of the shield wires of the new double circuit 138kV transmission line to Kewanee Substation. The new panel at the Cedar Creek Substation will contain the required fiber optic relays. Similar fiber optic relays will be installed at Kewanee Substation to facilitate the

second high speed communication system between Kewanee Substation and Cedar Creek Substation. It is an AEP and industry practice to have dual high speed relay communication systems to assure proper relay coordination and therefore improved customer reliability in the event of faults on the transmission system.

Witness: Michael G. Lasslo

DATA REQUEST

KPSC 2-7 Refer to Exhibit 3 and Exhibit 11 of the application.

a. State whether the property identified as "24" on the maps on pages 1 and 2 of Exhibit 3 is the property identified in Exhibit 11 as "PSC Filing ID 24."

b. Describe how the property boundaries as shown on Exhibit 3 were determined.

c. State whether the proposed route for the transmission line would cause the transmission line or the right-of -way for the transmission line to cross the property identified as "24" assuming there is no need to relocate the line within the filing corridor.

d. Describe the portion of the property identified as "24" in Exhibit 3 that is within the filing corridor.

e. Describe the circumstances , if any, under which the proposed transmission line or right-of-way for the transmission line would cross the property identified as "24" in Exhibit 3.

RESPONSE

a. Yes. The property identified as “24” on the Proposed Route Map provided in Exhibit 3 is the property identified as “PSC Filing ID 24” provided in Exhibit 11. The property owner is Sendelbach Family Trust according to the data provided by the Pike County Property Valuation Administrator’s (PVA) office.

b. The property boundaries shown on Exhibit 3 reflect data purchased by Kentucky Power from Floyd and Pike county PVA offices.

c. The centerline shown on Exhibit 3 in the vicinity of parcel “24” would not have crossed parcel “24” based on the boundaries provided by the Pike County PVA office. Prior to filing Kentucky Power agreed with the property owner to relocate the centerline 300 feet to the south to the position indicated on Exhibit 3 to avoid crossing parcel “24.”

Kentucky Power conducted a ground survey in the vicinity of parcel 24 subsequent to filing the application and determined that the boundaries provided by the Pike County PVA are inaccurate. Based on the revised boundaries determined by the ground survey the center line will cross approximately 200 feet of the parcel near its southern edge.

d. The portion of parcel "24" shown on Exhibit 3 that is within the filing corridor is a densely forested ridge located south and east of Left Fork Island Creek Road. Topographic signatures

and historical mining maps (from Red Cedar Mining Company) indicate the area was previously mined.

e. Please see the Company's response to subpart (c). Approximately 200 linear feet of the 100-foot right-of-way (ROW) (0.45 acres) will cross the Sendelbach property.

Structure 8 will be located on the southwestern tip of parcel "24" on a predominant ridge between two valleys. Structure 8 will be required to be approximately 140 in height to support a 3,350 foot back span and 3,500 foot ahead span over the two valley bottoms (KPCO_R_KPSC_2_7_Attachment1).

KPCO_R_KPSC_2_7_Attachment1.pdf shows the ground surveyed parcel boundaries, compared with the information received from the PVA office, which was displayed on Exhibit 3.

Kentucky Power representatives met on October 24, 2018 with Mr. Gary Bishop. Mr. Bishop is associated with parcel "24." At that meeting, Kentucky Power representatives used mapping to update Mr. Bishop on the proposed ROW location, which clips the southern edge of the property, and explained the PVA parcel information was updated with a ground survey. Mr. Bishop asked if the ROW could shift farther to the south and off the Sendelbach property. Kentucky Power representatives indicated that although further investigation concerning route modifications would be undertaken, the location of the ROW and Structure 8 is not anticipated to change because of the topographic and land use constraints (KPCO_R_KPSC_2_7_Attachment2).

Kentucky Power engineers subsequently investigated moving the center line and accompanying ROW farther south on the ridge to avoid parcel "24." Topographical constraints and land use conflicts on Left Fork Island Creek Road make relocation farther to the south impracticable. Specifically, shifting Structure 8 farther south on the narrow ridge would move the ROW closer to a cemetery and residential building, shown as parcels 18 and 19 on KPCO_R_KPSC_2_7_Attachment2.pdf. The Company will continue working with Mr. Bishop and the Sendelbach Family Trust to extent practicable and plans to visit the Sendelbach Family property in the near future to evaluate the views from Sendelbach home located on Left Fork Island Creek Road toward Structure 8.

Witness: Michael G. Lasslo

LEGEND

- Proposed Structure
- Ground Surveyed Parcel Information (Sept. 2018)
- Proposed Kewanee Extension 138 kV Transmission Line
- Preliminary Access Road
- Existing AEP Transmission Line
- Filing Corridor
- Proposed ROW (100-ft)
- Preliminary Structure Work Pad
- County Boundary
- County GIS Property Boundary (Nov. 2017)
- Sendelbach Family Trust (Old Parcel Boundary - Nov. 2017)
- Index Contour (250')
- Intermediate Contour (50')

Project Location

0 250 500
Feet

Pike and Floyd Counties
Kentucky

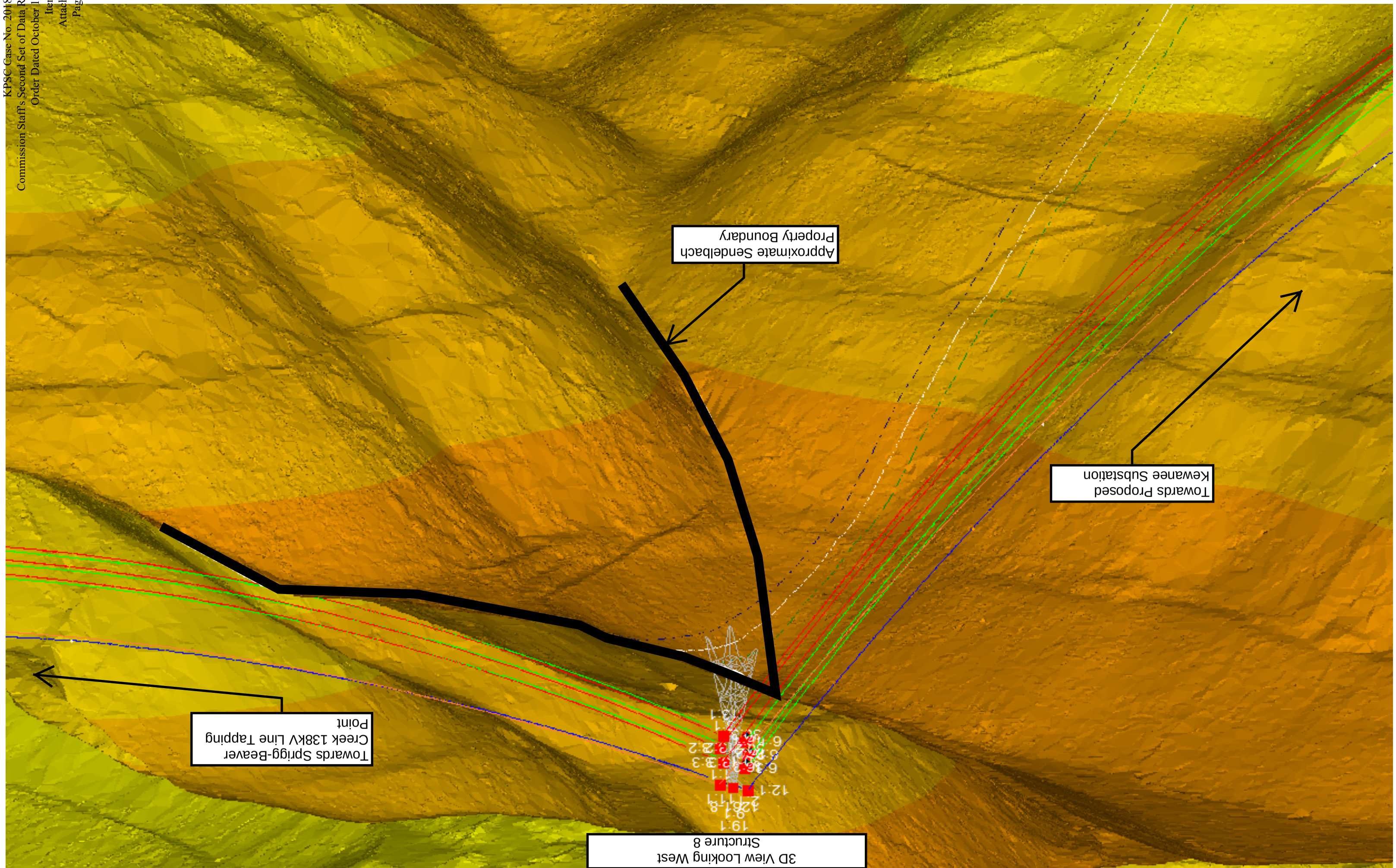
Published Date: October 22, 2018

Sendelbach Family Trust Map

KENTUCKY POWER
An AEP Company
BOUNDLESS ENERGY

PRELIMINARY

Enterprise Park Economic & Area Improvements Project


Approximate Sendelbach Property Boundary
Towards Proposed Kewanee Substation
Towards Sprigg-Beaver Creek 138kV Line Tapping Point
3D View Looking West
Structure 8

DATA REQUEST

KPSC 2-8 Refer to the Kentucky Power's Siting Study at page 15, which states that "[w]here feasible, service and access roads are constructed jointly but none are expected in this project," and refer to the application, which indicates that access roads are included in the Enterprise Park Economic & Area Improvements Transmission Project.

a. State whether Kentucky Power anticipates that it will need to construct either service roads or access roads to construct the transmission line portion of the project.

b. If not, state how it anticipates accessing the proposed site for construction and service.

c. If so, describe all service and access roads it anticipates constructing, and state whether the estimated cost for the construction of those service and access roads is included in the estimated cost of the Enterprise Park Economic & Area Improvements Transmission Project.

d. State whether any service or access road will be constructed on the property identified as "24" on Exhibit 3 to the application.

RESPONSE

a. Kentucky Power anticipates building a permanent service road to the proposed Kewanee Substation. Kentucky Power anticipates building temporary access roads to the transmission line structures in connection with their construction.

b. NA

c. Kentucky Power intends to build temporary construction access roads to each transmission line structure. A large portion of the project area has been previously mined with numerous existing access roads that will require upgrades for use during construction. After construction, the temporary transmission line access roads will be stabilized and not maintained. The Kewanee Substation will have a permanent and maintained gravel service road to provide access to the substation.

The estimated cost for the construction of temporary access roads and permanent service roads was included in the estimated cost of the Enterprise Park Economic and Area Improvements Project.

d. An access road will be built to structure 8 from the south. A temporary construction pad around structure 8, that will also encompass the approximately 45 foot temporary access road to be constructed on parcel “24,” will be required to provide a work space to erect the structure (see KPCO_R_KPSC_2_7_Attachment2).

Witness: Emily S. Larson

DATA REQUEST

KPSC 2-9 Refer to Kentucky Power's siting study at Page 15 in which Kentucky Power states that "[e]rosion control devices will be constructed where necessary to reduce soil erosion in the [right-of-way]."

a. Describe the types of erosion control devices and other erosion control measures that Kentucky Power will use to reduce erosion in the right-of-way and the circumstances under which Kentucky Power will use them.

b. Explain why Kentucky Power contends that those measures are sufficient to prevent or mitigate erosion in the right-of-way.

RESPONSE

a. A Stormwater Pollution Prevention Plan (SWPPP) will be completed and submitted to the Kentucky Department of Environmental Protection (DEP) for approval of erosion control devices and stormwater management practices that are site-specific and best suited the project. The SWPPP is not complete but erosion control devices and stormwater management practices may include, but are not limited to, sediment barriers, slope protection, stabilization, sediment trapping devices, stormwater flow management practices, along with others included in the DEP's Best Management Practices Plan.

b. A SWPPP is intended to prevent or mitigate erosion during construction activities. SWPPPs are approved by the Kentucky DEP for all projects that disturb more than one acre of land. The SWPPP to be submitted by Kentucky Power will meet all applicable DEP requirements. DEP's Best Management Practices Plan explains:

> The purpose of the SWPPP or BMP Plan is to reduce the amount of pollutants that would otherwise be carried off the property by stormwater and enter creeks and rivers, endangering health and the environment. During construction activities, the goal is to provide erosion control (protect soil surface to prevent soil particles from being dislodged and carried away by wind or water) and sediment control (remove soil particles after they have been dislodged). Also, during construction activities as well as during operation, the goal is to segregate stormwater from materials and equipment that could otherwise result in pollutants being carried away with the stormwater.

Erosion control devices and storm water protection measures undertaken in conformity with an approved plan are expected to be sufficient to prevent or mitigate erosion.

Witness: Emily S. Larson

VERIFICATION

The undersigned, Ranie K. Wohnhas, being duly sworn, deposes and says he is the Managing Director of Regulatory & Finance for Kentucky Power, 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.

Ranie K. Wohnhas

Commonwealth of Kentucky)
) Case No. 2018-00209
County of Boyd)

Subscribed and sworn before me, a Notary Public, by Ranie K. Wohnhas this 24 day of October, 2018.

Trisha M. Young Blum
Notary Public

My Commission Expires 3-18-19

TRISHA M. YOUNG
NOTARY ID 530202
COMMISSION EXPIRES 3-18-19

VERIFICATION

The undersigned, Michael G. Lasslo, being duly sworn, deposes and says he is the Reliability Manager for Kentucky Power, 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.

Michael G. Lasslo

Commonwealth of Kentucky)
) Case No. 2018-00209
County of Perry)

Subscribed and sworn before me, a Notary Public, by Michael G. Lasslo this 26th day of October, 2018.

Notary Public

My Commission Expires 6-21-2022

VERIFICATION

The undersigned, Emily S. Larson, being duly sworn, deposes and says she is the Project Manager for POWER Engineers, Inc., that she 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 her information, knowledge, and belief.

Emily S. Larson

Commonwealth of Virginia)
) Case No. 2018-00209
City of Richmond)

Subscribed and sworn before me, a Notary Public, by Emily S. Larson this 26 day of October, 2018.

Notary Public

My Commission Expires March 31, 2022

JESSICA RENEE BALLARD
NOTARY PUBLIC
REGISTRATION # 7582535
COMMONWEALTH OF VIRGINIA
MY COMMISSION EXPIRES
MARCH 31, 2022