

COMMONWEALTH OF KENTUCKY

BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

The Electronic Application of Duke Energy)
Kentucky, Inc. for a Certificate of Public)
Convenience and Necessity to Construct A) Case No. 2019-00251
138-kV Transmission Line And Associated)
Facilities In Boone County (Oakbrook to Aero)
Transmission Project))

**PETITION OF DUKE ENERGY KENTUCKY, INC. FOR CONFIDENTIAL
TREATMENT OF INFORMATION CONTAINED IN ITS APPLICATION**

Duke Energy Kentucky, Inc. (Duke Energy Kentucky or Company), pursuant to 807 KAR 5:001, Section 13, respectfully requests the Commission to classify and protect certain information provided by Duke Energy Kentucky in Exhibits 2, 3, 4, and pages 31, 32, and 33 of Exhibit 6 to its Application. The information for which Duke Energy Kentucky now seeks confidential treatment (Confidential Information), shows confidential critical utility infrastructure.

In support of this Petition, Duke Energy Kentucky states:

1. The Kentucky Open Records Act exempts from disclosure certain critical infrastructure information per KRS 61.878(1)(m). To qualify for this exemption and, therefore, maintain the confidentiality of the information, a party must establish that disclosure of the record would expose a vulnerability in providing the location of public utility critical systems. Public disclosure of the information identified herein would, in fact, prompt such a result for the reasons set forth below.

2. The information contained in Confidential Exhibits 2, 3, 4, and 6 contain confidential records and analysis that include and contain detailed depictions, locations, schematic drawings, and maps of confidential utility infrastructure, which is protected for security and safety

reasons as defined under KRS 61.878(1)(m)(1). If publicly released, this information would provide details regarding utility infrastructure that, in the wrong hands, could be exploited and used in ways that could create security and potential public safety risks. Therefore, this information should remain confidential.

3. The Confidential Information is distributed within Duke Energy Kentucky, only to those who must have access for business reasons, and is generally recognized as confidential and proprietary in the energy industry.

4. The Confidential Information for which Duke Energy Kentucky is seeking confidential treatment is not known outside of Duke Energy Corporation.

5. Duke Energy Kentucky does not object to limited disclosure of the Confidential Information described herein, pursuant to an acceptable protective agreement, with the Attorney General or other intervenors with a legitimate interest in reviewing the same for the purpose of participating in this case.

6. This information was, and remains, integral to Duke Energy Kentucky's effective execution of business decisions and safety of its systems. And such information is generally regarded as confidential or proprietary. Indeed, as the Kentucky Supreme Court has found, "information concerning the inner workings of a corporation is 'generally accepted as confidential or proprietary.'" *Hoy v. Kentucky Industrial Revitalization Authority*, 904 S.W.2d 766, 768 (Ky. 1995).

7. In accordance with the provisions of 807 KAR 5:001, Section 13(3), the Company is filing one copy of the Confidential Information separately under seal, and one copy without the confidential information included.

8. Duke Energy Kentucky respectfully requests that the Confidential Information be withheld from public disclosure until such time as the facilities depicted therein are no longer in service. This will assure that the Confidential Information – if disclosed after that time – will no longer be commercially sensitive so as to likely impair the interests of the Company or its customers if publicly disclosed.

9. To the extent the Confidential information becomes generally available to the public, whether through filings required by other agencies or otherwise, Duke Energy Kentucky will notify the Commission and have its confidential status removed, pursuant to 807 KAR 5:001 Section 13(10)(a).

WHEREFORE, Duke Energy Kentucky, Inc., respectfully requests that the Commission classify and protect as confidential the specific information described herein.

Respectfully submitted,

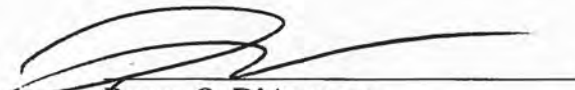


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CERTIFICATE OF SERVICE

This is to certify that a copy of the foregoing Application of Duke Energy Kentucky, Inc. has been served via overnight mail to the following party on this 23rd day of August 2019.

Hon. Kent Chandler
Office of the Attorney General
Utility Intervention and Rate Division
700 Capital Avenue, Ste. 20
Frankfort, Kentucky 40601


Rocco O. D'Ascenzo

COMMONWEALTH OF KENTUCKY
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Convenience and Necessity to Construct A)	Case No. 2019-00251
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Facilities In Boone County (Oakbrook to Aero)	
Transmission Project))	

APPLICATION

Now comes Duke Energy Kentucky, Inc. (Duke Energy Kentucky or the Company), pursuant to KRS 278.020(2) and 807 KAR 5:001, Sections 8 and 9, and 807 KAR 5:120, and other applicable law, and hereby respectfully requests from the Kentucky Public Service Commission (Commission) an Order granting a Certificate of Public Convenience and Necessity (CPCN) for approval of the construction of an approximately 1.1 mile new 138-kilovolt (kV) transmission line in Boone County, Kentucky and associated facilities, including expanding the existing 69-kV Oakbrook Substation and a new substation along Aero Parkway referred to as the Aero Substation (collectively, the Oakbrook to Aero Transmission Project). In support of this Application, Duke Energy Kentucky respectfully states as follows:

Introduction

1. Pursuant to 807 KAR 5:001, Section 14(2), Duke Energy Kentucky is a Kentucky corporation originally incorporated on March 20, 1901, in good standing, and a public utility as that term is defined in KRS 278.010(3), and, therefore, is subject to the Commission's

jurisdiction. A copy of its articles of incorporation is on file with the Commission in Case No. 2013-00097 and are hereby incorporated by reference.

2. Duke Energy Kentucky is engaged in the business of generation, purchasing, transmission, and distribution and sale of electric power as well as furnishing natural gas utility services to various municipalities and unincorporated areas in Boone, Bracken, Campbell, Gallatin, Grant, Kenton, and Pendleton Counties in the Commonwealth of Kentucky.

3. The Company's local office in Kentucky is Duke Energy Erlanger Ops Center, 1262 Cox Road, Erlanger, Kentucky 41018. The Company further states that its electronic mail address for purposes of this matter is KYfilings@duke-energy.com.

4. Copies of all orders, pleadings and other communications related to this proceeding should be sent to:

Rocco O. D'Ascenzo
Associate General Counsel
Duke Energy Kentucky, Inc.
139 E. 4th St., Cincinnati, OH 45202
Rocco.D'Ascenzo@duke-energy.com
KYfilings@duke-energy.com

Background

5. Duke Energy Kentucky has identified a need to construct a new 138 kV electric transmission line, approximately 1.1 miles in length, in Boone County, Kentucky extending from the existing Oakbrook Substation to the new proposed Aero Substation. A map showing the location of the Project is included in Exhibit 1. This Project is necessary due to load growth and system reliability of the surrounding Duke Energy Kentucky transmission and distribution systems.

6. Boone County is the fourth most populous and is one of the fastest developing counties in the Commonwealth of Kentucky.¹ Upon information and belief, this growth includes all three customer segments: residential; commercial; and industrial electric loads. This rapid growth has resulted in customer demand reaching near the limits of the Company's existing transmission system's capacity. The Company is projecting growth to continue in this area, necessitating additional capacity construction to meet projected demand.

The Project

7. Duke Energy Kentucky proposes to construct approximately 1.1-miles of new single circuit 138-kV transmission line in Boone County, Kentucky. The proposed line comes out of Oakbrook Substation from the south and crosses over Burlington Pike (State Route 18) and will run parallel to Aero Parkway (State Route 1017) for approximately one (1) mile until it reached the proposed location for the new Aero Substation. The electrical transmission line will have 26 direct embedded galvanized steel monopoles installed in 75 feet of private easements.

8. The existing Oakbrook 69-kV Substation is located at 1601 Burlington Pike in Boone County, Kentucky. The existing Oakbrook 69-kV Substation will be expanded on Company-owned property to install a 138-kV yard. The Oakbrook 138-kV Substation layout is included in Confidential Exhibit 2. Further details regarding the existing Oakbrook 69-kV Substation and proposed 138-kV expansion are provided in the testimony of Company Witness Kirschner.

9. The Aero 138-kV Substation will be constructed on an approximately 3.75-acre site located off Aero Parkway. The site will be under easement with the Cincinnati/Northern Kentucky International Airport (CVG). The Aero 138-kV Substation layout is included in Confidential Exhibit 3. Further details regarding the Aero 138-kV Substation are provided in the

¹ <http://www.indexmundi.com/facts/united-states/quick-facts/kentucky/population-growth#chart>

testimony of Company Witness Kirschner.

The Proposed 138-kV Transmission Line

10. Structure types and numbers will be determined during final engineering, which includes ground survey and geotechnical studies, and will depend upon terrain crossed, spans, turning angles, and other engineering considerations. Based upon preliminary engineering, the Company anticipates 26 direct embedded galvanized steel poles will be required. It is anticipated that angle and dead-end structures will utilize guy wires and anchors. Duke Energy transmission line 138-kV standards are included in Confidential Exhibit 4.

11. The structure heights will vary depending on placement, terrain, and clearance requirements. The average structure height is anticipated to be 75 feet with 11.5 feet of the structure being embedded in the ground. Average height above ground will be 63.5 feet. The proposed structures will be single circuit supporting a total of three phase conductors and one overhead ground wire. The phase conductors will utilize 954 kcmil aluminum conductor steel-reinforced (ACSR) conductor. The overhead ground wire will utilize fiber optic overhead ground wire (OPGW).

Oakbrook Substation

12. The existing Oakbrook 69-kV Substation is located at 1601 Burlington Pike in Boone County, Kentucky, approximately one mile west of the proposed Aero Substation. The existing Oakbrook 69-kV Substation will be expanded on Company-owned property to install a 138-kV yard. The expansion is approximately 195 feet by 175 feet and the complete yard after the expansion will be 250 feet by 175 feet of a graveled yard. To support the expansion, the driveway to the substation will be relocated to the south of the substation from Oakbrook Drive and the existing drive will be removed from Burlington Pike, and a retaining wall will be built on

the north side of the substation.

13. Oakbrook Substation currently contains a 138x69-13.09 kV, 22.4 MVA transformer (energized at 69 kV), 69-kV switching equipment on the high side of the transformer to connect to the 69-kV supply lines, and 12.47-kV switching equipment on the low side of the transformer to supply two (2) 12.47-kV distribution feeders to the surrounding area. The substation will be modified to install a 138-69 kV, 150-MVA autotransformer, two (2) 138-kV circuit breakers to connect both sides of the new autotransformer. These breakers will connect to the existing 69-kV bus in the substation on the low side and connect to the proposed 138-kV transmission line on the high side of the autotransformer. Confidential Exhibit 2 provides additional information regarding the planned expansion of the substation, its components, and its purpose.

14. The following equipment will be installed:

- One (1) 150 MVA 138-kV to 69-kV autotransformer which will help provide loading for the Circuit 30689.
- Two (2) 138-kV circuit breakers that will be placed on the high and low side of the above-mentioned autotransformer, this will provide a means of interruption/connection of the autotransformer to the Circuit 30689 and the existing Oakbrook 69-kV bus.
- 138-kV disconnect switches will be placed on both sides of each 138-kV circuit breaker for a total of four (4) 3 phase disconnect switches. These will function as a means of visible isolation.
- Auxiliary equipment such as lightning arresters, Coupling Capacitor Voltage Transformers, and a wave trap will be installed also.

- A new control enclosure will be installed to house the control equipment required for the added facilities.

Aero Substation

15. The Aero 138-kV Substation will be constructed on an approximately 3.75-acre site located off Aero Parkway. The site will be under easement with CVG. The fenced portion of the proposed Aero Substation will measure approximately 250 feet by 435 feet and will consist of a graveled yard. The Aero Substation will provide termination and switching facilities for the 138 kV lines that will supply the substation, four 138-13.09 kV, 22.4 MVA distribution supply transformers to supply distribution feeders to Amazon Prime Air Hub facility and to the surrounding area, and 12.47 kV switching facilities for the 12.47 kV feeders. Confidential Exhibit 3 provides additional information regarding the planned substation, its components, and its purpose.

16. The bus height of the low bus will be approximately 16.5 feet above the foundations. The bus height of the high bus will be approximately 25.5 feet above the height of the foundations. The 138-kV take off tower will be approximately 73 feet to the highest point of that structure.

Request for Certificate of Public Convenience and Necessity

17. Duke Energy Kentucky is requesting a CPCN pursuant to KRS 278.020 and 807 KAR 5:001, Section 15, for its Oakbrook to Aero Transmission Project for the reasons set forth above.

18. The Oakbrook to Aero Transmission Project will not result in a wasteful duplication of facilities. The Oakbrook to Aero Transmission Project will be located within Duke Energy Kentucky's electric service territory and is necessary to serve both increased load

and new customers in the area. The existing facilities in the area are insufficient to support the new load and customers in the area.

19. In accordance with 807 KAR 5:001 Section 12(2)(a)-(i). Duke Energy Kentucky is filing the following information in Exhibit 5, which is incorporated herein and made a part of this Application filed in this proceeding:

<u>Exhibit 5</u>	<u>Description</u>	<u>807 KAR 5:001</u>
<u>Page</u>		<u>Section Reference</u>
	Financial Exhibit	12(2)
1	Amount and kinds of stock authorized	12(2)(a)
1	Amount and kinds of stock issued and outstanding	12(2)(b)
1	Terms of preference or preferred stock	12(2)(c)
1	Brief description of each mortgage on property of Duke Energy Kentucky	12(2)(d)
1-2	Amount of bonds authorized and issued and related information	12(2)(e)
2	Notes outstanding and related information	12(2)(f)
2-3	Other indebtedness and related information	12(2)(g)
3-4	Dividend information	12(2)(h)
5-6	Detailed Income Statement and Balance Sheet	12(2)(i)

20. In accordance with Section 15(2)(a), the Application and supporting testimony provide the evidence to show that the Oakbrook to Aero Transmission Project is required by public convenience or necessity. The Oakbrook to Aero Transmission Project will allow Duke Energy Kentucky to continue to provide safe, reliable, and reasonable electric service to its customers.

21. In accordance with Section 15(2)(b), regarding the filing of franchise agreements, the Company states that it has previously filed with the Commission the applicable franchises from the proper public authorities. Additionally, to the extent a local city or municipality requires the Company obtain a construction permit, the Company will follow such local regulations and obtain any necessary local permits prior to beginning any work. Duke Energy Kentucky is not aware of any additional permits that will be necessary to complete construction.

22. In accordance with Section 15(2)(c), which requires the Company to provide a full description of the proposed location, route, or routes, including a description of the manner in which the facilities will be constructed, Duke Energy Kentucky respectfully states that the Oakbrook to Aero Transmission Project will be constructed as described above and as further described in the testimony accompanying this Application. Confidential Exhibit 6 includes a copy of the siting study which depicts the full description of the route. Exhibit 7 shows the proposed route and Exhibit 8 show the alternative routes considered as part of the siting review. Because the Company's proposal is applicable only in the Company's service territory, the Project will not compete with any other public utilities, corporations, or persons.

23. In accordance with 807 KAR 5:120 Sections 2(2)(a)-(c), requiring maps showing: a) the location of proposed transmission line centerline and right of way, and boundaries of each property crossed by the transmission line right of way as indicated on the property valuation administrator's maps, facilities and plans and specifications and drawings of the proposed plant, equipment, and facilities; b) sketches of proposed typical transmission line support structures; and c) a separate map of the same scale showing alternative routes considered, Duke Energy Kentucky respectfully states that Confidential Exhibit 4 and Exhibits 7 and 8 contain the required information.

24. In accordance with 807 KAR 5:120 Sections 2(3) Exhibit 9 includes a verified statement that, according to county property valuation administrator records, each property owner over whose property the transmission line right-of-way is proposed to cross has been sent by first-class mail, addressed to the property owner at the owner's address as indicated by the county property valuation administrator records, or hand delivered. The August 16, 2019 Notice included the following information:

- a. Notice of the proposed construction;
- b. The docket number (Case No. 2019-00251) under which the application will be processed;
- c. The address and telephone number of the Commission's Executive Director;
- d. A description of the property owner's rights to request a public hearing and the right to request intervention; and
- e. A description of the Project and a map of the transmission line route.

25. In accordance with 807 KAR 5:120 Sections 2(4), Exhibit 10 includes a sample copy of the notice provided to a property owner and a list of the names and addresses of the property owners to whom the notice has been sent.

26. In accordance with 807 KAR 5:120 Sections 2(5), Exhibit 11 includes a copy of the notice of the intent to construct the proposed transmission line that has been published in a newspaper of general circulation in the county or counties in which the construction is proposed.

27. In accordance with 807 KAR 5:120 Sections 2(7), the Company states that Project does not involve sufficient capital outlay to materially affect the existing financial condition of the Company.

28. In accordance with Section 15(2)(e), the Company states that it proposes to finance the construction through continuing operations and debt instruments, as necessary.

29. In accordance with Section 15(2)(f), the Company states that the total estimated cost of the initial construction for the Project is approximately \$32.3 million. The estimated annual ongoing cost of operation of the Oakbrook to Aero Transmission Project once completed is expected to be approximately \$5,000 (capital and operations and maintenance (O&M)).

30. Duke Energy Kentucky respectfully states that the Project is needed to respond to growing customer load, primarily a new expansion at CVG, as well as other anticipated load growth in the area. Exhibit 12 shows the proposed Project components and the existing system in the area of the Project.

Testimony and Exhibits

31. Additional facts supporting this Application are set forth in the following Direct Testimony attached to this Application as Exhibits 13 through 16:

- a. Yanthi W. Boutwell, Director of Midwest Transmission Resource & Project Management, provides an overview of the Oakbrook to Aero Transmission Project and supports the need for its construction;²
- b. John Hurd, Lead Transmission Siting Specialist, discusses the siting study that was performed and the proposed route;³
- c. Edward F. Kirschner, Director Transmission Planning, discusses Project need and engineering components;⁴
- d. Sarah E. Lawler, Director of Rates and Regulatory Planning Ohio/Kentucky, discusses the financial aspects of the Company's Application;⁵

² Exhibit 13.

³ Exhibit 14.

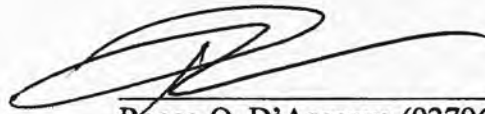
⁴ Exhibit 15.

⁵ Exhibit 16.

WHEREFORE, Duke Energy Kentucky respectfully requests that the Commission:

- 1) Issue a CPCN for the construction and implementation of the proposed Oakbrook to Aero Transmission Project;
- 2) Grant all waivers requested and necessary and other relief to which the Company may be entitled.

Respectfully submitted,



Rocco O. D'Ascenzo (92796)
Deputy General Counsel
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CERTIFICATE OF SERVICE

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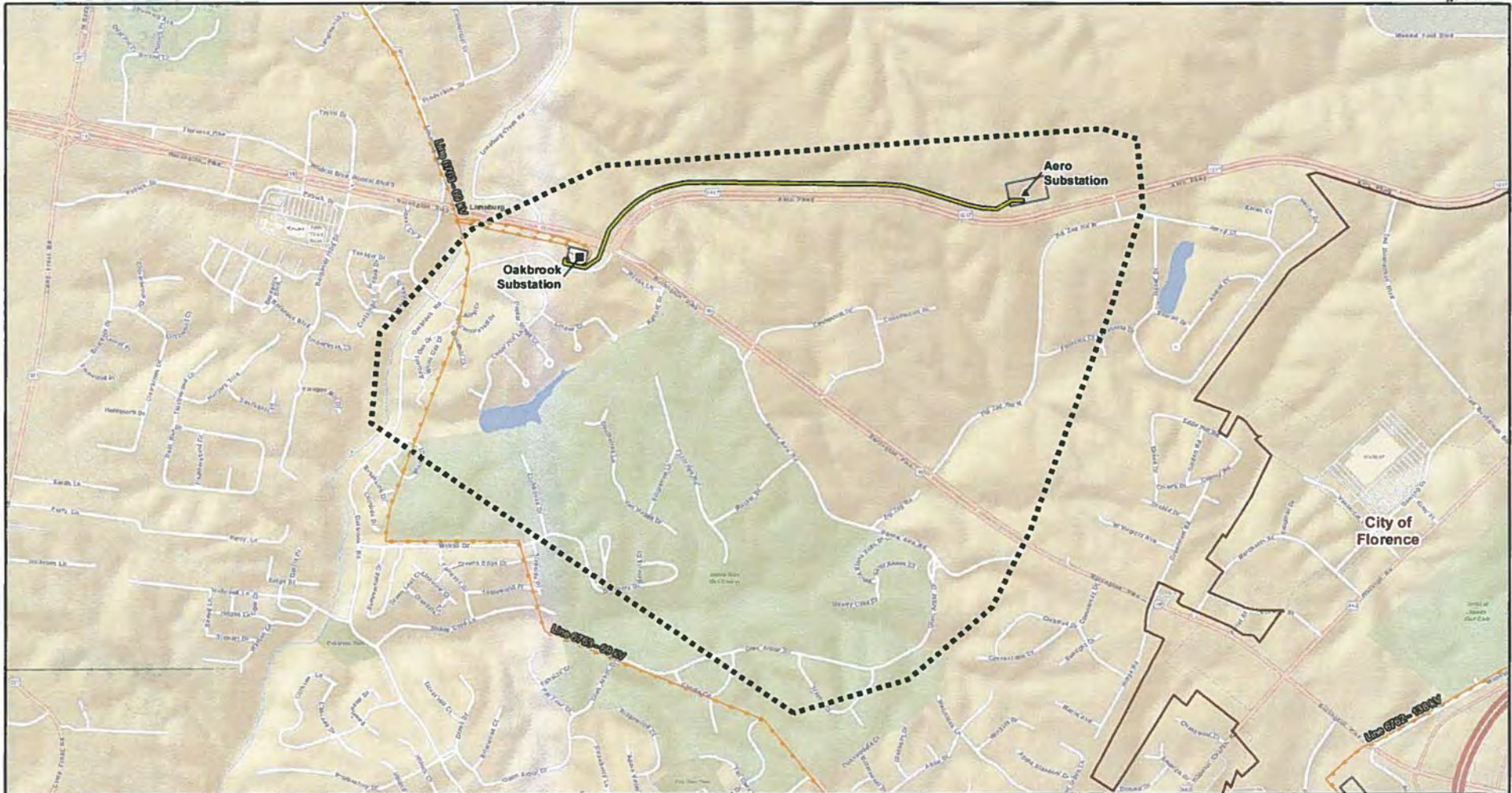
Hon. Kent Chandler
Office of the Attorney General
Utility Intervention and Rate Division
700 Capital Avenue, Ste. 20
Frankfort, Kentucky 40601



Rocco O. D'Ascenzo

List of Exhibits

- Exhibit 1: Project Location Map
- Exhibit 2: Oakbrook Substation Layout – Confidential
- Exhibit 3: Aero Substation Layout – Confidential
- Exhibit 4: Duke Energy 138-kV Transmission Line Standards – Confidential
- Exhibit 5: Financial Statement
- Exhibit 6: Siting Study – Confidential
- Exhibit 7: Proposed Route
- Exhibit 8: Alternative Routes
- Exhibit 9: Verified Statement
- Exhibit 10: Copy of Notice and Landowner List
- Exhibit 11: Newspaper Notice
- Exhibit 12: Present System and Proposed Project Components
- Exhibit 13: Yanthi W. Boutwell Testimony
- Exhibit 14: John K. Hurd Testimony
- Exhibit 15: Edward F. Kirschner Testimony
- Exhibit 16: Sarah E. Lawler Testimony



- Legend**
- ▲ Proposed Duke Substation
 - Existing Duke Substation
 - Oakbrook to Aero Preferred Route
 - Existing Duke Owned Transmission Line
 - Study Area
 - Substation Boundary
 - City of Florence Municipal Boundary



Exhibit 1:
Project Location

Notes
 1. Coordinate System: NAD 1983 StatePlane Kentucky North FIPS 1601 Feet
 2. Data Sources Include: Garmin, QGIS, NAD83, City of Florence
 3. Background: ESRI World Street Map

DRAWN BY: BWT
DATE: 2019-08-19

**CONFIDENTIAL PROPRIETARY TRADE
SECRET**

EXHIBIT 2

FILED UNDER SEAL

**CONFIDENTIAL PROPRIETARY TRADE
SECRET**

EXHIBIT 3

FILED UNDER SEAL

**CONFIDENTIAL PROPRIETARY TRADE
SECRET**

EXHIBIT 4

FILED UNDER SEAL

FINANCIAL EXHIBIT

(1) **Section 12(2)(a) Amount and kinds of stock authorized.**

1,000,000 shares of Capital Stock \$15 par value amounting to \$15,000,000 par value.

(2) **Section 12(2)(b) Amount and kinds of stock issued and outstanding.**

585,333 shares of Capital Stock \$15 par value amounting to \$8,779,995 total par value. Total Capital Stock and Additional Paid-in Capital as of June 30, 2019:

Capital Stock and Additional Paid-in Capital
As of June 30, 2019
(\$ per 1,000)

Capital Stock	\$8,780
Premiums thereon	18,839
Total Capital Contributions from Parent (since 2006)	58,594
Contribution from Parent Company for Purchase of Generation Assets	<u>140,061</u>
Total Capital Stock and Additional Paid-in-Capital	<u>\$226,274</u>

(3) **Section 12(2)(c) Terms of preference or preferred stock, cumulative or participating, or on dividends or assets or otherwise.**

There is no preferred stock authorized, issued or outstanding.

(4) **Section 12(2)(d) Brief description of each mortgage on property of applicant, giving date of execution, name of mortgagor, name or mortgagee, or trustee, amount of indebtedness authorized to be secured, and the amount of indebtedness actually secured, together with any sinking fund provision.**

Duke Energy Kentucky does not have any liabilities secured by a mortgage.

(5) **Section 12(2)(e) Amount of bonds authorized, and amount issued, giving the name of the public utility which issued the same, describing each class separately, and giving the date of issue, face value, rate of interest, date of maturity and how secured, together with the amount of interest paid thereon during the last fiscal year.**

The Company has ten outstanding issues of unsecured senior debentures issued under an Indenture dated December 1, 2004, between itself and Deutsche Bank Trust Company Americas, as Trustee, as supplemented by four Supplemental Indentures. The Indenture

allows the Company to issue debt securities in an unlimited amount from time to time. The Debentures issued and outstanding under the Indenture are the following:

Supplemental Indenture	Date of Issue	Principal Amount Authorized and Issued	Principal Amount Outstanding	Rate of Interest	Date of Maturity	Interest Paid Year 2018
1 st Supplemental	3/7/2006	65,000,000	65,000,000	6.200%	3/10/2036	4,030,000
2 nd Supplemental	9/22/2009	100,000,000	100,000,000	4.650%	10/1/2019	4,650,000
3 rd Supplemental	1/5/2016	45,000,000	45,000,000	3.420%	1/15/2026	1,539,000
3 rd Supplemental	1/5/2016	50,000,000	50,000,000	4.450%	1/15/2046	2,225,000
4 th Supplemental	9/7/2017	30,000,000	30,000,000	3.350%	9/15/2029	1,027,333
4 th Supplemental	9/7/2017	30,000,000	30,000,000	4.110%	9/15/2047	1,260,400
4 th Supplemental	9/7/2017	30,000,000	30,000,000	4.260%	9/15/2057	1,306,400
5 th Supplemental	10/3/2018	25,000,000	25,000,000	4.010%	10/15/2023	0
5 th Supplemental	10/3/2018	40,000,000	40,000,000	4.180%	10/15/2028	0
5 th Supplemental	12/12/2018	35,000,000	35,000,000	4.620%	12/15/2048	0
			450,000,000			16,038,133

- (6) **Section 12(2)(f) Each note outstanding, giving date of issue, amount, date of maturity, rate of interest, in whose favor, together with amount of interest paid thereon during the last fiscal year.**

Not applicable.

- (7) **Section 12(2)(g) Other indebtedness, giving same by classes and describing security, if any, with a brief statement of the devolution or assumption of any portion of such indebtedness upon or by person or corporation if the original liability has been transferred, together with amount of interest paid thereon during the last fiscal year.**

The Company has two series of Pollution Control Revenue Refunding Bonds issued under a Trust Indenture dated as of August 1, 2006 and a Trust Indenture dated as of December 1, 2008, between the County of Boone, Kentucky and Deutsche Bank National Trust Company as Trustee. The Company's obligation to make payments equal to debt service on the Bonds is evidenced by a Loan Agreement dated as of August 1, 2006 and December 1, 2008 between the County of Boone, Kentucky and Duke Energy Kentucky. The Bonds issued under the Indentures are as follows:

Indenture	Date of Issue	Principal Amount Authorized and Issued	Principal Amount Outstanding	Rate of Interest	Date of Maturity	Interest Paid Year 2018
Series 2010	11/24/2010	26,720,000	26,720,000	3.86% ⁽¹⁾	8/1/2027	1,031,392
Series 2008A	12/01/2011	50,000,000	<u>50,000,000</u>	2.54% ⁽²⁾	8/1/2027	<u>1,270,337</u>
			<u>76,720,000</u>			<u>2,301,729</u>

(1) The bonds were issued at a variable-rate and were swapped to a fixed rate of 3.86% for the life of the debt. The average floating-rate of interest on the bonds for 2018 was 1.41%.

(2) The interest rate represents the average floating-rate of interest on the bonds for 2018. The interest rate on the bonds resets on the first day of every month based on 70% of the sum of one-month LIBOR and a credit spread of 1.125%.

The Company had no outstanding financing leases as of June 30, 2019.

The Company had \$112,909,000 of money pool borrowings outstanding as of June 30, 2019, \$25,000,000 of which is classified as Long-Term Debt payable to affiliated companies. This obligation, which is short-term by nature, is classified as long-term due to Duke Energy Kentucky's intent and ability to utilize such borrowings as long-term financing.

(8) **Section 12(2)(h) Rate and amount of dividends paid during the last five (5) previous fiscal years, and the amount of capital stock on which dividends were paid each year.**

DIVIDENDS PER SHARE

Year Ending	Per Share	Total	No. of Shares	Par Value of Stock
December 31, 2014	0.00	0	585,333	8,779,995
December 31, 2015	93.96	55,000,000	585,333	8,779,995
December 31, 2016	17.08	10,000,000	585,333	8,779,995
December 31, 2017	0.00	0	585,333	8,779,995
December 31, 2018	0.00	0	585,333	8,779,995

(9) Section 12(2)(i) A detailed Income Statement and Balance Sheet

DUKE ENERGY KENTUCKY, INC.
Condensed Statements of Operations
(Unaudited)

	12 Months Ended June 30, 2019
<i>(In thousands)</i>	
Operating Revenues	
Electric	\$ 382,003
Natural gas	107,968
Total operating revenues	489,971
Operating Expenses	
Fuel used in electric generation and purchased power	128,665
Cost of natural gas	45,505
Operation, maintenance and other	144,868
Depreciation and amortization	73,653
Property and other taxes	15,395
Total operating expenses	408,086
Gain on Sales of Assets, net	85
Operating Income	81,970
Other Income and Expenses, net	6,114
Interest Expense	21,282
Income Before Income Taxes	66,802
Income Tax Expense (Benefit)	(13,512)
Net Income	\$ 53,290

DUKE ENERGY KENTUCKY, INC.
Condensed Balance Sheets
(Unaudited)

(in thousands, except share amounts)	June 30, 2019	December 31, 2018
ASSETS		
Current Assets		
Cash and cash equivalents	\$ 1,464	\$ 7,773
Receivables (net of allowance for doubtful accounts of \$325 at June 30, 2019 and \$221 at December 31, 2018)	6,622	9,450
Receivables from affiliated companies	11,524	29,195
Notes receivable from affiliated companies	—	—
Inventory	47,210	40,596
Regulatory assets	12,664	10,562
Collateral assets	5,072	4,481
Other	12,587	7,479
Total current assets	97,143	109,536
Property, Plant and Equipment		
Cost	2,597,611	2,517,897
Accumulated depreciation and amortization	(963,989)	(965,124)
Net property, plant and equipment	1,633,622	1,552,773
Operating Lease Right-of-Use Assets, net	9,345	—
Other Noncurrent Assets		
Regulatory Assets	114,005	113,652
Other	9,581	9,922
Total other noncurrent assets	123,586	123,574
Total Assets	\$ 1,863,696	\$ 1,785,883
LIABILITIES AND EQUITY		
Current Liabilities		
Accounts payable	\$ 31,263	\$ 45,759
Accounts payable to affiliated companies	22,391	17,503
Notes payable to affiliated companies	85,688	38,875
Taxes accrued	9,192	18,143
Interest accrued	6,194	6,115
Current maturities of long-term debt	100,000	100,396
Asset retirement obligations	6,296	6,448
Regulatory liabilities	18,294	14,294
Other	23,943	19,291
Total current liabilities	303,261	266,824
Long-Term Debt	424,606	424,714
Long-Term Debt Payable to Affiliated Companies	25,000	25,000
Operating Lease Liabilities	9,128	—
Other Noncurrent Liabilities		
Deferred income taxes	227,922	214,718
Asset retirement obligations	51,563	56,378
Regulatory liabilities	146,564	156,115
Accrued pension and other post-retirement benefit costs	26,599	21,734
Other	25,356	24,177
Total other noncurrent liabilities	478,004	473,122
Commitments and Contingencies		
Equity		
Common Stock, \$15.00 par value, 1,000,000 shares authorized and 585,333 shares outstanding	8,780	8,780
Additional paid-in-capital	217,494	217,494
Retained earnings	397,423	369,949
Total equity	623,697	596,223
Total Liabilities and Equity	\$ 1,863,696	\$ 1,785,883

**Oakbrook to Aero
Transmission Line Project**

Line Route Evaluation Report for
Detailed Project No. M18007706




Prepared for:
Duke Energy
139 East Main Street
Cincinnati, OH 45202

Prepared by:
Stantec Consulting Services Inc.


July 8, 2019

Sign-off Sheet


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OAKBROOK TO AERO TRANSMISSION LINE PROJECT

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OAKBROOK TO AERO TRANSMISSION LINE PROJECT

Executive Summary

Stantec was retained by Duke Energy Kentucky, Inc., (Duke Energy Kentucky) to conduct a line route evaluation (LRE) for the Oakbrook to Aero Transmission Line Project located in Boone County, Kentucky. The new 138-kV line is needed to feed the proposed Aero Substation and projected customer demand near the Cincinnati/Northern Kentucky International Airport (CVG Airport) in fast-growing Boone County.

The LRE process included the identification of an approximately 1.3-square mile Study Area, data collection, Alternative Route analysis, and the selection of a Preferred Route. Through the LRE process, four Alternative Routes (Routes A to D) were identified. An analysis was performed in which Ecology, Land Use, Cultural, and Engineering constraints were identified, calculated, and then weighted based on sensitivity to electrical transmission line construction. Overall scores were calculated and then the route options were ranked.

Route A was selected as the Preferred Route for the Oakbrook to Aero 138 kV transmission line. While Route A did not have the lowest overall score, it was a close second to the lowest scored Route B. Route A was best in Ecology and Engineering categories and similar in the Cultural category to other top scoring routes. Route A had relatively higher scores in the Land Use category, but this was strongly impacted by being sited on CVG Airport property. While this normally would be an impediment to siting a new electrical transmission line, the Amazon Prime Air Hub development at the CVG Airport requires additional access to reliable electric service and the affected property owners were amenable to providing an easement for Route A. Furthermore, trees along Route A have already been cleared as part of the new development, and by selecting Route A, Duke Energy Kentucky would avoid clearing additional trees. Route B ranked best overall, with a total score of 19.34 and was also a viable route for the new project; however, siting Route B would affect owners on properties that are planned for future development. By selecting Route A, Duke Energy Kentucky was able to integrate with existing development plans and work with the property owners to establish a solution that works for all parties.

OAKBROOK TO AERO TRANSMISSION LINE PROJECT

Abbreviations

Duke Energy Kentucky	Duke Energy Kentucky, Inc.
EMF	Electromagnetic Fields
GIS	Geographic Information System
KV	Kilovolt
KHC	Kentucky Heritage Council
KYOSA	Kentucky Office of State Archaeology
LRE	Line Route Evaluation
NHD	United States Geological Survey National Hydrologic Dataset
NWI	United States Fish and Wildlife Service National Wetlands Inventory
PAB	Palustrine Aquatic Bed
PEM	Palustrine Emergent Wetland
PFO	Palustrine Forested Wetland
PSS	Palustrine Scrub-Shrub Wetland
ROW	Right-of-Way
Stantec	Stantec Consulting Services Inc
T&E	Threatened and Endangered Species
USDA	United States Department of Agriculture
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey

OAKBROOK TO AERO TRANSMISSION LINE PROJECT

1.0 INTRODUCTION

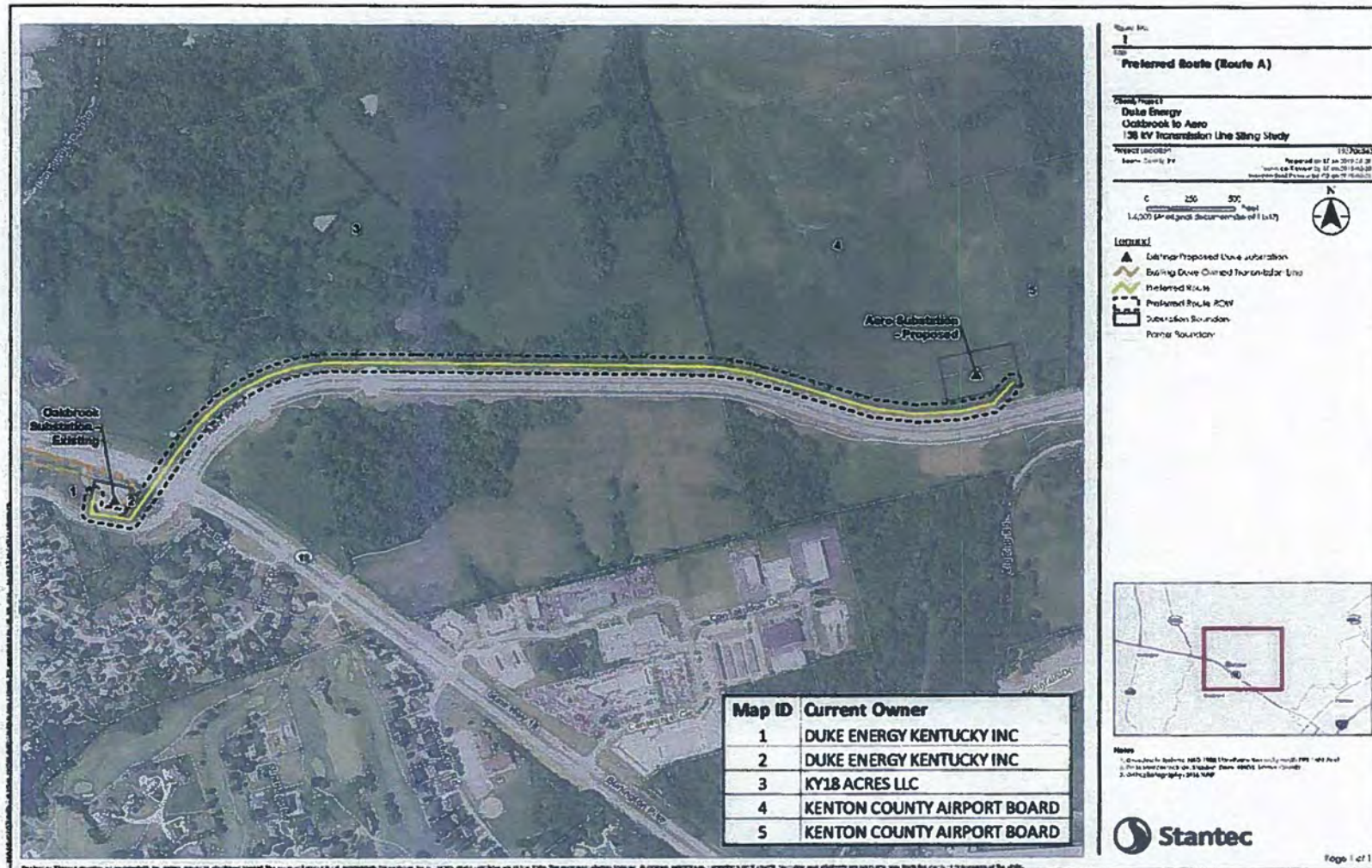
1.1 PROPOSED ACTION

Duke Energy Kentucky is planning to construct and operate a new 138 kilovolt (kV) overhead transmission line in Boone County, Kentucky. The new line will begin at the existing Oakbrook Substation and continue northeast over Burlington Pike (State Route 18) and then east approximately 1 mile to the proposed Aero Substation on the north side of Aero Parkway (State Route 1017). The overall route will be approximately 1.1 linear miles.

This project is one of two new 138 kV lines proposed for the area that are needed to support commercial and residential development, including the construction and operation of a new Amazon Prime Air Hub located on the Cincinnati/Northern Kentucky International Airport (CVG Airport) property. The line will consist of monopole structures and will require new, 100-foot-wide transmission line right-of-way (ROW). The ROW will be reduced to 75 feet where it parallels existing road ROWs. Duke Energy Kentucky's Preferred Route, Route A, exits the Oakbrook Substation to the south where it then turns east and then north, following the northern side of Oakbrook Drive until it crosses Burlington Pike. After crossing Burlington Pike, the route parallels the north side of Aero Parkway for approximately 1 mile before reaching the proposed Aero Substation site (Figure 1. Preferred Route). The area is comprised of commercial, recreation, and airport zoning districts and was undergoing development for the Amazon Prime Air Hub at the time of the study.

Duke Energy Kentucky retained Stantec to perform a line route evaluation (LRE) to identify and evaluate potential routes for the Oakbrook to Aero Transmission Line Project. This process reviewed four Alternative Routes (Figure 2, Appendix A) and culminated with Route A, as described above, being selected as the Preferred Route. The complete LRE process is described in more detail in the sections to follow.

OAKBROOK TO AERO TRANSMISSION LINE PROJECT



Scale: 1:10,000

Preferred Route (Route A)

Client/Project
 Duke Energy
 Oakbrook to Aero
 138 KV Transmission Line Siting Study

Project Location
 Kenton County, KY

Prepared on: 12/14/2019
Drawn by: J. R. [unreadable]
Checked by: J. R. [unreadable]

Scale: 1:10,000
 1:10,000 (Graphic Scale: 1 inch = 1,000 feet)

Legend:

- ▲ Existing Proposed Line Substation
- ▲ Existing Overhead Transmission Line
- Preferred Route
- Preferred Route ROW
- Substation Boundary
- Property Boundary

Notes:

1. This map is based on GIS data provided by the client.
2. All other data is from public sources.

Stantec

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OAKBROOK TO AERO TRANSMISSION LINE PROJECT

1.2 LRE PROCESS AND METHODOLOGY REVIEW

LRE is an iterative process in which information is compiled, analyzed, and communicated to identify a Preferred Route. This report provides a summary of:

- the opportunities and constraints in the project Study Area that shaped the development of Alternative Routes;
- the decision-making process that led to the selection of the Preferred Route; and
- the potential impacts of the Preferred Route on the natural and human environment.

The siting team that conducted the LRE was multidisciplinary, consisting of members from Duke Energy Kentucky and Stantec experienced in transmission line siting, planning, engineering, permitting, public engagement, project management, real estate, and agency and public outreach. Four potential routes were identified and vetted by Stantec and Duke Energy Kentucky subject matter experts. Because Duke Energy Kentucky had willing landowners for the easements, it was decided that no public meeting to review Alternative Routes would be conducted. Discussions with those landowners were ongoing at the time of this report. Stantec conducted a weighted analysis of opportunities and constraints data. Following the analysis, the routes were ranked and reviewed along with landowner feedback and agency correspondence to determine the Preferred Route. Each step in this process is further detailed in Section 2.

OAKBROOK TO AERO TRANSMISSION LINE PROJECT

2.0 ALTERNATIVES DEVELOPMENT

2.1 STUDY AREA DESCRIPTION

The 1.3-square mile Study Area is in an unincorporated portion of Boone County, Kentucky and encompasses the proposed Aero Substation and the existing Oakbrook Substation (Figure 3. Study Area, Appendix A).

The Study Area is characterized by mixed residential and commercial development, interspersed by hay fields, fallow fields, and woodlots. Existing development includes the Boone Links Golf Course, CVG Airport, suburban housing development, warehouse facilities, car dealerships, storage facilities, restaurants, and other retail buildings. Major travel corridors include Burlington Pike and Aero Parkway. Buried utilities, including water, sanitary sewer, and storm sewer lines, are sited along most roadsides in the Study Area.

United States Fish and Wildlife Service National Wetland Inventory (USFWS, NWI) data indicates minimal presence of wetlands and other jurisdictional wetland or water features. The land on the north side of Aero Parkway was partially forested, but due to planned construction for the Amazon Prime Air Hub, those trees had been recently cleared at the time of the study.

2.2 SITING GUIDELINES

The siting team developed the siting guidelines below to be applied throughout the LRE process:

- Minimize the removal or substantial interference with the use of existing residences;
- Minimize the removal of existing barns, garages, commercial buildings, and other non-residential structures;
Minimize interference with the use and operation of existing schools, recognized places of worship, cemeteries, and facilities used for cultural, historical, and recreational purposes;
- Minimize interference with economic activities, including agricultural and silvicultural activities;
- Minimize the crossing of environmentally and culturally sensitive lands, such as recreation lands, designated battlefields and other designated historic sites, national and state forests and parks, nature preserves, conservation lands and easements, large lakes and large wetland complexes, critical habitat, and other unique or distinct natural resources;
- Where crossings of sensitive lands are unavoidable, maximize the use of existing crossings;
- Minimize substantial visual impact on residential areas and public resources; and
- Minimize route length, circuitry, cost, and special design requirements.

OAKBROOK TO AERO TRANSMISSION LINE PROJECT

2.3 ALTERNATIVE ROUTE DEVELOPMENT

2.3.1 Data Collection

Upon identification of the Study Area and development of the siting guidelines, a project Geographic Information System (GIS) was compiled from publicly available data sets. Multiple sources of information were consulted during the LRE process and are listed below in Table 1.

Stantec obtained data from federal and state agencies to identify environmentally sensitive features and imperiled species locations within the Study Area (Appendix B). The Kentucky Natural Heritage Program (KNHP) was contacted to determine if any of the endangered, threatened, or special concern plants and animals or exemplary natural communities monitored by the Office of Kentucky Nature Preserves occur within the Study Area. The KNHP identified two species that may occur in the Study Area; the vesper sparrow (*Pooecetes graminus*) and northern leopard frog (*Rana pipiens*). The KNHP went on to note that many natural areas in Kentucky have never been surveyed thoroughly and as such, they could not provide a definitive statement on the presence, absence, or condition of biological elements in any part of Kentucky. The last observation of within the Study Area for the vesper sparrow was in 1950 and in 1934 for the northern leopard frog.

Based on available information from the USFWS, there was the potential for 14 protected species to be present within the Study Area. These species include the gray bat (*Myotis grisescens*), Indiana bat (*Myotis sodalis*), northern long-eared bat (*Myotis septentrionalis*), clubshell (*Pleurobema clava*), fanshell (*Cyprogenia stegaria*), northern riffleshell (*Epioblasma torulosa rangiana*), orangefoot pimpleback (*Plethobasus cooperianus*), purple cat's paw (*Epioblasma obliquata obliquata*), rabbitsfoot (*Quadrula cylindrica cylindrica*), ring pink (*Obovaria retusa*), rough pigtoe (*Pleurobema plenum*), sheepnose (*Plethobasus cyphus*), spectaclecase (*Cumberlandia monodonta*), and running buffalo clover (*Trifolium stoloniferum*). Due to the lack of perennial streams and the nature of the project, it is unlikely that the project will impact any of the nine mussel species. Potential suitable bat habitat may exist within the Study Area, but due to tree clearing that has already occurred along the Preferred Route it is unlikely there will be impacts to these species as a result of construction of the project. Due to the nature of the earthwork that has already taken place along the Preferred Route, it is unlikely the running buffalo clover would be found in these areas.

Stantec submitted a request on behalf of Duke Energy Kentucky to Boone County to obtain utilities data within the Study Area. Boone County provided GIS shapefiles of city utilities and a map of these features was produced for Duke Energy Kentucky's use in project planning and engineering (Figure 4. Ecology and Engineering Constraints Map, Appendix A).

Stantec contacted the Kentucky Heritage Council (KHC), Kentucky Office of State Archaeology (KYOSA), and the National Register of Historic Places (NRHP) to conduct a Cultural Resources Management Literature Review to obtain information regarding nearby cultural and historic resources. There were no NRHP listed sites or cemeteries identified within the Study Area

OAKBROOK TO AERO TRANSMISSION LINE PROJECT

(Appendix B). There was one state-listed resource within 1,000 feet of the centerlines for Routes A through C and three state-listed resources within 1,000 feet of the centerline for Route D (Figure 5. Social and Land Use Constraints Map, Appendix A). The state-listed cultural resources were all listed as undetermined.

Table 1. Data Sources

Sub-Category	Agency Source	Acquisition Date	Vintage Date	Notes
Aerial Imagery	NAIP	Streaming Service	2017	
Airport Boundary	CVG Master Plan	2/15/2019	6/20/2013	
Airport Runway Protection Zone	CVG Master Plan	2/15/2019	6/20/2013	
Archaeology Sites	Kentucky Office of State Archaeology	1/28/2019	1/28/2019	
Cemeteries	ESRI Boone County, KY	1/4/2019 03/2019	2/5/2018	Verified cemetery locations via Boone County GIS data viewer
Contours	USDA	1/2/2019	1/2/2019	Derived from LIDAR Elevation Dataset
County Land Use Data	Boone County, KY	1/23/2019	2009	
Existing Transmission Lines	Duke Energy	1/8/2019	1/8/2019	
Floodplain	Federal Emergency Management Agency	1/3/2019	6/29/2017	
Forested Areas	Digitized from NAIP 2016	5/22/2019	5/22/2019	Digitized from NAIP Imagery, confirmed clearing along north side of Aero Parkway 04/2019
Institutions - Schools	ESRI	1/4/2019	2/5/2018	Field verified 04/2019
Institutions - Places of worship	ESRI	1/4/2019	2/5/2018	Field verified 04/2019
Institutions - Hospitals	ESRI	1/4/2019	2/5/2018	Field verified 04/2019
Institutions -Daycares	ESRI	1/4/2019	2/5/2018	Field verified 04/2019
Local Recreational Trails	Kentucky Infrastructure Authority	1/4/2019	11/15/2007	
Local Roads	Kentucky Transportation Cabinet, Planning	1/4/2019	2015	
LIDAR 2 Meter Elevation Dataset	USDA	1/3/2019	2015	
Municipal Sanitary Sewer	Boone County, KY	1/23/2019	1/23/2019	
Municipal Storm Sewer	Boone County, KY	1/23/2019	1/23/2019	
Municipal Waterlines	Boone County, KY	1/23/2019	1/23/2019	
NADS Roads	North America Detailed Streets	3/15/2011	2005	
NPMS Pipelines	NPMS Public Viewer	1/4/2019	1/4/2019	
NRHP Listed Resources	NRHP	1/4/2019	10/20/2017	
Property Crossed	Duke Real estate/Boone County GIS	4/9/2019	4/9/2019	

OAKBROOK TO AERO TRANSMISSION LINE PROJECT

Sub-Category	Agency Source	Acquisition Date	Vintage Date	Notes
Residences	Microsoft	1/3/2019	Bing imagery date	Field verified 04/2019
Recreational Areas - Golf Courses	Duke Real estate/Boone County GIS	4/9/2019	4/9/2019	Extracted boundary from parcel data
Slope	USDA	1/3/2019	1/3/2019	Derived from LiDAR Elevation Dataset
Stated Listed Cultural Resources	Kentucky Heritage Council	2/11/2019	2/11/2019	
Streams	USGS National Hydrography Dataset	1/3/2019	10/1/2018	Field verified 04/2019
Stream/River Area	USGS National Hydrography Dataset	1/3/2019	10/1/2018	Field verified 04/2019
Threatened and Endangered Species	USFWS IPaC Planning Tool KY State Nature Preserves Commission	1/31/2019 1/18/2019	1/31/2019 1/18/2019	
Waterbodies	USGS National Hydrography Dataset	1/3/2019	10/1/2018	Field verified 04/2019
Wetlands	USFWS National Wetland Inventory	1/3/2019	10/1/2018	Field verified 04/2019
Wildlife Management Areas	KY Dept of Fish and Wildlife Resources	1/3/2019	1/5/2016	

USDA- United States Department of Agriculture, USGS- United States Geological Survey.

2.3.2 Field Reconnaissance

The Duke Energy Kentucky and Stantec siting leads, John Hurd and Bryan Thiermann, visited the site on January 9, 2019 to conduct an initial review of transmission siting opportunities and constraints in the region. A detailed field reconnaissance of the Alternative Routes was then conducted to verify the data compiled in the project GIS. The field reconnaissance was conducted on April 9th and 10th, 2019 by Nathan Noland and Aaron Kwolek of Stantec from public rights-of-way. Observers did not enter private property. During the reconnaissance, sensitive receptors (residences, schools, and churches) were verified and photographs were taken to document existing site conditions. A photo location map characterizing select features in the Study Area is included in Appendix A (Figure 6. Photo Location Map). A photograph log that corresponds to the photo location map is included in Appendix C.

2.3.3 Public and Stakeholder Outreach

Duke Energy Kentucky met with Amazon Prime Air Hub and CVG Airport representatives to discuss siting the transmission line on their properties. The new Amazon Prime Air Hub facility at the airport requires this project for an additional, reliable source of power. Consequently, Amazon was amenable to accommodate the required transmission line ROW. Because Duke Energy Kentucky had willing landowners for the easements, it was decided that no public meeting to review Alternative Routes would be conducted.

OAKBROOK TO AERO TRANSMISSION LINE PROJECT

3.0 COMPARATIVE EVALUATION

Following field reconnaissance and discussions with CVG Airport and Amazon, the four Alternative Routes were evaluated in a weighted analysis.

The analysis began by identifying and grouping the opportunities and constraint data that had been assembled as part of the project GIS. Opportunities and constraints data were classified into three tiers (Criteria Group, Criteria, and Sub-Criteria) and then weighted with regards to sensitivity to electrical transmission line construction and operation. These weights were based on Duke Energy Kentucky and Stantec's experience and stakeholder engagement from prior projects in addition to the nature of the project Study Area. Table 2 shows the criteria groups, criteria, and sub-criteria used in the weighted analysis for this project.

Table 2. Criteria Group, Criteria, and Sub-Criteria Weights

Criteria Group & Weight		Criteria & Weight		Sub-Criteria & Weight	
Ecology	30%	Wetlands	20%	Acres of PFO/PSS wetlands in ROW	70%
				Acres of PEM, PAB, PUB wetlands and riverine in ROW	30%
		Streams	30%	Number of streams crossed	100%
		Land Cover	35%	Acres of forested land within ROW	100%
		Protected Species	5%	Count of Federal & state T&E occurrences within 1,000 feet of centerline	100%
				Floodplain	10%
Linear feet of 100-year floodplain crossed by centerline	15%				
Land Use	45%	Residences	30%	Number of residences within the ROW	50%
				Number of residences within 200 feet of ROW	35%
				Number of residences between 200-500 feet of ROW	15%
		Properties	5%	Number of properties crossed by ROW	100%
		Institutional Uses	15%	Number of institutional uses crossed by centerline	70%
				Number of institutional uses within 1,000 feet of centerline	30%
		Sensitive Lands	20%	Acres of sensitive lands within ROW	70%
				Acres of sensitive lands within 1,000 feet of centerline	30%

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Criteria Group & Weight		Criteria & Weight		Sub-Criteria & Weight	
Land Use	45%	Agricultural & Industrial Uses	15%	Acres of cultivated agricultural and other industrial uses in ROW	100%
		New easement required	5%	Acres of new easement required	100%
		Paralleling Linear Infrastructure	10%	Percent of centerline not paralleling existing transmission ROW	100%
Cultural	10%	NRHP Listed Resources	40%	Number of NRHP listed resources within 1,000 feet of centerline	100%
		State Architectural Resources	30%	Number of state historic resources within 1,000 feet of centerline	100%
		Archaeological Sites	15%	Number of known archaeological resources within 100 feet of centerline	100%
		Cemeteries	15%	Number of cemeteries within 100 feet of centerline	100%
Engineering	15%	Route Length	20%	Length of route in linear feet	100%
		Rail & Road Crossings	10%	Number of highway, road, or railroad crossings	100%
		Slope	15%	Linear feet of centerline within slope >20%	100%
		Angles	20%	Number of turn angles >20 degrees	100%
		Span	15%	Linear feet of longest span (if a span greater than 400 feet is required)	100%
		Asset Protection	20%	Percent of route within 75 feet of roadway	100%

PAB- Palustrine Aquatic Bed, PEM- Palustrine Emergent Wetland, PFO- Palustrine Forested Wetland, PSS- Palustrine Scrub/Shrub Wetland, T&E- Threatened and Endangered Species. Wetland types based on Cowardin classification (Cowardin et al. 1979). Sub-criteria with gray text indicate there were no data recorded for any of the routes.

Each sub-criterion was calculated by route and the raw data were normalized so that the data could be combined in the model. The following formula was used for the normalization:

$$\text{Normalized Value for Criterion} = \text{value of criterion for route} / \text{maximum value for all routes}$$

An example is provided below:

Properties with unique ownership crossed by ROW for Route A = 5 / 13

Whereas: 5 is the number of properties with unique ownership for Route A
13 is the maximum number of properties with unique ownership for any route

There were no features present along any of the Alternative Routes for several of the sub-criteria, and therefore no data to calculate (grayed sub-criteria text in Table 2). Where there were multiple sub-criteria within a criterion, such as within residences, and there were no features to calculate for one of the sub-criteria, the weights of the other sub-criteria were adjusted in some cases to maintain their importance. For example, within residences, there are three sub-criteria but there were no features present for "Number of residences within the ROW." The weighting of that sub-criterion was made zero and its weight was applied proportionally to "Number of

OAKBROOK TO AERO TRANSMISSION LINE PROJECT

residences within 200 feet of the ROW" and "Number of residences within 200-500 feet of the ROW." All criteria shown in Table 3 reflect the final, adjusted weights used in the analysis.

The weighted multiplier was then applied to the normalized value to arrive at a score for that sub-criterion. The weighted multipliers for each sub-criterion were established by multiplying the criteria group, criteria, and sub-criteria weights together. For example, the weighted multiplier for the "Number of properties with unique ownership" sub-criterion was 0.0225, whereby the sub-criteria weight of 100 percent was multiplied by Properties Crossed criteria weight of 5 percent and the Land Use criteria group weight of 45 percent. The sub-criterion scores for each route were then added together to arrive at an overall score for that route.

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Table 3. Alternative Route Data

Route	Ecology									Land Use								
	Wetlands			Streams			Forest			Residences						Properties Crossed		
	PEM, PAB, PUB and riverine in ROW (acres)			Stream crossings by centerline (count)			Forested land in ROW (acres)			Residential buildings within 200 feet of ROW (count)			Residential buildings within 200-500 feet of ROW (count)			Properties with unique ownership crossed by ROW (count)		
Criteria Group Weight:	30%			30%			30%			45%			45%			45%		
Criteria Weight:	33%			23%			30%			40%			40%			5%		
Sub-Criteria Weight:	100%			100%			100%			75%			25%			100%		
Weighted Multiplier:	0.0975			0.0675			0.0900			0.1350			0.0450			0.0225		
Routes	Value	Normalized	Weighted Value	Value	Normalized	Weighted Value	Value	Normalized	Weighted Value	Value	Normalized	Weighted Value	Value	Normalized	Weighted Value	Value	Normalized	Weighted Value
A	0	0	0	0	0	0	0.33	0	0	0	0	0	20	0	0	3	0	0.00
B	0	0	0	0	0	0	1.75	21.35	1.92	0	0	0	21	5.56	0.25	4	12.50	0.28
C	0.05	86	8.38	2	67	4.5	4.42	61.50	5.54	0	0	0	30	55.56	2.50	5	25	0.56
D	0.06	100	9.75	3	100	6.75	6.98	100	9	1	100	13.50	38	100	4.50	11	100	2.25
Minimum	0	-	-	0	-	-	0.33	-	-	0	-	-	20	-	-	5	-	-
Maximum	0.06	-	-	3	-	-	6.98	-	-	1	-	-	38	-	-	11	-	-
Criteria Description:	National Wetland Inventory Data PEM, PAB, PUB and Riverine wetlands. Wetland feature presence not verified during field reconnaissance.			National Hydrography Dataset perennial (46006) and intermittent (46003) streams. Visually inspected other stream categories for evidence of stream channel on aerial. Stream feature presence verified during field reconnaissance where possible.			Forested land digitized from most recent Aerial Imagery (NAIP).			Occupied single family and multi-family residential dwellings. Dwelling type was verified during field reconnaissance.			Occupied single family and multi-family residential dwellings. Dwelling type was verified during field reconnaissance.			Parcels that intersect the ROW dissolved by owner (one owner with multiple parcels counted once).		

Data only shown for sub-criterion with calculated values.

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Table 3. Alternative Route Data (Continued)

Route	Land Use															Cultural		
	Institutional Land Use			Sensitive Areas						Agriculture & Industrial Uses			Paralleling Existing Transmission			State Listed Resources		
	Institutional uses within 1,000 feet of centerline (count)			Sensitive areas within ROW (acres)			Sensitive areas within 1,000 feet of ROW (acres)			Agricultural land and industrial uses in ROW (acres)			Length not paralleling existing transmission ROW (percent of total length)			State listed cultural resources within 1,000 feet of centerline (count)		
Criteria Group Weight:	45%			45%			45%			45%			45%			10%		
Criteria Weight:	5%			35%			35%			5%			10%			30%		
Sub-Criteria Weight:	100%			70%			30%			100%			100%			100%		
Weighted Multiplier:	0.0225			0.1103			0.0473			0.0225			0.0450			0.0300		
Routes	Value	Normalized	Weighted Value	Value	Normalized	Weighted Value	Value	Normalized	Weighted Value	Value	Normalized	Weighted Value	Value	Normalized	Weighted Value	Value	Normalized	Weighted Value
A	0	0	0	3.25	100	11.03	60.64	100	4.73	7.18	5.66	0.13	100	0	0	1	0	0
B	1	25	0.56	1.45	32.58	3.59	56.13	35.00	1.68	7.15	0	0	100	0	0	1	0	0
C	4	100	2.25	0.58	0	0	55.30	24.00	1.12	7.16	1.89	0.04	100	0	0	1	0	0
D	4	100	2.25	0.58	0	0	53.65	0	0	7.68	100	2.25	100	0	0	3	100	3
Minimum	0	--	--	0.58	--	--	54.23	--	--	7.15	--	--	100	--	--	1	--	--
Maximum	4	--	--	3.25	--	--	63.89	--	--	7.68	--	--	100	--	--	3	--	--
Criteria Description:	Schools, hospitals, churches, childcare institutional land uses within 1000 feet of centerline. For example, two buildings in a school complex would be counted as one. Institutions were verified during field reconnaissance.			Parks, preserves, trails, agency-managed areas, golf courses and airport property within ROW.			Parks, preserves, trails, agency-managed areas, golf courses, and airport property within 1,000 feet of ROW.			Agricultural and industrial land use was determined by the Boone County's 2009 land use data.						Kentucky Heritage Council historic structures. All structures had undetermined status.		

Data only shown for sub-criterion with calculated values.

OAKBROOK TO AERO TRANSMISSION LINE PROJECT

Table 3. Alternative Route Data (Continued)

Route	Engineering											
	Route Length			Highway and Rail Crossings			Turn Angles			Asset Protection		
	Route length (feet)			Highway or railroad crossings (count)			Turn angles > 20 degrees (count)			Route length within 75 feet of a road (percent of total length)		
Criteria Group Weight:	15%			15%			15%			15%		
Criteria Weight:	20%			10%			20%			20%		
Sub-Criteria Weight:	100%			100%			100%			100%		
Weighted Multiplier:	0.0300			0.0150			0.0300			0.0300		
Routes	Value	Normalized	Weighted Value	Value	Normalized	Weighted Value	Value	Normalized	Weighted Value	Value	Normalized	Weighted Value
A	5,881	0	0	1	0	0	3.00	0	0	91.5	100	2.99
B	6,056	8	0.24	3	100	1.5	6.00	100	3	91.7	100	3.00
C	6,372	22	0.66	3	100	1.5	6.00	100	3	40.1	0	0.00
D	8,109	100	3	3	100	1.5	6.00	100	3	60.2	39	0.88
Minimum	5,881	--	--	1.00	--	--	3.00	--	--	40.1	--	--
Maximum	8,109	--	--	3.00	--	--	6.00	--	--	91.7	--	--
Criteria Description:	Length determined by route centerline.			Included Aero Parkway and Burlington Pike road crossings. The Study Area did not include railroads.			Turn angles were measured at each point of inflection along the route.			Determined by identifying overlap between project ROW and road ROW. For 138 kV or above, paralleling a road is considered undesirable.		

Data only shown for sub-criterion with calculated values.

OAKBROOK TO AERO TRANSMISSION LINE PROJECT

4.0 RESULTS AND DISCUSSION

Once an overall score was established for each of the four Alternative Routes, the routes were ranked with the lowest score being the top ranked route. The scores are not considered a definitive comparison of routes. Rather, they provide a useful index of the relative overall impact associated with the Alternative Routes. The goal is to identify the least impactful route, using both the weighted analysis and unquantifiable features of the routes as identified through field reconnaissance and landowner interactions. The results of the weighted analysis and ranks are shown in Table 4 and Figure 7, below. Route B scored the best overall, followed closely by Route A. Route C was third and Route D was fourth.

The Ecology criteria group was most strongly affected by wetlands, streams, and forested land in the ROW. Impacts to forested land resulted in poorer scores for Routes C and D. Route A had the least impacts to forested land because trees had already been cleared in advance of development associated with the Amazon Prime Air Hub development. It is likely that impacts to wetlands and streams would be avoided for all routes, and therefore was not a deciding factor.

Route A was strongly affected in the Land Use criteria group by crossing the CVG Airport property, which was included in the sensitive land's designation. However, the property owner has agreed to grant an easement to build the transmission line and substation on airport property, and therefore this impact was mitigated. If proximity to airports was removed from the sensitive areas calculation, Route A would have scored the best in the Land Use criteria group, and overall.

Routes C and D were closer to more residential buildings, which were primarily on the southwest side of Burlington Pike in a neighborhood near Oakbrook Substation. Routes C and D also passed by more commercial buildings. There is a bike trail that all four routes cross, but the trail itself parallels the south side of Aero Parkway and would run adjacent to Route B for most of the route.

The results of the Cultural data search did not strongly affect the decision-making process. While several resources were recorded in the Study Area, they were all listed as undetermined (Appendix B). Most were buildings along Zig Zag Road.

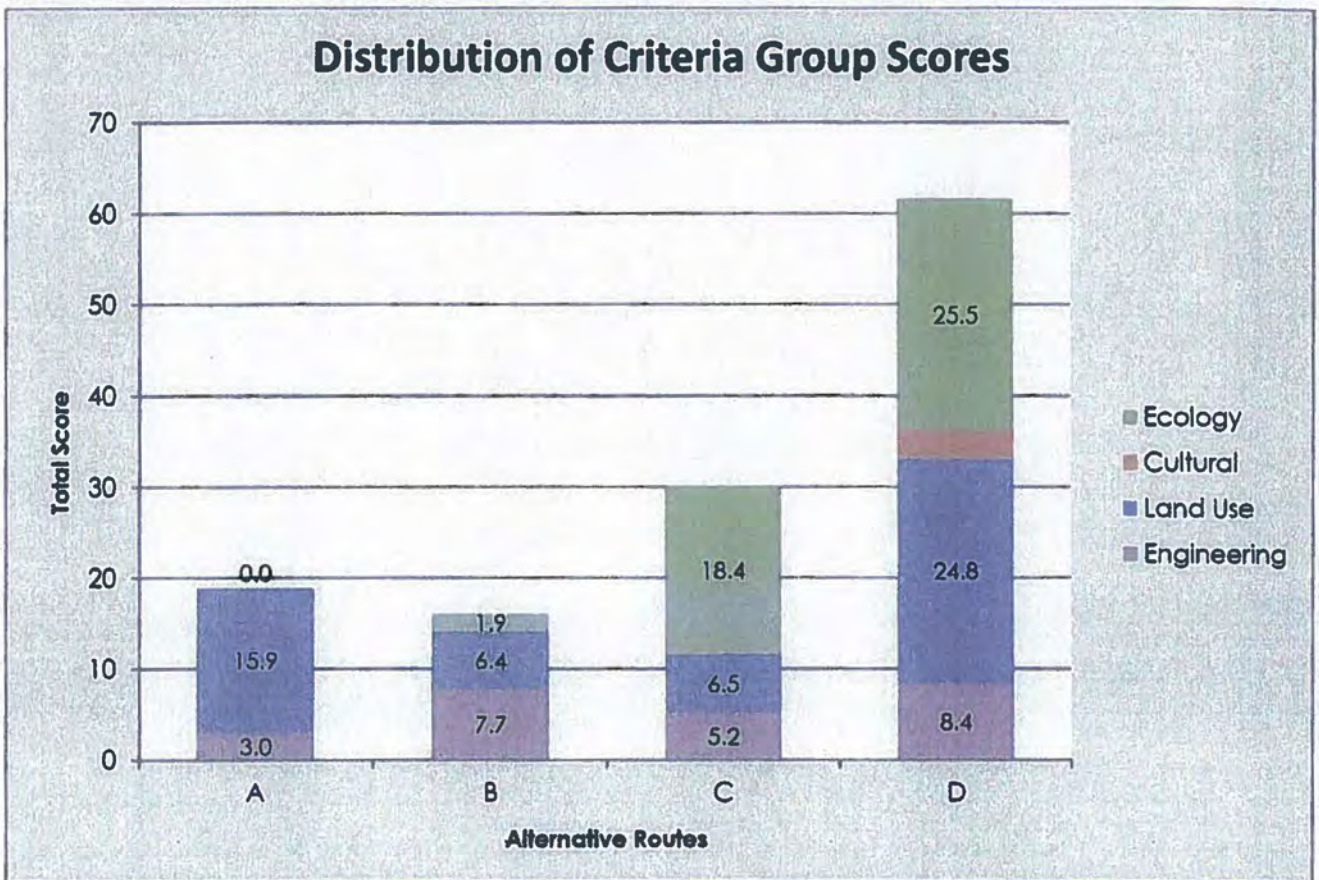
Route A scored first in the Engineering category because it was the shortest of the four routes and had only one highway crossing. Route A also had the fewest number of hard angles. Routes B and C were slightly longer and each had three highway crossings, while Route D was substantially longer. All routes paralleled either Aero Parkway or Burlington Pike for some portion of their ROW, but Routes A and B were essentially roadside. Roadside siting is considered less optimal for voltages of 138kV or above because it may constrain access to the transmission line during construction and operations. There is a risk that transmission lines sited along roads may need to be relocated at a future date due to road widening.

OAKBROOK TO AERO TRANSMISSION LINE PROJECT

Table 4. Results of Weighted Analysis

Route	Ecology		Land Use		Cultural		Engineering		Total	
	Score	Rank	Score	Rank	Score	Rank	Score	Rank	Score	Rank
A	0.0	1	15.9	3	0	1	3.0	1	18.86	2
B	1.9	2	6.4	1	0	1	7.7	3	16.02	1
C	18.4	3	6.5	2	0	1	5.2	2	30.04	3
D	25.5	4	24.8	4	3	4	8.4	4	61.63	4

Figure 7. Distribution of Criteria Group Scores



OAKBROOK TO AERO TRANSMISSION LINE PROJECT

4.1 PREFERRED ROUTE SELECTION

Route A was selected as the Preferred Route for the Oakbrook to Aero Transmission Line Project. While Route A did not have the lowest overall score, it was a close second to Route B. Route A was best in Ecology and Engineering categories and similar in the Cultural category to other top scoring routes. It had relatively higher scores in the Land Use category, but this was strongly impacted by being sited on CVG Airport property. While this normally would be an impediment to siting a new transmission line, development associated with the CVG Airport requires additional access to reliable electric service and the affected property owners were amenable to providing an easement for Route A. Furthermore, trees along Route A have already been cleared as part of the new development, and by selecting Route A, Duke Energy Kentucky would avoid clearing additional trees. Route B ranked best overall, with a total score of 16.02 and was also a viable route for the new project; however, siting Route B would affect owners on properties that are planned for future development. By selecting Route A, Duke Energy Kentucky was able to integrate with existing development plans and work with the property owners to establish a mutually beneficial solution. It is recommended that Duke Energy Kentucky remain in close contact with municipal authorities and affected property owners to ensure that pole siting does not interfere with existing or proposed underground utilities. Further, as the project moves to construction, it is recommended that Duke Energy Kentucky coordinate with the appropriate roadway authorities to confirm that pole placement does not encroach on clear zones and that future road widening projects are taken into consideration.

OAKBROOK TO AERO TRANSMISSION LINE PROJECT

5.0 REFERENCES

- Boone County Planning Commission. (2019). Zoning, Underground and Municipal Utilities, Land Use, Parcel Data. Boone County GIS. <http://boonecountygis.com/>. Accessed January 2019.
- Duke System Data. (2019). *Existing_Transmission_Shapefiles.zip* [January 2019]. Provided via e-mail.
- Environmental Systems Research Institute (Esri), TomTom North America, Inc., and U.S. Census Bureau. (2019). *USA Institutions, USA Schools, USA Churches, USA Hospitals, Cemeteries*. Retrieved from <https://www.arcgis.com/home>. Accessed January 2019.
- Federal Emergency Management Agency (FEMA). (2007). *National Flood Hazard Layer*. Boone County, Kentucky. Retrieved from <https://msc.fema.gov/portal>. Accessed January 2019.
- Kentucky Heritage Council (KHC). (2019). Division of Historic Resources. *Historic Sites in Kentucky*. Retrieved from <https://heritage.ky.gov/Pages/index.aspx>. Accessed February 2019.
- Kentucky Office of State Archaeology (KYOSA). (2019). *Archaeology Sites in Kentucky*. Retrieved from <https://anthropology.as.uky.edu/recorded-archaeological-sites>. Accessed January 2019.
- Kentucky Infrastructure Authority. (2007). Local Recreational Trails. Retrieved from <https://kygeoportal.ky.gov/geoportal/catalog/search/resource/details.page?uuid=%7BAA0648E0-DB04-4869-A4F3-433C6004E268%7D>. Accessed January 2019.
- Kentucky Transportation Cabinet, Planning. (2019). *Local Roads*. Retrieved from <https://kygeoportal.ky.gov/geoportal/catalog/search/resource/details.page?uuid=%7B7ZFA4A09-10DB-45A9-8D8A-F6EAE024F754%7D>. Accessed January 2019.
- National Register of Historic Places. (2017). *Historic Buildings and Cultural Resource Buildings*. Retrieved from <https://www.nps.gov/subjects/nationalregister/index.htm>. Accessed January 2019.
- U.S. Department of Agriculture (USDA). (2019). *Hillshade, Slope, Contours*. Retrieved from <https://www.nrcs.usda.gov/wps/portal/nrcs/main/national/nace/elevation/>. Accessed January 2019.
- U.S. Department of Agriculture (USDA). (2019). Boone County, Kentucky Soils. Retrieved from <https://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm>. Accessed January 2019.
- U.S. Department of Agriculture (USDA). (2017). *National Agriculture Imagery Program (NAIP)*. Retrieved from <https://naip.arcgis.com/arcgis/services/NAIP/ImageServer>. Accessed January 2019.

OAKBROOK TO AERO TRANSMISSION LINE PROJECT

- U.S. Department of Agriculture. (2019). *National Land Cover Database (NLCD)*. Retrieved from <https://catalog.data.gov/dataset/national-land-cover-database-nlcd-land-cover-collection>. Accessed January 2019.
- U.S. Department of Transportation. (2019). *National Pipeline Mapping System*. Retrieved from <https://www.npms.phmsa.dot.gov/>. Accessed January 2019.
- U.S. Fish & Wildlife Service. (2019). *National Wetlands Inventory (NWI)*. Retrieved from <https://www.fws.gov/wetlands/Data/Mapper.html>. Accessed January 2019.
- U.S. Fish & Wildlife Service. (2019). *IPaC Resource List*. Information for Planning and Consultation.
- U.S. Geological Survey (USGS). (2019). *National Hydrography Dataset (NHD)*. Retrieved from <https://nhd.usgs.gov/data.html>. Accessed January 2019.
- U.S. Geological Survey (USGS). (1984). *Burlington Quadrangle 7.5 Minute Topographic Map*. Retrieved from ArcGIS Online by Esri. Accessed January 2019.

APPENDIX A – FIGURES

Figure No.
2

Alternative Routes

Client/Project
Duke Energy
Outbrook to Astro
138 kV Transmission Line Siting Study
Project Location
Stanton County, KY
197705655
Prepared by ST on 03/14/2012
Reviewed by ST on 03/14/2012
Approved by ST on 03/14/2012
Submitted for Review on 03/14/2012



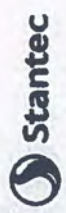
0 250 500 Feet
1:10,000 (at original document size of 11x17)

- Legend**
- Existing/Proposed Duke Substation
 - Alternative Route
 - Existing Duke Owned Transmission Line
 - Substation Boundary
 - Parcel Boundary



Notes

1. Duke Electric System, 600, 138 kV Transmission Network, March 1991, 1:62,500
2. Google Earth, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020
3. OpenStreetMap.org, 2018, 2019, 2020



Sheet No.
3

Study Area Map

Client/Project
Duke Energy
Outbrook to Aero
138 kV Transmission Line Siting Study
Project Location
Boone County, CT
18270443
Prepared by EIT on 2/14/17
Reviewed/Entered by EIT on 2/14/17
Approved/Entered by EIT on 2/14/17



Legend

- ▲ Existing/Proposed Duke Substation
- Existing Duke Owned Transmission Line
- ▭ Study Area
- ▨ Airport Property
- ▧ Boone Links Golf Course



Notes
1. Open Source Aerials - 2010 1:60,000 Scale, courtesy of ESRI, Inc.
2. 2014 1:60,000 Scale, courtesy of ESRI, Inc.
3. Cartography - July 2014



Figure No.
4

Environmental and Engineering Constraints

Client/Project:
Duke Energy
Outbrook to Aero
138 KV Transmission Line Siting Study
Project Location:
New Castle, VT
19770263
Prepared by B on 2/11/09
Horizontal Control by M on 2/11/09
Vertical Control by B on 2/11/09
Map Date: 2/11/09



0 250 500 Feet
1:4,000 (At original document size of 11x17)

- Legend**
- ▲ Bidding/Proposed Duke Substation
 - Alternative Route
 - Existing Duke Owned Transmission Line
 - Substation Boundary
 - Water Lines
 - Buried Storm Sewer Lines
 - Sewer Line
 - 10ft Elevation Contour
 - Parcel Boundary
 - NW1 Wetlands
 - FEMA Flood Hazard Areas
 - 100 Year Flood Zone
 - National Hydrography Dataset
 - Potential Intermittent
 - Waterbody



Map:
1. Contour Lines: 100, 1000
2. Contour Interval: 100
3. Contour Label: 100, 1000
4. Contour Color: Blue
5. Contour Style: Solid



Page 1 of 1

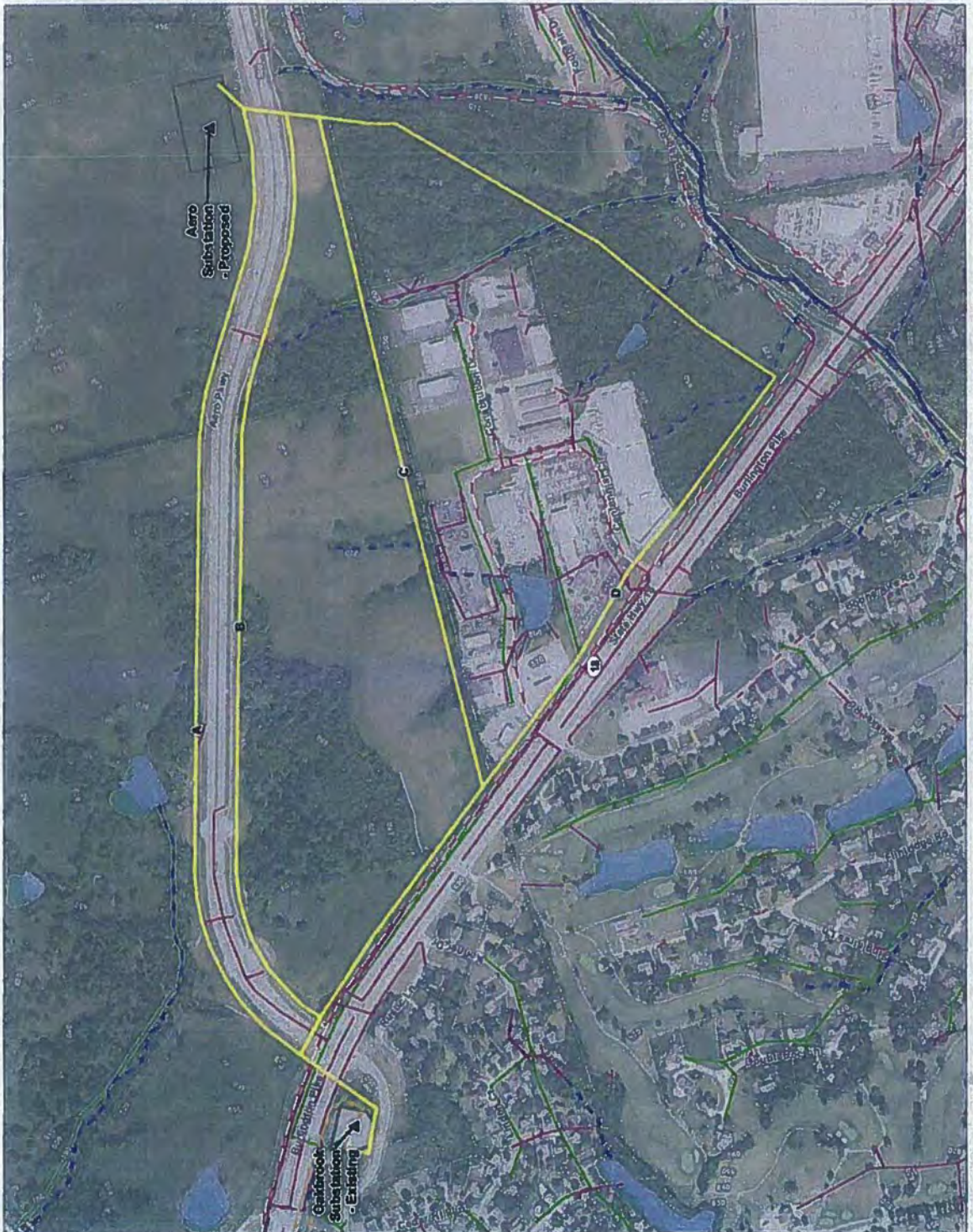
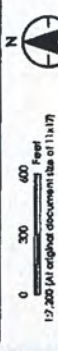


Figure No. 5

Social and Land Use Constraints

Client/Project
Duke Energy
Outbrook to Aero
138 KV Transmission Line Siting Study
Project Location
Irene County, VT
197006643
Prepared by EIT on 2014-05-28
Issued/Revised on 2014-05-28
Issued/Revised by EIT/CLM/2014/05/28



- Legend**
- Shifting/Proposed Duke Substation
 - Alternative Route
 - Existing Duke Owned Transmission Line
 - Substation Boundary
 - Parcel Boundary
 - RIC Historic Structures (Hoop Underlayment)
 - Aero Base Trail
 - Archaeological Site (NHP not assessed)
 - Airport Property
 - Zoning District
 - Commercial District
 - Employment District
 - Residential District
 - Public Facilities
 - Childs
 - Recreation District
 - Cemetery
 - Place of Worship
 - Daycare
 - Building Type
 - Church
 - Commercial
 - Daycare
 - Industrial
 - Single Family Residential
 - Multi-Family Residential



Map
1. Contour Interval: 100 Feet
2. Contour Interval: 100 Feet
3. Contour Interval: 100 Feet
4. Contour Interval: 100 Feet
5. Contour Interval: 100 Feet



Figure No.
6

Photo Location Map

**Duke Energy
Outbrook to Aero
138 KV Transmission Line Siting Study**

Project Location
Newark County, NY
13766-1117
Prepared by EUC on 2/14/05
Final Review by EUC on 2/14/05
Final Approval by EUC on 2/14/05

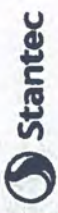


- Legend**
- Study Area
 - Existing/Proposed Duke Substation
 - Photo Location
 - Alternative Route
 - Existing Duke Owned Transmission Line
 - Substation Boundary
 - Parcel Boundary



Notes

1. Coordinate System: NAD 83 StatePlane New York Albany 1401 Feet
2. Data Source: ESRI, Inc. (2004) State Plane
3. Contour Interval: 20 Feet



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APPENDIX B – DATA SOURCE CORRESPONDENCE

CONFIDENTIAL PROPRIETARY TRADE SECRET

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IPaC Information for Planning and Consultation U.S. Fish & Wildlife Service

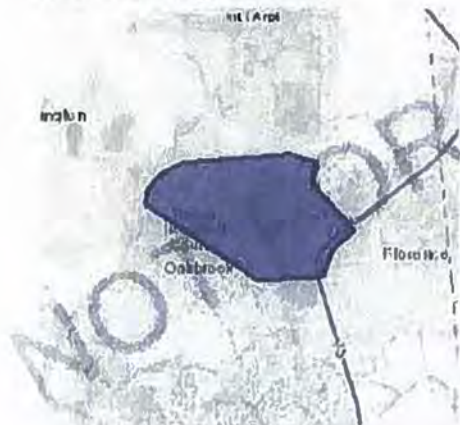
IPaC resource list

This report is an automatically generated list of species and other resources such as critical habitat (collectively referred to as *trust resources*) under the U.S. Fish and Wildlife Service's (USFWS) jurisdiction that are known or expected to be on or near the project area referenced below. The list may also include trust resources that occur outside of the project area, but that could potentially be directly or indirectly affected by activities in the project area. However, determining the likelihood and extent of effects a project may have on trust resources typically requires gathering additional site-specific (e.g., vegetation/species surveys) and project-specific (e.g., magnitude and timing of proposed activities) information.

Below is a summary of the project information you provided and contact information for the USFWS office(s) with jurisdiction in the defined project area. Please read the introduction to each section that follows (Endangered Species, Migratory Birds, USFWS Facilities, and NWI Wetlands) for additional information applicable to the trust resources addressed in that section.

Location

Boone County, Kentucky



Local office

Kentucky Ecological Services Field Office

☎ (502) 695-0468

📠 (502) 695-1024

J C Watts Federal Building, Room 265
330 West Broadway
Frankfort, KY 40601-8670

<http://www.fws.gov/frankfort/>

NOT FOR CONSULTATION

Endangered species

This resource list is for informational purposes only and does not constitute an analysis of project level impacts.

The primary information used to generate this list is the known or expected range of each species. Additional areas of influence (AOI) for species are also considered. An AOI includes areas outside of the species range if the species could be indirectly affected by activities in that area (e.g., placing a dam upstream of a fish population, even if that fish does not occur at the dam site, may indirectly impact the species by reducing or eliminating water flow downstream). Because species can move, and site conditions can change, the species on this list are not guaranteed to be found on or near the project area. To fully determine any potential effects to species, additional site-specific and project-specific information is often required.

Section 7 of the Endangered Species Act requires Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, permitted, funded, or licensed by any Federal agency. A letter from the local office and a species list which fulfills this requirement can only be obtained by requesting an official species list from either the Regulatory Review section in IPaC (see directions below) or from the local field office directly.

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list by doing the following:

1. Draw the project location and click CONTINUE.
2. Click DEFINE PROJECT.
3. Log in (if directed to do so).
4. Provide a name and description for your project.
5. Click REQUEST SPECIES LIST.

Listed species

¹ and their critical habitats are managed by the [Ecological Services Program](#) of the U.S. Fish and Wildlife Service (USFWS) and the fisheries division of the National Oceanic and Atmospheric Administration (NOAA Fisheries²).

Species and critical habitats under the sole responsibility of NOAA Fisheries are not shown on this list. Please contact [NOAA Fisheries](#) for [species under their jurisdiction](#).

1. Species listed under the [Endangered Species Act](#) are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the [listing status page](#) for more information.
2. [NOAA Fisheries](#), also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

The following species are potentially affected by activities in this location:

Mammals

NAME	STATUS
<p>Gray Bat <i>Myotis grisescens</i></p> <p>No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/6329</p>	Endangered
<p>Indiana Bat <i>Myotis sodalis</i></p> <p>This species only needs to be considered if the following condition applies:</p> <ul style="list-style-type: none">All activities in this location should consider possible effects to this species. The project area includes "potential" habitat. <p>There is final critical habitat for this species. Your location is outside the critical habitat. https://ecos.fws.gov/ecp/species/5949</p>	Endangered
<p>Northern Long-eared Bat <i>Myotis septentrionalis</i></p> <p>This species only needs to be considered if the following condition applies:</p> <ul style="list-style-type: none">The specified area includes areas in which incidental take would not be prohibited under the 4(d) rule. For reporting purposes, please use the "streamlined consultation form," linked to in the "general project design guidelines" for the species. <p>No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/9045</p>	Threatened

Clams

NAME	STATUS
<p>Clubshell <i>Pleurobema clava</i></p> <p>This species only needs to be considered if the following condition applies:</p> <ul style="list-style-type: none">The species may be affected by projects that significantly impact, directly or indirectly, the following rivers: Barren, Green, Licking, or Ohio. <p>No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/3789</p>	Endangered
<p>Fanshell <i>Cyprogenia stegaria</i></p> <p>This species only needs to be considered if the following condition applies:</p> <ul style="list-style-type: none">The species may be affected by projects that significantly impact, directly or indirectly, the following rivers: Barren, Green, Licking, Ohio, Rolling Fork, or Tennessee. <p>No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/4822</p>	Endangered

IPaC: Explore Location

<p>Northern Riffleshell <i>Epioblasma torulosa rangiana</i></p> <p>This species only needs to be considered if the following condition applies:</p> <ul style="list-style-type: none">• The species may be affected by projects that significantly impact, directly or indirectly, the following rivers: Green, Licking, or Ohio. <p>No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/527</p>	<p>Endangered</p>
<p>Orangefoot Pimpleback (pearlymussel) <i>Plethobasus cooperianus</i></p> <p>This species only needs to be considered if the following condition applies:</p> <ul style="list-style-type: none">• The species may be affected by projects that significantly impact, directly or indirectly, the following rivers: Green, Ohio, Salt, or Tennessee. <p>No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/1132</p>	<p>Endangered</p>
<p>Purple Cat's Paw (=purple Cat's Paw Pearlymussel) <i>Epioblasma obliquata obliquata</i></p> <p>This species only needs to be considered if the following condition applies:</p> <ul style="list-style-type: none">• The species may be affected by projects that significantly impact, directly or indirectly, the following rivers: Green, Licking, or Ohio. <p>No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/5602</p>	<p>Endangered</p>
<p>Rabbitsfoot <i>Quadrula cylindrica cylindrica</i></p> <p>This species only needs to be considered if the following condition applies:</p> <ul style="list-style-type: none">• The species may be affected by projects that significantly impact, directly or indirectly, the following rivers: Barren, Cumberland (below the falls), Green, Ohio, Rolling Fork, South Fork Kentucky, or Tennessee. <p>There is final critical habitat for this species. Your location is outside the critical habitat. https://ecos.fws.gov/ecp/species/5165</p>	<p>Threatened</p>
<p>Ring Pink (mussel) <i>Obovaria retusa</i></p> <p>This species only needs to be considered if the following condition applies:</p> <ul style="list-style-type: none">• The species may be affected by projects that significantly impact, directly or indirectly, the following rivers: Barren, Cumberland (below the falls), Green, Ohio, or Tennessee. <p>No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/4128</p>	<p>Endangered</p>

IPaC: Explore Location

Rough Pigtoe *Pleurobema plenum*

Endangered

This species only needs to be considered if the following condition applies:

- The species may be affected by projects that significantly impact, directly or indirectly, the following rivers: Barren, Green, Licking, or Ohio.

No critical habitat has been designated for this species.

<https://ecos.fws.gov/ecp/species/6894>

Sheepnose Mussel *Plethobasus cyphus*

Endangered

This species only needs to be considered if the following condition applies:

- The species may be affected by projects that significantly impact, directly or indirectly, the following rivers: Barren, Green, Kentucky, Licking, Ohio, or Tennessee.

No critical habitat has been designated for this species.

<https://ecos.fws.gov/ecp/species/6903>

Spectaclecase (mussel) *Cumberlandia monodonta*

Endangered

This species only needs to be considered if the following condition applies:

- The species may be affected by projects that significantly impact, directly or indirectly, the following rivers: Barren, Cumberland (below the falls), Green, Little South Fork of the Cumberland, Ohio, or Tennessee.

No critical habitat has been designated for this species.

<https://ecos.fws.gov/ecp/species/7867>

Flowering Plants

NAME

STATUS

Running Buffalo Clover *Trifolium stoloniferum*

Endangered

No critical habitat has been designated for this species.

<https://ecos.fws.gov/ecp/species/2529>

Critical habitats

Potential effects to critical habitat(s) in this location must be analyzed along with the endangered species themselves.

THERE ARE NO CRITICAL HABITATS AT THIS LOCATION.

Migratory birds

IPaC: Explore Location

Certain birds are protected under the Migratory Bird Treaty Act

¹ and the Bald and Golden Eagle Protection Act².

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats should follow appropriate regulations and consider implementing appropriate conservation measures, as described [below](#).

1. The [Migratory Birds Treaty Act](#) of 1918.
2. The [Bald and Golden Eagle Protection Act](#) of 1940.

Additional information can be found using the following links:

- Birds of Conservation Concern <http://www.fws.gov/birds/management/managed-species/birds-of-conservation-concern.php>
- Measures for avoiding and minimizing impacts to birds <http://www.fws.gov/birds/management/project-assessment-tools-and-guidance/conservation-measures.php>
- Nationwide conservation measures for birds <http://www.fws.gov/migratorybirds/pdf/management/nationwidestandardconservationmeasures.pdf>

The birds listed below are birds of particular concern either because they occur on the [USFWS Birds of Conservation Concern](#) (BCC) list or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ [below](#). This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around your project area, visit the [E-bird data mapping tool](#) (Tip: enter your location, desired date range and a species on your list). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found [below](#).

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list to see when these birds are most likely to be present and breeding in your project area.

NAME

BREEDING SEASON (IF A BREEDING SEASON IS INDICATED FOR A BIRD ON YOUR LIST, THE BIRD MAY BREED IN YOUR PROJECT AREA SOMETIME WITHIN THE TIMEFRAME SPECIFIED, WHICH IS A VERY LIBERAL ESTIMATE OF THE DATES INSIDE WHICH THE BIRD BREEDS ACROSS ITS ENTIRE RANGE. "BREEDS ELSEWHERE" INDICATES THAT THE BIRD DOES

IPaC: Explore Location

NOT LIKELY BREED IN YOUR
PROJECT AREA.)

Blue-winged Warbler *Vermivora pinus*

This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA

Breeds May 1 to Jun 30

Cerulean Warbler *Dendroica cerulea*

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

<https://ecos.fws.gov/ecp/species/2974>

Breeds Apr 23 to Jul 20

Prairie Warbler *Dendroica discolor*

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Breeds May 1 to Jul 31

Red-headed Woodpecker *Melanerpes erythrocephalus*

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Breeds May 10 to Sep 10

Rusty Blackbird *Euphagus carolinus*

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Breeds elsewhere

Wood Thrush *Hylocichla mustelina*

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Breeds May 10 to Aug 31

Probability of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read and understand the FAQ "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.

IPaC: Explore Location



Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.

[Nationwide Conservation Measures](#) describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. [Additional measures](#) and/or [permits](#) may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

What does IPaC use to generate the migratory birds potentially occurring in my specified location?

The Migratory Bird Resource List is comprised of USFWS [Birds of Conservation Concern \(BCC\)](#) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the [Avian Knowledge Network \(AKN\)](#). The AKN data is based on a growing collection of [survey, banding, and citizen science datasets](#) and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle ([Eagle Act](#) requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the [E-bird Explore Data Tool](#).

IPaC: Explore Location

What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?

The probability of presence graphs associated with your migratory bird list are based on data provided by the [Avian Knowledge Network \(AKN\)](#). This data is derived from a growing collection of [survey, banding, and citizen science datasets](#).

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go to the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

How do I know if a bird is breeding, wintering, migrating or present year-round in my project area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may refer to the following resources: [The Cornell Lab of Ornithology All About Birds Bird Guide](#), or (if you are unsuccessful in locating the bird of interest there), the [Cornell Lab of Ornithology Neotropical Birds guide](#). If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are [Birds of Conservation Concern](#) (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the [Eagle Act](#) requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

Details about birds that are potentially affected by offshore projects

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the [Northeast Ocean Data Portal](#). The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the [NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf](#) project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the [Diving Bird Study](#) and the [nanotag studies](#) or contact [Caleb Spiegel](#) or [Pam Loring](#).

What if I have eagles on my list?

If your project has the potential to disturb or kill eagles, you may need to [obtain a permit](#) to avoid violating the Eagle Act should such impacts occur.

Proper Interpretation and Use of Your Migratory Bird Report

IPaC: Explore Location

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the "no data" indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ "Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds" at the bottom of your migratory bird trust resources page.

Facilities

National Wildlife Refuge lands

Any activity proposed on lands managed by the National Wildlife Refuge system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGE LANDS AT THIS LOCATION.

Fish hatcheries

THERE ARE NO FISH HATCHERIES AT THIS LOCATION.

Wetlands in the National Wetlands Inventory

Impacts to NWI wetlands and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local U.S. Army Corps of Engineers District.

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

This location overlaps the following wetlands:

IPaC: Explore Location

FRESHWATER EMERGENT WETLAND

PEM1Fh

FRESHWATER FORESTED/SHRUB WETLAND

PFO1A

FRESHWATER POND

PUBHh

PUBFh

RIVERINE

R2UBH

R4SBC

R5UBH

A full description for each wetland code can be found at the [National Wetlands Inventory website](#)

Data limitations

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

Data exclusions

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tubercid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

Data precautions

Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.



MATTHEW G. BEVIN
GOVERNOR

CHARLES G. SNAVELY
SECRETARY

ENERGY AND ENVIRONMENT CABINET
OFFICE OF KENTUCKY NATURE PRESERVES
300 SOWER BOULEVARD
FRANKFORT, KENTUCKY 40601
(502) 573-2886

ZEB WEESE
EXECUTIVE DIRECTOR

January 18, 2019

Dan Godec
Stantec Consulting Services, Inc.
11687 Lebanon Road
Cincinnati, OH 45241

Project:	Duke Energy Aero Project; 193706563
Project ID:	19-0050
Project Type:	Area Study (no buffer)
Site Acreage:	1,984.28
Site Lat/Lon:	39.010280 / -84.662957
County:	Boone
USGS Quad:	BURLINGTON; UNION
Watershed HUC12:	Upper Gunpowder Creek
Physiographic Region:	Outer Bluegrass

Dear Dan Godec,

This letter is in response to your data request for the project referenced above. We have reviewed our Natural Heritage Program Database to determine if any of the endangered, threatened, or special concern plants and animals or exemplary natural communities monitored by the Office of Kentucky Nature Preserves occur within your general project area. Your project does pose a concern at this time, therefore please see the attached reports for more detailed information.

I would like to take this opportunity to remind you of the terms of the data request license, which you agreed upon in order to submit your request. The license agreement states "Data and data products received from the Office of Kentucky Nature Preserves, including any portion thereof, may not be reproduced in any form or by any means without the express written authorization of the Office of Kentucky Nature Preserves." The exact location of plants, animals, and natural communities, if released by the Office of Kentucky Nature Preserves, may not be released in any document or correspondence. These products are provided on a temporary basis for the express project (described above) of the requester, and may not be redistributed, resold or copied without the written permission of the Biological Assessment Branch (300 Sower Blvd - 4th Floor, Frankfort, KY, 40601. Phone: (502) 782-7828).

Please note that the quantity and quality of data collected by the Kentucky Natural Heritage Program are dependent on the research and observations of many individuals and organizations. In most cases, this information is not the result of comprehensive or site-specific field surveys; many natural areas in Kentucky have never been thoroughly surveyed and new plants and animals are still being discovered. For these reasons, the Kentucky Natural Heritage Program cannot provide a definitive statement on the presence, absence, or condition of biological elements in any part of Kentucky. Heritage reports summarize the existing information known to the Kentucky Natural Heritage Program at the time of the request regarding the biological elements or locations in question. They should never be



Project ID: 19-0050
January 18, 2019
Page 2

regarded as final statements on the elements or areas being considered, nor should they be substituted for on-site surveys required for environmental assessments. We would greatly appreciate receiving any pertinent information obtained as a result of on-site surveys.

If you have any questions, or if I can be of further assistance, please do not hesitate to contact me.

Sincerely,

Evelyn Pickett
Geoprocessing Specialist



**Standard Occurrence Report
KSNPC monitored species within 1 Feet of Project Area**




EO ID	Scientific Name	Common Name	GRank	SRank	SPROT	USES A	STWG	Last Obs Date	Precision	EO Rank	Lat / Lon	Directions	Habitat
7023	<i>Pooecetes gramineus</i>	Vesper Sparrow	G5	S1B	E		Y	1950-07-09	C	U	38.9829 / -84.7476	Boone Co.	Plains, prairie, dry shrublands, savanna, weedy pastures, fields, sagebrush, arid scrub and woodland clearings (B83COM01NA).
10672	<i>Rana pipiens</i>	Northern Leopard Frog	G5	S3	S		Y	1834-04-07	G	H	38.9889 / -84.6266	Florence.	Breeds in natural and manmade ponds. Otherwise uses moist grassland, meadows and margins.

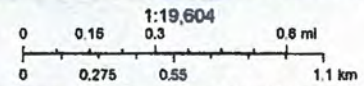
THESE DATA ARE VALID ONLY ON THE DATE ON WHICH THE REPORT WAS GENERATED.
THESE DATA MAY ONLY BE USED FOR THE PROJECT NAMED ABOVE.

Duke Energy Aero Project



January 18, 2019

-  Project Boundary
-  Buffered Project Boundary
-  Element Occurrences



Sources: Esri, HERE, Garmin, Inorement P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBasis, IGN, Kadaster NL, Ordnance Survey, Esri

APPENDIX C – PHOTOGRAPH LOG



Duke Energy Kentucky, Inc.
Oakbrook to Aero 138 kV Transmission Route Siting Study
Boone County, Kentucky



Photo Location 1. View of route crossing at the intersection of Oakbrook Drive and Burlington Pike (KY-18). Photograph taken facing east.



Photo Location 1. View of route crossing at the intersection of KY-18 and Oakbrook Drive. Photograph taken facing north.



Duke Energy Kentucky, Inc.
Oakbrook to Aero 138 kV Transmission Route Siting Study
Boone County, Kentucky



Photo Location 2. View of Oakbrook Station. Photograph taken facing northwest.



Photo Location 2. View of Oakbrook Drive north of Oakbrook Station. Photograph taken facing west.



Duke Energy Kentucky, Inc.
Oakbrook to Aero 138 kV Transmission Route Siting Study
Boone County, Kentucky



Photo Location 3. View of proposed route crossing at the intersection at the KY-18 and Oakbrook Drive. Photograph taken facing north.

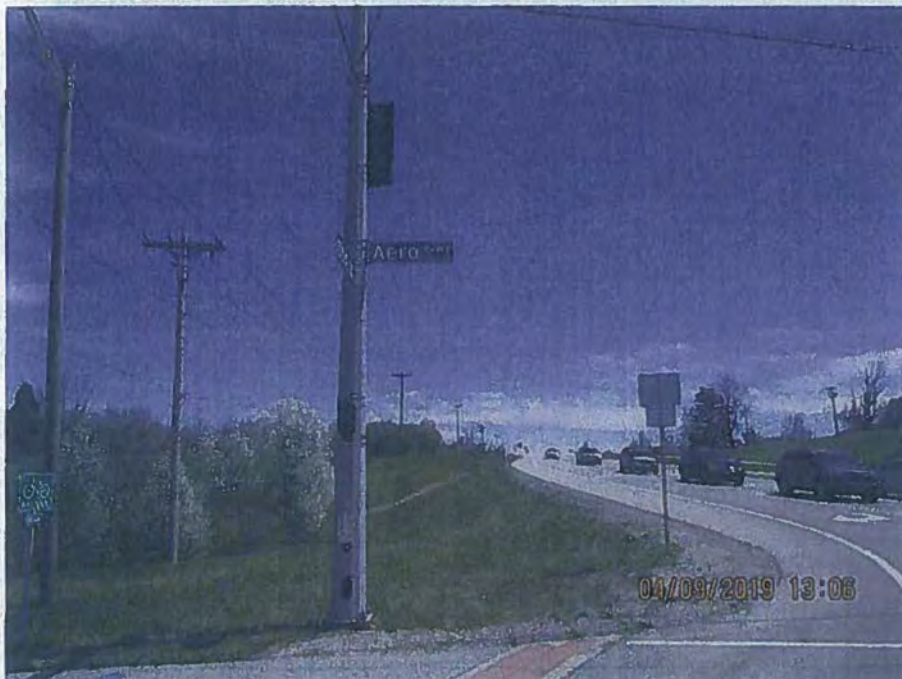


Photo Location 4. View of the proposed route crossing at the intersection of KY-18 and Aero Parkway. Photograph taken facing southeast.



Duke Energy Kentucky, Inc.
Oakbrook to Aero 138 kV Transmission Route Siting Study
Boone County, Kentucky



Photo Location 5. View of the proposed route along Aero Parkway. Photograph taken facing northeast.



Photo Location 5. View of the proposed route along Aero Parkway. Photograph taken facing southwest.



Duke Energy Kentucky, Inc.
Oakbrook to Aero 138 kV Transmission Route Siting Study
Boone County, Kentucky



Photo Location 6. View of proposed Aero Station north of Aero Parkway. Photograph taken facing north.



Photo Location 6. View of proposed route south of proposed Aero Station. Photograph taken facing south



Duke Energy Kentucky, Inc.
Oakbrook to Aero 138 kV Transmission Route Siting Study
Boone County, Kentucky



Photo Location 6. View of the proposed route along Aero Parkway just south of proposed Aero Station. Photograph taken facing east.



Photo Location 7. View of proposed route crossing at Zig Zag Road. Photograph taken facing southwest.



Duke Energy Kentucky, Inc.
Oakbrook to Aero 138 kV Transmission Route Siting Study
Boone County, Kentucky



Photo Location 7. View of proposed route crossing at Zig Zag Road. Photograph taken facing northwest.



Photo Location 8. View of proposed route at intersection of Centennial Circle and KY-18. Photograph taken facing southeast.



Duke Energy Kentucky, Inc.
Oakbrook to Aero 138 kV Transmission Route Siting Study
Boone County, Kentucky



Photo Location 8. View of proposed route at intersection of Centennial Circle and KY-18. Photograph taken facing northwest.



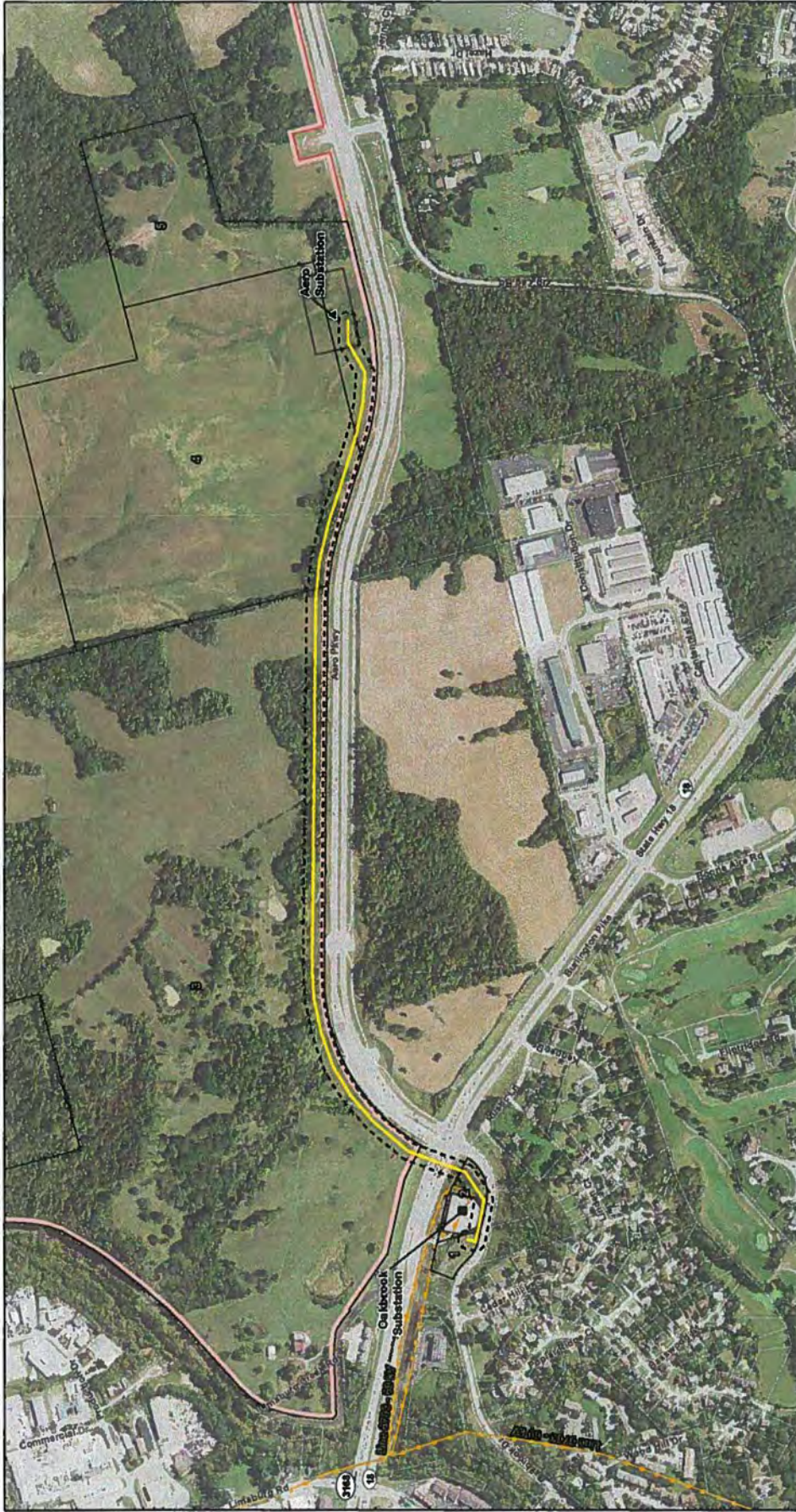
Photo Location 9. View of proposed route at intersection of Centennial Circle and KY-18. Photograph taken facing northwest.



Duke Energy Kentucky, Inc.
Oakbrook to Aero 138 kV Transmission Route Siting Study
Boone County, Kentucky



Photo Location 9. View of proposed route at intersection of Centennial Circle and KY-18.
Photograph taken facing southeast.



Legend

- ▲ Proposed Duke Substation
- Existing Duke Substation
- Outbrook to Aero Preferred Route Centerline
- Proposed ROW
- Existing Duke Owned 69KV Transmission Line
- Existing Duke Owned 89KV Transmission Line
- Substation Boundary
- CVG Airport Boundary

Permits Impacted by Project (Duke Inv. ID)

- Parcel Boundary



Feet
0 125 250 500

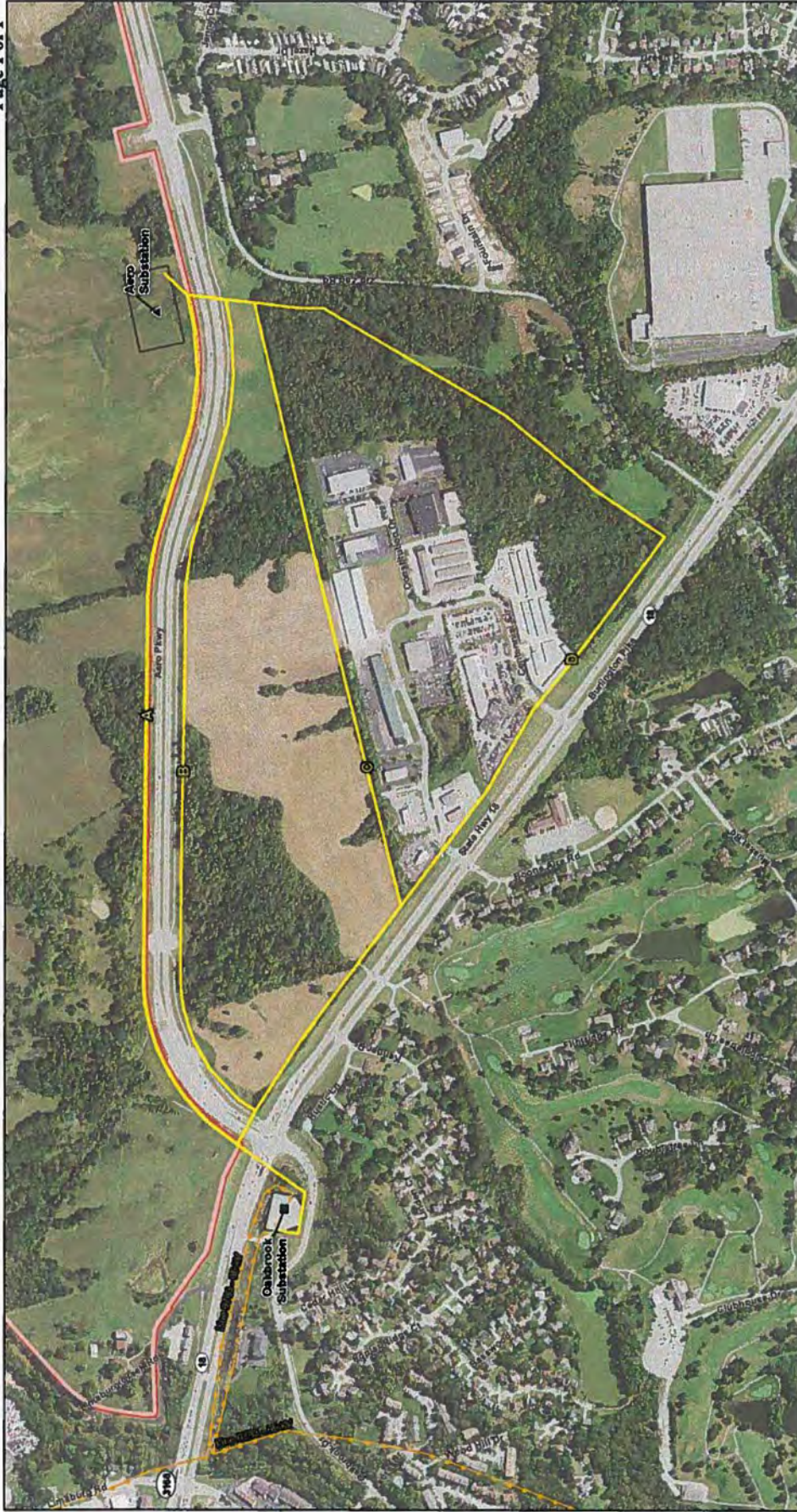


Exhibit 7:
Proposed Route

2014/01/01 BY: BMT
DATE: 2018-08-19

Notes:
1. Coordinate System: NAD 1983 StatePlane Kentucky North FIPS 1601 Feet
2. Data Sources Include: Barnes, Duke, HMCN, City of Florence, CVG Airport,
3. Orthophotography: 2018 NADP





DUKE ENERGY.

Exhibit 8:
Alternative Routes

DATE: 02-28-19

Scale: 0 125 250 500 Feet

North Arrow

Notes:
1. Coordinate System: NAD 83 StatePlane Kentucky North Zone 1801 Feet
2. Data Source: Esri/ArcGIS, State, Duke, NCDK, City of Florence, CVG Airport
3. Cartography: 2018 MAP

Legend

- ▲ Proposed Duke Substation
- ▲ Existing Duke Substation
- Alternative Route
- Existing Duke Owned 69KV Transmission Line
- Substation Boundary
- CVG Airport Boundary

Boone County, KY

COMMONWEALTH OF KENTUCKY
BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

The Electronic Application of Duke Energy)
Kentucky, Inc. for a Certificate of Public)
Convenience and Necessity to Construct A) Case No. 2019-00251
138-kV Transmission Line And Associated)
Facilities In Boone County (Oakbrook to Aero)
Transmission Project))

Verified Statement in Accordance with 807 KAR 5:120, Section 2(3)

Dawn M. Fuller, Senior Public Engagement Specialist, being duly sworn, states as follows:

1. The statements contained in this verification are based upon my personal knowledge, or my review of the records of Duke Energy Kentucky, Inc. within the purview of my duties for the Company.

2. The records of the Boone County Property Valuation Administrator, except as corrected or updated upon landowner contact or other research, located within the filing corridor (including the currently proposed right-of-way) for Duke Energy Kentucky, Inc.'s Oakbrook to Aero Transmission Line Project will cross the property owned by the persons listed in Exhibit 10 of the application.

3. On August 16, 2019 the persons in Exhibit 10 were mailed the notice as required by 807 KAR 5:120, Section 2(3)(a) – (e):

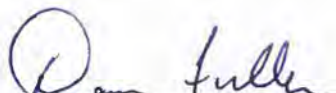
A verified statement that, according to county property valuation administrator records, each property owner over whose property the transmission line right-of-way is proposed to cross has been sent by first-class mail, addressed to the property owner at the owner's address as indicated by the county property valuation administrator records, or hand delivered:

- (a) Notice of the proposed construction;*
- (b) The commission docket number under which the application will be processed and a map showing the proposed route of the line;*

- (c) *The address and telephone number of the executive director of the commission;*
- (d) *A description of his or her rights to request a local public hearing and to request to intervene in the case; and*
- (e) *A description of the project.*

4. The form of the notice mailed is attached in Exhibit 10.


FURTHER AFFIANT SAYETH NAUGHT.



Dawn M. Fuller

STATE OF OHIO)
) SS
COUNTY OF HAMILTON)

Subscribed and sworn to before me, a Notary Public in and before said County and State,
by Dawn M. Fuller this 19th day of August 2019.



Notary Public
My Commission Expires: July 8, 2022





Aug. 16, 2019

Notice of Proposed Electric Transmission Line Construction Project

Dear Property Owner:

Duke Energy Kentucky, Inc. (Duke Energy) is proposing a new electric transmission line project in your community. We are contacting you as part of the process to file an application seeking a certificate of public convenience and necessity from the Kentucky Public Service Commission. This project involves the approximate 1-mile construction of a new, 138-kilovolt (kV) transmission line between a proposed new Aero Substation near the Amazon Prime Air Hub facility and the Oakbrook Substation, located at 1601 Burlington Pike in Florence, Ky.

You are receiving this notice because county property records indicate the proposed transmission line or right of way may cross your property.

1. The construction of the proposed 138-kV transmission line between the proposed Aero and existing Oakbrook substations involves the following work:

- The construction consists of approximately 1 mile of 138-kV transmission line.
- The transmission line will be supported by steel poles with an average above-ground height of 85 feet. The line is expected to be supported by approximately 26 of the 138-kV steel pole structures.
- The distance between poles will run an average of 200 to 300 feet. Right-of-way width for the project is 75 feet.
- To enable the safe operation of the line, the required right-of-way width and location of centerline will be finalized during the detailed engineering design and construction phases and will be discussed in land rights negotiations with landowners.

The project is described as No. 2019-00251 on the Kentucky Public Service Commission's website at: https://psc.ky.gov/PSC_WebNet/ViewCaseFilings.aspx?case=2019-00251.

2. Enclosed is a map that shows the route of the proposed transmission line.

3. The Kentucky Public Service Commission will process Duke Energy's application under Case No. 2019-00251.

Contact information for the executive director of the Kentucky Public Service Commission:

Gwen R. Pinson, Executive Director
Kentucky Public Service Commission
211 Sower Boulevard
Frankfort, KY 40602-0615
502.564-3940 / 800.772.4636

Duke Energy anticipates filing its application with the Kentucky Public Service Commission on Aug. 20, 2019. The application when filed may be viewed under Case No. 2019-00251 on the commission's website at https://pec.ky.gov/PSC_WebNet/ViewCaseFilings.aspx?case=2019-00251.

4. You have the right to submit a timely written request for intervention in Case No. 2019-00251. The motion must be submitted to the Kentucky Public Service Commission, 211 Sower Boulevard, Frankfort, KY 40602-0615 and must establish the grounds for your request to intervene, including your status and the nature of your interest in the proceeding. Please see 807 KAR 5:001, Section 4 (11), at: <http://kyrules.elaws.us/rule/807kar5:001> for additional information regarding the requirements and procedure for requesting intervention. 807 KAR 5:001, Section 4(11) may be accessed here: <http://www.lrc.state.ky.us/kar/807/005/001.htm>.

If no request for intervention is received within 30 days of the filing of the application, the commission may take final action on the application. The request for intervention should reference Case No. 2019-00251.

5. You also have the right to request a local public hearing regarding the application and the proposed 138-kV transmission line and related work. The requirements for requesting a local public hearing are described in 807 KAR 5:120, Section 3. See: <http://kyrules.elaws.us/rule/807kar5:001> for additional information.

6. Written comments may also be filed at the above address or by sending an email to the commission's public information officer at pec.info@ky.gov. The comments should reference Case No. 2019-00251.

7. Project updates may also be found on the Duke Energy/Aero Reliability Project website at: duke-energy.com/Aero.

Sincerely,

Duke Energy

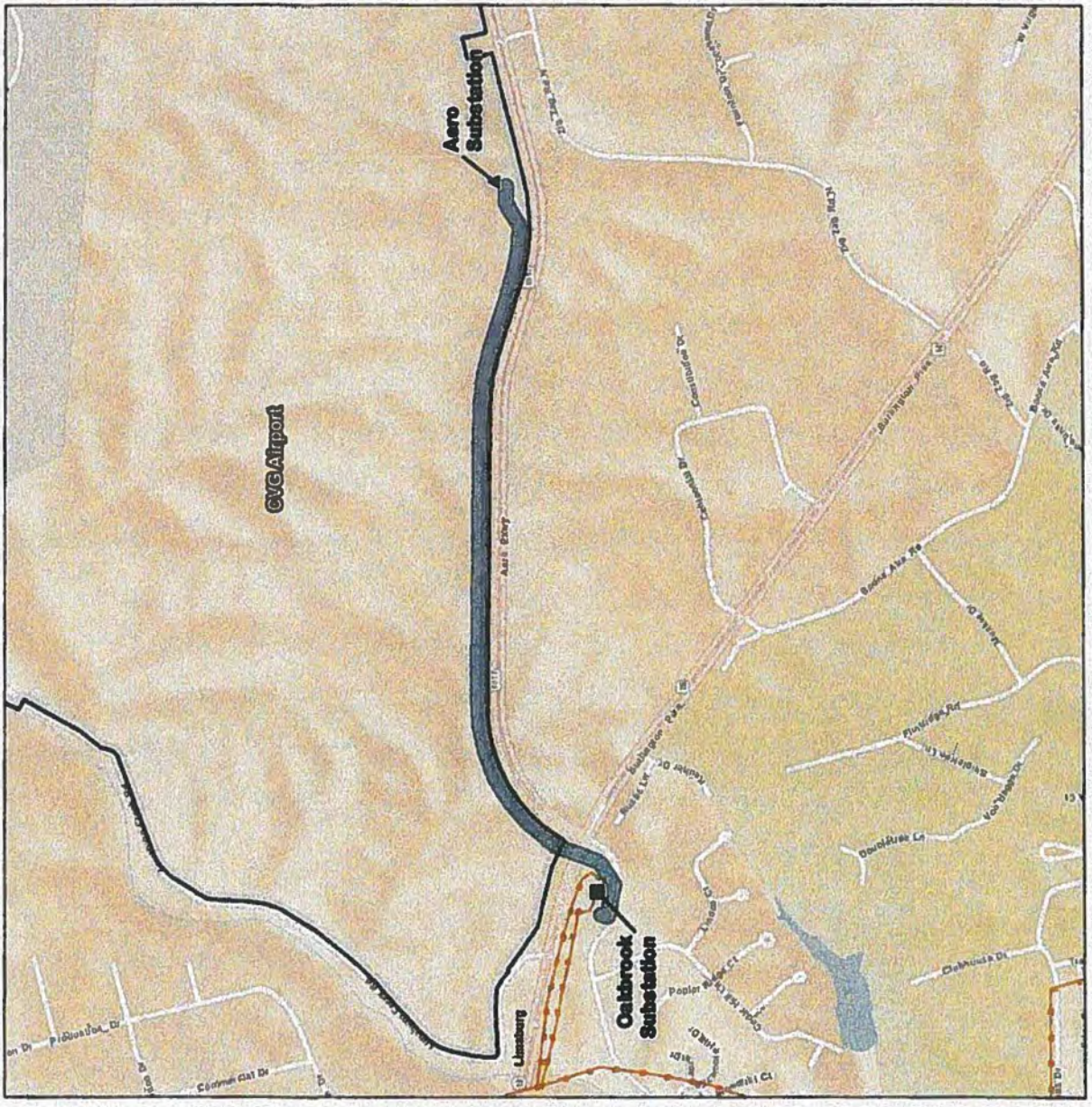
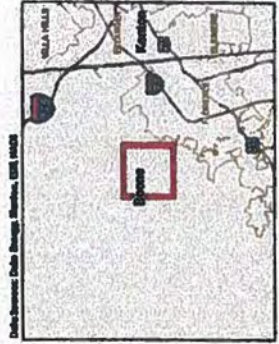
State Parcel Identification Number:

Preferred Route Corridor

Client/Project
Outbrook to Aero
138 KV Transmission Line Siting Study
Boone Co., KY



- Legend**
- Existing Duke Substation
 - ▲ Proposed Duke Substation
 - ▬ Preferred Route Corridor
 - Existing Duke Owned Transmission Line
 - ▭ CVG Airport Property Boundary



Order Number	Order Description	Mail Stop	Mail City	Mail State	Mail Zip	Barcode ID	Barcode	Physical Address	Order ID
1	DUKE ENERGY KENTUCKY/INC	PO BOX:1007	CHARLOTTE	NC	28201-1007	049.00-00-09-093	049.00-00-09-093	OAKBROOK RD	0000010
5							060.00-00-063.00		
4	KENTON COUNTY AIRPORT BOARD: ATTN: ALISON CHADWELL	P O BOX 752000	CINCINNATI	OH	45275-2000	049.00-00-092.00	049.00-00-092.00		
3	KENTON COUNTY AIRPORT BOARD: ATTN: ALISON CHADWELL	77 COMAIR BLDG	ERLANGER	KY	41013-0569	049.00-00-056.00	41013-0569		
2	UNION LIGHT, HEAT, AND POWER COMPANY	139 E 4TH ST	CINCINNATI	OH	45201	049.00-00-036.02	049.00-00-036.02	6501 OAKBROOK RD	

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P.O. Box 1800
Charlotte NC 28201-1007

PS Form 3820, April 2015 PSN 7530-02-000-9017 See Reverse for Instructions

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Cincinnati Ohio 45202

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Kenton County Airport Board - Allison C
P.O. Box 15200
Cincinnati Ohio 45215-2000

PS Form 3820, April 2015 PSN 7530-02-000-9017 See Reverse for Instructions

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CINCINNATI OH 45201

Kenton County Airport Board - Allison C
777 Comick St
Cincinnati KY 41018

PS Form 3820, April 2015 PSN 7530-02-000-9017 See Reverse for Instructions

NOTICE

Please take notice that Duke Energy Kentucky, Inc. has applied to the Kentucky Public Service Commission for approval to revise its Demand Side Management (DSM) rate electric service for residential and commercial customers. Duke Energy Kentucky's current monthly DSM rate for residential electric customers is (\$0.000081) per kilowatt-hour and for non-residential customers is \$0.00624 per kilowatt-hour for distribution service and \$0.00637 per kilowatt-hour for transmission service.

Duke Energy Kentucky seeks approval to revise these rates as follows: Duke Energy Kentucky's monthly DSM rate for residential electric customers would decrease to (\$0.000084) per kilowatt-hour and for non-residential customers would increase to \$0.006046 per kilowatt-hour for distribution service and would remain at \$0.00637 per kilowatt-hour for transmission service.

The rate contained in this notice is the rate proposed by Duke Energy Kentucky. However, the Public Service Commission may order a rate to be charged that differs from this proposed rate. Such action may result in a rate for consumers other than the rate in this notice. The foregoing rates reflect a proposed increase in electric revenues of approximately \$15.7 thousand or 0.004% over current total electric revenues.

A typical residential electric customer using 1000 kWh in a month will see a decrease of \$0.02 or (0.02%). A typical non-residential electric customer using 40 kilowatts and 14,000 kWh will see an increase of \$0.32 or 0.03%. Non-residential customers served at transmission voltage will see no change in their bills from this application.

Any corporation, association, body politic or person may by motion within thirty (30) days after publication or mailing of notice of the proposed rate changes, submit a written request to intervene to the Public Service Commission, 211 Sower Boulevard, P.O. Box 615, Frankfort, Kentucky 40602, and shall set forth the grounds for the request including the status and interest of the party. The intervention may be granted beyond the thirty (30) day period for good cause shown. Written comments regarding the proposed rate may be submitted to the Public Service Commission by mail or through the Public Service Commission's website. A copy of this application filed with the Public Service Commission is available for public inspection at Duke Energy Kentucky's office at 1282 Cox Road, Erlanger, Kentucky 41018 and on its website at <http://www.duke-energy.com>. This filing and any other related documents can be found on the Public Service Commission's website at <http://psc.ky.gov>.

NOTICE OF PROPOSED ELECTRIC TRANSMISSION LINE CONSTRUCTION PROJECT

Duke Energy Kentucky, Inc. (Duke Energy Kentucky or Company) proposes to construct a new 138-kVolt (kV) transmission line in Boone County, Kentucky (Caldwell to Aero Transmission Line Project). The Caldwell to Aero Transmission Line Project involves the approximate one-mile construction of a new 138-kV transmission line, construction of a new 138-kV substation (Aero Substation) near the Amazon Prime Air Hub facility, and upgrades to the existing 69-kV substation (Caldwell Substation) located at 1001 Burlington Pike, in Boone County, Kentucky.

The proposed transmission line generally will require a 75-foot-wide right-of-way. It contains some a wider right-of-way may be required. Duke Energy Kentucky may also be required to alter the proposed boundaries of the Caldwell to Aero Transmission Line Project and adjacent rights-of-way to address easement preferences or conditions discovered during survey and construction that affect constructability and access.

Duke Energy Kentucky plans to file an application with the Public Service Commission of Kentucky on or before August 20, 2019 seeking a certificate of public convenience and necessity authorizing the Caldwell to Aero Transmission Line Project. The application and the Commission proceedings have been assigned Case No. 2019-06251.

Any interested person, including any person over whose property the proposed transmission line will cross, may request a local public hearing in the county in which the transmission line is proposed to be constructed. The request must be in writing and should be delivered to the Executive Director, Public Service Commission, 211 Sower Boulevard, P.O. Box 615, Frankfort, Kentucky 40602. The request for local public hearing must be delivered to the Executive Director no later than thirty days after the date the application is filed. The request for local public hearing must comply with the requirements of 607 KAR 8:23, Section 3.

A person may seek to intervene as a party in the Commission proceedings to review Duke Energy Kentucky's application by filing a timely written request for intervention in accordance with the requirements of 607 KAR 6:001, Section 4(1) and 607 KAR 6:120, Section 9(2).

The application and other filings in connection with Duke Energy Kentucky's application may be accessed at <http://www.ky.gov> under Case No. 2019-06251 when filed. Project updates and further information may also be found on the Company's website: duke-energy.com.

A map of the proposed route for the electrical transmission line is shown below.



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NOTICE OF PROPOSED ELECTRIC TRANSMISSION LINE CONSTRUCTION PROJECT
The Kentucky Public Service Commission (PSC) is reviewing the proposed transmission line project...
The proposed transmission line generally follows a 10-foot-wide right-of-way...
Public and signed applications to allow transmission line construction...
The Commission is holding public hearings...
A map of the proposed route for the electric transmission line is shown below.



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NOTICE

Please take notice that Duke Energy Kentucky, Inc. has applied to the Kentucky Public Service Commission for approval to revise its Demand Side Management (DSM) rate electric service for residential and commercial customers. Duke Energy Kentucky's current monthly DSM rate for residential electric customers is \$0.000001 per kilowatt-hour and for non-residential customers is \$0.000004 per kilowatt-hour for distribution service and \$0.000037 per kilowatt-hour for transmission service.

Duke Energy Kentucky seeks approval to revise these rates as follows: Duke Energy Kentucky's monthly DSM rate for residential electric customers would decrease to \$0.000000 per kilowatt-hour and for non-residential customers would increase to \$0.000045 per kilowatt-hour for distribution service and would remain at \$0.000037 per kilowatt-hour for transmission service.

The rate contained in this notice is the rate proposed by Duke Energy Kentucky. However, the Public Service Commission may order a rate to be charged that differs from this proposed rate. Such action may result in a rate for consumers other than the rate in this notice. The foregoing rates reflect a proposed increase in electric revenues of approximately \$18.7 thousand or 0.004% over current total electric revenues.

A typical residential electric customer using 1000 kWh in a month will see a decrease of \$0.02 or (0.02%). A typical non-residential electric customer using 49 kilowatts and 14,000 kWh will see an increase of \$0.32 or 0.02%. Non-residential customers served at transmission voltage will see no change in their bills from this application.

Any corporation, association, trade public or person may by motion within thirty (30) days after publication or making of notice of the proposed rate changes, submit a request to intervene to the Public Service Commission, 211 Summit Street, P.O. Box 616, Frankfort, Kentucky 40621, and shall set forth the grounds for the request including the status and interest of the party. The intervention may be granted beyond the thirty (30) day period for good cause shown. Written comments regarding the proposed rate may be submitted to the Public Service Commission by mail or through the Public Service Commission's website. A copy of this application filed with the Public Service Commission is available for public inspection at Duke Energy Kentucky's office at 2202 Oak Road, Edinburgh, Kentucky 41016 and on its website at kych.com/pscom/pscom. This filing and any other related documents can be found on the Public Service Commission's website at ksps.com.

NOTICE OF PROPOSED ELECTRIC TRANSMISSION LINE CONSTRUCTION PROJECT

Duke Energy Kentucky has filed an application with the Kentucky Statewide Construction Authority (KSCA) for approval to construct and operate a new 138-kV transmission line in Boone County, Kentucky. The proposed project includes the approximate overall route of a new 138-kV transmission line, construction of a new 138-kV station (also identified) near the Jackson Pike at 18th entry, and approval to the existing 69-kV station (already identified) near 18th Station Pike, in Boone County, Kentucky.

The proposed transmission project will require a 16-foot-wide right-of-way. In certain areas, certain right-of-way may be required. Duke Energy Kentucky may be required to alter the present boundary of the Oaklawn to Amn Transmission Line Project and adjacent right-of-way to address boundary preference or conditions encountered during survey and construction that affect compliance and access.

Duke Energy Kentucky plans to file an application with the Public Service Commission's website on or about August 15, 2019 seeking a certificate of public convenience and necessity authorizing the Oaklawn to Amn Transmission Line Project. The application and the Commission proceeding have been assigned Case No. 019-0028.

Any interested person, including any person over whom property the proposed transmission line will cross, may request a hearing to be held by the state by which the transmission line is proposed to be constructed. The request must be in writing and shall be delivered to the Executive Director, Public Service Commission, 211 Summit Street, P.O. Box 616, Frankfort, Kentucky 40621. The request for a hearing must be delivered to the Executive Director no later than 60 days after the date the application is filed. The request for a hearing must comply with the requirements of KRS 194.014, Section 1.

Anyone may contribute to the public hearing by filing a written comment with the Public Service Commission by the day the public hearing request for intervention is submitted with the requirements of KRS 194.014, Section 4 and KRS 194.015, Section 2.

The application and other filing in connection with Duke Energy Kentucky's application may be examined at 10:00 a.m. on or after August 15, 2019 at the Public Service Commission and further information may also be found on the Commission's website at ksps.com.

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5 ALL VINTAGE MOTORCYCLES WANTED 1950-1980 ANY MAKE CASH PAID 5 ALL MAKES & MODELS CALL 606-456-6230 or gravelmore100@gmail.com

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Chevy 2007 Trailblazer LT 4x4, extra clean, con. cond. 659-639-8363

Trucks

Ford 2008 F250, F40 3.7L Fuel-SI, F-4, Super crew cab, leather, etc. 130K mi. 625-825-0363

Make 1989 2500A, Sep. Hwy 44 and 40000 miles, new good tires, 615-200-1200

Domestic Pets



Shih Tzu Puppies - AKC or ACA
AKC 16 weeks old - black & white or brown & white - 2
F-1 Not checked - ACA - 5 weeks old - 9/7/1 M
P. Black & White / M Cream - Vet checked - 9899 - Call 659-691-8283

Shih Tzu Puppies - CIC
First shots / vaccinated - Not available - 9899 - Call 659-691-8284



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F-1 Not checked - ACA - 5 weeks old - 9/7/1 M
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Shih Tzu Puppies - CIC
First shots / vaccinated - Not available - 9899 - Call 659-691-8284

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Chevy 2007 Trailblazer LT 4x4, extra clean, con. cond. 659-639-8363

Trucks

Ford 2008 F250, F40 3.7L Fuel-SI, F-4, Super crew cab, leather, etc. 130K mi. 625-825-0363

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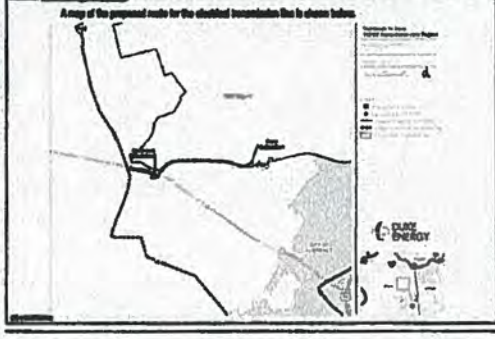
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Patients who have not requested their medical records must do so before September 1, 2019.

To obtain records phone 859-635-4143
Thank you to our loyal and valued patients.
The Bichlmeir Family and

J. Stehlin, Manager

CAM, Aug 15, 19872304

LEGAL NOTICE
CITY OF FORT THOMAS, KENTUCKY
TAX RATE INFORMATION - 2019

Tax Rate Proposed for 2019	\$.207 / \$100
Revenue Anticipated	\$,740,103
Tax Rate Proposed for 2018	\$.207 / \$100
Revenue Anticipated	\$,819,332
Compensating Tax Rate 2019	\$.202 / \$100
Revenue Anticipated	\$,653,223
Revenue From New Property	\$ 34,483
Revenue From Personal Property	\$ 31,453

General Areas of Allocation: Personnel, Utilities, Supplies

A Public Hearing will be held on Tuesday, September 3 at 6:00 P.M. at the City Building, 139 N. Ft. Thomas Avenue, Ft. Thomas, Kentucky. The purpose of this hearing is to receive taxpayer input on the proposed tax rate for 2019. This notice is required by KRS (23.027, as passed by the Kentucky General Assembly.

ISSUED: Shelia K. Beckwith, City Clerk
859-441-1023
CAM, Aug 15, 19872300

PUBLIC NOTICE
Legal Ad

The City of Highland Heights City Council meeting scheduled for Tuesday, August 20, 2019 at 7:00 p.m. at 175 Johns Hill Road is cancelled. The next City Council meeting is scheduled for Tuesday, September 3, 2019 at 7:00 p.m.
CAM, Aug 15, 19872304

The City of Dayton, Kentucky has adopted Ordinance 2019014 to prohibit certain discriminatory practices within the city. The ordinance may be viewed in full at www.daytonky.com
CAM, Aug 15, 19872301

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NOTICE

Please take notice that Duke Energy Kentucky, Inc. has applied to the Kentucky Public Service Commission for approval to revise its Demand Side Management (DSM) rate electric service for residential and commercial customers. Duke Energy Kentucky's current monthly DSM rate for residential electric customers is \$0.000051 per kilowatt-hour and for non-residential customers is \$0.000034 per kilowatt-hour for distribution service and \$0.000037 per kilowatt-hour for transmission service.

Duke Energy Kentucky's revised approval to revise these rates as follows: Duke Energy Kentucky's monthly DSM rate for residential electric customers would decrease to \$0.000004 per kilowatt-hour and for non-residential customers would increase to \$0.000045 per kilowatt-hour for distribution service and would remain at \$0.000037 per kilowatt-hour for transmission service.

The rate contained in this notice is the rate proposed by Duke Energy Kentucky. However, the Public Service Commission may order a rate to be changed that differs from this proposed rate. Such action may result in a rate for consumers other than the rate in this notice. This foregoing rates reflect a projected increase in electric revenue of approximately \$18.7 thousand or 0.007% over current total electric revenues.

A typical residential electric customer using 1000 kWh in a month will see a decrease of \$0.02 or (0.02%). A typical non-residential electric customer using 40 MWh and 14,000 kWh will see an increase of \$0.32 or 0.03%. Non-residential customers served at transmission voltage will see no change in their bills from this application.

Any corporation, association, body public or person may by motion within thirty (30) days after publication or mailing of notice of the proposed rate changes, submit a written request to intervene to the Public Service Commission, 211 Center Court, P.O. Box 616, Frankfort, Kentucky 40622, and shall set forth the grounds for the request including the status and interest of the party. The intervention may be granted beyond the thirty (30) day period for good cause shown. Written comments regarding the proposed rate may be submitted to the Public Service Commission by mail or through the Public Service Commission's website. A copy of this application filed with the Public Service Commission is available for public inspection at Duke Energy Kentucky's office at 1282 Cox Road, Erlanger, Kentucky 41018 and on its website at interact.dukeenergy.com. This filing and any other related documents can be found on the Public Service Commission's website at kpsc.com.

NOTICE OF PROPOSED ELECTRIC TRANSMISSION LINE CONSTRUCTION PROJECT

Duke Energy Kentucky, Inc. (Duke Energy Kentucky) proposes to construct a new 128-kV transmission line in Stone County, Kentucky (Outlook to New Transmission Line Project). The Outlook to New Transmission Line Project includes the approximate one-mile construction of a new 128-kV transmission line, construction of a new 128-kV substation (near the American Paper Air Mill facility) and upgrades to the existing 69-kV substation (Dukefield Substation) located at 1591 Dupleigh Pike, in Stone County, Kentucky.

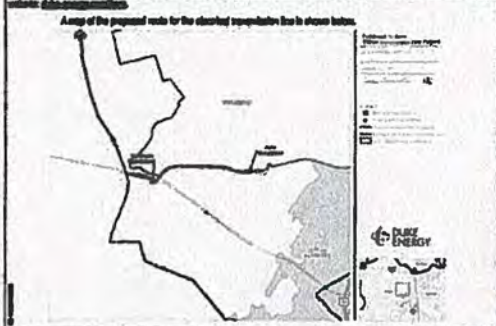
The proposed transmission line generally will utilize 70-foot-wide rights-of-way. In certain areas a wider right-of-way may be required. Duke Energy Kentucky may also be required to alter the proposed contents of the Outlook to New Transmission Line Project and adjacent right-of-way to address landowner preferences or conditions discovered during survey and construction that affect construction and access.

Duke Energy Kentucky plans to file an application with the Public Service Commission of Kentucky on or before August 30, 2019 seeking a certificate of public convenience and necessity authorizing the Outlook to New Transmission Line Project. The application and the Commission proceeding have been assigned Case No. 2019-0223.

Any interested person, including any person who owns property the proposed transmission line will cross, may request a local public hearing to be held by the Commission to be held on or before the date set forth in this notice. The request for a local public hearing must be delivered to the Executive Director, Public Service Commission, 211 Center Court, P.O. Box 616, Frankfort, Kentucky 40622. The request for local public hearing must comply with the requirements of KSP KAR 1:120, Section 6.

A person may wish to intervene in a party to the Commission proceeding by filing a written application with the Commission by filing a timely written request for intervention in accordance with the requirements of KSP KAR 1:120, Section 6. The application and other steps in connection with Duke Energy Kentucky's application may be accessed at kpsc.com under Case No. 2019-0223 unless that Project application and further information may also be found on the Company's website at interact.dukeenergy.com.

Approximate locations of the proposed transmission line are shown below.



ORDINANCE NO. 05-01-19
AN ORDINANCE ADOPTING THE CITY OF SILVER GROVE KENTUCKY ANNUAL BUDGET FOR THE FISCAL YEAR

(FISCAL YEAR 2019 THROUGH 2019/2020)

ESTIMATING REVENUES AND RESOURCES AND APPROPRIATING FUNDS FOR THE OPERATION OF CITY GOVERNMENT

WHEREAS, an annual budget proposal and message has been prepared and delivered to the City Council; and

WHEREAS, the City Council has reviewed such budget proposal and made necessary modifications;

NOW, THEREFORE, BE IT ORDAINED BY THE CITY OF SILVER GROVE,

SECTION 1:

That the annual budget for the fiscal year beginning (1/1/2019) and ending (12/31/2019) is hereby adopted as follows:

RESOURCES AVAILABLE:	GENERAL FUND	MUNICIPAL ROAD AID FUND
Fund balance carried forward	\$ 1,663,688.00	
Estimated Revenues:		
Property Taxes	174,300.00	
Licenses & Permits	5,376.00	
City Center Distribution	3,300.00	
Intergovernmental Revenues		28,500.00
Charges For Service	33,920.00	
Insurance Tax	140.00	
Payroll Tax	247,815.00	
Other	17,807.00	
Grants	255,173.00	
Total Estimated Revenues	\$ 907,279.00	\$ 28,500.00
Total Resources Available	\$ 2,570,967.00	\$ 28,500.00
Per Appropriation		

APPROPRIATIONS:	GENERAL FUND	MUNICIPAL ROAD AID FUND
General Government	238,000.00	
Public Works	604,186.00	28,500.00
Health, Safety, Welfare	171,859.00	
Water, Sewer Operations	6,450.00	
LEASE AGREEMENT Interest	5,671.00	
Bond & Insurance Expense	16,010.00	
Park & Playground	18,000.00	
Grants	353,171.00	
Total Appropriations	\$ 1,470,798.00	\$ 28,500.00
Excess of Resources Over (Under)	\$ 1,100,169.00	\$ -

SECTION 2:

That this Ordinance shall be in effect on

APRAYOR
City of Silver Grove, Kentucky

ATTEST
J. Clark
City of Silver Grove, Kentucky
CAM, Aug 15, 198723100

Your search ends here.

OUR NEW ROBOTS WON'T TAKE JOBS.

THEY'LL FIND YOU
THE RIGHT ONES.

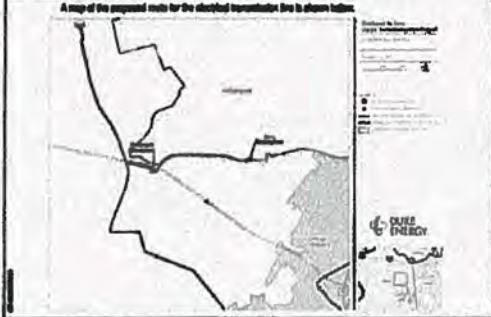
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OFFICIAL PUBLICATION OFFICIAL PUBLICATION OFFICIAL PUBLICATION

NOTICE OF PROPOSED ELECTRIC TRANSMISSION LINE CONSTRUCTION PROJECT

Duke Energy Kentucky, Inc. (Duke Energy Kentucky or Company) proposes to construct a new 120-MHz (MVA) transmission line to serve... The proposed transmission line generally will require a 70-foot-wide Right-of-Way, to include some a wider right-of-way... A permit may be required to be obtained for the proposed construction of the transmission line project and adjacent right-of-way to address... The application and other steps to be taken with Duke Energy Kentucky's application may be accessed at...

Any interested person, including any person over whose property the proposed transmission line will cross, may request a hearing... The application and other steps to be taken with Duke Energy Kentucky's application may be accessed at...



A map of the proposed route for the electrical transmission line is shown below.

NOTICE OF MASTER COMMISSIONER'S SALE

DARLINGTON FARMS CONDOMINIUMS COUNCIL OF CO-OWNERS, INC. VERSUS CHRISTINA M. BRUCCIER, ET AL. By virtue of a judgment and order of sale of the Boone Circuit Court rendered July 24, 2019... THE COMPLETE LEGAL DESCRIPTION IS PARTICULARLY SET OUT IN THE JUDGMENT AND ORDER OF SALE ENTERED IN THIS CASE.

NOTICE OF MASTER COMMISSIONER'S SALE

POHYMAC LOAN SERVICES, LLC 61101 COMODOR DRIVE MOORPARK, CA 92031 VERSUS KYLE A. HAPIER, ET AL. By virtue of a judgment and order of sale of the Boone Circuit Court rendered July 24, 2019... THE COMPLETE LEGAL DESCRIPTION IS PARTICULARLY SET OUT IN THE JUDGMENT AND ORDER OF SALE ENTERED IN THIS CASE.

NOTICE OF MASTER COMMISSIONER'S SALE

FIFTH THIRD BANK AS SUCCESSOR BY MERGER TO FIFTH THIRD MORTGAGE COMPANY VERSUS MELISSA SHARP, ET AL. By virtue of a judgment and order of sale of the Boone Circuit Court rendered SEPTEMBER 11, 2019... THE COMPLETE LEGAL DESCRIPTION IS PARTICULARLY SET OUT IN THE JUDGMENT AND ORDER OF SALE ENTERED IN THIS CASE.

NOTICE OF MASTER COMMISSIONER'S SALE

WELLS FARGO BANK, NA VERSUS CHAD A. BISHOP, ET AL. By virtue of a judgment and order of sale of the Boone Circuit Court rendered FEBRUARY 14, 2019... THE COMPLETE LEGAL DESCRIPTION IS PARTICULARLY SET OUT IN THE JUDGMENT AND ORDER OF SALE ENTERED IN THIS CASE.

NOTICE OF MASTER COMMISSIONER'S SALE

WELLS FARGO BANK, NA VERSUS CHAD A. BISHOP, ET AL. By virtue of a judgment and order of sale of the Boone Circuit Court rendered FEBRUARY 14, 2019... THE COMPLETE LEGAL DESCRIPTION IS PARTICULARLY SET OUT IN THE JUDGMENT AND ORDER OF SALE ENTERED IN THIS CASE.

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OFFICIAL PUBLICATION OFFICIAL PUBLICATION OFFICIAL PUBLICATION

LEGAL NOTICE

NOTICE OF PUBLIC HEARING... The Boone Fire Protection District will hold a public hearing on August 27, 2019, at 10:00 a.m. in the Boone County Administration Building... The purpose of the hearing is to receive comments from the public regarding the proposed rate increase for the Boone Fire Protection District.

NOTICE OF MASTER COMMISSIONER'S SALE

WELLS FARGO BANK, NA VERSUS CHAD A. BISHOP, ET AL. By virtue of a judgment and order of sale of the Boone Circuit Court rendered FEBRUARY 14, 2019... THE COMPLETE LEGAL DESCRIPTION IS PARTICULARLY SET OUT IN THE JUDGMENT AND ORDER OF SALE ENTERED IN THIS CASE.

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Put it up for sale. VISIT CLASSIFIEDS online at dcnrnat.com ENQUIRER MEDIA A WINNITTY COMPANY

POSTED!

Persons are notified that the land and property belonging to the below listed persons are posted for public sale, including, but not limited to, real estate, personal property, and other assets, for the purpose of satisfying a judgment or any other kind of lien. Owners are notified and responsible for any accounts. Debtors will be prosecuted to the fullest extent of the law.

City of Jonesboro, 2001 State Route 63, Jonesboro, KY 40343
 City of Paducah, 1000 North 3rd Street, Paducah, KY 40363-0443
 City of Paris, 2001 State St., Paris, KY 40362-0443
 City of Glasgow, 1000 North 3rd Street, Glasgow, KY 40324-0443
 City of Owensboro, 1000 North 3rd Street, Owensboro, KY 42301-0443
 City of Hickman, 1000 North 3rd Street, Hickman, KY 40121-0443
 City of Brandenburg, 1000 North 3rd Street, Brandenburg, KY 40301-0443
 City of Louisville, 1000 North 3rd Street, Louisville, KY 40201-0443
 City of Lexington, 1000 North 3rd Street, Lexington, KY 40501-0443
 City of Danville, 1000 North 3rd Street, Danville, KY 40401-0443
 City of Middlesboro, 1000 North 3rd Street, Middlesboro, KY 40277-0443
 City of Morehead, 1000 North 3rd Street, Morehead, KY 40351-0443
 City of Pikeville, 1000 North 3rd Street, Pikeville, KY 40360-0443
 City of Russell Springs, 1000 North 3rd Street, Russell Springs, KY 40371-0443
 City of Union City, 1000 North 3rd Street, Union City, KY 40380-0443
 City of Zanesville, 1000 North 3rd Street, Zanesville, KY 40390-0443
 City of Spencer, 1000 North 3rd Street, Spencer, KY 40389-0443
 City of Mount Vernon, 1000 North 3rd Street, Mount Vernon, KY 40359-0443
 City of Glasgow, 1000 North 3rd Street, Glasgow, KY 40324-0443
 City of Owensboro, 1000 North 3rd Street, Owensboro, KY 42301-0443
 City of Hickman, 1000 North 3rd Street, Hickman, KY 40121-0443
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 City of Pikeville, 1000 North 3rd Street, Pikeville, KY 40360-0443
 City of Russell Springs, 1000 North 3rd Street, Russell Springs, KY 40371-0443
 City of Union City, 1000 North 3rd Street, Union City, KY 40380-0443
 City of Zanesville, 1000 North 3rd Street, Zanesville, KY 40390-0443
 City of Spencer, 1000 North 3rd Street, Spencer, KY 40389-0443
 City of Mount Vernon, 1000 North 3rd Street, Mount Vernon, KY 40359-0443

NOTICE OF PROPOSED ELECTRIC TRANSMISSION LINE CONSTRUCTION PROJECT

The Commonwealth of Kentucky, Department of Transportation, is proposing to construct a new electric transmission line project in Grant County, Kentucky. The project involves the construction of a new 138 kV transmission line from the existing line at the intersection of US Highway 262 and KY 100, extending north to the intersection of KY 100 and KY 1000. The project will involve the construction of approximately 1.5 miles of new transmission line, including the installation of approximately 100 poles and towers. The project is expected to be completed by the end of 2011.

Any person who wishes to object to the proposed project should file a written objection with the Department of Transportation, 600 Commonwealth Building, Frankfort, Kentucky 40601, on or before August 18, 2010. The objection must be filed in accordance with the provisions of KRS 218.010. The Department will hold a public hearing on the project on August 25, 2010, at 10:00 a.m. in the County Courthouse, Paducah, Kentucky. The hearing will be held in accordance with the provisions of KRS 218.020. The Department will consider all objections filed in accordance with the provisions of KRS 218.010 and KRS 218.020. The Department will issue a final order on the project on or before September 15, 2010.

LEGAL NOTICES AND MASTER COMMISSIONER SALES

COMMISSIONER OF KENTUCKY UNITED COUNTY OF JUSTICE GRANT COUNTY COURT CASE NO. 10-CJ-0024

Plaintiff: **Wilmington Chase Bank, National Association**

Defendant: **John Beards, et al**

By virtue of a Judgment and Order of this court in the Grand Jury Case No. 10-CJ-0024, I will sell at public auction on the 25th day of August, 2010, at 10:00 a.m. the real estate described in the following: [Description of property]

The amount of money to be paid by the sale is the principal sum of \$14,400.00, together with interest at the rate of 12% per annum from the date of the sale. The interest shall be paid in cash at the time of the sale. The balance of the principal sum shall be paid in cash at the time of the sale. The sale shall be subject to the approval of the court.

The City of Clark is accepting bids for the following: [List of items for sale]

Bids should be submitted to the City of Clark, 1000 North 3rd Street, Clark, KY 40301, on or before August 18, 2010, at 4:00 p.m.

NOTICE OF PROPOSED ELECTRIC TRANSMISSION LINE CONSTRUCTION PROJECT

The Commonwealth of Kentucky, Department of Transportation, is proposing to construct a new electric transmission line project in Grant County, Kentucky. The project involves the construction of a new 138 kV transmission line from the existing line at the intersection of US Highway 262 and KY 100, extending north to the intersection of KY 100 and KY 1000. The project will involve the construction of approximately 1.5 miles of new transmission line, including the installation of approximately 100 poles and towers. The project is expected to be completed by the end of 2011.

COMMISSIONER OF KENTUCKY UNITED COUNTY OF JUSTICE GRANT COUNTY COURT CASE NO. 10-CJ-0025 Plaintiff: **Wilmington Chase Bank, National Association** Defendant: **John Beards, et al** By virtue of a Judgment and Order of this court in the Grand Jury Case No. 10-CJ-0025, I will sell at public auction on the 25th day of August, 2010, at 10:00 a.m. the real estate described in the following: [Description of property] The amount of money to be paid by the sale is the principal sum of \$14,400.00, together with interest at the rate of 12% per annum from the date of the sale. The interest shall be paid in cash at the time of the sale. The balance of the principal sum shall be paid in cash at the time of the sale. The sale shall be subject to the approval of the court.

COMMISSIONER OF KENTUCKY UNITED COUNTY OF JUSTICE GRANT COUNTY COURT CASE NO. 10-CJ-0026 Plaintiff: **Federal National Mortgage Association** Defendant: **John Beards, et al** By virtue of a Judgment and Order of this court in the Grand Jury Case No. 10-CJ-0026, I will sell at public auction on the 25th day of August, 2010, at 10:00 a.m. the real estate described in the following: [Description of property] The amount of money to be paid by the sale is the principal sum of \$14,400.00, together with interest at the rate of 12% per annum from the date of the sale. The interest shall be paid in cash at the time of the sale. The balance of the principal sum shall be paid in cash at the time of the sale. The sale shall be subject to the approval of the court.

COMMISSIONER OF KENTUCKY UNITED COUNTY OF JUSTICE GRANT COUNTY COURT CASE NO. 10-CJ-0027 Plaintiff: **Federal National Bank of Florida** Defendant: **John Beards, et al** By virtue of a Judgment and Order of this court in the Grand Jury Case No. 10-CJ-0027, I will sell at public auction on the 25th day of August, 2010, at 10:00 a.m. the real estate described in the following: [Description of property] The amount of money to be paid by the sale is the principal sum of \$14,400.00, together with interest at the rate of 12% per annum from the date of the sale. The interest shall be paid in cash at the time of the sale. The balance of the principal sum shall be paid in cash at the time of the sale. The sale shall be subject to the approval of the court.

COMMISSIONER OF KENTUCKY UNITED COUNTY OF JUSTICE GRANT COUNTY COURT CASE NO. 10-CJ-0028 Plaintiff: **FNB Third Bank** Defendant: **John Beards, et al** By virtue of a Judgment and Order of this court in the Grand Jury Case No. 10-CJ-0028, I will sell at public auction on the 25th day of August, 2010, at 10:00 a.m. the real estate described in the following: [Description of property] The amount of money to be paid by the sale is the principal sum of \$14,400.00, together with interest at the rate of 12% per annum from the date of the sale. The interest shall be paid in cash at the time of the sale. The balance of the principal sum shall be paid in cash at the time of the sale. The sale shall be subject to the approval of the court.

NOTARIZED PROOF OF PUBLICATION

COMMONWEALTH OF KENTUCKY

COUNTY OF Franklin

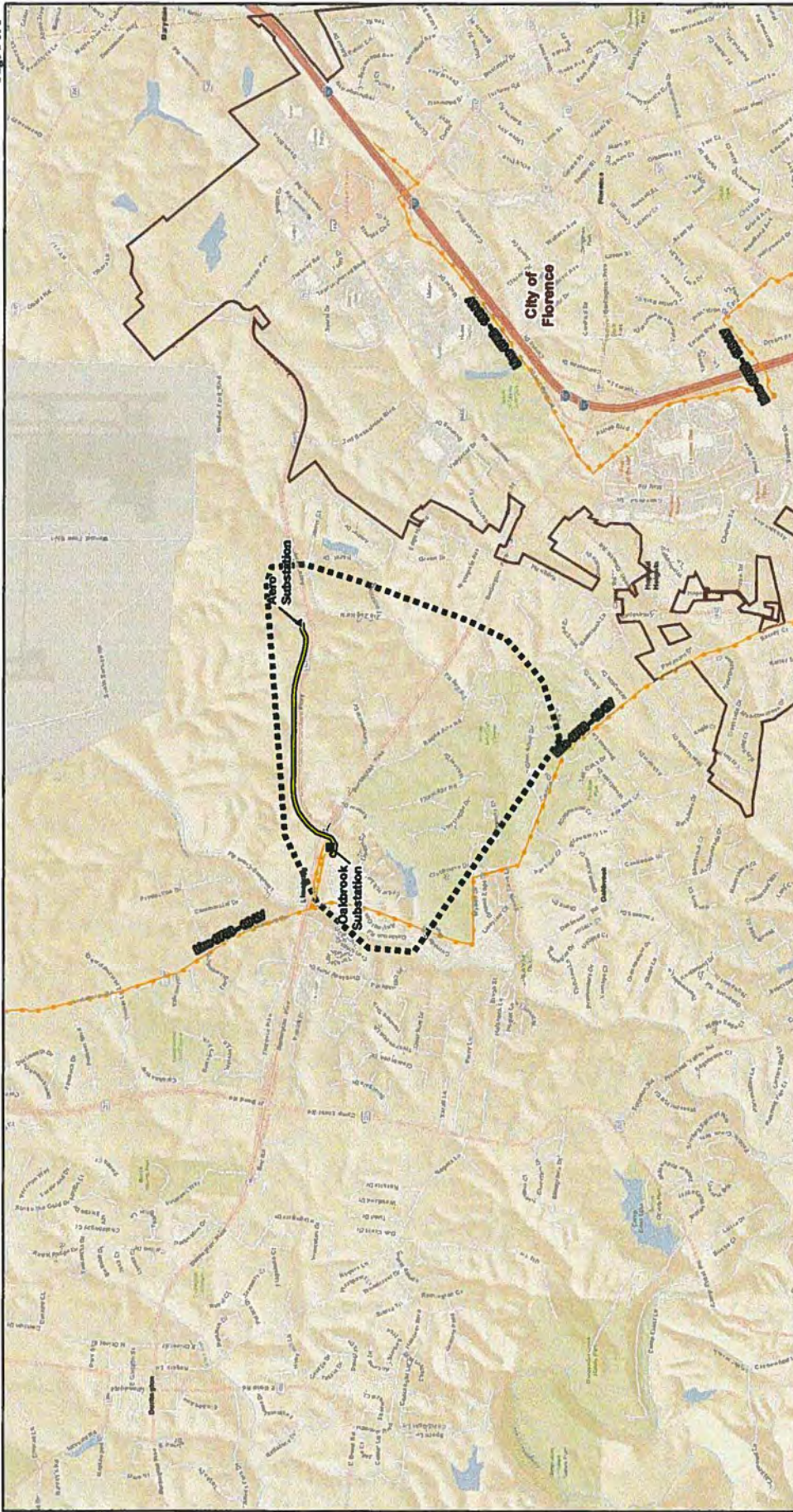
Before me, a Notary Public, in and for said county and state, this 15th day of August, 2019 came Rachel McCarty, personally known to me, who, being duly sworn, states as follows: that she is the Advertising Assistant of the Kentucky Press Service, Inc.; that she has personal knowledge of the contents of this affidavit; and that the publications included on the attached list published the Legal Notice for Duke Energy Corporation.

Rachel McCarty
Signature

Bonnie J. Howard

Notary Public
My Commission Expires: 9-18-20

(SEAL) Id. # 563384



DUKE ENERGY.

Exhibit 12:
Present System and
Proposed Project Components

DATE: 2018-08-19

Scale: 0 500 1,000 2,000 Feet

North Arrow

Map Notes:
1. Coordinate System: NAD 1983 StatePlane Kentucky North FIPS 1601 Feet
2. Data Source: ESRI World Street Map
3. Background: ESRI World Street Map

Legend

- ▲ Proposed Duke Substation
- Existing Duke Substation
- Oakbrook to Aero Preferred Route
- Existing Duke Owned Transmission Line
- Study Area
- ▭ City of Florence Municipal Boundary

COMMONWEALTH OF KENTUCKY
BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

The Electronic Application of Duke Energy)
Kentucky, Inc. for a Certificate of Public)
Convenience and Necessity to Construct A) Case No. 2019-00251
138-kV Transmission Line And Associated)
Facilities In Boone County (Oakbrook to Aero)
Transmission Project))

DIRECT TESTIMONY OF

YANTHI W. BOUTWELL

ON BEHALF OF

DUKE ENERGY KENTUCKY, INC.

August 23, 2019

TABLE OF CONTENTS

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I. INTRODUCTION AND PURPOSE	1
II. DUKE ENERGY KENTUCKY’S PROPOSAL TO CONSTRUCT THE PROJECT	3
III. FINANCIAL ASPECTS OF THE PROJECT	12
IV. REVIEW OF THE PROJECT AND STAKEHOLDER INPUT	13
V. CONCLUSION	14

I. INTRODUCTION AND PURPOSE

1 **Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.**

2 A. My name is Yanthi W. Boutwell, and my business address is 139 East Fourth
3 Street, Cincinnati, Ohio 45202.

4 **Q. BY WHOM ARE YOU EMPLOYED AND IN WHAT CAPACITY?**

5 I am employed by Duke Energy Business Services, LLC (DEBS) as Director of
6 Midwest Transmission Resource & Project Management. DEBS provides various
7 administrative and other services to Duke Energy Kentucky, Inc., (Duke Energy
8 Kentucky or Company) and other affiliated companies of Duke Energy
9 Corporation (Duke Energy).

10 **Q. PLEASE BRIEFLY DESCRIBE YOUR EDUCATIONAL AND**
11 **PROFESSIONAL BACKGROUNDS.**

12 A. I hold a Bachelor of Science and a Master of Science in Electrical Engineering
13 from the University of Alabama at Birmingham and a Master of Business
14 Administration from Xavier University. I am a licensed Professional Engineer in
15 the states of Ohio, Kentucky, Pennsylvania, and Alabama. I joined Duke Energy
16 in 2001 and have held various leadership and engineering roles within
17 Transmission Engineering. Prior to joining Duke Energy, I worked as an engineer
18 for Alabama Power Company in Birmingham, Alabama and for Allegheny Power
19 in Greensburg, Pennsylvania. I have design experience in transmission line,
20 substation, Protection & Control, and substation standards. I assumed my role as
21 Director of Midwest Transmission Resource & Project Management on May 1,
22 2019.

1 **Q. PLEASE SUMMARIZE YOUR DUTIES AS DIRECTOR OF MIDWEST**
2 **RESOURCE & PROJECT MANAGEMENT.**

3 A. As Director of Midwest Resource & Project Management, I am responsible for
4 providing strategic direction relative to project and resource management to the
5 Transmission Department as it relates to project development and execution,
6 project portfolio management, work management, project resource forecasting,
7 contracting strategy, and materials strategy. I am accountable for the Midwest
8 portion of the overall Transmission project portfolio with large capital spending
9 that equates to a portfolio of 100's of projects. I play a key role in providing
10 oversight on the Duke Energy Midwest Transmission capital and Operation and
11 Maintenance (O&M) budget and have responsibility within Work Management
12 including short-term and long-range planning, outage coordination, and NERC
13 compliance oversight for maintenance activities, scheduling all construction and
14 maintenance activities. I serve as the department management point of contact
15 with other departments and organizations, both internally and externally to the
16 Company as it relates to Midwest Transmission projects.

17 **Q. HAVE YOU PREVIOUSLY TESTIFIED BEFORE THE KENTUCKY**
18 **PUBLIC SERVICE COMMISSION?**

19 A. No.

20 **Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY IN THIS**
21 **PROCEEDING?**

22 A. I am testifying in support of Duke Energy Kentucky's application for a certificate
23 of public convenience and necessity (CPCN) to build Oakbrook to Aero

1 Transmission Line Project (the Project). In doing so, I provide an overview of the
2 Project, and detail the Company's compliance with the notice requirements for
3 this proceeding. Finally, I sponsor Exhibits 9, 10, and 11 to the Company's
4 Application.

II. DUKE ENERGY KENTUCKY'S PROPOSAL TO CONSTRUCT THE PROJECT

5 **Q. PLEASE BRIEFLY SUMMARIZE DUKE ENERGY KENTUCKY'S**
6 **PROPOSAL IN THIS APPLICATION.**

7 A. Duke Energy Kentucky is seeking authority to construct and operate a new single
8 circuit 138-kilovolt (kV) transmission line. The proposed line connects the
9 existing Oakbrook 69-kV Substation to the proposed Aero 138-kV Substation.
10 The existing Oakbrook Substation would be expanded to include 138-kV
11 equipment to support the Project. The Oakbrook to Aero transmission line will be
12 approximately 1.1 linear miles.

13 **Q. WHAT IS THE PURPOSE OF THE PROJECT?**

14 A. The purpose of the Project is to provide a 138-kV connection from the existing
15 Oakbrook Substation to the proposed Aero Substation. It is necessary as part of
16 the overall service plan to serve the new Amazon Prime Air Hub facility as well
17 as to support future load growth in the area and the reliability of the surrounding
18 Duke Energy Kentucky transmission and distribution systems.

1 **Q. PLEASE DESCRIBE THE PATH OF THE PROPOSED 138-kV**
2 **TRANSMISSION LINE.**

3 A. The proposed line comes out of Oakbrook Substation from the south and crosses
4 over Burlington Pike (State Route 18) and will run parallel to Aero Parkway
5 (State Route 1017) for approximately one (1) mile until it reached the proposed
6 location for the new Aero Substation which is located south of the
7 Cincinnati/Northern Kentucky International Airport (CVG).

8 **Q. WHAT IS THE STATUS OF THE ENGINEERING AND DESIGN WORK**
9 **FOR THE OAKBROOK TO AERO 138-kV TRANSMISSION LINE?**

10 A. Engineering and design work is ongoing and will be finalized once surveying and
11 Amazon's site design work is complete along the proposed route.

12 **Q. WHERE WILL THE PROPOSED AERO 138-kV SUBSTATION BE**
13 **LOCATED?**

14 A. The proposed Aero 138-kV Substation will be located in a private easement
15 within Boone County, Kentucky north of Aero Parkway and south of CVG.

16 **Q. PLEASE DESCRIBE THE PROPOSED AERO 138-kV SUBSTATION.**

17 A. The Aero 138-kV Substation will be constructed on an approximately 3.75-acre
18 site located off Aero Parkway. The site will be under an easement with CVG. The
19 fenced portion of the proposed Aero Substation will measure approximately 250
20 feet by 435 feet and will consist of a graveled yard. The Aero Substation will
21 provide termination and switching facilities for the 138-kV lines that will supply
22 the substation, four (4) 138-13.09 kV, 22.4 MVA distribution supply transformers
23 to supply distribution feeders to Amazon Prime Air Hub facility and to the

1 surrounding area, and 12.47-kV switching facilities for the 12.47-kV feeders. The
2 plan is for four (4) feeders to supply Amazon and four (4) feeders to supply the
3 surrounding area, for a total of eight (8) feeders. The station is designed to be able
4 to supply an additional six feeders, either to the Amazon Air Hub facility or the
5 surrounding area as needed in the future.

6 **Q. WHERE IS OAKBROOK 69-kV SUBSTATION LOCATED?**

7 A. The existing Oakbrook 69-kV Substation is located at 1601 Burlington Pike in
8 Boone County, Kentucky, approximately one mile west of the proposed Aero
9 Substation. As a part of this Project, the entrance into the substation will be
10 relocated to Oakbrook Drive on the south side of the substation on Company-
11 owned land.

12 **Q. WHAT WORK IS REQUIRED TO BE PERFORMED ON THE**
13 **OAKBROOK 69-kV SUBSTATION TO SUPPORT THE NEW 138-kV**
14 **LINE?**

15 A. The existing Oakbrook 69-kV Substation will be expanded on Company-owned
16 property to install a 138-kV yard. The expansion is approximately 195 feet by 175
17 feet and the complete yard after the expansion will be 250 feet by 175 feet of a
18 graveled yard.

19 Oakbrook Substation currently contains a 138x69-13.09 kV, 22.4 MVA
20 transformer (energized at 69 kV), 69-kV switching equipment on the high side of
21 the transformer to connect to the 69-kV supply lines, and 12.47-kV switching
22 equipment on the low side of the transformer to supply two (2) 12.47-kV
23 distribution feeders to the surrounding area. The substation will be modified to

1 install a 138-69 kV, 150 MVA autotransformer, two (2) 138-kV circuit breakers
2 to connect both sides of the new autotransformer. These breakers will connect to
3 the existing 69-kV bus in the substation on the low side and connect to the
4 proposed 138-kV transmission line on the high side of the autotransformer.
5 Exhibit 2 provides additional information regarding the planned substation and its
6 components.

7 **Q. WILL THE PROPOSED PROJECT ALSO ENHANCE DUKE ENERGY**
8 **KENTUCKY'S CAPACITY TO PROVIDE 12.47-kV SERVICE TO**
9 **OTHER CUSTOMERS LOCATED IN THE AREA?**

10 A. Yes. This proposed Project, plus other transmission system improvements to be
11 submitted on a separate CPCN application, will reinforce transmission system
12 capacity and enhance reliability of service to other portions of the Duke Energy
13 Kentucky transmission system. The Aero Substation will be utilized to serve
14 existing load and new load expected to develop in the vicinity of the Amazon
15 Prime Air Hub in addition to the Amazon Prime Air Hub facility itself.

16 **Q. DOES DUKE ENERGY HAVE ANY OTHER PROJECTS PLANNED FOR**
17 **THE PROPOSED AREA?**

18 A. Yes. The work necessary to provide service to the new Amazon Prime Air Hub
19 facility and to support other anticipated load in the area is multiphased. Duke
20 Energy Kentucky anticipates filing a CPCN to install a new gas line and
21 additional electric transmission facilities later in the fall of 2019.

1 **Q. PLEASE DESCRIBE THE AREA THE PROPOSED LINE WILL**
2 **TRAVERSE.**

3 A. The majority of the new proposed line will be placed within the foot-print of the
4 Amazon Prime Air Hub. This entire area will be cleared and graded to support
5 building Amazon Prime's Air Hub prior to the installation of the Project. Amazon
6 is tracking to have its grading done no later than March 2020 which will support
7 installation of Duke Energy Kentucky's facilities.

8 **Q. WHAT IS THE AMAZON PRIME AIR HUB FACILITY AND WHERE IS**
9 **IT LOCATED?**

10 A. Amazon is building a new air logistics center out of the CVG airport to support its
11 business model. The logistics center will be located on the south side of the
12 existing airport in Boone County, Kentucky. This facility is directly north of
13 Company proposed facilities.

14 **Q. CAN YOU PROVIDE ADDITIONAL INFORMATION ON THE AMAZON**
15 **PRIME AIR HUB FACILITY?**

16 A. Amazon has a phased approach to building its air hub facilities. It is leasing more
17 than 1,100 acres from CVG to build the air hub facilities. There is three million
18 square feet of building space planned in addition to hangers for cargo planes.
19 Amazon is planning to have the first phase of its facilities to be operational by
20 beginning of 2021 and fully completed around 2026.

1 **Q. COULD DUKE ENERGY KENTUCKY SERVE AMAZON'S 60MW**
2 **ULTIMATE LOAD WITHOUT THE PROJECT?**

3 A. No. The existing electric infrastructure in the area would not support the needs of
4 the Amazon facility. Amazon needs Duke Energy Kentucky to be able to
5 preliminarily be able to support 20MW and once they are in operations Amazon
6 needs 40MW. The full build-out of Amazon's facility will require 60MW which
7 Duke Energy Kentucky would not be able to support without this Project.

8 **Q. COULD THE SERVICE TO BE FURNISHED BY THE PROJECT BE**
9 **REASONABLY PROVIDED BY REBUILDING AN EXISTING**
10 **TRANSMISSION LINE OR EXTENDING SERVICE FROM AN**
11 **EXISTING SUBSTATION?**

12 A. No. There is not a reasonable alternative to meet the need.

13 **Q. AT WHAT VOLTAGE LEVELS DOES AMAZON ANTICIPATE TAKING**
14 **SERVICE?**

15 A. Amazon will take service at the Duke Energy Kentucky standard distribution
16 primary service voltage of 12.47 kV.

17 **Q. WHAT IS THE STATUS OF AMAZON'S FACILITIES?**

18 A. Amazon broke ground on their facilities on May 14, 2019. They are currently
19 grading their site and will be have rough grade completed by end of 2019 for its
20 first phase of development.

1 **Q. PLEASE BRIEFLY DESCRIBE THE ADDITIONAL ELECTRIC**
2 **TRANSMISSION PROJECT PHASES REQUIRED TO SUPPORT THE**
3 **RELIABILITY OF THE PROPOSED AERO SUBSTATION?**

4 A. There is another new 138-kV transmission line Duke Energy Kentucky is
5 planning to submit in the fourth quarter of 2019. This proposed line would
6 traverse from a new proposed substation to Aero Substation. Routing studies are
7 currently underway to determine a preferred route for this other line to be
8 submitted to the Commission for approval of a CPCN.

9 **Q. WHEN DOES DUKE ENERGY KENTUCKY PROPOSE TO BUILD THE**
10 **TRANSMISSION LINE AND THE SUBSTATION IF THE CERTIFICATE**
11 **IS GRANTED?**

12 A. Construction at Oakbrook Substation and Aero Substation would begin in
13 February 2020. Construction on the line would begin in June 2020. The line is
14 scheduled to be energized by end of 2020 and restoration will continue into spring
15 2021.

16 **Q. WHAT IS THE WIDTH OF THE RIGHT-OF-WAY FOR THE**
17 **PROPOSED LINE?**

18 A. The proposed Project will be located in a 75-foot right-of-way.

19 **Q. WILL THE PROPOSED LINE'S RIGHT-OF-WAY EXCEED 75 FEET IN**
20 **SOME CIRCUMSTANCES?**

21 A. No. It is not anticipated that a greater right-of-way width will be needed.

1 **Q. WHAT RIGHT-OF-WAY ACTIVITIES HAS DUKE ENERGY**
2 **KENTUCKY UNDERTAKEN TO DATE?**

3 A. Duke Energy Kentucky has been working with Amazon and CVG on easement
4 acquisition. At time of this testimony, final easements have not been signed and
5 will be subject to Commission approval of this Project.

6 **Q. DUKE ENERGY KENTUCKY FILED MAPS ILLUSTRATING THE**
7 **CENTERLINE OF THE PROPOSED TRANSMISSION LINE AS**
8 **EXHIBIT 7 TO ITS APPLICATION. COULD THAT CENTERLINE**
9 **CHANGE?**

10 A. Yes. Duke Energy Kentucky has been working with Amazon's site developer to
11 work through access to structures during construction and post-construction for
12 maintenance. Until these plans are finalized and the site is developed there could
13 be slight centerline changes and could change the right-of-way shown on Exhibit
14 7. Duke Energy Kentucky seeks authority to place the centerline and associated
15 right-of-way in the filing corridor if required based on field conditions
16 encountered.

17 **Q. WHAT IS THE WIDTH OF THE FILING CORRIDOR?**

18 A. The width of the Filing Corridor is 175 feet. This corridor would allow for 50 feet
19 on either side of the proposed right-of-way to account for adjustments required
20 during finalized negotiations with landowners and access needs. This also would
21 allow for slight flexibility based on field conditions at time of construction if
22 alternative access is required based on status of Amazon Prime Air Hub's
23 schedule.

1 **Q. IS DUKE ENERGY KENTUCKY SEEKING UNLIMITED DISCRETION**
2 **TO LOCATE THE TRANSMISSION LINE AND RIGHT-OF-WAY**
3 **WITHIN THE PROPOSED FILING CORRIDOR?**

4 A. Duke Energy Kentucky is seeking authority to move the electric transmission line
5 and associated right-of-way only within the indicated Filing Corridor.

6 **Q. WILL THE COMMISSION BE INFORMED OF THE FINAL LOCATION**
7 **OF THE LINE AND THE ADJACENT RIGHTS-OF-WAY?**

8 A. Yes. Duke Energy Kentucky will file with the Commission a revised plan
9 showing the location of the proposed line, structures, and substation facilities
10 upon the completion of construction.

11 **Q. DID DUKE ENERGY KENTUCKY COMPLY WITH THE**
12 **REQUIREMENTS OF 807 KAR 5:120, SECTION 2(3) BY PROVIDING**
13 **NOTICE TO ADJOINING LANDOWNERS WHOSE PROPERTY MIGHT**
14 **BE AFFECTED BY THE PROJECT?**

15 A. Yes. Duke Energy Kentucky mailed notices to the owners of record for all parcels
16 within the proposed right-of-way and the filing corridor.

17 **Q. WHEN WAS THE LANDOWNER NOTICE MAILED?**

18 A. The landowner notification was mailed on August 16, 2019. The list of
19 landowners within the proposed right-of-way and filing corridor to whom the
20 notice was mailed is attached to the application in Exhibit 10. The required
21 verification of mailing is attached to the application in Exhibit 9.

1 **Q. DID THE NOTICE CONTAIN THE INFORMATION REQUIRED BY 807**
2 **KAR 5:120, SECTION 2(3)(A)-(E)?**

3 A. Yes. The form of the notice is attached to the application as Exhibit 10.

4 **Q. DID DUKE ENERGY KENTUCKY PUBLISH THE REQUIRED NOTICE**
5 **IN THE NEWSPAPER OF RECORD?**

6 A. Yes. A copy of the notice and publication affidavit is provided as Exhibit 11.

III. FINANCIAL ASPECTS OF THE PROJECT

7 **Q. WHAT IS THE PROJECTED COST OF THE PROJECT?**

8 A. The overall Project is estimated to cost approximately \$32.3 million. That sum
9 comprises: (a) approximately \$2.1 million for the construction of the overhead
10 line, including right-of-way acquisition; (b) approximately \$7.2 million for
11 expansion and equipment at Oakbrook Substation; and (c) approximately \$23
12 million at Aero Substation which includes \$10 million in distribution components.

13 **Q. DOES THE \$32.3 MILLION COST ESTIMATE DESCRIBED ABOVE**
14 **AND SET OUT IN THE APPLICATION REPRESENT A FIXED AND**
15 **FINAL-COST?**

16 A. No. The \$32.3 million is based on a Class 4 estimate that represents plus 50
17 percent and minus 30 percent. This estimate will be further refined once
18 engineering is finalized and prior to start of construction. The final cost for the
19 Project will not be known until all work is complete and the right-of-way is
20 restored.

21 **Q. IS AMAZON CONTRIBUTING TO THE COST OF THE PROJECT?**

22 A. No.

1 **Q. HOW WILL THE PROJECT COST BE FUNDED?**

2 A. Duke Energy Kentucky anticipates funding the cost of the transmission line and
3 associated substation facilities through its normal operating cash flow and other
4 funds generated internally. The cost associated with the Project will be included in
5 Duke Energy Kentucky's next rate case as applicable.

6 **Q. WILL THE COST OF THE PROJECT MATERIALLY AFFECT THE
7 FINANCIAL CONDITION OF DUKE ENERGY KENTUCKY?**

8 A. No.

9 **Q. WHAT IS THE PROJECTED COST OF OPERATION FOR THE
10 PROPOSED FACILITIES AFTER THEY ARE COMPLETED?**

11 A. Duke Energy Kentucky projects the annual operating cost will be on average
12 approximately \$5,000 for general maintenance and inspection.

IV. REVIEW OF THE PROJECT AND STAKEHOLDER INPUT

13 **Q. IS THE PROJECT DENOMINATED BASELINE OR SUPPLEMENTAL
14 PJM INTERCONNECTION LLC?**

15 A. This will be considered a Supplemental Project. PJM Supplemental Project
16 Number s1782.

17 **Q. PLEASE EXPLAIN WHAT BEING A SUPPLEMENTAL PJM PROJECT
18 MEANS.**

19 A. Supplemental projects are expansions of the system that do not address reliability
20 criteria, but other needs. This need includes items like equipment condition,
21 performance and risk, operational flexibility and efficiency, infrastructure
22 resilience, and customer service. The driver for this Project is customer service

1 and being able to meet a customer's schedule for when it will need electric
2 service.

3 **Q. IS DUKE ENERGY KENTUCKY RELYING ON THE PJM REVIEW OF**
4 **THE PROJECT TO DEMONSTRATE THE NEED FOR THE PROJECT?**

5 A. No. As a supplemental project, the project is justified by Duke Energy Kentucky
6 to meet internal criteria, in this case provision of service to retail customers. PJM
7 performed a "do-no-harm" analysis to determine if the proposed project could
8 necessitate any other system projects or modifications and none were found which
9 were not already anticipated by Duke Energy Kentucky.

10 **Q. HAVE RELEVANT STAKEHOLDERS BEEN AFFORDED AN**
11 **OPPORTUNITY TO PROVIDE INPUT REGARDING THE PROPOSED**
12 **TRANSMISSION LINE ROUTE?**

13 A. Yes. Duke Energy Kentucky has been in communication with CVG and Amazon
14 to review easement location for the transmission line route.

V. CONCLUSION

15 **Q. WERE EXHIBITS 9, 10, AND 11 PREPARED UNDER YOUR**
16 **DIRECTION AND CONTROL?**

17 A. Yes.

18 **Q. DOES THIS CONCLUDE YOUR PRE-FILED DIRECT TESTIMONY?**

19 A. Yes.

VERIFICATION

STATE OF OHIO)
)
COUNTY OF HAMILTON) SS:

The undersigned, Yanthi W. Boutwell, Director of Midwest Transmission Resource & Project Management, being duly sworn, deposes and says that she has personal knowledge of the matters set forth in the foregoing testimony and that it is true and correct to the best of her knowledge, information and belief.

Yanthi W. Boutwell
Yanthi W. Boutwell Affiant

Subscribed and sworn to before me by Yanthi W. Boutwell on this 15th day of August, 2019.

Jacqueline S. Hobbs
NOTARY PUBLIC

My Commission Expires  **JACQUELINE SCHUSTER HOBBS**
Attorney at Law
Notary Public, State of Ohio
My Commission Has No Expiration
Date. Section 147.03 O.R.C.

COMMONWEALTH OF KENTUCKY
BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

The Electronic Application of Duke Energy)	
Kentucky, Inc. for a Certificate of Public)	
Convenience and Necessity to Construct A)	Case No. 2019-00251
138-kV Transmission Line And Associated)	
Facilities In Boone County (Oakbrook to Aero)	
Transmission Line Project))	

DIRECT TESTIMONY OF

JOHN K. HURD

ON BEHALF OF

DUKE ENERGY KENTUCKY, INC.

August 23, 2019

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I. INTRODUCTION AND PURPOSE

1 **Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.**

2 A. My name is John K. Hurd, and my business address is 139 East Fourth Street,
3 Cincinnati, Ohio 45202.

4 **Q. BY WHOM ARE YOU EMPLOYED AND IN WHAT CAPACITY?**

5 A. I am employed by Duke Energy Business Services, LLC (DEBS) as Lead
6 Transmission Siting Specialist. DEBS provides various administrative and other
7 services to Duke Energy Kentucky, Inc., (Duke Energy Kentucky or Company) and
8 other affiliated companies of Duke Energy Corporation (Duke Energy).

9 **Q. PLEASE BRIEFLY DESCRIBE YOUR EDUCATIONAL BACKGROUND
10 AND BUSINESS EXPERIENCE.**

11 A. I received a Bachelor of Science degree in Physical Geography in 2004 and a
12 Master's degree in Geography in 2007 from the University of Cincinnati. I received
13 a certificate in Geographic Information Systems (GIS) from the University of
14 Cincinnati in 2006. In 2014 I was certified a Geographic Information Systems
15 Professional (GISP) from the GIS Certificate Institute (GISCI). I began my
16 professional career at URS corporation as a GIS analyst supporting the siting and
17 permitting of electric and gas utility projects. In 2007 I become a project manager
18 at URS corporation leading the siting and permitting of transmission line and
19 substation projects. In 2012 I joined CH2M Hill as a project manager for siting and
20 permitting transmission line and substations and in 2013 became a GIS manager. I
21 joined Duke Energy as a Transmission Siting Specialist in 2018.

1 **Q. PLEASE SUMMARIZE YOUR DUTIES AS LEAD TRANSMISSION**
2 **SITING SPECIALIST.**

3 A. I am responsible for leading the siting and routing studies needed for new or
4 relocated substations and transmission lines in Duke Energy's Midwest Territory
5 which includes Kentucky, Ohio, and Indiana.

6 **Q. HAVE YOU PREVIOUSLY TESTIFIED BEFORE THE KENTUCKY**
7 **PUBLIC SERVICE COMMISSION?**

8 A. No.

9 **Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY IN THIS**
10 **PROCEEDING?**

11 A. I am testifying in support of Duke Energy Kentucky's application for a certificate
12 of public convenience and necessity (CPCN) to build the Oakbrook to Aero
13 Transmission Line Project (the Project). In doing so, I describe the methodology
14 used by Duke Energy Kentucky in conducting the siting study that was used to
15 identify and evaluate the various transmission line routes and substation sites. I
16 describe the results and conclusions of the siting study as well as the basis for the
17 recommended proposed route. Finally, I sponsor Exhibits 1, 6, 7, and 8, which I
18 describe below.

II. THE SITING STUDY

A. Overview

1 **Q. PLEASE PROVIDE A BRIEF SUMMARY OF THE PROJECT AND ITS**
2 **PURPOSE.**

3 A. Duke Energy Kentucky is seeking authority to construct and operate a new single
4 circuit 138-kV transmission line. The proposed line connects the existing Oakbrook
5 69-kV Substation to the proposed Aero 138-kV Substation. The existing Oakbrook
6 Substation will be expanded to include 138-kV equipment to support the Project.
7 The Oakbrook to Aero transmission line will be approximately 1.1 linear miles.

8 The purpose of the Project is to provide a 138-kV connection from the
9 existing Oakbrook Substation to the proposed Aero Substation. It is necessary as
10 part of the overall service plan to serve the new Amazon Prime Air Hub facility as
11 well as to support future load growth in the area and the reliability of the
12 surrounding Duke Energy Kentucky transmission and distribution systems.

13 **Q. WHAT IS THE PURPOSE OF A SITING STUDY?**

14 A. The purpose of a siting study is to select a preferred route for the new electrical
15 transmission facility that minimizes impacts to the natural and built environment
16 while also optimizing Duke Energy Kentucky's business needs. The siting study
17 methodology can vary depending on the nature of the project and study area.

18 **Q. PLEASE DESCRIBE HOW THE SITING STUDY WAS CREATED.**

19 A. The first step in the siting study was for the siting team to establish a study area for
20 the vicinity of load needs with input from planning on system reliability and to
21 create siting guidelines that served to direct the decision-making process. For this

1 Project, it was determined the study area would be a 1.3-square mile area between
2 an existing substation (Oakbrook Substation) and a proposed substation property
3 (Aero Substation). A broad array of data was then compiled to help the siting team
4 identify opportunities and constraints for siting the new transmission line.
5 Opportunities and constraints included information on ecology, engineering, land
6 use, and cultural features in the study area. Members of the siting team then created
7 route alternatives that minimized impacts to siting constraints and took advantage
8 of siting opportunities. These route alternatives were viewed in the field from public
9 vantage points and opportunities and constraints data were verified at this time to
10 the extent possible. The route alternatives were then vetted by the full siting team,
11 updated as necessary, and analyzed using Duke Energy Kentucky's standard siting
12 methodology. The analysis consisted of applying weights to criteria considered
13 important to siting electrical transmission lines in this area, normalizing the output,
14 and combining the values to establish a single composite score for each route.
15 Following the analysis, the routes were ranked and reviewed along with landowner
16 feedback and agency correspondence to determine the preferred route. Each step in
17 this process is further described in accompanying Line Route Evaluation Report in
18 Confidential Exhibit 6.

19 **Q. WERE YOU SOLELY RESPONSIBLE FOR THE CREATION OF THE**
20 **SITING STUDY?**

21 A. I led the siting study, but the siting team was multidisciplinary, consisting of
22 members from Duke Energy Kentucky and Stantec Consulting Services Inc.
23 (Stantec) experienced in transmission line siting, planning, engineering,

1 construction, permitting, public engagement, project management, real estate, and
2 agency and public outreach.

3 **Q. WHAT ENTITIES PARTICIPATED IN THE CREATION AND DATA**
4 **COLLECTION FOR THE SITING STUDY?**

5 A. Duke Energy Kentucky and Stantec.

B. 138 kV Transmission line

6 **Q. ARE YOU FAMILIAR WITH THE ELECTRIC POWER RESEARCH**
7 **INSTITUTE/GEORGIA TRANSMISSION CORPORATION'S (EPRI)**
8 **OVERHEAD ELECTRIC TRANSMISSION LINE SITING**
9 **METHODOLOGY?**

10 A. Yes.

11 **Q. ARE YOU FAMILIAR WITH THE RELATED KENTUCKY**
12 **TRANSMISSION LINE SITING METHODOLOGY (KENTUCKY EPRI**
13 **METHODOLOGY)?**

14 A. Yes.

15 **Q. PLEASE DESCRIBE THE KENTUCKY EPRI METHODOLOGY.**

16 A. The Kentucky EPRI methodology develops and ranks alternative routes by
17 assigning different weights to different landscape resources or variables. A study
18 area comprising multiple differing land uses/land covers can yield sufficient
19 differentiation in the values assigned to the alternatives to inform decision making.
20 Larger study areas, increase the possibility of more differentiation between
21 alternative routes because there may be more variety in the natural and built
22 environment.

1 **Q. WAS THE KENTUCKY EPRI METHODOLOGY USED IN THE**
2 **COMPANY'S SITING STUDY?**

3 A. While the Kentucky EPRI Methodology was not used for this Project's siting study,
4 the methodology that was used does have many similar features. Data were
5 compiled, assigned values of relative influence to the model outcome, and analyzed
6 to rank the route alternatives. The study area was small, with few landowners and
7 minimal variability in the natural and built environment. The siting team decided
8 that the small size of the study area favored the analysis methodology that was used.

9 **Q. WHAT METHODOLOGY WAS USED TO EVALUATE TRANSMISSION**
10 **ROUTES IN THE SITING STUDY?**

11 A. Duke Energy Kentucky used Duke Energy standard methodology which includes a
12 quantitative scoring and ranking and qualitative evaluations.

13 **Q. WHERE IS THE METHODOLOGY EXPLAINED IN THE SITING**
14 **STUDY?**

15 A. The methodology is explained in Sections 1.2, 2, and 3 of the Line Route Evaluation
16 Report included in Confidential Exhibit 6.

17 **Q. PLEASE EXPLAIN THE GENERAL STEPS OF THE SITING**
18 **METHODOLOGY USED IN THE SITING STUDY.**

19 A. In general, the siting study methodology consisted of five (5) steps:

20 1) Establish study area and siting guidelines;

21 2) Compile data and map constraints;

22 3) Identify route alternatives;

23 4) Analyze data; and

1 5) Select a preferred route.

2 **Q. PLEASE DESCRIBE IN MORE DETAIL THE FIRST STEP USED BY THE**
3 **SITING TEAM.**

4 A. Once Duke Energy Kentucky’s transmission planning identified that Oakbrook
5 Substation would provide power to the proposed Aero Substation with a new
6 transmission line connecting these two substations. The siting team then began by
7 establishing a Study Area that would provide opportunity to identify unique route
8 alternatives. The siting team then met to create siting guidelines that would steer
9 the decision-making process for the Project. The Project location is shown on the
10 map in Exhibit 1.

11 **Q. PLEASE DESCRIBE THE DATA COLLECTION PROCESS AND**
12 **CONSTRAINTS MAPPING.**

13 A. Members of the siting team collected data on the natural and built environment for
14 the Study Area from public data sets, agency correspondence, review of aerial
15 photography, and historic maps. Data were compiled in a project geographic
16 information system (GIS). The GIS was then used to produce maps that depicted
17 the ecology, engineering, land use and cultural features in the Study Area.

18 **Q. PLEASE DESCRIBE THE TOPOGRAPHY AND LAND USE FOUND IN**
19 **THE STUDY AREA.**

20 A. The 1.3-square mile Study Area is in an unincorporated portion of Boone County,
21 Kentucky and encompasses the proposed Aero Substation and the existing
22 Oakbrook Substation. The Study Area is characterized by mixed residential and
23 commercial development, interspersed by hay fields, fallow fields, and woodlots.

1 Existing development includes the Boone Links Golf Course, Cincinnati/Northern
2 Kentucky International Airport (CVG), suburban housing development, warehouse
3 facilities, car dealerships, storage facilities, restaurants, and other retail buildings.
4 Major travel corridors include Burlington Pike and Aero Parkway. Buried utilities,
5 including water, sanitary sewer, and storm sewer lines, are sited along most
6 roadsides in the Study Area. United States Fish and Wildlife Service National
7 Wetland Inventory (USFWS, NWI) data indicates minimal presence of wetlands
8 and other jurisdictional wetland or water features. The land on the north side of
9 Aero Parkway was partially forested, but due to construction for the Amazon Prime
10 Air Hub, those trees have been recently cleared at the time of the study.

11 **Q. PLEASE DESCRIBE THE SECOND STEP IN THE SITING**
12 **METHODOLOGY IN MORE DETAIL.**

13 A. Data collection was the second step in the siting methodology. This included a
14 review of the constraint maps and data collection in the field. The siting lead and
15 members of the analysis team conducted field reconnaissance of the Study Area on
16 multiple occasions from public vantage points.

17 **Q. PLEASE DESCRIBE THE THIRD STEP IN THE SITING**
18 **METHODOLOGY IN MORE DETAIL.**

19 A. The third step in the siting methodology was to create route alternatives. The siting
20 team created four route alternatives to take advantage of opportunities for siting the
21 transmission lines and avoid constraints. These routes were reviewed and updated
22 based on multi-disciplinary feedback from the members of the siting team.

1 **Q. PLEASE DESCRIBE THE FOURTH STEP IN THE SITING**
2 **METHODOLOGY IN GREATER DETAIL.**

3 A. The fourth step in the siting methodology was analysis. The data were categorized
4 by criteria group, criteria, and sub-criteria, weighted based on sensitivity to
5 electrical transmission line siting, and compiled into a single composite score for
6 each route. Additional qualitative data were also evaluated such as proposed
7 developments and discussions with landowners.

8 **Q. WAS THE ENTIRE STUDY AREA AVAILABLE IN CREATING THE**
9 **ROUTES?**

10 A. Yes.

11 **Q. WHERE STAKEHOLDERS WERE CONSULTED DURING THE SITING**
12 **PROCESS?**

13 A. Stakeholders were consulted using formal correspondence with regulatory agencies
14 and in person meetings with local officials and landowners.

15 **Q. WERE LANDOWNERS CONTACTED THROUGHOUT THE SITING**
16 **PROCESS?**

17 A. Yes.

18 **Q. PLEASE DESCRIBE THE COMPANY'S EFFORTS AT OUTREACH IN**
19 **DETAIL.**

20 A. In person meetings and phone calls occurred with local officials, CVG, and
21 Amazon throughout the siting process. Coordination with Amazon and CVG
22 started with the substation siting of Aero Substation and continued with the
23 transmission line routing. Amazon was able and willing to provide adequate space

1 in their development plans on CVG property to accommodate an easement with
2 CVG for substation and transmission line. Therefore, no outreach to additional
3 landowners was performed.

4 **Q. ARE THERE OTHER MEANS BY WHICH PUBLIC OFFICIALS AND**
5 **THE GENERAL PUBLIC MAY LEARN MORE ABOUT THE PROJECT**
6 **AND PROVIDE INPUT?**

7 A. Yes. More Project information is available on the Project website (www.duke-energy.com/Aero). On the website there is a toll-free phone number and email
8 address where officials or the public ask questions and provide input.
9

10 **Q. WERE ROUTES MODIFIED AS A RESULT OF STAKEHOLDER AND**
11 **LANDOWNER INPUT?**

12 A. Yes. The siting team worked closely with affected landowners to identify a
13 mutually acceptable preferred route.

14 **Q. WHAT WAS THE FIFTH AND FINAL STEP IN THE SITING PROCESS?**

15 A. The final step in the siting process was to select a preferred route. The siting team
16 reviewed the results of the data collection and analysis to identify a preferred route.
17 The review included both quantitative and qualitative aspects of each route.

C. Substation Site

18 **Q. WHAT FACTORS WERE CONSIDERED IN EVALUATING LOCATIONS**
19 **FOR THE PROPOSED SUBSTATION SITE?**

20 A. The proposed substation site was selected to be near the planned Amazon Prime
21 Air Hub facility on property provided to Duke Energy Kentucky for this purpose.

1 **Q. HOW WAS THE SUBSTATION SITE SELECTED?**

2 A. Through mutual coordination between Duke Energy Kentucky and the willing
3 landowner and Amazon.

III. RESULTS OF THE STUDY

4 **Q. YOU PREVIOUSLY INDICATED THAT FOUR ALTERNATIVE ROUTES**
5 **WERE DEVELOPED. PLEASE DESCRIBE THOSE ROUTES.**

6 A. The four (4) alternative routes are shown in Exhibit 8 and described below.

- 7 • Route A begins at the existing Oakbrook Substation and continues northeast
8 over Burlington Pike (State Route 18) and then east approximately 1 mile
9 to the proposed Aero Substation on the north side of Aero Parkway (State
10 Route 1017).
- 11 • Route B begins at the existing Oakbrook Substation and continues northeast
12 over Burlington Pike (State Route 18) and then immediately heads southeast
13 across the Aero Parkway (State Route 1017). Route B then heads east
14 approximately 1 mile on the south side of Aero Parkway, before crossing
15 Aero Parkway to the north and entering the proposed Aero Substation.
- 16 • Route C begins at the existing Oakbrook Substation and continues northeast
17 over Burlington Pike (State Route 18) and then immediately heads southeast
18 across the Aero Parkway (State Route 1017). Route C then continues
19 southeast approximately 0.27 miles on the north side of Burlington Pike
20 before heading east along a property line for 0.67 miles. Route C then turns
21 north, crosses Aero Parkway, and enters the proposed Aero Substation.

- 1 • Route D begins at the existing Oakbrook Substation and continues northeast
2 over Burlington Pike (State Route 18) and then immediately heads southeast
3 across the Aero Parkway (State Route 1017). Route D then continues
4 southeast approximately 0.77 miles on the north side of Burlington Pike
5 before heading northeast for 0.42 miles, much of it following an existing
6 electrical distribution line ROW. Route D then turns north for 0.6 miles,
7 crosses Aero Parkway, and enters the proposed Aero Substation.

8 **Q. WHY WAS THE PREFERRED ROUTE SELECTED?**

9 A. Route A was selected as the preferred route for the Oakbrook to Aero Transmission
10 Line Project and is shown on the map in Exhibit 7. While Route A did not have the
11 lowest overall score from the analysis, it was a close second to Route B. Route A
12 was best in ecology and engineering categories and similar in the cultural category
13 to other top scoring routes. It had relatively higher scores in the land use category,
14 but this was strongly impacted by being sited on CVG property. While this
15 normally would be an impediment to siting a new transmission line, development
16 associated with the CVG requires additional access to reliable electric service and
17 the affected property owners were amenable to providing easements for Route A.
18 Furthermore, trees along Route A have already been cleared as part of the Amazon
19 Prime Air Hub development, and by selecting Route A, Duke Energy Kentucky
20 would avoid clearing additional trees. Route B ranked best overall and was also a
21 viable route for the new project; however, siting Route B would affect owners on
22 properties that are planned for future development. By selecting Route A, Duke

1 Energy Kentucky was able to integrate with existing development plans and work
2 with the property owners to establish a mutually beneficial solution.

3 **Q. DID ANY AFFECTED LANDOWNERS EXPRESS OPPOSITION TO THE**
4 **ROUTES CONSIDERED OR SELECTED?**

5 A. No.

6 **Q. WERE ANY OTHER ALIGNMENT SHIFTS REQUIRED FOR THE**
7 **ALTERNATIVE ROUTES EXAMINED?**

8 A. No.

9 **Q. BASED UPON THE EFFORTS UNDERTAKEN BY THE SITING TEAM**
10 **AND DESCRIBED ABOVE, DO YOU HAVE ANY OPINION ON THE**
11 **COMPANY'S PREFERRED ROUTE FOR THE PROJECT?**

12 A I believe the preferred route is optimal for this Project.

IV. PERMITTING AND ENVIRONMENTAL STUDIES

13 **Q. WHAT ENVIRONMENTAL PERMITTING OR STUDIES ARE**
14 **ANTICIPATED FOR THIS PROJECT?**

15 A. Duke Energy Kentucky anticipates the following environmental studies, permits,
16 and/or approvals for construction of the Project:

- 17 • A wetland delineation will need to be conducted to identify wetlands and
18 waterbodies within the preferred route's right-of-way (ROW) to determine
19 if there are any jurisdictional features within the ROW. Impacts to
20 jurisdictional streams and wetlands are regulated in the Commonwealth of
21 Kentucky by the United States Army Corps of Engineers (USACE) and the
22 Kentucky Division of Water (KDOW). Discharges of dredged or fill

1 material into 'waters of the United States' require permits from the USACE
2 under the provisions of Section 404 of the Clean Water Act (CWA), as well
3 as Section 401 of the CWA also referred to as a Water Quality Certification
4 (WQC) from the KDOW.

- 5 • Coordination with United States Fish and Wildlife Service (USFWS) on
6 potential impacts to known sensitive species. Utilizing USFWS Information
7 for Planning and Consultation (IPac) database, there are three (3) bat
8 species, ten (10) clam species, and one (1) plant species that may exist in
9 the Project area. Required studies are coordinated with the USFWS.
- 10 • The Project is anticipated to have more than an acre of earth disturbance.
11 As such, a Kentucky Pollutant Discharge Elimination System (KPDES)
12 permit will be required to be obtained prior to starting construction for
13 stormwater. A condition of this permit is to develop a Stormwater Pollution
14 Prevention Plan (SWPPP) for the Project to show the best management
15 practices (BMPs) to be utilized during construction.
- 16 • A review of cultural resources in the Project vicinity will be conducted.
17 Consultation will be performed with Kentucky Heritage Council (KHC) –
18 State Historic Preservation Office (SHPO).

19 In addition to environmental permits, there are engineering permits that will
20 need to be obtained. With the proximity to CVG, permits will need to be filed with
21 Federal Aviation Administration (FAA) and Kentucky Transportation Cabinet
22 (KYTC). The aerial crossing of Burlington Pike (State Route 18) will require
23 approval from KYTC. Permits from county officials will need to be obtained for

1 driveway permits and a retaining wall permit at Oakbrook Substation. Duke Energy
2 Kentucky will also need to communicate with Sanitation District 1 (SD1) and
3 coordinate and obtain permits as required.

4 **Q. HAVE ANY OF THE ENVIRONMENTAL PERMITS OR STUDIES BEEN**
5 **COMPLETED FOR THIS PROJECT?**

6 A. Yes. As part of the Amazon Prime Air Hub facility, United States Department of
7 Transportation FAA used Landrum & Brown to prepare an Environmental
8 Assessment (EA). This EA covers one mile of the preferred route and Aero
9 Substation. This area is permitted to be cut and fill which is currently underway.
10 Site rough grading for Aero Substation is being performed by Amazon's developer
11 and this work is covered under KPDES permit number KYR10N250.

12 Bat mist net surveys were performed by Stantec. in the spring/summer of
13 2019 in the area of the Project. Stantec on behalf of Duke Energy Kentucky, sent a
14 correspondence letter to USFWS for clearance for the preferred route. On August
15 7, 2019, USFWS provided concurrence that significant impacts to federally-listed
16 species are not likely to result from the Project.

17 A data request was made to KHC-SHPO by Stantec. to support the siting
18 review. Additional consultation will be performed with the KHC-SHPO.

1 **Q. DO YOU EXPECT ANY ENVIRONMENTAL PERMITTING ISSUES OR**
2 **DELAYS TO THE CONSTRUCTION AS A RESULT OF PERMITTING**
3 **FOR THE SUBSTATIONS OR TRANSMISSION LINE?**

4 A. Duke Energy Kentucky does not expect any environmental permitting issues or
5 delays to the construction as a result of permitting for the substations or
6 transmission line.

V. CONCLUSION

7 **Q. WERE EXHIBITS 1, 6, 7, AND 8 PREPARED UNDER YOUR DIRECTION**
8 **AND CONTROL?**

9 A. Yes.


10 **Q. DOES THIS CONCLUDE YOUR PRE-FILED DIRECT TESTIMONY?**

11 A. Yes.

VERIFICATION

STATE OF OHIO)
) SS:
COUNTY OF HAMILTON)

The undersigned, John Hurd, Lead Transmission Siting Specialist, being duly sworn, deposes and says that he has personal knowledge of the matters set forth in the foregoing testimony and that it is true and correct to the best of his knowledge, information and belief.



John Hurd Affiant

Subscribed and sworn to before me by John Hurd on this 22nd day of August,
2019.



NOTARY PUBLIC

My Commission Expires: July 8, 2022



E. MINNA ROLFES-ADKINS
Notary Public, State of Ohio
My Commission Expires
July 8, 2022

COMMONWEALTH OF KENTUCKY
BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

The Electronic Application of Duke Energy)
Kentucky, Inc. for a Certificate of Public)
Convenience and Necessity to Construct A) Case No. 2019-00251
138-kV Transmission Line And Associated)
Facilities In Boone County (Oakbrook to Aero)
Transmission Line Project))

DIRECT TESTIMONY OF

EDWARD F. KIRSCHNER

ON BEHALF OF

DUKE ENERGY KENTUCKY, INC.

August 23, 2019

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I. INTRODUCTION AND PURPOSE

1 **Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.**

2 A. My name is Edward F. Kirschner, and my business address is 1000 E. Main Street,
3 Plainfield, Indiana 46168.

4 **Q. BY WHOM ARE YOU EMPLOYED AND IN WHAT CAPACITY?**

5 I am employed by Duke Energy Business Services, LLC (DEBS) as Director
6 Transmission Planning. DEBS provides various administrative and other services
7 to Duke Energy Kentucky, Inc., (Duke Energy Kentucky or Company) and other
8 affiliated companies of Duke Energy Corporation (Duke Energy).

9 **Q. PLEASE BRIEFLY DESCRIBE YOUR EDUCATIONAL BACKGROUND
10 AND BUSINESS EXPERIENCE.**

11 A. I received a Bachelor of Science degree in Electrical Engineering from Purdue
12 University in 1976. I am a registered Professional Engineer in the State of Indiana.
13 I completed the ABB Advance Power System Engineering Course in 1993. I began
14 my professional career with Public Service Company of Indiana, Inc. (PSI and now
15 known as Duke Energy Indiana) in 1976. I have had experience in distribution
16 design, transmission design, subtransmission planning and bulk transmission
17 planning. Prior to the 1994 merger of The Cincinnati Gas & Electric Company and
18 the holding company of PSI to form Cinergy Corp., I was Manager of Bulk
19 Transmission Planning for PSI. Prior to the 2006 merger of Cinergy Corp. and Duke
20 Energy Corporation, I was Manager of Transmission Planning for Cinergy Corp. I
21 assumed my current role in 2006.

1 **Q. PLEASE SUMMARIZE YOUR DUTIES AS DIRECTOR TRANSMISSION**
2 **PLANNING.**

3 A. As Director of Transmission Planning, I am responsible for managing the analysis,
4 development and implementation of strategic transmission (69 kilovolts (kV) and
5 above) asset plans for the Duke Midwest region which includes Duke Energy Ohio,
6 Inc., Duke Energy Kentucky, and Duke Energy Indiana, Inc., incorporating federal
7 and state reliability guidelines, capital cost processes, state regulatory cost recovery
8 constraints and corporate strategic objectives. Areas of focus include development
9 of company Transmission Plans, ReliabilityFirst (RFC) and North American
10 Electric Reliability Corporation (NERC) planning process strategies and
11 assessments, plans and analysis with adjacent interconnected utilities and MISO
12 and PJM and analysis and studies as required under the Federal Energy Regulatory
13 Commission (FERC) Open Access Transmission Tariff (OATT), FERC Order 890
14 and FERC Order 1000. Represents Duke Energy in various regional industry
15 forums such as RFC on transmission planning issues. Provides input to Legal and
16 the Federal Energy Policy Group on issues related to transmission planning.
17 Provides technical support to other areas of Transmission/Distribution and the
18 company (including the Commercial Transmission Function) on Transmission
19 Planning Related topics.

20 **Q. HAVE YOU PREVIOUSLY TESTIFIED BEFORE THE KENTUCKY**
21 **PUBLIC SERVICE COMMISSION?**

22 A. No.

1 **Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY IN THIS**
2 **PROCEEDING?**

3 A. I am testifying in support of Duke Energy Kentucky's application for a certificate
4 of public convenience and necessity (CPCN) to build Oakbrook to Aero
5 Transmission Line Project (the Project). In doing so, I provide an overview of the
6 Project, discuss the Project need, and details on Project components.

II. OVERVIEW OF THE PROJECT AND SUMMARY OF
NEED

7 **Q. PLEASE BRIEFLY SUMMARIZE DUKE ENERGY KENTUCKY'S**
8 **PROPOSAL IN THIS APPLICATION.**

9 A. Duke Energy Kentucky is seeking authority to construct and operate a new single
10 circuit 138-kV transmission line. The proposed line connects the existing Oakbrook
11 69-kV Substation to the proposed Aero 138-kV Substation. The existing Oakbrook
12 Substation will be expanded to include 138-kV equipment to support the Project.
13 The Oakbrook to Aero transmission line will be approximately 1.1 linear miles.

14 **Q. IN WHAT COUNTY IS THE PROJECT LOCATED?**

15 A. The Project will be in Boone County, Kentucky.

16 **Q. WHAT IS THE PURPOSE OF THE PROJECT AND WHY IT IS**
17 **NECESSARY?**

18 A. The purpose of the Project is to provide a 138-kV connection from the existing
19 Oakbrook Substation to the proposed Aero Substation. It is necessary as part of the
20 overall service plan to serve the new Amazon Prime Air Hub facility as well as to
21 support future load growth in the area and the reliability of the surrounding Duke
22 Energy Kentucky transmission and distribution systems.

1 **Q. WHEN IS THE PROPOSED IN-SERVICE DATE FOR THE PROJECT?**

2 A. The proposed in-service date for the Project is December 31, 2020.

3 **Q. WHAT IS THE AMAZON PRIME AIR HUB FACILITY AND WHERE IS**
4 **IT LOCATED?**

5 A. The Amazon Prime Air Hub facility will be a 3-million-square-foot cargo building
6 and 250,000-square-foot loading dock. This will include parking space for 100
7 planes and is expected to create 2,000 jobs. Amazon is leasing 900 acres of land
8 from Cincinnati/Northern Kentucky International Airport (CVG), located north of
9 Aero Parkway.

10 **Q. WHAT IS THE STATUS OF AMAZON'S FACILITIES?**

11 A. Amazon broke ground on their facilities on May 14, 2019. They are currently
12 grading their site and will have rough grade completed by end of 2019 for its
13 first phase of development.

14 **Q. AT WHAT VOLTAGE LEVELS DOES AMAZON ANTICIPATE TAKING**
15 **SERVICE?**

16 A. Amazon will take service at the Duke Energy Kentucky standard distribution
17 primary service voltage of 12.47 kV.

18 **Q. IS IT POSSIBLE FOR DUKE ENERGY KENTUCKY TO SERVE THIS**
19 **NEW LOAD WITH ITS EXISTING FACILITIES AND EQUIPMENT?**

20 A. No. The Duke Energy Reliability Engineering and Planning Department, which is
21 responsible for distribution system capacity evaluation and planning, determined
22 that there was insufficient capacity available in the 12.47 kV system in the vicinity
23 of the Amazon Prime Air Hub facility to serve the projected demands of that

1 facility, nor to meet the expected load growth in the vicinity of the air hub expected
2 as a result of the air hub and general economic growth in the area.

3 **Q. WHAT FUTURE LOAD GROWTH IS EXPECTED?**

4 A. In addition to Amazon Prime Air Hub, commercial, retail, industrial and residential
5 is growing in this and surrounding areas. A couple of examples of the growth is Al
6 Neyer which is planning a \$65 million industrial building with 1 million-square-
7 foot distribution center and 240 apartments to the south of the new Amazon Air
8 Hub facility.¹ GE Aviation On Wing Support Center will be moving into a 68,000
9 square-foot facility in Florence from its current facility in Hebron.² Both DHL and
10 Aeroterm LLC have been working on getting facilities at CVG, thereby adding
11 more load to the area.³ In addition, there is a handful of hotels being built or have
12 been built off of Vandercar Way, Ted Buschelman Boulevard, and Merchant Street
13 that are adding more growth to the electrical need to support the load.

14 **Q. WILL THE PROPOSED PROJECT ALSO ENHANCE DUKE ENERGY**
15 **KENTUCKY'S CAPACITY TO PROVIDE 12.47-kV SERVICE TO OTHER**
16 **CUSTOMERS LOCATED IN THE AREA?**

17 A. Yes. This proposed Project, plus other transmission system improvements to be
18 submitted on a separate CPCN application, will reinforce transmission system

¹ <https://www.neyer.com/construction-commenced-erlanger-commerce-building-iii/> Last visited August 20, 2019.

² <https://www.nkytribune.com/2019/02/ge-aviations-on-wing-support-center-expanding-with-new-facility-in-Northern-Kentucky/> Last visited August 20, 2019.

³ <https://www.bizjournals.com/cincinnati/news/2019/04/12/new-cargo-building-at-cvg-announces-anchor-tenant.html> Last visited August 20, 2019

See also <https://www.bizjournals.com/cincinnati/news/2018/10/17/dhl-to-add-250-jobs-at-cvg.html> Last visited August 20, 2019.

1 capacity and enhance reliability of service to other portions of the Duke Energy
2 Kentucky transmission system. The Aero Substation will be utilized to serve
3 existing load and new load expected to develop in the vicinity of the Amazon Prime
4 Air Hub in addition to the Air Hub facility itself.

5 **Q. COULD THE NEEDED SERVICE TO BE FURNISHED BY THE PROJECT**
6 **BE REASONABLY PROVIDED BY REBUILDING AN EXISTING**
7 **TRANSMISSION LINE OR EXTENDING SERVICE FROM AN EXISTING**
8 **SUBSTATION?**

9 A. No. The existing substations in the vicinity do not have sufficient capacity to serve
10 the projected near-term and ultimate demands of the Amazon Prime Air Hub and
11 other surrounding load. Capacity would have to be added at multiple substations to
12 serve the load, and multiple 12.47-kV feeders would have to be extended over
13 significant distances to serve the load, which would degrade reliability of service
14 to the Amazon Prime Air Hub. It is likely that similar transmission system
15 improvements would be required to allow the existing distribution substation to
16 support the additional load.

17 **Q. PLEASE BRIEFLY DESCRIBE HOW THE COMPANY WILL EXECUTE**
18 **AND COMPLETE CONSTRUCTION UNDER THE PROJECT.**

19 A. Duke Energy Kentucky will use both Company and contractor crews where
20 appropriate to complete this Project. If contractor crews are deployed, awarding of
21 contracts will be accomplished through a vendor selection process similar to what
22 the Company has successfully employed in prior construction projects. Duke

1 Energy Kentucky will use industry standard equipment, materials, and designs to
2 construct the Project in accordance with the work specifications.

3 **Q. PLEASE DESCRIBE THE ANTICIPATED CONSTRUCTION SCHEDULE**
4 **FOR THE PROJECT IF IT IS APPROVED?**

5 A. Construction at Oakbrook Substation and Aero Substation would begin in February
6 2020. Construction on the line would begin in June 2020. The substations and the
7 line is scheduled to be energized by end of 2020 and restoration on the line will
8 continue into spring 2021.

9 **Q. WILL THE COMPANY NEED TO OBTAIN ANY PERMITS FOR**
10 **CONSTRUCTION OF THE PROJECT?**

11 A. Yes. There are several permits that Duke Energy Kentucky has or is in the process
12 of obtaining. Duke Energy Kentucky witness John Hurd fully describes the required
13 state and federal permits in his Direct Testimony.

14 Duke Energy Kentucky has active electric franchises in many of the
15 communities that will be affected by the electric transmission line construction. It
16 is my understanding that those franchises are filed with the Commission. To the
17 extent any of these local communities require additional construction permitting,
18 the Company will follow those local rules and work with the communities to obtain
19 any and all necessary permits prior to beginning actual construction.

1 **Q. ARE ANY ADDITIONAL ELECTRIC TRANSMISSION PROJECT**
2 **PHASES REQUIRED TO SUPPORT THE RELIABILITY OF THE**
3 **PROPOSED AERO SUBSTATION?**

4 A. Yes. Duke Energy Kentucky is currently in the process of designing a new 138-kV
5 transmission line from a proposed new Woodspoint Substation to the proposed
6 Aero Substation to support the reliability of service to Aero Substation. A separate
7 CPCN application will be file with the Commission for approval for this proposed
8 line.

9 **Q. DO YOU BELIEVE THE PROJECT IS NECESSARY FOR DUKE ENERGY**
10 **KENTUCKY TO PROVIDE ADEQUATE, EFFICIENT, AND**
11 **REASONABLE SERVICE?**

12 A. Yes. As described above, the existing system does not have the capacity to serve
13 the expected loads, and the transmission line and associated substation projects will
14 enable reliable service to be provided to both the Amazon Prime Air Hub and the
15 surrounding Duke Energy Kentucky transmission and distribution systems.

16 **Q. WILL THE CONSTRUCTION OF THE PROJECT RESULT IN ANY**
17 **WASTEFUL DUPLICATION OF FACILITIES?**

18 A. No.

III. PROJECT CONSTRUCTION

A. TRANSMISSION LINE

1 **Q. PLEASE DESCRIBE THE PROPOSED TRANSMISSION LINE PORTION**
2 **OF THE PROJECT IN MORE DETAIL.**

3 A. Duke Energy Kentucky proposes to construct approximately 1.1-miles of new
4 single circuit 138-kV transmission line in Boone County, Kentucky. The line will
5 connect the existing Oakbrook Substation to a new proposed Aero Substation off
6 of Aero Parkway in the City of Florence. The electrical transmission line will have
7 26 direct embedded galvanized steel monopoles installed in 75 feet of private
8 easements. This 138-kV circuit is referred to as Circuit 30689 within the
9 Company's system and is referred to within this testimony and supporting exhibits
10 as this circuit number.

11 **Q. PLEASE BRIEFLY DESCRIBE THE PATH OF THE PROPOSED 138-kV**
12 **TRANSMISSION LINE.**

13 A. The proposed line comes out of Oakbrook Substation from the south and crosses
14 over Burlington Pike (State Route 18) and will run parallel to Aero Parkway (State
15 Route 1017) for approximately one (1) mile until it reached the proposed location
16 for the new Aero Substation.

17 **Q. PLEASE GENERALLY DESCRIBE THE AREAS THE PROPOSED LINE**
18 **WILL TRAVERSE.**

19 A. The majority of the new proposed line will be placed within the foot-print of the
20 Amazon Prime Air Hub. This entire area will be graded prior to the installation of
21 the Project. On the west side of Burlington Pike there is the existing Oakbrook

1 Substation that will be expanded on Company-owned property. Amazon is tracking
2 to have its grading done by end of 2019 on the first phase of its development.

3 **Q. PLEASE DESCRIBE THE PRINCIPAL TYPES OF STRUCTURES THAT**
4 **WILL BE USED FOR THE PROPOSED TRANSMISSION LINE.**

5 A. Structure types and numbers will be determined during final engineering, which
6 includes ground survey and geotechnical studies, and will depend upon terrain
7 crossed, spans, turning angles, and other engineering considerations. Based upon
8 preliminary engineering, the Company anticipates 26 direct embedded galvanized
9 steel poles will be required. It is anticipated that angle and dead-end structures will
10 utilize guy wires and anchors.

11 **Q. WHAT ARE THE PROJECTED HEIGHTS OF THE 26 STRUCTURES**
12 **THAT WILL BE ERECTED AS PART OF THE PROJECT?**

13 A. The structure heights will vary depending on placement, terrain, and clearance
14 requirements. The average structure height is anticipated to be 75 feet with 11.5
15 feet of the structure being embedded in the ground. Average height above ground
16 will be 63.5 feet.

17 **Q. PLEASE DESCRIBE THE TYPES OF CONDUCTORS THAT WILL BE**
18 **USED FOR THE PROPOSED TRANSMISSION LINE.**

19 A. The proposed structures will be single circuit supporting a total of three phase
20 conductors and one overhead ground wire. The phase conductors will utilize 954
21 kcmil aluminum conductor steel-reinforced (ACSR) conductor. The overhead
22 ground wire will utilize fiber optic overhead ground wire (OPGW). The OPGW

1 will be used for protection and controls and communication between the two
2 substations.

3 **Q. WHAT IS THE STATUS OF THE ENGINEERING AND DESIGN WORK**
4 **FOR THE OAKBROOK TO AERO 138-kV TRANSMISSION LINE?**

5 A. Engineering and design work is ongoing and will be finalized once surveying and
6 Amazon's site design work is complete. Duke Energy 138-kV standards for electric
7 lines framing and details on potential structures are included in Confidential Exhibit
8 4.

9 **Q. WHAT IS THE WIDTH OF THE RIGHT-OF-WAY FOR THE PROPOSED**
10 **LINE?**

11 A. The proposed Project will be located in a 75-foot right-of-way.

12 **Q. WILL THE PROPOSED LINE'S RIGHT-OF-WAY EXCEED 75 FEET IN**
13 **SOME CIRCUMSTANCES?**

14 A. No. It is not anticipated that a greater right-of-way width will be needed. Additional
15 right-of-way may be required for access to get to the line for construction and
16 maintenance.

17 **Q. WHAT RIGHT-OF-WAY ACTIVITIES HAS DUKE ENERGY**
18 **KENTUCKY UNDERTAKEN TO DATE?**

19 A. Duke Energy Kentucky has been working with Amazon and CVG on easement
20 acquisition. At time of this testimony, final easements have not been signed.

1 **Q. PLEASE EXPLAIN HOW DUKE ENERGY KENTUCKY WILL**
2 **MAINTAIN ITS TRANSMISSION RIGHT-OF-WAY.**

3 A. The right-of-way is maintained for vegetation every five (5) years to look for danger
4 trees and maintain clearance from the line. The lines are visually inspected via
5 helicopter twice a year and are field walked every six (6) years.

6 **Q. DUKE ENERGY KENTUCKY FILED MAPS ILLUSTRATING THE**
7 **CENTERLINE OF THE PROPOSED TRANSMISSION LINE AS EXHIBIT**
8 **7 TO ITS APPLICATION. COULD THAT CENTERLINE CHANGE?**

9 A. Yes. However, no change is anticipated at the time of filing.

10 **Q. WHAT CONDITIONS OR ADDITIONAL INFORMATION MIGHT LEAD**
11 **TO A DEVIATION FROM THE FILED CENTERLINE AND RIGHT-OF-**
12 **WAY?**

13 A. Duke Energy Kentucky is proposing to route and build the proposed 138-kV
14 transmission line on the Amazon and CVG property. At the time of filing, site
15 design and grading for construction access is still in progress for Amazon. Final
16 centerline placement could deviate based on final grade, required access of the
17 structure locations, and placement of other utilities to support the Amazon Prime
18 Air Hub facility.

19 **Q. WHAT IS THE WIDTH OF THE FILING CORRIDOR?**

20 A. The width of the Filing Corridor is 175 feet. This corridor would allow for 50 feet
21 on either side of the proposed right-of-way to account for adjustments required
22 during finalized negotiations with landowners and access needs. This also would

1 allow for slight flexibility based on field conditions at time of construction if
2 alternative access is required based on status of Amazon Prime Air Hub's schedule.

3 **Q. IS DUKE ENERGY KENTUCKY SEEKING UNLIMITED DISCRETION**
4 **TO LOCATE THE LINE AND RIGHT-OF-WAY WITHIN THE**
5 **PROPOSED CORRIDOR?**

6 A. Yes. Duke Energy Kentucky is seeking authority to move the electric transmission
7 line and associated right-of-way only within the indicated Filing Corridor.

8 **Q. WILL DUKE ENERGY KENTUCKY INFORM THE COMMISSION OF**
9 **THE FINAL LOCATION OF THE LINE AND THE ADJACENT RIGHTS-**
10 **OF-WAY?**

11 A. Yes. Duke Energy Kentucky will file with the Commission a revised plan showing
12 the final location of the proposed line, structures, and the proposed Aero Substation
13 after construction is completed.

B. SUBSTATION UPGRADES AND CONSTRUCTION

14 **Q. PLEASE BRIEFLY DESCRIBE THE OAKBROOK SUBSTATION AND**
15 **ITS PLANNED UPGRADES TO SUPPORT A 138-kV LINE.**

16 A. The existing Oakbrook 69-kV Substation is located at 1601 Burlington Pike in
17 Boone County, Kentucky, approximately one mile west of the proposed Aero
18 Substation. The existing Oakbrook 69-kV Substation will be expanded on
19 Company-owned property to install a 138-kV yard. The expansion is approximately
20 195 feet by 175 feet and the complete yard after the expansion will be 250 feet by
21 175 feet of a graveled yard. To support the expansion, the driveway to the
22 substation will be relocated to the south of the substation from Oakbrook Drive and

1 the existing drive will be removed from Burlington Pike, and a retaining wall will
2 be built on the north side of the substation.

3 Oakbrook Substation currently contains a 138x69-13.09 kV, 22.4 MVA
4 transformer (energized at 69 kV), 69-kV switching equipment on the high side of
5 the transformer to connect to the 69-kV supply lines, and 12.47-kV switching
6 equipment on the low side of the transformer to supply two (2) 12.47-kV
7 distribution feeders to the surrounding area. The substation will be modified to
8 install a 138-69 kV, 150-MVA autotransformer, two (2) 138-kV circuit breakers to
9 connect both sides of the new autotransformer. These breakers will connect to the
10 existing 69-kV bus in the substation on the low side and connect to the proposed
11 138-kV transmission line on the high side of the autotransformer. Confidential
12 Exhibit 2 provides additional information regarding the planned expansion of the
13 substation, its components, and its purpose.

14 **Q. PLEASE LIST AND DESCRIBE THE VARIOUS COMPONENTS DUKE**
15 **ENERGY KENTUCKY WILL INSTALL AT THE OAKBROOK**
16 **SUBSTATION.**

17 A. We will be installing:

- 18 • One (1) 150 MVA 138-kV to 69-kV autotransformer which will help
19 provide loading for the Circuit 30689.
- 20 • Two (2) 138-kV circuit breakers that will be placed on the high and low
21 side of the above mentioned autotransformer, this will provide a means of
22 interruption/connection of the autotransformer to the Circuit 30689 and the
23 existing Oakbrook 69-kV bus.

- 1 • 138-kV disconnect switches will be placed on both sides of each 138-kV
- 2 circuit breaker for a total of four (4) 3 phase disconnect switches. These will
- 3 function as a means of visible isolation.
- 4 • Auxiliary equipment such as lightning arresters, Coupling Capacitor
- 5 Voltage Transformers, and a wave trap will be installed also.
- 6 • A new control enclosure will be installed to house the control equipment
- 7 required for the added facilities.

8 **Q. PLEASE DESCRIBE THE CONSTRUCTION OF THE AERO 138-kV**
9 **SUBSTATION.**

10 A. Amazon will grade the substation site and install all necessary storm water and
11 drainage features. Duke Energy Kentucky will responsible for the additional below
12 grade work which includes install of all reinforced concrete foundations, conduits,
13 cable trench, and ground grid. Additionally, Duke Energy Kentucky will be
14 responsible for the above grade work which includes the installation of all electrical
15 transmission and distribution equipment, structural steel structures, security fence,
16 control enclosure, switchgears, and crushed aggregate blanket.

17 **Q. WHERE WILL THE PROPOSED AERO 138-kV SUBSTATION BE**
18 **LOCATED?**

19 A. The proposed Aero 138-kV Substation will be located in Boone County, Kentucky
20 north of Aero Parkway and south of CVG.

21 **Q. PLEASE DESCRIBE THE PROPOSED AERO 138-kV SUBSTATION.**

22 A. The Aero 138-kV Substation will be constructed on an approximately 3.75-acre site
23 located off Aero Parkway. The site will be under easement with CVG. The fenced

1 portion of the proposed Aero Substation will measure approximately 250 feet by
2 435 feet and will consist of a graveled yard. The Aero Substation will provide
3 termination and switching facilities for the 138 kV lines that will supply the
4 substation, four 138-13.09 kV, 22.4 MVA distribution supply transformers to
5 supply distribution feeders to Amazon Prime Air Hub facility and to the
6 surrounding area, and 12.47 kV switching facilities for the 12.47 kV feeders. The
7 plan is for four (4) feeders to supply Amazon and four (4) feeders to supply the
8 surrounding area, for a total of eight (8) feeders. The station is designed to be able
9 to supply an additional six feeders, either to Amazon or the surrounding area as
10 needed in the future. Confidential Exhibit 3 provides additional information
11 regarding the planned substation, its components, and its purpose.

12 **Q. WHAT IS THE ANTICIPATED HEIGHT OF THE SUBSTATION**
13 **STRUCTURES?**

14 A. The bus height of the low bus will be approximately 16.5 feet above the
15 foundations. The bus height of the high bus will be approximately 25.5 feet above
16 the height of the foundations. The 138-kV take off tower will be approximately 73
17 feet to the highest point of that structure.

18 **Q. WILL ANY EQUIPMENT OR INFRASTRUCTURE BE RETIRED AS**
19 **PART OF THE PROJECT?**

20 A. No.

**C. TREATMENT OF THE PROJECT BY PJM INTERCONNECTION LLC.,
UNDER TARIFFS**

1 **Q. IS THE PROJECT DESIGNATED TO BE A BASELINE OR**
2 **SUPPLEMENTAL PROJECT BY PJM INTERCONNECTION LLC.,**
3 **(PJM)?**

4 A. This will be considered a Supplemental Project. PJM Supplemental Project Number
5 s1782.

6 **Q. PLEASE EXPLAIN WHAT BEING A SUPPLEMENTAL PJM PROJECT**
7 **MEANS.**

8 A. Supplemental projects are expansions of the system that do not address reliability
9 criteria, but other needs. This need includes items like equipment condition,
10 performance and risk, operational flexibility and efficiency, infrastructure
11 resilience, and customer service. The driver for this Project is customer service and
12 being able to meet a customer's schedule for when it will need electric service.

13 **Q. WILL ALL OF THE PROJECT COMPONENTS BE SUBMITTED TO**
14 **PJM?**

15 A. Yes. All transmission components of the Project have already been submitted to
16 PJM.

17 **Q. IS DUKE ENERGY KENTUCKY RELYING ON THE PJM REVIEW OF**
18 **THE PROJECT TO DEMONSTRATE THE NEED FOR THE PROJECT?**

19 A. No. As a supplemental project, the Project is justified by Duke Energy Kentucky
20 to meet internal criteria, in this case provision of service to retail customers. PJM
21 performed a "do-no-harm" analysis to determine if the proposed Project could

1 necessitate any other system projects or modifications and none were found which
2 were not already anticipated by Duke Energy Kentucky.

IV. FILING REQUIREMENTS SPONSORED BY WITNESS

3 **Q. PLEASE LIST AND DESCRIBE THE FILING REQUIREMENTS AND**
4 **EXHIBITS TO THE APPLICATION THAT YOU ARE SPONSORING.**

5 A. I am the sponsor of Exhibits 2, 3, 4, and 12.

6 **Q. PLEASE EXPLAIN CONFIDENTIAL EXHIBIT 2.**

7 A. Confidential Exhibit 2 is the layout of the Oakbrook Substation showing structural
8 electrical equipment plan within the station.

9 **Q. PLEASE EXPLAIN CONFIDENTIAL EXHIBIT 3.**

10 A. Confidential Exhibit 3 is the layout of the Aero Substation showing structural
11 electrical equipment plan within the station.

12 **Q. PLEASE EXPLAIN CONFIDENTIAL EXHIBIT 4.**

13 A. Confidential Exhibit 4 are Duke Energy in the Midwest (Duke Energy Indiana,
14 Duke Energy Kentucky, and Duke Energy Ohio) standard structure details for 138-
15 kV electrical structures. Final engineering would use a combination of these
16 standard structures to construct the line.

17 **Q. PLEASE EXPLAIN EXHIBIT 12.**

18 A. Exhibit 12 shows the current transmission components in the area as well as the
19 Project components on an aerial map. This exhibit shows where the Project is
20 located in association with other existing Duke Energy transmission lines.

V. CONCLUSION

1 **Q. WERE EXHIBITS 2, 3, 4, AND 12 PREPARED UNDER YOUR DIRECTION**
2 **AND CONTROL?**

3 **A. Yes.**

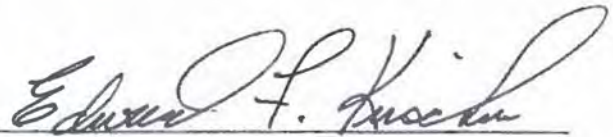
4 **Q. DOES THIS CONCLUDE YOUR PRE-FILED DIRECT TESTIMONY?**

5 **A. Yes.**

VERIFICATION

STATE OF INDIANA)
) SS:
COUNTY OF HENDRICKS)

The undersigned, Edward F. Kirschner, Director Transmission Planning, being duly sworn, deposes and says that he has personal knowledge of the matters set forth in the foregoing testimony and that it is true and correct to the best of his knowledge, information and belief.


Edward F. Kirschner, Affiant

Subscribed and sworn to before me by Edward F. Kirschner on this 21st day of August, 2019.


NOTARY PUBLIC

My Commission Expires: 10/7/2022



COMMONWEALTH OF KENTUCKY
BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

The Electronic Application of Duke Energy)
Kentucky, Inc. for a Certificate of Public)
Convenience and Necessity to Construct A) Case No. 2019-00251
138-kV Transmission Line And Associated)
Facilities In Boone County (Oakbrook to Aero)
Transmission Project))

DIRECT TESTIMONY OF

SARAH E. LAWLER

ON BEHALF OF

DUKE ENERGY KENTUCKY, INC.

August 23, 2019

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I. INTRODUCTION AND PURPOSE

1 **Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.**

2 A. My name is Sarah E. Lawler, and my business address is 139 East Fourth Street,
3 Cincinnati, Ohio 45202.

4 **Q. BY WHOM ARE YOU EMPLOYED AND IN WHAT CAPACITY?**

5 A. I am employed by Duke Energy Business Services LLC (DEBS) as Director, Rates
6 and Regulatory Planning for Duke Energy Kentucky, Inc., (Duke Energy Kentucky
7 or Company) and Duke Energy Ohio, Inc. DEBS provides various administrative
8 and other services to Duke Energy Kentucky and other affiliated companies of
9 Duke Energy Corporation (Duke Energy).

10 **Q. PLEASE SUMMARIZE YOUR EDUCATIONAL BACKGROUND AND**
11 **PROFESSIONAL EXPERIENCE.**

12 A. I earned a Bachelor of Science in Accountancy from Miami University, Oxford,
13 OH in 1993. I am also a Certified Public Accountant. I began my career in
14 September 1993 with Coopers & Lybrand, L.L.P. as an audit associate and
15 progressed to a senior audit associate. In August 1997, I moved to Kendle
16 International Inc., where I held various positions in the accounting department,
17 ultimately being promoted to Corporate Controller. In August 2003, I began
18 working for Cinergy Corp., the parent of Duke Energy Ohio, as External Reporting
19 Manager, where I was responsible for the Company's Securities & Exchange
20 Commission (SEC) filings. In August 2005, I then moved into the role of Manager,
21 Budgets & Forecasts. In June 2006, following the merger between Cinergy Corp.
22 and Duke Energy, I became Manager, Financial Forecasting. In February 2015, I

1 was promoted to Utility Strategy Director, Midwest where I was responsible for the
2 preparation of business plans and other internal managerial reporting for Duke
3 Energy Ohio and Duke Energy Kentucky, Inc. In December 2017 I began in my
4 current role as Director, Rates and Regulatory Planning.

5 **Q. PLEASE SUMMARIZE YOUR RESPONSIBILITIES AS DIRECTOR,**
6 **RATES AND REGULATORY PLANNING.**

7 A. As Director, I am responsible for the preparation of financial and accounting data
8 used in Duke Energy Ohio and Duke Energy Kentucky, Inc., retail rate filings and
9 changes in various other rate recovery mechanisms.

10 **Q. HAVE YOU PREVIOUSLY TESTIFIED BEFORE THE KENTUCKY**
11 **PUBLIC SERVICE COMMISSION?**

12 A. Yes.

13 **Q. WHAT IS THE PURPOSE OF YOUR DIRECT TESTIMONY IN THESE**
14 **PROCEEDINGS?**

15 A. The purpose of my testimony is to discuss the financial aspects of the Company's
16 request for a Certificate of Public Convenience and Necessity (CPCN) to construct
17 its Oakbrook to Aero Transmission Line Project (Project) in Boone County,
18 Kentucky. I also sponsor Exhibit 5 to the Application.

II. FINANCIAL IMPACT OF THE PROJECT

19 **Q. PLEASE PROVIDE A BRIEF SUMMARY OF THE PROJECT AND ITS**
20 **PURPOSE.**

21 A. Duke Energy Kentucky is seeking authority to construct and operate a new single
22 circuit 138-kilovolt (kV) transmission line. The proposed line connects the existing

1 Oakbrook 69-kV Substation to the proposed Aero 138-kV Substation. The existing
2 Oakbrook Substation would be expanded to include 138-kV equipment to support
3 the Project. The Oakbrook to Aero transmission line will be approximately 1.1
4 miles.

5 The purpose of the Project is to provide a 138-kV connection from the
6 existing Oakbrook Substation to the proposed Aero Substation. It is necessary as
7 part of the overall service plan to serve the new Amazon Prime Air Hub facility as
8 well as to support future load growth in the area and the reliability of the
9 surrounding Duke Energy Kentucky transmission and distribution systems.

10 **Q. WHAT IS THE PROJECTED COST OF THE PROJECT?**

11 A. The overall Project is estimated to cost approximately \$32.3 million. That sum
12 comprises: (a) approximately \$2.1 million for the construction of the overhead line,
13 including right-of-way acquisition; (b) approximately \$7.2 million for expansion
14 and equipment at Oakbrook Substation; and (c) approximately \$23 million at Aero
15 Substation.

16 **Q. DOES THE \$32.3 MILLION COST ESTIMATE REPRESENT A FIXED
17 AND FINAL COST?**

18 A. No. The \$32.3 million is based on a Class 4 estimate that represents an expected
19 range of plus 50 percent and minus 30 percent. This estimate will be further refined
20 once engineering is finalized and prior to start of construction. The final cost for
21 the Project will not be known until all work is complete and the right-of-way is
22 restored.

1 **Q. WHAT IS THE PROJECTED ONGOING COST OF OPERATION OF THE**
2 **PROJECT ONCE COMPLETED?**

3 A. The estimated annual ongoing cost of operation of the Project once completed is
4 expected to be approximately \$5,000 (capital and operations and maintenance
5 (O&M)).

6 **Q. ARE ANY CUSTOMERS DIRECTLY CONTRIBUTING TO THE COST**
7 **OF THE PROJECT?**

8 A. No.

9 **Q. HOW DOES DUKE ENERGY KENTUCKY INTEND TO FINANCE THE**
10 **PROJECT?**

11 A. The Company is proposing to finance the construction through continuing
12 operations and, if necessary, through debt issuances. The mix of debt and equity
13 used to finance the amended project will be determined so as to allow Duke Energy
14 Kentucky to maintain its investment-grade credit rating.

15 **Q. WILL THE COST OF THE PROJECT MATERIALLY AFFECT THE**
16 **FINANCIAL CONDITION OF DUKE ENERGY KENTUCKY?**

17 A. No.

18 **Q. PLEASE EXPLAIN HOW THE PROJECT WILL BE TREATED FROM AN**
19 **ACCOUNTING PERSPECTIVE.**

20 A. The Project is nearly all capital in nature because it is adding new facilities to serve
21 our electric customers and improve the reliability of the delivery system. There will
22 be an immaterial impact to the Company's O&M expenses in terms of incremental
23 cost of operation. The capital costs will be accumulated in FERC account 107

1 (Construction Work in Progress) during construction and will accrue Allowance for
2 Funds Used During Construction (AFUDC). Once completed, the Project will be
3 placed in-service initially to FERC account 106 (Completed Construction not
4 Classified) where it will begin being depreciated like any other asset that is used
5 and useful. Once unitized, the Project will be transferred to FERC account 101
6 (Plant in Service).

7 **Q. WHAT IS THE ESTIMATED IN-SERVICE DATE?**

8 A. The estimated in-service date is December 31, 2020.

9 **Q. PLEASE EXPLAIN HOW THE COMPANY WILL RECOVER ITS COSTS**
10 **OF CONSTRUCTION.**

11 A. The Company plans to recover the costs of this Project in future electric base rate
12 cases.

13 **Q. HAS THE COMPANY ESTIMATED THE IMPACT OF THIS PROJECT**
14 **TO CUSTOMER RATES?**

15 A. The Project is not expected to have a material impact on customer rates. Once the
16 in service and included in a base rate case, the estimated revenue requirement on
17 the Project is expected to be less than 1 percent of total Company revenues.

III. FILING REQUIREMENTS SPONSORED BY WITNESS

18 **Q. PLEASE LIST AND DESCRIBE THE FILING REQUIREMENT AND**
19 **EXHIBIT TO THE APPLICATION THAT YOU ARE SPONSORING.**

20 A. I am the sponsor of Exhibit 5.

21 **Q. PLEASE EXPLAIN EXHIBIT 5.**

22 A. Exhibit 5 is the financial statement for month end June 30, 2019 as required by 807

1 KAR 5:001, Section 12.

IV. CONCLUSION

2 **Q. WAS EXHIBIT 5 PREPARED UNDER YOUR DIRECTION AND**
3 **CONTROL?**

4 **A. Yes.**


5 **Q. DOES THIS CONCLUDE YOUR PRE-FILED DIRECT TESTIMONY?**

6 **A. Yes.**

VERIFICATION

STATE OF OHIO)
)
COUNTY OF HAMILTON) SS:

The undersigned, Sarah E. Lawler, Director Rates & Regulatory Planning, being duly sworn, deposes and says that she has personal knowledge of the matters set forth in the foregoing testimony and that it is true and correct to the best of her knowledge, information and belief.



Sarah E. Lawler Affiant

Subscribed and sworn to before me by Sarah E. Lawler on this 20th day of August, 2019.



NOTARY PUBLIC

My Commission Expires: July 8, 2022



E. MINNA ROLFES-ADKINS
Notary Public, State of Ohio
My Commission Expires
July 8, 2022