COMMONWEALTH OF KENTUCKY

BEFORE THE PUBLIC SERVICE COMMISSION

IN THE MATTER OF:

ELECTRONIC APPLICATION OF EAST KENTUCKY POWER COOPERATIVE, INC. FOR A CERTIFICATE OF PUBLIC CONVENIENCE AND NECESSITY FOR THE CONSTRUCTION OF A 161 kV TRANSMISSION LINE IN PULASKI COUNTY, KENTUCKY AND OTHER GENERALRELIEF	**)**	**CASE NO. 2025-00311**

RESPONSES TO STAFF'S SECOND INFORMATION REQUEST

TO EAST KENTUCKY POWER COOPERATIVE, INC.

DATED DECEMBER 31, 2025

COMMONWEALTH OF KENTUCKY

BEFORE THE PUBLIC SERVICE COMMISSION

IN THE MATTER OF:

ELECTRONIC APPLICATION OF EAST KENTUCKY POWER COOPERATIVE, INC. FOR A CERTIFICATE OF PUBLIC CONVENIENCE AND NECESSITY FOR THE CONSTRUCTION OF A 161 kV TRANSMISSION LINE IN PULASKI COUNTY, KENTUCKY AND OTHER GENERAL RELIEF	)	**CASE NO. 2025-00311**

CERTIFICATE

STATE OF KENTUCKY)
)
COUNTY OF CLARK)

Darrin Adams, being duly sworn, states that he has supervised the preparation of the responses of East Kentucky Power Cooperative, Inc. to the Commission Staff's Second Request for Information in the above-referenced case dated December 31, 2025, and that the matters and things set forth therein are true and accurate to the best of his knowledge, information and belief, formed after reasonable inquiry.

Darrin Adams

Subscribed and sworn before me on this 13th day of January, 2026.

JOHN CHRISTIAN EVERLY
Notary Public
Commonwealth of Kentucky
Commission Number KYNP104251
My Commission Expires Aug 27, 2029

Notary Public

COMMONWEALTH OF KENTUCKY

BEFORE THE PUBLIC SERVICE COMMISSION

IN THE MATTER OF:

ELECTRONIC APPLICATION OF EAST KENTUCKY POWER COOPERATIVE, INC. FOR A CERTIFICATE OF PUBLIC CONVENIENCE AND NECESSITY FOR THE CONSTRUCTION OF A 161 kV TRANSMISSION LINE IN PULASKI COUNTY, KENTUCKY AND OTHER GENERAL RELIEF	)	**CASE NO. 2025-00311**

CERTIFICATE

STATE OF KENTUCKY)
)
COUNTY OF CLARK)

Lucas Spencer, being duly sworn, states that he has supervised the preparation of the responses of East Kentucky Power Cooperative, Inc. to the Commission Staff's Second Request for Information in the above-referenced case dated December 31, 2025, and that the matters and things set forth therein are true and accurate to the best of his knowledge, information and belief, formed after reasonable inquiry.

Lucas Spencer

Subscribed and sworn before me on this 13th day of January, 2026.

JOHN CHRISTIAN EVERLY
Notary Public
Commonwealth of Kentucky
Commission Number KYNP104251
My Commission Expires Aug 27, 2029

Notary Public

EAST KENTUCKY POWER COOPERATIVE, INC.
CASE NO. 2025-00311
SECOND REQUEST FOR INFORMATION RESPONSE

STAFF'S REQUEST DATED DECEMBER 31, 2025
REQUEST 1
RESPONSIBLE PARTY: Lucas Spencer

Request 1. Refer to the Application, Attachment LS-1 page 22. Confirm that the 150-foot right of way on each side of the centerline is constant and will not shift throughout the entirety of the construction of the Cooper-Alcalde 161 kV double-circuit transmission line. If not confirmed, explain why the 150-foot right of way would shift and whether EKPC intends to request Commission permission to modify the right of way.

Response 1. The 150-foot buffer mentioned would give EKPC sufficient space to locate the proposed double-circuit transmission line. EKPC anticipates a typical right-of-way ("ROW") width of 150 feet total, which will be 75 feet on either side of the proposed centerline. The proposed ROW width will be constant. EKPC requested in its Application for authority to move the location of the transmission line up to 50 feet on either side of the centerline due to contingencies or potential blowouts.

EAST KENTUCKY POWER COOPERATIVE, INC.
CASE NO. 2025-00311
SECOND REQUEST FOR INFORMATION RESPONSE

STAFF'S REQUEST DATED DECEMBER 31, 2025
REQUEST 2
RESPONSIBLE PARTY: Darrin Adams

Request 2. Refer to the Direct Testimony of Darrin Adams (Adams Direct Testimony), page 9, lines 18–20. Provide a breakdown of any quantified economic benefits that EKPC members will incur as a result of the Cooper-Alcalde 161 kV double-circuit line being constructed.

Response 2. One quantifiable economic benefit to EKPC members is in the form of a reduction of system energy losses attributed to the Cooper-Alcalde 161 kV double-circuit line. EKPC estimates annual cost savings ranging from $865,000 to $1,700,000 over a 30-year period when comparing system losses with and without the double-circuit line. Based on a 30-year Net Present Value calculation ("NPV") EKPC estimates $12,175,000 in savings to EKPC's Owner-Members as a result of the double-circuit 161 kV line.

EAST KENTUCKY POWER COOPERATIVE, INC.
CASE NO. 2025-00311
SECOND REQUEST FOR INFORMATION RESPONSE

STAFF'S REQUEST DATED DECEMBER 31, 2025
REQUEST 3
RESPONSIBLE PARTY: Darrin Adams

Request 3. Refer to the Adams Direct Testimony, page 10. Explain how much new line installation will be avoided as a result of the construction of the new Cooper-Alcalde double-circuit 161 kV transmission line.

Response 3. The Cooper-Alcalde double-circuit 161 kV transmission line does not eliminate any new line construction, but it is the only new line construction project identified. A benefit of this double-circuit line is that it significantly reduces the total amount of system reinforcements needed to accommodate the added generation at Cooper Station. As mentioned in the Adams Direct Testimony, page 10, EKPC expects needing to upgrade approximately 55 miles of existing lines to accommodate the Liberty RICE and Cooper CCGT generation facilities. EKPC expects that upgrades of approximately 39 miles of existing line on the LG&E/KU transmission system will be required with the addition of the new line. However, the new double-circuit line does reduce the total number of projects required or the total number of miles of necessary upgrades to existing transmission lines compared to the alternatives of either not building a new line (#1) or only building a single-circuit line (#2) as seen in the table below.

Alternative	Scope	Total Number of Projects Identified	Total Existing Line Miles Upgraded (EKPC)	Total Existing Line Miles Upgraded (LG&E/KU)
1	Address all identified overloaded facilities via upgrades of existing facilities	32	129	46
2	Construct a single-circuit Cooper-Alcalde 161 kV transmission line and address all remaining identified overloaded facilities via upgrades of existing facilities	26	75	42
3	Construct a double-circuit Cooper-Alcalde 161 kV transmission line and address all remaining identified overloaded facilities via upgrades of existing facilities	20	55	39

EAST KENTUCKY POWER COOPERATIVE, INC.
CASE NO. 2025-00311
SECOND REQUEST FOR INFORMATION RESPONSE

STAFF'S REQUEST DATED DECEMBER 31, 2025
REQUEST 4
RESPONSIBLE PARTY: Darrin Adams

Request 4. Refer to the Adams Direct Testimony, page 12, lines 11–14.

a. Further explain the benefits and reasonableness of constructing the Cooper-Alcalde 161 kV double-circuit line compared to constructing the Cooper-Alcalde line at 345 kV. In the response, include the estimated cost of constructing the Cooper-Alcalde line at 345 kV.

b. Explain the estimated cost of constructing the second Cooper-Alcalde 161 kV transmission line circuit as opposed to a single-circuit transmission line. Include in the response a comparison of how running the second circuit is less expensive than the cost of the additional projects that would have been required with running only a single circuit Cooper-Alcalde transmission line.

Response 4.

a. As detailed in the Adams Direct Testimony, Attachment DA-1, Section 5.2, describes the need to explore options to increase the transmission capacity to move power away from Cooper Station. Attachment DA-1, pages 20-21, describes the power flow direction on the system during normal conditions and under contingency scenarios.

A large portion of the power generated from Cooper Station will flow from EKPC's system to the LG&E/KU system via the existing Cooper – Elihu – Alcalde 161 kV line. An outage on both of these lines (N-1-1 conditions) would cause significant strain on the existing transmission system and result in the need for significant reinforcement projects to operate the Cooper CCGT without restrictions during line outages. Furthermore, the Adams Direct Testimony, Attachment DA-1, shows that a single-circuit 161kV line between the Cooper and Alcalde substations results in a higher overall cost for the entire set of transmission projects required when compared to the set of required transmission projects with a Cooper-Alcalde double-circuit 161 kV line. For this reason, a single 345 kV would result in higher project costs when compared to those of a 161 kV double-circuit and also would require a very similar set of reinforcement projects on existing transmission lines as the plan required for the single-circuit 161 kV alternative. This is because the new Cooper-Alcalde line – whether built at 161 kV or 345 kV – becomes the most critical contingency for power flows in the area. In order to provide efficient utilization of the existing lines in the area and moderate the level of upgrades required for these lines, two new circuits are required to address the N-1-1 conditions studied by PJM, regardless of voltage level of those circuits. Therefore, a 345 kV solution would also have to be constructed as a double-circuit line. The tables below include cost for a single-circuit and double-circuit 345 kV Cooper-Alcalde line.

Cooper-Alcalde 345kV single-circuit	Construct a new Cooper Alcalde 345 kV line (5.25 miles) using 954 ACSR bundled conductor (Single-Circuit)	$26.25
	KU expands the 345 kV bus at the Alcalde substation to accommodate the new Cooper – Alcalde 345 kV circuit. (Single-Circuit)	$4.00
	Construct a new Cooper 345kV station (Breaker and A-Half - 1 rung)	$6.00
	Install a 345/161 kV transformer	$9.50
	Total	**$45.75**
Cooper-Alcalde 345kV double-circuit	Construct a new Cooper Alcalde 345 kV line (5.25 miles) using 954 ACSR bundled conductor (Double-circuit)	$34.10
	KU expands the 345 kV bus at the Alcalde substation to accommodate the new Cooper – Alcalde 345 kV circuit. (Double-Circuit)	$8.00
	Construct a new Cooper 345kV station (Breaker and A-Half - 2 rungs)	$12.00
	Install 2 345/161 kV transformers	$19.00
	Total	**$73.10**

b. In the Adams Direct Testimony, Attachment DA-1, a comparison of Table 6.2 on page 22 and Table 6.3 on page 24 show that the cost difference between construction of the single-circuit and double-circuit Cooper-Alcalde transmission line is $7.03 million. Those cost differences are summarized below.

Scenario	Project	Estimated Cost ($MM)
Single Circuit	Construct a new Cooper Alcalde 161 kV line (5.25 miles) using 1272 MCM ACSS conductor	$15.10
	KU expands the 161 kV bus at the Alcalde substation to accommodate the new Cooper – Alcalde 161 kV circuit.	$2.00
Double Circuit	Construct a new double circuit Cooper-Alcalde 161 kV line (5.25 miles) using 1272 MCM ACSS conductor	$20.13
	KU expands the 161 kV bus at the Alcalde substation to accommodate the new Cooper – Alcalde 161 kV double circuit.	$4.00

The cost shown above only represents the cost difference of the single vs double circuit explicitly and shows a $7.03 million-dollar incremental cost for running a second circuit.

Further comparison of Tables 6.2 and 6.3 in Attachment DA-1 illustrates that additional reinforcement projects would be required if the single circuit line is constructed. The construction of the double-circuit line improves the system's ability to transmit the additional generation at Cooper out under various outage scenarios. Installation of only a single-circuit line would result in more constraints needing further mitigation. The list of projects no longer identified as needed with the double-circuit line that would be needed with the single-circuit line are shown below.

Project	Estimated Cost ($MM)
Install a 100 MVA transformer at Liberty Jct to replace the existing 93 MVA unit.	$4.00
Rebuild the Cooper - Laurel River Dam 161 kV line with 954 MCM ACSR to replace the existing 795 MCM ACSR conductor. (17.32 miles)	$19.80
Rebuild the Cooper - Somerset 69kV double circuit with 556 MCM ACSR replacing the existing 266 MCM ACSR conductor. (3.2 miles)	$5.03
Springfield KU- N Springfield 69 kV line: reconductor 3.24 miles of line with 397.5 MCM 18X1 ACSR	$8.10
Corbin 1-Corbin 2 69 kV line: reconductor 0.67 miles using a minimum of 556 ACSR conductor	$1.68

The scope change from the single-circuit to double-circuit results in an incremental construction cost increase of $7.03 million for the new line, but the double-circuit line removes the five projects listed above from the set of required reinforcements, resulting in an offsetting $38.61 million reduction in cost. This ultimately provides $31.58 million in overall cost savings with the double-circuit transmission line versus the single-circuit line.

EAST KENTUCKY POWER COOPERATIVE, INC.
CASE NO. 2025-00311
SECOND REQUEST FOR INFORMATION RESPONSE

STAFF'S REQUEST DATED DECEMBER 31, 2025
REQUEST 5
RESPONSIBLE PARTY: Darrin Adams

Request 5. Refer to the Adams Direct Testimony, Attachment DA-1, Table 1.1 page 5– 6. For each individual project that was not included in EKPC's Cooper Station Certificate of Public Convenience and Necessity (CPCN), Case No. 2024-00370, but is included in this proceeding, provide specific justification for these additional costs included in the current proceeding, and specify any potential benefits to EKPC and its members may receive as a result of the additional costs.

Response 5. The table in the Adams Direct Testimony, Attachment DA-1, Table 1.1 on pages 5– 6 provides a comparison of the projects identified for the Cooper-Alcalde single-circuit line transmission plan as presented in Case No. 2024-00370,[1] EKPC's Cooper Station Certificate of Public Convenience and Necessity ("CPCN"), versus those identified based on updated power-flow modeling and available information. The updated information shows that with new system

[1] *Electronic Application of East Kentucky Power Cooperative, Inc. for 1) Certificates of Public Convenience and Necessity to Construct a New Generation Resource; 2) for a Site Compatibility Certificate Relating to the Same; 3) Approval of Demand Side Management Tariffs; and 4) Other General Relief*, Case No. 2024-00370, (Ky. PSC. Nov. 20, 2024).

models, updated coordination with LG&E/KU, and preliminary results from PJM's System Impact Studies for its generator interconnection queue, additional projects and associated costs are identified if EKPC proceeds with the single-circuit line between EKPC's Cooper Station and LG&E/KU's Alcalde substation. Attachment DA-1 provides analysis that considers a double-circuit line alternative to the new 161 kV single-circuit line between Cooper Station and Alcalde in order to provide the needed transmission capacity to allow the operation of the existing Cooper Station Unit #2, plus the planned Cooper CCGT, and Liberty RICE units at full output without restrictions. This is the justification for these projects – they are all necessary in order to allow the existing and planned generation on the area to operate without restrictions.

Attachment DA-1 shows that the overall transmission cost necessary to address all transmission-system overloads is lower with the double-circuit line than either without any new line or with only a single-circuit line. Please see Attachment *PSC DR2 Response 5 – Cost Justification.pdf* for details regarding the costs noted in Case No. 2024-00370 compared to the costs listed in Adams Direct Testimony, Attachment DA-1. These costs, while higher compared to the costs listed in Case No. 2024-00370 ($158.91 million) are now estimated to be $74.81 million higher ($233.72 million) if EKPC proceeds with the single-circuit Cooper-Alcalde transmission line as opposed to $43.23 million higher ($202.14 million) with the double-circuit line based on the transmission-system information that is currently available to EKPC.

EAST KENTUCKY POWER COOPERATIVE, INC.
CASE NO. 2025-00311
SECOND REQUEST FOR INFORMATION RESPONSE

STAFF'S REQUEST DATED DECEMBER 31, 2025
REQUEST 6
RESPONSIBLE PARTY: Darrin Adams

Request 6. Refer to the Adams Direct Testimony, Attachment DA-1, page 21. List all thermal overload violations that EKPC has identified. For each, specify which of the alternative projects would address the violation (single-circuit 161 kV line, double-circuit 161 kV line, and/or 345 kV line), and include whether an upgrade is required by PJM Interconnections, LLC., or whether EKPC determined an upgrade was necessary internally.

Response 6. Table 5.1 from the Adams Direct Testimony, Attachment DA-1, page 18-19, shown below with additional columns, lists the thermal overload violations identified due to the addition of the planned Cooper CCGT and Liberty RICE generation. As explained in Response 4a above, a single 345 kV line would result in similar violations as a single 161 kV line due to N-1-1 outage scenarios; therefore, the listed alternative in the Eliminates Required Upgrade column is either a single-circuit 161 kV line, a double-circuit 161 kV line or a double-circuit 345 kV line. The use of a double-circuit 345 kV line does not reduce the required projects identified on the transmission system compared to the double-circuit 161 kV line alternative.

Table 5.1 Identified Transmission Network Upgrades and Estimated Costs

Generation	Project	Eliminates Required Upgrade (None, Single Circuit 161 or 345 kV, Double Circuit 161 or 345 kV)	Identified By (EKPC,PJM,LGE/KU)
Liberty RICE	Rebuild the Liberty RICE-Liberty Junction 161 kV Line using 795 MCM ACSR conductor (7.8 miles)	None	EKPC and PJM
	Increase the MOT of the 636 MCM ACSR conductor in the Liberty RICE-Casey County 161 kV Line to 212F (6.2 miles)	None	EKPC and PJM
	Increase the MOT of the 795 MCM ACSR conductor in the Marion County-Marion County Industrial Park Tap 161 kV Line to 212F (4.0 miles)	None	EKPC
	Rebuild the Marion County-Lebanon 138 kV Line using 954 MCM ACSR conductor (0.1 mile)	None	EKPC and PJM
	Install a 100 MVA transformer at Liberty Jct to replace the existing 93 MVA unit.	Double-Circuit 161 or 345 kV	EKPC
	Lebanon 138/69 transformer overloads: Add a second transformer at or near Lebanon.	None	LGE/KU
	Campbellsville Tap-Taylor Co 69 kV line: Reconductor 0.38 miles using a minimum of 397 MCM ACSR conductor	None	LGE/KU
	Green River Plaza-Campbellsville- 69 kV: Increase MOT and verify from 150F to 170F for 0.52 miles of line	Single-Circuit 161 or 345 kV, Double-Circuit 161 or 345 kV	LGE/KU
	Mile Lane Tap - Campbellsville 69 kV line: Reconductor 2.21 miles with 397 MCM ACSR	None	LGE/KU
	Lebanon-Springfield KU 69 kV: Reconductor 6.58 miles with 556.5 MCM 26X7 ACSR.	None	LGE/KU
Cooper CCGT	Replace all 161 kV circuit breakers at Cooper with 63 kA breakers.	None	EKPC
	Rebuild the Cooper-Elihu 161 kV line (4.2 miles) using 1272 MCM ACSS conductor	None	EKPC and PJM
	Increase the MOT of the Laurel Dam-Laurel County 161 kV line (13.5 miles) to 212F	None	EKPC and PJM
	Rebuild the South Lancaster-Garrard County 69 kV line (1.8 miles) using 556 MCM ACSR conductor	Double-Circuit 161 or 345kV	EKPC
	Upgrade the Cooper 161/69 kV transformer with a 200 MVA unit, and purchase a spare 200 MVA transformer	None	EKPC and PJM
	Upgrade the Marion County 161/138 kV with a 300 MVA unit and purchase a spare 300 MVA transformer.	None	EKPC and PJM
	Increase the MOT of the Casey County-Marion County 161 kV line (17.8 miles) to 212 degrees F	None	EKPC and PJM

Cooper CCGT	Rebuild the Cooper - Laurel River Dam 161 kV line with 954 MCM ACSR to replace the existing 795 MCM ACSR conductor. (17.32 miles)	Double-Circuit 161 or 345 kV	EKPC
	Rebuild the Cooper - Somerset 69kV double circuit with 556 MCM ACSR replacing the existing 266 MCM ACSR conductor. (3.2 miles)	Double-Circuit 161 or 345 kV	EKPC
	Increase MOT on Taylor Co Jct-AF1-038 795 MCM ACSR conductor to 212F. (0.92 miles)	None	EKPC
	Increase the MOT of the County Farm Road-West London 69 kV line to 212 degrees F (0.92 miles)	Single-Circuit 161 or 345 kV, Double-Circuit 161 or 345 kV	EKPC
	Rebuild the Walnut Grove-Maretburg Tap 69 kV line using 556 MCM ACSR conductor replacing the existing 266 MCM ACSR conductor. (10.01 miles)	Single-Circuit 161 or 345 kV, Double-Circuit 161 or 345 kV	EKPC
	Rebuild the Somerset-KU Somerset 795 MCM ACSR bus tie using bundled 795 MCM ACSR conductor. (0.01 miles)	Single-Circuit 161 or 345 kV, Double-Circuit 161 or 345 kV	EKPC
	Increase the MOT of the 795 MCM ACSR conductor in the Cooper-Russell County Jct 161 kV Line to 212 degrees F (30.34 miles)	Single-Circuit 161 or 345 kV, Double-Circuit 161 or 345 kV	EKPC
	Replace the Distance Relay protecting the Cooper-Denny 161kV line at Cooper 161 kV station	Single-Circuit 161 or 345 kV, Double-Circuit 161 or 345 kV	EKPC
	Increase the MOT of the Laurel County-Pittsburg 161 kV line to 212 degrees F (10.41 miles)	Single-Circuit 161 or 345 kV, Double-Circuit 161 or 345 kV	EKPC
	Alcalde-Farley 161 kV: Reconductor 27.19 miles with 795 MCM ACSR[2]	Single-Circuit 161 or 345 kV, Double-Circuit 161 or 345 kV	LGE/KU
	Elihu-Ferguson So 69 kV line: Replace station conductor (line riser) with 2156 MCM 84X19 ACSR; needs a 215 MVA rating; also, reconductor 0.74 miles of line with 556.5 MCM 26X7 bundled ACSR conductor[3]	Single-Circuit 161 or 345 kV, Double-Circuit 161 or 345 kV	LGE/KU
	Springfield KU- N Springfield 69 kV line: reconductor 3.24 miles of line with 397.5 MCM ACSR	Double-Circuit 161 or 345 kV	LGE/KU
	Corbin East-Sweet Hollow 69 kV line: Reconductor 2.2 miles using a minimum of 556 MCM ACSR conductor	None	LGE/KU
	North London KU-Pittsburg 69 kV: Reconductor 1.9 miles with 397 MCM ACSR and replace Line Riser with similar conductor	Single-Circuit 161 or 345 kV, Double-Circuit 161 or 345 kV	LGE/KU
	Corbin 1-Corbin 2 69 kV line: reconductor 0.67 miles using a minimum of 556 ACSR conductor	Double-Circuit 161 or 345 kV	LGE/KU

[2] The rebuild of this line is eliminated with a Single-Circuit 161 or 345 kV, or Double-Circuit 161 or 345 kV but a maximum operating temperature increase is still required.

[3] LG&E/KU provided results of their studies that consider a contingency that is invalid. In discussions with LG&E/KU they believe this project will still be required once the invalid contingency is removed.

EAST KENTUCKY POWER COOPERATIVE, INC.
CASE NO. 2025-00311
SECOND REQUEST FOR INFORMATION RESPONSE

STAFF'S REQUEST DATED DECEMBER 31, 2025
REQUEST 7 & REQUEST 8
RESPONSIBLE PARTY: Lucas Spencer

Request 7 & Request 8. Refer to the Direct Testimony of Lucas Spencer (Spencer Direct Testimony) Attachments EKPC Cooper Alcalde – 161kV Greenfield Transmission Routing Study, Part XI: Alternate Routes page 63. The routing study states, "The first 2.90 miles of Route B is a double circuit transmission circuit, while the final 1.64 miles of Route B is a single transmission circuit." Refer also to the Application, page 4, paragraph 8 and the Direct Testimony of Darrin Adams (Adams Direct Testimony), page 4, lines 8–16. This statement does not appear to conform to the explanations of solutions for transmission contingencies given in the in the Application and the Adams Direct Testimony for the proposed 161 kV transmission line exiting Cooper Station and terminating at the Alcalde substation as a double circuit. Explain the apparent contradiction.

a. If the statement is correct, explain how the proposed line satisfies the transmission contingencies identified in the transmission studies.

b. If the statement is not correct and the proposed line will be a double 161kV circuit terminating at the Alcalde Substation, explain whether the siting study results are impacted by having a second circuit for the last 1.64 miles of the proposed route.

Response 7 & Response 8. EKPC is combining Request 7 and Request 8 because EKPC believes the questions were separated inadvertently.

EKPC revised the scope of the project to construct a double-circuit transmission line from Cooper Station to KU's Alcalde substation for the reasons outlined on page 7, lines 9-22 and page 8 of Mr. Adams' Direct Testimony.. As outlined in the Adams Direct Testimony, EKPC initially anticipated the required scope for this project to be a single circuit 161kV transmission line, but the scope shifted into the need for a double circuit 161kV transmission line.

When EKPC began the routing study for Cooper-Alcalde, the original routes identified were proposed assuming a single-circuit transmission line. EKPC initially identified routes consistent with a single-circuit approach – the route in question would require the new Cooper-Alcalde transmission circuit to be constructed with the Cooper-Laurel Dam transmission line as a double-circuit transmission line.

As discussed in Adams Direct Testimony, through further scope development, EKPC saw the need to modify the scope from a single-circuit greenfield line to a double-circuit greenfield transmission line. With this change in scope, additional changes in reasonable route proposals during the siting study had to be adjusted for the updated scope.

Since the Cooper CCGT project requires the construction of a double-circuit transmission line connecting the EKPC Cooper Switchyard to the KU Alcalde Switchyard, Route B was no longer feasible because it would have required the greenfield construction of a triple-circuit transmission line, which is more costly, unreliable from a long-term maintenance standpoint and non-standard for EKPC's transmission system. From a right-of-way standpoint, the double-circuit scope is very similar to the single-circuit scope meaning most of the routes remained viable options.

EAST KENTUCKY POWER COOPERATIVE, INC.
CASE NO. 2025-00311
SECOND REQUEST FOR INFORMATION RESPONSE

STAFF'S REQUEST DATED DECEMBER 31, 2025
REQUEST 9
RESPONSIBLE PARTY: Darrin Adams

Request 9. Refer to EKPC's response to Commission Staff's First Request for Information (Staff's First Request), Item 1. Confirm that the potential addition of the 2,200 MW load added to the Maysville area south of EKPC's Spurlock Station has no impact on the need for any transmission upgrades as a result of the additional generation from the Liberty Rice Units, the Cooper Combined Cycle Gas Turbine (CCGT), and the additional generation from Louisville Gas and Electric/Kentucky Utilities. If not, confirmed, explain the response.

Response 9. Confirmed. The 2,200 MW load added to the Maysville area south of EKPC's Spurlock Station has no impact on the needed transmission upgrades associated with EKPC's planned generation additions at Liberty RICE and Cooper CCGT. As previously mentioned in EKPC's response to Commission Staff's First Request for Information, Item 1, this load was included in the modeling updates and ensures consideration was taken for any impacts this load addition might have created, but none were identified.

EAST KENTUCKY POWER COOPERATIVE, INC.
CASE NO. 2025-00311
SECOND REQUEST FOR INFORMATION RESPONSE

STAFF'S REQUEST DATED DECEMBER 31, 2025
REQUEST 10
RESPONSIBLE PARTY: Darrin Adams

Request 10. Refer to EKPC's response to Staff's First Request, Item 2. Explain the need for the eventual 345 MW double circuit lines as opposed to a single circuit line.

Response 10. The transmission system has to be designed to remain adequate and stable under N-1 and N-1-1 events as defined by EKPC and PJM planning criteria. The need for the double-circuit 345 kV lines in Phase 3 and 4 of EKPC's solution to serve the 2,200 MW load in Maysville is driven by the critical N-1-1 contingency scenarios. At the 2,200 MW load level, EKPC's transmission configuration includes six 345 kV lines to the customer site to support that load level. Six lines are needed because the critical N-1-1 scenario would result in removing two 345 kV lines that support the area, and four 345 kV lines is the minimum number that would be required to support 2,200 MW of load.

EAST KENTUCKY POWER COOPERATIVE, INC.
CASE NO. 2025-00311
SECOND REQUEST FOR INFORMATION RESPONSE

STAFF'S REQUEST DATED DECEMBER 31, 2025
REQUEST 11
RESPONSIBLE PARTY: Darrin Adams

Request 11. Refer to EKPC's response to Staff's First Request, Item 3b.

a. Explain whether the remaining mitigation required after the Cooper-Alcalde double circuit 161 kV line is competed that EKPC will be responsible for constructing will require one or more separate CPCN and when the Commission can expect such a filing.

b. Explain how EKPC will increase the mean operating temperature (MOT) of a transmission line.

Response 11.

a. EKPC expects the Cooper-Alcalde double-circuit 161 kV line to be the only greenfield project requiring a CPCN. All other identified mitigation involves upgrades of existing facilities within existing Right-of-Way, and are projects that EKPC routinely undertakes as part of its ordinary course of business.

b. EKPC has experience with various methods of increasing the maximum operating temperature (MOT) of a transmission line. Conductor MOT is dependent on distance from conductors to objects below, including the ground. Therefore, the conductor MOT is increased

(and correspondingly the amount of power that can flow through those conductors) by increasing the distance between conductors and lower objects. EKPC uses various methods of achieving increased clearances, such as installing PhaseRaisers (which lift the structures higher) on wood H-Frame Structures, cutting and grading the ground below transmission lines, installing floating dead-end structures, replacing structures with taller structures, working with foreign utilities to lower their crossing lines if required, changing tension on transmission conductor, and modifying existing framing types. The specific method utilized for each transmission line to increase its MOT is determined via engineering analysis, and is dependent on the circumstances that limit the conductor clearances. For instance, if the conductor clearances are limited due to a distribution utility's line crossing underneath the transmission line, the typical method to increase the transmission line's MOT is for the distribution utility to lower the height of its conductors that cross underneath.

EAST KENTUCKY POWER COOPERATIVE, INC.
CASE NO. 2025-00311
SECOND REQUEST FOR INFORMATION RESPONSE

STAFF'S REQUEST DATED DECEMBER 31, 2025
REQUEST 12
RESPONSIBLE PARTY: Lucas Spencer

Request 12. Refer to EKPC's response to Staff's First Request, Item 4, page 2. Identify the parcel owner for the parcel situated between parcel #4 and parcel #2 and confirm the parcel owner was notified of the proposed project. If not confirmed, explain the response.

Response 12. EKPC confirms that these parcel owners were notified. The parcel situated between parcel #4 and parcel #2 is a continuation of parcel #2 and has the same parcel owners.

EAST KENTUCKY POWER COOPERATIVE, INC.
CASE NO. 2025-00311
SECOND REQUEST FOR INFORMATION RESPONSE

STAFF'S REQUEST DATED DECEMBER 31, 2025
REQUEST 13
RESPONSIBLE PARTY: Lucas Spencer

Request 13. Refer to EKPC's response to Staff's First Request, Item 4, page 3. Identify the parcel owner for the parcel situated between parcel #72 and parcel #81 and confirm the parcel owner was notified of the proposed project. If not confirmed, explain the response.

Response 13. EKPC can confirm that the parcel owner has been notified of the project. The parcel owner between #72 and #81 is the same parcel owner as parcel #72.