COMMONWEALTH OF KENTUCKY

BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

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 COMPATIBILITY CERTIFICATE; AND 3) OTHER GENERAL RELIEF

CASE NO. 2024-00310

<u>order</u>

On September 20, 2024, East Kentucky Power Cooperative, Inc. (EKPC), filed an application, pursuant to KRS 278.020, KRS 278.216, KRS 278.220, 807 KAR 5:001, and other applicable law, requesting issuance of a Certificate of Public Convenience and Necessity (CPCN) to construct a new electric generation station using Reciprocating Internal Combustion Engine (RICE) generators in Casey County, Kentucky (the Liberty RICE Facility), the issuance of a site compatibility certificate for the Liberty RICE Facility, and other general relief.

PROCEDURAL HISTORY

A procedural schedule was issued on October 9, 2024, and amended on January 16, 2025.¹ The Commission granted intervention to several parties: Nucor Steel Gallatin² (Nucor), the Attorney General, by and through the Office of Rate Intervention (Attorney

¹ Order (Ky. PSC Oct. 9, 2024). Order (Ky. PSC Jan. 16, 2025).

² Order (Ky. PSC Oct. 25, 2024).

General),³ Sierra Club,⁴ and the Joint Intervenors, individually, Mountain Association and Kentuckians for the Commonwealth.⁵

EKPC responded to four requests for information from Commission Staff,⁶ two requests for information from the Attorney General,⁷ three requests for information from Sierra Club,⁸ and three requests for information from the Joint Intervenors.⁹ EKPC filed multiple supplemental responses to requests for information throughout the proceeding.¹⁰

⁶ EKPC's Response to Commission Staff's First Request for Information (EKPC's Response to Staff's First Request) (filed Nov. 12, 2024); EKPC's Response to Commission Staff's Second Request for Information (EKPC's Response to Staff's Second Request) (filed Dec. 16, 2024); EKPC's Response to Commission Staff's Third Request for Information (EKPC's Response to Staff's Third Request) (filed Feb. 20, 2025); EKPC's Response to Commission Staff's Fourth Request for Information (EKPC's Response to Staff's Fourth Request) (filed Feb. 28, 2025).

⁷ EKPC's Response to Attorney General's First Request for Information (EKPC's Response to Attorney General's First Request) (filed Nov. 12, 2024); EKPC's Response to Attorney General's Second Request for Information (EKPC's Response to Attorney General's Second Request) (filed Dec. 16, 2024).

⁸ EKPC's Response to Sierra Club's First Request for Information (EKPC's Response to Sierra Club's First Request) (filed Dec. 6, 2024); EKPC's Response to Sierra Club's Second Request for Information (EKPC's Response to Sierra Club's Second Request) (filed Dec. 16, 2024); EKPC's Response to Sierra Club's Third Request for Information (EKPC's Response to Sierra Club's Third Request) (filed Pec. 20, 2025).

⁹ EKPC's Response to Joint Intervenors' First Request for Information (EKPC's Response to Joint Intervenors' First Request) (filed Dec. 6, 2024); EKPC's Response to Joint Intervenors' Second Request for Information (EKPC's Response to Joint Intervenors' Second Request) (filed Dec. 16, 2024); EKPC's Response to Joint Intervenors' Third Request for Information (EKPC's Response to Joint Intervenors' Third Request for Information (EKPC's Response to Joint Intervenors' Third Request for Information (EKPC's Response to Joint Intervenors' Third Request for Information (EKPC's Response to Joint Intervenors' Third Request for Information (EKPC's Response to Joint Intervenors' Third Request) (filed Feb. 20, 2025).

¹⁰ Supplemental Responses to Sierra Club's First Request for Information (filed Dec. 31, 2024); Supplemental Response to Sierra Club's First DR Item 15(b) (filed Jan. 3, 2025); Supplemental Response to Sierra Club DR 1- 16 (filed Feb. 14, 2025); Supplemental Responses to Requests for Information and Updated Exhibits (filed Mar. 10, 2025); Updated Response to JI 3-11 (filed Mar. 13, 2025); Supplemental Response to Sierra Club's First Request for Information, Item 16 (filed Mar. 14, 2025); Supplemental Response to Joint Intervenors Post Hearing DR Item 6 (filed Apr. 3, 2025), and Supplemental Response to Staff's First DR, Item 18 (filed Apr. 15, 2025).

³ Order (Ky. PSC Oct. 31, 2024).

⁴ Order (Ky. PSC Nov. 21, 2024).

⁵ Order (Ky. PSC Nov. 21, 2024).

EKPC provided direct testimony of Don Mosier,¹¹ Julia Tucker,¹² Brad Young,¹³ Craig Johnson,¹⁴ Darrin Adams,¹⁵ Jerry Purvis,¹⁶ and Thomas Stachnik¹⁷ in support of its application. No intervenor testimony was filed. On January 10, 2025, EKPC filed a request to submit the matter on the record.¹⁸ On January 13, 2025, the Attorney General and Nucor filed notice that they did not object to the motion to submit this matter on the record filed by EKPC.¹⁹

On January 14, 2025, the Commission issued an Order setting a hearing date of March 17, 2025.²⁰ On January 16, 2025, the Commission amended the procedural schedule it had set forth on October 9, 2024, allowing the parties additional time for requests for information and setting a date for an informal conference (IC).²¹ The IC was held on January 29, 2025, to allow all parties to ask any additional questions left unanswered before the subsequent request for information and before the hearing. A memorandum summarizing the discussion at the IC was filed into the record.²²

¹¹ Application, Direct Testimony of Don Mosier (Mosier Direct Testimony) Exhibit 2.

¹² Application, Direct Testimony of Julia J. Tucker (Tucker Direct Testimony) Exhibit 3.

¹³ Application, Direct Testimony of Brad Young (Young Direct Testimony), Exhibit 4.

¹⁴ Application, Direct Testimony of Craig Johnson (Johnson Direct Testimony), Exhibit 5.

¹⁵ Application, Direct Testimony of Darrin Adams (Adams Direct Testimony), Exhibit 6.

¹⁶ Application, Direct Testimony of Jerry B. Purvis (Purvis Direct Testimony), Exhibit 7.

¹⁷ Application, Direct Testimony of Thomas Stachnik (Stachnik Direct Testimony), Exhibit 8.

¹⁸ EKPC Request to Submit of the Record (filed Jan. 10, 2025).

¹⁹ Attorney General's Notice (filed Jan. 13, 2025). Nucor's Notice (filed Jan. 13, 2025).

²⁰ Order (Ky. PSC Jan. 14, 2025).

²¹ Order (Ky. PSC Jan. 16, 2025).

²² PSC Letter Filing IC Memorandum and Sign-in Sheet into the Record (filed Feb. 7, 2025).

Sierra Club filed an emergency motion on February 21, 2025, to amend the procedural schedule and allow additional time for discovery.²³ Joint Intervenors filed a response in support of the motion,²⁴ and EKPC filed a response in opposition to the motion.²⁵ The emergency motion was denied.²⁶ There were several public comments filed in March of 2025.²⁷

On March 17-18, 2025, the Commission held a hearing in this matter. After the hearing, EKPC responded to three additional requests for information,²⁸ and each party filed an initial brief in the matter on April 11, 2025.²⁹ EKPC and Joint Intervenors also filed response briefs on April 18, 2025.³⁰ The record has closed, and the matter now stands ready for a decision.

²⁶ Order (Ky. PSC Mar. 4, 2025).

²⁷ View Public Comments for: 2024-00310.

²³ Sierra Club Emergency Motion (filed Feb. 21, 2025).

²⁴ Response by Joint Intervenors to Sierra Club's Motion and Request for Leave to File Direct Testimony (filed Feb. 25, 2025).

²⁵ EKPC's Response to Emergency Motion (filed Feb. 24, 2025).

²⁸ EKPC's Response to Commission Staff's Post-Hearing Requests for Information (EKPC's Response to Staff's Post-Hearing Requests) (filed Mar. 31, 2025); EKPC's Response to Sierra Club's Post-Hearing Requests for Information (EKPC's Response to Sierra Club's Post-Hearing Requests) (filed Mar. 31, 2025); EKPC's Response to Joint Intervenors' Post-Hearing Requests for Information (EKPC's Response to Joint Intervenors' Post-Hearing Requests) (filed Mar. 31, 2025).

²⁹ Nucor's Initial Post-Hearing Brief (Nucor's Initial Brief) (filed Apr. 11, 2025). Attorney General's Initial Post-Hearing Brief (Attorney General's Initial Brief) (filed Apr. 11, 2025). Sierra Club's Initial Post-Hearing Brief (Sierra Club's Initial Brief) (filed Apr. 11, 2025). Joint Intervenors' Initial Post-Hearing Brief (Joint Intervenors' Initial Brief) (filed Apr. 11, 2025). EKPC's Initial Post-Hearing Brief (EKPC's Initial Brief) (filed Apr. 11, 2025).

³⁰ Joint Intervenors' Response Brief (filed Apr. 18, 2025). EKPC's Response Brief (filed Apr. 18, 2025).

BACKGROUND

EKPC is a not-for-profit rural electric cooperative corporation established under KRS Chapter 279 with its headquarters in Winchester, Kentucky.³¹ Pursuant to various agreements, EKPC provides electric generation capacity and electric energy to its 16 Owner-Member Cooperatives (Owner-Members),³² which in turn serve over 570,000 Kentucky homes, farms, and commercial and industrial establishments in 89 Kentucky counties.³³

In total, EKPC owns and operates approximately 2,963 MW of net summer generating capacity and 3,265 MW of net winter generating capacity.³⁴ EKPC owns and operates coal-fired generation at the John S. Cooper Station in Pulaski County, Kentucky (341 MW) and the Hugh L. Spurlock Station (1,346 MW) in Mason County, Kentucky. EKPC also owns and operates natural gas-fired generation at the J. K. Smith Station in Clark County, Kentucky (753 MW (summer) / 989 MW (winter)) and the Bluegrass Generating Station in Oldham County, Kentucky (501 MW (summer) / 567 MW (winter)), landfill gas-to-energy facilities in Boone County, Greenup County, Hardin County, Pendleton County, and Barren County (13.8 MW total), and a Community Solar facility (8.5 MW) in Clark County, Kentucky.³⁵ As of the date of the application, EKPC purchased hydropower from the Southeastern Power Administration at Laurel Dam in Laurel County, Kentucky (70 MW), and the Cumberland River system of dams in Kentucky and

³⁴ Application at 2.

³¹ Application at 1.

³² Application at 1.

³³ Application at 1-2.

³⁵ Application at 2.

Tennessee (100 MW).³⁶ EKPC noted it had 200 MWs of interruptible load and approximately 28 MWs in peak reduction mechanisms.³⁷ As of the date of the application, EKPC's record peak demand of 3,754 MW occurred on January 17, 2024.³⁸ As of the filing of this application, EKPC had 77 free-flowing interconnections with its neighboring utilities.³⁹ EKPC's transmission system is operated by PJM Interconnection, LLC (PJM),⁴⁰ of which EKPC has been a fully integrated member since June 1, 2013. PJM is a regional transmission organization (RTO) regulated by the Federal Energy Regulatory Commission (FERC).⁴¹

THE PROPOSED PROJECT

In its application, EKPC proposed to construct a new generation facility utilizing Reciprocating Internal Combustion Engines (RICE) on approximately 93 acres in Liberty, Casey County, Kentucky.⁴² The facility will consist of 12 Wartsila 18VS0DF engines. Each engine will produce approximately 18,132 kW of power for a combined production of approximately 214 MW net of peak load generation.⁴³ The engines will be located within an enclosed engine hall along with other ancillary equipment necessary for the

⁴¹ <u>PJM - PJM History</u> Last accessed April 3, 2025.

⁴³ Attachment BY-2 Vol. 1 at 1-1.

³⁶ Application at 2.

³⁷ Application at 2.

³⁸ Application at 2.

³⁹ Application at 2.

⁴⁰ PJM Interconnection, LLC is a regional transmission organization (RTO) that coordinates the movement of wholesale electricity in all or parts of 13 states and the District of Columbia. *See also* <u>PJM</u> - <u>About PJM</u> (last accessed May 2, 2025).

⁴² Application, Young Direct Testimony, Attachment BY-2 Volume 1 (Attachment BY-2, Vol. 1) at 1-1 and 2-1.

operation and maintenance of the engines.⁴⁴ The engines are capable of burning multiple fuels to provide operational flexibility during emergency situations.⁴⁵ The primary fuel source will be pipeline-quality natural gas (referred to as fuel gas), and the secondary fuel source will be Ultra-Low Sulfur Diesel (ULSD or fuel oil) stored on site.⁴⁶ The fuel gas will be filtered and regulated on-site to meet pressure and cleanliness requirements for the engines.⁴⁷ In addition, the fuel oil storage tank will be deigned to provide 72 hours' worth of fuel while running all engines at full load.⁴⁸

The project will require a single, new natural gas pipeline, dew point heater, and a metering and regulating station (M&R Station) that will be installed on the site as part of a separate project to serve the facility.⁴⁹ The cost of the construction and materials of the pipeline will be included in the overall cost of natural gas to be paid by EKPC to the natural gas supplier.⁵⁰ The natural gas transmission interconnection will utilize two primary mainline pipelines: ML200 (30-inch diameter) and ML300 (36-inch diameter).⁵¹ From these mainlines, the natural gas will be routed through a 10-inch diameter steel pipeline with a wall thickness of 0.365 inches for approximately 1,000 feet to the M&R Station.⁵²

- ⁴⁵ Attachment BY-2 Vol. 1 at 1-0.
- ⁴⁶ Attachment BY-2 Vol. 1 at 1-0.
- ⁴⁷ Attachment BY-2 Vol. 1 at 1-0.
- ⁴⁸ Attachment BY-1 at 1-2.
- ⁴⁹ Attachment BY-1 at 1-2.
- ⁵⁰ EKPC's Response to Staff's Second Request, Item 10.
- ⁵¹ EKPC's Response to Staff's Post-Hearing Request, Item 4.
- ⁵² EKPC's Response to Staff's Post-Hearing Request, Item 4.

⁴⁴ Attachment BY-2 Vol. 1 at 1-0.

The M&R Station will reduce the pressure significantly and the natural gas pipeline from the exit flange of the M&R Station to the new generation units at Liberty Station will be ten inches in diameter.⁵³

A new switchyard is proposed to be located east of the new units.⁵⁴ The two switchgears will then connect to generator step-up transformers, located in containments between the medium-voltage buildings and the new switchyard.⁵⁵ The RICE output will be connected through the generator step-up transformers to the new 161 kV switchyard, which will be accomplished by overhead transmission lines.⁵⁶ The new 161 kV switchyard will be a five bay, breaker-and-a-half configuration.⁵⁷ Two new 161 kV transmission lines will be constructed to connect the new 161 kV switchyard to the existing EKPC 161 kV transmission line located less than one mile away and entirely along property to be owned by EKPC.⁵⁸ A new 161 kV switchyard and transmission line will be installed to interconnect the output from the generating plant to match the high voltage transmission lines located approximately one mile from the facility.⁵⁹

EKPC stated that the connection to the transmission system as a whole would occur by constructing 161 kV extensions from the existing EKPC Casey County-Liberty Junction 161 kV line adjacent to the facility to the new substation, looping the existing line

- ⁵⁵ Application, Young Direct Testimony at 9.
- ⁵⁶ Application, Young Direct Testimony at 9.
- ⁵⁷ Application, Young Direct Testimony at 9.
- ⁵⁸ Young Direct Testimony at 9.
- ⁵⁹ Attachment BY-2 Vol. 1 at 1-0.

⁵³ EKPC's Response to Staff's Post-Hearing Request, Item 4.

⁵⁴ Application, Young Direct Testimony at 9.

in and out of the new substation.⁶⁰ EKPC described the need to retrofit the existing Casey County-Liberty Junction 161 kV line with Optical Ground Wire (OPGW) to provide highspeed communications and relay capabilities between the new Liberty RICE Facility substation and the existing Casey County and Liberty Junction substations.⁶¹

EKPC will have to make some transmission upgrades related to the RICE project; however, PJM will make the final determination as to the required upgrades.⁶² EKPC's transmission system is fully integrated into PJM, and any generator seeking to interconnect with the EKPC system must follow the FERC approved generator interconnection process described in PJM's Open Access Transmission Tariff.⁶³ PJM is responsible for administering that process, including approving applications for interconnection, developing study models, performing power-flow, short-circuit, and stability studies, and issuing generator interconnection agreements.⁶⁴ EKPC requested to be considered in the Reliability Resource Initiative (RRI),⁶⁵ an accelerated interconnection process for both this project as well as the projects included in the application for a CPCN in Case No. 2024-00370.⁶⁶

- ⁶⁴ Adams Direct Testimony at 8; <u>PJM Modeling Data</u>. (last accessed May 2, 2025).
- 65 20241008-item-06---reliability-resource-initiative.pdf (last accessed May 2, 2025).

⁶⁰ Adams Direct Testimony at 4-5.

⁶¹ Adams Direct Testimony at 5.

⁶² Case No. 2012-00169, Application of East Kentucky Power Cooperative, Inc. to Transfer Functional Control of Certain Transmission Facilities to PJM Interconnection, LLC (Ky. PSC Dec. 5, 2019), final Order.

⁶³ Adams Direct Testimony at 8.

⁶⁶ Case No. 2024-00370, Electronic Application of East Kentucky Power Cooperative, Inc. For 1) Certificates of Public Convenience and Necessity to Construct a New Generation Resources; 2) For A Site Compatibility Certificate Relating to the Same; 3) Approval of Demand Side Management Tariffs; And 4) Other General Relief (filed July 25, 2025).

EKPC identified four potential network upgrades that may be needed. These upgrades are:

• Rebuild of the Liberty RICE-Liberty Junction 161 kV line (approximately eight miles) using 795 MCM ACSR conductor;

• Increase the maximum conductor operating temperature of the 636 MCM ACSR conductor in the Liberty RICE-Casey County 161 kV line (approximately six miles) from 167 degrees Fahrenheit to 212 degrees Fahrenheit;

• Increase the maximum conductor operating temperature of the 795 MCM ACSR conductor in the Marion County-Marion County Industrial Park 161 kV line (approximately 4 miles) from 167 degrees Fahrenheit to 212 degrees Fahrenheit; and

• Rebuild the Marion County-LGE/KU Lebanon 138 kV line (approximately 0.1 mile) using 795 MCM ACSR conductor.⁶⁷

For the upper-boundary case, EKPC identified three potential network upgrades

that could be needed. These upgrades are:

• Rebuild of the Mt. Olive Junction-Highland-Broughtentown Tap-Tommy Gooch Tap 69 kV line (approximately 17.3 miles) using 556.5 MCM ACSR conductor;

• Rebuild the Peytons Store-Casey County 69 kV line (approximately 4.4 miles) using 795 MCM ACSR conductor; and

• Upgrade the limiting terminal equipment (circuit-breaker bushing, current transformers, and disconnect switches) at the Denny substation associated with the Denny-Wiborg Tap 69 kV line.⁶⁸

However, PJM will make the final decision on what upgrades will be needed in

relation to this project.⁶⁹

⁶⁷ Adams Direct Testimony at 6-7.

⁶⁸ Adams Direct Testimony at 6.

⁶⁹ Adams Direct Testimony at 6-10.

<u>Financial Aspects</u>. Initially, any expenditure related to the project will be funded by general corporate cash and borrowings on the Revolving Credit Facility.⁷⁰ As of September 13, 2024, approximately \$375 million of EKPC's \$600 million Revolving Credit Facility was available.⁷¹ EKPC will replace any interim financing with long-term debt under the existing trust indenture from the U.S. Department of Agriculture (USDA), Rural Utilities Service (RUS).⁷²

The RUS financing that EKPC will ultimately seek for the Liberty RICE Facility requires an application process.⁷³ Thus, there will be a lag in receiving funds due to pending environmental review, applications, and other procedures. EKPC has discussed with RUS the possibility of advancing funds prior to the completion of the projects.⁷⁴

<u>Costs of the Project and Rate Impact</u>. The cost of the facility is anticipated to be approximately \$500 million.⁷⁵ EKPC expects to finance the project over five years with the following estimated costs: 2024: \$20 million; 2025: \$122 million; 2026: \$68 million; 2027: \$176 million; 2028: \$106 million; and 2029: \$8 million.⁷⁶ EKPC expects to have its RUS loan in place by 2027, so its need for short-term financing will peak at approximately \$200 million in 2027 and average \$100-125 million over the project life.⁷⁷

- ⁷⁵ Young Direct Testimony at 5.
- ⁷⁶ Stachnik Direct Testimony at 4, Application at 165.

⁷⁰ Stachnik Direct Testimony at 3, Application at 164.

⁷¹ Stachnik Direct Testimony at 3, Application at 164.

⁷² Stachnik Direct Testimony at 3, Application at 164.

⁷³ Stachnik Direct Testimony at 3, Application at 164.

⁷⁴ Stachnik Direct Testimony at 3, Application at 164.

⁷⁷ Stachnik Direct Testimony at 5, Application at 166.

EKPC will also incur costs related to the construction of the natural gas pipeline.⁷⁸ The costs will be included in the price of the gas procured from Columbia Gas pursuant to a contract executed by both parties.⁷⁹ When determining the least cost, most reasonable option, EKPC did include the cost of the natural gas with the project cost in the analysis.⁸⁰

EKPC provided analyses indicating that the Liberty RICE Facility will be a costeffective addition to its generation portfolio.⁸¹ The facility is expected to displace highercost market power, resulting in fuel savings and potentially lowering EKPC's carbon footprint.⁸² EKPC projected that the facility will add approximately \$40.42 million in initial annual costs, translating to an estimated impact of \$3.42 monthly on an average consumer's 1,250 kWh monthly bill.⁸³ EKPC further noted that other components, such as capacity sales in the PJM market, off-system sales, and lower operating costs of the RICE units versus existing or purchased generation, ultimately could result in savings to the average customer bill.⁸⁴

EKPC argued that the RICE units may provide fuel savings to the consumer via the Fuel Adjustment Clause, as these units have a better heat rate than any of the existing

⁷⁸ EKPC's Response to Staff's Third Request, Item 16 and PSC3.2b.xlsx (uploaded separately).

⁷⁹ EKPC's Response to Staff's Third Request, Item 16 and PSC3.2b.xlsx (uploaded separately). The original commodity cost of the natural gas, reflecting no construction costs, was provided in EKPC's Response to the Attorney General's First Request, Item 5.

⁸⁰ EKPC's Response to Staff's Third Request, Item 16.

⁸¹ EKPC's Response to Attorney General's First Request, Item 3 at 1-2.

⁸² EKPC's Response to Attorney General's First Request, Item 8 at 1-2.

⁸³ EKPC's Response to Attorney General's First Request, Item 3 at 1-2.

⁸⁴ EKPC's Response to Attorney General's First Request, Item 3 at 1-2.

combustion turbines (CT) on its system.⁸⁵ EKPC stated that the RICE units could save \$1.1 million per year compared to the most efficient CTs on its system and \$3.9 million per year compared to less efficient CTs on the system.⁸⁶ Finally, EKPC noted that it purchases roughly half of its energy needs from the market and that the 214 MW of energy for 2,500 hours per year could provide a savings of \$2.7 million per year.⁸⁷ EKPC stated it would be reasonable to expect roughly \$4 million in annual fuel cost savings.⁸⁸

Inflation Reduction Act (IRA). The IRA benefits available to EKPC do not apply to the RICE units and, therefore, they were not considered part of the economic evaluation within this application.⁸⁹ The IRA does not provide incentives for dispatchable resources, like the RICE units, but rather for renewable generation.⁹⁰

<u>Alternatives Considered</u>. EKPC considered multiple alternatives during the application process, which according to EKPC testimony included:

- Nuclear power remains cost-prohibitive, and it would be nearly impossible to get the necessary permits;
- New coal generation is too cost-prohibitive given current environmental regulations;
- Demand Side Management could not provide the near-term capacity means;

⁸⁹ EKPC's Response to Joint Intervenors' Second Request for Information, Item 20.

⁹⁰ Case No. 2025-00087, *Electronic 2025 Integrated Resource Plan of East Kentucky Power Cooperative, Inc.*, (filed Apr. 1, 2025) Application, Section 1.0, Executive Summary at 16.

⁸⁵ EKPC's Response to Attorney General's First Request, Item 3 at 2.

⁸⁶ EKPC's Response to Attorney General's First Request, Item 3 at 2.

⁸⁷ EKPC's Response to Attorney General's First Request, Item 3 at 2.

⁸⁸ EKPC's Response to Attorney General's First Request, Item 3 at 2.

- Intermittent Resources, including solar power, could not provide reliable capacity due to its unique operating characteristics and weather dependency;
- Natural gas-fired generation resource provided the best loadfollowing capacity.⁹¹

EKPC also considered transmission options that might replace or reduce the need for RICE units. Based on an analysis of its transmission studies, EKPC determined that "none of the transmission alternatives evaluated would negate the need for the RICE units, nor would the transmission alternatives reduce the benefits of constructing the RICE units"⁹² as will be discussed in further detail below.

SUMMARIES OF PARTY BRIEFS

<u>EKPC's Position</u>. EKPC requested a CPCN and a site compatibility certificate to construct the Liberty RICE Facility, a 214 MW reciprocating internal combustion engine plant.⁹³ EKPC argued that the facility is essential to meeting its growing winter peak demand, supporting grid reliability, and enabling further integration of renewable energy.⁹⁴ The facility would also address transmission reliability issues in the southern part of EKPC's service territory.⁹⁵

EKPC emphasized that its 2024 Long-Term Load Forecast (LTLF) shows significant demand growth and that recent extreme winter weather events (e.g., Winter Storms Elliott, Gerri, and Enzo) resulted in record peaks, exposing vulnerabilities in

- ⁹³ EKPC's Initial Brief at 1.
- ⁹⁴ EKPC's Initial Brief at 8-9.
- 95 EKPC's Initial Brief at 8.

⁹¹ Tucker Direct Testimony at 20-22.

⁹² EKPC's Response to Staff's Fourth Request, Item 5.

EKPC's current system.⁹⁶ EKPC projects a 200 MW capacity shortfall in 2026–2027 and a 454 MW shortfall, including planning reserves, for the same period, compared to its forecasted winter peak.⁹⁷ It argued that relying on PJM market purchases is increasingly risky due to tightening supply conditions and regulatory changes like PJM's effective load carrying capability (ELCC) framework.⁹⁸

EKPC defended the Liberty RICE Facility as a cost-effective, flexible, and dispatchable solution for meeting load and supporting intermittent renewables.⁹⁹ Although it did not issue a request for proposal (RFP), EKPC asserted it reviewed alternatives and selected the RICE technology for its fast-ramping ability, reliability, and compatibility with transmission needs in the region.¹⁰⁰

Regarding the site compatibility certificate, EKPC submitted a site assessment report (SAR) and a National Environmental Policy Act (NEPA) Environmental Assessment.¹⁰¹ The SAR evaluated the facility's compatibility with surrounding land uses, noise levels, traffic, and visual impacts.¹⁰² EKPC argued that it satisfied all statutory requirements and proactively designed the project to maintain 1,000-foot setbacks and

- ¹⁰¹ EKPC's Initial Brief at 25.
- ¹⁰² EKPC's Initial Brief at 25.

⁹⁶ EKPC's Initial Brief at 8-9.

⁹⁷ EKPC's Initial Brief at 14.

⁹⁸ EKPC's Initial Brief at 17. <u>PJM - Effective Load Carrying Capability (ELCC)</u> (last checked May 7, 2025).

⁹⁹ EKPC's Initial Brief at 8-9.

¹⁰⁰ EKPC's Initial Brief at 23-24.

implement multiple mitigation measures.¹⁰³ No intervenor submitted evidence challenging EKPC's site selection.

In its post-hearing response brief filed on April 18, 2025, EKPC reaffirmed its position that the Liberty RICE Facility is necessary to address growing winter peak demand and that the record demonstrates compliance with the statutory standards for issuance of a CPCN and a site compatibility certificate.¹⁰⁴ EKPC emphasized that its 2024 LTLF was developed through an established and transparent planning process. It is consistent with PJM's treatment of EKPC's Load Serving Entity load, which differs from the Transmission Owner forecast cited by the Joint Intervenors.¹⁰⁵ EKPC noted that its actual winter peak loads have exceeded existing capacity in the past three years, and it faces a forecasted capacity shortfall beginning in the 2026–2027 winter season.¹⁰⁶

EKPC addressed concerns regarding the alleged pre-selection of the Liberty RICE Facility and stated that load forecasting is a continuous process.¹⁰⁷ The 2024 forecast was accelerated to ensure the most current information was available for regulatory review.¹⁰⁸ It further defended its modeling assumptions, including the projected capacity factor for the RICE units, as reasonable and based on production cost modeling that reflects fuel costs and system operation.¹⁰⁹

- ¹⁰³ EKPC's Initial Brief at 27-28.
- ¹⁰⁴ EKPC's Response Brief at 9.
- ¹⁰⁵ EKPC's Response Brief at 2-3.
- ¹⁰⁶ EKPC's Response Brief at 5.
- ¹⁰⁷ EKPC's Response Brief at 5.
- ¹⁰⁸ EKPC's Response Brief at 6.
- ¹⁰⁹ EKPC's Response Brief at 15.

EKPC also argued that the Liberty RICE Facility serves a distinct operational role from the generation resources proposed in Case No. 2024-00370¹¹⁰ and that the two proceedings reflect complementary elements of EKPC's broader resource plan.¹¹¹ EKPC asserted that the projects are not duplicative. The Liberty RICE Facility is designed to provide fast-ramping, flexible support for system reliability, particularly in light of increasing renewable penetration, while the other resources provide baseload generation.¹¹²

Regarding site compatibility, EKPC stated that it satisfied all requirements of KRS 278.216 by submitting both a SAR and documentation of compliance with the National Environmental Policy Act, including a final Finding of No Significant Impact issued by RUS.¹¹³ EKPC addressed concerns related to scenic compatibility, property values, noise, and traffic, noting that its analyses incorporated conservative assumptions and multiple mitigation measures and that intervenors did not submit expert evidence in support of their claims.¹¹⁴

Finally, EKPC addressed transparency concerns raised by Sierra Club and others by noting that it had responded to over 850 requests for information and numerous informal information requests, including those submitted after the close of formal

¹¹⁰ Case No.2024-00370 Electronic Application of East Kentucky Power Cooperative, Inc. for 1) Certificates of Public Convenience and Necessity to Construct a New Generation Resources; 2) For a Site Compatibility Certificate Relating to the Same; 3) Approval of Demand Side Management Tariffs; and 4) Other General Relief (filed Nov. 25, 2024).

¹¹¹ EKPC's Response Brief at 8.

¹¹² EKPC's Response Brief at 8-9.

¹¹³ EKPC's Response Brief at 9-10.

¹¹⁴ EKPC's Response Brief at 10-11.

discovery.¹¹⁵ EKPC concluded that the Liberty RICE Facility is a prudent, cost-effective solution to meet projected demand. It aligns with the Commission's stated preference for utilities to rely on owned generation rather than market purchases and satisfies all legal requirements for approval.¹¹⁶

EKPC concluded that the Liberty RICE Facility is needed, will not result in wasteful duplication, and meets all legal standards for approval. It requested that the Commission grant the CPCN and site compatibility certificate accordingly.¹¹⁷

<u>Attorney General's Position</u>. In its brief, the Attorney General supported EKPC's request for a CPCN, asserting that EKPC demonstrated a need for additional generation capacity and that the proposed facility would not result in wasteful duplication.¹¹⁸ The Attorney General noted EKPC's 2024 LTLF projected a 200 MW shortfall in winter peak capacity by 2026–2027, which increases to 454 MW when accounting for reserve margins.¹¹⁹ The Attorney General emphasized that relying solely on PJM's market to meet this growing need would be imprudent due to the increasing volatility and declining reliability of dispatchable generation within PJM.¹²⁰ The Attorney General further supported EKPC's choice of RICE technology, citing its ability to rapidly respond to intermittent generation gaps as a prudent and reliable approach.¹²¹ The brief concluded

- ¹¹⁷ EKPC's Response Brief at 15-16.
- ¹¹⁸ Attorney General's Initial Brief at 1.
- ¹¹⁹ Attorney General's Initial Brief at 2.
- ¹²⁰ Attorney General's Initial Brief at 2.
- ¹²¹ Attorney General's Initial Brief at 2-3.

¹¹⁵ EKPC's Response Brief at 13-14.

¹¹⁶ EKPC's Response Brief at 7.

that EKPC's proposal represents sound planning in light of growing reliability concerns and encouraged approval of the CPCN.¹²²

The Attorney General did not file a post-hearing response brief in this proceeding.

<u>Nucor's Position</u>. In its brief, Nucor did not oppose EKPC's request for a CPCN and acknowledged that EKPC demonstrated a legitimate need for additional capacity.¹²³ Nucor highlighted that EKPC's recent winter peaks, including a record 3,754 MW in January 2024, exceeded its current generating capacity.¹²⁴ Nucor also noted that projected load growth, combined with changes in PJM accreditation rules, underscores the urgency of EKPC's capacity needs.¹²⁵

While generally supportive of the application, Nucor took a measured approach in its brief, emphasizing that any decision to construct new generation must be justified with a clear demonstration that it is necessary and the most reasonable solution.¹²⁶ Nucor recognized that the proposed Liberty RICE Facility would enhance system reliability, especially in EKPC's southern territory, provide operational flexibility through fast ramping capabilities, and hedge against volatile market pricing.¹²⁷

Nucor noted that EKPC, as a not-for-profit cooperative, lacks the financial incentive to overbuild generation, implying that its proposal is more likely to reflect prudent planning

- ¹²⁴ Nucor's Initial Brief at 1-2.
- ¹²⁵ Nucor's Initial Brief at 2.
- ¹²⁶ Nucor's Initial Brief at 2.
- ¹²⁷ Nucor's Initial Brief at 2.

¹²² Attorney General's Initial Brief at 3.

¹²³ Nucor's Initial Brief at 1.

rather than rate-based expansion.¹²⁸ Nevertheless, Nucor's comments underscore the importance of ensuring that EKPC's investment decisions remain cost-justified and carefully balanced against member and customer impacts, particularly in the current economic environment.¹²⁹

On April 18, 2025, Nucor filed a notice with the Commission indicating that it would not submit a post-hearing response brief in this proceeding.¹³⁰

<u>Sierra Club's Position</u>. Sierra Club opposed EKPC's application for a CPCN, arguing that EKPC failed to demonstrate that the Liberty RICE Facility represents the least-cost and reasonable option.¹³¹ Sierra Club criticized EKPC's procedural approach, noting the delayed disclosure of essential economic modeling data, which, according to Sierra Club, deprived intervenors and the Commission of an opportunity for meaningful review and analysis.¹³²

Specifically, Sierra Club contended that EKPC's economic analysis relied on an unrealistic and unproven 73 percent capacity factor for the Liberty RICE units.¹³³ Sierra Club highlighted EKPC's failure to substantiate this critical assumption, pointing out a lack of evidence that comparable RICE facilities within the United States operate at such high-capacity factors.¹³⁴ Additionally, Sierra Club argued that EKPC conducted insufficient

- ¹³³ Sierra Club's Initial Brief at 12-14.
- ¹³⁴ Sierra Club's Initial Brief at 12-13.

¹²⁸ Nucor's Initial Brief at 1.

¹²⁹ Nucor's Initial Brief at 1-2.

¹³⁰ Nucor's Notice in Lieu of Response Brief (filed Apr. 18, 2025).

¹³¹ Sierra Club's Initial Brief at 4-5.

¹³² Sierra Club's Initial Brief at 4-5, and 7-8.

due diligence and modeling, emphasizing that EKPC provided inadequate justification for rejecting alternative generation options and conducted no capacity expansion modeling or comprehensive net present value analyses of alternatives.¹³⁵

Regarding the site compatibility certificate, Sierra Club did not present detailed arguments addressing the specific statutory factors such as scenic compatibility, noise impacts, traffic, or property values. Rather, its arguments focused on EKPC's fragmented regulatory strategy, asserting that EKPC's choice to divide its Capacity Expansion Plan (Expansion Plan) into separate filings undermines the Commission's ability to comprehensively evaluate cumulative impacts, including those relevant to site suitability.¹³⁶

In conclusion, Sierra Club recommended denying the CPCN, primarily due to EKPC's alleged procedural deficiencies, insufficient economic justifications, unrealistic operational assumptions, and failure to adequately consider alternatives.¹³⁷ Sierra Club's approach to the site compatibility certificate did not explicitly address site-specific environmental or compatibility concerns or make an argument that EKPC did not meet the statutory requirements to be granted a site compatibility certificate.

On April 18, 2025, Sierra Club filed a notice with the Commission indicating that it would not submit a post-hearing response brief in this proceeding.¹³⁸

¹³⁵ Sierra Club's Initial Brief at 9 and 12.

¹³⁶ Sierra Club's Initial Brief at 4.

¹³⁷ Sierra Club's Initial Brief at 14-16.

¹³⁸ Sierra Club's Notice In lieu of Response Brief (filed Apr. 18, 2025).

Joint Intervenor's Position. The Joint Intervenors opposed EKPC's request for a CPCN, arguing that EKPC had not sufficiently demonstrated a clear need for the Liberty RICE Facility or an absence of wasteful duplication.¹³⁹ Joint Intervenors contended that EKPC's historic overestimation of load forecasts and inconsistencies between EKPC's projections and those of its reliability coordinator, PJM, raise doubts about the accuracy of EKPC's asserted capacity needs.¹⁴⁰ Moreover, the Joint Intervenors emphasized that EKPC's 2024 LTLF was not finalized until after the Liberty RICE project was approved internally and submitted for regulatory review.¹⁴¹

The Joint Intervenors noted that the Liberty RICE Facility is one of multiple generation projects EKPC has proposed based on the same projected need, but filed in separate dockets.¹⁴² Joint Intervenors further argued that this segmented filing approach hinders the Commission's ability to assess the full scope of potential duplication and that, in EKPC's testimony, it highlighted and characterized these filings as part of a single strategic plan, suggesting they should be reviewed together.¹⁴³

- ¹⁴¹ Joint Intervenors' Initial Brief at 4.
- ¹⁴² Joint Intervenors' Initial Brief at 5.

¹⁴³ Joint Intervenors' Initial Brief at 13-14; and Joint Intervenors' Initial Brief at 16, referencing Mosier Direct Testimony on Behalf of EKPC, at 7 ("EKPC... has identified the need for further additions and changes to its generation, investments in demand response and energy efficiency, new highly efficient natural gas generation and the possible co-firing of EKPC's coal units at its Spurlock Station in Maysville, KY and Cooper's coal units at Burnside, KY. These future additions will be complimentary to the addition of the Liberty RICE Facility and will help meet EKPC's commitment to our Board's Sustainability Plan and its overall Strategic Plan to diversify and decarbonize our generation fleet over the next decade"; Case No. 2024-00370, Direct Testimony of Don Mosier on Behalf of EKPC, at 7-8 (walking through the contributions of the Liberty RICE facility and the previous application for solar generation).

¹³⁹ Joint Intervenors' Initial Brief at 4.

¹⁴⁰ Joint Intervenors' Initial Brief at 4.

With respect to alternatives, the Joint Intervenors asserted that EKPC had not conducted a thorough review.¹⁴⁴ After the filing, the cooperative did not issue an all-source RFP or engage in capacity expansion modeling and limited its economic comparison to one resource type: combustion turbines.¹⁴⁵ Joint Intervenors further criticized EKPC's assumed approximate 67 percent to 75 percent capacity factor for the RICE units as unrealistic, especially given the facility's intended flexible operation profile, frequent ramping, and partial-load efficiency characteristics.¹⁴⁶

The Joint Intervenors also objected to issuing a site compatibility certificate, stating that the proposed facility would be incompatible with its rural, agricultural setting and could adversely impact surrounding land uses, property values, noise levels, and local traffic.¹⁴⁷ Joint Intervenors asserted that EKPC's modeling did not evaluate these impacts at property boundaries, as required, and lacked supporting detail for its assertions regarding mitigation.¹⁴⁸

The Joint Intervenors filed their post-hearing response brief on April 18, 2025.¹⁴⁹ In that brief, they reiterated that EKPC has not met its burden of proof to support the issuance of either a CPCN or a site compatibility certificate.¹⁵⁰ They emphasized that

¹⁵⁰ Joint Intervenors' Response Brief at 4.

¹⁴⁴ Joint Intervenors' Initial Brief at 17.

¹⁴⁵ Joint Intervenors' Initial Brief at 18.

¹⁴⁶ Joint Intervenors' Initial Brief at 21 referencing Tucker Direct Testimony at 23 ("It takes a run time of over 6,000 hours to equalize the total cost between the two technologies") with Response to JI 3-5, Attachment JI3.5 RICE-CT-Economic Analysis.xlsx (showing a capacity factor from the production cost modeling of between 67.1 percent and 75.2 percent).

¹⁴⁷ Joint Intervenors' Initial Brief at 24-27.

¹⁴⁸ Joint Intervenors' Initial Brief at 26.

¹⁴⁹ Joint Intervenors' Response Brief (filed Apr. 18, 2025).

EKPC's asserted need remains unquantified and inadequately supported by the record, and that the utility failed to evaluate reasonable alternatives thoroughly.¹⁵¹ The Joint Intervenors also rejected EKPC's efforts to shift the burden of proof onto intervening parties. They maintained that the facility remains incompatible with the rural character of the proposed site.¹⁵² They further argued that the Commission may not rely on information filed in separate, unconsolidated proceedings to justify approval in this docket.¹⁵³ Accordingly, the Joint Intervenors renewed their recommendation that the Commission deny both the CPCN and the site compatibility certificate.¹⁵⁴

LEGAL STANDARD

Pursuant to KRS 278.020(1), no utility may construct or acquire any facility to be used in providing utility service to the public until it has obtained a CPCN from this Commission. To obtain a CPCN, the utility must demonstrate a need for such facilities and an absence of wasteful duplication.¹⁵⁵

"Need" requires

[A] showing of a substantial inadequacy of existing service, involving a consumer market sufficiently large to make it economically feasible for the new system or facility to be constructed or operated.

[T]he inadequacy must be due either to a substantial deficiency of service facilities, beyond what could be supplied by normal improvements in the ordinary course of business; or to indifference, poor management or disregard of the rights of consumers, persisting over such a period of time as to

¹⁵¹ Joint Intervenors' Response Brief at 13-14 and 16.

¹⁵² Joint Intervenors' Response Brief at 18.

¹⁵³ Joint Intervenors' Response Brief at 14-15.

¹⁵⁴ Joint Intervenors' Response Brief at 20.

¹⁵⁵ *Kentucky Utilities Co. v. Pub. Serv. Comm'n*, 252 S.W.2d 885 (Ky. 1952).

establish an inability or unwillingness to render adequate service.¹⁵⁶

"Wasteful duplication" is defined as "an excess of capacity over need" and "an excessive investment in relation to productivity or efficiency, and an unnecessary multiplicity of physical properties."¹⁵⁷ To demonstrate that a proposed facility does not result in wasteful duplication, the Commission has held that the applicant must demonstrate that a thorough review of all reasonable alternatives has been performed.¹⁵⁸ The selection of a proposal that ultimately costs more than an alternative does not necessarily result in wasteful duplication.¹⁵⁹ All relevant factors must be balanced.¹⁶⁰

The site compatibility certificate is governed, in part, by KRS 278.216. KRS 278.216(1) states that "no utility shall begin the construction of a facility for the generation of electricity capable of generating in aggregate more than ten megawatts (10MW) without having first obtained a site compatibility certificate from the Commission." KRS 278.216(3) states that the Commission may deny an application for a site compatibility certificate or require reasonable mitigation of impacts disclosed in the site assessment report, but the Commission shall, in no event, order relocation of the facility.

KRS 278.216(2) states that:

¹⁵⁶ Kentucky Utilities Co. at 890.

¹⁵⁷ Kentucky Utilities Co. at 890.

¹⁵⁸ Case No. 2005-00142, Joint Application of Louisville Gas and Electric Company and Kentucky Utilities Company for the Construction of Transmission Facilities in Jefferson, Bullitt, Meade, and Hardin Counties, Kentucky (Ky. PSC Sept. 8, 2005).

¹⁵⁹ See Kentucky Utilities Co. v. Pub. Sew. Comm'n, 390 S.W.2d 168, 175 (Ky. 1965). See also Case No. 2005-00089, Application of East Kentucky Power Cooperative, Inc. for a Certificate of Public Convenience and Necessity for the Construction of a 138 kV Electric Transmission Line in Rowan County, Kentucky (Ky. PSC Aug. 19, 2005).

¹⁶⁰ Case No. 2005-00089, August 19, 2005 Order at 6.

An application for a site compatibility certificate shall include the submission of a site assessment report as prescribed in KRS 278.708(3) and (4), except that a utility which proposes to construct a facility on a site that already contains facilities capable of generating ten megawatts (10MW) or more of electricity shall not be required to comply with setback requirements established pursuant to KRS 278.704(3).

The requirement that a utility file a SAR, like those filed before the siting board when a merchant generator seeks to obtain a construction certificate, indicates that the legislature intended for the Commission to consider the factors discussed in the SAR when determining whether to approve a site compatibility certificate or impose mitigation measures.¹⁶¹ However, KRS 278.216(2) also states that "[a] utility may submit and the commission may accept documentation of compliance with the National Environmental Policy Act (NEPA) rather than a site assessment report," which indicates that the Commission is able to consider other factors, at least compliance with NEPA, in lieu of at least certain factors in the SAR.

KRS 278.708(3) and (4), which are written in reference to merchant generating facilities as opposed to utility owned facilities, state that the SAR shall include (1) a detailed description of the proposed site, including surrounding land uses, legal boundaries of the proposed site, proposed access control to the site, the location of facility buildings, transmission lines, and other structures, the location of use of access ways, internal roads, and railways, compliance with applicable setback requirements as provided under KRS 278.704(2), (3), (4), or (5), and evaluation of the noise levels

¹⁶¹ See Case No. 2014-00133, Joint Application of Louisville Gas and Electric Company and Kentucky Utilities Company for Site Compatibility Certificates for the Construction of a Combined Cycle Combustion Turbine at the Green River Generating Station and a Solar Photovoltaic Facility at the E.W. Brown Generating Station (Ky. PSC Dec. 19, 2014), Order at 2–3 (applying factors required to be discussed in the SAR when granting the site compatibility certificate for a solar facility).

expected to be produced by the facility; (2) an evaluation of the compatibility of the facility with scenic surroundings; (3) potential changes in property values and land use resulting from the siting, construction, and operation of the proposed facility for property owners adjacent to the site; (4) evaluation of anticipated peak and average noise levels associated with the facility's construction and operation at the property boundary; (5) the impact of the facility's operation on road and rail traffic to and within the facility, including anticipated levels of fugitive dust created by the traffic and any anticipated degradation of roads and lands in the vicinity of the facility; and (6) any mitigating measures to be suggested by EKPC to minimize or avoid adverse effects identified in the SAR.

In relevant part, KRS 278.704(2) states that:

For purposes of applications for site compatibility certificates pursuant to KRS 278.216, only the exhaust stack of the proposed facility to be actually used for coal or gas-fired generation ... shall be required to be at least one thousand (1,000) feet from the property boundary of any adjoining property owner and two thousand (2,000) feet from any residential neighborhood, school, hospital, or nursing home facility.¹⁶²

Notably, the reference to site compatibility certificates required pursuant to KRS 278.216, which are only required for utilities as defined by KRS 278.010, indicates that the legislature intended for KRS 278.704(2) to establish explicit setback requirements for utilities that must be met in order to obtain a site compatibility certificate. However, KRS 278.216(4) allows the Commission to:

[g]rant a deviation from any applicable setback requirements on a finding that the proposed facility is designed and located to meet the goals of this section and KRS 224.10-280 [cumulative environmental assessment], 278.010 [definitions statute], 278.212 [cost of transmission upgrades for

¹⁶² KRS 278.704(2).

interconnection by merchant generators], 278.214 [governing interruption of service], 278.218 [ownership change statute], and 278.700 to 278.716 [siting board statutes] at a distance closer than those provided by the applicable setback requirements.

Thus, while KRS 278.216 generally allows other factors included in the SAR to be weighed to determine whether to grant a site compatibility certificate, KRS 278.704(2) establishes explicit setback requirements that must be met for a utility to obtain a site compatibility certificate, unless the utility can establish that it is entitled to a deviation pursuant KRS 278.216(4).

KRS 278.704(3) states that local planning and zoning commissions may establish setback requirements from a property boundary, residential neighborhood, school, hospital, or nursing home facility, which shall have primacy over statutory setback requirements, "[i]f the merchant electric generating facility is proposed to be located in a county or a municipality with a planning and zoning commission." However, KRS 100.324 generally provides that "public utilities operating under the jurisdiction of the Public Service Commission... shall not be required to receive the approval of the planning unit for the location or relocation of any of their service facilities,"¹⁶³ which the Kentucky Court of Appeals has interpreted as exempting utility service facilities from the jurisdiction of local planning and zoning commissions. KRS 278.216(5) also states that "nothing in this section shall be construed to limit a utility's exemption provided under KRS 100.324."

DISCUSSION AND FINDINGS

Having reviewed the record and being otherwise sufficiently advised, the Commission finds that the requests for a CPCN for the Liberty RICE Facility and an

¹⁶³ KRS 100.324.

accompanying site compatibility certificate should be granted as discussed below. As part of this consideration, the Commission recognizes that EKPC is a not-for-profit, member-owned electric cooperative. EKPC's evaluation of resource options appears to be appropriately centered on serving end-user needs with reliability, cost-effectiveness, and operational flexibility in mind.

Certificate of Public Convenience and Necessity

The Commission's standard of review of a request for a CPCN is well settled. A utility may not construct or acquire any facility outside of the ordinary course of business until it has obtained a CPCN from this Commission. To obtain a CPCN, the utility must demonstrate a need for such facilities and an absence of wasteful duplication.¹⁶⁴ Contrary to the assertions of the Joint Intervenors, the Commission must evaluate each project individually to determine its need and wasteful duplication regardless of whether the projects are filed jointly in one application or in individual applications.

EKPC filed an application for two CPCNs for solar generation facilities in Case No. 2024-00129¹⁶⁵ in Marion and Fayette counties, Kentucky. The approved solar generation facilities will provide 96 MW from the facility in Marion County, Kentucky and 40 MW from the facility in Fayette County, Kentucky.¹⁶⁶ However, the 136 MW of capacity would be non-dispatchable, as it is dependent on factors such as weather. In the final Order for

¹⁶⁴ Kentucky Utilities Co. v. Pub. Serv. Comm'n., 252 S.W.2d 885 (Ky. 1952).

¹⁶⁵ Case No. 2024-00129, Electronic Application of East Kentucky Power Cooperative, Inc. for Certificates of Public Convenience and Necessity and Site Compatibility Certificates for the Construction of A 96 Mw (Nominal) Solar Facility in Marion County, Kentucky and a 40 Mw (Nominal) Solar Facility in Fayette County, Kentucky and Approval of Certain Assumptions of Evidences of Indebtedness Related to the Solar Facilities and Other Relief (Ky. PSC Dec. 26, 2024).

¹⁶⁶ Case No. 2024-00129, Apr. 26, 2024 Application at 1.

that application, the Commission found that those two projects allowed EKPC to help diversify its generation portfolio, hedge against future regulatory risks and energy price risks, satisfy the demands of existing commercial and industrial customers and of potential economic development candidates, and reduce costs for current customers.¹⁶⁷ Additionally, as will be discussed with regard to need, the final Order in Case No. 2024-00129 discussed EKPC's acknowledgement that "…it has sufficient capacity resources to meet its forecasted load peaks for several years,...[.]ⁿ¹⁶⁸ To be clear, within the context of the hearing testimony, witness Julia Tucker, on behalf of EKPC, clarified that the solar projects will not satisfy the PJM capacity requirement, not that EKPC has enough capacity to meet its load forecast.

EKPC filed this application prior to the final Order being issued in Case No. 2024-00129. During the pendency of this matter, EKPC provided updated load forecasts, with the most recent on being provided on March 10, 2025.¹⁶⁹ As soon as winter of 2025/2026, EKPC projects a capacity deficit.¹⁷⁰

<u>Need:</u> Having reviewed the record, the Commission finds that EKPC has a need for the capacity the Liberty RICE Facility will provide. To adequately demonstrate the need for new generation, EKPC provided a detailed LTLF supported by an Expansion

¹⁶⁷ Case No. 2024-00129, Dec. 26, 2024 Order at 23-25.

¹⁶⁸ Case 2024-00129, Dec. 26, 2024 Order at 10; *citing* Tucker Direct Testimony at 7; *see also* Hearing Testimony of Julia J. Tucker (Tucker Hearing Testimony), HVT at 11:15 (Oct. 29, 2024) (testifying that the proposed solar projects were not being built for capacity value and noting that PJM Interconnection, LLC (PJM) provides no winter capacity accreditation for solar power).

¹⁶⁹ Updated Attachment JJT-3 (filed Mar. 10, 2025).

¹⁷⁰ Updated Attachment JJT-3 (filed Mar. 10, 2025).

Plan, including Additional Capacity Resources.¹⁷¹ To further support this presented need, EKPC provided a summary of transmission system upgrades that could support the integration of the new generation and improve the reliability and stability of the transmission system.¹⁷² The Commission further finds that the need for additional capacity is not speculative or long-term, but a present and pressing issue. EKPC faces a current and forecasted winter capacity shortfall beginning in 2025, which remains unresolved due to the uncertainty and potential failure of other planned capacity purchases, including the long-term hydro purchased power agreement (PPA).¹⁷³ The Commission has previously emphasized the importance of utilities maintaining sufficient owned capacity rather than relying on market purchases.¹⁷⁴ The Commission continues to value "steel in the ground" investments as a prudent and reliable means to serve native load.¹⁷⁵ Additional benefits are identified to further support the need for the new generation. These subject areas are discussed in more detail below.

Load Forecast. The decision to add new generation and demonstrate a regulatory need is primarily impacted by the results embodied in the EKPC Load Forecast. The

¹⁷³ Updated Attachment JJT-3.

¹⁷⁵ KRS 278.264(2)(d).

¹⁷¹ See REDACTED_PSC_Attachment_1(a)_EKPC_LTLF_ (1).pdf (filed Nov. 13, 2024); and Attachment_JJT-3(revised).pdf (filed Mar.10, 2025).

¹⁷² Adams Direct Testimony at 4-11.

¹⁷⁴ Case No. 2022-00402, *Electronic Joint Application of Kentucky Utilities Company and Louisville Gas and Electric Company For Certificates Of Public Convenience And Necessity And Site Compatibility Certificates and Approval of a Demand Side Management Plan and Approval of Fossil Fuel-Fired Generating Unit Retirements* (Ky. PSC Nov. 6, 2023), Order at 95 ("…capacity market is not a replacement for a vertically integrated utility having sufficient generation capacity owned or contracted for to serve their retail customers. The Commission expects our vertically integrated utilities, in furtherance of their service, and now reliability obligations, to replace generation capacity with "steel in the ground" or a Purchase Power Agreement. To expect otherwise would open the door to runaway costs and turning over our reliability fate to out-of-state and unaccountable entities.")

Load Forecast is prepared every two years in accordance with EKPC's Load Forecast Work Planning Process (Work Plan), which was most recently prepared in December 2024. The following describes the 2024 Load Forecast Work Plan, which was utilized to support the proposed RICE Liberty Facility Project.

The Work Plan details the methodology used to develop the load forecast. The EKPC Power Supply Analytics Department works with the staff of each Owner-Member to prepare 16 Owner-Member forecasts. Once finalized, EKPC aggregates each Owner-Member's forecasts, adds projections of EKPC facilities and transmission losses, and incorporates energy efficiency impacts, demand side management impacts, and electric vehicle (EV) assumptions, resulting in EKPC's total system forecast.¹⁷⁶ Owner-Members use their load forecasts as input in developing construction work plans, long-range work plans, and financial forecasts.¹⁷⁷ EKPC uses the load forecast for demand-side management analyses, marketing analyses, transmission planning, financial forecasting, and, as associated with this case, power supply planning.¹⁷⁸ Factors considered in preparing the forecast include national, regional, and local economic performance, population and housing trends, service area industrial development, electric price, household income, appliance saturations and efficiencies, demand side management programs, and weather.¹⁷⁹

¹⁷⁶ REDACTED_PSC_Attachment_1(a)_EKPC_LTLF_ (1).pdf (filed Nov. 13, 2024) at 1.

¹⁷⁷ REDACTED_PSC_Attachment_1(a)_EKPC_LTLF_ (1).pdf at 1.

¹⁷⁸ REDACTED_PSC_Attachment_1(a)_EKPC_LTLF_ (1).pdf at 1.

¹⁷⁹ REDACTED_PSC_Attachment_1(a)_EKPC_LTLF_ (1).pdf at 1.

The results of this Work Plan are embodied in the 2024 LTLF. It should be noted that the 2024 LTLF substantially altered the base demand and energy projections as compared to those used in the development of the 2022 Integrated Resource Plan (IRP),¹⁸⁰ which were based on EKPC's 2020 load forecast.¹⁸¹ According to EKPC, key drivers of the 2024 LTLF include native load growth, load growth attributed to economic development, and the addition of assumptions for electric vehicle (EV) penetration.¹⁸² It should also be noted that the 2024 LTLF is conservative because it did not include the possible addition of energy-intensive manufacturing, data centers, and/or artificial intelligence computing loads.¹⁸³ EKPC recognized that the addition of these large loads is possible based upon regional economic development activities in EKPC's Owner-Member service territories; however, the demand remained speculative, and EKPC stated that it did not and will not include the load in the LTLF until specific projects are finalized and announced.¹⁸⁴

Additionally, the 2024 LTLF winter peak forecast is higher than the 2020 and 2022 forecasts.¹⁸⁵ The peak load experienced during Winter Storm Elliott in December 2022 is attributed to an extreme weather event with unprecedented wind-chill ratings, meaning that once that peak was weather-normalized, it was in line with forecasted

- ¹⁸² Tucker Direct Testimony at 8.
- ¹⁸³ Tucker Direct Testimony at 8.
- ¹⁸⁴ Tucker Direct Testimony at 8.
- ¹⁸⁵ Tucker Direct Testimony at 11.

¹⁸⁰ See Case No. 2022-00098, *Electronic 2022 Integrated Resource Plan of East Kentucky Power Cooperative, Inc.* (filed Apr. 1, 2022).

¹⁸¹ Tucker Direct Testimony at 8.

expectations.¹⁸⁶ However, EKPC stated the peak during Winter Storm Gerri in January 2024 (EKPC's all-time peak) did not occur during an extreme weather event, indicating that prior forecasts were under-projecting winter peaks.¹⁸⁷

EKPC adjusted its 2024 Reserve Margin from zero percent in the EKPC 2022 IRP to seven percent for the EKPC winter peak.¹⁸⁸ EKPC indicated the change was driven by two risks associated with winter peaks: higher than anticipated demand driven by extreme cold weather events (Winter Storms Elliott and Gerri) and generator outage probability. EKPC is a winter peaking utility although PJM is a summer peaking RTO;¹⁸⁹ and thus, it was necessary and reasonable to plan for a generation portfolio that meets expected forecasts and accounts for these unknown risks while meeting its PJM requirements.¹⁹⁰

EKPC quantified this risk by analyzing the 1 in 10 probability of extreme weather events and spreading that risk over the planning horizon, with an extreme weather event occurring every two years for a 48-hour period within each of those two-year periods.¹⁹¹ This is consistent with Winter Storms Elliott and Gerri events, which were multiple-day cold weather events, driving load saturation from residential consumption.¹⁹²

- ¹⁸⁶ Tucker Direct Testimony at 11.
- ¹⁸⁷ Tucker Direct Testimony at 11.
- ¹⁸⁸ Tucker Direct Testimony at 13.
- ¹⁸⁹ Tucker Direct Testimony at 13.
- ¹⁹⁰ Tucker Direct Testimony at 13.
- ¹⁹¹ Tucker Direct Testimony at 13.
- ¹⁹² Tucker Direct Testimony at 13.

EKPC stated the Reserve Margin of seven percent accounts for the inherent risk above the base forecast and enables EKPC to increase reliability while improving the Owner-Member's hedge against PJM energy market prices during peak winter periods.¹⁹³ EKPC's reserve margin for the summer peak has increased from three percent to seven percent since the 2022 IRP.¹⁹⁴ EKPC averred this increase in summer peak reserves is necessary to ensure that EKPC is hedged from potentially volatile PJM capacity market prices, which recently cleared at approximately \$270/MW-Day for the 2025/2026 Base Residual Auction (BRA).¹⁹⁵ According to EKPC, this increase was primarily driven by the PJM adoption of Effective Load Carrying Capability (ELCC) in lieu of Equivalent Forced Outage Rate Demand (EFORd) as the capacity accreditation methodology in effect starting with the 2025/2026 BRA.¹⁹⁶

According to the testimony, the shift to ELCC results in an overall reduction in capacity available from all generators to sell into the PJM capacity market and reduced EKPC's accredited capacity to sell into PJM by 17 percent on average for the 2025/2026

¹⁹³ Tucker Direct Testimony at 13.

¹⁹⁴ Tucker Direct Testimony at 14.

¹⁹⁵ Tucker Direct Testimony at 14.

¹⁹⁶ Tucker Direct Testimony at 14. EFORd represents a single generator's probability of availability based on total service hours compared to partial or total forced outage hours. ELCC is a combination of both a generator's market-wide class rating, based on thirty years' worth of historical weather patterns used to simulate thirty-nine thousand (39,000) years' worth of data, and individual generator performance using actual output during the two hundred (200) highest coincident-peak load hours over a rolling ten (10) year period. See also PJM Manual 35: Definitions and Acronyms. EFORd represents "The portion of time a unit is in demand but is unavailable due to a forced outage. Also see PJM Inside Lines dated December 18, 2018, and PJM Manual 21A dated June 27, 2024. ELCC methodology determines the contribution that an individual generator or a fleet of generators makes to overall system resource adequacy. Specifically, ELCC is a measure of the additional load the system can supply with the particular generator(s) of interest, without a change in reliability.

BRA.¹⁹⁷ The Commission notes that, while the summer peak does not represent a reliability concern for EKPC, as EKPC's winter peak is approximately 1,000 MW higher than its summer peak, it does represent a financial risk should EKPC not carry enough available capacity to offset its required load obligation from the PJM capacity market.¹⁹⁸ While it is likely that the winter capacity needs will continue to drive capacity resource expansion, EKPC alleged that it cannot ignore the risk of ELCC and therefore, has increased its summer planning reserves to match its revised winter reserves.¹⁹⁹ EKPC noted that the Commission has repeatedly stated that it does not desire regulated utilities in Kentucky to rely on wholesale energy markets for capacity and energy.²⁰⁰ During the hearing, Witness Tucker also cited the need to include and forecast demand not accounted for by PJM, energy serving customers of other utilities.²⁰¹

To summarize the 2024 LTLF, the residential, small commercial, and large commercial sales are forecast to grow at compound annual growth rates of 1.0 percent, 0.2 percent, and 1.5 percent, respectively, over the forecast period (2025 - 2039).²⁰² In addition to class forecasts, EKPC partnered with a consultant to forecast EV growth and

¹⁹⁷ Tucker Direct Testimony at 14.

¹⁹⁸ Tucker Direct Testimony at 14.

¹⁹⁹ Tucker Direct Testimony at 14-15.

²⁰⁰ Tucker Direct Testimony at 15; citing Case No. 2014-00226, An Examination of the Application of the Fuel Adjustment Clause of East Kentucky Power Cooperative, Inc. from November 1, 2013 Through April 30, 2014 (Ky. PSC Jan., 30, 2015), Order; Case No. 2022-00402; Case No. 2023-00153, Electronic Tariff Filing of East Kentucky Power Cooperative, Inc. and its Member Distribution Cooperative For Approval of Proposed Changes to their Qualified Cogeneration and Small Power Production Facilities Tariffs (Ky. PSC Oct. 31, 2023), Order.

²⁰¹ Hearing Video Transcript (HVT) of the Mar. 18, 2025 Hearing, Testimony of Julia Tucker, Hearing at 29:46-36:27.

²⁰² Tucker Direct Testimony at 10.
energy requirements. According to that response, charging profiles from the U.S. Department of Energy's (DOE) Alternative Fuel Data Center (AFDC) were analyzed and incorporated into EKPC's forecast to project EV hourly charging needs and seasonal peak contributions.²⁰³ Total energy requirements, winter peak demand, and summer peak demand, including EV projections, are forecast to grow at compound annual growth rates of 1.4 percent, 0.9 percent, and 1.2 percent, respectively.²⁰⁴

Based on the information of EKPC's rationale and supporting documentation, the Commission finds that the 2024 LTLF is a reasonable assessment of EKPC's anticipated loads for 2024 through 2039. Although the Joint Intervenors take issue with the load forecasting using such terms as "exaggerated" on multiple occasions,²⁰⁵ the Joint Intervenors did not present any testimony to call into question the accuracy of the information. Joint Intervenors' brief does not acknowledge the uncontested fact that EKPC does not appear to be able to finalize its hydro PPA, upon which EKPC relied in calculating its capacity. The Commission notes that the decision to exclude large load demand customers, like data centers, must be acknowledged and was considered in accepting the reasonableness of the load forecast.

In addition, as an illustrative example in support of reasonableness, parties can compare the 2022 IRP with EKPC's recently filed 2025 IRP. For the years of 2022 and 2023, the 2022 IRP had forecasted load information, and the 2025 IRP contains actual load data for those years. In the winter of 2022 into 2023, the actual winter peak demand

²⁰³ Tucker Direct Testimony at 10.

²⁰⁴ Tucker Direct Testimony at 10.

²⁰⁵ Joint Intervenors' Initial Brief at 8-9.

was 3,747 MW, and the summer peak demand was 2,465 MW.²⁰⁶ For the winter of 2023 into 2024, the peak demand was 3,754 MW, and the summer peak demand was 2,497 MW.²⁰⁷ In the 2022 IRP those same time periods were projected as follows: for 2022 the net winter peak demand was projected to be 3,363 MW and the summer peak was projected to be 2,500 MW; the 2023 peak net winter demand was projected to be 3,384 MW and the projected summer peak demand amount was 2,574 MW.²⁰⁸ For the 2022/2023 winter peak, EKPC's peak load forecast was exceeded. For the 2022 summer projected peak, EKPC's forecast was approximately 98 percent of the actual demand amount. As for the winter of 2023/2024, EKPC's forecasted peak load was exceeded by almost the same percentage as 2022/2023 winter forecasted peak. EKPC's summer forecast was approximately 97 percent accurate as to peak demand load. Clearly, this illustration using recent actual data is just a snapshot but does support the Commission's finding that EKPC provided a thorough and reasonable analysis of its forecasted load.

With respect to concerns raised regarding differences between EKPC's load forecast and PJM's forecasts, the Commission finds that EKPC provided a thorough and credible explanation. EKPC demonstrated that PJM forecasts transmission owner (TO) load zone energy and capacity obligations, which do not fully capture all EKPC's retail customer service obligations due to third-party transmission service arrangements. As a Kentucky jurisdictional utility, EKPC has a statutory obligation to plan for and serve all its customers,

²⁰⁶ Case No. 2025-00087, Public IRP at 45. Impact of Demand Side Management programs is considered in forecast.

²⁰⁷ Case No. 2025-00087, Public IRP at 45. Impact of Demand Side Management programs is considered in forecast.

²⁰⁸ Case No. 2022-00098, REDACTED EKPC 2022 IRP at 65.

regardless of transmission provider. The Commission finds that EKPC's LTLF methodology properly accounted for these obligations.

<u>EKPC Capacity Expansion Plan:</u> EKPC's forecasted seasonal capacity needs and planned capacity additions are represented by EKPC's Expansion Plan illustrated in Appendix C attached to this Order.²⁰⁹

According to EKPC's application, the Expansion Plan includes capacity additions of a long-term hydro purchased power agreement (PPA) (300 MW winter, 9 MW summer) capacity needs, and a 745 MW winter, 573 MW summer natural gas combined cycle unit in addition to the proposed RICE units. EKPC alleged that, along with the hydro PPA, the Liberty RICE Facility would allow EKPC to meet its forecasted winter peak within the 2025 through 2033 period.²¹⁰

<u>Transmission System Upgrades:</u> The Commission notes that EKPC explored transmission alternatives to construction of permanent generation.²¹¹ There are some reliability issues related to voltage violations in the southern part of EKPC's territory.²¹² Although adding the Liberty RICE units will help resolve some transmission issues in the area, upgrading the transmission facilities will not resolve EKPC's generation capacity issues. Upgrading or adding new transmission capabilities will not provide additional

²⁰⁹ Tucker Direct Testimony, Attachment JJT-3 and Updated Attachment JJT-3 (revised) (filed Mar. 10, 2025).

²¹⁰ Tucker Direct Testimony, Attachment JJT-3 and Attachment JJT-3 (revised) (filed Mar. 10, 2025). Also, see EKPC's Response to Staff's Third Request, Item 12. EKPC indicated that the negotiations for the Hydro PPA were ongoing, and that the agreement had not been finalized. The potential loss of the hydro PPA would exacerbate EKPC's forecast and immediate capacity need, but not lessen the need for the RICE units in this proceeding.

²¹¹ Tucker Direct Testimony at 20-21.

²¹² Adams Direct Testimony, Attachment DA-1, Transmission Analysis Report at 3.1.

generation needed to serve the load.²¹³ The Commission notes that generation and transmission are two different issues, and upgrades to the transmission system do not produce additional generation capacity.

Additionally, in June 2024, EKPC completed an analysis of its transmission system to determine if modifications or upgrades to the transmission system can reduce the need for new generation in the region.²¹⁴ This analysis determined that either the construction of a new West Garrard-Cooper 345 kV line and associated substation terminal equipment at each end or the construction of a new KU Alcalde-Cooper 345 kV line and associated substation terminal equipment provides the most load-serving benefit for the region.²¹⁵ If no new generation is added, these alternatives would support the highest amount of additional EKPC load in the region, estimated at 405.7 MW. Therefore, these transmission upgrades would provide the most significant reliability margin if the existing and/or new generation is unavailable.²¹⁶

However, the Commission acknowledges that none of the transmission alternatives provides additional generation for the EKPC system. The Commission's finding of need in this proceeding is founded upon a projected capacity deficit with an emphasis on steel in the ground in the service territory, and the need requires additional

²¹⁶ EKPC's Response to Staff's Fourth Request, Item 5.

²¹³ EKPC's Post-Hearing Brief at 16. See also EKPC's Response to Staff's Fourth Request, Item 1 at 2. EKPC stated that it "needs both the Liberty RICE facility in this application and the unit at Cooper Station in Case No. 2024-00370 to address EKPC's capacity shortfall which cannot be overcome with transmission projects only." and "The existence of two separate generation facilities in the area creates an additional level of reliability that will provide more operating margin for the area when transmission and/or generation outages occur."

²¹⁴ EKPC's Response to Staff's Fourth Request, Item 5.

²¹⁵ EKPC's Response to Staff's Fourth Request, Item 5.

generation to serve the EKPC Owner Members' load. Therefore, none of the transmission alternatives evaluated would eliminate the need for the RICE units, nor would they reduce the benefits of constructing the Liberty RICE Facility.²¹⁷

<u>Other Benefits:</u> The Liberty RICE Facility units have dual-fuel capability with the ability to switch from natural gas to diesel fuel to ensure operation when natural gas may be curtailed or unavailable. Additionally, EKPC will store 1,260,000 gallons of Ultra Low Sulfur Diesel fuel on-site, providing up to 72 hours of black start capability.²¹⁸

The Commission recently initiated an investigation into the issues related to Winter Storm Elliott and Louisville Gas & Electric (LG&E) and Kentucky Utilities Company (KU) (jointly, LG&E/KU).²¹⁹ One of the biggest issues for all utilities served by the Texas Gas Company during this period was the failure of Texas Gas Company to provide natural gas at appropriate pressures due to equipment failures.²²⁰ As the October 2023 FERC/NERC²²¹ Report²²² detailed, Winter Storm Elliott blanketed "'most of the eastern United States on December 23 and 24, 2022, and did not subside until December 26."²²³ The Liberty RICE Facility's ability to operate for up to 72 hours in a similar weather

²¹⁷ EKPC's Response to Staff's Fourth Request, Item 5.

²¹⁸ Johnson Direct Testimony at 9

²¹⁹ Case No. 2023-00422, *Electronic Investigation of Louisville Gas and Electric Company and Kentucky Utilities Company Service Related to Winter Storm Elliott* (Ky. PSC Jan.7, 2025).

²²⁰ Case No. 2023-00422, Jan. 7, 2025 Order at 6-8.

²²¹ NERC is the North American Electric Reliability Corporation. Pursuant to Section 215 of the Federal Power Act, NERC serves as the country's Electric Reliability Organization, as designated by the FERC.

²²² Winter Storm Elliott Report: Inquiry into Bulk-Power System Operations During December 2022 | Federal Energy Regulatory Commission (ferc.gov) (FERC/NERC Report).

²²³ Case No. 2023-00422, Jan. 7, 2025 Order at 3.

emergency as a result of the dual fuel option may become invaluable in addressing similar issues in the future. The Commission would be remiss not to cite this factor as advantageous in approving this facility, a unique generation resource for the Commonwealth that may produce energy when other generation facilities are unable.

<u>Wasteful Duplication</u>. EKPC considered traditional combustion turbines, along with the Liberty RICE Facility, when determining what generation would best meet its long-term needs. EKPC already has a significant amount of CT capacity on its system.²²⁴ Generally, CTs provide critical, dependable power during peak load demand periods or when other generation is taken offline.²²⁵ However, the typical CT units take at least thirty minutes to start and then are synchronized to the grid.²²⁶ Based on the information provided in this application, the operational characteristics of the RICE units enable them to start up quickly within five minutes and be fully dispatchable across the unit's full load range.²²⁷ It should be noted that, compared to RICE units, traditional CTs run at higher heat rates (lower efficiency with more cost) at lower load levels and are most efficient at full load output.²²⁸ The RICE units operate with very little variation in heat rate across their full operating range.²²⁹ The flexibility in operating levels, fast start/ramp times, and

²²⁴ Application at 2. EKPC also owns and operates natural gas-fired generation at the J. K. Smith Station in Clark County, Kentucky (753 MW (summer)/989 MW (winter)) and the Bluegrass Generating Station in Oldham County, Kentucky (501 MW (summer)/567 MW (winter)).

²²⁵ Adams Direct Testimony at 8-9.

²²⁶ Adams Direct Testimony at 8-9.

²²⁷ Adams Direct Testimony at 8-9.

²²⁸ Adams Direct Testimony at 8-9.

²²⁹ Tucker Direct Testimony at 21.

efficient heat rates make the RICE units cost-effective when considering load following requirements for solar generation as more units are added to the system.

In order for EKPC to meet its immediate capacity needs, the only reasonable option may be one or more PPAs as an alternative due to the time required to permit and construct a new facility. However, the 300 MW PPA contract that EKPC thought it could rely on has not panned out as planned.²³⁰ Since other alternatives were deemed not feasible, as listed earlier in the Order, to satisfy EKPC's immediate need for capacity, EKPC did not develop or analyze a longer list of alternatives but focused instead on the CT.²³¹

Least Cost Analysis. Everything else being equal, EKPC's Expansion Plan shows that, without the Liberty RICE Facility capacity addition, EKPC's capacity shortfall will become worse in 2029-2030 until the projected combined cycle gas turbine is brought online.²³² The Commission recognizes that, pursuant to the Expansion Plan, the generation assets proposed in this proceeding represent only a portion of EKPC's broader effort to address its capacity shortage over the forecast period. EKPC argued that the Expansion Plan presented represents its most reasonable, least-cost option to meet the long-term needs of its Owner-Members.²³³

²³⁰ HVT of the Mar. 18, 2025 Hearing at 04:16:44-04:18:16. Witness Julia Tucker stated the PPA contract was "in jeopardy." That status of the PPA contract was later confirmed to no longer be part of EKPC's LTLF in Case No. 2024-00370 in EKPC's Response to Staff's Post-Hearing Requests for Information, Item 22 (filed May 2, 2025) (subject to change, record is not closed).

²³¹ EKPC's Response to Staff's Fourth Request, Item 5.

²³² Tucker Direct Testimony, Attachment JJT-3 and Attachment JJT-3 (revised).

²³³ Application at 9.

The Commission notes that the Expansion Plan indicated a capacity need across the entire forecast horizon, and the evaluation of the CPCN in this proceeding covered the RICE units only and not the hydro PPA and the proposed CCGT.²³⁴ This created the impression that the analysis for the RICE units was unnecessarily truncated because EKPC did not appear to carry out a resource assessment prior to the production cost analysis.²³⁵ However, EKPC did provide the necessary analyses.

EKPC did not directly compare a battery energy storage system (BESS) against the RICE units. However, during discovery EKPC stated that available BESS technology cannot provide several key characteristics that the RICE units possess.²³⁶ These include, but are not limited to, the ability to maintain rated output during long-duration extreme weather events, such as Winter Storms Elliott and Gerri, the ability to dispatch when needed without concern for available stored energy, and the viability of long-term maintenance.²³⁷ EKPC directly compared the RICE units to a CT, as stated throughout the application and discovery.²³⁸

EKPC's cost comparison to a CT demonstrated that the RICE units' lower variable costs meant they needed to run over 6,000 hours annually to overcome their higher fixed

²³⁴ The Commission is concerned that the Hydro PPA is listed in the Expansion Plan as a resource whose capacity is needed almost immediately and that the PPA contract had not been finalized. In addition, while not a part of this case, the PPA contract had not been finalized in Case No. 2024-00370, where EKPC is seeking a CPCN for the CCGT in the Expansion Plan (subject to change, record is not closed).

²³⁵ Not conducting a resource assessment analysis to allow the model to select the RICE units over a CT gave the appearance of EKCP pre-selecting the RICE units, even though subsequent analyses demonstrated the cost advantages over a CT, if the run times were sufficient.

²³⁶ EKPC's Response to Joint Intervenors' Second Request, Item 18.

²³⁷ EKPC's Response to Joint Intervenor's Second Request for Information, Item 18.

²³⁸ EKPC's Response to Joint Intervenors' Second Request, Item 18.

costs.²³⁹ The production cost modeling results demonstrate that the RICE units would be economically dispatched 6,426 hours annually due to the lower variable costs versus EKPC's CTs.²⁴⁰ The Commission acknowledges that the operating characteristics of RICE units enable them to be used in either role. Based on the evidence in the record, the advantages of the RICE units over a traditional CT include the following:

- lower operating and maintenance costs than a traditional combustion turbine;
- the RICE units offer extremely flexible operational characteristics;
- the RICE units are not subject to the more restrictive air permits that limit a CT's operation; and
- the RICE units have faster start times; they have quicker ramp times; and lower downtime and runtime values.²⁴¹

Although the RICE units entail higher capital costs than CT units at certain price points, the Commission finds that the units' flexibility, fast-ramping capabilities, and superior efficiency at partial loads justify their selection in this instance. RICE units can be dispatched in response to market signals and renewable intermittency, unlike CTs, which are limited by slower startup and narrower efficiency bands. The Commission, therefore, finds that the RICE units do not result in wasteful duplication, as they fulfill a distinct operational role and represent a prudent investment given EKPC's urgent capacity needs and the need for dispatchable flexibility in an increasingly renewable grid.

²³⁹ Tucker Direct Testimony at 23-24 and EKPC's Response to Joint Intervenors' Third Request, Item 5 Attachment JI3.5_-_RICE-CT-Economic_Analysis.XLSX.

²⁴⁰ EKPC's Response to Staff's Second Request, Item 5.

²⁴¹ EKPC's Response to Staff's First Request, Item 6 at 3.

However, the Commission's evaluation of the RICE units was complicated by the uncertainty of exactly how the RICE units would be utilized. Given that the cost and production cost analyses indicated that the RICE units needed to run over 6,000 hours annually, a comparison to base load units would appear to be appropriate. However, EKPC indicated that they would be load following and well suited as more renewable energy entered the market,²⁴² which would indicate that they would be used in lieu of CTs.

Both the Joint Intervenors and Sierra Club took issue with EKPC's capacity factor for least cost alternative.²⁴³

To support EKPC's Expansion Plan, EKPC anticipated dispatching these RICE units at a 60 percent capacity factor.²⁴⁴ EKPC indicated that the RICE units could operate continuously for unlimited hours over their 30-year design life span as long as they were operated, maintained, and repaired according to the manufacturer's specifications.²⁴⁵ In addition, the 30-year design life is not affected by engine run time.²⁴⁶

Based upon the evidence in the record, the Commission finds that the RICE units are a least-cost, most reasonable capacity addition to EKPC's generation fleet. How the RICE units are utilized will depend upon how they are bid into the energy markets and

²⁴² See Tucker Direct Testimony at 20-23. The discussion focuses on EKPC's need for load following generation as more renewables are added and why RICE engines are more suitable than CTs for specific load following activity.

²⁴³ Sierra Club's Initial Brief at 12-14; Joint Intervenors' Initial Brief at 20-22.

²⁴⁴ Young Direct Testimony Attachment BY-1 Project Scoping Report, Appendix T. *See also* EKPC's Response to Staff's Second Request, Item 4. The production cost model economically dispatched the RICE units 6, 426 hours annually, which resulted in a capacity factor of 73.3 percent.

²⁴⁵ EKPC's Response to Staff's Third Request, Item 3.

²⁴⁶ EKPC's Response to Staff's Third Request, Item 4. *See also* EKPC's Response to Staff's Third Request, Item 5. EKPC indicated that RICE units similar to those proposed in this proceeding have been used for over 75 years in the marine industry, employed in passenger, merchant, and specialized vessels operating in diverse configurations and on various gaseous and liquid fuels.

dispatched. Because the RICE units are the first-generation units of this technology type and neither EKPC nor the Commission have any experience with RICE units, the Commission finds that EKPC should track Key Performance Indicators for reliability and operation, monthly, and file an annual report reflecting those monthly figures for each of the RICE units following the first full year of unit operation. How each unit (or block of units, depending on how the units are bid and dispatched into the PJM day-ahead and real-time energy markets) is bid and the number of hours monthly the units are dispatched should be included in the monthly reports. The Commission also finds that this facility is not duplicative of the solar generation facilities proposed in Case No. 2024-00129. The Liberty RICE Facility is dispatchable and provides firm capacity, while solar resources are intermittent and non-dispatchable. These resources are complementary, not redundant, and jointly support EKPC's broader portfolio transformation. As each application must be evaluated on its own merits, the Commission considers this filing separately while recognizing that both projects serve different operational needs in EKPC's long-term capacity strategy.

SITE COMPATIBILITY CERTIFICATE

To determine the optimal and lowest cost option for siting the RICE units, after an initial broad search involving approximately 20 sites, EKPC reviewed five potential locations²⁴⁷ in central Kentucky, primarily in or around the Campbellsville and Liberty

²⁴⁷ EKPC's Response to Staff's First Request, Item 17.

areas.²⁴⁸ EKPC conducted a detailed Siting Study where each of the potential locations was compared against a set of siting criteria including:

- Sufficient land area for the new Liberty RICE facility,
- Domestic water availability,
- Noise sensitivity,
- Adjacent residences or community gathering locations,
- Wetlands and other potential regulatory constraints.²⁴⁹

The details of the Siting Study were included in the Project Feasibility Report. The final recommendation from the Feasibility Report indicated that the Liberty, Kentucky site was preferable due to the proximity of gas pipelines and the existing 161 kV transmission system.²⁵⁰ EKPC stated that the owner of the parcel, labeled as Liberty 4, that scored arguably better than the selected site location, did not want to sell.²⁵¹ EKPC stated that the the the the tiberty site chosen was the next best option based on the siting matrix.²⁵²

Pursuant to KRS 278.216 and KRS 278.708(3) and (4), EKPC submitted a SAR with its application for a site compatibility certificate for the proposed Liberty RICE Facility.²⁵³ The SAR was prepared by Burns & McDonnell and addressed the statutory requirements concerning *inter alia* the site characteristics, including land use compatibility, potential environmental impacts, setback requirements, noise levels, any effects on nearby property valuation, and proposed mitigation measures.

²⁴⁸ Attachment BY-2 at PDF page 3-8. The Site Selection Study was performed by 1898 & Co., a part of Burns & McDonnell. *See also* Attachment BY 3 at PDF page 12 and Young Direct Testimony at 5-6.

²⁴⁹ Young Direct Testimony at 5-6; *See also* Attachment BY-2.

²⁵⁰ Young Direct Testimony at 5-6.

²⁵¹ EKPC's Response to Staff's Second Request, Item 9.

²⁵² Attachment BY-2.

²⁵³ Application, Attachment BY-2, Vol. 1.

KRS 278.708(3)(a)(1–6) requires that the detailed site description in the SAR include a description of (1) surrounding land uses for residential, commercial, agricultural, and recreational purposes; (2) the legal boundaries of the proposed site; (3) proposed access control to the site; (4) the location of facility buildings, transmission lines, and other structures; (5) location and use of access ways, internal roads, and railways; and (6) existing or proposed utilities to service the facility.

Detailed Site Description. The proposed Liberty RICE Facility will be located on a greenfield site consisting of approximately 93 acres in Casey County, Kentucky, approximately four miles north of Liberty.²⁵⁴ All 12 Wartsila engines will be placed in an engine hall building. The engine hall building will house the engine hall, mechanical room, tank room, maintenance/shop room, electrical room, and battery room.²⁵⁵ The natural gas pipeline operator will operate a new Meter and Regulating station.²⁵⁶ A new switchyard will also be built on the project site.²⁵⁷ All of the facilities are depicted on the site plan attached as Appendix A.²⁵⁸

The facility will be accessed from Carr Sasser Road off KY-49 and is sited in an area with predominantly agricultural land uses and low-density residential development. According to the SAR, the surrounding land is primarily agricultural with low-density residential and limited commercial uses.²⁵⁹ According to Table 2-1 of the SAR,

- ²⁵⁶ Attachment BY-2 Vol. 1 at 2-1.
- ²⁵⁷ Attachment BY-2 Vol. 1 at 2-0.
- ²⁵⁸ Attachment BY-2 Vol. 1 at Appendix A at 102-126.
- ²⁵⁹ Attachment BY-2 Vol. 1 at 2-1.

²⁵⁴ Attachment BY-2 Vol. 1 at 2-1.

²⁵⁵ Attachment BY-2 Vol. 1 at 2-1.

approximately 66.12 percent of the surrounding acreage is agricultural, and 31.37 percent is used for mixed agricultural/residential purposes.²⁶⁰ Less than three percent of the surrounding land is used solely for residential or commercial purposes.²⁶¹ EKPC holds an option to acquire the entire project site and has provided maps and documentation establishing its legal boundaries and ownership status for each parcel necessary for the project build.²⁶²

According to the SAR, two gated access points will be located off Carr Sasser Road.²⁶³ Security personnel will control access to the main entrance.²⁶⁴ The property site will be surrounded by a secure fence.²⁶⁵ The main gate will include a security building and personnel to provide security to the site.²⁶⁶ The second gate will be for craft labor to park and gain access through the facility turnstile.²⁶⁷ The engine hall, administration building, and other major facilities within the complex will be located approximately 700 feet from the guard shack, in the center of the property boundary.²⁶⁸ Access roads will be used for delivery of equipment and materials during construction, as well as operation

²⁶⁰ Attachment BY-2 Vol. 1 at 2-1.

- ²⁶⁴ Attachment BY-2 Vol. 1 at 2-3.
- ²⁶⁵ Attachment BY-2, Vol. 1 at 2.5.
- ²⁶⁶ Attachment BY-2, Vol. 1 at 2.3.
- ²⁶⁷ Attachment BY-2, Vol. 1 at 2.3.
- ²⁶⁸ Attachment BY-2, Vol. 1 at 2.3.

²⁶¹ Attachment BY-2 Vol. 1 at 2-1, reflecting 2.21% acreage for residential use and 0.30% acreage for commercial use.

²⁶² Attachment BY-2 Vol. 1 at 2-2.

²⁶³ Application, Attachment BY-2, Vol. 2, Appendix B.

of the facility.²⁶⁹ An asphalt-paved loop road will enclose the areas of the engine hall, warehouse, and administrative space.²⁷⁰ According to the SAR, traffic in the area of the facility should only see an impact when employees are coming to work and leaving at the end of the shift.²⁷¹ All other traffic will be contained within the project boundaries.²⁷² For security and safety, the site will be fenced and include appropriate signage warning trespassers of the potential dangers.²⁷³ There are currently no railways near the project site.²⁷⁴

Regarding visual compatibility, the SAR concludes that visibility of the facility from KY-49 will be limited due to the site's setback from the highway and a dense tree line along the southwest portion of the property.²⁷⁵ EKPC plans to further reduce visual impacts by planting new trees along Carr Sasser Road and constructing an earthen berm near nearby residences and businesses.²⁷⁶ The facility buildings and equipment will be neutral-colored to blend with the surroundings, and disturbed construction areas will be reseeded to restore a natural appearance.²⁷⁷ The facility layout was developed to

- ²⁶⁹ Attachment BY-2, Vol. 1 at 2.3.
- ²⁷⁰ Attachment BY-2, Vol. 1 at 2.3.
- ²⁷¹ Attachment BY-2, Vol. 1 at 2.3.
- ²⁷² Attachment BY-2, Vol. 1 at 2.3.
- ²⁷³ Attachment BY-2, Vol. 1 at 2.3.
- ²⁷⁴ Attachment BY-2, Vol. 1 at 2.3.
- ²⁷⁵ Attachment BY-2, Vol. 1 at 3.0.
- ²⁷⁶ Attachment BY-2, Vol. 1 at 3.0.
- ²⁷⁷ Attachment BY-2, Vol. 1 at 3.0.

mitigate noise impact by placing major equipment and structures, stack orientation, and using the above-listed natural and constructed buffers.²⁷⁸

Although the Joint Intervenors did not present evidence related to the SAR, they did take issue with several of the conclusions in the SAR, site selection being compatible with the surrounding area, in particular.²⁷⁹ The Commission finds that with the proposed mitigation measures and the mitigation measures imposed in Appendix B of this Order, address the concerns regarding the site compatibility with the surroundings appropriately.

<u>Setback Compliance</u>. The Liberty RICE Facility does not include any coal generation. Instead, the project includes two exhaust stacks for the engines, and a 1,000-foot radius setback from the centerline of each stack was established and incorporated into the site layout.²⁸⁰ The SAR notes that the site plan does not include any residential neighborhoods, schools, hospitals, or nursing home facilities within 2,000 feet of the facility structures.

<u>Noise Assessment</u>. Burns & McDonnell conducted a sound study as part of the SAR.²⁸¹ Neither the Commonwealth of Kentucky nor Casey County has any applicable ordinances, so the report notes that it used an industry standard guidance by the United States Environmental Protection Agency (USEPA) and American National Standards Institute (ANSI) S12.9.²⁸² The noise assessment modeled expected operational sound

²⁷⁸ Attachment BY-2, Vol. 1 at 3.0.

²⁷⁹ Joint Intervenors Initial Brief at 22-26.

²⁸⁰ Attachment BY-2 Vol. 1 at 2.7.

²⁸¹ Attachment BY-2, Vol. 2, Appendix D.

²⁸² Attachment BY-2, Vol. 2, Appendix D at 2.0.

levels at eight receptor points.²⁸³ The project sound levels are expected to slightly exceed the recommended noise levels from the USEPA and ANSI S12.9 at only some of the receptors, but overall, the noise was within the recommended levels.²⁸⁴ Specifically, as designed, the project is expected to contribute a maximum sound level of approximately 52 dBA and 71 dBC at the nearest residential noise-sensitive receptor, R7, located west of the Project site.²⁸⁵ This is slightly above the recommended noise criteria provided by USEPA and ANSI S12.9, but as previously stated, these targets are only being used as guidance and are not to be interpreted as regulatory limits.²⁸⁶

At the hearing, Brad Young testified that EKPC planned to incorporate several mitigation measures related to noise abatement. Specifically, he explained that EKPC had opted to construct the engine hall using pre-cast concrete walls, rather than standard insulated panels, to reduce low-frequency sound emissions.²⁸⁷ Additional measures included installing exhaust silencers, resonator silencers, insulated ductwork, and low-noise radiators. Ridge vent silencers were also planned to further suppress noise.²⁸⁸ Young clarified that many of these components were not included in the original noise study, which had taken a conservative approach by modeling noise levels assuming all 12 engines were operating simultaneously.²⁸⁹ Although the study predicted that sound

²⁸³ Attachment BY-2 Vol. 2, Appendix D, and SAR Vol. 1 at 5-0 and Table 5-1.

²⁸⁴ Attachment BY-2, Vol. 2, Appendix D at 4.0, Table 4-3.

²⁸⁵ Attachment BY-2 Vol. 2, Appendix D at 5.0.

²⁸⁶ Attachment BY-2, Vol. 2, Appendix D at 5.0.

²⁸⁷ HVT of Brad Young on March 17, 2025, at 1:41:18-1:42:00.

²⁸⁸ HVT of Brad Young on March 17, 2025, at 1:42:07-1:43:09.

²⁸⁹ HVT of Brad Young on March 17, 2025, at 1:43:15.

levels at two receptor sites could slightly exceed EPA and ANSI guidelines, EKPC has acquired or is negotiating options to purchase those properties and expects final design improvements will bring noise levels within recommended limits.²⁹⁰

The Commission finds that, in addition to the mitigation measures included in the application related to noise abatement, EKPC should adopt the mitigation measures as testified to by Brad Young.

Impact on Property Values. A Property Value Impact Study prepared by Kirkland Appraisals, LLC, was submitted as part of the SAR.²⁹¹ The study assessed property transactions near similar RICE facilities across the United States. The property valuation report noted that RICE facilities generally do not have a significant traffic impact, nor do they produce a noticeable odor.²⁹² However, RICE facilities may generate significant noise.²⁹³ The property valuation report recommended the use of noise abatement technologies and noted that those would be discussed further in the noise assessment.²⁹⁴ In addition, the report noted that the RICE facilities may somehow have a stigma or impact on the viewshed, but the report noted that these issues may be addressed with appropriate mitigation measures.²⁹⁵

In this case, the closest residence is the only home on the adjoining property, and it will be 735 feet from the Liberty RICE Facility, with the average distance of the homes

²⁹⁰ HVT of Brad Young on March 17, 2025, at 1:29:08-1:30:01.

²⁹¹ Attachment-BY-2, Vol. 2, Appendix B.

²⁹² Attachment BY-2, Vol. 2, Appendix B, at 11.

²⁹³ Attachment BY-2, Vol. 2, Appendix B, at 11.

²⁹⁴ Attachment-BY-2, Vol. 2, Appendix B at 11.

²⁹⁵ Attachment BY-2, Vol. 2, Appendix B at 12.

being approximately 1,262 feet from the facility.²⁹⁶ The switchyard, which the report noted is similar to a substation, is 215 feet from the nearest residence, and the average distance from surrounding residences is 1,340 feet.²⁹⁷ The report concluded that the Liberty RICE Facility is unlikely to adversely affect adjacent local property values, particularly with the implementation of recommended setbacks and landscape buffers.²⁹⁸

Environmental Impacts and Environmental Compliance. EKPC's Siting Matrix and related evaluations indicate a low to moderate potential for impacts to wetlands, floodplains, and sensitive species.²⁹⁹ The site is situated outside of the 100-year floodplain and has a low probability of containing archaeological or cultural resources.³⁰⁰ The project will include appropriate erosion control, stormwater management, and environmental best management practices during the design and construction phases.³⁰¹

EKPC has determined that for the Liberty RICE Facility Project, EPA's final rules in April and May 2024 for Greenhouse Gases (GHG), Mercury Air Toxics (MATs), the Good Neighbor federal implementation plan (GNFIP), the legacy Coal Combustion Rule,

²⁹⁶ Attachment BY-2, Vol. 2, Appendix B, Letter dated Aug. 27, 2024, from Kirkland Appraisals, LLC.

²⁹⁷ Attachment BY-2, Vol. 2, Appendix B, Letter dated Aug. 27, 2024, from Kirkland Appraisals, LLC.

²⁹⁸ Attachment BY-2, Vol. 2, Appendix B, Letter dated Aug. 27, 2024, from Kirkland Appraisals, LLC; Attachment BY-2, Vol. 2, Appendix B at 40.

²⁹⁹ Attachment BY-2 Vol. 1 at 5.4.

³⁰⁰ Attachment BY-2 Vol. 1 at 5.4.4-5.4.6.

³⁰¹ Attachment BY-2 Vol. 1 at 7.2.

the 2015 Coal Combustion Rule, the National Effluent Limitations Guidance, the 2020 Reconsideration of the ELG, and the 2024 ELGs do not apply to this application.³⁰²

EKPC is applying for the EPA and state-required permits. The applicable rules under the Clean Air Act (CAA), Clean Water Act (CWA) and Resource Conservation and Recovery Act (RCRA) and Corp of Engineers as applicable are the operating air permit under the Title V of the Clean Air Act 1990 amendments, PSD, Section 402 of the Clean Water Act: NPDES as it was adopted in Kentucky as the KPDES program, water permit, Spill Prevention, Control, and Countermeasure (SPCC) as established under CWA 1973, Corp of Engineers regulations and an Environmental Assessment (EA) under the National Environmental Policy Act, as an application as a federal borrower to the Rural Utility Service (RUS) under the United States Department of Agriculture (USDA).³⁰³

EKPC provided a PSD/Title V Air Quality Permit application to the Kentucky Division for Air Quality (KDAQ) on September 20, 2024, and is awaiting final approval. Preliminary indications are that the KDAQ has not filed any Notices of Deficiencies (NODs).³⁰⁴ However, given the current level of uncertainty in environmental regulation, the Commission recommends that EKPC respond within 30 days of any significant modification to the PSD/Title V Air Quality Permit application.

On April 14, 2025, EKPC received the final Finding of No Significant Impact (FONSI) from RUS's Environmental and Historic Preservation Division.³⁰⁵ RUS finds that

³⁰² Purvis Direct Testimony at 4; *see also* Case No. 2025-00087, EKPC Public IRP _REDACTED, Section 9 at 193 (filed Apr. 1, 2025) (IRP contains updates related to recent Executive Orders impacting federal regulations.)

³⁰³ Purvis Direct Testimony at 4.

³⁰⁴ EKPC's Response to Staff's Fourth Request, Item 4.

³⁰⁵ EKPC's Supplemental Response to Staff's First Request, Item 18.

the EA is consistent with federal regulations and meets the standards for an adequate assessment. RUS considers the proposed Project an undertaking subject to review under Section 106 of the National Historic Preservation Act (NHPA) (54 USC 306108), and its implementing regulation, "Protection of Historic Properties" (36 CFR Part 800).³⁰⁶

EKPC does not foresee any impacts to streams or wetlands pursuant to the Waters of the United States or Commonwealth, so there is no expectation that EKPC will be required to apply for an individual permit under the CWA 404 permit program with the Louisville District of the USACE.³⁰⁷ However, EKPC will pursue a Nationwide 57 permit for transmission upgrades and modifications with the Louisville District of the USACE, and a 401 Water Quality Certification from the Kentucky Division of Water as needed.³⁰⁸

<u>Mitigation Measures</u>. As required by KRS 278.708(4), EKPC proposed various mitigation measures consistent with the statutes regarding traffic, noise, roadway preservation, permitting, setbacks, public safety, and scenic preservation. The Commission finds that EKPC's proposed mitigation measures are generally reasonable and should be implemented as proposed, unless modified or added to herein. However, the Commission finds that a few of EKPC's mitigation measures should be modified and that some additional mitigation measures should be included to ensure that the goals of KRS 278.216 are met. Each of these mitigation measures can be found in Appendix B to this Order.

³⁰⁶ EKPC's Supplemental Response to Staff's First Request, Item 18.

³⁰⁷ Purvis Direct Testimony at 5-6.

³⁰⁸ Purvis Direct Testimony at 5-6.

First, the Commission finds loud construction activities, such as the use of heavy equipment, should be limited to Monday through Saturday, 7:30 a.m. to 7:30 p.m. Limiting loud construction activities to 12 hours a day will not significantly affect EKPC's construction schedule. Conversely, limiting such activities to periods when the majority of nearby residents are likely to be at work and unlikely to be sleeping should minimize the effects of the construction work on nearby residents.

However, the Commission recognizes that there may be limited circumstances caused by matters outside of EKPC's control, such as significant weather events, in which it would be appropriate to deviate from the limitations imposed on construction activity for a short period. Thus, the Commission finds that the executive director should be authorized to grant deviations from the limits of loud construction activities for short periods upon showing good cause, such as when a minor deviation, necessitated by matters outside of EKPC's control, could avoid significant delays or costs.

To ensure that the Commission can follow what is occurring with respect to the Project, the Commission also finds that it is necessary to require EKPC to make various filings with the Commission as the Project progresses, such as a final plan layout and any changes in the Project boundary, as explained in more detail in the Appendix B, which lists most of the mitigation measures proposed by EKPC and those required by the Commission herein.

Further, while EKPC indicated it would work to keep local residents informed regarding the project, which is appropriate, the Commission finds that as part of that outreach that EKPC should notify residents and businesses within 2,000 feet of the Project boundary about the construction plan, the noise potential, and any mitigation

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plans, at least one month prior to the start of construction. Finally, as part of EKPC's or its contractor's outreach to emergency services, the Commission finds that EKPC shall provide a finalized emergency response plan to the local fire district, first responders, and any county emergency management agency, and provide site-specific training for local emergency responders at their request after consultation with local authorities to ensure they have access to information about the Project site.

For the reasons discussed above, the evidence presented by EKPC supports approving the Site Compatibility Certificate subject to the mitigation measures proposed by EKPC, and finds that, in addition to those EKPC has initially proposed, the mitigation measures set forth in this Order are appropriate and reasonable because they achieve the statutory purpose of mitigating the adverse effects identified in the SAR in accordance with KRS 278.708.

The SAR identifies several mitigation measures in section 7.0 to be implemented during the design, construction, and operation phases to minimize adverse effects. These measures mitigate adverse effects and ensure long-term compatibility with surrounding land uses. The proposed measures include (1) maintenance of natural vegetation buffers, (2) noise and sound-level mitigation consistent with best practices, (3) implementation of erosion, sedimentation controls, and dust suppression measures, (4) installation of new trees for visual screening, and (5) construction-phase traffic management and delivery routing.

CONCLUSION

As noted, the Commission finds that EKPC has demonstrated both a need and a lack of wasteful duplication and approves the CPCN for the Liberty RICE Facility

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proposed in this application. In addition, the Commission approves the siting compatibility certificate subject to the mitigation measures set out in Appendix B of this Order. The Commission notes EKPC has demonstrated that the RICE units fill a unique niche in its generation portfolio as a counterpoint to the solar facilities approved in Case No. 2024-00129. The Commission and the parties to this matter are trying to navigate changing environmental regulations, unprecedented energy demand, and an aging coal generation infrastructure. In finding the approval for this application appropriate, the Commission is reiterating its desire for utilities to invest in the Commonwealth and ensure that each utility has planned for future generation retirement while addressing current demand with utility-owned generation facilities.

IT IS THEREFORE ORDERED that:

1. EKPC is granted a Certificate of Public Convenience and Necessity to construct the Liberty RICE Facility as proposed in its application and consistent with the evidence presented in this proceeding.

2. EKPC is granted a site compatibility certificate for the Liberty RICE Facility pursuant to KRS 278.216, subject to the mitigation measures set forth in this Order and attached as Appendix B.

3. EKPC shall begin tracking, within 60 days of the Liberty RICE Facility's first day of commercial operation, the information set out in ordering paragraph 4, on a monthly basis for the first 12 months of commercial operation to be filed as a single cumulative report.

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4. EKPC shall file a single cumulative report with the Commission at the end of the 12-month period that includes, for each month:³⁰⁹

a. The monthly operational capacity factor for the facility.

b. Availability factor.

c. Total operating hours.

d. How the Liberty RICE units were bid into the PJM energy markets.

5. EKPC shall file a final Site Plan in post case correspondence referencing this case number.

6. If EKPC amends the Site Plan, EKPC shall submit the new site plan for approval.

7. As to ordering paragraphs 4 and 5, the Commission will review any submitted changes and issue an Order denying or approving the changes within 14 days.

8. EKPC shall file notice of any material changes with an explanation to this project, including but not limited to price, availability of materials, and undue delay within 14 days.

9. EKPC shall comply with all commitments made in the proceeding regarding traffic management, community communication during construction, and site security.

10. EKPC shall provide the Commission with updates regarding the status of all required federal, state, and local permitting approvals for the Liberty RICE Facility, including notification of any significant delays or denials. A notice of permit approval shall be filed into post-case correspondence referencing this case number.

³⁰⁹ Certain information (i.e., outage information, starts per day, shut-down time, maintenance costs, etc.) is to be tracked and filed with Fuel Adjustment Clause and Environmental Surcharge filings with the Commission.

11. This case is closed and shall be removed from the Commission's docket.

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PUBLIC SERVICE COMMISSION Chairman

Vice Chairman

Commission

ATTEST:

Link QP





APPENDIX A

APPENDIX TO AN ORDER OF THE KENTUCKY PUBLIC SERVICE COMMISSION IN CASE NO. 2024-00310 DATED MAY 20 2025

TWO PAGES TO FOLLOW



Issued: December 1, 2022

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APPENDIX B

APPENDIX TO AN ORDER OF THE KENTUCKY PUBLIC SERVICE COMMISSION IN CASE NO. 2024-00310 DATED MAY 20 2025

The following mitigation measures and conditions are hereby imposed on East Kentucky Power Cooperative, Inc. (EKPC) to ensure that the facilities proposed in this proceeding are constructed as ordered.

1. A final site layout plan shall be submitted to the Commission upon completion of the final site design. Deviations from the preliminary site layout should be clearly indicated on the revised graphic. Those changes could include, but are not limited to, plant building, stacks, substation, switchyard, natural gas line route, transmission line route(s), or other project facilities and infrastructure.

2. Any change in the project boundaries from the information that formed the evaluation in this Order shall be submitted to the Commission for review.

3. The Commission will determine whether any deviation in the boundaries or site layout plan is likely to create a materially different pattern or magnitude of impacts.

4. EKPC shall submit a status report to the Commission every six months until the project begins generating electricity to update the Commission on the progress of the Project. The report shall reference this case number and be filed in post-case correspondence in this case.

EKPC shall provide the date construction will commence to the Commission
30 days prior to that date.

6. Prior to construction, EKPC shall provide a finalized Emergency Response Plan to the local fire district, first responders, and any county emergency management agency. EKPC shall provide site-specific training for local emergency responders at their request. Access for fire and emergency units shall be set up after consultation with local authorities.

7. EKPC shall utilize neutral-colored facilities and equipment to blend with the surroundings, to the extent possible.

8. EKPC or its contractor will control access to the site during construction and operation. All construction entrances will be gated and locked when not in use.

9. EKPC's access control strategy shall also include appropriate signage to warn potential trespassers. EKPC must ensure that all site entrances and boundaries have adequate signage, particularly in locations visible to the public, local residents, and business owners.

10. The security fence must be installed prior to activation of any electrical installation work in accordance with National Electrical Safety Code (NESC) standards.

11. Existing vegetation between nearby roadways and homes shall be left in place to the extent feasible to help minimize visual impacts and screen the project from nearby homeowners and travelers.

12. EKPC shall implement planting of native evergreen species as a visual buffer to mitigate visual viewshed impacts, in areas where those viewshed impacts occur from residences or roadways directly adjacent to the Project and there is not adequate existing vegetation. If it is not adequate, then vegetation as described by Brad Young in both his written testimony as well as at the hearing shall be planted. Planting of vegetative buffers may be done over the construction period; however, EKPC should prioritize

vegetative planting at all periods of construction to reduce viewshed impacts. All planting shall be done prior to the operation of the facility.

13. EKPC shall carry out visual screening consistent with the plan proposed in its application, Site Assessment Report (SAR), the testimony provided by Brad Young and the maps and ensure that the proposed new vegetative buffers are successfully established and developed as expected over time. Should vegetation used as buffers die over time, EKPC shall replace plantings as necessary.

14. To the extent that an affected adjacent property owner indicates to EKPC that a visual buffer is not necessary, EKPC will obtain that property owner's written consent and submit such consent in writing to the Siting Board within 20 days of execution of the consent document.

15. EKPC shall use ridge vent silencers, exhaust silencers, resonator silencers, insulated ductwork, and low-noise radiators as discussed by Brad Young in his hearing testimony.

16. EKPC is required to limit construction activity, process, and deliveries to the hours between 7:30 a.m. and 7:30 p.m. local time, Monday through Saturday. EKPC should be mindful to limit the highest noise generating activities to usual work hours, to the extent possible. Non-noise causing and non-construction activities can take place on the site between 7 a.m. and 10 p.m. local time, Monday through Sunday, including field visits, arrival, departure, planning, meetings, mowing, surveying, etc.

17. EKPC should implement the method for mitigating plant noise as described in the SAR and Brad Young's written and verbal testimony.

18. EKPC shall maintain functional mufflers and engine shrouds on all trucks

and engine-powered equipment.

19. EKPC shall notify residents and businesses within 2,400 feet of the Project boundary about the construction plan, the noise potential, any mitigation plans, and its Complaint Resolution Program referred to in Item 27 of this Appendix, at least one month prior to the start of construction.

20. EKPC shall fix or pay for repairs for damage to roads and bridges resulting from any vehicle transport to the site. For damage resulting from vehicle transport in accordance with all permits, those permits will control.

21. EKPC shall comply with all laws and regulations regarding the use of roadways.

22. EKPC shall implement ridesharing between construction workers when feasible, use appropriate traffic controls, or allow flexible working hours outside of peak hours to minimize any potential traffic delays during AM and PM peak hours.

23. EKPC shall consult with the Kentucky Transportation Cabinet (KYTC) regarding truck and other construction traffic and obtain necessary permits from the KYTC.

24. EKPC shall consult with the Casey County Road Department (CCRD) regarding truck and other construction traffic and obtain any necessary permits from the CCRD.

25. EKPC shall obtain all necessary permits before transporting heavy loads, especially the RICE engines and substation transformer, onto state or county roads.

26. EKPC shall properly maintain construction equipment and follow best management practices related to fugitive dust throughout the construction process,

Page 4 of 6

including the use of water trucks. Dust impacts shall be kept at a minimal level. The Commission requires EKPC's compliance with 401 KAR 63:010.

27. Prior to construction, EKPC shall maintain a Complaint Resolution Plan to address any complaints from community members. EKPC shall also submit annually a status report associated with its Complaint Resolution Plan, providing, among other things, the individual complaints, how EKPC addressed those complaints, and the ultimate resolution of those complaints identifying whether the resolution was to the complainant's satisfaction. EKPC shall submit a final report within 30 days after commencement of electric generation.

28. EKPC shall adhere to the proposed transmission route presented in the application. Should EKPC find it necessary to include any parcel of land not included in this application and approved by the Commission; to finalize the route of the proposed transmission line, EKPC shall return to the Commission to request an amendment to the location of the transmission line.

29. In order the minimize the impacts provided for in KRS 278.714(3) EKPC shall submit a final layout of the transmission line and make all reasonable efforts to minimize a new right of way and instead try to co-locate with current transmission facility.

30. As EKPC progresses in the interconnection process, EKPC shall provide the Commission with all approvals or reports related to interconnection.

31. Any reports or studies that are completed by Columbia Gas Transmission as it relates to this project should be submitted to the Commission for review within 30 days of completion of said report or study. If these reports are duplicative of any other required filing, EKPC may submit a letter as an alternative, with an explanation.

32. Within 30 days of service of this Order, EKPC shall send a notice with web address to this Order to all the adjoining landowners who previously were required to receive notice of this Project, and the notice shall advise the property owner(s) that the project was approved. In addition, the notice should include any construction complaint contact information.

33. If not specifically listed above, all mitigation measures set forth in Section7 of the SAR are incorporated.
APPENDIX C

APPENDIX TO AN ORDER OF THE KENTUCKY PUBLIC SERVICE COMMISSION IN CASE NO. 2024-00310 DATED MAY 20 2025

ONE PAGE TO FOLLOW

EKPC Expansion Plan - Q4 2024

																							Toal Ca	pacity vs.
		Load	Planning	Reserves Capacity			Existing		Deficit before Cap			CAPACITY ADDITIONS T								Total Effective		sonal	Planning Reserves	
	LTLF-2024	Obligation	7%	7% Required		Capacity		Additions		CCGT		Hydor PPA		RICE		Solar		Capacity		Purchases		(Excl Seas Pur)		
Year	WIN	SUM*	WIN	SUM*	WIN	SUM*	WIN	SUM*	WIN	SUM*	WIN	SUM*	WIN	SUM*	WIN	SUM*	WIN	SUM*	WIN	SUM*	WIN	SUM*	WIN	SUM*
2025	3,517	2,379	246	166	3,763	2,545	3,727	2,610	36	-65				9					3,727	2,619	40		-1%	3%
2026	3,627	2,433	254	170	3,881	2,603	3,427	2,610	454	-7			300					11	3,727	2,630	150		-4%	1%
2027	3,677	2,482	257	174	3,934	2,656	3,427	2,610	507	46								-1	3,727	2,629	210	30	-5%	-1%
2028	3,712	2,504	260	175	3,972	2,679	3,427	2,610	545	69									3,727	2,629	240	50	-6%	-2%
2029	3,727	2,527	261	177	3,988	2,704	3,427	2,610	561	93					214	169		18	3,491	2,816	50		-1%	4%
2030	3,743	2,541	262	178	4,005	2,719	3,300	2,504	705	215								-5	3,814	2,705	190		-5%	-1%
2031	3,760	2,560	263	179	4,023	2,739	3,300	2,504	723	235	745	573							4,559	3,278			13%	20%
2032	3,788	2,584	265	181	4,053	2,765	3,300	2,504	753	260									4,559	3,278			12%	19%
2033	3,793	2,600	266	182	4,059	2,782	3,300	2,504	760	277									4,559	3,274			12%	2%
2034	3,811	2,625	267	184	4,078	2,809	3,300	2,504	778	304								4-	4,559	3,274			12%	17%
2035	3,832	2,649	268	185	4,100	2,834	3,300	2,504	800	329									4,259	3,265			4%	15%
2036	3,870	2,682	271	188	4,141	2,870	3,300	2,504	841	366									4,259	3,265			3%	14%
2037	3,882	2,705	272	189	4,154	2,894	3,300	2,504	855	390									4,259	3,265			3%	13%
2038	3,908	2,736	274	191	4,182	2,927	3,300	2,504	882	422									4,259	3,265			2%	12%
2039	3,933	2,765	275	194	4,208	2,959	3,300	2,504	908	454									4259	3265			1%	10%

*Summer capacity adjusted for class ELCC ratings and summer load adjusted for PJM load obligation (EKPC LTLF Summer Peak minus 6%)

*L. Allyson Honaker Honaker Law Office, PLLC 1795 Alysheba Way Suite 1203 Lexington, KY 40509

*Angela M Goad Assistant Attorney General Office of the Attorney General Office of Rate 700 Capitol Avenue Suite 20 Frankfort, KY 40601-8204

*Ashley Wilmes Kentucky Resources Council, Inc. Post Office Box 1070 Frankfort, KY 40602

*Byron Gary Kentucky Resources Council, Inc. Post Office Box 1070 Frankfort, KY 40602

*Joe F Childers Joe F. Childers & Associates 300 Lexington Building 201 West Short Street Lexington, KY 40507

*Tom Fitzgerald Kentucky Resources Council, Inc. Post Office Box 1070 Frankfort, KY 40602

*Greg Cecil East Kentucky Power Cooperative, Inc. 4775 Lexington Road P. O. Box 707 Winchester, KY 40392-0707 *Heather Temple Honaker Law Office, PLLC 1795 Alysheba Way Suite 1203 Lexington, KY 40509

*Jacob Watson East Kentucky Power Cooperative, Inc. 4775 Lexington Road P. O. Box 707 Winchester, KY 40392-0707

*Jody Kyler Cohn Boehm, Kurtz & Lowry 425 Walnut Street Suite 2400 Cincinnati, OH 45202

*John G Horne, II Office of the Attorney General Office of Rate 700 Capitol Avenue Suite 20 Frankfort, KY 40601-8204

*Kristin Henry Staff Attorney Sierra Club Environmental Law Program 2101 Webster Street Suite 1300 Oakland, CA 94612

*Lawrence W Cook Assistant Attorney General Office of the Attorney General Office of Rate 700 Capitol Avenue Suite 20 Frankfort, KY 40601-8204

*J. Michael West Office of the Attorney General Office of Rate 700 Capitol Avenue Suite 20 Frankfort, KY 40601-8204 *Honorable Michael L Kurtz Attorney at Law Boehm, Kurtz & Lowry 425 Walnut Street Suite 2400 Cincinnati, OH 45202

*Nathaniel Shoaff Sierra Club 2101 Webster St. , Suite 1300 Oakland, CA 94612

*East Kentucky Power Cooperative, Inc. 4775 Lexington Road P. O. Box 707 Winchester, KY 40392-0707