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VIA OVERNIGHT DELIVERY

RECEIVED

APR 27 2018

PUBLIC SERVICE
COMMISSION

April 26, 2018

Ms. Gwen R. Pinson
Executive Director
Kentucky Public Service Commission
211 Sower Boulevard
Frankfort, Kentucky 40601

Re: 2017 Reliability Report and Vegetation Management Plan Update

Dear Ms. Pinson:

Enclosed please find a signed paper of the Duke Energy Kentucky, Inc. 2017 Reliability Report and Vegetation Management Plan Update together with the redacted part of Exhibit A provided in Excel format on CD.

We have included the unredacted part of Exhibit A in Excel format on CD in a separate envelope to be filed under seal. Also enclosed is a Petition for Confidential Treatment for your consideration in the above referenced matter.

Please date-stamp the two copies of the letter and the filings and return to me in the enclosed envelope.

Should you have any questions, please do not hesitate to contact me.

Very truly yours,

E. Minna Rolfes-Adkins
Sr. Paralegal

ERA
Enclosures
cc: Rebecca Goodman

APR 27 2018

PUBLIC SERVICE
COMMISSION

COMMONWEALTH OF KENTUCKY

BEFORE THE PUBLIC SERVICE COMMISSION

An Investigation of the Reliability)	
Measures of Kentucky’s Jurisdictional)	Administrative
Electric Distribution Utilities)	Case No. 2011-00450

**DUKE ENERGY KENTUCKY, INC.’S
PETITION FOR THE CONFIDENTIAL TREATMENT OF CERTAIN
INFORMATION FILED FOR CALENDAR YEAR 2017**

Duke Energy Kentucky, Inc. (Duke Energy Kentucky or Company) respectfully submits this petition in accordance with 807 KAR 5:001 Section 13, seeking the confidential treatment of certain information filed for calendar year 2017:

1. On January 11, 2012, the Commission issued an Order in this proceeding requiring Duke Energy Kentucky to collect and maintain all records necessary to evaluate its system reliability performance in accordance with the methodology established by the most recent edition of the (“IEEE”) standard number 1366 “Guide for Electric Power Distribution Reliability Indices,” which currently is IEEE Standard 1366-2012.

2. On May 30, 2013, the Commission issued its Order requiring all jurisdictional utilities to file annual reliability reports and to develop vegetation management plans. Pursuant to the Order, jurisdictional utilities were required to report a 5 year average of reliability data. The reports are required to be based upon a calendar year (January to December) and filed by the first business day in May in the year immediately following the reporting year.

3. The Commission’s regulations, in 807 KAR 5:001, Section 13, provide that any person requesting confidential treatment of any material file a petition setting

forth the grounds, pursuant to KRS 61.870 *et seq.*, upon which the Commission should classify that material as confidential.

4. Kentucky Revised Statute § 61.878(1)(c)(1) provides that records confidentially disclosed to an agency or required to be disclosed to the agency be exempt from Kentucky's open records statutes, KRS 61.870 *et seq.* where the records are generally recognized as confidential or proprietary, and which if openly disclosed would permit an unfair commercial advantage to competitors of the entity that disclosed the records.

5. Duke Energy Kentucky submits that the following information, if openly disclosed, could present security issues:

- a. Physical street addresses of all the Company's electric substations and circuits.

6. The above information, if openly disclosed, would allow the public knowledge as to the specific physical location of critical utility infrastructure, namely Duke Energy Kentucky substations and circuits. With this information, a possible security issue could arise. Such actions might include theft, destruction, possible injury, and/or vandalism. Releasing the street address of all of the Company's electric substations in one public filing would present a significant security and reliability risk where a concentrated action could undermine Duke Energy Kentucky's distribution system and the security of its grid.

7. The information for which Duke Energy Kentucky is seeking confidential treatment is not known outside of Duke Energy Corporation.

8. Duke Energy Kentucky does not object to limited disclosure of the confidential information described herein to any intervenors, pursuant to an acceptable

protective agreement, and with a legitimate interest in reviewing the same for the purpose of participating in this case.

9. Pursuant to 807 KAR 5:001 Section 13(2), Duke Energy Kentucky has attached to this Petition, under seal, one copy of Exhibit A of the 2017 Reliability Report and Vegetation Management Plan and one copy of Exhibit A of the 2017 Reliability Report and Vegetation Management Plan with the confidential material omitted or otherwise redacted. Duke Energy Kentucky respectfully requests that the Confidential Information be withheld from public disclosure indefinitely. This will assure that the Confidential Information will not become available to the general public. 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).

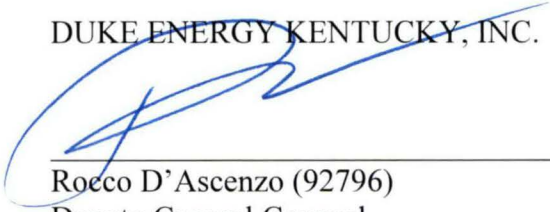
10. This information was, and remains, integral to Duke Energy Kentucky's effective execution of business decisions and such information is generally regarded as confidential or proprietary. Indeed, as the Kentucky Supreme Court has found, "information concerning the inner workings of a corporation is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

WHEREFORE, Duke Energy Kentucky respectfully requests that the Commission:

1. Accept this Petition for filing;
2. Grant the information delineated herein confidential treatment in accordance with 807 KAR 5:001 Section 13 and KRS 61.870 *et seq.*

Respectfully submitted,

DUKE ENERGY KENTUCKY, INC.



Rocco D'Ascenzo (92796)
Deputy General Counsel
Duke Energy Business Services LLC
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Cincinnati, Ohio 45201-0960
Phone: (513) 287-4320
Fax: (513) 287-4385
E-mail: Rocco.D'Ascenzo@duke-energy.com
Counsel for Duke Energy Kentucky, Inc.

CERTIFICATE OF SERVICE

I hereby certify that a copy of the foregoing filing was served on the following via
overnight mail, this 26th day of April 2018:

Rebecca Goodman
The Office of the Attorney General
Utility Intervention and Rate Division
700 Capital Avenue, Suite 20
Frankfort, Kentucky, 40601



Rocco D'Ascenzo

COMMONWEALTH OF KENTUCKY
BEFORE THE PUBLIC SERVICE COMMISSION

DUKE ENERGY KENTUCKY, INC.
RELIABILITY REPORT AND VEGETATION MANAGEMENT PLAN UPDATE FOR
CALENDAR YEAR 2017

April 27, 2018

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I. Introduction

On May 30, 2013, the Commission issued its Order requiring all jurisdictional utilities to file annual reliability reports and to develop vegetation management plans. Pursuant to the Order, jurisdictional utilities were required to report a 5 year average of reliability data. The reports are required to be based upon a calendar year (January to December) and filed by the first business day in May in the year immediately following the reporting year.

Duke Energy Kentucky, Inc. (Duke Energy Kentucky or the Company) submits its Reliability Report and Vegetation Management Plan update for Calendar year 2017 as required by the Commission's May 30, 2013 Order in Case No. 2011-00450.¹

II. Reliability Report Summary

Consistent with the most recent edition of the standard number 1366 "Guide for Electric Power Distribution Reliability Indices," and the Commission's Order,² the following is included in Exhibit A of Duke Energy Kentucky's Reliability Report Summary:

1. Calculate the System Average Interruption Duration Index (SAIDI) system-wide indices including Major Event Days (MEDs) and calculate the SAIDI system-wide indices excluding MEDs;
2. Calculate the System Average Interruption Frequency Index (SAIFI) system-wide indices including MEDs and calculate the SAIFI system-wide indices excluding MEDs;
3. Develop a system-wide rolling five-year average SAIDI excluding MEDs;
4. Develop a system-wide rolling five-year average SAIFI excluding MEDs;
5. Calculate SAIDI excluding MEDs for every circuit within its system;
6. Develop a rolling five-year average SAIDI for each circuit within its system;

¹ *In the matter of An Investigation of the Reliability Measures of Kentucky's Jurisdictional Electric Distribution Utilities, Case No 2011-00450. (Order)(May 30, 2013).*

² *Id.*

7. Compare each circuit to that circuit's rolling five-year average SAIDI;
8. Calculate SAIFI excluding MEDs for every circuit within its system;
9. Develop a rolling five-year average SAIFI for each circuit within its system;
10. Compare each circuit to that circuit's rolling five-year average SAIFI.
11. File a Reliability Report by May 1 of each year, containing the reliability information as outlined in the attached Appendix for the preceding calendar year from January 1 to December 31 that includes the SAIDI and SAIFI system-wide indices, both including and excluding MEDs.

12. For each circuit with either SAIDI or SAIFI value higher than that circuit's respective SAIDI or SAIFI rolling five-year average, excluding MEDs, include in the annual Reliability Report the following information:

- a. The circuit's SAIDI index for the year;
- b. The circuit's SAIFI index for the year;
- c. The circuit's rolling five-year average SAIDI;
- d. The circuit's rolling five-year average SAIFI;
- e. The substation name, number and location (i.e., County-Road-Town);
- f. The circuit name, number and location (Town-Road-General Area);
- g. The circuit's overall length in miles to the nearest tenth of a mile;
- h. The number of customers served on the circuit for the year;
- i. The date of the last circuit trim performed by the utility as part of its vegetation management plan;
- j. A list of outage causes for the circuit, along with the percentage of total outage numbers represented by each cause;

- k. Circuit five-year average SAIDI;
- l. Reporting year SAIDI;
- m. Circuit five-year average SAIFI;
- n. Reporting year SAIFI;
- o. A Corrective Action Plan which describes any measures the utility has completed or plans to complete to improve the circuit's performance; and
- p. Any other information the utility believes will assist the Commission in understanding the circumstances surrounding the circuit's performance.

III. Vegetation Management Plan Update and Summary

Duke Energy Kentucky filed its initial Vegetation Management Plan with this Commission on December 18, 2007 in Case No. 2006-00494.³ Duke Energy's Midwest Vegetation Management Group is responsible for controlling vegetation growth for 37,000 miles of transmission and distribution overhead electric lines and gas supply lines in Ohio, Indiana, and Kentucky.

Exhibit B is a copy of Duke Energy Kentucky's Vegetation Management Plan. There have been no substantive amendments or changes to the Company's plan since it was initially filed with the Commission on December 18, 2007.

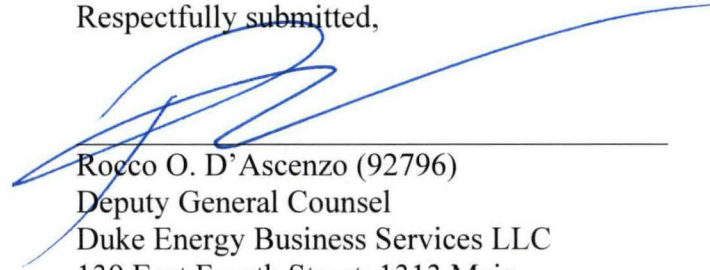
As part of its 2018 plan, Duke Energy Kentucky plans to trim trees and maintain vegetation along 288 miles of its distribution system. The Company was able to get a good start on our Vegetation Plan for 2018. As of March 3, 2018 Duke Energy Kentucky has completed approximately 17% of its scheduled trimming, or approximately 47 miles of its distribution system. This leaves approximately 241 miles to be trimmed in 2018. The Company does not

³ *Id.*

anticipate any difficulty in completing all planned trimming for 2018. The Company will have sufficient crew coverage throughout the year.

During the 4th quarter of 2017, Duke Energy Kentucky finalized negotiations with a long term contract to support trimming activities in Kentucky.

Respectfully submitted,



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Counsel for Duke Energy Kentucky, Inc.

KENTUCKY PUBLIC SERVICE COMMISSION

Electric Distribution Utility Annual Reliability Report

SECTION 1: CONTACT INFORMATION

UTILITY NAME	DUKE ENERGY KENTUCKY
REPORT PREPARED BY	BRETT STOCKTON
E-MAIL ADDRESS OF PREPARER	BRETT.STOCKTON@DUKE-ENERGY.COM
PHONE NUMBER OF PREPARER	513-287-3278

SECTION 2: REPORTING YEAR

CALENDAR YEAR OF REPORT	2017
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SECTION 3: MAJOR EVENT DAYS (MED)

	T _{MED}	4.6669
FIRST DATE USED TO DETERMINE T _{MED}		January 1, 2012
LAST DATE USED TO DETERMINE T _{MED}		December 31, 2016
NUMBER OF MED IN REPORT YEAR		3

NOTE: Per IEEE 1366 T_{MED} should be calculated using the daily SAIDI values for the five prior years. If five years of data are not available, then utilities should use what is available until five years are accumulated

SECTION 4: SYSTEM RELIABILITY INFORMATION AND RESULTS

System-wide Information

TOTAL CUSTOMERS	141,973	TOTAL CIRCUITS	132
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Excluding MED

5 YEAR AVERAGE		REPORTING YEAR	
SAIDI	105.60	SAIDI	98.91
SAIFI	0.98	SAIFI	0.81

Including MED

5 YEAR AVERAGE		REPORTING YEAR	
SAIDI	163.90	SAIDI	230.38
SAIFI	1.16	SAIFI	1.11

Notes

- 1) All duration indices (SAIDI) are to be reported in units of minutes.
- 2) Reports are due on the first business day of April of each year
- 3) Reports cover the calendar year ending in the December before the reports are due.
- 4) IEEE 1366 (latest version) is used to define SAIDI, SAIFI, and T_{MED}

CONFIDENTIAL PROPRIETARY TRADE SECRET

CIRCUIT NUMBER	SUBSTATION NAME	SUBSTATION NUMBER	SUBSTATION COUNTY	SUBSTATION TOWN	CIRCUIT NAME	CIRCUIT ID	CIRCUIT NUMBER	CIRCUIT TOWN
H9321700041	ATLAS	170	KENTON	ERLANGER	ATLAS 41	H9321700041	41	CRESCENT SPRINGS
H9320780042	AUGUSTINE	78	KENTON	COVINGTON	AUGUSTINE 42	H9320780042	42	COVINGTON
H9320780045	AUGUSTINE	78	KENTON	COVINGTON	AUGUSTINE 45	H9320780045	45	COVINGTON
H9320860041	BEAVER	88	BOONE	WALTON	BEAVER 41	H9320860041	41	WALTON
H9320670041	BUFFINGTON	67	KENTON	FLORENCE	BUFFINGTON 41	H9320670041	41	ERLANGER
H9320670042	BUFFINGTON	67	KENTON	FLORENCE	BUFFINGTON 42	H9320670042	42	FLORENCE
H9320670044	BUFFINGTON	67	KENTON	FLORENCE	BUFFINGTON 44	H9320670044	44	ERLANGER
H9320670047	BUFFINGTON	67	KENTON	FLORENCE	BUFFINGTON 47	H9320670047	47	FLORENCE
H9321470041	CLARYVILLE	147	CAMPBELL	CLARYVILLE	CLARYVILLE 41	H9321470041	41	GRANT'S LICK
H9321470042	CLARYVILLE	147	CAMPBELL	CLARYVILLE	CLARYVILLE 42	H9321470042	42	GRANT'S LICK
H9321470043	CLARYVILLE	147	CAMPBELL	CLARYVILLE	CLARYVILLE 43	H9321470043	43	CLARYVILLE
H9321320041	COLD SPRING	132	CAMPBELL	COLD SPRINGS	COLD SPRING 41	H9321320041	41	COLD SPRINGS
H9321320049	COLD SPRING	132	CAMPBELL	COLD SPRINGS	COLD SPRING 49	H9321320049	49	COLD SPRINGS
H9320420043	CONSTANCE	42	BOONE	ERLANGER	CONSTANCE 43	H9320420043	43	ERLANGER
H9322170043	COVINGTON	217	KENTON	COVINGTON	COVINGTON 43	H9322170043	43	COVINGTON
H9320700042	CRESCENT	70	KENTON	FT MITCHELL	CRESCENT 42	H9320700042	42	FT MITCHELL
H9320700043	CRESCENT	70	KENTON	FT MITCHELL	CRESCENT 43	H9320700043	43	FT MITCHELL
H9320700044	CRESCENT	70	KENTON	FT MITCHELL	CRESCENT 44	H9320700044	44	CRESCENT SPRINGS
H9320700045	CRESCENT	70	KENTON	FT MITCHELL	CRESCENT 45	H9320700045	45	FT MITCHELL
H9321240042	CRITTENDEN	124	GRANT	CRITTENDEN	CRITTENDEN 42	H9321240042	42	CRITTENDEN
H9320760041	DAYTON	76	CAMPBELL	DAYTON	DAYTON 41	H9320760041	41	DAYTON
H9320760042	DAYTON	76	CAMPBELL	DAYTON	DAYTON 42	H9320760042	42	DAYTON
H9320760043	DAYTON	76	CAMPBELL	DAYTON	DAYTON 43	H9320760043	43	DAYTON
H9320890043	DIXIE	89	BOONE	FLORENCE	DIXIE 43	H9320890043	43	Dixie Hwy
H9320890044	DIXIE	89	BOONE	FLORENCE	DIXIE 44	H9320890044	44	FLORENCE
H9320550043	DONALDSON	55	KENTON	ERLANGER	DONALDSON 43	H9320550043	43	ERLANGER
H9320550044	DONALDSON	55	KENTON	ERLANGER	DONALDSON 44	H9320550044	44	ERLANGER
H9321090041	DRY RIDGE	109	GRANT	DRY RIDGE	DRY RIDGE 41	H9321090041	41	DRY RIDGE
H9321090042	DRY RIDGE	109	GRANT	DRY RIDGE	DRY RIDGE 42	H9321090042	42	DRY RIDGE
H9322890041	EMPIRE	289	BOONE	FLORENCE	EMPIRE 41	H9322890041	41	FLORENCE
H9322890042	EMPIRE	289	BOONE	FLORENCE	EMPIRE 42	H9322890042	42	FLORENCE
H9322410041	FLORENCE	241	BOONE	FLORENCE	FLORENCE 41	H9322410041	41	FLORENCE
H9321610041	GRANT	161	GRANT	WILLIAMSTOWN	GRANT 41	H9321610041	41	DRY RIDGE
H9321280042	HANDS	128	KENTON	COVINGTON	HANDS 42	H9321280042	42	TAYLOR MILL
H9321280044	HANDS	128	KENTON	COVINGTON	HANDS 44	H9321280044	44	ERLANGER
H9321520041	HEBRON	152	BOONE	HEBRON	HEBRON 41	H9321520041	41	PETERSBURG
H9321520042	HEBRON	152	BOONE	HEBRON	HEBRON 42	H9321520042	42	PETERSBURG
H9321520045	HEBRON	152	BOONE	HEBRON	HEBRON 45	H9321520045	45	HEBRON
H9320090041	KENTON	9	KENTON	LAKEVIEW	KENTON 41	H9320090041	41	FT. WRIGHT
H9320090042	KENTON	9	KENTON	LAKEVIEW	KENTON 42	H9320090042	42	TAYLOR MILL
H9320090044	KENTON	9	KENTON	LAKEVIEW	KENTON 44	H9320090044	44	FT. WRIGHT
H9320090045	KENTON	9	KENTON	LAKEVIEW	KENTON 45	H9320090045	45	LATONIA
H9322870042	KY UNIV	287	CAMPBELL	NEWPORT	KY UNIV 42	H9322870042	42	HIGHLAND HEIGHTS
H9322870045	KY UNIV	287	CAMPBELL	NEWPORT	KY UNIV 45	H9322870045	45	HIGHLAND HEIGHTS
H9320980041	LONGBRANCH	98	BOONE	FLORENCE	LONGBRANCH 41	H9320980041	41	FLORENCE
H9320980043	LONGBRANCH	98	BOONE	FLORENCE	LONGBRANCH 43	H9320980043	43	UNION
H9323050043	MT ZION	305	BOONE	FLORENCE	MT ZION 43	H9323050043	43	FLORENCE
H9321990042	RICHWOOD	199	BOONE	RICHWOOD	RICHWOOD 42	H9321990042	42	RICHWOOD
H9321990043	RICHWOOD	199	BOONE	RICHWOOD	RICHWOOD 43	H9321990043	43	RICHWOOD
H9320620041	SILVER GROVE	62	CAMPBELL	MELBOURNE	SILVER GROVE 41	H9320620041	41	CAMP SPRINGS
H9320620042	SILVER GROVE	62	CAMPBELL	MELBOURNE	SILVER GROVE 42	H9320620042	42	SILVER GROVE
H9321340042	THOMAS MORE	134	BOONE	EDGEWOOD	THOMAS MORE 42	H9321340042	42	EDGEWOOD
H9321250041	VERONA	125	KENTON	CRITTENDEN	VERONA 41	H9321250041	41	Dixie Hwy
H9321250042	VERONA	125	KENTON	CRITTENDEN	VERONA 42	H9321250042	42	CRITTENDEN
H9322430041	VILLA	243	KENTON	EDGEWOOD	VILLA 41	H9322430041	41	CRESTVIEW HILLS
H9322430044	VILLA	243	KENTON	EDGEWOOD	VILLA 44	H9322430044	44	EDGEWOOD
H40C0151524	WEST END STA	15	HAMILTON	CINCINNATI	WEST END 24	H40C0151524	24	COVINGTON
H9320590043	WILDER	59	KENTON	WILDER	WILDER 43	H9320590043	43	COVINGTON
H9320590044	WILDER	59	KENTON	WILDER	WILDER 44	H9320590044	44	WILDER
H9320590045	WILDER	59	KENTON	WILDER	WILDER 45	H9320590045	45	WILDER

CONFIDENTIAL PROPRIETARY TRADE SECRET

CIRCUIT GENERAL AREA	TOTAL CIRCUIT LENGTH (miles)	CUSTOMER COUNT FOR THIS CIRCUIT	DATE OF LAST CIRCUIT TRIM (VEGETATION MANAGEMENT)	CIRCUIT 5-YEAR AVERAGE (SAIFI)	REPORTING YEAR (2017) SAIFI	DID SAIFI INCREASE IN 2017?	CIRCUIT 5-YEAR AVERAGE (SAIFI)	REPORTING YEAR (2017) SAIFI	DID SAIFI INCREASE IN 2017?
Crescent Springs, Erlanger	5.78	436	4/25/2016	230.3	407.6	YES	1.61	1.88	YES
Covington	7.71	2026	11/2/2013	60.6	157.8	YES	0.66	1.25	YES
Covington	12.45	2443	9/27/2013	42.7	283.1	YES	0.50	2.63	YES
Walton	48.29	1285	12/18/2017	182.2	305.3	YES	1.56	3.05	YES
Elsmere	14.03	1826	11/7/2014	41.0	103.8	YES	0.43	1.11	YES
Florence	4.37	51	6/6/2015	72.1	127.3	YES	0.25	0.96	YES
Erlanger	25.72	3046	6/6/2015	81.2	184.5	YES	0.54	1.28	YES
Florence	15.06	1808	5/9/2015	81.1	112.3	YES	0.71	1.45	YES
Grant's Lick	61.1	1697	12/19/2015	162.0	282.3	YES	1.31	2.31	YES
Grant's Lick	53.49	1952	10/15/2016	180.8	319.4	YES	1.39	2.16	YES
Claryville	1.48	7	12/5/2015	12.8	136.2	YES	0.36	0.43	YES
Cold Springs	41.2	1288	3/17/2014	99.6	160.4	YES	0.82	0.60	NO
Highland Heights	24.14	906	7/22/2014	157.0	312.9	YES	1.23	1.92	YES
Erlanger	2.41	1	3/12/2016	49.6	682.8	YES	0.69	1.00	YES
Covington	10.33	1792	11/7/2014	54.9	82.5	YES	0.63	1.43	YES
FT. MITCHELL	31.41	1907	10/18/2014	108.7	462.3	YES	1.24	3.62	YES
Ft. Mitchell	17.81	1649	12/6/2014	96.7	224.2	YES	0.77	1.01	YES
Crescent Springs	10.32	724	12/19/2015	117.9	146.7	YES	0.71	1.29	YES
FT. MITCHELL	21.24	1785	new in 2016	12.8	61.2	YES	0.07	0.37	YES
Crittenden	25.14	920	8/10/2013	150.1	255.1	YES	1.21	2.17	YES
Dayton	4.9	1035	11/23/2015	32.1	29.4	NO	0.20	0.69	YES
Dayton	11.05	1620	12/5/2015	27.4	193.8	YES	0.14	2.68	YES
Dayton	6.57	1125	12/19/2015	27.3	52.4	YES	0.14	0.70	YES
Florence	1.62	31	3/21/2015	70.6	73.3	YES	0.18	0.13	NO
Florence	1.33	9	3/21/2015	57.2	65.9	YES	0.53	1.00	YES
Erlanger, Florence, CVG	17.94	751	11/15/2014	118.5	255.7	YES	2.19	1.99	NO
Erlanger, Florence, CVG	9.03	640	10/3/2015	16.1	59.8	YES	0.71	0.41	NO
Dry Ridge	7.43	579	12/3/2016	86.9	121.0	YES	0.78	1.01	YES
Dry Ridge	3.13	156	11/28/2016	101.4	122.1	YES	0.93	1.01	YES
Florence, Union	26.27	1815	10/15/2013	199.5	218.5	YES	1.60	1.77	YES
Florence	1.19	1	10/19/2013	298.0	617.2	YES	2.07	2.00	NO
Florence Mall	1.96	6	Nothing to trim	60.2	125.0	YES	1.00	1.00	NO
Dry Ridge	4.81	137	8/25/2017	185.7	154.2	NO	1.21	1.42	YES
Taylor Mill	9.28	368	4/19/2016	24.1	31.9	YES	0.15	0.17	YES
ERLANGER	21.12	1235	12/12/2015	54.9	101.9	YES	0.77	1.21	YES
Hebron	21.65	1367	5/23/2014	127.9	75.8	NO	0.76	1.20	YES
Petersburg	47.72	649	5/22/2014	152.3	93.4	NO	1.15	1.84	YES
Hebron	17.86	474	5/17/2014	76.2	136.4	YES	1.80	1.85	YES
Ft. Wright, Ft. Mitchell	19.7	1516	12/5/2013	72.1	142.3	YES	0.73	1.32	YES
Taylor Mill	14.48	955	5/11/2016	55.4	304.7	YES	0.27	1.57	YES
Ft. Wright, Ft. Mitchell	22.53	2314	8/10/2013	99.4	139.4	YES	1.29	1.75	YES
Ft. Wright, Latonia	14.08	2154	12/8/2015	38.4	39.5	YES	0.60	0.28	NO
Northern Kentucky University	15.05	1748	12/5/2013	43.6	131.0	YES	0.49	0.81	YES
Northern Kentucky University	1.34	4	12/31/2013	13.8	68.2	YES	0.15	0.25	YES
FLORENCE	18.81	2238	8/22/2015	0.5	0.2	NO	0.00	0.00	YES
UNION	22.13	1709	10/12/2013	10.4	68.6	YES	0.06	0.36	YES
FLORENCE	12.58	956	10/25/2013	11.7	90.8	YES	0.09	0.44	YES
Richwood	30.63	2007	11/12/2013	80.1	33.4	NO	0.54	2.08	YES
Union	17.04	1242	11/22/2014	58.4	122.8	YES	0.75	0.48	NO
Camp Springs	60.96	846	new in 2015	132.2	174.0	YES	0.60	1.48	YES
Silver Grove	8.33	421	new in 2015	29.7	43.0	YES	0.10	0.73	YES
Edgewood	8.78	435	11/22/2014	37.4	183.5	YES	0.25	1.25	YES
Verona, Piner, Fiskburg and Wal	48.52	857	6/11/2016	246.0	420.9	YES	1.48	2.02	YES
Walton	22.4	774	12/27/2017	74.9	412.3	YES	0.60	2.30	YES
Lakeside Park	14.61	1692	4/25/2014	68.0	80.9	YES	0.58	0.33	NO
Edgewood	27.54	2263	5/2/2015	129.3	152.7	YES	1.33	1.33	NO
Mutter Gottes	1.8	90	8/24/2017	21.5	104.0	YES	0.40	0.80	YES
Covington, Latonia	9.96	1676	12/24/2016	56.4	78.8	YES	0.50	1.01	YES
Wilder & Covington	19.33	1218	7/26/2017	68.4	253.9	YES	0.39	1.89	YES
Wilder, Southgate, Ft. Thomas	13.68	1633	12/11/2017	112.6	219.8	YES	1.43	1.03	NO

CONFIDENTIAL PROPRIETARY TRADE SECRET

SUBSTATION - CIRCUIT	CIRCUIT NAME	CIRCUIT ID	OUTAGE CAUSE	PERCENT OF TOTAL OUTAGE MINUTES	CORRECTIVE ACTION PLAN
ATLAS - H9321700041	ATLAS 41	H9321700041	Loss of Transmission	44.302%	Loss of transmission. No further action required.
			Unknown	36.07%	
			Equipment failure	8.38%	
			Other	7.38%	
			Vegetation	3.75%	
			Wildlife	0.08%	
			Lightning strike	0.04%	
			100.000%		
AUGUSTINE - H9320780042	AUGUSTINE 42	H9320780042	Other	52.765%	Mylar balloons removed from line. No further action required.
			Equipment failure	41.789%	
			Planned	4.636%	
			Wildlife	0.593%	
			Unknown	0.138%	
			Vegetation	0.080%	
			100.000%		
AUGUSTINE - H9320780045	AUGUSTINE 45	H9320780045	Weather	70.408%	Weather related. No failures located. No further action required.
			Equipment failure	25.277%	
			Vegetation	2.189%	
			Planned	1.444%	
			Wildlife	0.327%	
			Unknown	0.208%	
			Public Accident	0.061%	
			Other	0.050%	
			Lightning strike	0.037%	
			100.000%		
BEAVER - H9320860041	BEAVER 41	H9320860041	Lightning strike	27.308%	Weather related due to Hot Line Tag. No further action required.
			Unknown	26.243%	
			Weather	25.036%	
			Vegetation	8.918%	
			Planned	5.271%	
			Other	4.568%	
			Equipment failure	1.546%	
			Public Accident	0.984%	
			Wildlife	0.126%	
BUFFINGTON - H9320670041	BUFFINGTON 41	H9320670041	Public Accident	83.428%	Public Accident damaged pole. Repaired and restored. No further action required.
			Equipment failure	8.042%	
			Other	6.593%	
			Planned	1.718%	
			Lightning strike	0.200%	
			Wildlife	0.018%	
			100.000%		
BUFFINGTON - H9320670042	BUFFINGTON 42	H9320670042	Equipment failure	52.672%	Tree touching line and blown arrestor. Removed and repaired. No further action required.
			Vegetation	47.328%	
			100.000%		

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BUFFINGTON - H9320670044	BUFFINGTON 44	H9320670044	Equipment failure	61.967%	Substation equipment failure- permanent repaired. No further action required.
			Lightning strike	35.011%	
			Public Accident	2.174%	
			Planned	0.489%	
			Wildlife	0.204%	
			Unknown	0.060%	
			Other	0.057%	
			Weather	0.038%	
				100.000%	
BUFFINGTON - H9320670047	BUFFINGTON 47	H9320670047	Equipment failure	64.612%	Substation equipment failure - permanent repairs completed. No further action required.
			Vegetation	27.851%	
			Planned	6.335%	
			Other	0.831%	
			Wildlife	0.257%	
			Unknown	0.114%	
				100.000%	
CLARYVILLE - H9321470041	CLARYVILLE 41	H9321470041	Equipment failure	55.093%	Failed Overhead equipment repaired. Self-Healing feeder. No further action required.
			Weather	28.335%	
			Vegetation	8.733%	
			Planned	3.845%	
			Public Accident	1.518%	
			Other	1.479%	
			Unknown	0.967%	
			Wildlife	0.016%	
Lightning strike	0.015%				
				100.000%	
CLARYVILLE - H9321470042	CLARYVILLE 42	H9321470042	Vegetation	65.979%	Oak tree fell into line. Removed and repaired. No further action required.
			Weather	25.193%	
			Equipment failure	3.808%	
			Lightning strike	3.607%	
			Planned	1.060%	
			Other	0.143%	
			Wildlife	0.138%	
Unknown	0.071%				
				100.000%	
CLARYVILLE - H9321470043	CLARYVILLE 43	H9321470043	Weather	68.394%	Weather related blown fuse. Replaced. No further action required.
			Wildlife	21.951%	
			Equipment failure	9.655%	
				100.000%	
COLD SPRING - H9321320041	COLD SPRING 41	H9321320041	Equipment failure	44.971%	Multiple fuses replaced. No further action required.
			Unknown	20.509%	
			Planned	17.913%	
			Other	11.817%	
			Public Accident	3.586%	
			Vegetation	0.636%	
			Lightning strike	0.490%	
			Wildlife	0.078%	
				100.000%	

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COLD SPRING - H9321320049	COLD SPRING 49	H9321320049	Vegetation	65.077%	Removed Ash Tree and repaired Overhead line. No further action required.
			Wildlife	22.183%	
			Planned	6.314%	
			Lightning strike	5.944%	
			Other	0.182%	
			Equipment failure	0.172%	
			Unknown	0.105%	
			Public Accident	0.024%	
			100.000%		
CONSTANCE - H9320420043	CONSTANCE 43	H9320420043	Public Accident	100.000%	Public Accident bulldozer snapped pole. No further action required.
			100.000%		
COVINGTON - H9322170043	COVINGTON 43	H9322170043	Vegetation	60.151%	Tree in line removed. No further action required.
			Equipment failure	17.807%	
			Lightning strike	5.872%	
			Other	4.679%	
			Planned	3.873%	
			Wildlife	3.507%	
			Weather	3.334%	
			Unknown	0.777%	
			100.000%		
CRESCENT - H9320700042	CRESCENT 42	H9320700042	Vegetation	43.037%	Tree in line, Public Accident, contractor work. Permanent repaired. No further action required.
			Public Accident	26.645%	
			Unknown	23.522%	
			Equipment failure	6.148%	
			Other	0.514%	
			Planned	0.072%	
			Lightning strike	0.035%	
			Wildlife	0.027%	
			100.000%		
CRESCENT - H9320700043	CRESCENT 43	H9320700043	Vegetation	90.594%	1 tree related outage. Planned overhead transformer upgrades. No further action required.
			Weather	6.793%	
			Planned	1.707%	
			Other	0.378%	
			Lightning strike	0.258%	
			Equipment failure	0.194%	
			Wildlife	0.067%	
			Public Accident	0.009%	
			100.000%		
CRESCENT - H9320700044	CRESCENT 44	H9320700044	Equipment failure	49.789%	Tree in line removed and loss of transmission restored. No further action required.
			Vegetation	26.084%	
			Planned	16.607%	
			Weather	6.707%	
			Wildlife	0.539%	
			Other	0.274%	
			100.000%		

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CRESCENT - H9320700045	CRESCENT 45	H9320700045	Equipment failure	46.780%	Tree removed from line. Defective cable repaired. No further action required.
			Unknown	26.495%	
			Planned	15.356%	
			Public Accident	6.052%	
			Weather	3.885%	
			Wildlife	0.836%	
			Vegetation	0.422%	
			Other	0.174%	
			100.000%		
CRITTENDEN - H9321240042	CRITTENDEN 42	H9321240042	Vegetation	43.807%	Transmission source restored. No further action required.
			Planned	35.238%	
			Unknown	9.324%	
			Equipment failure	5.751%	
			Other	4.542%	
			Weather	1.012%	
			Wildlife	0.284%	
			Lightning strike	0.041%	
			100.000%		
DAYTON - H9320760041	DAYTON 41	H9320760041	Planned	59.501%	Planned overhead transformer upgrades. No further action required.
			Wildlife	23.237%	
			Unknown	15.980%	
			Other	0.957%	
			Vegetation	0.325%	
			100.000%		
DAYTON - H9320760042	DAYTON 42	H9320760042	Unknown	77.989%	Circuit was carrying additional circuit and relayed due to hot line tag on relay. Restored. No further action required.
			Public Accident	21.109%	
			Wildlife	0.258%	
			Equipment failure	0.250%	
			Vegetation	0.171%	
			Other	0.167%	
			Planned	0.058%	
			100.000%		
DAYTON - H9320760043	DAYTON 43	H9320760043	Equipment failure	73.665%	Failed padmounted switchgear. Restored. Replacement was scheduled March 2018. No further action required.
			Other	16.725%	
			Planned	9.517%	
			Wildlife	0.092%	
			100.000%		
DIXIE - H9320890043	DIXIE 43	H9320890043	Vegetation	87.112%	Tree took out line. Line replaced/repared. No further action required.
			Equipment failure	5.132%	
			Unknown	4.731%	
			Wildlife	3.024%	
			100.000%		
DIXIE - H9320890044	DIXIE 44	H9320890044	Vegetation	100.000%	Tree took out line. Line replaced/repared. No further action required.
			100.000%		

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DONALDSON - H9320550043	DONALDSON 43	H9320550043	Vegetation	55.651%	Ash Tree removed from overhead line on inaccessible road. No further action required.
			Equipment failure	43.904%	
			Planned	0.162%	
			Unknown	0.147%	
			Wildlife	0.135%	
				100.000%	
DONALDSON - H9320550044	DONALDSON 44	H9320550044	Planned	57.519%	Planned Cable Injection. No further action required.
			Vegetation	19.114%	
			Equipment failure	16.852%	
			Other	5.895%	
			Wildlife	0.544%	
			Public Accident	0.075%	
				100.000%	
DRY RIDGE - H9321090041	DRY RIDGE 41	H9321090041	Vegetation	98.310%	Transmission source restored. No further action required.
			Planned	1.690%	
				100.000%	
DRY RIDGE - H9321090042	DRY RIDGE 42	H9321090042	Vegetation	97.582%	Transmission source restored. No further action required.
			Planned	2.418%	
				100.000%	
EMPIRE - H9322890041	EMPIRE 41	H9322890041	Unknown	28.686%	Planned overhead transformer upgrades. No further action required.
			Vegetation	23.428%	
			Planned	17.896%	
			Equipment failure	13.408%	
			Weather	7.940%	
			Other	4.911%	
			Public Accident	2.027%	
			Lightning strike	1.485%	
Wildlife	0.218%				
				100.000%	
EMPIRE - H9322890042	EMPIRE 42	H9322890042	Other	86.021%	Large Customer overloaded transformer. Replaced. No further action required.
			Unknown	13.979%	
				100.000%	
FLORENCE - H9322410041	FLORENCE 41	H9322410041	Equipment failure	100.000%	Replaced defective cable. No further action required.
				100.000%	
GRANT - H9321610041	GRANT 41	H9321610041	Vegetation	90.379%	Removed Ash Tree and repaired Overhead line. Line trimmed in 2017. No further action required.
			Planned	7.429%	
			Equipment failure	2.192%	
				100.000%	

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HANDS - H9321280042	HANDS 42	H9321280042	Vegetation	59.252%	Removed Tree and repaired Overhead line. Line trimmed in 2017. No further action required.
			Equipment failure	14.345%	
			Public Accident	8.983%	
			Planned	6.066%	
			Weather	5.451%	
			Other	5.212%	
			Wildlife	0.691%	
			100.000%		
HANDS - H9321280044	HANDS 44	H9321280044	Public Accident	74.718%	Safety - Opened for Public Accident. No further action required.
			Planned	18.646%	
			Weather	4.600%	
			Vegetation	1.816%	
			Unknown	0.161%	
			Other	0.059%	
			100.000%		
HEBRON - H9321520041	HEBRON 41	H9321520041	Public Accident	66.305%	Public Accident, auto pushed tree into Overhead line. No further action required.
			Equipment failure	18.373%	
			Weather	13.929%	
			Vegetation	1.111%	
			Wildlife	0.156%	
			Planned	0.125%	
			100.000%		
HEBRON - H9321520042	HEBRON 42	H9321520042	Public Accident	57.633%	Public Accident, auto pushed tree into Overhead line. No further action required.
			Unknown	26.790%	
			Vegetation	6.393%	
			Equipment failure	5.500%	
			Wildlife	1.349%	
			Weather	0.909%	
			Planned	0.851%	
			Other	0.576%	
			100.000%		
HEBRON - H9321520045	HEBRON 45	H9321520045	Planned	70.545%	Planned outage for Cable injection. No further action required.
			Public Accident	29.455%	
			100.000%		
KENTON - H9320090041	KENTON 41	H9320090041	Vegetation	66.245%	Removed tree and repaired line. Line trimmed in 2017. No further action required.
			Equipment failure	12.406%	
			Planned	10.826%	
			Lightning strike	8.510%	
			Wildlife	1.824%	
			Other	0.188%	
			100.000%		

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KENTON - H9320090042	KENTON 42	H9320090042	Vegetation	75.140%	Removed tree and repaired line. No further action required.
			Equipment failure	14.111%	
			Unknown	5.232%	
			Wildlife	4.258%	
			Planned	1.129%	
			Other	0.131%	
				100.000%	
KENTON - H9320090044	KENTON 44	H9320090044	Equipment failure	48.585%	General planned repairs. Miscoded. No further action required.
			Vegetation	16.048%	
			Public Accident	11.081%	
			Planned	11.061%	
			Lightning strike	6.135%	
			Weather	5.720%	
			Other	0.749%	
			Wildlife	0.621%	
				100.000%	
KENTON - H9320090045	KENTON 45	H9320090045	Equipment failure	67.229%	Repaired failed Overhead conductor - required flaggers. No further action required.
			Other	10.554%	
			Vegetation	10.554%	
			Planned	6.505%	
			Wildlife	3.880%	
			Unknown	1.148%	
			Public Accident	0.130%	
KY UNIV - H9322870042	KY UNIV 42	H9322870042	Public Accident	41.336%	Public Accident, repaired Overhead line. No further action required.
			Weather	32.960%	
			Planned	12.095%	Planned Transformer upgrades. No further action required.
			Lightning strike	6.748%	
			Vegetation	3.392%	
			Equipment failure	1.913%	
			Other	0.986%	
			Wildlife	0.570%	
				100.000%	
KY UNIV - H9322870045	KY UNIV 45	H9322870045	Equipment failure	100.000%	Replaced transformer. No further action required.
				100.000%	
LONGBRANCH - H9320980041	LONGBRANCH 41	H9320980041	Planned	66.834%	Planned overhead transformer upgrades. No further action required.
			Vegetation	33.166%	
				100.000%	
LONGBRANCH - H9320980043	LONGBRANCH 43	H9320980043	Planned	98.692%	Replaced blown fuse - flaggers required. No further action required.
			Wildlife	0.552%	
			Vegetation	0.437%	
			Equipment failure	0.188%	
			Unknown	0.131%	
				100.000%	

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MT ZION - H9323050043	MT ZION 43	H9323050043	Unknown	75.666%	Removed tree and repaired line. No further action required.
			Equipment failure	16.010%	
			Weather	2.923%	
			Other	2.474%	
			Planned	1.751%	
			Wildlife	1.058%	
			Lightning strike	0.118%	
				100.000%	
RICHWOOD - H9321990042	RICHWOOD 42	H9321990042	Public Accident	46.889%	2 public accidents and loss of transmission restored. No further action required.
			Other	20.080%	
			Vegetation	17.645%	
			Wildlife	12.390%	
			Equipment failure	2.647%	
			Unknown	0.348%	
				100.000%	
RICHWOOD - H9321990043	RICHWOOD 43	H9321990043	Other	72.697%	Replace failed cable. No further action required.
			Equipment failure	13.525%	
			Planned	11.926%	
			Lightning strike	1.852%	
				100.000%	
SILVER GROVE - H9320620041	SILVER GROVE 41	H9320620041	Unknown	45.901%	Relay had Hot Line Tag and locked out. No problem found. No further action required.
			Vegetation	38.326%	
			Other	13.328%	
			Wildlife	0.795%	
			Equipment failure	0.687%	
			Weather	0.541%	
			Public Accident	0.269%	
Planned	0.153%				
				100.000%	
SILVER GROVE - H9320620042	SILVER GROVE 42	H9320620042	Planned	94.930%	Planned overhead transformer upgrades. No further action required.
			Wildlife	3.291%	
			Other	1.212%	
			Equipment failure	0.567%	
				100.000%	
THOMAS MORE - H9321340042	THOMAS MORE 42	H9321340042	Unknown	83.852%	Repaired failed Overhead to underground termination. No further action required.
			Equipment failure	10.453%	
			Vegetation	2.914%	
			Other	1.050%	
			Lightning strike	0.827%	
			Wildlife	0.741%	
Planned	0.162%				
				100.000%	

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VERONA - H9321250041	VERONA 41	H9321250041	Vegetation	84.992%	Replaced poles and line taken down by tree. Line trimmed in 2016. No further action required.
			Weather	8.987%	
			Equipment failure	4.100%	
			Lightning strike	1.343%	
			Planned	0.375%	
			Other	0.167%	
			Public Accident	0.036%	
				100.000%	
VERONA - H9321250042	VERONA 42	H9321250042	Vegetation	54.954%	Transmission source restored due to tree. Public accident. No further action required.
			Public Accident	37.839%	
			Lightning strike	4.039%	
			Equipment failure	1.591%	
			Planned	1.421%	
			Other	0.105%	
			Unknown	0.051%	
				100.000%	
VILLA - H9322430041	VILLA 41	H9322430041	Lightning strike	57.172%	Weather related. No further action required.
			Vegetation	14.910%	
			Equipment failure	12.817%	
			Planned	10.293%	
			Other	3.848%	
			Wildlife	0.960%	
				100.000%	Planned overhead transformer upgrades. No further action required.
VILLA - H9322430044	VILLA 44	H9322430044	Loss of Transmission	31.360%	
			Equipment failure	31.103%	
			Lightning strike	30.196%	
			Planned	3.695%	
			Other	1.261%	
			Weather	1.257%	
			Public Accident	0.359%	
			Wildlife	0.352%	
			Unknown	0.346%	
Vegetation	0.070%				
				100.000%	
WEST END STA - H40C0151524	WEST END STA 24	H40C0151524	Planned	100.000%	Replace pole from public accident. No further action required.
				100.000%	
WILDER - H9320590043	WILDER 43	H9320590043	Public Accident	97.910%	
			Planned	1.131%	
			Wildlife	0.407%	
			Other	0.345%	
			Equipment failure	0.207%	
				100.000%	

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WILDER - H9320590044	WILDER 44	H9320590044	Lightning strike	38.970%	Pole Fire - opened line for safety. Repaired. No further action required.
			Planned	32.788%	
			Equipment failure	24.555%	
			Public Accident	2.294%	
			Weather	0.676%	
			Wildlife	0.672%	
			Vegetation	0.045%	
				100.000%	
WILDER - H9320590045	WILDER 45	H9320590045	Equipment failure	42.512%	Repaired broken conductor. Self-healing circuit. No further action required.
			Unknown	30.945%	
			Vegetation	14.771%	
			Weather	9.710%	
			Lightning strike	1.122%	
			Wildlife	0.857%	
			Planned	0.055%	
			Other	0.027%	
	100.000%				

Duke Energy Kentucky's Vegetation Management Plan

Goals

Duke Energy's goals for its Vegetation Management Operations are to balance the need for reliable utility service with safe and cost-effective vegetation management practices that preserve our local communities' natural surroundings, aesthetics and the environment. Targeted herbicides provide one of the most cost-effective and environmentally friendly means of controlling undesirable vegetation.

Safety

Our goals are to work safely at all times to achieve a zero injury culture and to minimize the safety risk of vegetation and conductor contacts. Serious or fatal shocks can occur when working in trees near power lines. Duke Energy strives to minimize that risk by trimming properly in accordance with industry tree trimming safety standards.

Reliability

Duke Energy's electric service reliability, as measured by SAIFI and SAIDI, has improved in recent years due in part to our more rigorous tree trimming practices. Duke Energy strives to trim its Kentucky distribution circuits every four-and-one-half years and transmission every six years.

Tree Care Standards

Duke Energy requires its employees and contractors to prune trees in accordance with American National Standards Institute (ANSI) and National Arborist Association (NAA) standards. The relevant standards are ANSI Z133, Safety in Tree Trimming Operations, and ANSI A300, Safety in Tree Care Operations. These ANSI standards were developed in cooperation with the NAA. Additionally, Duke Energy follows the practices in Field Guide for Qualified Line Clearance Tree Workers by Dr. Alex L. Shigo, former head of the U.S. Forest Service. In rural areas, Duke Energy may authorize its contractors to use mechanized pruning equipment.

Tree Trimming Specifications

69KV and above Transmission Lines

- 15 feet clearance to the side from all conductors.
- 15 feet clearance below the lowest conductor.
- No overhanging/encroaching branches permitted.
- Trim to the previously established widths of our right-of-way and practice established beyond the 15 feet widths.

3 Phase Primary Lines and 2 Phase Primary Lines

- 10 feet clearance to the side from all conductors.
- 10 feet clearance below the conductors.
- Multi-phased lines will be pruned as high as the buckets will reach but no less than 60' above the ground. In any case where overhang is allowed to remain, all hazardous overhangs (dead, dying, diseased, structurally unsound, etc.) shall be removed.

Single Phase

- 10 feet clearance to the side from all conductors.
- 10 feet clearance below the conductors.
- Overhang: all live branches above the conductors shall be removed to a minimum height of 15 feet, and at a 45-degree angle. All dead and structurally weak branches overhanging any primary voltage wires shall be removed.
- Underneath the primary: 10 feet clearance from the conductors to the closest limbs beneath the phases.

Secondary Lines

- 5 feet clearance to the side from the secondary line.
- 5 feet clearance above and below the secondary line.

Services Lines

- 1 foot swing clearance from all service lines.

Brush/Wood Removal

- Circuit maintenance - brush is removed, wood cut into movable pieces.
- Customer may request off-cycle maintenance in accordance with the clearance standards above - brush and wood is customer's responsibility.
- Storm Work - no brush or wood removal.

Customer Notification

- Duke Energy customers are notified of tree trimming being done on their property by door hanger cards.
- Duke Energy requires its contractors to contact local government officials prior to beginning work in the community.

Right Tree In The Right Place

- Duke Energy will cooperate in tree removal with local government officials as needed.

Determination of Need to Perform Maintenance/Evaluation of Plan Effectiveness

Duke Energy regularly monitors its SAIFI and SAIDI measures. If SAIFI or SAIDI were to significantly decline, Duke Energy would evaluate whether to modify its vegetation management practices, including its right-of-way clearing cycle, in order to improve SAIFI and SAIDI performance. Duke Energy also monitors the performance of individual circuits. If an individual circuit has a significant number of outages, Duke Energy will perform off-cycle tree trimming as needed. Duke Energy also monitors industry tree trimming standards and modifies its tree trimming practices as necessary to meet or exceed industry standards.