COMMONWEALTH OF KENTUCKY

BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

THE ELECTRONIC APPLICATION OF EAST KENTUCKY POWER COOPERATIVE, INC. FOR 1) A CERTIFICATE OF PUBLIC CONVENIENCE AND NECESSITY TO CONSTRUCT A NEW GENERATION RESOURCE; 2) A SITE COMPATIBLITY CERTIFICATE; AND 3) OTHER GENERAL RELIEF	))))))	**CASE NO. 2024-00310**

RESPONSES TO STAFF'S FIRST REQUEST FOR INFORMATION

TO EAST KENTUCKY POWER COOPERATIVE, INC.

DATED OCTOBER 28, 2024

COMMONWEALTH OF KENTUCKY

BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

THE ELECTRONIC APPLICATION OF EAST KENTUCKY POWER COOPERATIVE, INC. FOR 1) A CERTIFICATE OF PUBLIC CONVENIENCE AND NECESSITY TO CONSTRUCT A NEW GENERATION RESOURCE; 2) A SITE COMPATIBLITY CERTIFICATE; AND 3 OTHER GENERAL RELIEF	)))))))	**CASE NO. 2024-00310**

CERTIFICATE

STATE OF KENTUCKY)
)
COUNTY OF CLARK)

Darrin Adams, being duly sworn, states that he has supervised the preparation of the responses of East Kentucky Power Cooperative, Inc. to the Commission Staff's First Request for Information in the above-referenced case dated October 28, 2024, and that the matters and things set forth therein are true and accurate to the best of his knowledge, information, and belief, formed after reasonable inquiry.

Darrin Adams

_____

Subscribed and sworn before me on this 12th day of November, 2024.

Notary Public

GWYN M. WILLOUGHBY
Notary Public
Commonwealth of Kentucky
Commission Number KYNP38003
My Commission Expires Nov 30, 2025

COMMONWEALTH OF KENTUCKY

BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

THE ELECTRONIC APPLICATION OF EAST KENTUCKY POWER COOPERATIVE, INC. FOR 1) A CERTIFICATE OF PUBLIC CONVENIENCE AND NECESSITY TO CONSTRUCT A NEW GENERATION RESOURCE; 2) A SITE COMPATIBLITY CERTIFICATE; AND 3 OTHER GENERAL RELIEF	)))))))	**CASE NO. 2024-00310**

CERTIFICATE

STATE OF KENTUCKY)
)
COUNTY OF CLARK)

Nick Comer, being duly sworn, states that he has supervised the preparation of the responses of East Kentucky Power Cooperative, Inc. to the Commission Staff's First Request for Information in the above-referenced case dated October 28, 2024, and that the matters and things set forth therein are true and accurate to the best of his knowledge, information, and belief, formed after reasonable inquiry.

Subscribed and sworn before me on this 12th day of November, 2024.

Notary Public

GWYN M. WILLOUGHBY
Notary Public
Commonwealth of Kentucky
Commission Number KYNP38003
My Commission Expires Nov 30, 2025

COMMONWEALTH OF KENTUCKY

BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

THE ELECTRONIC APPLICATION OF EAST KENTUCKY POWER COOPERATIVE, INC. FOR 1) A CERTIFICATE OF PUBLIC CONVENIENCE AND NECESSITY TO CONSTRUCT A NEW GENERATION RESOURCE; 2) A SITE COMPATIBLITY CERTIFICATE; AND 3 OTHER GENERAL RELIEF	)))))))	**CASE NO. 2024-00310**

CERTIFICATE

STATE OF KENTUCKY)
)
COUNTY OF CLARK)

Scott Drake, being duly sworn, states that he has supervised the preparation of the responses of East Kentucky Power Cooperative, Inc. to the Commission Staff's First Request for Information in the above-referenced case dated October 28, 2024, and that the matters and things set forth therein are true and accurate to the best of his knowledge, information, and belief, formed after reasonable inquiry.

Scott Drake

_____

Subscribed and sworn before me on this 12th day of November, 2024.

Notary Public

GWYN M. WILLOUGHBY
Notary Public
Commonwealth of Kentucky
Commission Number KYNP38003
My Commission Expires Nov 30, 2025

COMMONWEALTH OF KENTUCKY

BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

THE ELECTRONIC APPLICATION OF EAST KENTUCKY POWER COOPERATIVE, INC. FOR 1) A CERTIFICATE OF PUBLIC CONVENIENCE AND NECESSITY TO CONSTRUCT A NEW GENERATION RESOURCE; 2) A SITE COMPATIBLITY CERTIFICATE; AND 3 OTHER GENERAL RELIEF	)))))))	**CASE NO. 2024-00310**

CERTIFICATE

STATE OF KENTUCKY)
)
COUNTY OF CLARK)

Craig A. Johnson, being duly sworn, states that he has supervised the preparation of the responses of East Kentucky Power Cooperative, Inc. to the Commission Staff's First Request for Information in the above-referenced case dated October 28, 2024, and that the matters and things set forth therein are true and accurate to the best of his knowledge, information, and belief, formed after reasonable inquiry.

Craig Johnson

_____

Subscribed and sworn before me on this 12th day of November, 2024.

Notary Public

GWYN M. WILLOUGHBY
Notary Public
Commonwealth of Kentucky
Commission Number KYNP38003
My Commission Expires Nov 30, 2025

COMMONWEALTH OF KENTUCKY

BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

THE ELECTRONIC APPLICATION OF EAST KENTUCKY POWER COOPERATIVE, INC. FOR 1) A CERTIFICATE OF PUBLIC CONVENIENCE AND NECESSITY TO CONSTRUCT A NEW GENERATION RESOURCE; 2) A SITE COMPATIBLITY CERTIFICATE; AND 3 OTHER GENERAL RELIEF	**)**	**CASE NO. 2024-00310**

CERTIFICATE

STATE OF KENTUCKY)
)
COUNTY OF CLARK)

Jerry Purvis, being duly sworn, states that he has supervised the preparation of the responses of East Kentucky Power Cooperative, Inc. to the Commission Staff's First Request for Information in the above-referenced case dated October 28, 2024, and that the matters and things set forth therein are true and accurate to the best of his knowledge, information, and belief, formed after reasonable inquiry.

Jerry Purvis

_____

Subscribed and sworn before me on this 12th day of November, 2024.

Notary Public

GWYN M. WILLOUGHBY
Notary Public
Commonwealth of Kentucky
Commission Number KYNP38003
My Commission Expires Nov 30, 2025

COMMONWEALTH OF KENTUCKY

BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

THE ELECTRONIC APPLICATION OF EAST KENTUCKY POWER COOPERATIVE, INC. FOR 1) A CERTIFICATE OF PUBLIC CONVENIENCE AND NECESSITY TO CONSTRUCT A NEW GENERATION RESOURCE; 2) A SITE COMPATIBLITY CERTIFICATE; AND 3 OTHER GENERAL RELIEF	)	**CASE NO. 2024-00310**

CERTIFICATE

STATE OF KENTUCKY)
)
COUNTY OF CLARK)

Julia J. Tucker, being duly sworn, states that she has supervised the preparation of the responses of East Kentucky Power Cooperative, Inc. to the Commission Staff's First Request for Information in the above-referenced case dated October 28, 2024, and that the matters and things set forth therein are true and accurate to the best of her knowledge, information, and belief, formed after reasonable inquiry.

Julia J. Tucker

_____

Subscribed and sworn before me on this 12th day of November, 2024.

Notary Public

GWYN M. WILLOUGHBY
Notary Public
Commonwealth of Kentucky
Commission Number KYNP38003
My Commission Expires Nov 30, 2025

COMMONWEALTH OF KENTUCKY

BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

THE ELECTRONIC APPLICATION OF EAST KENTUCKY POWER COOPERATIVE, INC. FOR 1) A CERTIFICATE OF PUBLIC CONVENIENCE AND NECESSITY TO CONSTRUCT A NEW GENERATION RESOURCE; 2) A SITE COMPATIBLITY CERTIFICATE; AND 3 OTHER GENERAL RELIEF	)))))))	**CASE NO. 2024-00310**

CERTIFICATE

STATE OF KENTUCKY)
)
COUNTY OF CLARK)

Brad Young, being duly sworn, states that he has supervised the preparation of the responses of East Kentucky Power Cooperative, Inc. to the Commission Staff's First Request for Information in the above-referenced case dated October 28, 2024, and that the matters and things set forth therein are true and accurate to the best of his knowledge, information, and belief, formed after reasonable inquiry.

Brad Young

_____

Subscribed and sworn before me on this 12th day of November, 2024.

Notary Public

GWYN M. WILLOUGHBY
Notary Public
Commonwealth of Kentucky
Commission Number KYNP38003
My Commission Expires Nov 30, 2025

EAST KENTUCKY POWER COOPERATIVE, INC. CASE NO. 2024-00310
FIRST REQUEST FOR INFORMATION RESPONSE

STAFF'S REQUEST DATED OCTOBER 28, 2024
REQUEST 1
RESPONSIBLE PARTY: Julia J. Tucker

Request 1. Refer to the Direct Testimony of Julia J. Tucker (Tucker Direct Testimony), page 8, lines 4-16.

a. Provide a copy of the long-term load forecast (LTLF). Include with the response a copy of the individual Owner-Member load forecasts, all forecast equations, discussion of assumptions, and data sources.

b. Explain the extent to which EKPC expects energy intensive manufacturing or data centers to locate within its service territory.

c. Refer also to the Tucker Direct Testimony, page 10, lines 3-5. Provide an explanation of the Itron, Inc., modeling methodology including the formulation of the various modeling variables.

Response 1.

a. Please see the EKPC 2024 Long Term Load Forecast ("LTLF") report attached, which is being filed under seal subject to a motion for confidential treatment, which details the methodology, assumptions, and data sources used to the develop the forecast along with the forecast results for the years 2025 through 2039. In addition, please see the individual Owner Member load forecast reports in the attached PDF, which are also being filed under seal subject to a motion for confidential treatment. See attachments *PSC Attachment 1(a) EKPC LTLF.pdf* and

PSC Attachment 1(a) Owner Member Forecast.pdf.

b. The 2024 LTLF does not include any data center, mega load, or new energy intensive industrial load. Any service of these loads would be above and beyond the forecast. EKPC has been approached by multiple large data centers, but no firm commitments have been made to date. EKPC does expect that some large data center load will materialize.

c. Please see Appendix B of the attached 2023 Itron SAE Update, which is being filed under seal subject to a motion for confidential treatment, which details the Itron modeling methodology used to develop the LTLF. Modeling variables are attached in the attached *PSC Attachment 1c - Model Variable List.pdf.*

EAST KENTUCKY POWER COOPERATIVE, INC. CASE NO. 2024-00310
FIRST REQUEST FOR INFORMATION RESPONSE

STAFF'S REQUEST DATED OCTOBER 28, 2024
REQUEST 2
RESPONSIBLE PARTY: Scott Drake

Request 2. Refer to the Tucker Direct Testimony, page 9, lines 5-14.

a. Provide the Demand Side Management (DSM) Potential Study serving as the basis for EKPC's increased program selection.

b. The table shows the potential energy and capacity impacts of increased DSM program implementation. Explain whether individual Owner-Members have the option to implement these programs and if so, what assumptions were made regarding retail customer participation.

Response 2.

a. See attachment *PSC Attachment 2a - EKPC 2024 DSM Study – Report wAppendices.pdf.*

b. All DSM programs offered by EKPC are a la carte; meaning EKPC's owner-members can choose which DSM programs to offer their members. EKPC develops the DSM programs collaboratively with the owner-members, which results in the DSM programs being implemented by almost all owner-members. The forecasted end-use member participation levels are based on past participation levels and conversations with the owner-member's energy advisors and member services staff.

EAST KENTUCKY POWER COOPERATIVE, INC. CASE NO. 2024-00310
FIRST REQUEST FOR INFORMATION RESPONSE

STAFF'S REQUEST DATED OCTOBER 28, 2024
REQUEST 3
RESPONSIBLE PARTY: Julia J. Tucker

Request 3. Refer to the Tucker Direct Testimony, page 12, lines 11-16. Explain what EKPC's PJM seasonal planning reserve margins are and how that compares to EKPC's seven percent winter and summer planning reserve margin.

Response 3. PJM quantifies its reserve margin using the Installed Reserve Margin ("IRM") methodology. According to PJM Manual 20:

"[IRM] is the installed capacity percent above the forecasted peak load required to satisfy a Loss of Load Expectation (LOLE) of, on average, 1 Day / 10 Years. For a given delivery year, IRM is one of the two primary inputs needed for calculating the Forecast Pool Requirement (FPR)."[1]

[1] PJM Interconnection LLC, Manuel 20, https://www.pjm.com/-/media/documents/manuals/m20.ashx (last accessed November 7, 2024).

PJM issued its 2023 Reserve Requirement Study ("RRS") on December 29, 2023[2], which recommended the following IRM values for 2024 through 2028:

Table I-1: 2023 Reserve Requirement Study Summary Table

RRS Year	Delivery Year Period	Recommended IRM	Average EFORd	Recommended FPR
2023	2024 / 2025	**17.7%**	5.10%	**1.1170**
2023	2025 / 2026	**17.7%**	5.09%	**1.1171**
2023	2026 / 2027	**17.7%**	5.08%	**1.1172**
2023	2027 / 2028	**17.6%**	5.06%	**1.1165**

These values represent an increase of approximately 3% over the recommended IRM from the previous year's 2022 RRS. PJM cited the increase in IRM is due to the increased loss of load expectation ("LOLE") experienced during Winter Storm Elliot ("WSE") and the 2014 Polar Vortex event.

Similarly, EKPC quantified its reserve margin by analyzing the 1 in 10 probability of extreme weather events on the EKPC load forecast by modeling an extreme weather event occurring every two years for a 48-hour period within each of those two-year periods. EKPC's load forecast assumes normal winter peak producing temperature of -2°F. The normal assumption for the hourly

[2] PJM 2023 Reserve Requirement Study, https://www.pjm.com/-/media/planning/res-adeq/2023-pjm-reserve-requirement-study.ashx (last accessed November 7, 2024).

load shape on the winter peak day is based on EKPC's typical winter load shape with a morning peak followed by a valley and a late afternoon peak. The extreme event used in this analysis assumes -13°F as the peak producing temperature every two years. Rather than a typical winter peak day hourly shape, the event assumes a 48-hour event with a shape similar to Winter Storm Elliott where load reached peak levels for an extended period of time. This resulted in an increase to the forecasted peak load of 7% over the base forecast, which represents the target for capacity planning.

EAST KENTUCKY POWER COOPERATIVE, INC. CASE NO. 2024-00310
FIRST REQUEST FOR INFORMATION RESPONSE

STAFF'S REQUEST DATED OCTOBER 28, 2024
REQUEST 4
RESPONSIBLE PARTY: Julia J. Tucker

Request 4. Refer to the Tucker Direct Testimony, page 13, lines 14-18. Provide the analysis and a more detailed explanation of how EKPC quantified the risk of an unexpected extreme weather event or generator outage.

Response 4. Refer to the response to Request 3 above. The risk of a forced generator outage is taken into account with the planning reserve margin and PJM's Effective Load Carrying Capability ("ELCC") calculations.

EAST KENTUCKY POWER COOPERATIVE, INC. CASE NO. 2024-00310
FIRST REQUEST FOR INFORMATION RESPONSE

STAFF'S REQUEST DATED OCTOBER 28, 2024
REQUEST 5
RESPONSIBLE PARTY: Julia J. Tucker

Request 5. Refer to the Tucker Direct Testimony page 16 lines 5-7. Explain the source of the potential hydro resources.

Response 5. EKPC is currently contracted with Brookfield Hydro Resources ("Brookfield") on a short-term purchased power agreement ("PPA") to supply energy from its Safe Harbor facility located on the Susquehanna River in Pennsylvania. The PPA allows EKPC to purchase actual output from the hydro facility at a fixed price per megawatt hour delivered to the generator node, which is within PJM. The PPA expires May 31, 2025, however EKPC is currently working to extend the current agreement through December 31, 2025. EKPC is also negotiating a long-term PPA with Brookfield which would start January 1, 2026, and extend through May 31, 2034.

EAST KENTUCKY POWER COOPERATIVE, INC. CASE NO. 2024-00310
FIRST REQUEST FOR INFORMATION RESPONSE

STAFF'S REQUEST DATED OCTOBER 28, 2024
REQUEST 6
RESPONSIBLE PARTY: Julia J. Tucker

Request 6. Refer to the Tucker Direct Testimony page 16 lines 11-23, page 17 lines 1-16, and Exhibit JJT-3. Provide the resource selection and resource optimization analyses complete with a detailed explanation of all the assumptions (including Environmental Protection Agency (EPA) and PJM related assumptions), and all potential resource (including power purchase agreements (PPAs) fixed and variable cost data used determine the specific resources selected and the timing of new resource implementation represented in Exhibit JJT-3.

Response 6. EKPC is anticipated to be capacity deficient beginning in the 2025/2026 winter peak period by 200 MWs, not accounting for any planning reserve margin, when comparing existing generation assets against forecasted peak load without the addition of new generation assets and/or PPAs. When the seven percent planning reserve margin is added to the peak load forecast the expected capacity deficiency increases from 200 MWs to 454 MWs in the 2025/2026 winter peak period, as shown in Attachment JJT-3, the EKPC Capacity Expansion Plan, in columns P and Q, "Deficit before Cap Additions". This deficit is forecasted to grow from 454 MWs in 2025/2026 to 908 MWs in the 2038/2039 winter peak period.

In order for EKPC to meet this immediate capacity need it has only PPAs as alternatives, due to the time required to permit and construct a new facility. EKPC currently has a short-term PPA for energy from Safe Harbor Hydro and is in negotiations to extend that into a longer-term contract that will

provide a bridge to installed capacity. While this PPA provides an energy bridge to the RICE units, it does not provide dispatchable generation or capacity value. The hydro owners sell the energy, capacity and renewable energy credits each as a separate product, not bundled. EKPC did not choose to purchase the capacity and renewable energy credit products in its PPA, as they were not deemed to be economically prudent purchases.

EKPC's updated 2024 long term load forecast shows a significant increase in expected winter peak loads based on recent experience but it does not report significant changes in expected energy requirements. Therefore, EKPC's optimization analyses in its 2022 Integrated Resource Plan ("IRP") continues to be relevant concerning its energy resource needs going forward. That plan indicates that solar resources are economically viable for EKPC and that its next dispatchable resource is expected to be a combustion turbine. EKPC did not include RICE units in its alternatives in the 2022 IRP. EKPC compared the RICE units to a simple cycle combustion turbine only in its analysis for this application, since the detailed optimization studies for the 2022 IRP were still pertinent with regards to energy needs. However, the timing of the need for the next resource has changed due to the change in peak load expectations.

The capital cost for an "F" class combustion turbine was assumed to be $1,329/kW, with a full load average heat rate of 9,717 btu/kWh. Fixed operations and maintenance ("O&M"") of $26/kW-yr and variable O&M of $6.94/MWh. The capital cost for the RICE engines was assumed to be $1,995/kW, with an average annual heat rate of 8,381 btu/kWh. Fixed O&M for RICE is
$15/kW-yr and variable O&M is $2.65/MWh. A carrying charge rate of 10.8%, based on 4.5% interest and 30 years depreciation, results in annual fixed charges of $143,500/MW-yr for the combustion turbine and $215,500/MW-yr for the RICE units. Adding fixed O&M charges to the capital investment shows an annual cost of $169,500/MW-yr for CT and $230,500/MW-yr for RICE.

RICE costs $61,000/MW-yr more than the CT in fixed charges. RICE units are more efficient and cost less to run on a variable cost basis than the CT. The crossover point between the two technologies is highly dependent on natural gas prices. At $4.00/mmbtu gas cost, the CT costs $38.87/MWh ($4.00/mmbtu * 9,717 btu/kWh * 1,000 kWh/MWh / 1,000,000 btu/mmbtu). The RICE unit costs $33.52/MWh ($4.00/mmbtu*8,381btu/kWh*1,000kWh/MWh/ 1,000,000btu/mmbtu). The total variable cost for a CT including variable O&M is $45.81/MWh. The total variable cost for a RICE unit is $36.17/MWh, which is $9.64/MWh less than the CT. Solving for the breakeven point between fixed cost versus variable cost savings shows a crossover point at 6,328 hours per year ($61,000/MW-yr / $9.64/MWh). A gas price of $3.00/mmbtu results in a cross over point of 7,350 hours per year and a gas price of $5.00/mmbtu results in a cross over point of 5,560 hours per year. From a strict price point, the combustion turbine is slightly less in total cost. However, from a strategic point, the RICE units provide a tremendous amount of flexibility operationally and reduce the risk of performance penalties in the PJM capacity market.

The RICE units will receive as much capacity value, if not more, in the PJM capacity auction as the combustion turbine. The lower minimum operating level on the RICE units as compared to the combustion turbine mean that they will likely operate more often than the CT. The RICE units can follow load much better than the CT, meaning that the change in generation needs when there is substantial solar penetration on the system will be much better suited to the RICE units than the CT. EKPC believes that PJM will see substantial solar penetration in its system, as will EKPC, and having the RICE units will provide significant benefit to the system. The flexibility of the RICE units will also help support the addition of solar generation to the system.

RICE units have distinct advantages over CTs, including faster start times, quicker ramp rates, and lower minimum downtime and runtime values. These advantages make RICE units an attractive

resource within the PJM energy market, as shown by the anticipated revenue as discussed within the Application. Building a resource and ensuring EKPC has steel in the ground provides EKPC with all attributes of a resource, including energy and capacity, at a competitive cost as compared to PPAs and enables EKPC to effectively hedge against PJM market risks such as capacity performance and high energy prices. RICE units also fully comply with current greenhouse gas regulations as more fully described in the direct testimony of Jerry Purvis.

EAST KENTUCKY POWER COOPERATIVE, INC. CASE NO. 2024-00310
FIRST REQUESTFOR INFORMATION RESPONSE

STAFF'S REQUEST DATED OCTOBER 28, 2024
REQUEST 7
RESPONSIBLE PARTY: Craig A. Johnson

Request 7. Refer to the Tucker Direct Testimony, page 23, line 23 and page 24, line 1. Also refer to the Direct Testimony of Craig A. Johnson (Johnson Direct testimony), page 5, lines 13-16 and page 9, lines 22-23.

a. If the Reciprocating Internal Combustion Engines (RICE) units are expected to run as much as 6,000 hours per year, between 20 percent to 70 percent capacity factors, and burn natural gas and low sulfur diesel fuel, explain what environmental controls the RICE units will be required to meet.

b. Explain whether CO2 is produced in addition to CO when natural gas and low sulfur diesel fuel are burned. If so, explain whether the addition of a CO catalyst is sufficient to control carbon emissions in compliance with EPA rules.

c. Explain whether the RICE units will be able to burn hydrogen gas to reduce carbon emissions in the event a CO catalyst insufficient.

Response 7 a-c. Carbon dioxide ("CO2") will be created as a by-product during the combustion of natural gas or diesel fuel ("ULSD"). CO2 is very dependent upon the type of fuel being burnt. Natural gas produces 116.65 lbs of CO2 for every one-million BTUs of energy consumed. ULSD produces 163.45 lbs. of CO2 for every one-million BTUs of energy consumed. More efficient units result in less fuel consumed and a lower CO2 intensity. Carbon monoxide ("CO") is a byproduct given off during combustion of either Natural Gas or ULSD. CO is controlled in two ways; first, is through tuning the engine to combust fuels as efficiently as possible, and second is through post

combustion cleanup. CO is reduced through catalyst placed in the flue gas stream prior to exhausting through the stack. The air permitting process involves modeling the predicted emissions based upon information given by the original equipment manufacturer ("OEM"). The emissions characteristics for the model of engine being installed are very well known, allowing the OEM to guarantee the CO emission rate. Even though Wartsila has stated publicly that RICE technology is capable of burning hydrogen as a fuel, hydrogen will not be available as a fuel for the foreseeable future.

EAST KENTUCKY POWER COOPERATIVE, INC. CASE NO. 2024-00310
FIRST REQUEST FOR INFORMATION RESPONSE

STAFF'S REQUEST DATED OCTOBER 28, 2024
REQUEST 8
RESPONSIBLE PARTY: Craig A. Johnson

Request 8. Refer to the Tucker Direct Testimony, page 24, line 1, the Application paragraph 12 and the Direct Testimony of Darrin Adams (Adams Direct Testimony), page 10, lines 15-23 and page 11, lines 1-18. The RICE units are expected to run as much as 6,000 hours per year and are expected to support Cooper Station for regional reliability purposes.

a. Explain whether the addition of the RICE units will allow the Cooper units to run less with a resulting lower capacity factor and potentially aid in environmental compliance due to the lower capacity factor.

b. Explain whether the addition of the RICE units will allow EKPC to rely less upon Kentucky Utilities' Brown Station and TVA for voltage support and reliability. If so, explain whether there are any monetary savings connected with this reduced reliance.

Response 8.

a. Operation of the RICE units could potentially offset the operation of Cooper Station when the station is being dispatched for reliability reasons. The RICE units will not impact the economic dispatch of Cooper Station. Environmental compliance for any generation

station is based upon site specific permits governing air, water and waste. Therefore, operation of the RICE units will not impact Cooper Station's environmental compliance requirements.

b. The addition of the Liberty RICE units will provide real and reactive power support for the southern region of Kentucky when operating. Although support from Kentucky Utilities' Brown Station and TVA will continue to be important components to the overall voltage support and load-serving reliability in this region, the addition of local generation in the area will provide additional operating margin to maintain adequate reliability during periods (particularly periods of high customer demand) when other generation and/or transmission facilities that help support the region are not available. The support provided to the region by Kentucky Utilities and TVA facilities (as well as EKPC facilities) is facilitated by the interconnected transmission system. Numerous free-flowing transmission interconnections exist between the EKPC system and the Kentucky Utilities and TVA systems. These interconnections have been established to provide mutual support and enhance reliability for customers served by each company. No financial compensation is provided for transmission support by any of the interconnected companies to any other company. Therefore, there are no monetary savings that will be realized due to the reduced reliance on other companies' support in the area.

EAST KENTUCKY POWER COOPERATIVE, INC. CASE NO. 2024-00310
FIRST REQUEST FOR INFORMATION RESPONSE

STAFF'S REQUEST DATED OCTOBER 28, 2024
REQUEST 9
RESPONSIBLE PARTY: Julia J. Tucker

Request 9. Refer to the Tucker Direct Testimony, page 26, lines 12-17 and Johnson Direct testimony page 5 line 4.

a. With a RICE unit nameplate capacity rating of 18.132 MW, explain the PJM seasonal capacity rating.

b. Explain how the RICE units will be bid into the PJM energy market, individually or in groups.

Response 9.

a. The RICE unit nameplate capacity of 18.132 MW represents the gross output capability of a single generator. The total gross capacity for the twelve units in total is 217.584 MW. The facility is expected to require a station service load of approximately 3.58 MW for all twelve units in total, which results in an expected net output of 214 MW. PJM has not published a specific ELCC value for RICE units at this time, however EKPC estimated the ELCC to be 79 percent in the 2029/2030 delivery year which is consistent with the PJM-calculated ELCC for a Natural Gas Combined Cycle resource.

b. EKPC is still evaluating the methodology for offering the RICE units into the PJM energy market.

EAST KENTUCKY POWER COOPERATIVE, INC. CASE NO. 2024-00310
FIRST REQUEST FOR INFORMATION RESPONSE

STAFF'S REQUEST DATED OCTOBER 28, 2024
REQUEST 10
RESPONSIBLE PARTY: Darrin Adams

Request 10. Refer to the Adams Direct Testimony, page 6, lines 13-23 and page 7, lines 1-18.

a. For the four lower bound projects, explain whether EKPC expects that these projects will have to be completed prior to the RICE project completion date.

b. For the upper bound of network upgrades, explain whether the three upper bound projects listed on page 7 are projects that EKPC expects to be completed regardless of the RICE project but at a later date.

Response 10. a. If these projects are identified in the PJM generator-interconnection queue studies as necessary projects to allow full delivery of the Liberty RICE energy output, these projects will need to be completed prior to the RICE project completion date to ensure that the facility will not be partially curtailed during periods of transmission congestion. The Liberty RICE facility may be able to operate with limited output until the upgrades are

completed, but EKPC's goal will be to complete the upgrades prior to the commercial operation date of the RICE facility.

b. EKPC does not expect a need to complete the rebuild of the Peytons Store-Casey County 69 kV line in the foreseeable future without the Liberty RICE facility based on either current power-flow studies or concerns about the physical condition of this line. This line was constructed in 2002, so it is not expected to need upgrade due to equipment condition in the foreseeable future. However, additional merchant-generator interconnection requests in the area that are not currently in the PJM queue could result in a need for this project in the future.

EKPC expects the rebuild of the Mt. Olive Junction-Highland-Broughtontown Tap- Tommy Gooch Tap 69 kV line will be needed due to the line's condition, even if power- flow studies do not project a thermal overload of the line's conductor. These line sections were built in the early 1950's and have much of their originally installed equipment still in operation. Therefore, although the need to rebuild these line sections has not yet been identified by EKPC, the expectation is that this need will be identified in the near future. EKPC also expects the necessity to complete the third project listed – an upgrade of the terminal equipment at the Denny substation associated with the Denny- Wiborg Tap 69 kV line based on current power-flow studies. A thermal overload of this line section has been identified in EKPC's power-flow studies in 2029-30 Winter extreme-load (1-in-10 year load level) conditions. Therefore, this upgrade will most likely be needed no later than the end of EKPC's current 15-year planning horizon even without the Liberty RICE facility.

EAST KENTUCKY POWER COOPERATIVE, INC. CASE NO. 2024-00310
FIRST REQUEST FOR INFORMATION RESPONSE

STAFF'S REQUEST DATED OCTOBER 28, 2024
REQUEST 11
RESPONSIBLE PARTY: Jerry Purvis

Request 11. Refer to the Direct Testimony of Jerry B. Purvis (Purvis Direct Testimony), page 5, lines 3-4. Explain how the RICE facility is exempt from the Greenhouse Gas (GHG) Rule, the Mercury, and Air Toxics (MATs) Rule, and the Good Neighbor Federal Implementation Plan (GNFIP). Include in the response, whether EPA rules are applicable and whether they are applied to individual RICE units or to the facility as a whole.

Response 11. EPA's latest suite of federal Clean Air Act ("CAA") rules apply to coal-fueled combustion facilities. Since the Liberty RICE does not burn coal, the rules do not apply. Specifically, the EPA GHG and MATs rules do not apply. The GNFIP rule applies to existing fossil fueled units or those that currently have a Title V permit and are rated above 25 MWs. The RICE engines are exempt from this rule because each engine is below 25 MWs and are new sources of emissions. EKPC submitted an air application to the Kentucky Division for Air Quality on September 20, 2024.

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STAFF'S REQUEST DATED OCTOBER 28, 2024
REQUEST 12
RESPONSIBLE PARTY: Jerry Purvis

Request 12. Refer to the Purvis Direct Testimony, page 7, lines 10-14. Presuming the RICE units have a capacity of 18.132 MW and are expected to run up to approximately 6,000 hours per year (20 percent – 70 percent capacity factor), if the RICE units were to be operationally bid into the PJM energy market as a group of three units, that would equal 54.396 MW of gross nameplate generation (18.132 X 3 = 54.396). Since this operationally equates to more than 25 MW, explain why this wouldn't trigger new GHG rule compliance.

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Response 12. Congress authorized EPA to regulate air quality under the CAA. As authorized, EPA regulates air quality from three perspectives: 1) under new source performance standards ("NSPS"); 2) national emission standards for hazardous air pollutants ("HAPs"); and 3) national ambient air quality standards ("NAAQs"). EPA chose to regulate, under NSPS and HAPs, the manufacturer of the RICE engines with ratings less than 25 MWs. Engine manufacturers must meet EPA emissions before the engines can be offered and sold in the US for engines under 25 MWs.

From a historical to current regulatory actions, EPA regulates RICE engines under NESHAP for RICE September 2013 and the New Source Performance Standards for Stationary Internal Combustion Engines, August 24, 2013 as applicable to engines after June 12, 2006 for hazardous air pollutants 79 FR 48072-01 as published August 15, 2014 and ISO 8178-4:1996 (e) for Exhaust Emissions Measurement. EPA issued a final regulation updating how to electronically report emissions on June 26, 2023. On June 26, 2023, EPA proposed to amend the National Emission Standards for Hazardous Air Pollutants for Reciprocating Internal Combustion Engines (40 CFR part 63 subpart ZZZZ), the New Source Performance Standards for Stationary Compression Ignition Internal Combustion Engines (40 CFR part 60 subpart IIII), and the New Source Performance Standards for Stationary Spark Ignition Internal Combustion Engines (40 CFR part 60 subpart JJJJ) to add electronic reporting provisions and to clarify and correct inadvertent and other minor errors in the Code of Federal Regulations. This action will finalize those proposed amendments. Regarding GHG, EPA categorized this exemption under the GHG rule and chose not to regulate the RICE engines GHG emissions.

Dispatching 18 MW units individually, in totality, or less than totality is what EKPC represented in its application to KDAQ. EKPC submitted the air application under the EPA's PSD/Title V program as delegated to Kentucky. EPA and Kentucky will review the application under NSPS, NESHAP, and NAAQs and let EKPC know if it meets the requirements. EKPC filed the air modeling impacts results and an air permit application on September 20, 2024, to the Division for Air Quality. KDAQ is reviewing this application.

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STAFF'S REQUEST DATED OCTOBER 28, 2024
REQUEST 13
RESPONSIBLE PARTY: Jerry Purvis

Request 13. Refer to the Purvis Direct Testimony, Attachment JP-1. Provide the current status of listed federal and state permits listed in the exhibit. This is an ongoing request that is to be updated as the status of each requested permit changes.

Response 13. EKPC filed the air application for PSD/Title V of the CAA on September 20, 2024. The NEPA environmental assessment is being prepared for Rural Utility Services and is anticipated to be completed by year end. The remaining permit applications will be prepared and submitted in accordance with Exhibit JP-1, the permit matrices.

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STAFF'S REQUEST DATED OCTOBER 28, 2024
REQUEST 14
RESPONSIBLE PARTY: Scott Drake

Request 14. Refer to the Tucker Direct Testimony, pages 8-9, lines 23-1. Provide a complete cost benefit analysis for each energy efficiency program analyzed for use in the development of DSM programs.

Response 14. Cost benefit analysis is performed by EKPC's expert DSM consultant utilizing the DSMore cost benefit analysis software. The DSMore software system performs the California Standard Practice cost benefit tests. Input assumption sheets are created for each DSM program being evaluated. The assumption sheets detail all inputs used for the cost benefit analysis. Cost benefit summary results are produced by DSMore for each DSM program evaluated. See attachments uploaded separately with the names beginning with *PSC 14* for the assumption and summaries. The DSM program assumptions and summary results include both energy efficiency and demand response programs.

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STAFF'S REQUEST DATED OCTOBER 28, 2024
REQUEST 15
RESPONSIBLE PARTY: Nick Comer

Request 15. Explain whether EKPC has or intends to set up a complaint resolution process during the construction phase. If so, provide a discussion of the process.

Response 15. EKPC will establish a page on its web site with information regarding this project. This web page will include a link for visitors to email questions or concerns, as well as a phone number to call. During construction, EKPC plans to erect a sign at the main entrance directing any questions/concerns from the public to a phone number. The sign will include a QR code linking to the web page with project information and email address. EKPC's communications and project staff will coordinate to respond to questions/concerns as they arise.

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STAFF'S REQUEST DATED OCTOBER 28, 2024
REQUEST 16
RESPONSIBLE PARTY: Nick Comer

Request 16. State whether EKPC has received any written comments regarding this project. If yes, provide a copy of the written comments.

Response 16. No, EKPC has received no written comments at this time.

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STAFF'S REQUEST DATED OCTOBER 28, 2024
REQUEST 17
RESPONSIBLE PARTY: Brad Young

Request 17. Explain why the potential unevaluated sites listed in the Site Assessment Report (SAR) were not evaluated to be compared to the other potential sites listed

Response 17. All sites listed in the Site Assessment Report, specifically in the Site Selection Study in Appendix A, were evaluated for placing the RICE generators. A quantitative scoring system was applied to all 20 sites evaluated to select the top five preferred site locations for further evaluation. Further evaluation was conducted on those five sites, and the Liberty 3 site was selected as the optimum location for the construction of the plant.

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STAFF'S REQUEST DATED OCTOBER 28, 2024
REQUEST 18
RESPONSIBLE PARTY: Jerry Purvis

Request 18. Provide a list of any existing environmental concerns, such as soil contamination or protected habitats, that exists with the selected site.

Response 18. EKPC plans to seek financing assistance from the U.S. Department of Agriculture (USDA) Rural Utilities Service (RUS) to construct the proposed Liberty Reciprocating Internal Combustion Engine Project in Casey County, Kentucky. Prior to taking a federal action (i.e., providing financial assistance), RUS is required to complete an analysis of the potential environmental effects of the proposed action in accordance with the National Environmental Policy Act of 1969 (NEPA [42 U.S.C. 4321 et seq.]), the Council on Environmental Quality's (CEQ) regulations for implementing NEPA (40 CFR Parts 1500-1508), and Rural Development's (RD) NEPA implementing regulations, Environmental Policies and Procedures (7 CFR Part 1970). In addition, RUS considers the proposed Project an undertaking subject to review under Section 106 of the National Historic Preservation Act (NHPA), 54 U.S.C. 300101 et seq., and its implementing regulations, "Protection of Historic Properties" (36 CFR Part 800), and Section 7 of the Endangered Species Act (ESA) (16 U.S.C. 1531 et seq.).

Per RUS Environmental Policies and Procedures, the proposed action requires the preparation of Environmental Assessments (EA) in accordance with Section 1970.101 and RD Instruction 1970-C. At this time, EKPC and its consultants are conducting the required field assessments, environmental analyses, interagency coordination, and drafting the reports that will summarize the results of those efforts for each project, which will be submitted for review and approval by RUS. Upon such approval, RUS may adopt the report as the EA to meet their NEPA compliance obligations. Based on the anticipated environmental review schedule for this project, the final EA is anticipated to be completed and submitted by Q1 2025.

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STAFF'S REQUEST DATED OCTOBER 28, 2024
REQUEST 19
RESPONSIBLE PARTY: Jerry Purvis

Request 19. Provide the Environmental Impact Assessment (EIA).

Response 19. EKPC will provide a copy of the Liberty Reciprocating Internal Combustion Engine Project Environmental Assessment located in Casey, County Kentucky in accordance with the National Environmental Policy Act and our financing agency, the Rural Utility Service when it is complete. It is anticipated to be complete in early 2025.

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STAFF'S REQUEST DATED OCTOBER 28, 2024
REQUEST 20
RESPONSIBLE PARTY: Brad Young

Request 20. Describe any new infrastructure necessary (e.g., transportation, water, gas lines to connect to the existing infrastructure, and other utilities) to support the construction and ongoing operation of the facility.

Response 20. Utilities including electrical, water, and natural gas will all be modified to support the construction and facility. Potable water from the city will be used as the main source of fire protection, service water, and potable water needs. A new 4-inch water line will be run from the existing main trunk line near KY-49. A natural gas pipeline is located approximately 0.28 miles south and east of the proposed facility. EKPC will contract with the gas pipeline company to bring in service to the facility. Electrical transmission interconnect will be brought in from the existing transmission lines to the northeast via overhead 161kV service.

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STAFF'S REQUEST DATED OCTOBER 28, 2024
REQUEST 21
RESPONSIBLE PARTY: Brad Young

Request 21. Describe any new roads or utility connections that will be needed, the corresponding cost estimates as well as map depicting each additional road or connection.

Response 21. No new roads will be required to gain access to the new facility. The existing Carr Sasser Road coming into the plant will be widened and repaved to support equipment deliveries and future access to the plant. The upgrades to this road are estimated at $1 million. Facility roads will be integrated into the design around the new facility for operations and maintenance activities. Please see the response to Request 20 for a discussion of utility connections and locations. Additionally, please refer to Attachment BY-3 Project Feasibility Report.

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STAFF'S REQUEST DATED OCTOBER 28, 2024
REQUEST 22
RESPONSIBLE PARTY: Brad Young

Request 22. Provide any feedback EKPC has received from any surveys or consultations with local residents regarding potential noise, traffic, or visual impacts. Include any summaries of attempts to obtain feedback, if no feedback has been received.

Response 22. EKPC has been in contact with adjacent property owners and has provided initial information about the project, including potential impacts and planned mitigation strategies associated with the construction and future operation of the facility. Furthermore, prior to construction EKPC plans to conduct a public meeting to provide information and an opportunity for the public to provide feedback.

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STAFF'S REQUEST DATED OCTOBER 28, 2024
REQUEST 23
RESPONSIBLE PARTY: Brad Young

Request 23. Explain what steps EKPC is taking to minimize community conflict surrounding the construction of the Liberty RICE Facility.

Response 23. Typically, with construction of this type of facility the most opportunity for community conflict is with oversize deliveries, traffic, and noise. Below are the typical steps EKPC has taken or plans to take to minimize the impact on the local community.

1. All oversize deliveries will follow all permitting requirements. In addition, EKPC will notify local law enforcement of the incoming oversize deliveries so that the community can be informed before the deliveries.
2. EKPC will work with the local law enforcement regarding traffic and adjust start/finish times (or potentially stage these times) to allow workers to get to site and leave at non rush hour. EKPC performed a noise study and chose to follow self-implement typical setback guidelines.

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STAFF'S REQUEST DATED OCTOBER 28, 2024
REQUEST 24
RESPONSIBLE PARTY: Brad Young

Request 24. Refer to the mitigation strategies listed in the SAR, specifically sound walls, visual buffers, etc. Provide specific plans for the implementation of these mitigation measures. Include a timeline and detailed map of where the mitigation strategies will be implemented for maximum efficiency.

Response 24. At this early stage of project development, prior to detailed design, specific plans and detailed mitigations have not been defined. It is anticipated that sound walls, made of fast-growing coniferous trees, will be installed on the west side of Carr Sasser Road to mitigate sound projection to receptor points R1 and R2. It is also anticipated that additional trees, earthen berms, or sound walls may be necessary along the north and west sides of the facility near the radiator banks, however, this will be further developed and refined during detailed design.

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STAFF'S REQUEST DATED OCTOBER 28, 2024
REQUEST 25
RESPONSIBLE PARTY: Brad Young

Request 25. Provide any assessments that have been conducted to ensure that the site is safe for both the workers who will build and operate the facility and the nearby community.

Response 25. Several initial assessments of the site have been conducted to determine the suitability of the site for installation of the proposed facility. These include, but are not limited to, a comprehensive geotechnical evaluation, traffic study, noise study, transportation study and emissions modeling. None of these assessments have identified any unique safety concerns to workers or nearby community members during construction or operation of the facility. EKPC will develop and implement a comprehensive safety and health plan during construction of the facility in consultation with resources experienced in successfully constructing similar facilities in a safe manner. Once construction is complete, EKPC will implement its corporate health and safety program at the facility which has been in place and successfully utilized at all of EKPC's facilities in Kentucky for many years.

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STAFF'S REQUEST DATED OCTOBER 28, 2024
REQUEST 26
RESPONSIBLE PARTY: Brad Young

Request 26. Explain how EKPC will mitigate any risks related to air and water quality during and after construction.

Response 26. A stormwater pollution prevention plan ("SWPPP") will be developed for the project which will provide specific details for implementing best management practices ("BMPs"). During construction, runoff and spill prevention protocols will be managed by the construction management teams and contractors on site. Regular inspections will be performed on BMPs as required by the SWPPP. Spills of oils, chemicals, or other potential environmental impacting materials will require spill containment and remediations and will be defined in the site safety plan. Equipment in storage, prior to installation will be created or covered to prevent water contamination and runoff at the site. Air quality at the site will be maintained utilizing dust control measures such as spray trucks running continuously. Running equipment and engines will be minimized to prevent idling.

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STAFF'S REQUEST DATED OCTOBER 28, 2024
REQUEST 27
RESPONSIBLE PARTY: Brad Young

Request 27. Explain how EKPC will mitigate any risks related to increased traffic in and around the site area during and after construction.

Response 27. A traffic study was performed as part of the preliminary project planning. It is anticipated that traffic will increase during the morning and evening hours on KY-49 north and southbound as a result of construction activities. EKPC will work to mitigate traffic during construction by staggering craft start times in both the morning and evenings to reduce the volume of vehicles over a longer duration of time. Safety talks and training to bring awareness to the risks of the increased traffic will be routinely discussed on-site. Post construction traffic to and from the facility is expected to be less than 20 vehicles a day, causing negligible impact to traffic patterns.

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STAFF'S REQUEST DATED OCTOBER 28, 2024
REQUEST 28
RESPONSIBLE PARTY: Brad Young

Request 28. State whether construction of the Liberty RICE facility is expected to create new jobs in the area. If yes, provide an estimate of the number and type of jobs that EKPC expects this project to create.

Response 28. The current estimate is for an average of 100 construction craft workers peaking at approximately 200 for the project. We are estimating 23 permanent positions. Please refer to response 29 for additional details.

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STAFF'S REQUEST DATED OCTOBER 28, 2024
REQUEST 29
RESPONSIBLE PARTY: Craig A. Johnson

Request 29. Explain how many employees will be present at the facility on a day-to-day basis and describe their job duties.

Response 29. EKPC will have 23 full-time employees hired to oversee the daily operation of this facility. There will be a Plant Manager responsible for the entire station. An Operations Superintendent will oversee the station operation. Part of this position's duties involve daily operation personnel oversight, work order criticality monitoring, unit reporting for record keeping, and plant consumable inventory control. There will be two operations personnel per shift. There will be four shifts of operators whose role and responsibility are to monitor the safe operation of each unit and plant auxiliaries. The plant operators will work a 12-hour rotating shift. Plant operations staff will also write maintenance work orders and any necessary lock out tag out of equipment so work can be performed safely. The Maintenance Manager will oversee, plan, budget, and track the required maintenance for the station. This position will have two instrument and controls technicians, two electricians, four general maintenance personnel and **two** planner positions to plan and track preventative, corrective, equipment overhauls, and other plant maintenance activities. There will also be one Engineer, and one Warehouse person assigned to this station. The engineer and warehouse person positions will be dedicated to this station but will report to different departments in the EKPC organization.

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STAFF'S REQUEST DATED OCTOBER 28, 2024
REQUEST 30
RESPONSIBLE PARTY: Brad Young

Request 30. Provide and describe any policies or procedures relating to health and safety related emergencies that EKPC either has prepared, or is preparing, for the facility, including fire, severe weather, chemical contamination, cyber and physical security emergencies

Response 30. EKPC will be preparing a Business Continuity Plan ("BCP") for the proposed facility. The procedures described in the BCP will include fire and severe weather. The chemical contamination action plan will be part of developed environmental procedures; Best Management Practices Plan (BMP) and Spill Prevention Control and Countermeasures Plan (SPCC). Cyber security will be addressed by a Critical Infrastructure Protection (CIP) procedure. Physical security emergencies will be addressed by Levels of Security Procedure document.

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STAFF'S REQUEST DATED OCTOBER 28, 2024
REQUEST 31
RESPONSIBLE PARTY: Craig A. Johnson

Request 31. Describe whether any policies or procedures relating to fire responses rely upon local fire departments.

Response 31. EKPC will have sufficient fire suppressant resources on site to fight fire. Onsite personnel will monitor the fire alarm systems 24 hours a day, 365 days per year. EKPC will maintain an adequate volume of water in a storage tank at all times for fire suppression with an onsite diesel fueled fire pump. EKPC's onsite personnel will be trained to operate this equipment. EKPC has always tried to foster relationships with local emergency agencies on the type of hazards that could be encountered at a specific station. As part of the emergency procedures, onsite personnel will promptly notify the local authorities to inform them of the situation or if it is felt assistance is needed.

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STAFF'S REQUEST DATED OCTOBER 28, 2024
REQUEST 32
RESPONSIBLE PARTY: Craig A. Johnson

Request 32. Explain any physical security measures being taken beyond the security fence and security guards posted at the entrance to the facility

Response 32. EKPC will have personnel present 24 hours a day, 365days a year at the site. These personnel are trained to be on the lookout for suspicious activity. EKPC's has layers of security starting with the 24-hour a day, 365-days a year, security guards and perimeter fencing. After entering the site, only authorized EKPC personnel will be allowed in certain areas of the station based upon the need to be there. All entrances will be protected by electronic entry or locks only accessible by authorized personnel. EKPC will utilize cameras around the station which will be monitored by the security team at all times. A sufficient amount of exterior lighting will be installed to allow for the monitoring of the premises at night; including the substation, and the natural gas metering and regulating station.

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STAFF'S REQUEST DATED OCTOBER 28, 2024
REQUEST 33
RESPONSIBLE PARTY: Craig A. Johnson

Request 33. Describe how the RICE generators will be controlled and from where.

Response 33. The 12 units and all station auxiliaries will be controlled from a central control room located within the Administration Building. There will be EKPC personnel stationed there 24 hours a day, 365 days a year. Onsite operations personnel will supervise the startup, operation and shut down of the engines. Once an engine is started and synchronized into the transmission grid, onsite personnel will place the engine into automatic control giving PJM dispatchers the ability to raise and lower the unit output within the operating limits agreed upon by EKPC. Even with automatic control, sufficient safeguards will be in place so that the engine is operated in a safe, environmentally compliant manner.

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STAFF'S REQUEST DATED OCTOBER 28, 2024
REQUEST 34
RESPONSIBLE PARTY: Brad Young

Request 34. Explain any cyber security measures EKPC has currently in place or plans to put into place to protect the proposed facility.

Response 34. The facility, including both substation and generating assets, will, most likely, be classified as a "Low Impact Facility" per the NERC Critical Infrastructure Protection (CIP) reliability standards. It is currently anticipated that the cyber security measures for this facility would follow the NERC-CIP guidelines and include the following: Cyber Security Awareness, Physical Security Controls, Electronic Access Controls, Cyber Security Incident Response, and Transient Cyber Assets and Removable Media. EKPC would deploy these defined standards for the Liberty RICE Station, and further refine the needs and implementation during the detailed design phase of the project.

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STAFF'S REQUEST DATED OCTOBER 28, 2024
REQUEST 35
RESPONSIBLE PARTY: Brad Young

Request 35. Provide a narrative description of the location of each of the following site features:

a. Each construction entrance.

b. Each entrance to be used in operations.

c. Operations and Maintenance Area (O&M) area.

d. Each laydown area.

Response 35.

a. There are two entrances to the facility. The first is the main entrance located on the west side of the facility, south of the reserved switchyard, on Carr Sasser Road. There is a secondary construction parking entrance south of the main entrance, also located on Carr Sasser Road. These two entrances are the only planned egress points to the facility to limit flow in and out of the facility.

b. The main entrance as discussed in section a above will be used during plant operations. This entrance will be gated after construction and access granted by card/badge only.

c. O&M for the facility will be performed at the equipment. There is a warehouse located to the west of the engine hall that will be used to store spare equipment and materials. The warehouse will also contain a small area that contains tools and equipment for use on equipment repairs.

d. There are two primary laydown areas and two overflow laydown areas if they are necessary. The primary laydown area is located to the south of the generating facility and to the east of the craft parking area. The primary laydown area is approximately 5.35 acres. The secondary laydown area is south of the main entrance and is intended for staging and assembly of the Wartsilia Engines and materials. This area is approximately 1.13 acres. North of the engine hall are the secondary laydown areas with the largest one, west of KY-49 and between the property line and Carr Sasser Road, being 25.53 acres and the smallest being 2.14 acres. Please see Drawing GA120 for details as well as Figure 2-1 Site Access Locations in the Site Assessment Report.

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STAFF'S REQUEST DATED OCTOBER 28, 2024
REQUEST 36
RESPONSIBLE PARTY: Brad Young

Request 36. Explain whether the construction and operational entrances will be locked outside of normal working hours.

Response 36. Please refer to the Project Scoping Report, Section 3.3.2 Plant Location and Layout. A new site entrance with a security building and double lanes for entrance and exit will be located off Carr Sasser Road to the new proposed facility. The security building will be staffed 24/7 once construction is finished. Furthermore, as noted in Section 5.3.2, during construction a temporary fence will be installed as well as onsite security and will also be staffed 24/7 during construction activities. All laydown areas will also be within the site security fencing.

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STAFF'S REQUEST DATED OCTOBER 28, 2024
REQUEST 37
RESPONSIBLE PARTY: Brad Young

Request 37. Provide the security measures for the O&M area and substation.

Response 37. Please refer to the Project Scoping Report, Scope Assumptions Matrix. Under "Site Security," cameras, badge access for all doors, 24 hours a day, 7 days a week security during construction and normal operations. For the substation (switchyard), it will have its own secured fence and locked entrance from within the site. Permission to enter will be required from the EKPC Operation Center / Dispatch.

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STAFF'S REQUEST DATED OCTOBER 28, 2024
REQUEST 38
RESPONSIBLE PARTY: Brad Young

Request 38. Provide a one-page site map that contains the locations of water features, including rivers, streams, lakes, and ponds. Include any known or suspected karst features

Response 38. Please refer to the EKPC RICE Siting Study - Liberty 3 figure in the Site Selection Study (Site Assessment Report - Appendix A) that details locations of wetlands, ponds, and streams/riverine. There are two small riverines located on the selected location. The eastern riverine is only active during rain events. This riverine will be modified during site grading. The western riverine will be minimally impacted as there is a large elevation difference that will prohibit construction in that area. Minor modifications will be necessary at the northeastern head of the riverine. Based on geotechnical investigations performed to date, there are no known or suspected karst features on the site. Further investigations are planned during project execution to determine if karst features exist. Mitigation plans have been put in place if karst features are found.

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STAFF'S REQUEST DATED OCTOBER 28, 2024
REQUEST 39
RESPONSIBLE PARTY: Brad Young

Request 39. Provide a detailed table listing all residential structures located within 2,000 feet of the Project boundary line. For each structure, provide:

a. The distance to the boundary line.

b. The distance to the closest solar panel.

c. The distance to the nearest inverter.

d. The distance to the substation.

Response 39(a)-(d). Application**,** Attachment BY-2 _Final_ Vol 2, Appendix B, Property Value Impact Study, pages 5-6 contain this chart. There are no solar panels or inverters for the Liberty Rice project, so that is not included in the table.

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STAFF'S REQUEST DATED OCTOBER 28, 2024
REQUEST 40
RESPONSIBLE PARTY: Brad Young

Request 40. Provide a detailed table listing all non-residential structures located within 2,000 feet of the Project boundary line. For each structure, provide:

a. The distance to the boundary line.

b. The distance to the closest solar panel.

c. The distance to the nearest inverter.

d. The distance to the substation

Response 40. Please see the response to Request 39.

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STAFF'S REQUEST DATED OCTOBER 28, 2024
REQUEST 41
RESPONSIBLE PARTY: Brad Young

Request 41. Explain if any existing structures on the Project site will be demolished or removed in order to accommodate the Project. If so, identify each structure and its location within the site project boundary on a map.

Response 41. There is currently one small house, a barn, and a few small sheds on the property but are outside the proposed construction area for the project as shown on the overall site plan drawing (see GA120). These structures will be demolished and removed during construction of the project due to their deteriorating conditions.

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STAFF'S REQUEST DATED OCTOBER 28, 2024
REQUEST 42
RESPONSIBLE PARTY: Darrin Adams

Request 42. For each proposed transmission line:

- Provide a narrative description of the proposed transmission line and alternate route, including the number of poles to be installed, the height of the poles and the length and width of the transmission line corridor.
- Provide a map showing the existing property lines that the proposed transmission line is proposed to cross.
- Explain how the proposed route of the transmission line will minimize significant adverse impact to the scenic assets of Kentucky.
- Provide a detailed map of the proposed transmission line route and the alternate route, including proposed pole locations, access roads and nearby residences.
- Provide any sketches of the proposed transmission line support structure.
- Provide a table showing the distance between transmission line structures (poles) and nearby residences, for the proposed route and the alternate route.
- Explain how the proposed transmission route was determined.

Response 42.

a. The only new transmission line required for the Liberty RICE facility is a short 161 kV loop extension (approximately 2,000 feet) from EKPC's existing Casey County-Liberty Junction 161 kV line to the new substation for the Liberty RICE facility. This extension will require construction of a double-circuit line to loop the Casey County-Liberty Junction 161 kV line through the new Liberty RICE 161 kV substation. This new line extension will be located entirely on the Liberty RICE facility property that EKPC will own, so there will be no need to locate the line on property owned by anyone other than EKPC.

b. The design of this line has not yet been completed. Due to the proximity of the new Liberty RICE substation to the existing Casey County-Liberty Junction 161 kV line, no alternative route has been developed. EKPC will build two single-circuit transmission lines that are each approximately 2,000 feet in length. Double-circuit construction may be used in certain portions of the route – that determination will be finalized once the design activities are completed. The specific design for this line extension has not yet been completed, so specific pole locations and pole heights cannot be provided. Typical 161 kV transmission line structures for EKPC range in height from 85 feet to 105 feet, dependent on span length and the terrain being traversed. The transmission line corridor will be 150 feet wide. All other potentially necessary transmission projects identified are upgrades of existing lines that will remain within their existing rights-of-way. Engineering design activities have not yet begun forthese projects but will commence once EKPC has more certainty regarding their need as a result of the PJM generation-queue study process.

c. See *Attachment Staff DR 42-1.pdf* for a map showing the route of the new double-circuit transmission line extension from the new Liberty RICE substation to the existing Casey County-Liberty Junction 161 kV line.

d. The proposed new 161 kV transmission line extension between the Liberty RICE substation and the existing Casey County-Liberty Junction 161 kV line will have minimal impact to the scenic assets in the area since it will be far away and out of view from any major highway or public recreation area. The proposed line will not require clearing of any trees because it will be routed in an area that is already cleared. The viewsheds from Reynolds Creek Road to the east and from KY 49 to the west will be unchanged, since the terrain and existing vegetation will block the view of both the existing 161 kV line and the new line extension connecting to that line. The wooded area to the west of the proposed new line extension will remain in place and will block the view of the new line from Carr Sasser Road.

e. See Attachment Staff DR 42-1 for the initial proposed route. The detailed engineering/design work for the new transmission line has not yet started, so proposed pole locations and access roads have not yet been identified. Likewise, no alternate routes have been identified at this stage of the project lifecycle.

There are two homes in the vicinity of the proposed route for the new transmission line extension. One residence is directly across Carr Sasser Road from the proposed location of the Liberty RICE substation. Therefore, the new transmission line extension is expected to be within 300 feet of that residence. The other residence is located approximately 1000 feet south of the new Liberty RICE substation location. The new transmission line extension is not expected to be located any closer than 1000 feet to that residence, since the expected line route exits the substation and traverses'

northwest in order to connect to the Casey County-Liberty Junction 161 kV line.

f. *Attachment Staff DR 42-2.pdf* shows the framing for a single-circuit corner structure, which is expected to be used where the transmission line route changes direction. *Attachment Staff DR 42-3.pdf* shows the framing for a double-circuit tangent structure, which will be the prevailing structure type for the new 161 kV line extension.

g. There are two homes in the vicinity of the proposed route for the new transmission line extension. One residence is directly across Carr Sasser Road from the proposed location of the Liberty RICE substation. Therefore, the new transmission line extension is expected to be within 150 feet of that residence at the closest proximity. EKPC is negotiating with the owner of this residence to purchase the property.

The other residence is located approximately 1,000 feet south of the new Liberty RICE substation location. The new transmission line extension is not expected to be located any closer than 1,000 feet to that residence, since the expected line route exits the substation and traverses northwest in order to connect to the Casey County-Liberty Junction 161 kV line.

The route of the new 161 kV transmission line extension was determined based on the following factors:

- The planned location of the new Liberty RICE substation
- The location of the nearby road that is adjacent to the substation location,
- The location Minimization of the need to clear trees

- The proposed line route traverse's terrain that is relatively flat and is open and unobstructed. Also, the chosen location to connect to the existing Casey County- Liberty Junction 161 kV line is preferred due to the presence of an existing dead-end structure at that location. Due to the short length of the new line extension and the factors identified above, no alternate routes have been identified on of an existing distribution circuit that crosses the property.

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STAFF'S REQUEST DATED OCTOBER 28, 2024
REQUEST 43
RESPONSIBLE PARTY: Craig A. Johnson

Request 43. Refer to the Direct Testimony of Craig A. Johnson, page 10, lines 9-10. Provide itemized estimates and detailed explanations for RICE engine maintenance costs, both daily and annually.

Response 43. The RICE facility maintenance costs are summarized in three categories: Fixed O&M costs, Non-Fuel Variable O&M costs, and the OEM Long Term Service Agreement costs. The basis is discussed and itemized below. Note that anticipated facility operation may vary from day to day, and most O&M activities are based on run time. As such, it is more accurate to estimate the yearly costs of the facility in accordance with the facility capacity factor.

Fixed O&M Costs:

The fixed O&M costs incorporate anticipated labor, general fixed O&M allowances, and unscheduled maintenance allowances. The labor costs directly correspond to the staffing plan. The yearly labor costs are shown as $2,530,000, which corresponds to 23 full-time employees with an

average annual salary of $110,000 per year. The general fixed O&M allowance is budgeted asb$500,000 to account for miscellaneous expenses such as office and administrative expenses, training, environmental services, safety expenses, communication services, security and control room/lab expenses. The allocated budget reflects the anticipated costs to keep the facility running and permitted outside of equipment and consumable costs. Most of these expenses are intermittent and occur as needed. These costs are not dependent upon how often the facility operates.

The unscheduled maintenance costs consist of unplanned equipment maintenance (such as service equipment calls when equipment unexpectedly stops running as intended) outside of the OEM Long Term Service Agreement costs and planned O&M Maintenance of balance of plant equipment. These account for a parts allowance of $40,000 per year and a labor allowance of $126,400 per year based on reference information for similar projects. A majority of the cost of equipment component spares and parts are included in the planned O&M Maintenance in the following paragraphs.

Non-Fuel Variable O&M Costs:

The non-fuel variable O&M costs consist of the OEM major maintenance activities, catalyst replacements, consumables, planned balance of plant O&M maintenance, and standby power energy costs to keep the facility "hot" and ready for dispatch. The OEM major maintenance activities are not covered in the OEM Long Term Service Agreement but are instead included in this cost category. Major maintenance activities include engine overhauls, inspection, maintenance, and/or replacement of major engine components such as cylinder heads, cylinder

liners, crank shafts, turbocharger components, etc. Anticipated costs for the major maintenance activities were provided by the OEM and include parts and labor in accordance with the schedule below:

- 12,000 Engine Run Hours - $207,000 per engine
- 18,000 Engine Run Hours - $911,000 per engine.
- 24,000 Engine Run Hours - $729,000 per engine.
- 36,000 Engine Run Hours - $2,057,000 per engine.
- 48,000 Engine Run Hours - $2,354,000 per engine.

The catalysts for the selective catalytic reduction system which reduce emissions are also supplied by the OEM, and require inspection and replacement at the following intervals:

- Catalyst elements inspection: 20,000 hours of engine run time at $326,000 per engine.
- Catalyst element inspection and replacement: 40,000 hours of engine run time at $1,088,000 per engine.

These costs were calculated based on anticipated annual run time in accordance with the table below (shown for the first 10 years) and annualized.

Calendar Year	2028	2029	2030	2031	2032
Year	0	1	2	3	4
Plant Hours (each engine)	0	5,256	10,512	15,768	21,024
Major Maintenance Milestones	$ -	$ -	$ -	$2,484,000	$10,932,000
Catalyst Maintenance	$ -	$ -	$ -	$ -	$3,912,000

Calendar Year	2033	2034	2035	2036	2037	2038
Year	5	6	7	8	9	10
Plant Hours (each engine)	26,280	31,536	36,792	42,048	47,304	52,560
Major Maintenance Milestones	$8,748,000	$ -	$24,684,000	$ -	$ -	$28,248,000
Catalyst Maintenance	$ -	$ -	$ -	$13,056,000	$ -	$ -

Annualized Cost of Major Maintenance: $7,509,600 per year Annualized Cost of Catalyst Maintenance: $1,892,400 per year

Non-fuel engine consumables consist of lubricating oil, urea consumption, and water consumption. Utilizing consumption rates provided by the OEM and the anticipated run profile of the facility, the annualized costs are shown below:

Lubricating Oil Consumption Rate	1.11 gallon per hour per engine
Lubricating Oil Costs	$10.00 per gallon
Annualized Oil Costs	**$700,100**
Water Consumption Rate (Facility + Engines)	201,095 gallons per year
Water Consumption Cost	$5.60 per 1000 gallons
Annualized Water Costs	**$2,400**
Urea Consumption Rate	185.55 lb per hour per engine
Urea Costs	$262.61 per ton delivered
Annualized Urea Costs	**$1,536,600**

Planned O&M maintenance allowance is intended to cover all non-engine equipment. This consists of radiators, air compressors, auxiliary equipment, etc. This is estimated based upon run hours of the facility. This assumes a value of $94.20 per hour of facility operation and is annualized as $495,100 per year.

Standby Energy Costs account for the auxiliary power draw of the facility to keep the engines on standby while not in operation. The auxiliary power consists of running the facility lighting and general equipment, as well as lubricating oil and coolant preheating systems. Using power costs of 0.035 $/kWh, this is estimated to be an annual cost of $235,500.

<u>OEM Long Term Service Agreement:</u>

The OEM Long Term Service Agreement incorporates OEM fixed monthly fees of $20,300 for maintenance management, remote operational support, technical support, condition monitoring, assistance on spare parts and unplanned maintenance support. This is annualized as $243,600 per

year. The OEM variable fee is based on engine run time and is charged by the OEM at $33 per engine run hour. These costs cover spare parts for planned maintenance outside of the major maintenance overhauls, spare parts logistics and freight, and planned maintenance services. Lastly, the OEM will provide an emergency spare set of critical engine components for emergency rebuild, commonly referred to as a "Swing Set." The swing set is estimated at $8,725,000 and is payable yearly through the first 10 years in accordance with the LTSA contract setup. This value is annualized through the first 10 years only at $872,500.

Summarizing Table of Annual Costs:

Fixed O&M Costs	**$**	**3,196,400**
Labor	$	2,530,000
General Fixed O&M	$	500,000
Unscheduled Maintenance	$	166,400
Variable O&M Costs	**$**	**2,969,700**
Water Consumption	$	2,400
Lube Oil Consumption	$	700,100
Urea Consumption	$	1,536,600
BOP Maintenance	$	495,100
Standby Energy Costs	$	235,500
OEM LTSA Costs	**$**	**3,197,500**
OEM Fixed Fees	$	243,600
OEM Swing Set (first 10 years only)	$	872,500
OEM Variable Fee	$	2,081,400
Capitalized Costs	**$**	**9,402,000**
Major Maintenance Milestones	$	7,509,600
Catalyst Replacements	$	1,892,400
Combined Total Annual Cost	**$**	**18,765,600**

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STAFF'S REQUEST DATED OCTOBER 28, 2024
REQUEST 44
RESPONSIBLE PARTY: Darrin Adams

Request 44. Refer to the Direct Testimony of Darrin Adams, page 10, lines 11-14. Outline and estimate the costs for all transmission projects supporting the Liberty RICE Facility generation additions.

Response 44. The following projects in Table 44-1 will be needed in order to physically connect the Liberty RICE facility to the EKPC transmission system.

Table 44-1: Required Physical Interconnection Transmission Facilities	
Project Description	**Planning-Level Estimated Cost**
Construct a new 161 kV switching station ("Liberty RICE Substation") at the Liberty RICE generation facility location.	$12,000,000
Construct necessary transmission line facilities to loop the existing Casey County-Liberty Junction 161 kV line through the new Liberty RICE Substation. The estimated distance of these extensions is 2,000 feet.	$1,500,000
Replace the existing overhead steel ground wire on the Liberty RICE- Casey County 161 kV line (6.6 miles) with optical ground wire for communications and relaying purposes.	$800,000
Replace the existing overhead steel ground wire on the Liberty RICE-Liberty Junction 161 kV line (7.4 miles) with optical ground wire for communications and relaying purposes.	$1,005,000
TOTAL	**$15,305,000**

The following Table 44-2 lists projects that **may be** needed to support the Liberty RICE facility if no additional merchant generation facilities connect to the EKPC system beyond those that currently have executed Generator Interconnection Agreements. The final list of required network upgrades will be determined via the PJM generator-interconnection queue study process, which is not expected to commence until the second quarter of 2026 for the study cluster that the Liberty RICE facility will be located within. EKPC anticipates receiving initial study results in the third quarter of 2026, which will provide a strong indication of the upgrades that will be required, although not final confirmation of the required upgrades. The final list of required network upgrades is anticipated to be provided in the second or third quarter of 2027.

nsmission Network Upgrade Projects Expected with No Additional Merchant Generation Additions in the Liberty Area	
Project Description	**Planning-Level Estimated Cost**
Increase the maximum operating temperature of the conductor in the Liberty RICE Substation-Casey County 161 kV transmission line (6.6 miles) to 212 degrees Fahrenheit.	$1,950,000
Rebuild the Liberty RICE-Liberty Junction 161 kV transmission line (7.4 miles) using 795 MCM ACSR conductor.	$13,700,000
Increase the maximum operating temperature of the conductor in the Marion County-Marion County Industrial Park Tap 161 kV line (4.0 miles) to 212 degrees Fahrenheit.	$1,150,000
Rebuild the Marion County-LG&E/KU Lebanon 138 kV line (0.1 mile) using 795 MCM ACSR conductor.	$200,000
TOTAL	**$17,000,000**

The following Table 44-3 lists projects that **may be** needed to support the Liberty RICE facility if all merchant generation facilities currently in the PJM generation queue in the EKPC zone connect to the EKPC transmission system. The final list of required network upgrades will be determined

via the PJM generator-interconnection queue study process, which will follow the timeline as described in the previous paragraph.

smission Network Upgrade Projects Expected with All PJM Queued Merchant Generation Additions in the Liberty Area	
Project Description	**Planning-Level Estimated Cost**
Upgrade the limiting terminal equipment (bushing CTs and disconnect switches) at Denny substation associated with the Denny-Wiborg Tap 69 kV line.	$450,000
Upgrade the limiting equipment (disconnect switches at the Liberty KU Tap point) associated with the Liberty KU-Peytons Store 69 kV line.	$150,000
Rebuild the Mt. Olive Junction-Highland-Broughtontown-Tommy Gooch Tap 69 kV line (17.3 miles) using 556 MCM ACSR conductor.	$23,750,000
Rebuild the Peytons Store-Casey County 69 kV line using 795 MCM ACSR conductor.	$6,400,000
TOTAL	**$30,750,000**

Therefore, EKPC expects the total cost for the necessary transmission upgrades to be in the range of $32,305,000 (the combination of the upgrades listed in Tables 44-1 and 44-2 above) to $47,750,000 (the combination of the upgrades listed in Tables 44-1 and 44-3 above), depending on the results of the PJM generator interconnection studies to be conducted in 2026-2027.

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STAFF'S REQUEST DATED OCTOBER 28, 2024
REQUEST 45
RESPONSIBLE PARTY: Jerry Purvis

Request 45. Refer to the Direct Testimony of Jerry B. Purvis, page 4, lines 5-20. Identify and explain any pending environmental legislation or regulations that could foreseeably hinder RICE engine usage.

Response 45. EPA has indicated that it plans to regulate RICE under the GHG Rule in the future, but it is unknown when this will occur or what the regulations may require.

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STAFF'S REQUEST DATED OCTOBER 28, 2024
REQUEST 46
RESPONSIBLE PARTY: Darrin Adams

Request 46. Provide documentation of each voltage violation by substation, including time and date, in the proposed project area for the period beginning October 1, 2022, through September 2024.

Response 46. As a NERC designated Reliability Coordinator, PJM utilizes a Post Contingency Local Load Relief Warning ("PCLLRW") program for transmission contingency control. PJM issues a PCLLRW to member transmission owners (like EKPC) due to localized transmission congestion and reliability concerns. In the period of 10/1/2022 through 9/30/2024, PJM issued a total of six (6) PCLLRWs for potential voltage violations in the southern portion of the EKPC system. Table 46-1 provides details regarding location, date, and duration for these voltage issues.

Table 46-1: PJM Issued PCLLRW for Voltage Violations in the Southern Portion of EKPC's System

Substation	PJM PCLLRW ID Number	Start Date/Time	End Date/Time	Total Duration of PCLLRW (hours)
Brodhead 69 kV	103743	12/1/2022 @ 19:30	12/3/2022 @ 02:55	31.4
Brodhead 69 kV	103943	7/13/2023 @ 15:40	7/14/2023 @ 09:40	18.0
Russell County 69 kV	104091	11/29/2023 @ 06:56	11/29/2023 @ 08:35	1.7
Sewellton 69 kV	104161	3/26/2024 @ 11:16	3/29/2024 @ 16:44	77.5
Russell County 69 kV	104327	9/20/2024 @ 16:14	9/21/2024 @ 07:34	15.3
Liberty Junction 69 kV	104331	9/21/2024 @ 15:42	9/24/2024 @ 20:15	76.6

In addition to PJM-issued PCLLRWs in the region, EKPC flagged real-time voltage issues at three substations in the area over the same period of time. Table 46-2 provides details regarding location, date, and duration for these EKPC-identified voltage issues.

Table 46-2: EKPC-Identified Real-Time Voltage Issues in the Southern Portion of EKPC's System

Substation	Start Date/Time	End Date/Time	Total Duration of Voltage Issue (hours)
Three Links Junction 69 kV	11/3/2022 @ 07:45	11/9/2022 @ 02:30	138.75
Three Links Junction 69 kV	1/5/2023 @ 04:45	1/5/2023 @ 05:30	0.75
Three Links Junction 69 kV	3/11/2023 @ 07:15	3/11/2023 @ 08:30	1.25
Three Links Junction 69 kV	4/10/2023 @ 21:00	4/10/2023 @ 21:15	0.25
Three Links Junction 69 kV	4/15/2023 @ 17:15	4/15/2023 @ 17:30	0.25
Shopville 69 kV	7/11/2023 @ 14:00	7/11/2023 @ 16:15	2.25
Walnut Grove 69 kV	7/11/2023 @ 14:00	7/11/2023 @ 16:15	2.25
Shopville 69 kV	7/12/2023 @ 13:45	7/12/2023 @ 14:00	0.25
Walnut Grove 69 kV	7/12/2023 @ 13:45	7/12/2023 @ 14:00	0.25
Three Links Junction 69 kV	3/4/2024 @ 12:00	3/4/2024 @ 12:15	0.25

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STAFF'S REQUEST DATED OCTOBER 28, 2024
REQUEST 47
RESPONSIBLE PARTY: Darrin Adams

Request 47. Explain whether the voltage problems in the area are the result of equipment failure or demand.

Response 47. The voltage concerns discussed in the Application, exhibit 6, Direct Testimony of Darrin Adams, are issues that exist during periods of high customer demand, so the issues are load-driven, and are magnified when sufficient local generation is not available. Equipment failure is not the primary concern, although failure of a piece of equipment that results in a critical transmission line or transformer tripping out of service unexpectedly could result in creating more stressed conditions on the system that then leads to greater voltage concerns.

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STAFF'S REQUEST DATED OCTOBER 28, 2024
REQUEST 48
RESPONSIBLE PARTY: Darrin Adams

Request 48. Absent the installation of the RICE units, describe EKPC's five-year plan to address the voltage issues.

Response 48. EKPC has previously considered various transmission projects to provide additional voltage support into the southern region of the system. EKPC has decided to install a 69 kV capacitor bank at Cooper Station by the end of 2026 to help provide some reactive-power support into the area during periods when the Cooper generating units are not operating. This 69 kV capacitor bank is being developed as an interim solution to provide some support for the area until the longer-term (and much more robust) solution of adding generation in the area is in place. In lieu of those future generation facilities being added to the area to provide significant local support i, EKPC would re-evaluate the need to construct one of the other transmission options that have been previously considered to provide additional support for the area.

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STAFF'S REQUEST DATED OCTOBER 28, 2024
REQUEST 49
RESPONSIBLE PARTY: Darrin Adams

Request 49. Refer to Application, Attachment BY-3. Provide maps and a narrative explanation for each transmission line connected to the project as to where the line will connect into the EKPC system, whether those property owners have been notified of the project, and the easement requested by EKPC, if these transmission lines were considered part of the proposed project. If the transmission lines are not considered part of the proposed project, explain why not.

Response 49. See Attachment Staff DR 42-1 provided in response to Staff's Request No. 42. This map shows the new transmission lineconnections from the planned Liberty RICE substation to the existing Casey County-Liberty Junction 161 kV line. *Attachment Staff DR 49-1.pdf* is a map of the larger area in the vicinity of the Liberty RICE facility. This map shows the existing Casey County-Liberty Junction 161 kV location. The planned Liberty RICE substation will connect to the Casey County 161-69 kV substation to the northwest. The Casey County substation is connected to the Marion County 161/138 kV substation to the northwest via a 17.8-mile 161 kV line. The Marion County 161/138 kV substation has a 161 kV connection to EKPC's Green County substation in the southwestern

portion of the EKPC system, and a 138 kV connection to the LG&E/KU system via the Lebanon substation, which is adjacent to the Marion County substation. The Liberty RICE substation's other transmission connection will be to the Liberty Junction 161-69 kV substation to the southeast.

The Liberty RICE substation has a 161 kV connection to the Cooper 161-69 kV substation to the southeast via a 26-mile 161 kV line (with the Pulaski County 161-69 kV substation tapped off this line). Therefore, connecting the Liberty RICE facility to the existing Casey County-Liberty Junction 161 kV line integrates the new generation very well into the existing 161 kV and 138 kV systems in the region, while also providing additional support to the 69 kV system connected to the Casey County, Liberty Junction, and Pulaski County substations. The new 161 kV transmission line extension from the Liberty RICE substation to the Casey County-Liberty Junction line will be routed on property that will be owned entirely by EKPC, so no easements will be required from any property owners in the area.