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MISSOURI PUBLIC SERVICE COMMISSION

File No. EA-2026-0058

DIRECT TESTIMONY

OF

JOHN DUNHAM

ON

BEHALF OF

UNION ELECTRIC COMPANY

d/b/a Ameren Missouri

St. Louis, Missouri
November, 2025

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DIRECT TESTIMONY

OF

JOHN DUNHAM

FILE NO. EA-2026-0058

I. INTRODUCTION

A. Witness Identification

Q. **What is your name and what is your business address?**

A. My name is John Dunham. My business address is 9400 Ward Parkway, Kansas City, Missouri, 64114.

Q. **By whom are you employed and in what capacity?**

A. I am employed by Burns & McDonnell as an Associate Environmental Scientist.

Q. **On whose behalf are you submitting testimony?**

A. I am submitting testimony on behalf of Union Electric Company d/b/a Ameren Missouri ("Ameren Missouri" or "Company").

B. Purpose of Direct Testimony

Q. **What is the purpose of your Direct Testimony?**

A. My testimony supports Ameren's request for a Certificate of Convenience and Necessity ("CCN") to construct, own, operate, and maintain the Montgomery to Callaway Connector Project's (Project) 345kV transmission line. The Proposed Route for the Project is in Montgomery and Callaway Counties, Missouri. My Direct Testimony introduces the Project Routing Study, attached hereto as Ameren Missouri Schedule

A. JD-D1. The Routing Study provides a high-level overview of the route selection methodology and analysis of environmental and other potential impacts such as agricultural, residential, and cultural, that were factored into the routing selection process.

C. Background and Qualifications

Q. **What are your duties and responsibilities in your current position?**

A. In my current capacity, I serve as a project manager for multiple transmission line routing projects for various clients across the country. I am responsible for overseeing project financials, data collection, route development, route evaluation, and project documentation for these routing projects.

Q. **What is your relevant educational experience and business background?**

A. I received a B.S. in Fisheries & Wildlife Biology from the University of Missouri-Columbia in 1993, and an M.S.E. in Secondary School Administration from Central Missouri State University in 2001. I served in public education as a teacher and middle school administrator for 12 years before joining Burns & McDonnell Engineering Company, Inc. ("Burns & McDonnell") in 2006 as a Staff Environmental Scientist. I have since been promoted to Senior Environmental Scientist and currently Associate Environmental Scientist. In my current position, I manage routing and public involvement activities for high-voltage transmission line projects for various clients across the country, with the help of subject matter specialists from the utilities. In 19 years at Burns & McDonnell, I have supported the routing and siting efforts for hundreds of miles of transmission lines.

D. Attachments

Q. **What are the attachments to your direct testimony?**

A. The following Exhibits ("Exs.") are attached to my direct testimony:

- **Schedule JD-D1** contains Montgomery-Callway Connector Project: Routing Study (the "Routing Study").
- **Schedule JD-D2** contains the CV of John Dunham.

II. BACKGROUND ON THE ROUTING STUDY

Q. **What is the objective of the route selection process?**

A. The primary objective of the route selection process and Routing Study were to identify an economically feasible route for the Project's 345kV transmission line that offered the most benefits in terms of providing reliable interconnection (engineering), but also limited adverse impacts on landowners, as well as the social and natural environment within the study area, as defined in further detail below. The goal of the study was to identify and analyze route alternatives to select the Proposed Route with the least cost and community impact for the Project.

Q. **What was your role in this routing study?**

A. I served as the routing manager and was responsible for overseeing the data collection, route development, and route evaluation for the Routing Team, which consisted of subject matter expert participants from across Ameren Services (on behalf of Ameren Missouri), including transmission line design, substation engineering, Project Management, Real Estate, Environmental, External Affairs, Economic Development,

Communications, Legal, and other departments as needed, as well as Burns & McDonnell subject matter specialists in routing, public engagement, communications and engineering (the "Routing Team").

III. OVERVIEW OF ROUTE SELECTION PROCESS

Q. Please summarize the route selection process that Ameren Missouri undertook for the Project's 345kV transmission line.

A. The route selection process was a multi-step process that included the following multiple-phase approach: (1) study area phase, (2) route alternatives network phase, (3) public engagement phase, and (4) proposed route evaluation and selection phase. Each phase is briefly described below and, in more detail, later in my direct testimony.

First, the study area phase involved defining the Project endpoints, identifying the study area, collecting publicly available study area data, and identifying constraints, opportunities, and routing factors.

Second, the route alternatives network phase involved developing a set of distinct route alternatives by identifying routing considerations, identifying any needed modifications to the route alternatives, identifying additional routes to be added or removed, conducting a field review of the route alternatives network, and finalizing the route alternatives network. This included adjusting the route alternatives network based on the field observations and the Routing Team's subject matter experts.

Third, the public involvement phase included public outreach and obtaining and incorporating feedback from members of the public and key stakeholders. The feedback was used to adjust criteria weights (described in future sections), adjust route alternatives (if needed), and will be incorporated and addressed as necessary during final design of the line. The public engagement activities undertaken by Ameren Missouri for this Project are described in detail in the Direct Testimony of Ms. Leah Dettmers.

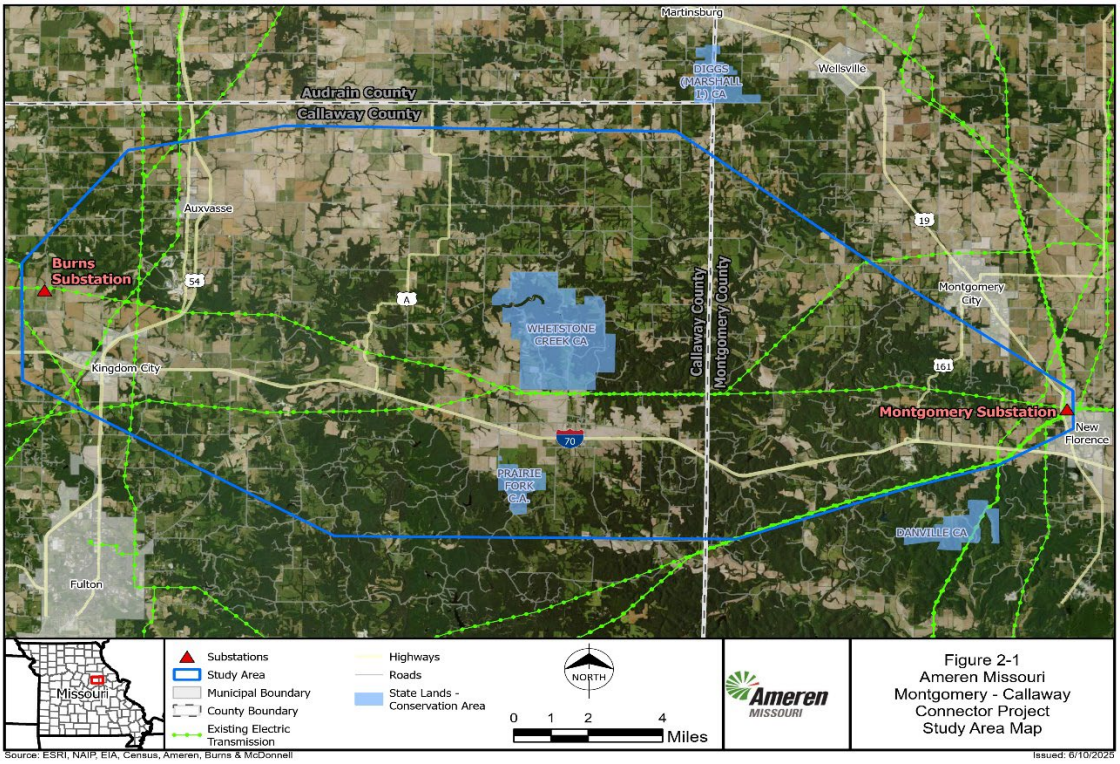
Fourth, the proposed route evaluation and selection phase involved performing a route analysis of the route alternatives and selecting the Proposed Route.

IV. STUDY AREA AND ROUTE DEVELOPMENT

Q. **What is the study area phase of the Project?**

A. To develop a study area in which to locate the Proposed Route, project endpoints need to be defined. For the Project, the endpoints were the Burns Substation located near the Village of Kingdom City in Callaway County, and the Montgomery Substation located near the City of New Florence in Montgomery County. The Project endpoints were established by Ameren personnel prior to routing and the rationale for the establishment of endpoints can be found in the Direct Testimony of Ameren Missouri witness Sam Gardner. With these endpoints in mind, the Routing Team established the study area boundary covering approximately 254 square miles, which is shown below in Figure 1 and in Section 2.2 of the Routing Study. *See* Ameren Missouri Schedule JD-D1.

Figure 1: Study Area Boundary



Q. **What was the next step in the routing process, following the development of the study area?**

A. After the study area was developed, publicly available data pertaining to the study area was collected and organized within a geographic information system ("GIS") database. This data included, but was not limited to, recent aerial photography, U.S. Geological Survey ("USGS") topographic maps, wetlands, parcel data, roads, and municipal boundaries. The collection of this data was necessary to identify constraints and opportunities within the study area for the development of the initial route alternatives network. Examples of data collected within the Project study area include:

- Topography
- Water resources
- Vegetation
- Wildlife
- Threatened and endangered species
- Urban and residential areas
- Parks and recreation areas
- Transportation and utilities
- Cultural resources
- Visual characteristics

Q. **What is a "constraint" in the context of the study area?**

A. A constraint is an area that can be delineated on a map and affects where the new transmission linecould be located. Constraints represent potential obstacles or impediments to the routing of a transmission line. A constraint does not prohibit the construction or operation of a transmission line but is a sensitivity that needs to be considered during the routing process to minimize potential impacts, if possible. Examples of constraints for route selection included residential areas, steep topography, wetlands areas, parks and nature preserves, and crossings of other existing transmission

lines. Costs are generally minimized when a transmission line is sited through or near the least number of constraints.

Q. **What is a "routing opportunity" in the context of the study area?**

A. Routing opportunities are locations where the routes could be located to avoid constraints and co-locate with or run parallel to, as appropriate, existing linear infrastructure, such as railroads, roads, existing transmission lines, natural features, to potentially minimize the impacts of the route alternatives on the community and natural environments. Routing opportunities in the study areas included the siting of route segments parallel to roads, existing transmission lines, or other linear features such as paralleling opportunities, which are areas where new transmission lines could be constructed parallel to an existing linear feature, which lessens potential impacts as opposed to greenfield alignments, (*i.e.*, those locations where no linear feature exists) as well as utilizing undeveloped land where paralleling or co-location opportunities did not exist. The Routing Team assembled this data and identified the opportunities and constraints for the study area.

V. ROUTE ALTERNATIVES NETWORK PHASE

Q. **Did you establish a route alternatives network for the Project?**

A. Yes. Following the study area phase, the Routing Team identified an initial network of geographically distinct route options that could connect the Project endpoints. These routes were comprised of numerous shorter and interconnecting segments. Once these segments were identified, the Routing Team reviewed these in detail during numerous project meetings and added, modified, or eliminated several route

segments. These changes were based on known and frequently used routing principles, which consist of industry best practices used for the development of transmission line route alternatives to aid in minimizing potential impacts during construction, operation, and maintenance of the line.

Q. **What were the routing principles used to identify the route alternatives?**

A. The routing principles used to identify route alternatives include:

- Minimizing overall impacts by paralleling or constructing within existing rights-of-way ("ROWs"), including transmission lines and roads, where possible;
- Minimizing the overall length of the route;
- Minimizing potential impacts to residences and residential areas, where practical;
- Minimizing potential impacts to recreational areas;
- Providing connection into and out of the Project endpoints; and
- Evaluating the design and construction feasibility of the routes.

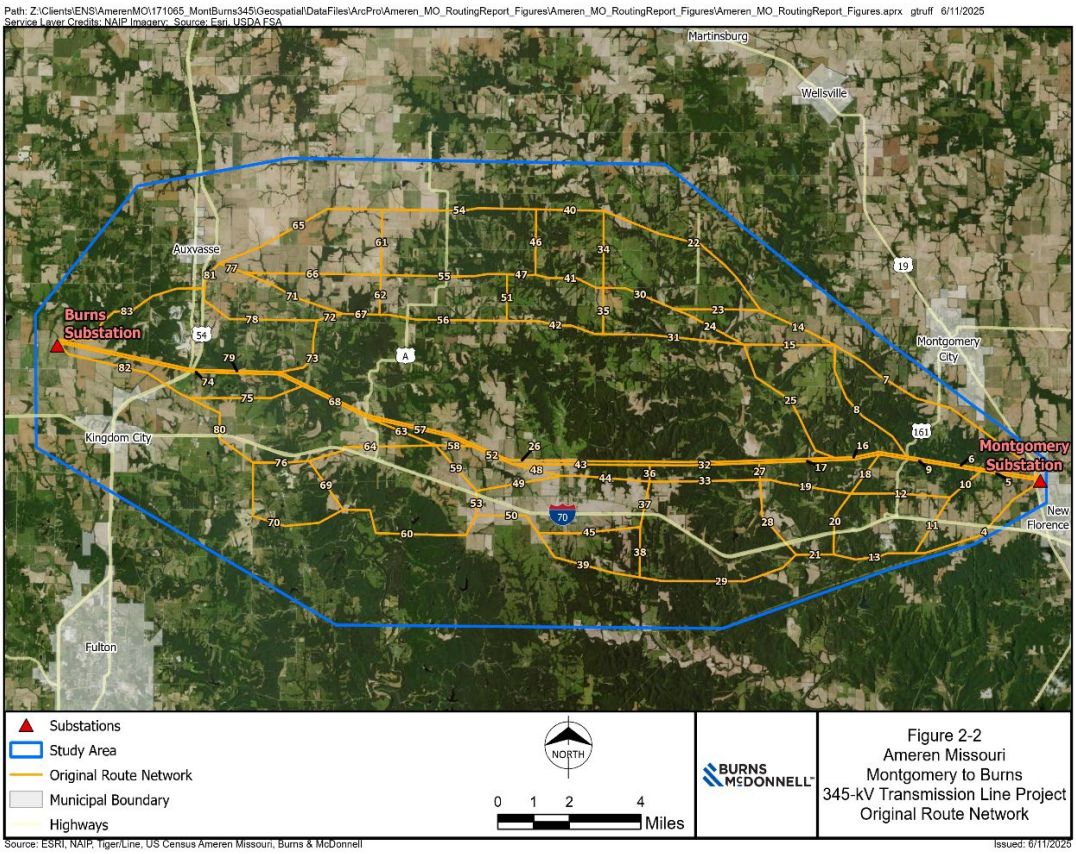
Q. **What is a field review?**

A. During a field review, members of the Routing Team travel to the locations within the study area to verify potential constraints and opportunity areas, the feasibility of the segments, and to facilitate further screening and evaluation of the routes.

Q. **Did the Routing Team conduct a field review of the identified route alternatives?**

A. Yes. After route alternatives were initially identified via desktop review, members of the Routing Team conducted a field review of the route segments along publicly accessible roads. At the conclusion of the field review process, a network of 85 route segments was confirmed between the Project endpoints. The network of route segments for the Project is depicted below in Figure 2 and in Section 2.3 of Ameren Missouri Schedule JD-D1. An original network of 721 unique route alternatives was developed using a combination of the 85 route segments to connect the Project endpoints as further described below.

Figure 2: Original Network of Routes for the Project



Q. **Was the original network of routes modified after the field review?**

A. Yes. Following the field review, a set of key criteria were quantified to refine the route network to a more manageable size for further evaluation. The criteria utilized were the total length of the line, heavy angles, forested land within the ROW, wetlands in the ROW, and number of residents within 500 feet of the route. The data for each route alternative were normalized using the z-score method to manage and review the raw data produced. A detailed explanation of the z-score method can be found in Section 2.3 of Ameren Missouri Schedule JD-D1. The initial

z-score analysis, combined with further evaluation from the Project team, ultimately allowed the Project team to reduce the route network to five geographically distinct routes from among the 721 unique routes. These five routes would be carried forward for public engagement and further route evaluation to select a proposed route for the Project.

During the initial analysis, the Project team determined that routes in the southern portion of the study area (south of I-70) would require crossing I-70 multiple times, increased the potential to impact protected lands, and would face topographic challenges that could likely impact construction, maintenance, cost, and the reliability of the transmission line; for these reasons they were excluded from further consideration. This resulted in the removal of segments 4, 10, 11, 12, 13, 18, 19, 20, 21, 27, 28, 29, 33, 36, 37, 38, 39, 44, 45, 48, 49, 50, 53, 58, 59, 60, 63, 64, 69, 70, 75, 76, 80, and 82 from further consideration and subsequently removed those route alternatives using any of these segments. The Project team reviewed the remaining segments and removed several additional segments due to those segments either being redundant or potentially having greater impact than similar segments, which resulted in the removal of alternative routes that utilized the removed segments. The array of route options was then narrowed down to the following five, geographically distinct route alternatives for further evaluation:

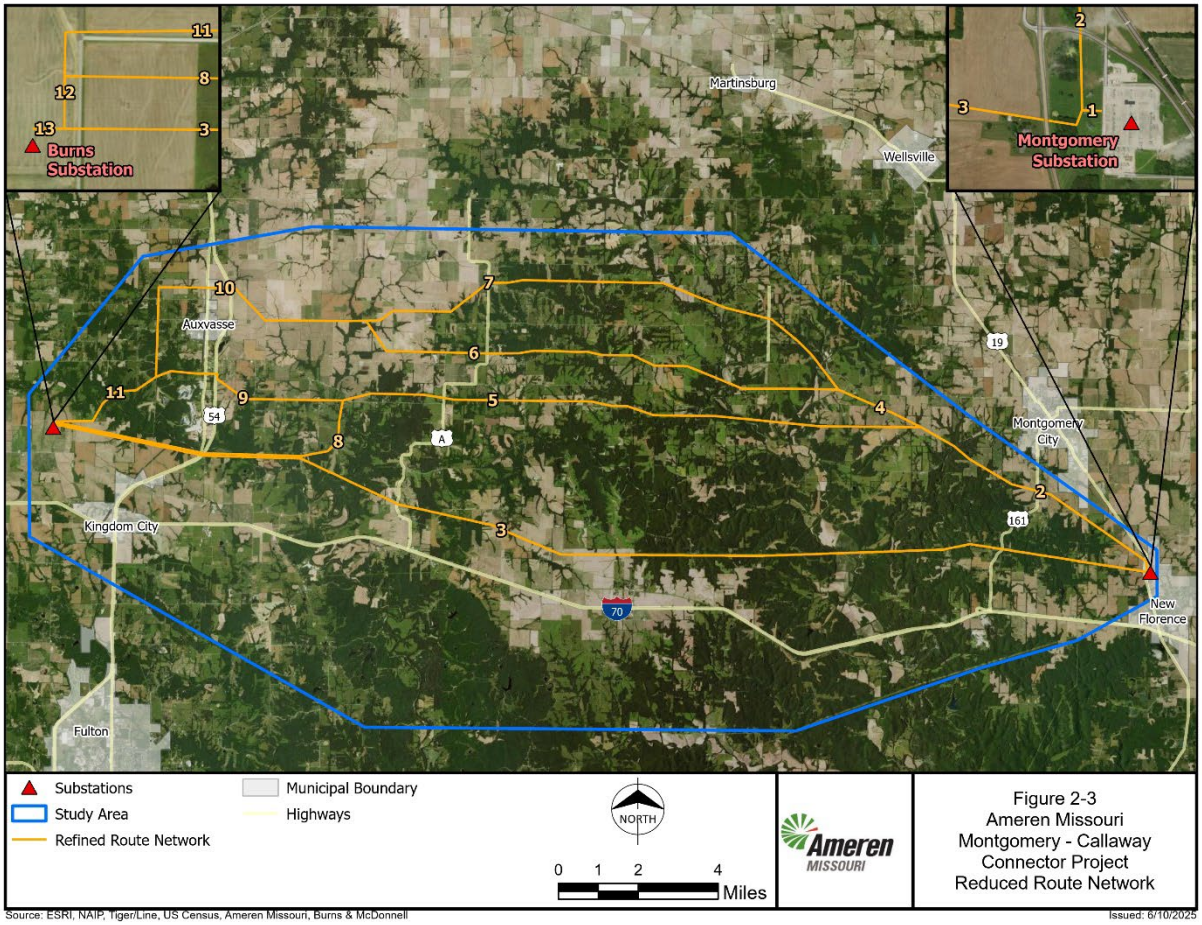
- Route 101 - segments 1, 2, 5, 9, 17, 32, 43, 52, 57, 68, 74, 85
- Route 601 - segments 1, 3, 7, 14, 22, 40, 54, 65, 81, 83, 84, 85

- Route 641 - segments 1, 3, 7, 14, 23, 30, 41, 47, 55, 66, 77, 81, 83, 84, 85
- Route 720 - segments 1, 3, 7, 15, 31, 42, 56, 67, 72, 73, 79, 84, 85
- Route 721 - segments 1, 3, 7, 15, 31, 42, 56, 67, 72, 78, 83, 84, 85

The above routes provided geographically distinct routes, including an option (Route 101) that parallels the existing McCreadie – Montgomery 345 kV transmission line. There were modifications made to the remaining five routes. This included modifications to original Routes 601, 641, and 721. These adjustments were made to limit impacts on center pivot irrigation, residences, and the avoidance of a cemetery along Old U.S. Highway 54. Routes 101 and 720 were not modified. After these modifications, the final route network included 13 segments that were combined to make 5 routes. These segments and routes were renumbered, as shown below and in Figure 3 (below), as well as in Section 2.3 of Ameren Missouri Schedule JD-D1:

- Route 1 (originally Route 601) – segments 1, 2, 4, 7, 10, 11, 12, 13
- Route 2 (originally Route 641)– segments 1, 2, 4, 6, 10, 11, 12, 13
- Route 3 (originally Route 721) – segments 1, 2, 5, 9, 11, 12, 13
- Route 4 (originally Route 720) – segments 1, 2, 5, 8, 12, 13
- Route 5 (originally Route 101)– segments 1, 3, 13

- **Figure 3: Reduced Network of Routes for the Project**



Appendix B of Ameren Missouri Schedule-JD-D1 includes the analysis table for the z-score analysis performed initially for all 721 route alternatives before renumbering.

VI. PUBLIC ENGAGEMENT

Q. What opportunities did the public have to provide feedback during the route selection process?

A. Ameren hosted multiple public open house events, provided landowners opportunities to fill out questionnaires online or at the public open house events, and hosted a Project website that offered landowners the opportunity to leave questions, comments, or concerns related to the Project. The input that the Project Team obtained from the public was important to the planning of the route and decisions the Team made. A more comprehensive description of the public engagement process for the Project is described in the direct testimony of Ameren Missouri witness Leah Dettmers.

VII. EVALUATION OF THE ROUTE ALTERNATIVES

Q. How were route alternatives evaluated?

A. Burns & McDonnell quantified the route criteria for the five retained route alternatives used for the evaluation. Route data for the Project is displayed in Table 3-3 of Ameren Missouri Schedule JD-D1 and reprinted below in Figure 4.

Figure 4: Route Data

Route	Segments	Total Length (miles)	Heavy Angles (> 40 degrees) (number)	Road Crossings (number)	Length Not Along Roads (miles)	Length Not Parallel Existing T-Line (miles)	T-Line Crossings (number)	Wetlands within ROW (acres)	Length through Bat Zone 2 (feet)	River/ Stream/ Waterways Crossed (number)	Waterbodies within the ROW (number)	Floodplain in ROW (acres)	Woodlands within ROW (acres)	Archaeological Sites within ROW (number)	Residences within 100 ft of Centerline (number)	Residences within 101 to 300 ft of Centerline (number)	Residences within 301 to 500 ft of Centerline (number)	Residential Proximity Score (score)	Landowners within ROW (number)	Length Not Along Parcel Boundary (number)	Industrial Facilities within 100 ft of centerline (number)	Protected lands within 500 ft of centerline (number)	Grassland /Pasture within ROW (acres)	Croplands within ROW (acres)	Center-Pivot Irrigation within 100 ft of Centerline (number)
1	1,2,4,7,10,11,12,13	33.18	9	36	28.99	30.64	9	9.32	22727.32	27	4	21.64	187.76	0	0	7	10	31	115	25.12	1	0	148.19	228.88	1
2	1,2,4,6,10,11,12,13	32.52	11	37	28.27	29.98	9	9.06	32107.00	29	12	17.67	153.46	0	0	7	9	30	101	22.65	1	0	178.54	216.29	1
3	1,2,5,9,11,12,13	29.64	7	36	28.19	29.33	8	17.13	47304.37	32	6	41.44	198.12	0	0	14	17	59	102	21.68	1	1	168.14	140.91	0
4	1,2,5,8,12,13	29.88	6	34	29.81	23.31	8	20.54	53855.79	32	6	47.17	220.81	1	1	10	14	49	98	25.51	1	1	135.24	161.89	0
5	1,3,13	28.04	2	22	28.04	0.00	6	15.33	53267.34	30	7	36.16	265.14	6	1	6	6	29	97	26.18	1	0	66.40	162.71	0

Due to the reduced number of route alternatives undergoing full evaluation for the Project, the alternatives were evaluated using a relative scoring methodology (Minimum-Maximum), as described in Section 3.4 of Ameren Missouri Schedule JD-D1. Using this methodology, all criteria would have a score with a range from 1 to 5. Scores in the upper ranges for a particular route for a certain criterion indicate greater relative impacts for that criterion for that route as compared to the other routes, while scores in the lower ranges for a particular route for a certain criterion indicate fewer relative impacts for that criterion for that route as compared to the other routes. This means, the lower the scores for a particular criterion, the fewer impacts that route has with respect to that criterion.

Q. **What were the routing criteria used to evaluate the route alternatives?**

A. The Routing Team evaluated the route alternatives using a systematic comparison of the alternatives based on the social, environmental, and engineering criteria that represent potential adverse effects on resources in the study area. The routing criteria used in the evaluation are industry standard and are used on routing projects throughout the country. The evaluation criteria are shown in Table 3-1 of Ameren Missouri Schedule JD-D1 and are listed below in Figure 5.

Figure 5: Routing Evaluation Criteria

Categories	Evaluation Factors
Engineering	Total Length (miles)
	Heavy Angles (>40 degrees) (count)
	Road Crossings (count)
	Length Not Along Roads (miles)
	Number of Pipeline Crossings (count)
	Length Not parallel Existing Transmission Line (miles)
	Transmission Line Crossings (count)
Environmental	Wetlands within ROW (acres)
	Length through Bat Zone 2 (feet)
	Length through Bat Zone 3 (feet)
	River/Stream/Waterbodies within the ROW (count)
	Waterbodies within the ROW (count)
	Floodplain in ROW (acres)
	Floodway in ROW (acres)
	Woodlands within ROW (acres)
Social	Historical/NRHP Districts or Sites within 1,320 ft (count)
	Archaeological Sites within the ROW (count)
	*Residences within 100 ft of centerline (count)
	*Residences within 101 – 300 ft of centerline (count)
	*Residences within 301 – 500 ft of centerline (count)
	Residence Proximity Score (score)
	Landowners within ROW (count)
	Length Not Along Parcel Boundary (miles)
	Businesses within 300 ft (count)
	Industrial Facilities within 100 ft of centerline (count)
	Public Facilities within 500 ft of centerline (count)
	Public lands within 500ft of Centerline (count)
	Grasslands/Pasture within ROW (acres)
	Cropland within ROW (acres)
	Center-Pivot Irrigation within 100 ft of Centerline (count)

*Internal factor for residential proximity

Q. **Are you aware of any additional criterion the Commission has used in selecting routes?**

A. Although there are no specific regulatory criterion administered by the Commission related to routing a transmission line, landowner notice and potential impacts to residences and property are understandably of great concern to the Commission. The Commission requires that all landowners directly impacted by the proposed route be notified of filing, and be given opportunities to express concerns or other input during the public engagement process. Affected landowners were given the opportunity to attend all public open houses during the course of the Project as Ms. Dettmers testifies.

Q. **Do some routing criteria have greater relative impacts compared to other criteria?**

A. Yes. Criteria have varying relative impacts. For example, the number of streams crossed is an important criterion because of the potential impact on these areas during construction and maintenance, as well as how to design the transmission to cross the stream(s). However, design issues are relatively easy to address when crossing streams, and measures can be taken to mitigate impacts to these areas. Therefore, this criterion would have fewer relative impacts. Conversely, the number of residences located near an alternative route would be considered to have greater relative impacts due to the proximity of new transmission line construction and maintenance near residential areas and concerns expressed by homeowners and landowners. Landowners were given the opportunity to attend public open houses to provide input and to express concerns

with residential proximity, along with other concerns such as potential impacts to agricultural operations.

Q. **How were the criteria weighted?**

A. The Routing Team assigned weights to the criteria based on industry standards accepted and used by utilities for various transmission line routing projects throughout the country, and from input received from agencies and the public during the public engagement process. Not all criteria are of equal importance within the study area. Each routing criterion was given an attribute weight corresponding to its relative importance and potential for impacts to this Project. The criteria considered to be the most potentially impacting to the Project were the criteria assigned the highest numbered overall weights (from a range of 1 to 10, with 1 being least impacting and 10 being most impacting). Criteria considered lower impacting were assigned lower overall weights. Weights used in the evaluation are found below in Figure 6, reprinted from Table 3-2 of Ameren Missouri Schedue JD-D1.

Figure 6: Attribute Weight of Evaluation Criteria

Evaluation Factors	Unit of Measure	Weight
Engineering		
Total Length	Miles	1
Heavy Angles (>40 degrees)	Count	5
Road Crossings	Count	3
Length Not Along Roads	Miles	3
Number of Pipeline Crossings	Count	1
Length Not parallel Existing Transmission Line	Miles	3
Transmission Line Crossings	Count	2
Environmental		
Wetlands within ROW	Acres	6
Length through Bat Zone 1	Feet	8
Length through Bat Zone 2	Feet	5
River/Stream/Waterbodies within the ROW	Count	1
Waterbodies within the ROW	Count	2
Floodplain in ROW	Acres	3
Floodway in ROW	Acres	5
Woodlands within ROW	Acres	7
Social		
Historical/NRHP Districts or Sites within 1,320 ft	Count	4
Archaeological Sites within the ROW	Count	2
Residences within 100 ft of centerline	Count	5*
Residences within 101 – 300 ft of centerline	Count	3*
Residences within 301 – 500 ft of centerline	Count	1*
Residence Proximity Score	Score	10
Landowners within ROW	Count	0
Length Not Along Parcel Boundary	Miles	2
**Businesses within 300 ft	Count	2
Industrial Facilities within 100 ft of centerline	Count	4
Public Facilities within 500 ft of centerline	Count	6
Protected Lands within 500 ft of centerline	Count	4
Grasslands/Pasture within ROW	Acres	1
Cropland within ROW	Acres	5
Center-Pivot Irrigation within 100 ft of Centerline	Count	7

*indicates an internal multiplication factor based on residential distance before the attribute weighting factor is applied for "Residential Proximity Score"

**does not include agricultural operations

Q. **Were any other adjustments (such as units of measurement, numbers of, etc.) made to the evaluation criteria when analyzing the route alternatives?**

A. No.

VIII. SELECTION OF THE PROPOSED ROUTE

Q. **Once the network of route alternatives for the Project was finalized, how did the Routing Team go about selecting the Proposed Route?**

A. After the Minimum-Maximum analysis was conducted, the routes were arranged by weighted route score from the lowest (least impactful) score to the highest (most impactful) score, as shown below in Figure 7.

Figure 7: Weighted Route Scores

	Weights	1	5	3	3	3	2	6	5	1	2	3	7	2	10	2	4	1	5	7	
Route	Segments	Total Length (miles)	Heavy Angles (> 40 degrees) (number)	Road Crossings (number)	Length Not Along Roads (miles)	Length Not Parallel Existing T-Line (miles)	T-Line Crossings (number)	Wetlands within ROW (acres)	Length through Bat Zone 2 (feet)	River/ Stream/ Waterways Crossed (number)	Waterbodies within the ROW (number)	Floodplain in ROW (acres)	Woodlands within ROW (acres)	Archaeological Sites within ROW (number)	Residential Proximity Score (score)	Length Not Along Parcel Boundary (number)	Protected lands within 500 ft of centerline (number)	Grassland /Pasture within ROW (acres)	Croplands within ROW (acres)	Center-Pivot Irrigation within 100 ft of Centerline (number)	Weighted Score
5	1,3,13	1.0	5.0	3	3.0	3.0	2.0	19.1	24.6	3.4	5	10.5	35.0	10.0	10.0	10.0	4	1.0	10.0	7	166.6
2	1,2,4,6,10,11,12,13	4.5	25.0	15	4.6	14.7	10.0	6.0	11.0	2.6	10	3.0	7.0	2.0	11.3	3.7	4	5.0	22.1	35	196.6
1	1,2,4,7,10,11,12,13	5.0	20.6	14.2	9.4	15.0	10.0	6.5	5.0	1	2	4.6	15.6	2.0	12.7	8.1	4	3.9	25.0	35	199.6
3	1,2,5,9,11,12,13	2.2	16.1	14.2	4.0	14.5	7.3	22.9	20.8	5	4	12.7	18.2	2.0	50.0	2.0	20	4.6	5.0	7	232.5
4	1,2,5,8,12,13	2.4	13.9	12.6	15.0	12.1	7.3	30.0	25.0	5	4	15.0	23.9	3.3	36.7	8.8	20	3.5	9.8	7	255.3

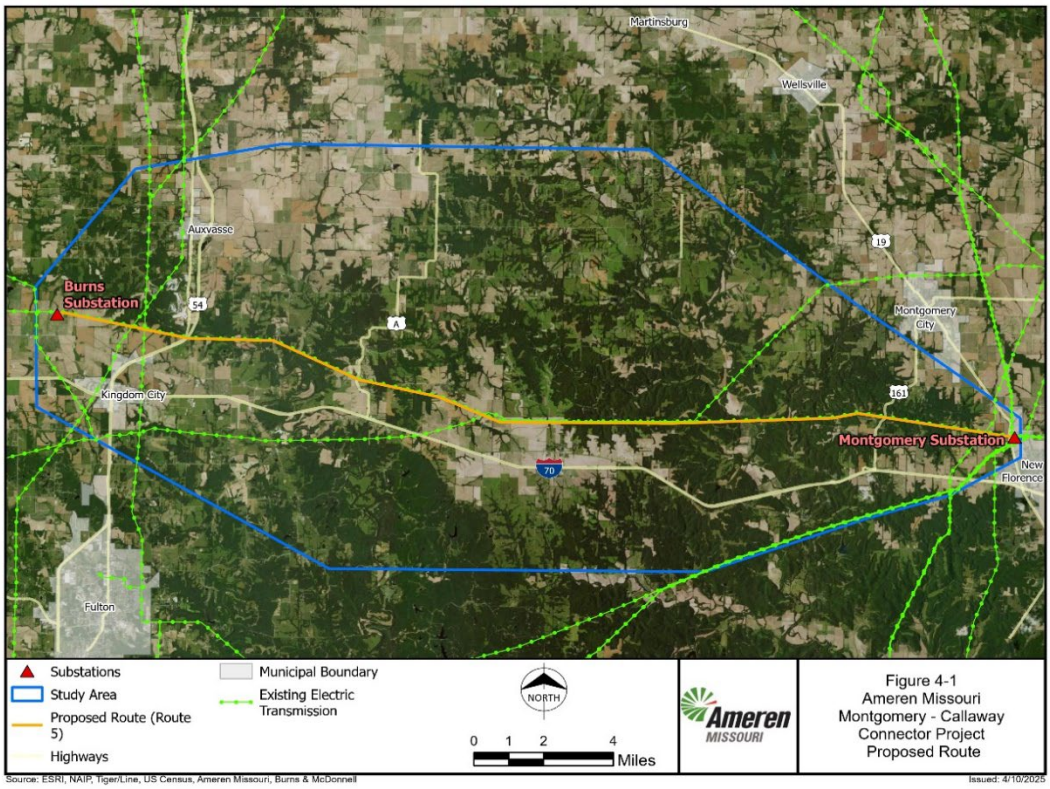
Scores resulting from the Minimum-Maximum score analysis of the route alternatives ranged 88.7 points. The lowest scoring route alternative is Route 5, with a score of 166.6 points. The routes were reviewed in detail using the route data and weighted scores to

make a final recommendation for a Proposed Route for the Project. This process is described in detail in Section 4.1 of Ameren Missouri Schedule JD-D1.

Q. **Which of the route alternatives for the Project was selected as the Proposed Route?**

A. The route alignment selected as the Proposed Route as explained in the Routing Study is Route 5. This route is depicted below by the orange line in Figure 8, reprinted from Figure 4-1 of Ameren Missouri Schedule JD-D1.

Figure 8: Proposed Route (Route 5)



Q. **What were the considerations that contributed to the selection of Route 5 as the Proposed Route for the Project?**

A. The primary considerations that led to the selection of Route 5 as the Proposed Route for the Project include the following:

- Minimizes impacts to residences
- Minimizes length
- Minimizes heavy angles, road crossings, and existing transmission line crossings
- Minimizes agricultural impacts

- Parallels existing transmission ROW for its entire length
- Support from the public and key stakeholders

Q. **What role did the landowners, key stakeholders and the public in general play in determining the Proposed Route for the Project?**

A. Through the public engagement process that Ms. Dettmers describes in her testimony, landowners, stakeholders and other members of the public were key sources of information regarding the study area and its opportunities and sensitivities related to the Project. Public input was especially helpful in eliminating less workable route corridors from consideration for this Project and for determining landowner preferences regarding the various route alternatives. Public input was a vital tool in helping to determine the most favorable route for the Project.

Q. **Could the Proposed Route be subject to adjustments as this proceeding goes forward and as the Team begins to work with landowners?**

A. Yes. If the Commission approves Ameren's Proposed Route, Ameren may be required to make minor adjustments to the Proposed Route alignment based on local conditions that may be identified or encountered during boundary and environmental surveys, final engineering, design, ROW acquisition, or construction. Any adjustments would be to address specific, localized conditions or circumstances not readily apparent as part of the route selection process but would not be anticipated to result in substantial, if any, impacts. The Commission could also choose to order a different route alignment

after consideration and public hearings. Any new alignment or adjustments would be intended to reduce overall environmental impacts, reduce the Project's inconvenience to landowners, address site specific engineering concerns, and/or protect public safety.

IX. CONCLUSION

Q. **Does this conclude your Direct Testimony?**

A. Yes.

BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF MISSOURI

In the Matter of the Application of Union Electric Company d/b/a Ameren Missouri Company for a Certificate of Convenience and Necessity to Construct, Own, Operate and Maintain Upgrades to the Transmission System in Montgomery and Callaway Counties, Missouri	)))))))	File No. EA-2026-0058

AFFIDAVIT OF JOHN DUNHAM

STATE OF MISSOURI)
) ss
CITY OF ST. LOUIS)

John Dunham, being first duly sworn states:

My name is John Dunham, and on my oath declare that I am of sound mind and lawful age; that I have prepared the foregoing *Direct Testimony*; and further, under the penalty of perjury, that the same is true and correct to the best of my knowledge and belief.

/sJohn W. Dunham
John W. Dunham

Sworn to me this 10th day of November, 2025.